State of the Art Conference 2018

of the

European Society of Gynaecological Oncology

Lyon, France

October 4-6, 2018

Abstract ID: 3718 – page 56
The driver mutational landscape of ovarian squamous cell carcinomas arising in mature cystic teratoma
- Darren Ennis, Susanna Cooke, Lisa Evers, Suzanne Dowson, Mei Yen Chan, James Paul, Lynn Hirschowitz, Rosalind Glasspool, Naveena Singh, Sarah Bell, Elizabeth Day, Agata Kiochman, Nafisa Wilkinson, Philip Beer, Sancha Martin, David Millan, Andrew V. Biankin, Iain A. McNeish, On behalf of the Scottish Genome Partnership

Abstract ID: 3719 – page 58
Diagnostic accuracy of risk of ovarian malignancy algorithm (ROMA) experienced in the clinical practice at a single hospital
- JIYOUNG Kim, Hae Nam Lee, Haeil Park, Dae Woo Lee, Min Jeong Kim, Jae Eun Shin

Abstract ID: 3720 – page 59
Prognostic factors and impact of adjuvant treatment in surgically treated FIGO stage IB-IIA neuroendocrine carcinoma of the uterine cervix
- Seung Hyuk Shim, Ju-Hyun Kim, Dae-Yeon Kim

Abstract ID: 3721 – page 60
Molecular Diagnosis of Endometrial Stromal Sarcomas
- Sorsiah Mansor, Chik Hong Kuick, Kenneth Chang

Abstract ID: 3722 – page 61
Living after non-epithelial ovarian cancer: Chronic fatigue, quality of life and long term side effects of chemotherapy – Vivrovaire Rare Tumors
- Florence Joly, Djihane Ahmed-Lecheheb, Hubert Orfeuvre, Jérôme Alexandre, Thibaut De La Motte Rouge, Laure De Cock, Cédric Nadeau, Christophe Pomel, Elsa Kalbacher, Aude-Marie Savoye, Magali Provansal, Dominique Berton-Rigaud, Alain Lortholary, Anne Gompel, Eric Pujade-lauraine, Christine Rousset-Jablonski, Jean-Michel Grellard, Anne Floquet, Patricia Pautier, Isabelle Ray-Coquard

Abstract ID: 3723 – page 63
Serum levels of IL-1ra and sTNF RI in patients with uterine sarcoma
- Malgorzata Fuksiewicz, Maria Kowalska, Anna Danska-Bidzinska, Mariusz Bidzinski, Alicja Berezowska, Beata Kotowicz

Abstract ID: 3724 – page 64
Endocervical clear cell carcinoma: a rare case report
- KAD?R GÜZ?N ATE? KARATEKE

Abstract ID: 3725 – page 65
Evaluation of IL-8 and CA 125 in patients with uterine sarcoma
- Beata Kotowicz, Malgorzata Fuksiewicz, Anna Danska-Bidzinska, Mariusz Bidzinski, Alicja Berezowska, Maria Kowalska

Abstract ID: 3730 – page 66
Retrospective Analysis of 58 Patients with Granulosa Cell Tumors of the Ovary over a 31-year Period: A Single-Center Experience
- Sarah AL-Rubaish, Sophie Vincent, Cormire Beatrice, Vanessa Samouelian

Abstract ID: 3731 – page 67
Taxane and platinum chemotherapy for patients with uterine carcinosarcoma
- Hiroyuki Yamazaki, Yukiharu Todo, Chisa Shimada, Yasuhiro Yamamoto, Shinichiro Minobe, Hidenori Kato

Abstract ID: 3736 – page 68
Cervical cancer stage IIB-IVA radiation therapy clinical responses based on spectral pulsed wave Doppler
- Syamel Syamel muhammad, Dodi Dodi Suardi , Maringan Maringan Diaptri Lumban Tobing

Abstract ID: 3738 – page 69
Prognosis factors in malignant ovarian germ cell tumors (MOGCT): retrospective analysis of 147 cases prospectively included in the French network for Rare Malignant Ovarian Tumors (TMRO) & GINECO group
- Fanny Derquin, Anne Floquet, Jean Pierre Lotz, Julien Edeline, Jérôme Alexandre, Patricia Pautier, Gwenael Ferron, Stéphane Oudard, Claudia Lefeuvre Plesse, Helène Vegas, Anne Patsouris, Elsa Kalbacher, Dominique Berton Rigaud, Anne Claire Hardy Bessard, Vincent Lavoué, Isabelle Treilleux, Isabelle Ray Coquard, Thibault De La Motte Rouge

Abstract ID: 3740 – page 71
A Case of Lymphoid follicular hyperplasia of the ovary in a 53-year-old Woman
- Yong jae Lee, Jung-Yun Lee, Eun Ji Nam, Sang Wun Kim, Sunghoon Kim, Young Tae Kim

Abstract ID: 3742 – page 72
Germline BRCA1 and BRCA2 gene mutation among epithelial ovarian / primary peritoneal cancer at KFSHRC
- Sharifa Al-Farsi

Abstract ID: 3950 – page 209
Laparoscopic management of primary vaginal clear cell carcinoma in a woman without diethylstilbestrol exposure
- Yeliz Aykanat, Murat Api

Abstract ID: 3951 – page 211
GENE EXPRESSION OF ATP-SYNTHASE AS A PROGNOSTIC FACTOR IN PATIENTS WITH OVARIAN CANCER.
- Patrycja Ziober-Malinowska, Krzysztof Ku?ak, Marcin Stanis?aw Bobi?ski, Jan Kotarski, Rafa? Tarkowski

Abstract ID: 3952 – page 212
Non-dysgerminomatous Tumours of Ovary: Clinical Outcome
- Francis James, Pallavi Nair, Susan Mathews, John Joseph, Jagath Krishna, Suchetha Sambasivan, Aswin Kumar

Abstract ID: 3953 – page 214
INFLUENCE OF SINGLE AND MULTI-AGENT CHEMOTHERAPY ON OVARIAN FUNCTION AND FERTILITY IN PATIENTS WITH GESTATIONAL TROPHOBLASTIC NEOPLASIA
- Sonia Magni, Daniela Giuliani, Federica Paola Sina, Galli Francesca, Lamanna Maria, Delle Marchette Martina, Lorenzo Ceppi, Robert Fruscio, Cristina Maria Bonazzi, Fabio Landoni

Abstract ID: 3955 – page 216
Malignant germ cell tumors and sex cord-stromal tumor clinical experience in a tertiary spanish hospital
- Coves Asuncion, Oliver Reyes, Lopez Gregorio, Alvarez Carmen, Seoane Jose Miguel, Tejerizo Alvaro

Abstract ID: 3958 – page 218
Neutropenic septic shock during chemotherapy in gynecologic cancer: Clinical course and characteristics
- Ji-Geun Yoo

Abstract ID: 3961 – page 219
Difference in preference of advance care planning and palliative care between gynecological cancer patients and other cancer patients
- Kang EunKyo, Lee Jihye, Choo Jiyeon, Min Jeonghee, Yun Young Ho

Abstract ID: 3962 – page 221
The relation between TORC1 and TORC2 expression and response on mTOR inhibitors treatment in uterine sarcoma and carcinosarcoma cell lines
- Bobi?ski Marcin, Ok?a Karolina, Bednarek Wies?awa, Wertel Iwona, Wawruszak Anna, Kotarski Jan

Abstract ID: 3963 – page 223
Recurrent High-Grade Vaginal Intraepithelial Neoplasia
- Giorgio Bogani, Fabio Martinelli, Antonino Ditto, Valentina Chiappa, Umberto Leone Roberti Maggiore, Alice Indini, Domenica Lorusso, Francesco Raspagliesi

Abstract ID: 3968 – page 224
Prognostic factors for recurrence and survival in uterine leiomyosarcoma
- E Sun Paik, Jae Hong Kang, Jihye Kim, Myeong Seon Kim, Soo Young Jeong, Chel Hun Choi, Tae-Joong Kim, Byoung-Gie Kim, Duk-Soo Bae, Jeong-Won Lee

Abstract ID: 3969 – page 225
Clinical, pathological study and therapeutic peculiarities of ovarian carcinosarcoma
- RAJA BRIKI, KHALID OUAZZANI TAIBI, SAFIA ERNEZ, MEHDI MAKNI, SASSI BOUGHIZANE, HEDI KHAIRI

Abstract ID: 3970 – page 227
cord-stromal tumors of the ovary: clinical and pathological study of 13 cases
- RAJA BRIKI, ONS KAABIA, KHALID OUAZZANI TAIBI, SAFIA ERNEZ, MEHDI MAKNI, SASSI BOUGHIZANE, HEDI KHAIRI

Abstract ID: 3971 – page 229
Breast cancer and pregnancy: about a case series and a review of literature
- SAFIA ERNEZ, RAJA BRIKI, MEHDI MAKNI, KHALID OUAZZANI TAIBI, SAMIR HIDAR, SASSI BOUGHIZANE, HEDI KHAIRI

Abstract ID: 3975 – page 230
The mutational and copy number landscape of ovarian carcinosarcoma
- Darren Ennis, Gareth Bryson, Suzanne Dowson, Ros Glasspool, Patricia Roxburgh, David Millan, Andrew Biankin, Iain McNeish, Susanna Cooke, Scottish Genome Partnership

MicroRNA-1 functionality in uterine leiomyosarcoma

Authors

Matthias Stope 1, Dominique Koensgen 2, Martin Burchardt 1, Alexander Mustea 2,

1. Urology, University Medicine Greifswald, Greifswald, GERMANY
2. Gynecology, University Medicine Greifswald, Greifswald, GERMANY

Abstract ID: 3330

Background
Uterine leiomyosarcoma (uLMS) is a rare and aggressive disease with chemotherapy and radiation frequently have little or no effect on overall survival. Prognostic factors are primarily restricted to stage, age of patient, and tumor size. Since no marker molecules are established for clinical use in diagnosis and therapy, the characterization of molecular mechanisms in uLMS cells appears strongly recommended. This study examined for the first time the role of tumor suppressive microRNA-1 (miR-1) in both uLMS tissue and an uLMS cell line.

Materials and Methods
Tissue samples (Ethics Committee of the University Medicine Greifswald; registration no. III SV 05/04) from uLMS patients (n=3) and healthy women (n=4) as well as cells from the uLMS cell line SK-UT-1 were applied in miR-1 analysis by quantitative RT-PCR. Modulation of miR-1 expression was done by transfected miR-1 overexpression vector pmiR-1 and subsequent proliferation was performed utilizing a CASY cell analyzer (Roche Applied Science). Analysis of the miR-1 target genes MAP kinases Erk1/2 and p38 was assessed by standard Western blot techniques.

Results
miR-1 levels arose diminished in uLMS patients compared to control group, pointing to the tumor suppressive functionality of the microRNA. Transfection of pmiR-1 vector was accompanied by a significant 5-fold increase of intracellular miR-1. This miR-1 overexpression, however, neither led to an attenuated SK-UT-1 cell growth nor to reduced expression levels of the miR-1 targets Erk1/2 and p38.

Conclusion
Even though miR-1 expression becomes reduced during uLMS progression, restauration of miR-1 levels failed to restore tumor suppressive and particularly antiproliferative properties of the microRNA. In uLMS cells, miR-1 functionality might be disrupted by preventing the downregulation of proliferative miR-1 target genes, e.g. MAP kinases Erk1/2 and p38.

Keywords: uterine leiomyosarcoma, microRNA-1, tumor suppressor

Rare Gynecological ovarian cancers (Struma, sexual cords ovarian cancers and, germinal ovarian cancers)

Authors

ABDELMOUNAIM TAIBI 1, Kamel Bouzid 2,

1. Medical oncology, Center pierre marie curie, ALGER, ALGERIA
2. Medical oncology, Center pierre marie curie, A, ALGERIA

Abstract ID: 3344

The malignant non-epithelial tumors of the ovary represent less than 20% of the cancers of the ovary in the adult. One distinguishes primarily the tumors of the stroma and the sexual cords, and the germinal tumors malignant. Although these rare malignant tumors show different histological characteristics, they share several of the following elements compared to the gynecological Common tumors; to an earlier median age, clean tumoral markers; aspecific genomics; a histological presentation

Materials and Methods
two groups of tumors
1°/The first: concerning a group of ovarian malignant germinal tumours corrected during theperiod active of the energy from January 2004 to December 2016 ,44 patients young (15 – 43 years).
All the patients have undergone a surgery first, ithas was preserving in 42 cases and complete in 2cases (it is multiparas).
Under histological types are as follows:
17 cases of immature dysgerminomist,
17cas of tératoma, 6cases of TSE and
the mixed ovarian germinal tumors in 4 cases.
The patients are stages according to the FIGO (stages
I=32, stage II: 1cas; stage III: 10cases; stage IV: 1 case).
The chemotherapy received by the patients is oftype: 1st line protocol PVB (29 patients), in 2ndline protocol BEP (8patientes) and a patient profited from an autograft of stem
The response of the patients to the first line chemotherapy is:
39 patients Complete answer (CR);
3 patients have a partial answer (PR)
and 2 patients have an evolution under treatment.
Become to these patients is: 37 alive
patients incomplete remission and 7 patients are die.
2°/the second group of patient are concerning
Tumors of the stroma and sexual cords which normally gathers two pennies groups of tumors (Granulosa ,and tumors of sertoli and leydig),
during the period going of the energy from January 2008 to December 2013, we collaged, 09 patients, young people and carrying malignant tumour of sertoli and leydig of the ovary whose median age is of 23ans (16 – 43 years). 07 are nulliparous, they are 8 stages IA and 1 IC

Results
the surgery was preserving among 07patients (+ young people), radical in others (2cas), the size of the tumor is between 10-24cm - of aspect very vascularized is noted in all the cases. The anatomopathologic study found 04 tumors with intermediate differentiation, 1 differentiated little and the 4 other not-precis, auxiliary chemotherapy was drawn up among 06 patients it was justified by association with the same patient of a big size of the tumor and a low aspect of differentiation , remarkable in 02 cases and thelack of information 01cas (table ofhémopéritoine), the evolution was marked spoke progressive disappearance about the signs of virilisation with return to the normal of the testosteronemy at 02 patients, and their persistence in less degrees at 3rd. 01

waitspresented a pelvic repetition and péritonéale(carcinose) in 15 month, it profited from a reducing surgery and a chemotherapy of 2ndline with palliative aiming, unfortunately is deceased 4 months afterwards by tumoral progression With 41 months, an average passing(18-60), 08 patients are alive in remission, the 01 deceased
we collaged these 9 cases of androblastoma among a series of 483 malignant ovarian tumors between 2008-2013, représentant 1.86 % just as for the other parameters with knowing the revealing signs which are dominate by the endocrinal syndrome,the stage localised to the tumour mainly Ia stageor their relatively favorable forecast (1 only repetition in our series after an average retreat of 41mois)

Conclusion
Although they are like ovarian malignant tumors, the assumption of responsibility of these tumors is complex because of their weak incidence, of the frequent absence of preoperative diagnosis and of need for taking in to account the desire of procreation of these patients. We underline the importance of assumption of responsibility specialized as well as the need for holding a register allowing a better knowledge of their forecast.

Keywords
ovarian tumor, rare, germinal, granulosa, sertoli leiydig

GRANULOSA OVARIAN TUMOR RARE JEVENILE AND ADULT CHARACTERISTIC ANATOMO CLINICAL AND THERAPEUTIC STUDY RETOSPECTIVE EXPERIMENT OF ALGIERS

Authors

FATIHA HADJARAB 1, CHEMEDDINE CHEKMAN 2, ASSIA BOUFENNARA 3, ABDELMOUNAIM TAIBI 1, KAMEL BOUZID 1,

1. Medical oncology, Center pierre marie curie, ALGER, ALGERIA
2. Surgery, Center pierre marie curie, ALGER, ALGERIA
3. Histology, Center pierre marie curie, ALGER, ALGERIA

Abstract ID: 3378

The tumors of granulosa are rare ovarian cancer with rather
Slow evolution if one them compared to Germinal or epithelial tumors of the ovary, they account for 0.6 % to 3 % of the whole of the tumors of the ovary and 5 % of the malignant tumors of this one. Their diagnosis is anatomopathologic resting primarily on data morphologics. Two types are distinguished: the adult type (TGA) which is most frequent, and type (TGJ), this last is characterized by an age from which has occurred relatively young person, a morphological aspect different involving histological signs from malignity more marked and a higher risk of repetition. These tumours have a profile clinical, histological and evolutionary particular.
a retrospective study of 24 files carrying the diagnosis of tumour granulosa (TG) which collaged during the 10 years period, energy fromJ anuary 2006 with December 2016 parameters studied in these patients: (the age ofthe diagnosis, the circumstance of discovery,assessment initial (diagnosis and assessment of extension), the stage of the FIGO, it surgical epic,chemotherapy used and the therapeutic answer,total survival)
23 patients were standard adult Granulosa (TGA),only one waits were standard Granulosa jévunile (TGJ), the âge of patient at the time of the diagnosis varied from 22 to 72 years, the hormonal statute was variable and the circumstances of discoveries were dominated by pains abdomino-pelvic dans= 15 case (62 %), métrorragies in = 4case, amenorrhoea in =4 case, pelvicmass in =6 case), the pelvic echoraphy was practised at all our pat ients the tumour was solidokystic at 60% of our patients, cystic in 5 % of and solid in 35 % cases. Tumours werebulky with a size varies from 7 to 27 cm, with an average of 10 cm.
average of 10 cm.
Stages 19 stage I ,
1 stage II,
3 stage III,
1stage IV,

All the patients profited from a surgical, radical in 18 cases (hysterectomy with annexectomy bilateral), in 6 cases unilateral annexectomy (young woman) 6 patients have receipt of auxiliary chemotherapy stage I E tIIwith two types of protocols: cisplatin, vinblastine,bleomycin), And 4 with the protocol: paclitaxel, carboplatin thepatients at the stages III profited from an auxiliarychemotherapy néo with the protocol cisplatine,bléomycine, vinblastine followed by surgery with astabilization of the lesions, two patients repeated,the youthful form presented a local repetition one year after head end, which died by evolutionary, continuation of the disease
The other presented lesions in the form of carcinogen peritoneal and having received chemotherapy type paclitaxel carboplatine,presented a complete good answer, Median of survival = 26 month

Tumors of ovarian are rare, adult forms forms are slow – moving ,often diagnosed at an early stage ,treatment relies on surgery ,we note in our series that age, stage at diagnosis was correlate with that of literature

Keywords
granulosa, cordon sexuel, ovarian tumor, rare

Letrozole therapy in cases of endometrial hyperplasia not responding to Gestagen therapy

Author

IBRAHIM IBRAHIM 1,

1. Obs&Gyn, Mansoura Medical college. Mansoura university, Mansoura, EGYPT

Abstract ID: 3547

Intoduction
Endometrial hyperplasia is a condition of excessive proliferation of the cells of the endometrium which may present with abnormal uterine bleeding and considered an important risk factor for the development or even co-existence of endometrial cancer.Geatagen failure can be defined as progression to atypical hyperplasia that occurs during follow-up, no histological regression of hyperplasia despite 12 months of treatment, relapse of endometrial hyperplasia after completing hormonal treatment, or Persistent bleeding:
Aim of the work: The aim of this trial was to evaluate the efficacy of letrozole as a treatment for endometrial hyperplasia without atypia not responding to gestagen therapy and to study the outcome of two doses different regimens

Patients and methods
This prospective randomized study was conducted at Mansoura University Hospital, department of Obstetrics & Gynaecology. A total of 46 women diagnosed with simple endometrial hyperplasia without atypia with failed gestagen therapy (for at least one year) were enrolled. History taking, and examination was done to all cases. Eligible participant subjects who met the inclusion and exclusion criteria were randomly assigned to either: Group A included 20 patients who received letrozole (Letrozole Tablets, Synthon Pharmaceuticals, Inc.) in a dose of 2.5 mg daily for 3 months by non-stop regimen. Group B included 20 patients who received letrozole; in a dose of 5 mg daily (2.5mg twice daily) for 3 months by non-stop regimen
Results: Complete resolution occurred in 17 patients in group A (89.5 %) and 17 patients in group B (94.4 %). Static disease occurred in 3 patients, 2 from group A (10.5 %) and 1 patient from group B. These 3 patients were advised to continue on the same regimen for another 3 months, one of them (from group A) underwent hysterectomy on her own request, also the other two patients did not improve after that and underwent hysterectomy.

Conclusion
patients with simple endometrial hyperplasia without atypia with failed Gestagen therapy can be managed successfully with Letrozole. Both dose regimens used succeeded in management of simple endometrial hyperplasia without atypia with no significant difference between them as regard the clinical, radiological or histological outcome. However, the second dose group B (5 mg) was associated with higher side effects, failure rates, cost and less patient compliance, so, group A (2.5 mg) is preferred, however further RCT are warranted to prove or disprove this.

Keywords
Letrozole, failed gestagen, hyperplasia

Supplementary material
http://sites.altilab.com/files/159/abstracts/abstract-hyperplasia.docx,
http://sites.altilab.com/

Uterine adenosarcomas: A tertiary cancer center experience

Authors

Ilker Kahramanoglu 1, Fuat Demirkiran 1, Hasan Turan 1, Tugan Bese 1, Macit Arvas 1,

1. Division of Gynecologic Oncology, Istanbul University, Cerrahpasa School of Medicine, Istanbul, TURKEY

Abstract ID: 3618

Introduction
Mullerian adenosarcoma is a very rare malignancy composed of benign epithelial and malignant stromal components. Uterine adenosarcomas (UAs) account for 5.5% of all uterine sarcomas. Even though these tumors are considered as less agressive tumors than uterine carcinosarcomas, recurrence rate may reach up to 40%.
Due to its rarity, there are limited data on the optimal therapy and prognostic factors. In this study, we investigated the clinicopathological features, treatment and recurrence patterns of the patients with UA treated at our institution.

Patients and Methods
A retrospective analysis of all patients with UA from 1 January 1998 to 1 May 2018 was performed. Demographic, clinicopathological and treatment data were abstracted from the patients' medical records.

Results
A total of 8 women were identified and included into study. Median follow-up was 59 months. The median age at the time of diagnosis was 62 years (31-69 years). Four patients had UA with sarcomatous overgrowth. Seven patients underwent complete surgical staging including total hysterectomy with bilateral salpingo-oophorectomy, pelvic-paraaortic lymphadenectomy and omentectomy. Only one patient underwent total hysterectomy with bilateral salpingo-oophorectomy only. Patients were staged as follows according to FIGO 2009 staging system: 2 patients had stage 1A, 2 patients had stage 1C, 2 patients had stage 2B and 2 patients had stage 3B diseases. Only one patient had a residual disease (>1 cm) after surgery. None of the patients had a lymph node involvement. Three patients received adjuvant chemotherapy (two of them had sarcomatous overgrowth). Five of 8 patients had tumor recurrence. Recurrence sites were as pelvis in 1 patient, upper abdomen and pelvis in 3 patients, and abdomen and lung in 1 patient. Three of these 5 had sarcomatous overgrowth. The other patient with sarcomatous overgrowth died 3 months after surgery. Median overall survival was 47 months.

Conclusion
Herein, we present our 20-year experience of UA. Sarcomatous overgrowth seems to be associated with an increased risk of recurrence and a decreased overall survival. A future metaanalysis may provide an information about the role of adjuvant therapy.

Keywords
adenosarcoma, Mullerian

The treatment outcome of the combination therapy of high-dose rate intra-cavity brachytherapy (HD-ICBT) and Intensity-modulated radiation therapy (IMRT; TomoTherapy) with central-shielding (CS) for cervical cancer

Authors

Yuki Mukai 1, Motoko Oomura 2, Masaharu Hata 3,

1. Radiology, Yokohama City University Graduate School of Medicine, Yokohma, JAPAN
2. Radiation Oncology, Shonan Kamakura General Hospital, Kamakura, JAPAN
3. Radiology, Yokohama City University Graduate School of Medicine, Yokohama, JAPAN

Abstract ID: 3636

Purpose
Reduction of the rectal dose is critical for high-dose rate intra-cavity brachytherapy (HD-ICBT) of cervical cancer patients. This is often difficult in Asian patients because of their smaller build compared with Caucasian patients. Therefore, in Japan, the standard radiation field of external beam radiation therapy (EBRT) is a combination whole pelvis (WP) plan and a sequential WP with central-shielding (WP-CS) plan to reduce the rectal dose prior to HD-ICBT. The aim of this study was to evaluate the treatment outcome and tolerance of cervical cancer patients treated by EBRT which is consisting of WP and WP-CS plans using TomoTherapy followed by HD-ICBT.
Material/methods: Thirty consecutive cervical cancer patients treated from 8/2011 to 10/2016 were included in this retrospective analysis. The EBRT started with the WP plan. The fractions ratio of WP and WP-CS plans was determined depending on tumor volume reduction during EBRT. Updated CT and MRI images were acquired for the WP-CS plan. In WP-CS plans, the dose to the rectum and uterus area where the intensive dose of HD-ICBT may be distributed was reduced to less than 20 % of the prescribed dose using the IMRT technique. However, the dose to the lymph-node area including pre-sacral area was maintained. A megavolt CT was performed daily just before treatment. The dose to rectum was defined as that to the ICRU rectal point.

Results
The median age of the patients was 64 (range, 38-91) years. Twenty–five (83.3%) had squamous cell carcinoma and the other five had adenocarcinoma. Tumor stages (FIGO) were distributed as follows: IB: 6, IIA: 2, IIB: 3, IIIA: 1, IIIB: 7, IVA: 1. Median dose of WP and WP-CS plans was 36 (range, 20-41.4) Gy and 14.4 (range, 9-28) Gy, respectively. Median ICBT dose/fractions to point A was 25Gy / 5 Fr.
Median total equivalent dose (EQD2) of combined EBRT and ICBT to Point A ($\alpha/\beta=10$) and to rectum ($\alpha/\beta=3$) were 63.0 Gy and 68.9 Gy, respectively. Twenty-two patients (73.3%) received weekly cisplatin, concomitantly. Median follow-up time was 32.5 (range, 4-78) months. The 2-year local control (LC), disease-free survival (DFS) and overall survival (OS) rates were 89.9%, 83.3%, and 86.3%, respectively. Univariate analysis showed the better OS for those with SCC ($p=0.035$).
Three patients experienced local recurrence and two of them developed simultaneous distant metastases. No pelvic lymph-node recurrence was observed. No acute or late ≥ grade 3 genitourinary or gastrointestinal toxicities were observed.

Conclusion
For cervical cancer patients, the combination of EBRT that consist of WP and WP-CS plans using TomoTherapy and HD-ICBT resulted in excellent LC and tolerance rates compared with previous studies using 3D-CRT. To our knowledge, this is the first report on EBRT including WP-CS plans using TomoTherapy.

Keywords

Cervical cancer, chemoradiation, Intensity-modulated radiation therapy (IMRT), high-dose rate intra-cavity brachytherapy (HD-ICBT), external beam radiation therapy (EBRT),

Malignant peritoneal mesothelioma found before 30 years of age without previous exposure to asbestos

Author

HYUN YOUNG KWOM 1,

1. Obstetrics and Gynecology, Dong-A University, College of Medicine, Busan, KOREA, REPUBLIC OF

Abstract ID: 3638

Introduction
Malignant peritoneal mesothelioma is a very rare disease and occurs about 80 cases a year in the United States. The disease usually occurs between the ages of 50 and 69. 50 % of them have a history of exposure to asbestos and others have radiation exposure, Simian virus 40 infection, chronic inflammation, hereditary disposition, cigarette smoking. Among those affected, 20 % have never been exposed to asbestos. The clinical presentation of the disease is nonspecific abdominal pain, weight loss, and abdominal distension also ascites occurs in 90 % of the patients. The prognosis is usually poor with median survival of less than 1 year for peritoneal tumors. Until now, the clinical characters, biologic and prognostic factor and treatment are unclear. We report a case of malignant peritoneal mesothelioma in a 30-year-old woman who had never been exposed to asbestos.

Case
A 28-year-old Russian woman (gravida 0, para 0) was presented with abdomen distension and a weight loss of 10 kg for 2 months. She had no underlying disease and had never been exposed to asbestos before. In the blood test results, the CA-125 is rising a little as 77 U/mL (normal range 0–35) the other results were normal ranged. By initial APCT, a serous surface papillary carcinoma is suggested and there was a large amount of ascites. She was submitted to exploratory operation upon which total hysterectomy, bilateral salpingo-ophorectomy and bilateral lymph node dissection, para aortic lymph node dissection, peritonectomy were performed. On pathological examination, the pelvic peritoneum showed Malignant mesothelioma and the other tissues revealed as Malignant mesothelioma, metastatic lesion. Postoperative combined Alimta-cisplan chemotherapy was applied. However, lymph node, lung and hepatic metastasis persisted, eventually she died 18 months after the cancer diagnosis.

Conclusion
This case reported that diffuse Malignant peritoneal mesothelioma can develop in those younger than 30 and without history of asbestos exposure. This is a rare case that has not been reported so far. Further research is neded to determine the risk factors for diffuse Malignant peritoneal mesothelioma because the disease is rapid, and the prognosis is very poor and early diagnosis is important. Therefore, a lot of research on Malignant peritoneal mesothelioma is needed in the future.

The Case of a Locally Advanced Endometrioid Adenocarcinoma arising from Vaginal Endometriosis: Diagnosis and Multidisciplinary Treatment

Authors

APOSTOLOS SARIVALASIS 1, ANITA WOLFER 1, MARIA TERESA ALVAREZ FLORES 2, FERNANDA HERRERA 3, MARIANGELA COSTANZA 1, PATRICE MATHEVET 4,

1. Medical Oncology Department, Center of Gynaecological Malignancies, CHUV, LAUSANNE, SWITZERLAND
2. Pathology Department, Center of Gynaecological Malignancies, CHUV, LAUSANNE, SWITZERLAND
3. Clinical Oncology Department, Center of Gynaecological Malignancies, CHUV, LAUSANNE, SWITZERLAND
4. Gynecology Department, Center of Gynaecological Malignancies, CHUV, LAUSANNE, SWITZERLAND

Abstract ID: 3643

Introduction
Chronic endometriosis is most commonly associated with clear cell neoplasms. Rarely, endometriosis can be complicated with endometrioid carcinoma. According to the literature, any abdominal structure can be involved. The vagina is rarely reported as the primary location of endometrioid adenocarcinoma associated with endometriosis with only six cases published in the last 20 years none of them with lymph node involvement. In this setting, staging and treatment references are missing. Here we present the diagnosis, surgical and adjuvant treatment of a patient with an endometrioid adenocarcinoma arising from endometriosis of the vaginal fornix with nodal involvement and extension to the Douglas pouch and rectal wall.

Patients and methods
A 56-year-old patient with a medical history of bilateral oophorectomy for endometriosis in 2002 was admitted to our gynecological department for investigation of progressive perineal pain with vaginal discharge developing over 5 months. Pelvic MRI and a PET-CT identified a mass of the posterior vaginal fornix infiltrating the Douglas pouch and possibly the rectal wall. There was no evidence of uterine involvement nor nodal or distant metastasis.
Initial surgical debulking consisted in a laparoscopic posterior exenteration with bowel anastomosis and ileostomy, bilateral pelvic lymph-node dissection and vaginal reconstruction. The pathology report confirmed a grade1, endometrioid adenocarcinoma, measuring 30mm, with nodal involvement (1/25), infiltrating the perirectal fat but not the muscular layer, developed on an endometriosis lesion. There was no lymphovascular or perineural invasion and the surgical margins free of tumor.
For this locally advanced ectopic endometrial adenocarcinoma, there is no specific staging system nor treatment guideline. The literature review for similar cases provids only scarce evidence, therefore we extended our research to endometrioid adenocarcinomas arising from endometriosis loci of other abdominal localization. Of the 13 published cases, three presented with nodal involvement and 8/13 had documented adjuvant treatment with chemotherapy and radiotherapy. The median progression free survival (PFS) of the treated cases was 24months [0-60] and 10months among the three cases with nodal involvement [6-28].

Results
Based on these findings, for this high risk of relapse setting, we decided a sequential adjuvant treatment with 4-6 cycles of carboplatinum AUC5 – paclitaxel 175mg/m2 chemotherapy followed by EBRT and Brachytherapy. This approach was inspired by stage III endometrial carcinoma treatment. Because of a life-threatening anaphylactic reaction

on cycle one, despite adequate premedication, the paclitaxel was changed for a weekly nab-paclitaxel 100mg/m2 treatment. The toxicities observed with the carboplatinum – nab-paclitaxel combination was manageable. After completing 4 cycles of chemotherapy, the patient received radiotherapy and is free from relapse one year after the completion of her adjuvant treatment.

Conclusion

Endometrial adenocarcinoma associated with endometriosis is a rare gynecological malignancy. The decision of a sequential chemoradiation treatment as indicated for classic uterine endometrioid adenocarcinoma needs to be personalized. The substitution of the three-weekly schedule of chromophore diluted paclitaxel, with a weekly schedule of nab-paclitaxel is feasible and globally well tolerated but further study is necessary to determine the equivalence of this weekly, dose dense, approach in this setting.

Keywords

Endometriosis associated, Advanced Endometrial Adenocarcinoma

Supplementary material:

http://sites.altilab.com/files/159/abstracts/abstract-esgo-4-6.10.2018-final.docx, http://sites.altilab.com/files/159/abstracts/poster-ec-endometriosis-3rd-esgo-10.2018-final.pptx

Clinical utility of the risk of malignancy indices for preoperative differentiation between ovarian cancer and borderline ovarian tumor

Authors

Oh So Ra 1, Park Jung Woo 1, Han Myoungseok 1, Bae Jong Woon 1, Cho Yeon Jean 1,

1. Obstetrics and Gynecology, Dong-A University, College of Medicine, Busan, KOREA, REPUBLIC OF

Abstract ID: 3647

Introduction and Objectives
Preoperative identification of ovarian malignancies is not always feasible with current diagnostic modalities. Especially, it is difficult to discriminate between ovarian cancer (OC) and borderline ovarian tumor (BOT). This study aimed to determine an appropriate risk of malignancy index (RMI) cutoff value by comparative analysis of the four malignancy risk indices (RMI 1, RMI 2, RMI 3, and RMI 4) for distinguishing between OC and BOT.

Methods
We retrospectively enrolled 339 patients: 115 women with BOTs and 224 with OCs. Preoperative serum CA125 level, menopausal status, tumor sizes, and ultrasound findings were used to calculate the RMI 1, RMI 2, RMI 3, and RMI 4 scores for each patient, and the results were compared.

Results
There were no significant differences in the area under the ROC curve (AUC) for RMI 1, RMI 2, RMI 3, and RMI 4 (0.792, 0.791, 0.785, and 0.785, respectively). However, the statistical significance in the diagnostic capability of RMI compared to other factors (CA 125, menopause, tumor size, and ultrasound) was proven.

Discussion / Conclusion
This study is the first to investigate the performances of the four malignancy indices in invasive OCs and BOTs; although there was no significant difference in the compared RMI scores, the RMIs were very effective at predicting an accurate preoperative diagnosis in patients with all invasive OC and BOT histotypes.

Keywords
Risk of malignancy index, Preoperative diagnosis, Ovary cancer, Borderline ovarian tumor

Ileal gastrointestinal stromal tumors mimicking gynecological masses: a single institutional experience

Authors

Giulia Dondi 1, Anna Myriam Perrone 1, Margherita Nannini 2, Antonio De Leo 3, Marco Tesei 1, Donatella Santini 3, Maristella Saponara 2, Maria Pantaleo 2, Pierandrea De Iaco 1,

1. Gynaecological Oncology Unit, S. Orsola-Malpighi Hospital, Bologna, ITALY
2. Department of Specialized, Experimental and Diagnostic Medicine, S. Orsola-Malpighi Hospital, Bologna, ITALY
3. Pathology Service, Addarii Institute of Oncology, S. Orsola-Malpighi Hospital, Bologna, ITALY

Abstract ID: 3661

Introduction
Gastrointestinal stromal tumor (GIST) is the most common mesenchimal neoplasm of the gastrointestinal tract. The small intestine is the second predominant site of origin of GIST (1,2). This neoplasia has a wide spectrum of clinical presentations and rarely can be diagnosed as an asymptomatic pelvic mass accidentally detected by trans-vaginal ultrasound and thus wrongly diagnosed as a gynaecologic tumor in female patients. To date, in literature 35 cases of ileal GIST mimicking gynecologic masses have been described (3-11).
The aim of this study is to describe the clinical and trans-vaginal sonographic appearance of an ileal GIST mimicking a gynecologic tumors in five patients referred to our Institution, in order to better recognize this rare clinical presentation.

Patients and methods
We retrospectively reviewed 64 female patients with ileal GIST, collected since 2001 to 2017 in our GIST database. Among those 64 female patients with ileal GIST, we selected 5 patients presented with a pelvic mass and referred to a gynecological consultation at first. Characteristics of patients are listed in Table 1.

Results
Clinically, one patient was asymptomatic and the mass was occasionally found with a routine transvaginal ultrasound, two presented with abdominal pain, one with melena and one with a left inguinal swelling. In all cases CA 125 was negative or mildly increased (< 170 U/ml).
At trans-vaginal ultrasound exam all the lesions were predominant solid, dishomogeneous and hypoechoic (Figure 1A and 1B). The mean diameter was 68 mm. In four cases the lesions were described as "lobulated masses". Cystic areas due to necrosis were described in one patient. In all cases no acoustic shadows were observed. In three cases the mobility towards other pelvic structures was reduced and in four cases the masses were localized in the right pelvis mimicking right ovarian lesions. All cases showed a high vascularization at Power Doppler (Fig 2A and 2 B).
A laparotomic ileal resection was performed in all cases. Hysterectomy and bilateral salpingo-oophorectomy were performed in 2 cases and left salpingo-oophorectomy in one. The histologic exam revealed an ileal GIST with a mitotic index ranging from <5/50 HPF to 19/50 HPF (median: 5/50 HPF) with bilateral ovarian metastases in one patient with an advanced disease (12).

Conclusion
In our experience the clinical presentation of ileal GIST was heterogeneous and nonspecific and does not permit a differential diagnosis between GIST and ovarian tumor. GIST shows transvaginal sonographic peculiar features. The mass appears solid, irregular, hypo-echoic with small anechoic parts, without acoustic shadows, highly

vascularized and frequently dislocated in the right pelvis. Normal or mild serum levels of CA 125 (< 170 U/ml) and absence of free fluid in the pouch of Douglas can be considered ancillary features for suspicion of GIST. Lastly a gyneacologic evaluation should be proposed in patients with a history of GIST because of the possibility of metastases to the genital tract (12,13).

Keywords
Ileal gastrointestinal stromal tumor; gynaecologic masses; trans-vaginal ultrasound

Supplementary material
http://sites.altilab.com/files/159/abstracts/referencestable.pdf,
http://sites.altilab.com/files/159/abstracts/figures.pdf

COMPARISON BETWEEN LAPAROSCOPY AND LAPAROTOMY IN THE SURGICAL RE- STAGING OF GRANULOSA CELL TUMORS OF THE OVARY

Authors

Proto Anna 1, Peiretti Michele 1, Ricciardi Enzo 2, Bruni Simone 3, Aletti Giovanni 3, Candotti Giorgio 1, Colombo Nicoletta 3, Zanagnolo Vanna 3, Maggioni Angelo 3,

1. Division of Obstetrics and Gynecology,, University of Cagliari, Cagliari, ITALY
2. Gynäkologie & Gynäkologische Onkologie, Kliniken Essen-Mitte, Essen, GERMANY
3. Division of Gynecology, European Institute of Oncology, Milan, ITALY

Abstract ID: 3662

Introduction
To evaluate the role of laparoscopic (LPS) and laparotomic (LPT) staging in patients with incompletely surgically staged ovarian granulosa cell tumors (OGCT).
Materials /Patients and methods
All medical records of patients with OGCT that were managed as inpatients from March 1994 to March 2017 at the Division of Gynaecologic Oncology, European Institute of Oncology in Milan, were reviewed. Information about the age at time of diagnosis, FIGO stage, histology, grade, treatment and survival, were extracted. The initial date of diagnosis ranged from 1990 to 2017.

Results
We found from our database a total of 170 patients with a median age of 49 years (range, 15-84 years); 145 (85%) patients had adult type and 13 (7,6%) had juvenile granulosa cell tumors, 10 (5,8%) had Sertoli-Leydig tumour, 1 patient (0,5%) had a Sex-cord tumour with annular tubules and 1 had Steroid cell tumour. Eighty-four patients (49,5%) received primary surgery that included a hysterectomy; 86 patients (50,5%) underwent fertility-sparing surgery Eighty-one patients (48%) with diagnosis of OGCT were incompletely surgically staged at another institution. We completed the surgical staging with peritoneal assessment, infracolonic omentectomy and abdominal/pelvic washings after a mean delay time from the diagnosis of 3.5 months (range 1-8 months). We evaluated our results in terms of laparoscopic treatment (56 patients) and laparotomic treatment (25 patients). The original clinical International Federation of Gynecology and Obstetrics (FIGO) stage of the LPS-group was IA in 35 patients, IB in 1, IC in 18 and IIC in 2. After surgical restaging performed by LPS, 10/56 (19%) were upstaged. Among the IA patient's group, 1 was upstaged to IB stage and 3 to IIB (4/35); among patients with stage IC, 1 was upstaged to IIA, 4 to IIB and 1 to IIIC stage (6/18). In the LPT-group the FIGO stage was IA in 11 patients, IC in 11, IIIA in 1, IIIB in 1 and IIIC in 1 patient. After second surgery performed by LPT, 7/25 (28%) were upstaged. Among the IA patient's group, 1 was upstaged to IIB stage and 2 to IIIB (3/11); among patients with IC stage, 1 was upstaged to IIA, 2 to IIB and 1 to IIIB stage (4/11). There were no major intraoperative or postoperative complications. Adjuvant chemotherapy was given to the upstaged (IIB-IIIC) patients (Table I).

Conclusion
According to our series, laparoscopic restaging compared to the open approach seems to be a feasible and efficient technique to complete surgical staging in patients with GCTs incorrectly staged. Surgical restaging seems to upstage a considerable number of OGCT, mainly in the initial stage IC group of patients. However, the impact of restaging on final outcome and survival remains to be demonstrated.

Keywords
Ovarian granulosa cell tumors, Laparoscopy, Laparotomy, Restaging

Treatment Outcomes Of Clear Cell Carcinoma Of Ovary: Experience From A Tertiary Cancer Center In Eastern India

Authors

ANIK GHOSH 1, JOYDEEP GHOSH 2, JAYDIP BHAUMIK 1, DIVYA MIDHA 3,

1. Gynae-Oncology, Tata Medical Center, Kolkata, INDIA
2. Medical Oncology, Tata Medical Center, Kolkata, INDIA
3. Pathology, Tata Medical Center, Kolkata, INDIA

Abstract ID: 3664

Introducton and Objectives
Clear cell carcinoma of ovary is a distinct and rare entity. The incidence in Asian patients is higher than the western population. The outcomes are poorer compared to other histologies. There is scarcity of outcome data from India. Hence, we undertook this study to analyze the clinical characteristics, patterns of recurrence and survival outcomes.

Materials
This is a retrospective observational study of all CCCO diagnosed and treated at our institute from June 2011 to March 2018. We took out the clinical characteristics, treatment details and follow up data from the electronic hospital database. Survival analysis was done by Kaplan Meir method.

Results
A total of 46 patients were analyzed. Median age at diagnosis was 51 years (29-69 years). The distribution of FIGO stage at diagnosis was: 29 (63 %) in Stage I, 3 (6.5 %) in Stage II, 11 (23.9 %) in Stage III and 3 (6.5 %) in Stage IV. The median Ca125 at diagnosis was 66.50 IU/ml (4.00 – 6137.00 IU/ml). Upfront surgery was done in 38(82.6 %) patients. Neoadjuvant chemotherapy (NACT) followed by interval debulking surgery (IDS) was done in 6 (13.0 %). Surgery could not be performed in 2 patients after NACT due to poor performance status. Surgery in our hospital was done in 17 (37.0 %) patients. Optimal cytoreduction was achieved in all patients, out of which CCscore-0 was achieved in 15 (88 %) and CCscore-1 in 2 (12 %) patients. Follow up data was available in 44 patients. The median follows up duration was 19.5months. There were 21 (47.7 %) recurrences and 22 (50 %) deaths (1 death unrelated to treatment or disease). Out of 21 recurrences, 11 (52.3 %) were platinum sensitive and 10 (47.6 %) were resistant. The estimated recurrence free survival (RFS) and overall survival (OS) for early stage (FIGO I&II) is 30 and 40 months respectively and in advanced stages (FIGO III & IV) it is 11 and 12 months respectively.

DISCUSSION & CONCLUSION
CCCO is frequently diagnosed at an early stage and is amenable to upfront surgery with complete cytoreduction. Patients with early stage disease have better RFS and OS compared to advanced stage disease.

Keywords
ovary, clear cell, treatment outcome, india

EG-VEGF Receptor, the PROKR2, is a target for the treatment of gestational choriocarcinoma: in vitro and in vivo studies

Authors

Nadia Alfaidy 1, Wael Traboulsi 1, Frederic Sergent 1, Houssine Boufettal 2, Rima Slim 3, Pierre-Adrien Bolze 4, Touria Aboussaouira 5, Jean-jacques Feige 1, Mohamed Benharouga 6,

1. Biologie du cancer et de l'infection, INSERM U1036, Grenoble, FRANCE
2. Gynécologie obstétrique, CHU ibn Rochd, Casablanca, MOROCCO
3. McGill University, Montreal, CANADA
4. Medical Diagnostic Discovery Department (MD3) LCR HCL-bioMérieux, CHU Lyon sud, Lyon, FRANCE
5. Cancer deprtement, Faculty of medicine of Casablanca, Casablanca, MOROCCO
6. LCBM-UMR5249, Université Grenoble-Alpes, Grenoble, FRANCE

Abstract ID: 3673

Objectives
Choriocarcinoma (CC) is the most malignant gestational trophoblastic disease that often develops from complete hydatidiform moles (CHM). Neither the mechanism of CC development nor its progression are yet characterized. We have recently identified EG-VEGF (endocrine gland-derived vascular endothelial growth factor) as a novel key placental growth factor that controls trophoblast proliferation and invasion. EG-VEGF acts via two G-protein receptors, PROKR1 and PROKR2. Eg-VEGF was recently reported by our group to increase trophoblast proliferation and control their migration and invasion, suggesting its potential involvement in choriocarcinoma development and progression.
Methods: To test this hypothesis, three approaches were used , i) a clinical investigation comparing circulating EG-VEGF in control (n=20) and in distinctive CHM (n=38) and CC (n=9) cohorts, ii) an in vitro study investigating EG-VEGF effects on the CC cell line JEG3, and iii) an in vivo study including the development of a novel CC mouse model, through a direct injection of JEG3-luciferase into the placenta of gravid SCID-mice.

Results
Both placental and circulating EG-VEGF levels were significantly increased in CHM and CC (5 folds) patients. EG-VEGF increased JEG3 proliferation, migration and invasion, in 2D and 3D culture systems. JEG3 injection in the placenta caused CC development with large metastases compared to their injection into the uterine horn. Treatment of the animal model with the EG-VEGF receptor's antagonist, PKR505 significantly reduced tumor development and progression and preserved pregnancy. Antibody-array and immunohistological analyses of the placenta further deciphered the mechanism of the antagonist's actions.

Conclusion
Overall, our work describes a novel pre-clinical animal model of CC and bring evidences that EG-VEGF receptors can be targeted for CC therapy. This may provide safe and less toxic therapeutic options compared to the currently used multi-agent chemotherapies.

Keywords
Choriocarcinoma, prokineticin, EG-VEGF, pregnancy, therapy

Can clinical features, ultrasound and elastography be useful for presurgical prediction of ovarian granulosa cell tumor: case report

Authors

Nabil Abdalla 1, Robert Piorkowski 1, Seweryn Trojanowski 1, Alicja Jakimiuk 1, Pawel Stanirowski 1, Krzysztof Cendrowski 1, Wlodzimierz Sawicki 1,

1. Chair and Clinic of Obstetrics, Gynecology and Oncology, Medical University of Warsaw, Warsaw, POLAND

Abstract ID: 3677

A 39-year-old patient was admitted to our Oncology Centre for surgery because of right adnexal tumor. The patient suffered from heavy irregular menstrual cycles every 14-30 days, lasting 3 days for the last six months. The past medical, past surgical and family history was uneventful. The body mass index was 32. Clinical examination reveals movable right adnexal tumor of 7 cm diameter. The left adnexa and uterus were of normal size. The serum level of CA125 and HE4 was within normal range and achieved 5,3 IU/ml and 66,8 pmol/L, respectively. Risk of malignancy algorithm (ROMA) revealed low risk (13,1 %) of ovarian malignancy. The level of serum estradiol, beta hCG, AFP and LDH was within normal range and reached 10 pg/ml, 1,2 mIU/ml, 2,85 ng/ml and 177 U/L, respectively. The 2D ultrasound showed regular solid right adnexal tumor with dimensions of 71x42x75 mm. The vascularization was assessed as grade 3 according to terms and definitions of International Ovarian Tumor Analysis (IOTA) group. Ultrasound with elastography option was used to assess the mass. The strain ratio of the anterior and posterior wall of the myometrium of the uterus compared to the adnexal mass was 0,17 % and 0.17 %, respectively. There was no acoustic shadows, free fluid or evidence of metastases. The IOTA-ADNEX model predicted 32% risk of malignancy, with a probability of being borderline tumor, stage I ovarian cancer, stage II-IV ovarian cancer and metastases was 5,3 %, 15,2%, 2,4 % and 9,1 %, respectively. The mass was inconclusive according to the IOTA simple rules and subjective assessment of the expert ultrasonographist suggested malignant nature of the mass. After obtaining patient's consent, the patient underwent laparotomy, which confirmed soft yellow regular right ovarian solid mass without evidence of metastases. Right oviduct was without macroscopic changes. Complete right adnexal excision was performed, and intraoperative histological assessment revealed mature type of ovarian granulosa cell tumor. Final histological examination confirmed the diagnosis of completely excised granulosa cell tumor without interruption of the tumor's capsule. Immunohistochemical staining showed positive staining for calretinin (++), inhibin (+) and smooth muscle actin (++) and negative for CD117. The postoperative period was uneventful. Presurgical difficulties are attributed to contradicting finding from suspicious ultrasound appearance and normal level of tumor markers. Elastography gave additional information about the tumor and it's consistency and compared it to the elastography features of the myometrium. Abnormal sudden change of menstrual cycle rhythm and heavy menstrual bleeding in a young patient with solid ovarian tumor suggested rather hormone secreting tumor. The final histological assessment confirmed rare adult type of ovarian granulosa cell tumor.

Malignant brenner tumor ovary: A Rre Case Report

Author

Renuka Gupta 1,

1. Gynae-Oncology, Action Cancer Hospital, New Delhi, INDIA

Abstract ID: 3682

Intoduction
Malignant Brenner tumors (MBTs) of the ovary are very rare, and their definition, biology and treatment modality have not been established. Most Brenner tumors are benign, with only 1-2% being malignant. We presented a case of 57 years old women with a rare malignant Brenner tumor.

Objectives
To study a very rare case and Its management
Method: It is a case study, a case of 57 years old women with a rare malignant Brenner tumor presented with complaint of abdominal pain and postmenopausal bleeding. Imaging revealed large complex solid cystic pelvic mass. We did staging ovarian laparotomy. Histopathology revealed malignant Brenner tumor. On Immunohistochemistry (IHC) tumour cells were immunoreactive for uroplakin, CK7, WT1, GATA-3 and Ki67 was 60% and non immunoreactive for CK20, favor of tumor of urothelial differentiation.

Result
Malignant Brenners tumor of ovary is a very rare tumor
Conclusion: Malignant Brenners tumor of ovary is a very rare tumor

Keywords
Malignant Brenner Tumor (MBTs), Immunohistochemistry (IHC), Coelomic epithelium, Urothelial epithelium

Axillary lymph node dissection in ovary cancer patients with axillary lymph node metastasis

Authors

Junf So-Youn 1, Lim Myong Cheol 2, Seo Sang-Soo 2, Kang Sokbom 2, Kim Sun Ho 2, Yoo Chong Woo 2, Koh Kyongran 1, Lee Seeyoun 1, Kang Han-Sung 1, Lee Eun Sook 1, Park Sang-Yoon 2,

1. Center for Breast Cancer, National Cancer Center, Goyang, KOREA, REPUBLIC OF
2. Center for Uterine Cancer, National Cancer Center, Goyang, KOREA, REPUBLIC OF

Abstract ID: 3686

Objectives
This study aimed to evaluate the role of axillary lymph node dissection (ALND) in ovary cancer patients with ALN metastasis.
Methods: A total 16 patients who underwent ALND for ALN metastasis from ovary cancer in a single institution were retrospectively reviewed. All clinicopathologic characteristics at initial treatment and relapsing disease

Result
Median age at initial diagnosis of ovary cancer was 52 years (range, 36-71). Fourteen patients (85.5 %) had serous ovary cancer and 2 patients (12.5 %) mixed serous and endometroid type. Initial stage of 7 patients (43.8%) was stage III and 9 patients (56.2 %) stage IV.
Median period of initial diagnosis of ovary cancer to diagnosis of ALN metastasis was 21.0 months (range, 6.8-133.5). Eight patients (50.0 %) showed right ALN metastasis, 3 (18.8 %) left ALN metastasis, and 5 (31.2 %) both ALN metastasis. Median number of dissected ALNs was 12.5 (range, 1-28) and median number of metastatic ALNs 3 (range, 1-15).
For the median follow-up period of 22.6 months (range, 6.0-157.7), 6 patients (37.5 %) died and 10 patients (62.5 %) experienced disease-progression. The 2-year and 5-year OS rate was 63.5% and 43.5 % and the 2-year and 5-year PFS rate 44.4% and 17.8%, respectively. After ALND, the affected arm lymphedema was developed in 6 patients (37.5 %).

Conclusion
Although ALND resulted in arm lymphedema, it could be one of the optimal treatments which improve the prognosis of ovary cancer patients with ALN metastasis.

Keywords
ovary cancer, axillary lymph node, dissection

Metastasis of Cervical Cancer to the Abdominal Wall: a case report

Authors

Dalia Khalife 1, Alaa El Housheimi 1, May Abiad 2, Rayan Rammal 3, Reem Abdallah 1,

1. Obstetrics and Gynecology, American University of Beirut Medical Center, Beirut, LEBANON
2. School of Medicine, American University of Beirut, Beirut, LEBANON
3. Pathology & laboratory medicine, American University of Beirut Medical Center, Beirut, LEBANON

Abstract ID: 3687

Introduction
Squamous cell carcinoma of the cervix (SCC) accounts for 85% of the cases of cervical cancer.
The most common sites of recurrence postoperatively are in the pelvis and vagina. Metastases to the abdominal wall from cervical carcinoma are rare with reported incidence of 0.1 to 2 %, and a survival rate ranging from 1 week to 7 months.

Case report
A 43-year-old woman with stage IB2 SCC of the cervix underwent a radical hysterectomy, with bilateral salpingo-oophorectomy and pelvic lymph node dissection at a different institution. She did not receive any adjuvant treatment, although she is considered at intermediate risk by Sedlis criteria (size of 4 cm and deep stromal invasion). Fifteen months later, she presented to our institution with a painful suprapubic rapidly growing mass. MRI of pelvis showed a 13 x11x 9 cm mass adherent to the anterior abdominal wall, to the dome of the bladder and to the small bowel with enlarged right pelvic lymph nodes. There was no evidence of intra-abdominal or distant metastases. The mass was removed en bloc, with rectus abdominus muscles, 2 segments of small bowel and a portion of the bladder, along with right pelvic lymphadenectomy. The resultant infra-umbilical abdominal wall defect measured 20 x 15 cm. It was reconstructed with an island pedicle of right thigh anterolateral vastus and vastus lateralis muscle flap. Histology showed invasive non-keratinizing moderately differentiated SCC, consistent with uterine cervical primary, involving urinary bladder, bowel and soft tissue, with negative margins and one positive right pelvic lymph node. Adjuvant treatment was delayed for 3 months to allow for complete healing as the patient had to undergo de-epithelialization of a segment of the flap. She received 6 cycles of Carboplatin, Taxol and Avastin and was then lost to follow up for 4 months. CT scan confirmed the absence of recurrence and she is currently receiving the pre-planned radiation therapy. She remains free of recurrence after 12 months of the surgery.

Discussion
We describe the case of a 43-year-old woman with abdominal wall lesion that turned out to be metastatic from primary cervical carcinoma. Metastatic carcinoma to the abdominal wall is uncommon. Treatment involves chemotherapy and/or radiotherapy. Two cases in the literature are similar to our case, and treatment consisted of palliative resection of the abdominal wall lesion, followed by reconstruction with various muscular flaps. Recurrence is deemed to be the result of residual occult cancer after surgical resection. Other mechanisms of spread proposed are through implantation of cancer cells at the time of surgery or via retrograde spread through the lymphatics.

Conclusion
The present case is uncommon because abdominal wall metastasis from SCC of the cervix after radical surgery is rare. It was also challenging since the removal of the lesion has resulted in a large soft tissue defect. However, with advancement in reconstructive surgery, extensive resection with defect closure with rotational flaps may be the standard

of care in the management of abdominal wall lesion after cervical cancer in order to improve the overall survival.

Keywords
Cervical cancer, Abdominal wall lesion, Metastasis of cervical cancer, Wedge resection of lesion

Supplementary material
http://sites.altilab.com/files/159/abstracts/picture1.pdf,
http://sites.altilab.com/files/159/abstracts/2.pdf

Single port laparoscopic surgery for adnexal masses

Author

Abdulaziz Alobaid 1,

1. Gynecologic Oncology, National Medical Care, King Fahad Medical City, Riyadh, SAUDI ARABIA

Abstract ID: 3688

Background
Over the last few decades, advancement in minimally invasive surgical technique has resulted in it becoming the standard of care for the management of adnexal masses. Although the adoption of minimally invasive techniques hasn't been optimal, minimally invasive techniques have proven to lower blood loss, shorten hospital stay, improve post-operative pain, reduce wound complications and improve cosmesis
Objective: Our study aims to validate Single Incision Laparoendoscopic Surgery feasibility in regard to surgery duration and cyst size as well as its safety in regard to intraoperative blood loss, need for conversion to conventional laparoscopy or laparotomy and postoperative complications.

Settings
This is a retrospective study that analyzed all patients who underwent single port laparoscopic (SPL) surgery for an adnexal masses from Oct. 2012 till Oct. 2017 at King Fahad Medical City in Riyadh, Saudi Arabia.

Results
In total, 47 patients underwent 47 surgeries. The median age was 32 years (range12 - 88 years). The mean BMI was 27.27 ± 6.06 kg/m2. 14 (29.2 %) Patients had a history of at least one comorbidity. The primary indication for study inclusion was surgery for an adnexal mass performed via SPL by a gynecologic oncologist. All patients underwent unilateral or bilateral oophorectomy/salpingectomy, combined salpingoophorectomy, cystectomy or detorsion. There was one case (2.08 %) that required a conversion to laparotomy due to dense adhesions and another case (2.08 %) that required a re-operation due to a suspicion of bowel obstruction postoperatively. The median size (Greatest Dimension of resected lesions) was 8.5 cm (3- 30 cm). Median operative time was 66 minutes (34-200). The median estimated blood loss was 50 milliliter (20-300), with a median hospital stay of 1 day (1-3). The short term and long-term postoperative complications (Venous thromboembolism, ICU admission, Infection, Pelvic Collection, Injury to adjacent organs) were 0%. Among the 47 masses removed, 91.5 % (n = 43) were benign, 4.3 % (n = 2) were borderline or low malignant potential, and 2.1 % (n=1) were malignant.
The first image is for a patient with a huge cyst before surgery and the second image is for the same patient immediatly after surgery.

Conclusion
This retrospective study shows that SPL is a safe surgical option to treat adnexal masses with acceptable surgical time and morbidity. Unfortunately, this study does not provide data to guide a surgeon in the choice of a surgical platform. We believe that the flexibility to alter the size of the single incision is best used in removing adnexal masses of various sizes and character.

Keywords
Adnexa, Single port, Laparoscopy

Supplementary material
http://sites.altilab.com/files/159/abstracts/picture1.png,
http://sites.altilab.com/files/159/abstracts/picture2.png

The impact of extent of cytoreductive surgery (CRS) on epithelial ovarian cancer (EOC) at the American University of Beirut (AUBMC)

Authors

Reem Abdallah 1, Muhieddine Seoud 1, Alaa Husheimi 1, Iman Jaafar 1, Karam Hamed 1, Faek Jamali 2, Ali Khaiil 1,

1. Obstetrics & Gynecology, American University of Beirut medical center, Beirut, LEBANON
2. Surgical Oncology, American University of Beirut medical center, Beirut, LEBANON

Abstract ID: 3699

Aims
To study the impact of the extent of CRS [complete Debulking (CD), optimal Debulking (OD) < 1cm, or suboptimal Debulking (SOD) > 1 cm residual disease] on progression free (PFS) and overall survival (OS) of patients with advanced EOC between 1996-2017 at AUBMC.

Methods
A retrospective review of the impact of CD versus OD versus SOD on PFS and OS. Results: Of 177 patients with EOC, 107 were stage IIIC and 28 IV. 75 % had CD while 23.4 % had OD and 1.6 % had SOD. In patients with stage IIIC serous EOC, the overall PFS and OS were 51.6 ± 8.4 and 62.8±7.3 months respectively whereas in stage IV serous EOC, the overall PFS and OS were 34.7 ± 3.9 and 52.4 ± 4.6 months respectively. In patients with stage IIIC serous EOC, CD compared to OD statistically significantly prolonged PFS (40 ± 4.4 vs. 20.7 ± 1.7 months respectively, P=0.007) but did not statistically significantly prolong OS (48.5 ± 4.2 and 36.4 ± 6.75 months respectively, P=0.486). In stage IV serous EOC, PFS was longer in CD vs. OD (26.0 ± 6.2 and 10.6 ± 2.17 months respectively) but did not reach statistical significance (P=0.08) while OS was comparable (27.8 ± 11.1 and 21.9 ± 4.3 months respectively, P=0.5).

Conclusions
The extent of the cytoreductive surgery (CD vs. OD) significantly prolonged Progression free Survival but not overall survival in stage IIIC serous epithelial ovarian cancer but not in stage IV serous epithelial ovarian cancer.

Keywords
Ovarian Cancer, debulking, Cytoreduction, Overall Survival, Progression free survival.

A multicentre analysis of malignant ovarian germ cell tumours: rationale for alignment of paediatric and adult practice and for chemotherapy de-escalation in specific subtypes

Authors

Michelle Lockley 1, Claire Newton 2, Krithika Murali 3, Amar Ahmed 4, Helen Hockings 1, Daniel Berney 5, Jonathan Shamash 6, Susana Banerjee 3, Sara Stoneham 7,

1. Barts Cancer Institute, CRUK Barts Cancer Centre, Queen Mary University London, London, UNITED KINGDOM
2. University Hospitals Bristol NHS Foundation Trust, Bristol, UNITED KINGDOM
3. The Royal Marsden Hospital, London, UNITED KINGDOM
4. The Wolfson Institute, CRUK Barts Cancer Centre, Queen Mary University London, London, UNITED KINGDOM
5. CRUK Barts Cancer Centre, Queen Mary University London, London, UNITED KINGDOM
6. Barts Health NHS Trust, London, UNITED KINGDOM
7. University College Hospital, London, London, UNITED STATES

Abstract ID: 3706

Introduction and Objectives
Ovarian germ cell tumours (OvGCTs) are a group of rare cancers. Histological subtypes include dysgerminoma (Dys), yolk sac tumour (YST), mixed germ cell tumour (MGCT) and immature teratoma (IT), which is subdivided by pathological grade. Incidence peaks in adolescence and young adulthood and prognosis is excellent. Fertility-sparing surgery is the standard of care. The most commonly used chemotherapy regimen is BEP (bleomycin, etoposide, cisplatin), which can result in chronic and potentially life-threatening toxicities. To reduce these toxicities, paediatricians use lower doses of bleomycin, substitute carboplatin for cisplatin and successfully manage IT with surgery alone. We aimed to characterise the toxicity burden of current chemotherapy regimens and to investigate chemotherapy efficacy in all histological subtypes occurring at all ages.

Methods
A large, retrospective analysis of OvGCTs in four UK cancer centres between 1/1/2005 and 31/12/2016. Pre-defined age cut-off was ≤18 and ≥19 in accordance with current definitions of adult and paediatric practice.

Results
138 patients were identified, of which 99 (72%) were aged 19 or older (median age: 23.5, range: 8-76). Overall survival rate was 93% at a median follow-up of 56.6 months (range: 11 days-16.5 years). 137/138 patients underwent surgery, which was fertility-sparing in 88% cases. 39 patients experienced an event defined as relapse or progression of any OvGCT histology. There was no significant difference in event-free survival (EFS) according to age (≤18 vs. ≥19: log-rank p=0.96) or stage (HR=1.311, 95% CI 1.008-1.704, p=0.051) but histological subtype was significantly associated with EFS (log-rank p=4.9e-7). 55% patients received neo-adjuvant or adjuvant platinum-containing chemotherapy, which was BEP in 82%. Recorded tumour stage was the same in patients ≤18 and ≥19 yet more adult patients received chemotherapy (59% vs. 46%). Chemotherapy caused 27 potentially chronic toxicities and one patient subsequently died from acute lymphoblastic leukaemia. Dys, YST and MGCT patients experienced fewer relapse/progression events following neo-adjuvant and adjuvant chemotherapy (Dys: 0% with chemotherapy vs. 20% without, YST: 26.3% vs. 75% and MGCT: 40% vs. 70%). Patients with pure Dys or YST who did not receive chemotherapy and subsequently relapsed, were successfully salvaged by chemotherapy alone (3/3 pure Dys patients, 3/4 pure YST). No patients with pure IT had a radiological response to chemotherapy and neo-adjuvant/adjuvant chemotherapy did not reduce relapse/progression events (30% with chemotherapy vs. 15% without). IT grade did not predict EFS (HR 1.038, 95% CI

0.417-2.581, p=0.937).

Conclusions
We confirmed the excellent prognosis of OvGCTs and observed no difference in outcome according to age. Dys and YST were extremely sensitive to chemotherapy but toxicities occurred frequently and there was one probable treatment-related death. Clinical trials investigating reduced-toxicity chemotherapy regimens are therefore warranted in these chemotherapy-sensitive cancers and our series supports inclusion of patients across traditional adult/paediatric age boundaries. In marked contrast to other histological subtypes, IT was not chemotherapy-sensitive and pathological grading was not informative. Thus we support surgical management of IT at all patient ages in line with current paediatric and TYA practice.

Keywords
Germ Cell, chemotherapy, BEP, toxicity, age

Supplementary material
http://sites.altilab.com/files/159/abstracts/kaplain-meier-efs-curves.pdf,
http://sites.altilab.com/

Clinicopathological determinants of survival and response to therapy in patients (pts) with gynaecological (GYN) carcinosarcomas (CS)

Authors

Alberto Hernando 1, Victor Rodriguez Freixinos 1, Rodrigo Dienstmann 2, Fiorella Ruiz 2, Guillermo Villacampa 2, Lorena Fariñas 1, Asunción Perez Benavente 3, Berta Diaz Feijoo 3, Ramona Verges Cardona 4, Silvia Cabrera Diaz 3, Jose Luis Sánchez Iglesias 3, Antonio Gil-Moreno 3, Angel García 5, Silvia Franco Camps 3, Ana Oaknin 1,

1. Medical Oncology, Vall D´Hebron University Hospital, Barcelona, SPAIN
2. Odyssey, Vall d'Hebron Institute of Oncology, Barcelona, SPAIN
3. Gynecology, Vall D´Hebron University Hospital, Barcelona, SPAIN
4. Radiotherapy, Vall D´Hebron University Hospital, Barcelona, SPAIN
5. Anatomical pathology, Vall D´Hebron University Hospital, Barcelona, SPAIN

Abstract ID: 3707

Introduction
Carcinosarcomas (CS) are rare and aggressive GYN epithelial malignancies that contain both malignant sarcomatous and carcinomatous elements. There are no standard therapeutic options implemented.

Methods
Retrospective review of GYN CS uterine (UT) and ovarian (OC) pts treated at the Vall d´Hebron Hospital from 2009-2017 was conducted. Clinicopathological features and treatment modalities were correlated with outcomes. Overall Survival (OS) was calculated with Kaplan Meier method and multivariate Cox models were constructed.

Results
A total of 41 CS pts (UT 33 (80.5%), OC 8 (19.5%)) were selected. Median age at diagnosis was 68 years (44-91), including 15 (36.6%) stage I/II, 26 (64%) stage III/IV pts. All but one had grade 3 histology and 12 pts (30%) had heterologous (HT) component. Thirty-seven pts (90%) had surgery, 7 pts (19%) had adjuvant chemotherapy/radiotherapy (CT/RT), 7 pts (19%) RT and 9 pts (24%) CT alone. With a median follow up of 46 months (mo), 18 pts (47%) recurred with median relapse free survival (RFS) of 7.8 mo (CI95% 4.3-25.8), without significant association with clinicopathological factors or adjuvant treatment. Twelve pts (29%) received 1st line therapy (92% platinum-based) with overall response rate of 50% (17% complete response and 33% partial response). Median progression-free survival (PFS) was 11.2 mo (CI95% 6.3-not reached) and median duration of response was 22.0 mo (CI95% 7.7-not reached). We found a trend for higher median PFS in 9 pts with homologous (HM) CS compared to 3 HT-CS pts (17.0 mo vs 6.3 mo; p=0.08). Only 5 pts (42%) received a 2nd line therapy. Median OS for the entire cohort was 18.6 mo (CI95% 9.4-not reached). Multivariate model showed improved OS for OC vs. UT CS (HR=0.18; p=0.06) and HM-CS vs. HT-CS (HR=0.3; p=0.08).

Conclusion
GYN CS pts have poor outcomes with relapses occurring mostly in the first year after surgery. Homologous CS pts treated with first-line platinum-based CT showed improved outcomes with long-lasting responses in some pts, which reveals potential opportunities for research. Understanding the different molecular basis of GYN CS remains crucial to improve outcomes and hopefully help personalize treatment.

Keywords
carcinosarcomas, Rare malignancies

Combined Cellular Immunotherapy and Chemotherapy Improves the Prognosis of Patients with Epithelial Ovarian Cancer

Authors

Min Zhengmin 1, Yun Zhouyun 1,

1. Gynecology, Sun Yat-sen University Cancer Center, Guangzhou, CHINA

Abstract ID: 3708

Introduction and Objectives
Cytokine-induced killer (CIK) cells are demonstrated to have potent cytolytic effect against ovarian cancer cells in vitro and in vivo. Ovarian cancer is the most lethal gynecologic malignancy and the fifth leading cause of cancer mortality in women worldwide, whose most common form is epithelial ovarian cancer (EOC). The objective of this study was to assess the clinical efficacy of maintenance therapy of CIK cells in patients with epithelial ovarian cancer (EOC) after first-line treatment.

Methods
This study included 646 cases of postoperative EOC patients, 72 of which received chemotherapy and sequential immunotherapy (CIT group), and 574 of which received only chemotherapy (control group). Patients in CIT group received at least four cycles of CIK cell (range 8.0×109 - 1.3×1010cells) transfusion, and the interval of every cycle was 2 weeks. All postoperative patients were followed up regularly.

Results
Survival analysis showed a significantly higher overall survival (OS) rate in the CIT group compared with the control group, and a favorable progression-free survival (PFS) rate in the CIT group (P=0.001 and P=0.117, respectively). Univariate and multivariate analyses indicated that adjuvant CIT was an independent prognostic factor for the OS of patients with EOC (P=0.001 and P=0.039, respectively). Furthermore, subgroup analyses showed that adjuvant CIT significantly improved the OS of patients older than 45 years (P=0.001), with CA125≤1000, or with moderate or poorly differentiated tumors (P=0.011). Additionally, a higher percentage of CD3+CD8+/CD3+CD56+ phenotypes and lower percentage of CD3+CD4+/CD3-CD56+ phenotypes in the infused CIK cells significantly enhanced the survival of patients with EOC (P=0.005 and P=0.042, respectively).

Conclusion
In this study, adjuvant CIT with CIK cells, especially when comprised of more CD8+ T cells or NKT cells, was identified to be an effective therapeutic approach to prolonging the survival of EOC patients.

Keywords
Adjuvant cellular immunotherapy, clinical outcome, epithelial ovarian cancer

Supplementary material
http://sites.altilab.com/files/159/abstracts/data1.docx,
http://sites.altilab.com/files/159/abstracts/data2.docx,

The influence of oral contrast agent on pelvic VMAT dose in patients with postoperative endometrial carcinoma

Authors

Zhang Ruohui 1, Bai Wenwen 2, Fan Xiaomei 3, Zhang Qianying 3, Miao Mingchang 1,

1. Radiation Therapy, The Fourth Hospital of Hebei Medical University, Shijiazhuang, CHINA
2. Radiation Ocology, The Fourth Hospital of Hebei Medical University, Shijiazhuang, CHINA
3. Gynecological Oncology, The Fourth Hospital of Hebei Medical University, Shijiazhuang, CHINA

Abstract ID: 3709

Purpose
To evalutate the impact of oral contrast agent (meglumine diatrizoate) for assisting in outlining the small intestine on pelvic volume modulated arc therapy (VMAT) dose in patients with endometrial carcinoma. Methods: Ten endometrial carcinoma patients for postoperative radiotherapy underwent CT scans, and the planning target volumes (PTV) and organs at risk (including the small intestine, rectum, bladder, colon and the left and right femoral head) were contoured. The VMAT plans were generated on Oncentra v4.1 planning system for each case, PTV was prescribed to 50.4 Gy in 28 fractions. Then another plan was generated by re-calculating the radiation dose after changing the electron density of the small bowel. The first plan (plan A) was the conventional VMAT plan (with oral contrast agent), and the second one (plan B) specified the electron density of the small bowel (without oral contrast agent). Paired t-test was used to compare the dose distribution between the two plans. Results: The PTV's D2, D50, D95, V110, conformity index, and homogeneity index of plans A and B were 5615.5 vs. 5618.4 cGy (P=0.18), 5350.1 vs. 5354.0 cGy (P=0.875), 5042 vs. 5045.4 (P=0.52), 6.1% vs. 6.2 %(P=0.888), 0.127 vs. 0.1272 (P=0.34) and 0.842 vs. 0.842 (P=0.61), respectively. The volumes of the small bowel receiving at least 30 Gy (V30) and the minimum dose of 2% volume accepted (D2) for plans A and B were 32.1% vs. 31.8% (P=0.375) and 5075.8 vs. 5090.4 cGy (P=0.383), while rectum V50 of the two plans was 12.5% vs. 12.2% (P=0.49). Conclusion: The oral contrast agent (meglumine diatrizoate) filling the small intestine does not lead to a significant increase in the pelvic VMAT dose in patients with postoperative endometrial carcinoma.

Supplementary material
http://sites.altilab.com/files/159/abstracts/impact-of-oral-contrast-agent-for-assisting-in-outlining-small-intestine-on-pelvic-imat-dose-in-patients-with-cervical-cance.pdf, http://sites.altilab.com/

Primary small cell ovarian carcinoma of the pulmonary type

Authors

Yasunori Hashiguchi 1, Makoto Yamauchi 1, Mari Kasai 1, Takeshi Fukuda 1, Tomoyuki Ichimura 1, Tomoyo Yasui 1, Toshiyuki Sumi 1,

1. Obstetrics and Gynecology, Osaka City University Graduate School of Medicine, Osaka, JAPAN

Abstract ID: 3712

Introduction
Small cell ovarian carcinoma is a rare type of ovarian cancer, and divided histologically into the hypercalcaemic type and the pulmonary type. Especially, the pulmonary type is extremely rare. To our knowledge, there was only 40 cases of small cell ovarian carcinoma of the pulmonary type. It is extremely aggressive and progressive, and there are no established treatment guidelines for this tumor type.

Patient
A 55-year-old woman without a past medical history of interest was referred to our hospital with atypical genital bleeding. MRI examination demonstrated a left adnexal mass with an internal focus of bleeding. Laboratory investigations showed no remarkable findings including serum Ca level. Serum tumor markers were as followed: CA125: 119U/mL; CEA: 0.7ng/mL; CA19-9: 2U/mL; NSE: 6.8ng/mL. Therefore, primary ovarian cancer was initially considered the most likely diagnosis. The patient underwent an exploratory laparotomy. Macroscopically, there was left ovarian tumor suspecting ovarian cancer. The frozen pathological examination showed poorly differentiated carcinoma. At this time, we diagnosed the patient as primary ovarian cancer and performed hysterectomy, bilateral salpingo-oophorectomy, partial omentectomy, and pelvic lymph node biopsy. The pathological examination showed, the tumor was densely cellular, and the tumor cells had scanty cytoplasm and small-sized hyperchromatic nuclei that were oval shaped. The tumor cells showed positivity by immunohistochemistry for CD56 and synaptopodin, although chromogranin A was negative. Finally, the pathological examination showed a small cell carcinoma of the pulmonary type. We confirmed the diagnosis of primary ovarian cancer stage IC1 (pT1cNXM0). After operation, the patient received 6 courses of chemotherapy combining cisplatin (60 mg/m2, Day 1), and irinotecan (60 mg/m2, Day 1, 8, 15) administered every 4 weeks. To date, 36 months after operation, the patient is alive with no evidence of recurrence or metastasis.

Conclusion
In case of small cell ovarian carcinoma of the pulmonary type, chemotherapy regimen used for small cell lung cancer such as chemotherapy combining cisplatin and irinotecan should be considered.

Keywords
ovarian cancer, small cell carcinoma of the pulmonary type

Significance of PET-CT as the preoperative evaluation in endometrial cancer

Authors

Shiomi Mayu 1,

1. Obstetrics and Gynecology, Osaka University Hospital, Suita, JAPAN

Abstract ID: 3713

Objective
The diagnosis of lymph node metastasis is necessary for staging and decision of postoperative treatment strategy in endometrial cancer, but lymph node dissection is only diagnostic method because noninvasive test such as imaging cannot identify microscopic lymph node metastasis. PET-CT is used for presence of lymph node metastasis and distant metastasis in this country. There are few studies that evaluated utility of PET-CT. We examined significance of preoperative PET-CT as the evaluation of lymph node metastasis.

Methods
206 patients with endometrial cancer underwent preoperative workup by PET-CT. They underwent operation between August 2008 and June 2016. We retrospectively evaluated the accuracy of preoperative diagnosis about lymph node metastasis.

Results
The median age of patients was 59 years old (25-89) and postoperative stage was stage Ⅰ 143 cases, stage Ⅱ 17 cases, stage Ⅲ 40 cases and stage Ⅳ 6 cases. The pathological diagnosis was 168 endometrioid carcinoma, 13 serous carcinoma, 5 clear cell carcinoma, 1 mucous carcinoma, 12 carcinosarcoma, 7 mixed carcinoma. A total of 37 (18%) patients detected lymph node metastasis. About pelvic or para-aortic lymph node metastasis, sensitivity and specificity were 57% and 94%, positive predictive value and negative predictive value were 68% and 91% respectively.

Conclusion
In endometrial cancer, preoperative PET-CT showed high specificity and negative predictive value. In the future, we add number of cases and report it.

Keywords
PET-CT; endometrial cancer; lymph node; metastasis; preoperative evaluation

Treatment and prognosis of recurrent uterine leiomyosarcomas in last 5 years

Authors

Tsuyoshi Saito 1, Rhoichi Tanaka 2, Seiro Satohisa 1, Shuetsu Abe 1, Masahiro Iwasaki 1, Mizue Teramoto 1, Motoki Matsuura 1, Masato Tamate 1,

1. Department of Obstetrics and Gynecology, Sapporo Medical University, Sapporo, JAPAN
2. Gynecology, Tonan Hospital, Saporo, JAPAN

Abstract ID: 3714

Objectives
Leiomyosarcomas in pelvis are mainly derived from uterus, however it is rare tumor and poor prognosis. Recently, several new anticancer compounds against leiomyosarcomas have been averrable. In this presentation we report treatment and prognosis of uterine leiomyosarcomas in last 5 years in our instrument.
Methods: We analyzed response rate, prognosis and adverse effects of anticancer compounds for five cases of recurrent uterine leiomyosarcoma.

Results
Average age was 53.6 yr. Metastatic sites were lung for 3 cases and abdominal cavity for 2 case, which were completely resected surgically. Disease free survival after the resection of metastatic sites were 4 months, 22 months and 52 months for lung metastasis cases who underwent VATS and 41months for colon metastasis case who underwent pelvic exenteration. As third line chemotherapy pazopanib was used for 3 cases, trabectedin for 2 cases and eribulin for 2 cases. In this study, all cases were PD, however severe adverse effect (level 3 and 4) was not observed.

Conclusions
In this study, only one case showed disease free survival who underwent tumor section surgery recurrent uterine leiomyosarcoma, however severe adverse effects was not found in new anticancer compounds.

Keywords
leiomyosarcoma, surgery, chemotherapy, reccurence

Surgery allows long-term control in advanced stage low-grade serous ovarian cancer

Authors

Giorgio Bogani 1, Valentina Chiappa 1, Domenica Lorusso 1, Umberto Leone Roberti Maggiore 1, Francesco Raspagliesi 2,

1. Gynecologic Oncology, IRCCS National Cancer Institute, Milan, ITALY
2. Gynecologic ONcology, National Cancer Institute, Milan, ITALY

Abstract ID: 3715

Objective
To examine outcomes related to the execution of neoadjuvant chemotherapy, surgery and adjuvant treatments in newly diagnosed advanced stage low-grade serous ovarian cancer.

Methods
We conducted a retrospective case series of women affected by advanced stage (stage IIIB or more) low-grade ovarian cancer undergoing surgery in a single oncologic centre between January 2000 and December 2016. Data including demographic as well as histological characteristics, various treatment modality and outcomes were recorded. Survival outcomes were assessed using Kaplan-Meier and Cox models.

Results
Data of 72 patients were retrieved. Mean (SD) patients age was 59.6 (18.3) years. Stage distribution included FIGO stage IIIB, IIIC, IVA and IVB in 9, 56, 1 and 7 cases, respectively. Primary cytoreductive surgery was attempted in 68 (94.4%) patients: 44 (64.7%) patients had complete resection, optimal resection was achieved in 65% and 72% patients; while 24 (35.3%) had residual disease after primary. Interval debulking surgery was attempted in 15 of these patients and the remaining four patients having not primary debulking surgery. Twelve out of 19 (63.1%) patients having interval debulking had residual disease. After a mean follow-up was 61.6 (37.2) months, 50 (69.4%) and 22 (30.5%) patients recurred and died of disease, respectively. Via univariate analysis, presence of residual disease (HR: 2.16 (95%CI: 1.23, 3.79); p=0.007), non-optimal cytoreduction (HR: 2.99 (95%CI: 1.68, 5.33); p<0.001) and FIGO stage IV (HR: 4.11 (95%CI: 1.80, 9.34); p=0.001) were associated with an increased risk of recurrence. Via multivariate analysis, non-optimal cytoreduction (HR: 2.79 (95%CI: 1.16, 6.70); p=0.021) and FIGO stage IV (HR: 3.15 (95%CI: 1.29, 7.66); p=0.011) remained associated with disease-free survival. Overall survival was influenced by patients' co-morbidity (HR: 0.42 (95%CI: 0.25, 0.94); p=0.033), type of surgical approach (HR: 3.00 (95CI: 1.25, 7.20) for patients who had interval debulking instead of primary surgery; p=0.014), presence of residual disease (HR: 2.25 (95%CI: 0.95, 5.30); p=0.064) and FIGO stage IV (HR: 3.46 (95%CI: 1.23, 9.70); p=0.018). Via multivariate analysis, absence of significant comorbidities (HR: 0.56 (95%CI: 0.29, 1.10); p=0.093) and primary instead of interval debulking surgery (HR: 2.95 (95%CI: 1.12, 7.74); p=0.027) remained independently associated with an improved overall survival.

Conclusion
Low grade serous ovarian cancer are at high risk of early recurrence. However, owing to the indolent nature of the disease, the majority of patients are long-term survivors. Complete cytoreduction plays an important role in improving long-term outcomes of women affected by advanced stage low-grade serous ovarian cancer. Even possible primary surgery should be preferred over interval debulking since the poor response to neoadjuvant chemotherapy do not improve our ability to achieve cytoreduction.

The functional mechanism of Clk2 supporting the development of chemoresistance in non-BRCA1 deficient ovarian cancer

Author

Huang Shuting 1,

1. Gynecology, Sun yat-sen university cancer center, Guangzhou, CHINA

Abstract ID: 3716

Background
Clinical studies have found that ovarian cancer patients with BRCA-mutation are more sensitive to chemotherapeutic agents because of DNA repair capacity of tumor cells weakened. Our microarray data showed that the expression of Clk2 was higher in ovarian cancer tissues than the compared normal tissues. Moreover, platinum-resistant cancer specimens indicated significantly higher Clk2 expression. In addition, as a protein kinase, Clk2 phosphorylates and activates BRCA1. Therefore, from the perspective of regulating non-BRCA-deficient ovarian cancer, this study aims to investigate the molecular mechanisms of the Clk2 overexpression in mediating drug resistance of ovarian cancer.

Results
1. High expression of Clk2 in ovarian cancer is associated with poor prognosis and platinum resistance
Clk2 expression was significantly negatively correlated with patient progression-free survival. Moreover, Clk2 expression level in platinum-resistant patients was higher compared with the platinum-sensitive. Cisplatin induced Clk2 in time- and concentration-dependent manner. Compared to sensitive cell lines, Clk2 expression level in cisplatin resistant ovarian cancer cell was increased.
2. Clk2 promotes ovarian cancer chemo-resistance via influencing DNA damage
The IC50 of platinum-based drugs and apoptotic ratio were increased when Clk2 was knockdown. Further studies revealed that DNA damage was more serious in drug-resistant cells, and expressions of the anti-apoptotic proteins in downstream of DNA damage were down-regulated.
3. Clk2 interacts with BRCA1/2 and regulates its phosphorylation and activation
BRCA1 bond to Clk2. BRCA1/2 phosphorylation level was increased in Clk2 overexpression cells while decreased when Clk2 was knockout under the control of cisplatin. Recombination kinase assay showed that Clk2 could directly phosphorylate BRCA1.
4. Cisplatin stimulates the sustained activation of p38 pathway and stabilizes Clk2 protein
The inhibitor of p38 antagonized the inducing of Clk2 protein level after cisplatin treatment. The half-life of Clk2 was prolonged by cisplatin, while p38 inhibitors can antagonize this effect. Co-IP assay showed that p38 and Clk2 interact with each other.
5. Phosphorylation of p38 activates the T343 of the Clk2 Activation Loop domain and stabilizes Clk2 protein
Clk2 is known as a protein kinase which has an Activation Loop, a key domain in which protein kinases function and stabilization. When the key site in this domain is activated by phosphorylation, then the kinase will be stabilized and activated. According to the comparison of database, threonine at position 343 was the key site. None of the p38 activator and cisplatin could induce Clk2 in ovarian cancer cells after Clk2-T343 was mutated. The IC50 was decreased in Clk2-T343A ovarian cancer resistant cells.
6. Combination of Clk2 and PARP Inhibitors has a “Synergistic Lethal Effect” on drug resistant ovarian cancer
After pretreatment with Clk2 and/or PARP inhibitors, the IC50 of ovarian cancer drug resistant cells for cisplatin was examined. It was found that combining two inhibitors improve the DNA damage, enhance drug sensitivity and inhibit the growth of cisplatin-resistant ovarian cancer cells more effectively than single drugs.

Conclusion
Combining Clk2 and PARP inhibitors can form a "synergistic lethal effect" and increase DNA damage in ovarian cancer platinum-resistant cells.

Keywords
Clk2, chemo-resistance, PARP inhibitor, synergistic lethal effect

Rare case report of Primary Pseudomyxoma ovarii with disseminated peritoneal adenomucinosis

Authors

Renuka Renuka Gupta 1,

1. Gynae- Oncology, Action cancer Hospital, New Delhi, INDIA

Abstract ID: 3717

Introduction
Pseudomyxoma peritonei (PMP) is a poorly understood uncommon condition with an estimated incidence of one to two per million (worldwide) per year. It is characterized by the peritoneal deposition of mucinous implants, diffusely involving the peritoneal surfaces, most commonly of the appendix, and occasionally from the ovary, coupled by mucinous ascites. PMP associated with primary ovarian mucinous tumor was very rare.

Objectives
to present a very rare case

Method
patient with large ovarian mass with ascites was operated to our institution which was diagnosed as borderline mucinous ovarian tumor with pseudomyxoma peritonei, case was reviewed and being a rare case it was prepare to present as rare case

Result
pseudomyxoma peritonei of ovarian origin is very rare and diagnosis is always a dilemma

Conclusion
Pseudomyxoma peritonei of ovarian origin is very rare its diagnosis usually based on clinical and immunohistochemistry finding

Keywords
Pseudomyxoma Peritonei (PMP), Atypical proliferative mucinous tumor, Pseudomyxoma ovarii, disseminated peritoneal adenomucinosis (DPAM).

Supplementary material
http://sites.altilab.com/files/159/abstracts/fig.2-large-ovarian-mass-with-mucinous-material-copy.jpg, http://sites.altilab.com/

The driver mutational landscape of ovarian squamous cell carcinomas arising in mature cystic teratoma

Authors

Darren Ennis 1, Susanna Cooke 2, Lisa Evers 2, Suzanne Dowson 2, Mei Yen Chan 2, James Paul 3, Lynn Hirschowitz 4, Rosalind Glasspool 5, Naveena Singh 6, Sarah Bell 7, Elizabeth Day 7, Agata Kiochman 8, Nafisa Wilkinson 9, Philip Beer 10, Sancha Martin 2, David Millan 7, Andrew V. Biankin 11, Iain A. McNeish 1, On behalf of the Scottish Genome Partnership 2,

1. Surgery & Cancer, Imperial College London, London, UNITED KINGDOM
2. Cancer Sciences, University of Glasgow, Glasgow, UNITED KINGDOM
3. Clinical Trials, Cancer Research UK Clinical Trials Unit, Glasgow, UNITED KINGDOM
4. Pathology, Birmingham Women's NHS Trust, Birmingham, UNITED KINGDOM
5. Medical Oncology, Beatson West of Scotland Cancer Centre, Glasgow, UNITED KINGDOM
6. Pathology, Barts Health NHS Trust, London, UNITED KINGDOM
7. Pathology, Queen Elizabeth University Hospital, Glasgow, UNITED KINGDOM
8. Pathology, Monklands Hospital, Airdrie, UNITED KINGDOM
9. Pathology, University College London Hospital, London, UNITED KINGDOM
10. Bioinformatics, Wellcome Trust Sanger Institute, Cambridge, UNITED KINGDOM
11. Institute of Cancer Sciences, University of Glasgow, Glasgow, UNITED KINGDOM

Abstract ID: 3718

Introduction
We sought to identify the genomic abnormalities in squamous cell carcinomas (SCC) arising in ovarian mature cystic teratoma (MCT, also known as dermoid cyst), a rare gynaecological malignancy of poor prognosis.

Materials /Patients and methods
We performed copy number, mutational state and zygosity analysis of 151 genes in SCC arising in MCT (n=25) using next-generation sequencing. The presence of high/intermediate risk HPV genotypes was assessed by quantitative PCR. Whole genome sequencing (WGS) was completed on 2 MCT cases and all genomic events were correlated with clinical features and outcome.

Results
MCT had a low mutation burden with a mean of only 1 mutation per case. WGS on 2 MCT cases revealed no driver mutations or rearrangements. Zygosity analyses of MCT indicated four separate patterns, suggesting that MCT can arise from errors at various stages of oogenesis. A total of 244 abnormalities were identified in 79 genes in MCT-associated SCC, and the overall mutational burden was high (mean 10.2 mutations per megabase). No SCC was positive for HPV. The most frequently altered genes in SCC were TP53 (20/25 cases, 80%), PIK3CA (13/25 cases, 52%) and CDKN2A (11/25 cases, 44%). Mutation in TP53 was associated with improved overall survival. In 8/20 cases with TP53 mutations, two or more variants were identified, which were bi-allelic.

Conclusions
Ovarian MCT has low mutation burden. By contrast, ovarian SCC arising in MCT has a high mutational burden with TP53 mutation the most common abnormality. The presence TP53 mutation is a good prognostic factor. SCC arising in MCT share similar mutation profiles to other SCC. Given their rarity, they should be included in basket studies that recruit patients with SCC of other organs.

Keywords
Ovary, mature cystic teratoma, squamous cell carcinoma, TP53; bi-allelic

Diagnostic accuracy of risk of ovarian malignancy algorithm (ROMA) experienced in the clinical practice at a single hospital

Authors

JIYOUNG Kim 1, Hae Nam Lee 2, Haeil Park 3, Dae Woo Lee 2, Min Jeong Kim 2, Jae Eun Shin 2,

1. Obstetrics and Gynecology, St. Mary's hospital, the Catholic University of Korea, Daejeon, KOREA, REPUBLIC OF
2. Obstetrics and Gynecology, College of Medicine, The Catholic Unversity of Korea, Seoul, KOREA, REPUBLIC OF
3. Laboratory Medicine, College of Medicine, The Catholic University of Korea, Seoul, KOREA, REPUBLIC OF

Abstract ID: 3719

Objective
Risk of ovarian malignancy algorithm (ROMA) is used for assessing epithelial ovarian cancer (EOC) risk in women with pelvic mass. The reported diagnostic accuracy of ROMA is variable. We investigated whether the clinically acceptable minimal sensitivity of > 0.800 could be obtained with the suggested cutoff of 7.4 %/25.3 % for pre/postmenopausal women and different cut offs set to a specificity of ≥ 0.750 in a hospital with a lower EOC prevalence than that reported.

Methods
ROMA scores were calculated from measurements of HE4 and CA125 in blood drawn from 443 patients with pelvic mass. The risk group was compared against the result of biopsy (n=309) or clinical follow-up with imaging studies (n=134). The ROMA sensitivity and specificity for predicting EOC and borderline ovarian tumor (BOT) in addition to EOC were calculated for the suggested and adjusted cutoff values.

Results
When EOC prevalence was 0.041, sensitivity and specificity at the suggested cutoff were 0.778 and 0.894, respectively. When the BOT or EOC prevalence was 0.074, sensitivity and specificity were 0.636 and 0.907, respectively. When targeting EOC only, sensitivity was 0.889 at the 4.78 %/14.35% cutoff set to a specificity of 0.750. When targeting BOT as well as EOC, sensitivity was 0.818 at the 4.65 %/13.71 % cutoff set to a specificity of 0.750.

Conclusions
The laboratory of a hospital serving a population with a lower EOC prevalence should validate the suggested cutoff. Unless validated, the cutoff should be adjusted based on the specificity or sensitivity that gynecologists expect in clinical practice.

Prognostic factors and impact of adjuvant treatment in surgically treated FIGO stage IB-IIA neuroendocrine carcinoma of the uterine cervix

Authors

Seung Hyuk Shim 1, Ju-Hyun Kim 2, Dae-Yeon Kim 2,

1. Obstetrics and Gynecology, BDepartment of Obstetrics and Gynecology, Konkuk University School of Medicine, Seoul, KOREA, REPUBLIC OF
2. Obstetrics and Gynecology, University of Ulsan College of Medicine, Asan Medical Center, S, KOREA, REPUBLIC OF

Abstract ID: 3720

Objective
To investigate prognostic factors and impact of adjuvant treatment in surgically treated early-stage high-grade (HG) neuroendocrine cervical carcinoma (NECC).
Methods: Between 1993 and 2017, 47 patients with FIGO stage IA-IIA HG NECC were initially treated with radical hysterectomy. Clinicopathological variables of the patients were retrospectively reviewed from electronic medical records. Cox proportional hazards regression was used to identify potential prognostic factors. After patients were stratified by risk factors, survival curves, according to adjuvant therapy, were compared using the Kaplan–Meier method.

Results
The median follow-up period was 28.2 months (range, 1.1–202.5). Stage IB1 disease was the most common (70.2%), followed by stage IB2 (19.1%) and IIA (10.6%). The 5-year overall survival (OS) rate was 66.0%, and the 5-year disease-free survival (DFS) rate was 38.3%. Lymph-node (LN) metastasis was an independent significant risk factor for OS and DFS. According to adjuvant treatment modalities, there was no difference in survival outcomes and recurrence patterns. The Kaplan–Meier survival curves of the high-risk group revealed that there was no significant difference between the adjuvant-CT-only group and RT-containing group. In the low-risk group among those who did or did not receive post-operative adjuvant treatment, no significant difference in Kaplan-Meier survival curves was observed.

Conclusion
LN metastasis was a poor prognostic factor of survival outcomes in initially surgically treated early-stage HG NECC. After radical hysterectomy in the low-risk group, we may omit adjuvant therapy. Instead, adjuvant systemic chemotherapy could be beneficial in high-risk patients.

Keywords
Cervical cancer; Neuroendocrine carcinoma; Prognosis; Adjuvant treatment

Molecular Diagnosis of Endometrial Stromal Sarcomas

Authors

Sorsiah Mansor 1, Chik Hong Kuick 2, Kenneth Chang 2,

1. DPLM, KK Women's and Children's Hospital Singapore, Singapore, SINGAPORE
2. As above, As above, As above, SINGAPORE

Abstract ID: 3721

Introduction
Uterine sarcomas can be challenging to diagnose by standard techniques of histology and immunohistochemistry because they may have non-specific histomorphologies and immunophenotypes. In some cases, definitive diagnosis is not possible, necessitating overseas consultation. Recently, molecular analysis has revealed that endometrial stromal sarcomas have definitive and pathognomonic genetic changes such as JAZF1-SUZ12 in low-grade endometrial stromal sarcoma (LG-ESS) and YWHAE-NUTM2 in high-grade endometrial stromal sarcoma (HG-ESS). Definitive diagnosis is important because of differing prognosis and treatment. In this study, we aim to determine if molecular analysis using a NanoString nCounter platform or a next-generation sequencing-based anchored multiple PCR technique (Archer® Sarcoma FusionPlex) can reliably identify gene fusions in ESS.

Methods
The 10 most recent archival ESS cases were identified. RNA extracted from each case was submitted for the NanoString® nCounter® testing, which can identify any of 190 sarcoma-associated gene fusions in a single experimental assay. Selected cases with no fusions detected by this method underwent Archer® Sarcoma FusionPlex sequencing. All identified gene fusions were validated orthogonally by reverse transcriptase-PCR.

Results
Five of 10 cases had gene fusions identified by NanoString®, namely four JAZF1- SUZ1 cases and one ZC3H7B-BCOR case. A sixth case with no NanoString®-identified gene fusion underwent Archer® Sarcoma FusionPlex sequencing and showed JAZF1-PHF1 fusion. The remaining four cases did not have identifiable gene fusions.

Conclusion
Molecular characterisation of uterine sarcomas by the NanoString® or Archer® Sarcoma FusionPlex methods is a powerful diagnostic tool for accurate diagnosis of ESS.

Keywords
endometrial stromal sarcoma, nanostring

Living after non-epithelial ovarian cancer: Chronic fatigue, quality of life and long term side effects of chemotherapy – Vivrovaire Rare Tumors

Authors

Florence Joly 1, Djihane Ahmed-Lecheheb 2, Hubert Orfeuvre 3, Jérôme Alexandre 4, Thibaut De La Motte Rouge 5, Laure De Cock 6, Cédric Nadeau 7, Christophe Pomel 8, Elsa Kalbacher 9, Aude-Marie Savoye 10, Magali Provansal 11, Dominique Berton-Rigaud 12, Alain Lortholary 13, Anne Gompel 14, Eric Pujade-lauraine 15, Christine Rousset-Jablonski 16, Jean-Michel Grellard 17, Anne Floquet 18, Patricia Pautier 19, Isabelle Ray-Coquard 16,

1. Département of oncology, Centre François Baclesse, Caen, FRANCE
2. Departement of oncology, Centre François Baclesse, Caen, FRANCE
3. Departement of oncology, CH Fleyriat, Bourg-En-Bresse, FRANCE
4. Departement of oncology, Hôpital Cochin, Paris, FRANCE
5. Departement of oncology, Centre Eugène Marquis, Rennes, FRANCE
6. Departement of oncology, Hôpitaux Universitaires de Strasbourg, Strasbourg, FRANCE
7. Departement of oncology, CHU Poitiers, Poitiers, FRANCE
8. Departement of oncology, Centre Jean Perrin, Clermont-Ferrand, FRANCE
9. Department of Oncology, CHU Jean Minjoz, Besançon, FRANCE
10. Department of Oncology, Institut Jean Godinot, Reims, FRANCE
11. Departement of oncology, Institut Paoli Calmettes, Marseille, FRANCE
12. Departement of oncology, Institut de Cancérologie de l'Ouest, Site René Gauducheau, Saint Herblain, FRANCE
13. Departement of oncology, Centre Catherine de Sienne, Nantes, FRANCE
14. Departement of oncology, Hôpitaux Universitaires Cochin Hôtel-dieu Broca, Paris, FRANCE
15. Departement of oncology, CHU Paris Centre - Hôpital Hôtel-Dieu, Paris, FRANCE
16. Departement of oncology, Centre Léon Bérard, Lyon, FRANCE
17. Departement of oncologie, Centre François Baclesse, Caen, FRANCE
18. Departement of oncology, Institut Bergonie, Bordeaux, FRANCE
19. Departement of oncology, Institut Gustave Roussy, Villejuif, FRANCE

Abstract ID: 3722

Context and hypothesis
The standard of treatment of Ovarian Germ Cell (OGCT) and Sex Cord Stromal (OSCST) Tumors mainly involves conservative surgery combined with chemotherapy (CT) [Bleomycin, Etoposide and Cisplatinum (BEP)] depending on the stage and the prognostic factors, by analogy with CT regimen prescribed for testicular cancers. As reported in testicular cancers survivors, CT may induce long term side effects (in particular, cardiovascular and pulmonary disorders, neurotoxicity and infertility), with a negative impact on Quality of Life (QoL), and social and professional insertion. These effects have not been evaluated among OGCT and OSCST survivors.
A large French multicenter case-control study is ongoing to explore the needs and the QoL of OGCT and OSCST survivors treated with BEP, and to identify long term side effects of CT.

Objectives
This study is conducted in 2 steps aiming to assess i) chronic fatigue and QoL and ii) long term side effects of CT with a particular focus on cardiovascular and pulmonary disorders, and neurotoxicity among OGCT and OSCST survivors.

Methods
Using self-reported questionnaires, chronic fatigue and several domains of QoL are compared between 160 OGCT and OSCST survivors (cancer free ≥ 2 years after

treatment) treated with surgery and BEP and 2 control groups (160 OGCT and OSCST survivors treated with surgery alone and 160 age matched healthy women). Medical data are collected from patient records.
In a second step, long term side effects of BEP are assessed by specific medical examination among the 2 groups of patients (70 patients per group). Patients have several specialized medical tests: 1) Cardiological evaluation: a) clinical examination, b) Non-invasive cardiological tests to explore atherosclerosis and coronary heart disease (endothelial dysfunction): Systolic index of the lower and upper limbs, electrocardiogram, echocardiography, measurements of carotid intima media thickness, c) Specific cardiac biological tests. 2) Pulmonary test: Pulmonary function testing. 3) Hearing test: Audiogram. 4) Blood tests: to explore the metabolic and hormonal dysfunctions.
Patients are included by the oncologists of the GINECO (Groupe d'Investigateurs Nationaux pour l'Étude des Cancers Ovariens et du sein) from the French network TMRO (Tumeurs Malignes Rares de l'Ovaire). Healthy women are recruited from the association Seintinelles.

Expected results
This first national multidisciplinary study is the opportunity to evaluate the impact of long-term side effects of CT on chronic fatigue and QoL among a large population of rare ovarian cancer survivors. Expected results will provide information about concerns and needs of these patients at distance from treatment.
For the first time, this study will provide important data on potential long term physical side effects of CT, especially cardiovascular and pulmonary disorders, and neurotoxicity using rigorous measurements methods.
Based on our results, intervention strategies could be proposed to improve the management of these patients during treatments and at long-term follow-up. Our expected findings may be helpful for modifying strategies for care and post treatment modalities of follow-up. The identification of long-term side effects contributes in the development of recommendations regarding practices and CT regimens in order to reduce toxicity while maintaining efficacy.

Keywords
Non-epithelial ovarian cancer, chemotherapy, chronic fatigue, quality of life, long term side effects

Serum levels of IL-1ra and sTNF RI in patients with uterine sarcoma

Authors

Malgorzata Fuksiewicz 1, Maria Kowalska 1, Anna Danska-Bidzinska 2, Mariusz Bidzinski 3, Alicja Berezowska 1, Beata Kotowicz 1,

1. Laboratory of Tumor Markers, Department of Pathology and Laboratory Diagnostics, The Maria Sklodowska-Curie Institute-Oncology Center, Warsaw, POLAND
2. Department of Obstetrics and Gynecology, Medical University of Warsaw, Warsaw, POLAND
3. Department of Gynecological Oncology, The Maria Sklodowska-Curie Institute-Oncology Center, Warsaw, POLAND

Abstract ID: 3723

Introduction and Objectives
Tumor development and progression is often accompanied by overexpression of cytokines and their receptors in tumor and/or stromal cells, as well as in immune cells. Fundamental importance was a discovery that some cytokine receptors found on malignant cells determine their metastatic potential. Pro-inflammatory cytokines and their receptors play a crucial role in inflammation and their release may relate to the frequency of local recurrence of tumor. The purpose of this study was to evaluate the potential use of antagonist receptor of interleukin 1(IL-1ra) and soluble receptor TNF (sTNF RI) serum levels as a diagnostic marker in patients with uterine sarcoma.
Patients and Methods: The study included 35 untreated uterine sarcoma patients, aged between 23-80 years (median 56 yours old), and 30 healthy women as controls. Concentrations of serum IL-1ra and sTNF RI were determined by the ELISA of R&D. Standard concentration for cytokines was determined taking the 95 percentiles. For the statistical analysis, Mann-Whitney U tests were applied. Receiver-operating characteristic (ROC) curves were used, to assess the diagnostic sensitivity and specificity of the marker.

Results
Here, we show a significant increase in both IL-1ra ($p< 0,0001$) and sTNF RI ($p<0,0001$) in blood serum samples from patients with uterine sarcomas, as compared to control group of healthy female individuals. Increased concentration of sTNF RI was observed more frequently among patients (94% of all patients) than IL-1ra (50% of patients). Based on ROC curve analysis, we observed higher accuracy of sTNF RI (AUC-0.998) than IL-1ra (AUC=0.795) to detect uterine sarcoma.

Conclusion
These results suggest that determination of IL-1ra and sTNF RI serum levels may be a useful marker in patients with uterine sarcoma.

Keywords
uterine sarcoma, cytokines, soluble receptor TNF

Endocervical clear cell carcinoma: a rare case report

Authors

KAD?R GÜZ?N ATE? KARATEKE 1,

1. Obsterics & Gynecolohy, div of Gyneaologycological Onc, Kahramanmara? (KmedicineSU) school of, Kahramanmara?, TURKEY

Abstract ID: 3724

Endocervical clear cell (clear cell) carcinoma (BHK) the histological type of adenocarcinoma of the cervix is a rare variant of a poorly differentiated). Endocervical glandular cells and in biology originate from HPV 16, 18, with utero des exposure are the main causes of being the most important.
At the age of 69, and endocervical curettage and endometrial pathology material admitted with the complaints of vaginal bleeding for 6 months BHK radical hysterectomy patients from the result, right, left and right salpingooferektomi, underwent left pelvic lymphadenectomy.Microscopy, histological grade3, stromal invasion 1.6 cm horizontal 5 cm in my software, the boundaries of vågen surgery clean surgery the border of the parametrial endocervical clear cell adenocarcinoma was reported as the distance to 1 mm. 1 No lymph node metastasis on both sides was there. Periaortik 2 setup and pelvic RT and intracavitary brachytherapy dose 3 months after nephrostomy and DJ stent placement in the patients who underwent 16 upon revealed hydronephrosis was performed. It left on 2 cm lesion on CT in conjunction with pet ureterovezikal hipermetabolik in combination, para-aortic, and aortakaval parakaval emerging areas of metastasis are suggestive hipermetabolik lymphadenopaties have been reported.
Issued to the Council on Oncology our clinic, the patient after the treatment, systemic CHEMO, if necessary, surgery are found to be appropriate. Keywords: clear cell, clear cell adenocarcinoma, cervical

Keywords
clear cell, clear cell adenocarcinoma, cervical

Supplementary material
http://sites.altilab.com/files/159/abstracts/1.docx,
http://sites.altilab.com/files/159/abstracts/3.docx

Evaluation of IL-8 and CA 125 in patients with uterine sarcoma

Authors

Beata Kotowicz 1, Malgorzata Fuksiewicz 1, Anna Danska-Bidzinska 2, Mariusz Bidzinski 3, Alicja Berezowska 1, Maria Kowalska 1,

1. Laboratory of Tumor Markers, Department of Pathology and Laboratory Diagnostics, The Maria Sklodowska-Curie Institute-Oncology Center, Warsaw, POLAND
2. Department of Obstetrics and Gynecology, Medical University of Warsaw, Warsaw, POLAND
3. Department of Gynecologic Oncology, The Maria Sklodowska-Curie Institute-Oncology Center, Warsaw, POLAND

Abstract ID: 3725

Introduction and Objectives
Uterine sarcomas are a group of highly heterogeneous mesenchymal tumours, which remain a significant clinical challenge due to lack of accurate diagnostic markers and appropriate treatments. Increased expression of interleukine-8 observed in tumour cells has been shown to be involved in epithelial to mesenchymal transition, as well as in angiogenesis, promoting distant relapse and resistance to chemotherapy. The aim of this study was to evaluate the utility of interleukine-8 and CA 125 assessment in blood of patients with uterine sarcomas.

Patients and Methods
This study included 52 patients diagnosed with uterine sarcoma, aged between 23-80 years old (median 56 years). Blood samples were collected at the time of the diagnosis and used to assess the concentration levels of CA 125 and IL-8. CA 125 concentration was assessed using electrochemiluminescence immunoassay (ECLIA) from COBAS ROCHE DIAGNOSTICS and IL-8 concentration using enzyme-linked immunosorbent assay from R&D Systems. The standard concentration of IL-8 was established in a group of control samples from 40 healthy females, aged between 28 and 63 (median 48 years), taking the top 95 percentile. For the statistical analysis, Mann-Whitney U test was applied. Receiver-operating characteristic (ROC) curves were used, to assess the diagnostic sensitivity and specificity of the marker.

Results
In the included group of patients, only 23% showed increased levels of CA 125, while concentration of IL-8 was increased in 56% of patients. The concentration of both CA 125 ($p< 0.0001$) and IL-8 ($p< 0.0029$) was increased in blood samples from patients, as compared to healthy individuals. Receiver operating characteristics (ROC) curve analysis revealed higher diagnostic accuracy of IL-8 (AUC = 0.812) than CA 125 (AUC=0.748). Conclusions: Diagnostic accuracy of cytokine IL-8 is higher than that of CA 125, as confirmed using ROC curve analysis. Therefore, using IL-8 concentrations in addition to CA 125 might be beneficial in the diagnosis and treatment of patients with uterine sarcomas.

Keywords
uterine sarcoma, interleukine-8, tumor marker

Retrospective Analysis of 58 Patients with Granulosa Cell Tumors of the Ovary over a 31-year Period: A Single-Center Experience

Authors

Sarah AL-Rubaish 1, Sophie Vincent 2, Cormire Beatrice 3, Vanessa Samouelian 3,

1. Gynecologic oncology, Hôtel-Dieu de Québec at Laval University., Quebec, CANADA
2. Mcgill University, Montreal, CANADA
3. Gynecology oncology, University of Montreal, Montreal, CANADA

Abstract ID: 3730

Objective
The objective of this study was to report the outcomes for patients with recurrent ovarian granulosa cell tumors (GCTs) who were treated according to different management strategies.

Study method
We conducted a retrospective analysis of all patients diagnosed with ovarian GCT at the Notre Dame CHUM-Hospital from January 1985 to August 2016. Medical records were reviewed to determine patient demographics, disease characteristics and treatment modalities as well as response rates.

Results
Fifty-eight patients with GCT were treated during the study period. The mean age at diagnosis was 48 years (range 18 to 82). FIGO stages were I, II, and III in 46 (90.20%), 1 (1.96%), and 4 (7.84%) of the cases respectively. In 7 (12.10%) cases, the FIGO stage was not available.
At the time of data collection, 32 (55.20%) patients were still in follow-up, among whom 20 (34,50%) were in remission and 12 (20,70%) were under treatment for recurrent disease. Seven (12,10%) patients were discharged from the clinic on remission, 5 (8.60%) patients were reported dead (2 with disease progression, 3 with other causes), and 14 (24.10%) patients were lost to follow-up.
The mean and median follow up times were 10,2 years and 11,7 years respectively. The median PFS and OS were not reached by the time of data collection. The mean PFS among the 27 patients who presented 96 episodes of recurrence was 7,9 years.
Surgery was performed in 36 (37.89%) of the recurrence cases up to the 5th episode of recurrence. Twenty patients had surgery after the first episode, 9 had surgery after the second episode, and 5 had surgery after their third episode. One patient had surgery after their fourth and fifth episode respectively. Only 10% of patients who had surgery for recurrences did not receive any adjuvant therapy. Chemotherapy was administered for 28 (29.20%) of the recurrences. The preferred regimen was Carboplatin/Paclitaxel (n=13) followed by Bleomycin, Etoposide and Cisplatin (BEP) (n=6), and Vincristine, Actinomycin, Cyclophosphamide (VAC) (n=3). Six hormonal agents were used alone or combined to treat 52 (54.2%)of the recurrences. Preferred agents were Leuprolide n=13, Aromatase inhibitors n=11, Tamoxifen n=7, and Megestrol Acetate n=6. Radiotherapy and Metformin were each used in 14 episodes.
Besides surgery, chemotherapy and radiotherapy showed complete responses in 16 (17.0%) and in 9 (9.4%) recurrence episodes respectively. Partial response or stable disease was achieved with chemotherapy in 9 (9.4%), hormone therapy in 22 (23.0%), radiotherapy in 4 (4.2%), and Metformin in 9 (9.4%).

Conclusion
The long-term outcome of GCTs is good but there is no standardized treatment protocol. When possible, recurrences should be addressed surgically. Chemotherapy is effective in the recurrent setting. No complete responses were achieved from hormonal therapy, but enduring partial responses and stable disease results were observed. Radiotherapy can

be considered in selected localized, non-resectable recurrences.

Keywords
recurrent ovarian granulosa cell tumors (GCTs), surgery, chemotherapy, hormone therapy

Taxane and platinum chemotherapy for patients with uterine carcinosarcoma

Authors

Hiroyuki Yamazaki 1, Yukiharu Todo 1, Chisa Shimada 1, Yasuhiro Yamamoto 1, Shinichiro Minobe 1, Hidenori Kato 1,

1. Gynecologic Oncology, Hokkaido Cancer Center, Sapporo, JAPAN

Abstract ID: 3731

Objectives
To assess the effects of taxane and platinum chemotherapy in uterine carcinosarcomas (UCS) and previously reported literatures are critically reviewed.

Methods
We retrospectively examined the records of women with UCS and overall survival (OS)/survival after recurrence (SAR) are demonstrated in Kaplan-Meier method. And response rates of chemotherapies were evaluated in women who had measurable disease.

Results
45 women were eligible among seventy-five patients with UCS in 1987-2016. 29 had advanced stage (III or IV) and 16 had recurrence disease. Their overall survival and survival after recurrence was 8 months (median, range 1-45) and 10 months (median, range 1-68). The two-year survivals were 20% and 22%, respectively. The response rate of taxane and platinum was 26% in 28 patients who had measurable disease when treated with chemotherapy, which accounted for 40 regimens.

Conclusions
Taxane and platinum combined chemotherapy for advanced or recurrent UCS showed less activity than previously reported although this is a single center retrospective study in the small number.

Keywords
Carcinosarcoma, chemotherapy

Cervical cancer stage IIB-IVA radiation therapy clinical responses based on spectral pulsed wave Doppler

Authors

Syamel Syamel muhammad 1, Dodi Dodi Suardi 2, Maringan Maringan Diaptri Lumban Tobing 2,

1. Oncology Gynaecology, Andalas University Padang Indonesia, Padang, INDONESIA, REPUBLIC OF
2. Oncology Gynaecology, Hasan Sadikin General Hospital, Bandung, INDONESIA, REPUBLIC OF

Abstract ID: 3736

Introduction and Objective
To examine the relationship between Doppler spectralultrasound images of Transrectal PulseWave Doppler with the clinical response of external radiation therapy for locally advance dcervical cancer (IIB-IVA).

Method
The study used a prospective cohort study involving 60 samples of patients with stage IIB-IVA cervical cancer. Doppler Pulsewave checks use transrectal probes. Measurements of tumor mass and clinical assessment were performed before and after external radiation to assess the therapeutic response. Samples were grouped on Doppler pulsewave examinations into good and bad vascularizations which were then followed to assess the therapeutic response divided into good clinical response and poor clinical response.

Result
Of the 60 samples, 2 patients were unable to continue the study so that the clinical response was obtained as much as 46 people (79.3%) and bad clinical response of 12 people (20.7%). The group of bad clinical responses as much as 9 (75.0%) had spectral vascularization poorly and as much as 3 (25.0%) had good spectralvasculatory well while for good clinical response as much 19 (41.3%) had spectral vascularization poor and as many as 27 (58 , 7%) have good spectral vascularization. In the analysis with Fisher exact test found a significant relationship ($p < 0.05$) between the spectral PW Doppler transrectal image with the clinical response of external radiation therapy in stage IIB-IVA cervical cancer with RelativeRisk (RR) value 3,214 times.

Conclusions
There is a significant relationship between Doppler spectral imagery and the clinical response of external radiation therapy in stage IIB-IVA cervical cancercancer.

Keywords
Cervical cancer,SpectralPulsewave Doppler,Clinicalresponse
Supplementary material : http://sites.altilab.com/files/159/abstracts/abstract-esgo.docx, http://sites.altilab.com/files/159/abstracts/suplement-esgo.docx

Prognosis factors in malignant ovarian germ cell tumors (MOGCT): retrospective analysis of 147 cases prospectively included in the French network for Rare Malignant Ovarian Tumors (TMRO) & GINECO group

Authors

Fanny Derquin 1, Anne Floquet 2, Jean Pierre Lotz 3, Julien Edeline 1, Jérôme Alexandre 4, Patricia Pautier 5, Gwenael Ferron 6, Stéphane Oudard 7, Claudia Lefeuvre Plesse 1, Helène Vegas 8, Anne Patsouris 9, Elsa Kalbacher 10, Dominique Berton Rigaud 11, Anne Claire Hardy Bessard 12, Vincent Lavoué 13, Isabelle Treilleux 14, Isabelle Ray Coquard 15, Thibault De La Motte Rouge 1,

1. Medical Oncology, Centre Eugène Marquis, Rennes, FRANCE
2. Medical Oncology, Institut Bergonié, Bordeaux, FRANCE
3. Medical Oncology, APHP Tenon University Hospital, Paris, FRANCE
4. Medical Oncology, Hôpital Cochin, Paris, FRANCE
5. Medical Oncology, Institut Gustave Roussy, Villejuif, FRANCE
6. Surgical Department, Centre Claudius Regaud, Toulouse, FRANCE
7. Medical Oncology, Hopital Europeen George Pompidou, Paris, FRANCE
8. Medical Oncology, CHRU Bretonneau, Tours, FRANCE
9. Medical Oncology, ICO Paul Papin, Angers, FRANCE
10. Medical Oncology, CHU Besançon, Besançon, FRANCE
11. Medical Oncology, ICO René Gauducheau, Saint-Herblain, FRANCE
12. Medical Oncology, Hopital Privé des Cotes d'Armor, Plérin, FRANCE
13. Surgical Department, CHU Rennes, Rennes, FRANCE
14. Department of Pathology, Centre Léon Berard, Lyon, FRANCE
15. Medical Oncology, Centre Léon Berard, Lyon, FRANCE

Abstract ID: 3738

Objective
MOGCT are rare tumors arising in young women. In France, the TMRO network has been set up since 2010 in order to prospectively monitor the management of these rare tumors. Our study aimed to evaluate long-term outcomes and to identify prognostic parameters likely to help make appropriate risk-based decisions about therapy in this disease.

Methods
This retrospective study is based on prospectively recorded cases from 13 of the biggest centers of the TMRO network. Survival curves were estimated using Kaplan-Meier method. Univariate analysis was performed using the log-rank test.

Results
Overall, 147 patients (pts) were registered between January 1st, 2010 and September 11, 2017. Median age was 25 years old [15-77]. Most of pts (n = 101) had stage I disease. Overall, 126 pts presented with a pure tumor while 21 had a mixed tumor. Among pure tumors, 40 had dysgerminomas, 52 immature teratomas, 32 yolk sac tumors (YST) and 2 choriocarcinomas. Surgery was carried out in 140 pts, allowing no residual disease in 121 pts. Fertility-sparing surgery was achieved in 125 pts. First line chemotherapy was performed in 106 pts while 38 pts underwent watchful surveillance following initial surgery. Progressive disease or relapse following first line treatment was diagnosed in 22 pts: 12/22 who underwent surgery only and 10/22 who were treated with surgery followed by chemotherapy. Overall, 8 pts died. With a median follow-up of 51 months, the overall 5-year survival and disease-free survival rates were respectively 92.4% and 82%. Stage at diagnosis, complete primary surgery and post-operative level of alpha fetoprotein (αFP) were significantly predictive factors associated with survival. Conclusion: There is no evidence for adjuvant chemotherapy in stage I MGCT, question

remains for YST. Although most pts has an excellent prognosis, some pts relapsed and eventually died. Setting up a prognostic score may help to make appropriate risk-based decisions about therapy in this disease, in order to increase the cure rate in pts with a poor prognosis and to decrease toxicity in pts with a low risk of relapse.

Keywords
Malignant Ovarian Germ Cell Tumors, TMRO, alphaFP

Supplementary material
http://sites.altilab.com/files/159/abstracts/table.docx
http://sites.altilab.com/

A Case of Lymphoid follicular hyperplasia of the ovary in a 53-year-old Woman

Authors

Yong jae Lee 1, Jung-Yun Lee 1, Eun Ji Nam 1, Sang Wun Kim 1, Sunghoon Kim 1, Young Tae Kim 1,

1. Obstetrics and Gynecology, Yonsei University College of Medicine, Seoul, KOREA, REPUBLIC OF

Abstract ID: 3740

Introduction
Lymphoid follicular hyperplasia of the ovary is an extremely rare condition that may be missed on associated clinical evaluation but is diagnosed on biopsy. We report a case of lymphoid follicular hyperplasia of ovary.

Case
A 53-year-old Korean woman was referred to out institute because of bilateral solid mass lesion in both ovaries. Magnetic resonance imaging and positron emission tomography/computed tomography showed bilateral ovarian tumor suspected as a sex cord stromal tumor, each measuring about 5cm in diameter with multiple enlarged paraaortic lymph nodes. Laparoscpoic bilateral salpingo-oophorectomy was performed. The final pathologic diagnosis was lymphoid follicular hyperplasia with dense plasmacytic infiltration, bilateral parovarian and paratubal regions. Immuno-histochemistry was positive for IgG4, Bcl-2, and Bcl-6, while negative for cyclin D1. No further treatment was instituted, and the patient is currently being followed-up everyone year.

Conclusion
This report demonstrated important clinical information on lymphoid follicular hyperplasia of the ovary. Morphologic and immunohistochemical analyses and molecular studies are essential to achieve accurate diagnosis and to implement appropriate management.

Keywords
ovary, lymphoid follicular hyperplasia

Germline BRCA1 and BRCA2 gene mutation among epithelial ovarian / primary peritoneal cancer at KFSHRC

Authors

Sharifa Al-Farsi 1,

1. Gynecologic oncology, King Faisal Specialist Hospital and Research Center, Muscat, OMAN

Abstract ID: 3742

Introduction
Ovarian cancer is the seventh most common cancer in women worldwide and the second most common gynecologic malignancy. Saudi Arabia has a similar trend of ovarian cancer.
Ovarian cancer is usually fatal, and it is the eighth most common cause of cancer death in women worldwide.
BRCA1 or BRCA2 genes germline mutations is one of the risk factors for ovarian cancer accounting for the majority of hereditary ovarian cancers. Women with BRCA gene mutations have a greatly increased risk of ovarian and breast cancer.
However, there is no data in Saudi Arabia neither about mortality rate nor about incidence of BRCA gene mutation among Saudi women.
Thus the prevalence of BRCA1 and BRCA2 gene mutations in epithelial ovarian and primary peritoneal cancer in Saudi Arabia need to be obtained. This is important in order to plan further treatment and to consider genetic counseling and preventive measures.

Objective
This study is a retrospective cohort study conducted in the oncology center at King Faisal Specialist Hospital and Research Center with the aim of determining the prevalence of BRCA1 and BRCA2 gene mutation and the type of mutation among patients who have been diagnosed with epithelial ovarian or primary peritoneal cancer.
It looked at the tumor risk factors (including histologic type, stage and grade of the tumor) in these patients. Moreover, it looked at the patient personal history risk factors including history of breast cancer as well as patient family history risk factors including history of breast cancer, ovarian cancer and it explored the correlation with BRCA gene mutation.

Method
We included 67 patients in the study. The presence of germline BRCA1 and BRCA 2 mutation among them was obtained. A detailed information was collected on patients' characteristics emphasizing on personal, family risk factors and tumor characteristics, and the main primary treatment given and the relationship between these parameters and the BRCA mutations was estimated.

Results
Twenty-six patients with mutations were identified (twenty-four in BRCA1 and two in BRCA2) representing (38.1%). The number of Saudi patients with BRCA gene mutation were 24 with a percentage of Saudi patient of 40% (24/60). The median age at diagnosis was 51 years old with a range of (17-75).
Among the twenty-six mutation-positive patients, six (6/26= 23%) had a previous history of breast cancer and six (6/26= 23%) had a family history of breast or ovarian cancer.
All patients with BRCA mutations were of serous histology and of high grade. Twenty-two (84.6%) of them have high Ca 125 at diagnosis and nineteen (73.1%) presented at advanced stage; reason why most of them (53.8%) had interval de-bulking surgery.

Conclusion
The frequency of BRCA gene mutations was high among our patients (38.1%). The lower

median age of ovarian cancer in Saudi Arabia (51years old) can be explained by the high percentage of patients with BRCA gene mutation. Only (23%) of our patients with BRCA gene mutations have positive family history.

17 β-estradiol reverses apelin-inducing ovarian cancer cell proliferation

Authors

Hoffmann Marta 1, Gogola Justyna 1, Ptak Anna 1,

1. Department of Physiology and Toxicology of Reproduction, Jagiellonian University, Institute of Zoology and Biomedical Research, Krakow, POLAND

Abstract ID: 3743

Apelin is a bioactive adipocytokine that is highly expressed by various tissues in the human body with serum concentration 1,31 ± 0,12 ng/ml. Several studies show that alterations in the secretion of adipokines affect cell proliferation, apoptosis, tumor invasion and angiogenesis. We previously demonstrated that apelin and its receptor (APLNR) are expressed by ovarian tumor cell lines and acts as a mitogenic factor in these cells. It is well known that 17β-estradiol (E2) and insulin-like growth factor 1 (IGF-1) plays a key role in ovarian cancer progression. Moreover, apelin by binding to its receptor, share the same signaling pathways with E2 and IGF-1 such as ERK1/2. Thus, we investigated whether apelin can interact with E2 or IGF-1 and regulate ovarian cancer progression.

The human ovarian serous carcinoma cell line OVCAR-3 were obtained from the ATCC and cultured in RPMI 1640 medium supplemented with 15% FBS. Cell proliferation was measured using the CellTiter-Glo Luminescent Cell Viability Assay reagent. Total RNA isolation and cDNA synthesis were carried out using the TaqMan Gene Expression Cells-to-CT. Statistical analysis was performed using one-way ANOVA followed by Tukey's test. The level of significance was set at $P < 0.05$.

Consistent with previous results, we found that apelin (2 ng/ml), E2 (1nM) and IGF-1 (100 ng/ml) stimulated OVCAR-3 cell proliferation (160%, 127% and 135% relative to that of the control, respectively; $p < 0.05$). The combined treatment of apelin and IGF-1 does not change the proliferative effect of these compounds. However, treatment of E2 and apelin together decreased cell proliferation to the control cell level (111%; $p < 0.05$). Thus, we examined whether apelin (2 ng/ml) could affect the mRNA expression of ESR1, ESR2, and GPER1 in OVCAR-3 cells. We observed no difference in selected receptors expression between apelin-treated and control cells. Considering an antagonistic effect of apelin and E2 together on cell proliferation, we then determined whether the non-genomic ERK1/2 signaling pathway was involved in these effects. Pretreatment of OVCAR-3 cells with the ERK1/2 inhibitor PD098059 (5 μmol/L) reversed the stimulatory effects of apelin and E2 alone on cell proliferation (102% and 101%, respectively; $p < 0.05$). Exposure of the cells to the combination of apelin and E2 with PD098059 also decreased to the control level OVCAR-3 cell proliferation (111%; $p < 0.05$) indicating that non-genomic ERK1/2 pathway is not involved in this process. Taken together, our results suggest that ERK1/2 signaling pathway is involved in apelin and E2 regulated ovarian cancer cell proliferation. We also showed that antagonistic effect of apelin and E2 together is not mediated by ERK1/2 pathway and further studies are needed.

This work was supported by the National Science Centre, Poland (NCN, grant number 2016/21/N/NZ5/00161).

Keywords
ovarian cancer, apelin, estradiol

A feasibility study of laparoscopic sentinel lymph node mapping by cervical tracer injection in endometrial cancer

Authors

Chisa Shimada 1, Yukiharu Todo 1, Hiroyuki Yamazaki 1, Yasuhiro Yamamoto 1, Shinichiro Minobe 1,

1. Hokkaido, Hokkaido Cancer Center, Sapporo, JAPAN

Abstract ID: 3744

Objective
The aim of this study was to investigate the feasibility of laparoscopic sentinel lymph node (SLN) mapping characterized by a cervical tracer injection in endometrial cancer.

Methods
This retrospective study was carried out between January 2017 and April 2018 using data for 118 patients with endometrial carcinoma who had undergone intraoperative SLN mapping and subsequent surgical staging. Technetium colloid (Tc) and/or indocyanine green (ICG) was injected into the uterine cervix and a gamma-detecting probe and/or photodynamic eye camera system was used intraoperatively to locate hot spots. Various perioperative parameters were compared between laparoscopic SLN mapping (Group L) and open approach SLN mapping (Group O).

Results
One hundred and nine (92%) had FIGO Stage I disease. Fifty-three (45%) patients were in the Group L and 65 (55%) in the Group O. Successful unilateral or bilateral mapping occurred in 16% and 77%, respectively. Perioperative complication was observed in 13%. Lower extremity lymphedema was observed in 3%. Combined use of Tc and ICG were observed in 49% of the Group L and 20% of the Group O ($P<0.0001$). Unsuccessful mapping occurred in 8% of the Group L and 6% of the Group O ($P=0.76$). Perioperative complication occurred in 6% of the Group L and 18% of the Group O ($P<0.05$).

Conclusion
Laparoscopic SLN mapping with the use of cervical tracer injection is highly feasible in Japanese women with early stage endometrial cancer despite that it might need combined use of Tc and ICG for detecting SLNs.

Keywords
endometrial cancer sentinel lymph node mapping

A 17-years old patient presented with clear cell carcinoma of uterine cervix

Authors

Alemka Brncic-Fischer Brncic-Fischer 1, Marko Klari? 2, Danilo Vejnovi? 3, Danko Perovi? 4, Lana Glavan Gacanin 3, Herman Haller 3,

1. Gynecology&Obstartics, University Hospital Center Rijeka, Rijeka, CROATIA
2. Gynecology&Obstetrics, University Hospital Centre Rijeka, Rijeka, CROATIA
3. Gynecology&Obsterics, University Hospital Centre Rijeka, Rijeka, CROATIA
4. Ganecology&Obsterics, Univeristy Hospital Center Rijeka, Rijeka, CROATIA
5. Gynecology&Obsterics, University Hospital Centre Rijeka, Rijeka, CROATIA

Abstract ID: 3748

Introduction
A 17-year-old girl presented with the complaints of irregular menstrual bleeding for last five months. There was no maternal history of any drug/DES exposure during pregnancy and she had negative familial cancer history.
Transrectal ultrasound discovered a cervical tumor measuring 60x50mm. Adnexal mass were presented on both ovaries, high vasculated. We didn't perform vaginal examination per speculam beacuse she had no sexual intercourse. Magnetic resonance imaging showed solid mass in the cervix with cystic components, solid mass of both ovaries and suspected pelvic lymph nodes. Biopsy confirmed the diagnosis of clear cell adenocarcinoma of cervix. Pap smear taken at biopsy showed adenocarcinoma and HPV testing was negative. CA 125 was elevated (74.5). Radical abdominal hysterectomy, bilateral salpingo-oophorectomy, systemic pelvic and paraaortic lymphadenectomy, infracolic omentectomy, appendectomy, resection of distal part of left urether with reimplantation (psoas hitch) was perfomed. Pathological examination showed pelvic and paraaortic lymph node involment, lymph-vascular space involment, penetration of cervical tumor in vagina and metastases in both ovaries, peritoneum and omentum. There was no residual tumor. Postoperative adjuvant chemotherapy (6 cycle of paclitaxel and carboplatin, in three- weeks intervals) and radiotherapy was administrated. Ten months after operation Ca 125 level is negative (8.6) and there is no sign of malignant activity. After two months there has been a rise in tumor marker (CA 125) and PET CT confirmed the relaps of disease in liver, peritoenm, thoracal spinje and lungs.

Discussion
Primary clear cell carcinoma of cervix is extremely rare in women without in utero DES exposure and in such cases it concerns mostly postmenopausal women. Clear cell adenocarcinoma (CCAC) has a bimodal age distribution. The first peak occurs in women who are 17 to 37 years of age, and the second peak occurs in women who are 44 to 88 years of age. Liebrich et al have reported 18 cases of primary cervical cancer, persistently negative for high-risk HPV-DNA, in virgins and very young women. Only few studies have explored the association between HR HPV and CCAC. In this small studies HR HPV positivity varied between 0% and 100%. CCAC in young virginal patients is often misdiagnosed as precocious puberty or anovulatory bleeding. Thomas reported that only six of 31 CCAC patients (18%) had abnormal Pap tests. Although CCAC is an uncommon tumor, it must be considered in the differential diagnosis in young women and children who have cervico-vaginal lesions even without in utero DES exposure history. In these group of patients CCAC usually presents at advanced stage and diagnosis may be delayed beacuse of nonspecificity of symptoms, refusal of gynecological examination. No guidelines have been established for the treatment of CCAs, as their treatment is mainly based on experience with squamous cell carcinomas and adenocarcinomas.

Conclusion
CCAC in adolescents usually is often misdiagnosed because of its rarity. It should be

considerd as a possible differential diagnosis in a case of vaginal bleeding, even without a history of sexual intercourse

Keywords
adolescent, adenocarcinoma, clear cell carcinoma

Supplementary material
http://sites.altilab.com/files/159/abstracts/figure-1..jpg,
http://sites.altilab.com/files/159/abstracts/figure-2..jpg

Breast cancer, primary peritoneal malignant mixed mullerian tumor and fallopian tube carcinoma: incidental concomitant malignancies or evidence for a new genetic cancer predisposition syndrome?

Authors

Grace Lynn Estanislao 1, Ronald Augustine Campos 2,

1. Obstetrics and Gynecology, The Medical City, Manila, PHILIPPINES
2. Obstetrics and Gynecology, Gynecologic Oncology, The Medical City, Manila, PHILIPPINES

Abstract ID: 3751

This a case report on a 72-year-old postmenopausal G4P4(4-0-0-4), known case of stage I breast cancer, maintained on Anastrozole, with no history of chemotherapy or radiotherapy. One year later she was diagnosed with synchronous primary peritoneal malignant mixed mullerian tumor and high grade serous fallopian tube carcinoma. While her BRCA status is unknown, recent studies have suggested the existence of another genetic cancer predisposition syndrome linking breast cancer and malignant mixed mullerian tumor. Because of the poor prognosis of malignant mixed mullerian tumors, discovery of a such a hereditary link with breast cancer impacts not only numerous individuals but entire families as well.

Keywords
breast neoplasms; fallopian tube neoplasms; mixed tumor, Mullerian

Supplementary material
http://sites.altilab.com/files/159/abstracts/grace-lynn-estanislao-case-report-submission.pdf, http://sites.altilab.com/

Primary vulvar adenocarcinoma

Author

Amira Badawy 1,

1. Gyne-Oncology Unit, Alexandria University, Alexandria, EGYPT

Abstract ID: 3752

Introduction
Primary vulvar cancer is a rare gynaecologic malignancy, seen in about 2–3 per 100,000 women. The majority of cases (about 90%) are squamous cell carcinomas. Primary vulvar adenocarcinoma is much less common, with a very limited number of cases reported worldwide. It may originate from Bartholin's gland, sweat glands, Skene's gland, minor vestibular glands, aberrant mammary tissue or endometriotic implants.
Case report: This is a report of a 60 years old female, presented with a big right-sided labial soft tissue swelling with two superficial skin ulcers. Excisional biopsy was done and histo-pathologic examination revealed a primary vulval mucinous adenocarcinoma. After local excision, the patient was directed to the medical oncology department to receive adjuvant chemotherapy.

Discussion
The full details of the case regarding the clinical and laboratory findings is presented, and compared to similar published cases.
Conclusions: Primary vulval mucinous adenocarcinoma although rare, but should be suspected particularly in cases presented with suspicious vulval masses rather than ulcers, metastatic workup and immunohistochemistry should be performed to confirm to confirm the primary vulval origin of such a tumour.

Keywords
Rare gynecologic malignancies, Vulval adenocarcinoma, Cancer vulva, Mucinous adenocarcinoma

Mixed type endometrial cancer, a series of six cases

Author

Amira Badawy 1,

1. Gyne-Oncology Unit, Alexandria University, Alexandria, EGYPT

Abstract ID: 3753

Introduction
Endometrial cancer is the most common malignant tumour of the female genital tract, Type-1 (endometrioid) endometrial adenocarcinoma is the pathological variant detected in the vast the majority of cases, while type-2 endometrial adenocarcinoma is less common but usually more aggressive and of high grade. Type-2 endometrial adenocarcinoma includes papillary serous and clear cell carcinoma, in addition to carcino-sarcoma (malignant mixed Mullerian tumours) varieties. Endometrial stromal sarcoma is a very rare type of endometrial cancer, representing only 0.2% of all uterine malignancies. The presence of mixed pathologic patterns of gynaecologic cancers is not a common finding. In endometrial cancer, mixed epithelial carcinoma is defined as a tumour composed of two or more different histological types of endometrial carcinoma, at least one of which is of the type II category, with at least 10% of each component. It is also called mixed cell adenocarcinoma. Coexistence of endometrial stromal sarcoma and endometrial epithelial carcinoma is an extremely rare finding.

Patients and methods
In the current study, we present six cases of mixed endometrial cancers, five of which are mixed adenocarcinoma (mixed epithelial carcinoma), and one is mixed type-1 endometrioid adenocarcinoma with endometrial stromal sarcoma. Each case is discussed in full details regarding the clinical presentation, imaging and laboratory findings, management and follow up.

Results and Discussion
mixed endometrial cancer is an unusual pathological finding. The common combination is type-1 endometrial cancer and papillary serous adenocarcinoma. Tumour behaviour is mostly related to the dominant pathological component.
Conclusions: Considering the rarity of mixed endometrial carcinoma (particularly combination of endometrioid adenocarcinoma with endometrial stromal sarcoma), this study adds a great value to other similar case reports in the literature in order to clarify the possible aetiology, pathogenesis, and clinical behaviour of this group of tumours.

Keywords
Endometrial carcinoma, Endometrial stromal sarcoma, Mixed cancers, Type-2 endometrial carcinoma.

Endometrial Cancer in Oman , A Single Institution Experience

Authors

Al-Farsi Sharifa 1, Thuria Al-Rawahi 1,

1. Gynecologic oncology, Royal Hospital, Muscat, OMAN

Abstract ID: 3754

Introduction
Endometrial cancer is the most common gynecologic malignancy worldwide. Most endometrial cancers are diagnosed at an early stage (75%), and hence the reported survival rate is 75%.
In Oman, Uterine cancer is the commonest gynecologic cancer. To date no data is available about this cancer in the country.

Objectives
This retrospective cohort study analyzed the tumor characteristics and outcomes of uterine cancer in Omani patients, including clinical and histo-pathological characteristics of the tumor, risk factors, treatment given, patterns of disease relapse, and different treatments given for relapse.

Methods
All patients with uterine cancer were identified and their data were collected retrospectively using the Al- Shifa database at Royal Hospital, Oman between January 2006 and December 2014.

Results
Eighty eight patients with uterine cancer were identified. The mean age of the patients was 60.9 ± 12.5 years, the mean body mass index ± SD was 31.4 ± 8.0 kg/m2, and the median parity was approximately 7.0.
Although diabetes and hypertension are considered independent risks factors, we found that 25 patients (28.4%) were diabetic while 41 patients (46.6%) were hypertensive.
The most common presenting symptom among postmenopausal patients was post menopausal bleeding (77.3%), while menstrual problems were the main presenting symptoms in premenopausal patients (8.0%).
Hysteroscopy with endometrial biopsy was the main method used for confirming the diagnosis in 49 patients (55.7%) while outpatient biopsy was used in 4 patients (4.5%).
Type 1 endometrial cancer was reported in 56 patients (63.3%), while type 2 was reported in 23 patients (20.0%), and other rare histo-pathological subtypes were in 9 (10.2%).
Tumor distribution by International Federation of Gynecology and Obstetrics stage was the following: 39 patients (44.3%) had stage I disease at diagnosis, 12 patient (13.6%) stage II disease, 22 patients (25.4%) stage III disease, 4 patients (4.5%) stage IV disease and unknown in 11 patients.
The surgical treatment was the main treatment performed for 77 patients (87.5%).
Adjuvant chemotherapy was given for 18 patients (18.2%) and adjuvant radiotherapy for 39 patients (44.3%).
Hormonal therapy was given for 5 patients (5.7%).
Twenty-two patients (25%) had a recurrence of the disease at different sites on follow up. Treatment of recurrence consisted mainly of chemotherapy (12/22=54.5%) , hormonal treatment (4/22=18.1%), surgical resection (2/22=9.1%) and radiotherapy (1/22=4.5%). Combined modality treatment (2/22=9.1%).

Conclusions
Uterine cancer in Oman was diagnosed at early stages (51/88 patients = 57.9%).
Majority of patients had surgery (77/88 =87.5%) with either adjuvant radiotherapy or

chemotherapy. This explained why only 25% (22/88 patients) had relapsed disease after treatment.
Thus uterine cancer is one of the cancer in Omani population that can be diagnosed and treated at an early stage with good results.

Primordial germ cells as a potential shared cell of origin for mucinous cystic neoplasms of the pancreas and mucinous ovarian tumors

Authors

Intidhar Labidi-Galy 1, Kevin Elias 2, Petros Tsantoulis 1, Jean-Christophe Tille 3, Michael Goggins 4, Michael Birrer 5, Michelle Hirsch 6, Ronny Drapkin 7,

1. Department of Oncology, Hopitaux Universitaires de Geneve, Geneva, SWITZERLAND
2. Department of gynecology, Brigham and Women's hospital, Boston, UNITED STATES
3. Division of pathology, Hopitaux Universitaires de Geneve, Geneva, SWITZERLAND
4. Department of pathology, Johns Hopkins University, Baltimore, UNITED STATES
5. Division of hematology and oncology, University of Alabama, Birmingham, UNITED STATES
6. Department of pathology, Brigham and Women's hospital, Boston, UNITED STATES
7. Department of gynecology, University of pennsylvania, Philadelphia, UNITED STATES

Abstract ID: 3756

Mucinous ovarian tumors (MOT) morphologically and epidemiologically resemble mucinous cystic neoplasms (MCN) of the pancreas, sharing a similar stroma and both occurring disproportionately among young females. Additionally, MOT and MCN share similar clinical characteristics and immunohistochemical phenotypes. Exome sequencing has revealed frequent recurrent mutations in KRAS and RNF43 in both MOT and MCN. The cell of origin for these tumors remains unclear, but MOTs sometimes arise in the context of mature cystic teratomas and other primordial germ cell (PGC) tumors. We undertook the present study to investigate whether non-teratoma associated MOT and MCN share a common cell of origin. Comparisons of the gene expression profiles of MOT (including both the mucinous borderline ovarian tumors [MBOT] and invasive mucinous ovarian carcinomas [MOC]), high-grade serous ovarian carcinomas, ovarian surface epithelium, Fallopian tube epithelium, normal pancreatic tissue, pancreatic duct adenocarcinomas, MCN, and RNA-sequencing of single cell PGCs revealed that both MOT and MCN are more closely related to PGCs than to either eutopic epithelial tumors or normal epithelia. MOC and MCNs express markers of late PGCs. We hypothesize that MCN may arise from PGCs that stopped in the dorsal pancreas during their descent to the gonads during early human embryogenesis, while MOT arise from PGCs in the ovary. Together, these data suggest a common pathway for the development of MCN and MOT and suggest that these tumors may be more properly classified as germ cell tumor variants.

Keywords
ovarian cancer, mucinous ovarian tumors, pathogenesis, primordial germ cell

Recurrence after total laparoscopic hysterectomy without morcellation for smooth muscle tumors of uncertain malignant potential: A rare case report

Authors

SEIRO SATOHISA 1, Shuetsu Abe 1, Masahiro Iwasaki 2, Taishi Akimoto 1, Satoshi Shikanai 1, Masato Tamate 1, Motoki Matsuura 1, Mizue Teramoto 1, Tsuyoshi Saito 1,

1. Obstetrics and Gynecology, Sapporo Medical University School of Medicine, Sapporo, JAPAN
2. Obstetrics and Gynecology, Sapporo Medical University School of Medicine, Sapporp, JAPAN

Abstract ID: 3757

Introduction
Uterine smooth muscle tumors of uncertain malignant potential (STUMP) are rare mesenchymal tumors with characteristics between benign leiomyomas and leiomyosarcomas (LMSs). Diagnosis, surgical management, and follow-up of this neoplasm remain controversial due to their unaggressive behavior and prolonged patient survival rate compared to LMSs. However, recurrence is estimated at almost 10% and may include delayed recurrences. When morcellated uterine tumors are unexpectedly found to be LMSs or tumors with atypical features (atypical leiomyoma, smooth muscle tumors of uncertain malignant potential), there may be significant clinical consequences.

Methods
We report the case of a 49-year-old woman (gravida 2, para 2) who presented with recurrence and transformation into LMS 37 months after the first operation without morcellation for STUMP.

Results
The patient had undergone a total laparoscopic hysterectomy and bilateral salpingo-oophorectomy without morcellation for a suspected uterine myoma, which was histologically proven to be STUMP. The patient presented with two months of dull pain on her right back buttock. Computed tomography showed a relapse of STUMP at the right side of the vaginal stump to pelvic wall and right hydronephrosis. The patient underwent a laparotomy for complete removal of the neoplastic recurrence and removal of the right kidney and ureter, which was histologically proven to be recurrence and transformation into LMS. The patient received adjuvant gemcitabine plus docetaxel. To date, the patient is disease-free.

Conclusion
STUMP needs frequent surveillance for the risk of recurrence and transformation into LMS, even many years after the first diagnosis and even after complete removal without morcellation.

Keywords
Uterine Smooth muscle tumors of uncertain malignant potential, surgical treatment, leiomyosarcoma, recurrence

Supplementary material
http://sites.altilab.com/files/159/abstracts/stump-a-rare-case-report.docx, http://sites.altilab.com/

Recurring Ovarian Primary Glioblastoma with Effective Carboplatin+Etoposide Therapy

Authors

Shuetsu Abe 1, Seiro Satohisa 1, Taishi Akimoto 1, Kazusa Nofuji 1, Yoko Nishimura 1, Masato Tamate 1, Tasuku Mariya 1, Takafumi Kuroda 1, Motoki Matsuura 1, Mizue Teramoto 1, Masahiro Iwasaki 1, Tsuyoshi Saito 1,

1. Department of Obstetrics and Gynecology, Sapporo Medical University, Sapporo, JAPAN

Abstract ID: 3761

Introduction
A glioblastoma arising from an ovarian mature cystic teratoma is extremely rare. Guidelines for treatment of glioblastoma arising in teratoma have not been established because of its rarity. We report a case of glioblastoma arising from an ovarian teratoma diagnosed at Stage IA and we review the literature on glioblastoma arising in an ovary.

Patients
A 31-year-old woman (gravida 3, para 1) visited a hospital because of abdominal fullness. She had no significant medical or gynecological history. Magnetic resonance imaging revealed a bilateral ovary tumor that suggested mature cystic teratoma. She underwent a total hysterectomy with bilateral salpingo-oophorectomy and partial omentectomy because frozen section diagnosis during surgery was immature teratoma of the left ovary. Based on the morphology and immunohistochemical results, the final diagnosis was a glioblastoma arising from an ovarian teratoma. Additional treatment options were recommended, but she chose close observation. Six months later she relapsed, which was diagnosed by computed tomography (CT) imaging of an enlarged para-aortic lymph node. She underwent systematic para-aortic and pelvic lymphadenectomy. The metastatic lymph node showed pathological features similar to those of the primary tumor. Temozolomide (TMZ) was administered for maintenance therapy followed by TMZ with concomitant radiotherapy. After 6 months, CT indicated ascites and lymph node metastasis. She received a carboplatin+etoposide regimen.

Results
After 3 cycles of the carboplatin+etoposide regimen, her diseases were remarkably reduced.

Conclusion
To our knowledge, this is only the fifteenth reported case of glioblastoma occurring in an ovarian mature cystic teratoma. There is no consensus regarding the most appropriate treatment for recurrent glioblastoma arising from the ovary. A regimen of carboplatin+etoposide may be an alternative choice for patients with recurrent high-grade glioma.

Keywords
Glioblastoma, Ovarian teratoma, Malignant Transformation, Carboplatin, Etoposide

CLINICAL APPLICATION OF WHOLE EXOME SEQUENCING IN A CASE OF METASTASISED LOW GRADE SEROUS OVARIAN CANCER

Authors

Michael Wilkinson 1, Bruce Moran 2, Sudipo Das 3, Kieran Sheahan 4, Darran O'Connor 3, Jean Murphy 5, Cathy Kelly 4, Niall Mulligan 4, Brendan Loftus 2, Donal Brennan 7,

1. The Conway Institute, University College Dublin, Dublin, IRELAND
2. Core sequencing facility, Conway Institute, University College Dublin, Dublin, IRELAND
3. Molecular and Cellular Therapeutics Lab, Royal College of Surgeons Ireland, Dublin, IRELAND
4. Department of Histopathology, Mater Misericordiae University Hospital, Dublin, IRELAND
5. Department of Histopathology, St. Vincent's University Hospital, Dublin, Dublin, IRELAND
6. Core Sequencing Facility, Conway Institute, University College Dublin, Dublin, IRELAND
7. Cancer Biology and Therapeutics Lab, Conway Institute, University College Dublin, Dublin, IRELAND

Abstract ID: 3763

Background
Low grade serous ovarian cancer (LGSOC) is defined by slow growth, chromosomal stability and resistance to chemotherapy. We report a stage IV LGSOC patient who had extensive cytoreductive surgery in December 2016, completed 6 cycles of adjuvant carboplatinum and paclitaxel and was commenced on maintenance tamoxifen. She developed recurrent disease in her chest and abdominal wall in November 2017.

Methods
DNA was extracted from seven FFPE tumour samples (5 from primary surgery and 2 from recurrences) and whole blood. Exomes were sequenced using Illumina's NextSeq platform. Sequence data was trimmed, aligned and single nucleotide variants (SNVs) and copy number alterations (CNAs) were called. Single gene testing was performed for BRAF V600E, KRAS and ERFR. MSI status was confirmed using immunohistochemistry.

Results
The tumour had a low mutational burden. Among twenty protein-coding somatic SNVs reported, we identified a class 3 'kinase-dead' BRAF variant, D594G present in 6/7 tumour samples. This mutation is known to inhibit protein activity. Concordant near-whole chromosome 1 amplification in both primary and recurrent samples, covering the NRAS proto-oncogene. Single gene testing confirmed wild type EGFR and KRAS and the tumour is microsatellite stable.

Discussion
Class 3 BRAF mutations increase MAPK activity by weakly binding CRAF which increases receptor tyrosine kinase mediated phosphorylation of RAS genes. This is particularly the case in RAS-activated tumours, likely here given NRAS amplification. As a result we have commenced this lady on MEK inhibitor (Trametinib) and she is awaiting restaging. These findings have not been previously described in LGSOC.

FFPE = Formalin-Fixed Parafin Embedded

Keywords
Low Grade Serous Ovarian Cancer, BRAF

Clinical Approaches and Outcomes of Serous Endometrial Cancer in a Large Tertiary Referral Centre

Authors

Michael Wilkinson 1, Sarah Murphy 1, Edward Corry 2, Tom Walsh 1, Ruaidhri Mcvey 1, Bill Boyd 1, Matt Hewitt 3, Donal Brennan 1,

1. Gynaeoncology, Mater Misercordiae Hospital, Dublin, IRELAND
2. Gynaeoncology, Cork University Maternity Hospital, Cork, IRELAND
3. Gynaeoncology, Cork University Maternity Hospital, Dublin, IRELAND

Abstract ID: 3765

Background
Currently there is a lack of consensus on the uniform management of Serous Endometrial cancer, owing to the fact that often these patients are poor surgical and oncology candidates.

Aims
To describe the clinical approach and outcomes of 57 patients with Serous Endometrial cancer in a large tertiary referral centres.

Methods
A retrospective study from January 2009 to January 2018 of all cases of predominantly serous histology. Data parameters including treatment regimens and survival patterns were recorded.

Results
A total of 57 patients with an average age at presentation of 67.5 years (47-92) were included in the study. Upon diagnosis, 9/57 (16%) had an ASA $\geq$3 and were deemed un-suitable for surgical intervention. 5/9 (55.5%) received neoadjuvant chemotherapy, 2/9 (22.2%) received palliative RT while 2/9 (22.2%) declined treatment. 48/57 (84.2%) had upfront de-bulking surgery with a wide variation in the choice of adjuvant therapy; Chemo+RT 18/48 (37.5%), Chemo Only 16/48 (33.3%), RT only 3/48 (6.2%), Progesterone only 2/48 (4.1%), No Therapy 9/48 (5.9%). The 18 month progression free survival was 51.1%. There was a statistically significant difference in the 18 month progression free survival between the Chemo+RT and the Chemo only group; (71% V 42%: $P<0.05$).

Conclusion
A larger percentage of these patients receive neoadjuvant treatment only compared to their Endometrioid counterparts. There is a wide variation in adjuvant treatments with those receiving combined chemotherapy and radiotherapy having higher progression free survivals at 18 months.

Is conservative surgery appropriate in ovarian granulosa cell tumors with tumor rupture?

Authors

Sebastien Gouy 1, Gregoire Miaihle 2, Hélène Gauthier 3, Amandine Maulard 3, Enrica Bentivegna 3, Patricia Pautier 3, Catherine Genestie 3, Alexandra Leary 3, Philippe Morice 3,

1. Surgery, Gustave Roussy, Villejuif, FRANCE
2. Gustave Roussy, Vilejuif, FRANCE
3. Gustave Roussy, Villejuif, FRANCE
4. Gustave Roussy, Villejuif, FRANCE

Abstract ID: 3766

Introduction and Objective
The aim of the study was to evaluate oncological and fertility outcomes after conservative surgery for ovarian granulosa cell tumors (GCT) for stage IC associated with tumor rupture.

Methods
Retrospective study of patients (pts) < 40 years, referred to Gustave Roussy with a GCT between 1986 and 2016 treated with conservative surgery (contralateral ovarian and uterine preservation) and stage IC 1 and 2 according to the 2014 FIGO classification. Results: 16 pts were identified (adult GCT 11 pts; juvenile GCT 5 pts); median age was 27 [19-40] years. Nine patients had stage Ic1 (54%) and 7 (44%) stage Ic2. Eight (50 %) patients received adjuvant chemotherapy with bleomycin, etoposide and cisplatin. With a median follow up of 9.2 [0.75-31.7] years. The relapse rate was high at 75% (12/16) with a median delay of 4.5 [0.6-19.6] years. Location of relapse were peritoneal (n=9) and contralateral ovary (n=3). Three patients (37,5%) had relapse after adjuvant chemotherapy. All patients (n=8) who didn't receive adjuvant chemotherapy had a relapse. Among these 16 patients, 11 were in remission, 3 were alive with disease and 2 died. Four patients had a pregnancy. Two patients had a relapse 72 and 133 months respectively after pregnancy and were in remission. Two patients had a relapse (peritoneal treated by a new surgery) 18 and 60 months respectively after initial treatment and a pregnancy 33 and 44 months respectively after first relapse. One patient was in remission and one was alive with disease.

Conclusion
Given the high relapse rates (75%) in Ic1 and Ic2 GCT, our data confirm the current recommendations for radical surgery. In case of patient refused radical surgery, adjuvant chemotherapy should be done and a delay to obtain a spontaneous pregnancy will be define in order to perform a radical surgery.

Keywords
ovarian granulosa cell tumors; stage Ic; conservative surgery

Extremely high human chorionic gonadotropin levels associated with an advanced stage of ovarian dysgerminoma

Authors

Lee Seon-Kyung 1, Ki Kyung-Do 1,

1. Dept of OB/GYN, Kyung Hee University Hospital at Gangdong, Seoul, KOREA, REPUBLIC OF

Abstract ID: 3769

Positive serum beta-human chorionic gonadotropin (beta-hCG) in reproductive-age women generally indicates a pregnancy. In the absence of pregnancy, an elevated beta-hCG is highly suspicious of an underlying malignancy. Most cases maybe due to gestational trophoblastic disease and rarely involve trophoblastic differentiation in non-gestational neoplasm including germ cell and epithelial tumours.
We report a case of extremely high human chorionic gonadotropin levels associated with an advanced stage of ovarian dysgerminoma in young girl and perform the review of literature.

A 13-year-old girl was referred to the Department of Obstetrics and Gynecology at Kyung Hee University Hospital at Gangdong in April 2018 because of an abdominal pain and huge pelvic mass.
Preoperatively, the level of the β-subunit of human chorionic gonadotropin was 3,790 IU/liter and AFP was within normal range.
Pelvic MRI revealed the presence of a 16 x 14 x 11 cm sized huge pelvic mass with central necrosis. Pelvic and chest CT revealed no significant lymph node enlargement.
Abdominal exploration revealed a stage III dysgerminoma; Unilateral salpingo-oophorectomy, Partial Omentectomy, small bowel resection, multiple peritoneal biopsy, and pelvic/para-aortic lymphadenectomy were performed.
Pathologic result revealed Ovarian dysgerminoma (18.5 x 17 x 11cm) with microscopic omental involvement and no lymph node metastasis.
HCG level dropped in the next 10 days after surgery to 33 and remained stable.
Diagnosis of stage III dysgerminoma was made and the patient received 3 cycles of BEP chemotherapy.

Malignant ovarian germ cell tumors with advanced stage are rare and knowledge about prognostic parameters is limited. A number of papers have documented increased serum beta-hCG levels in patients with ovarian dysgerminoma and elevation of serum markers beta-human chorionic gonadotropin and alpha-fetoprotein were also found to be significant predictors of overall survival in malignant ovarian germ cell tumors. Therefore, beta HCG testing as a tumor marker should be considered for ovarian dysgerminoma.

Keywords
Ovarian Dysgerminoma, Beta HCG

Undifferentiated sarcoma arising in an ovarian immature teratoma in a 22-year-old patient: A case report

Authors

Alaa El Housheimi 1, Dalia Khalifeh 1, Maelle Saliba 2, Muhieddine Seoud 1, Reem Abdallah 1,

1. Obstetrics and Gynecology, American University of Beirut Medical Center, Beirut, LEBANON
2. Pathology, American University of Beirut Medical Center, Beirut, LEBANON

Abstract ID: 3770

Introduction
Immature Teratoma is a rare type of germ cell tumors, that occurs in young women and represents 1% of all ovarian teratomas. Mixed germ cell tumors with other types of ovarian malignancies like sex cord tumors have been reported. On the other hand mixed germ cell tumor with sarcomatous component have been rarely reported and only few cases have been described in the literature.

Case report
A 22-year-old female presented to our clinic with increased abdominal girth associated with abdominal pain, nausea, constipation, 7 kg weight gain, exertional dyspnea, and orthopnea. 5 months prior to presentation, the patient had seeked medical attention in another hospital due to the same clinical picture. She was found to have a 22cm right adnexal mass on CT scan for which she underwent a laparotomy and excision. Pathologic examination revealed an immature teratoma, however no further steps were taken. The symptoms recurred 8 weeks after the surgery, and repeat imaging showed bilateral large adnexal masses, which were also resected, and the pathology was reported as immature teratoma versus fiborsarcoma. Review of the available pathology slides at our instituition revealed an immature teratoma from both previous surgeries.
In view of our pathology review findings, and the extent of the disease on PET/CT, the patient received the BEP protocol with partial response after 4 cycles and underwent an interval cytoreductive surgery. Intraoperatively, she was found to have significant abdominal and pelvic disease, and complete cytoreduction was achieved. Pathology revealed pure high grade (undifferentiated) sarcoma in all slides. There were no elements of immature teratoma. Immunohistochemical staining revealed histologic features of rhabdomyosarcoma. Additional pathology slides from the previous surgeries were rereviewed by the pathology department at our institution and revealed pure immature teratoma in samples from first surgery, mixed immature teratoma with sarcoma constituting around 20% of the tumor in samples from second surgery.
Chemotherapy with Vincristine, Adriamycin, and Ifosfamide was started 4 weeks postoperatively. However, the patient had a massive recurrence one week later, with bilateral 20 cm pelvic masses and multiple abdominal lesions and passed away shortly thereafter.

Discussion
We describe the case of a 22-year-old woman with mixed ovarian immature teratoma with undifferentiated sarcoma. The development of sarcoma in immature teratoma could be attributed to the totipotential nature of the germ cell tumor, which led to their partial differentiation into somatic tissue or to malignant transformation of mesenchymal elements within the teratoma. However, given the high grade and undifferentiated nature of sarcoma in this patient, it is more likely that sarcoma and immature teratoma were present concomitantly. The decreasing percentage of the immature teratoma part throughout the course of disease is attributed to the effect of chemotherapy on the chemosensitive germ cell tumor.

Conclusion

Very few cases of mixed germ cell tumors with sarcoma has been reported. Both tumors were most probably present concomitantly in our case, in contrast to other cases reported, where the totipotential immature teratoma cells have undergone differentiation to well differentiated sarcoma tissues.

Keywords

Immature teratoma, Rhabdomyosarcoma, mixed ovarian tumors.

Clinical outcomes of Gestational trophoblastic disease who underwent hysterectomy: a 12-year clinical experience at single institute.

Authors

Lee Seon-Kyung 1, Ki Kyung-Do 1,

1. Dept of OB/GYN, Kyung Hee University Hospital at Gangdong, Seoul, KOREA, REPUBLIC OF

Abstract ID: 3772

Introduction
Gestational trophoblastic disease (GTD) is an abnormal group of pregnancy-related tumors. Most of women with GTD respond well to simple evacuation of trophoblastic tissue in the uterus with/without chemotherapy. But small minority whose beta human chorionic gonadotropin (B-hCG) levels remain elevated undergo more definitive surgical management. In this study, we analyzed the clinical features, treatment, and outcomes of Gestational trophoblastic disease who underwent hysterectomy in our institution.

Materials /Patients and methods
The electronic medical record database of Kyung Hee University Hospital at Gangdong was screened to identify patients with Gestational trophoblastic disease from 2006 to 2017. Medical records for each patient's clinical features and treatment were reviewed.

Results
A total of 118 cases of GTD, 10 (8.5%) patients underwent hysterectomy. Two patients were molar pregnancies who didn’t want pregnancy, 5 were persistent gestational trophoblastic neoplasia (GTN), 2 patients were choriocarcinoma, 1 patient was placental site trophoblastic tumor. The median age of the patients was 41 years. All patients had disease confined to the uterus without metastasis at diagnosis. But 3 patients needed adjuvant chemotherapy because B-hCG levels remain elevated. All of them were alive without disease during the follow-up period.

Conclusion
Patients who underwent hysterectomy represent a high-risk group, often having more aggressive pathology. Hysterectomy is feasible as treatments modality of GTD and it is essential to examine the beta-hCG serially.

Keywords
Gestational trophoblastic disease; Hysterectomy; Chemotherapy; Prognosis; Beta-hCG

STK11 mutated cervical carcinoma

Authors

Zoran Gatalica 1, Kara Bui 2, Jeffrey Swensen 2, Joanne Xiu 3, Alexandra Leary 4,

1. Pathology, Caris Life Sciences, Phoenix, UNITED STATES
2. Genetics, Caris Life Sciences, Phoenix, UNITED STATES
3. Medical Affairs, Caris LIfe Sciences, Phoenix, UNITED STATES
4. Gynecology Unit, Gustave Roussy Cancer Centre, Villejuif, FRANCE

Abstract ID: 3773

Introduction and Objectives
Pathogenic germline mutations in STK11, a tumor suppressor gene, lead to development of Peutz-Jeghers syndrome (PJS). PJS is associated with increased rates of tumors that include cervical adenocarcinoma, specifically adenoma malignum. The impact of STK11 germline and somatic mutations in an unselected cervical cancer population is unknown. The role of HPV infection and potential therapeutic targets, including immuno-oncology (I-O) were evaluated in a cohort of STK11-mutated cervical cancers.

Methods and Patients
The study set consisted of 30 cases of primary cervical/endocervical malignancies with STK11 pathogenic mutations, detected using a 592 gene NGS panel. Additional biomarkers included IHC for PD-L1 and steroid receptors (ER, PR and AR), and in-situ hybridization (ISH) for HR-HPV. Microsatellite instability (MSI) and total mutational burden (TMB) were calculated from NGS data. Patients' age range was 29-64 (mean 47.6) years.

Results
STK11 mutated cervical carcinoma represented 4% of all cervical malignancies. Pathogenic mutations were identified in exons 1 and 3-8, and included splice site (3), frameshift (17) missense (4) and nonsense (8) mutations. In 3 cases clinical evidence of PJS and germline STK11 mutations were confirmed. 18 cases had evidence of metastasis at the time of testing. Histologically, STK11 mutant cancers were classified as: squamous (11), adenosquamous (3) or adenocarcinomas (16). One patient had squamous cell carcinoma with an STK11 mutation and a separate focus of adenocarcinoma without an STK11 mutation. Other commonly mutated genes included: PIK3CA (4), KRAS (4) and CDKN2A (4). 2 cases (1 PJS) had additional MDM2 gene amplification. All tested cases were microsatellite stable (23/23), while one case had a high TMB (19/Mb).PD-L1 was positive in 4/29 cases. HR-HPV was detected in 17/28 cases, including 1/3 adenocarcinomas in PJS patients. Steroid receptors were consistently negative (ER and PR 0/29; and AR 0/7).

Discussion/Conclusions
STK11 mutated cervical carcinomas are rare (4% of all cervical cancers), and associated with various histologic types. Confirmed cases of PJS were all adenocarcinomas. Biomarkers of potential usefulness of I-O therapy included PD-L1 overexpression (4 cases) and TMB-H (1 case). HPV infection can occur concomitantly with STK11 mutations (17/28 cases). All STK11 mutated cervical carcinomas were consistently negative for all 3 steroid receptors.

Keywords
adenocarcinoma, cervix, Peutz-Jeghers, STK11

c-Met signalling and endocytosis in clear cell ovarian cancer

Authors

G.E.Wood, S.F.Heuss, I.Osagie, M.Lockley, S.Kermorgant

Abstract ID: 3774

Introduction
Clear cell ovarian cancer (CCOC) is a rare subtype of ovarian cancer. Response rate to first line chemotherapy is only 20%. When disease relapses, chemotherapy response rate is less than 10%. As a result, survival in advanced CCOC is poor and new therapies are urgently required.
Upon binding its ligand, Hepatocyte Growth Factor (HGF), the receptor tyrosine kinase c-Met promotes ovarian cancer cell proliferation, survival and motility. c-Met has emerged as a major target and mediator of chemo-resistance in ovarian cancer. c-Met amplification has been demonstrated in 37% of CCOC, compared to 2.6% of epithelial cancers.
Recent clinical trials with c-Met inhibitors in ovarian cancer showed response in only 20% of patients. More comprehensive understanding of c-Met signalling in CCOC is necessary to establish optimal therapeutic strategies.
We have previously shown that c-Met transmits oncogenic signalling post-endocytosis and endocytosis inhibition reduces c-Met driven tumourigenesis. Consequently, manipulating c-Met endosomal signalling may provide a novel therapeutic approach in cancer treatment. c-Met endocytic trafficking has never previously been analysed in CCOC.

Materials /Patients and methods
Human tissue sections from CCOC patients were obtained via the Barts/UCLH Gynae Tissue Bank and underwent immunohistochemical staining for c-Met.
CCOC cell lines - JHOC-5, JHOC-7, JHOC-9, OVTOKO, OVMANA - were investigated for c-Met expression, activation with exogenous HGF stimulation and downstream signalling via Western blot analysis.
The effect of c-Met inhibitor PHA-665752 and siRNA knockdown of c-Met on cell viability was assessed using CellTiter-Glo.
Cells were plated on coverslips and stimulated with HGF for 0 and 15 min, fixed and stained for c-Met and the endosomal marker EEA-1. Slides were imaged with fluorescent confocal microscopy.

Results
c-Met expression was observed in 5/6 patients CCOC patient samples when assessed by immunohistochemistry. Strong c-Met expression was seen at the cell surface of malignant epithelial cells but not in the stroma of these tumours.
In our panel of CCOC cell lines, c-Met was found to be expressed with JHOC-5 cells expressing the highest levels.
Stimulation of the cell lines with exogenous HGF activated c-Met and the downstream signals ERK1/2 and AKT, followed by degradation of c-Met. This activation was blocked by pre-treatment with c-Met inhibitors.
The c-Met inhibitor PHA-665752 and siRNA knockdown significantly reduced the cell's viability ($n=3$ $p<0.001$).
Exogenous HGF stimulation triggers rapid c-Met endocytosis in our cell panel. Blocking endocytosis with the dynamin inhibitor Dyngo reduced c-Met ERK1/2 and AKT signalling.

Conclusion
This study confirms c-Met as a therapeutic target in CCOC and illustrates, for the first time, that c-Met is endocytosed in CCOC. Further work is ongoing to unravel these pathways and to identify novel treatment approaches.

Paget's disease: biomarkers differences between extra-mammary and mammary diseases

Authors

Zoran Gatalica 1, Kelsey Poorman 2, Gino In 3, Denisa Kacerovska 4, Bozo Kruslin 5, Elena Florento 6, Alexandra Leary 7,

1. Pathology, Caris Life Sciences, Phoenix, UNITED STATES
2. Medical Affairs, Caris Life Sciences, Phoenix, UNITED STATES
3. Medicine, Keck School of Medicine of USC, Los Angeles, UNITED STATES
4. Pathology, Charles University Medical Faculty, Pilsen, CZECH REPUBLIC
5. Pathology, KBC Sestre Milosrdnice, Zagreb, CROATIA
6. Pathology, Caris LIfe Sciences, Scottsdale, UNITED STATES
7. Gynecology Unit, Gustave Roussy Cancer Centre, Villejuif, FRANCE

Abstract ID: 3777

Introduction and Objectives
Extra-mammary Paget disease (E-MPD) is a rare primary cutaneous carcinoma of uncertain etiology (apocrine, anogenital mammary-like glands) commonly arising in the vulva, while mammary Paget's disease (MPD) is a frequent manifestation of intra-epidermal dissemination of an underlying invasive breast carcinoma. The post-surgical recurrence rate in E-MPD is 20–40%, and metastatic E-MPD has a poor survival rate. While there is no standard systemic treatment, cases of E-MPD with amplified ERBB2/HER2 have been successfully treated with Trastuzumab, alone or in combinations. However, HER2 amplification is overall rare in E-MPD, and most cases are triple (ER/PR/HER2) negative E-MPD.

Methods and Patients
14 specimens from 12 patients with primary vulvar (E-MPD) and 9 patients with mammary (areolar) Paget's disease (MPD) were molecularly profiled using immunohistochemistry, in-situ hybridization and massively parallel gene sequencing (NGS) (Caris Life Sciences, Phoenix, AZ) to detect potentially targetable alterations. Total mutational burden (TMB) and microsatellite instability (MSI) were calculated from NGS data.

Results
E-MPD comprised approximately 3.5% of all vulvar malignancies in a retrospective database of tumors (Caris Life Sciences). Her2 by IHC was significantly overexpressed in MPD (n=6/7) as compared to E-MPD (n=3/11) (p=0.019). HER2 gene amplification was significantly higher in in MPD (n=5/7) compared to E-MPD (n=1/8) (p=0.035). TOP2A amplification was higher in E-MPD (n=3/7) (one co-amplified with HER2) than in MPD (n=1/7), but the difference was not significant. Androgen receptor (AR) overexpression was seen in both cohorts (n=10/12 E-MPD and n=6/7 MPD). Estrogen receptor (ER) and Progesterone Receptor (PR) were rarely overexpressed in E-MPD (n=3/12 and n=1/12, respectively); overexpression was more common in MPD (n=3/8 and n=2/8, respectively). PIK3CA and TP53 genes were recurrently mutated; PIK3CA mutations were detected in 2 of 7 E-MPD cases and in 3 of 6 MPD cases. TP53 mutations were seen in 3 of 6 E-MPD and 1 of 5 MPD. No gene fusions or EGFRvIII variant transcripts were identified from either cohort (n=8). The ARv7 variant transcript was detected in a single case of E-MPD (n=1/4). No cases of E-MPD expressed PD-L1 in tumor cells (TC 0). TMB in E-MPD varied from 6-12 Mut/Mb, with 2 cases showing TMB>10 Mut/Mb. No patients had MSI. One patient with E-MPD with clinical follow-up data was treated with immune-checkpoint inhibitor therapy, where the best response was stable disease followed by disease progression.

Discussion/Conclusions

Extra mammary Paget’s disease shows a molecular profile distinct from mammary Paget’s disease, including lower HER2 over-expression (27% v. 85%) and amplification (12.5% v. 71%), but higher TOP2A gene amplification (42% v. 14%), which may represent a novel therapeutic target in E-MPD. Over-expression of AR in triple- negative E-MPD (Her2-/ER-/PR-; n=5/6) also suggests a role for androgen inhibitor therapy, analogous to its use in triple negative breast cancer and prostate cancer. However, special note should be taken as ARv7 transcripts, a resistance mechanism to AR-targeted therapies, are also possible in this setting. Total mutational burden in E-MPD may indicate a potential biomarker for checkpoint inhibitor therapy in selected cases (TMB>10/Mb).

Keywords

Extramammary Paget's Disease, molecular profile

Clinical and genetic characteristics of BRCA1/2 mutation in Korean ovarian cancer patients: A multicenter study and literature review

Authors

Jin Young Choi 1, Sul Lee 2, Byung Su Kwon 3,

1. Obstetrics and Gynecology, Chungbuk National University Hospital, Cheongju, KOREA, REPUBLIC OF
2. Obstetrics and Gynecology, Pusan National University Hospital, Busan, KOREA, REPUBLIC OF
3. Pusan National University Hospital, Pusan National University Hospital, Busan, KOREA, REPUBLIC OF

Abstract ID: 3778

Purpose
The aims of this study were to investigate the clinical relevance and spectrum of BRCA1/2 mutations in Korean ovarian cancer (KoOC) patients.
Materials and Methods
Two hundred seventy-nine KoOC patients were enrolled from three university hospitals between 2012 and 2017. Their peripheral blood samples were obtained for BRCA1/2 mutation analysis. Clinicopathological characteristics were retrospectively reviewed, and spectrum analyses of BRCA1/2 mutation were assessed by systematic literature review.

Results
Frequency of BRCA1/2 mutations was 16.5% in KoOC patients. BRCA1/2 mutations were significantly associated with serous histology (p=0.002), advanced FIGO stage (III/IV, p=0.007), and lymph node metastasis (p=0.011) but not with early age-of-onset (age < 50, p=0.223). A literature review of BRCA1/2 mutations in KoOC patients found 111 (55 distinct) mutations. The proportion of Korean-specific mutations (24/55 distinct, 43.6%) was high. Comparing the spectrum of BRCA1/2 mutation between KoOC and Korean breast cancer (KoBC) patients, the ratio of BRCA1-to-BRCA2 mutations was different, with BRCA1 (78.4%) being predominant in KoOC and BRCA2 being predominant in KoBC (59.2%). The most common mutation also differed between the two (c.3627insA of BRCA1 in KoOC and c.7480C>T of BRCA2 in KoBC).

Conclusion
The clinical relevance of BRCA1/2 mutations in KoOC patients was confirmed but that of early age-of-onset was not. Inconsistency in the ratio of BRCA1-to-BRCA2 mutations and the most common mutation between KoOC and KoBC may suggest possible presence of mutation sequence-associated penetrance tendency in hereditary KoBOC. These data may provide insights for optimal genetic counseling and prophylactic treatment for at-risk relatives of KoOC patients.

Prognostic value of preoperative lymphocyte-monocyte ratio in patients with ovarian clear cell carcinoma

Authors

Kim Ki Hyung 1, Hyeong jun Yoon Hyeongjun 2,

1. Obstetrics and Gynecology, Pusan National University School of Medicine, Busan, KOREA, REPUBLIC OF
2. Obstetrics and Gynecology, Pusan National University Hospital, Busan, KOREA, REPUBLIC OF

Abstract ID: 3779

Objective
The aim of the present study was to determine the prognostic significances of markers of preoperative systemic inflammatory response (SIR) in patients with ovarian clear cell carcinoma (OCCC).

Methods
A total of 109 patients diagnosed with OCCC that underwent primary cytoreductive surgery and adjuvant platinum-based chemotherapy from 2009 to 2012 were enrolled in this retrospective study. SIR markers were calculated from complete blood cell counts determined before surgery. Receiver operating characteristic (ROC) curve analysis was used to determine optimal cut-off values for neutrophil-to-lymphocyte ratio (NLR), lymphocyte-to-monocyte ratio (LMR), and platelet-to-lymphocyte ratio (PLR). Prognostic significances with respect to overall survival (OS) and progression-free survival (PFS) were determined by Kaplan–Meier curve and multivariate Cox regression analysis.

Results
The optimized NLR, LMR and PLR cut-off values as determined by ROC curve analysis for PFS and OS were 2.3, 4.2, and 123.6, respectively. When the cohort was divided using these optimized cut-offs, NLR and LMR were found to be significantly associated with clinicopathologic factors, NLR with FIGO stage, the presence of malignant ascites, and platinum response, and LMR with FIGO stage, lymph node metastasis, malignant ascites, and platinum response. Kaplan-Meier analysis revealed a high NLR (> 2.3) was significantly associated with low 5-year PFS and OS rates and that a high LMR was significantly associated with high 5-year PFS and OS rates. Multivariate analysis identified FIGO stage, residual mass, and platinum response as independent prognostic factors of PFS, and FIGO stage, residual mass, platinum response, and LMR as independent prognostic factors of OS.

Conclusions
Markers of systemic inflammatory response provide useful prognostic information and lymphocyte-to-monocyte ratio is the most reliable independent prognostic factor of overall survival in patients with ovarian clear cell carcinoma.

Keywords
Ovarian clear cell carcinoma, systemic inflammatory response, neutrophil-to-lymphocyte ratio, lymphocyte-monocyte ratio, platelet-to-lymphocyte ratio, survival.

YAP silencing as a new therapeutic strategy for ovarian cancer

Authors

Ju-Won Roh 1, Jongseung Kim 2, Jeong Eun Choi 3, Hee Dong Han 4,

1. Department of Obstetrics, Dongguk University, Seoul, KOREA, REPUBLIC OF
2. Department of Family Medicine, Boramae Medical Center, Seoul Metropolitan Government Seoul National University, Seoul, KOREA, REPUBLIC OF
3. Department of Obstetrics & Gynecology, Dongguk University, Seoul, KOREA, REPUBLIC OF
4. Department of Immunology, Konkuk University, Chungju, KOREA, REPUBLIC OF

Abstract ID: 3780

Introduction and Objective
Yes-associated protein (YAP) is a key effector of the hippo tumor suppressive pathway and its abnormal expression is associated with carcinogenesis and chemo-resistance in a number of malignancies. There was no relevant data in ovarian cancer. We examined the biological roles of YAP and its therapeutic effect of YAP silencing using siRNA, dobutamine, single or combined.

Methods
YAP expression was evaluated in clinical samples from the patients with ovarian cancer, benign neoplasm and controls, and also in normal or malignant ovarian cell lines (HOSE 0160, SKOV3, OVCAR3, A2780, HeyA8, and HeyA8-MDR). Biological roles of YAP and therapeutic effect of YAP silencing were examined using in vitro (Cell viability, apoptosis and invasion ability) and in vivo (orthotopic ovarian cancer models) assays. We examined the therapeutic YAP silencing using YAP siRNA, dobutamine, and their combination in vitro experiment. For in vivo experiment, YAP siRNA-, dobutamine, and their combination-loaded PLGA nanoparticle were used for effective delivery.

Results
Nuclear YAP (nYAP) expression, active form, was increased in ovarian cancers compared to controls or benign neoplasm. HeyA8 and -MDR showed high nYAP and low cytosol phosphorylated-YAP (pYAP), but HOSE 0160, SKOV3, OVCAR3, and A2780 showed high nYAP and pYAP. HeyA8 or HeyA8-MDR cells were used as YAP-activated ovarian cancer models, and SKOV3 as a YAP-inactivated ovarian cancer model. YAP silencing with siRNA suppressed YAP expression and resulted in decreased cell viability and invasion ability, and increased apoptosis in HeyA8, and –MDR cells ($p < 0.05$), but not in SKOV3. Dobutamine induced YAP inactivation by phosphorylation resulted in decreased cell viability, invasion ability and increased chemosensitivity (significant reduction of paclitaxel IC50 in HeyA8-MDR) in YAP-activated cells, but not in YAP-inactivated cells. Additive effect of siRNA and dobutamine was observed HeyA8, and –MDR in vitro experiment. In vivo model, YAP silencing using PLGA nanoparticle (YAP siRNA/PLGA or dobutamine/PLGA) showed antitumor effect in YAP-activated model (HeyA8 and -MDR), but not in YAP-inactivated model (SKOV3). However, no additive effect was observed when combination of YAP siRNA and dobutamine-loaded PLGA nanoparticle was used in vivo experiment. Dobutamine/PLGA was the most prominent therapeutic effect (78% reduction of tumor weight; $p = 0.0008$) in HeyA8 in vivo model.

Discussion and Conclusion
These findings identify YAP silencing can be an attractive target to overcome YAP-activated ovarian cancer. Dobutamine/PLGA nanoparticle may be a possible new therapeutic strategy for YAP-activated ovarian cancer. Repeated preclinical trial and clinical trial will be needed for future.

Keywords
YAP, Ovarian cancer, dobutamine, PLGA

Selective cytotoxic effect of non-thermal micro-DBD plasma

Authors

Byung Su Kwon 1, Hyeong jun Yoon 1,

1. Obstetrics and Gynecology, Pusan National University Hospital, Busan, KOREA, REPUBLIC OF

Abstract ID: 3781

Non-thermal plasma has been extensively researched as a new cancer treatment technology. We investigated the selective cytotoxic effects of non-thermal micro-dielectric barrier discharge (micro-DBD) plasma in cervical cancer cells. Two human cervical cancer cell lines (HeLa and SiHa) and one human fibroblast (HFB) cell line were treated with micro-DBD plasma. All cells underwent apoptotic death induced by plasma in a dose-dependent manner. The plasma showed selective inhibition of cell proliferation in cervical cancer cells compared to HFBs. The selective effects of the plasma were also observed between the different cervical cancer cell lines. Plasma treatment significantly inhibited the proliferation of SiHa cells in comparison to HeLa cells. The changes in gene expression were significant in the cervical cancer cells in comparison to HFBs. Among the cancer cells, apoptosis-related genes were significantly enriched in SiHa cells. These changes were consistent with the differential cytotoxic effects observed in different cell lines.

The Neutrophil-Lymphocyte Ratio Predicts Recurrence of Cervical Intraepithelial Neoplasia

Authors

Sul Lee 1, Ki Hyung Kim 2,

1. Obstetrics and Gynecology, Pusan National University Hospital, Busan, KOREA, REPUBLIC OF
2. Obstetrics and Gynecology, Pusan National University School of Medicine, Busan, KOREA, REPUBLIC OF

Abstract ID: 3782

Objective
The purpose of the present study was to determine the prognostic significance of the neutrophil-lymphocyte ratio (NLR) in recurrence of cervical intraepithelial neoplasia (CIN).

Methods
We evaluated the NLR as a prognostic marker in the entire cohort of 230 patients who had undergone surgical resection and were diagnosed with CIN. Subjects were categorized into two different groups based on the NLR (NLR-high and NLR-low) using cutoff values determined by receiver operating characteristic (ROC) analysis. The primary research objective for this study was to validate the impact of the NLR on recurrence-free survival (RFS) in patients with CIN. The secondary objective was to evaluate the impact of other hematologic parameters on RFS in CIN patients.

Results
Using the entire cohort, the most appropriate NLR cut-off value for CIN recurrence selected on the ROC curve was 2.1. The NLR-low and NLR-high groups included 167 (72.6%) and 63 patients (27.4%), respectively. According to Kaplan-Meier analysis, RFS rates during the entire follow-up period were considerably lower in the NLR-high group than in the NLR-low group (P = 0.0125). In multivariate survival analysis using Cox proportional hazard model, we identified the NLR, absolute eosinophil count (AEC), hemoglobin concentration, and mean corpuscular volume (MCV) as valuable prognostic factors that impact RFS.

Conclusions
The NLR is an independent prognosticator for RFS following surgical resection in CIN patients. We also found that the AEC, hemoglobin level, and MCV were strongly associated with RFS, as determined by multivariate analysis using a Cox model. These hematological parameters might provide additional prognostic value beyond that offered by standard clinicopathologic parameters.

Epithelioid trophoblastic tumor (ETT): a rare disease entity in a case with an unusual presentation.

Authors

Anna Nunzia Della Gatta Della Gatta 1, Antonio De Leo 2, Giulia Maria Borghese 1, Giacomo Santandrea 2, Martina Procaccini 1, Doriana Di nanni 2, Marco Tesei 1, Anna Myriam Perrone 1, Donatella Santini 2, Pierandrea De Iaco 1,

1. Oncologic Gynaecology Unit, Policlinico Universitario S. Orsola Malpighi, Università degli Studi di Bologna, Alma Mater Studiorum, Bologna, ITALY
2. Pathology Unit, Policlinico Universitario S. Orsola Malpighi, Università degli Studi di Bologna, Alma Mater Studiorum, Bologna, ITALY

Abstract ID: 3783

Introduction
Epithelioid trophoblastic tumor (ETT) is a rare neoplasm of the chorionic-type intermediate trophoblast that affects reproductive age women, in most cases with a prior gestation, with vaginal bleeding as beginning presentation. The literature suggests surgery as elective treatment for ETT as it is not responsive to chemotherapeutic agents, used in the treatment of other types of gestational trophoblastic diseases.

Patients and methods
We report the case of a 31-years-old woman who presented with constipation and abdominal distension (unusual for an ETT). She had an uneventful cesarean delivery three months before. Pelvic ultrasound showed two large adnexal masses (50x60 mm each one), multiple echogenic foci on peritoneum of Douglas space, anterior rectum's wall and small bowel, with a thickening of omentum suggestive of peritoneal carcinosis with omental cake. Endometrial thickness was 2 mm. A huge amount of ascitic fluid reached Morrison space. Beta HCG was mild positive (34mUI/mL) and serum oncomarkers (Alfa1 fetal protein, CEA, Ca 19.9, Ca 15.3, CA125) were negative. Because of the recent pregnancy and positive Beta HCG, a chorionic type disease was thought at beginning, even though symptoms and imaging tend to an ovarian carcinoma. Diagnostic hysteroscopy with multiple endometrial biopsies and pap smear were negative. The diagnostic laparoscopy revealed a diffuse peritoneal carcinosis. Omentum, jejunum, ileum, diaframmatic surfaces, liver's round ligament, surface of the uterus also appeared to be involved and adnexa were transformed in two large masses of 10 cm in diameter. The Fagotti Score was 12; the Peritoneal Cancer Index 28. Morphological features of the tumor and immunohistochemical positivity for CK7, p40, CK 5/6, GATA3, CD10, MUC4, human chorionic gonadotropin (hCG), anti-placental alkaline phosphatase (PLAP) and human placental lactogen (hPL) were consistent with the diagnosis of an extrauterine ETT.

Results
6 cycles of neoadjuvant chemotherapy with Etoposide and Cisplatinum, to let feasible the surgical debulking, were performed, but the computed tomography revealed a significant dimensional reduction of the adnexal masses with no differences in the distribution of the peritoneal carcinosis. Despite these findings, we made an explorative laparotomy: the carcinosis process involved the entire pelvis, with nodules of 2-3 cm on the ileum, jejuneum, stomach and liver; she was not operable. Palliative chemotherapy was performed postoperatively and she died from disease after 10 months.

Conclusion
Extrauterine presentation of ETT, in the absence of uterine lesions, has been rarely reported and it should be considered, although rare, in patients with atypical ovarian/peritoneal cancer or with a gestational trophoblastic tumour, who do not respond to appropriate chemotherapy. The differential diagnosis of ETT includes placental site

trophoblastic tumor (PSTT), choriocarcinoma, squamous cell carcinoma, undifferentiated carcinomas and, to make the right diagnosis, an appropriate immunohystochemical panel is essential. Considering the extremely rare incidence of an extrauterine ETT and the limited data published regarding follow-up, we think that our pathological and clinical experience can provide more information on its features and prognosis underlying that diagnosis and management of extrauterine ETT is the result of a multidisciplinary approach with a strong cooperation between gynecologists, pathologists and oncologists.

Keywords
unusual symptomatology, extrauterine presentation

Supplementary material
http://sites.altilab.com/files/159/abstracts/tc-pretreatment.jpg,
http://sites.altilab.com/files/159/abstracts/tc-pretreatment-2.jpg

Cervical laser vaporization for women with cervical intraepithelial neoplasia-3

Authors

Yukiharu Todo 1, Hiroyuki Yamazaki 1, Chisa Shimada 1, Shinichiro Minobe 1, Sho Takeshita 1, Hidenori Kato 1,

1. Gynecologic Oncology, Hokkaido Cancer Center, Sapporo, JAPAN

Abstract ID: 3784

Objectives
This study evaluated outcomes of laser vaporization (LAVA) of the cervix for women with cervical intraepithelial neoplasia (CIN)-3.

Methods
We retrospectively reviewed 161 consecutive patients with CIN3 who were treated with cervical LAVA between January 2008 and December 2012. At each follow-up visit, histologically confirmed CIN2, CIN3, and invasive carcinoma were defined as treatment failures, as were high-grade squamous intraepithelial lesion (HSIL) or atypical squamous cells that cannot exclude HSIL (ASC-H) with subsequent treatment or lost to follow-up. Treatment failure rates were estimated by the Kaplan–Meier method.

Results
Patients' median age was 31 years old. Median follow-up period was 67 months (interquartile range: 52–74 months). Over 5 years, 70.8% continued their follow-up visits, but significantly more patients aged ≥ 35 years did so (86.4%) than did those aged ≤ 34 years (61.8%, P=0.0009). Treatment failure was observed in 14 (8.7%) patients, 1 of whom progressed to invasive cancer (0.6%). Cumulative treatment failure rates were 1-year: 5.1%, 2-year: 6.4%, and 5-year: 9.5%. Among patients who suffered treatment failures, 57.1% initial failures occurred within the first year and 71.4% within the first 2 years.

Conclusion
The importance of continuing follow-up visits after 5 years should be emphasized to patients with CIN3 who are candidates for cervical LAVA, especially those aged ≤ 34 years.

Keywords
Cervical intraepithelial neoplasia, vaporization, ablation, oncologic outcome

A wound that failed to heal: high-grade ovarian serous carcinoma associated with chronic Schistosomiasis

Authors

Shiara Marriz Marquez 1, Lylah Reyes 1, Jennifer Co 1,

1. Obstetrics and Gynecology, Far Eastern University-Nicanor Reyes Medical Foundation Medical Center, Quezon City, PHILIPPINES

Abstract ID: 3785

Schistosomiasis has been associated to urinary bladder, liver, colorectal and cervical cancer. However, its role in ovarian malignancy has not been described. With the premise that long-standing inflammation secondary to chronic infection predisposes to cancer by promoting an environment that cultivates genomic lesions and tumor initiation, does chronic infection with Schistosomiasis also predispose to ovarian malignancy? We presented a case of a 54-year-old with chronic Schistosoma infection, who was diagnosed with high-grade serous carcinoma of the right ovary. In this case, the infection reached the pelvic organs infesting the right fallopian tube and left ovary. With chronic inflammation, there was subsequent damage to deoxyribonucleic acid (DNA) caused by mutation and activation of oncogenes, oxidative stress from fluke-derived products and physical damage of host tissues as the parasites developed. Ultimately, these mechanisms led to tumor initiation, promotion and progression. However, only the right fallopian tube developed the cancer. Consistent with the hypothesis that premalignant lesions at the fimbriated end of the fallopian tube is the origin of high grade ovarian serous carcinoma, we supposed that the primary site of malignancy is the right fallopian tube. Based on proximity, the malignant cells could have seeded to the right ovary, leading to the high grade serous carcinoma of the patient.

Keywords
fallopian tube, inflammation, ovarian neoplasms, schistosomiasis

Supplementary material
http://sites.altilab.com/files/159/abstracts/images.docx, http://sites.altilab.com/

The role of claudin-2 on the malignancy of human endometrioid carcinoma tissues

Authors

Seiro Satohisa 1, Hiroshi Shimada 1, Takayuki Kohno 2, Takumi Konno 2, Masato Tamate 1, Motoki Matsuura 1, Mizue Teramoto 1, Taishi Akimoto 1, Masahiro Iwasaki 1, Takashi Kojima 2, Tsuyoshi Saito 1,

1. Obstetrics and Gynecology, Sapporo Medical University School of Medicine, Sapporo, JAPAN
2. Cell Science, Research Institute for Frontier Medicine, Sapporo Medical University School of Medicine, Sapporo, JAPAN

Abstract ID: 3786

Background
The overexpression of certain tight junction proteins, including claudins, is associated with tumor growth and metastasis. Claudin-1 overexpression characterized type II (seropapillary) endometrial carcinoma, while claudin-2 was elevated in type I (endometrioid) carcinoma. Claudin-2 is a leaky type tight junction protein and overexpression of claudin-2 increases tumorgenesis of some type cancer cells.

Methods
In the present study, we investigate the regulation and the role of claudin-2 in endometriosis and endometrioid carcinoma with endometriosis tissues, endometrioid carcinoma tissues and Sawano human endometrioid carcinoma cells.

Results
In endometrioid carcinoma tissues, marked upregulation of claudin-2 was observed together with malignancy, while in endometriosis tissues, the changes in localization of claudin-2 was observed. The loss of claudin-2 by the siRNA upregulated the epithelial barrier and inhibited cell migartion in Sawano cells. Furthermore, the loss of claudin-2 affected cell cycle and inhibited cell proliferation. In Sawano cells cultured with high glucose medium, claudin-2 expression was downregulated at mRNA and protein levels. The high glucose medium upregulated the epithelial barrier and inhibited cell invasion. Histone deacetylase (HDAC) inhibitors tricostatin A and HDAC1 inhibitor which have antitumor effects, downregulated claudin-2 expression, cell proliferation, invasion and migration and upregulated the epithelial barrier.

Conclusions
Taken together, overexpression of claudin-2 closely contributed to the malignancy of endometrioid carcinoma and downregulation of claudin-2 by the changes of glucose metabolism and HDAC might be important in therapy for cancer.

Keywords
tight junction, claudin-2, endomerioid carcinoma, cell invasion, glucose metabolism

Outcome of subsequent pregnancy after chemotherapy for high risk gestational trophoblastic neoplasia: a case report

Authors

Fitri Adinda Fitri Adinda Novianti 1, Lieke Koes Lieke Koes Handayani 1, T.D Anggraeni Tricia Dewi Anggraeni 1, Wiku Andonotopo Wiku Andonotopo 2, Sandhy Prayudhana Sandhy Prayudhana 2,

1. Obstetrics and Gynecology, Faculty of Medicine University of Indonesia, Jakarta, INDONESIA, REPUBLIC OF
2. Obstetrics and Gynecology, Tangerang General Hospital, Jakarta, INDONESIA, REPUBLIC OF

Abstract ID: 3788

Gestational trophoblastic disease is a group of placental disorders that hydatidiform mole is the most common form. It is considered a benign condition that may develop into other malignant forms, referred indistinctly as gestational trophoblastic neoplasia (GTN). Patients with trophoblastic neoplasia are classified by the presence of risk factors according to the International Federation of Gynecology and Obstetrics' (FIGO) prognostic score having low-risk disease that receiving a single chemotherapy agent and high-risk disease that receiving combination chemotherapy. Adverse effect was reported that influence the outcome of subsequent pregnancy after chemotherapy. A case report of outcome of subsequent pregnancy after three times got etoposide+methotrexate+actinomycin-D alternating with cyclophosphamide+vincristine (EMA/CO) chemotherapy for high risk gestational trophpblastic neoplasia and nine months after that she conceived. During her pregnancy non-invasive prenatal testing (NIPT) was did to screen whether she had fetal abeuploidy and the result was low risk. She delivered at term, born healthy baby. In conclusion, the recommendation interval for subsequent pregnancy after chemotherapy for gestational thropoblastic neoplasm is recomended at least 6 months or more after completion chemotherapy. NIPT is used as a screening method to detect fetal chromosomal aneuploidies.
Keyword: gestational trophoblastic neoplasia (GTN), chemotherapy, Non-invasive prenatal testing (NIPT), subsequent pregnancy

Keywords
gestational trophoblastic neoplasia (GTN), chemotherapy, Non-invasive prenatal testing (NIPT), subsequent pregnancy

Supplementary material
http://sites.altilab.com/files/159/abstracts/cr-gtn.docx
http://sites.altilab.com/

Suppression of inhibitory receptors and stimulation of migration of CD8 T cell effectively controlled vaginal tumor.

Authors

Sungjong Lee 1, Dongchoon Park 1,

1. Department of Obstetrics and Gynecology, St. Vincent's Hospital, The Catholic University of Korea, Seoul, KOREA, REPUBLIC OF

Abstract ID: 3790

Background
Expression of inhibitory receptors by CD8 cytotoxic T cells is generally considered a hall mark of "T cell exhaustion". Dysfunctional T cells can render the immune system unable to eliminate cancer. Activation of exhausted CD8 T cell and strong induction of migration of immune cells into tumor site is an important step for overcoming resistant mechanism to cancer therapy. The purpose of this study is to evaluate the role of suppression of inhibitory receptors and chemokine axis in immune system in vaginal tumor bearing mouse.

Materials and Methods
C57BL/6 mice (5 per group) were categorized into four groups according to treatment modality. Mice were challenged with 1×105 TC-1 cells on vagina and then HPV DNA therapeutic vaccine was injected on thigh muscle on day 7 for 3 times with a 2-day interval. Vaginal injection of GMCSF was performed on tumor bearing mice on day 11 for 3 times with a 2-day interval. Tumor bearing mice were harvested on day 21 and immune cells were investigated on spleen, lymph node, and tumor by flow cytometry. We checked the expression of inhibitory receptors by CD8 T cells of tumor bearing mice, including PD1, TIM3 and LAG3 after HPV DNA vaccine and GMCSF. Chemokine axis such as CXCL9, CXCL10, and CXCR3 were evaluated to know migration mechanism after combination therapy.

Results
Combination of HPV DNA vaccine and GMCSF resulted in a significantly lowest percentage of inhibitory receptors of CD8+ T cells including PD1, TIM3 and LAG3 in spleen and tumor ($p<0.05$) (Fig. 1). They significantly induced accumulation of tumor specific CD8 T cell in tumor site and increased expression of CXCR3 on tumor infiltration CD8 T cell ($p<0.05$). Chemokine such as CXCL9, CXCL10 was overexpressed in tumor site after combination therapy ($p<0.05$) (Fig. 2). Vaginal injection of GMCSF led to accumulation and maturation of dendritic cell in tumor site ($p<0.05$). HPV DNA vaccine and GMCSF increased production of interferon gamma from CD8 T cell and effectively reduced tumor growth ($p<0.05$). Finally, mice treated with combination of HPV DNA vaccine and GMCSF survived significantly longer than other groups ($p<0.05$).

Conclusion
In conclusion, we overcame T cell exhaustion and identified chemokine axis during migration of CD8 T cell into vaginal tumor using HPV DNA vaccine and GMCSF. This mechanism can be ideal target for future immunotherapy in vaginal tumor.

Keywords
Vaginal tumor, Immunotherapy

Supplementary material
http://sites.altilab.com/files/159/abstracts/esgo-figure-ppt.pptx, http://sites.altilab.com/

MULTICENTRIC POOLED ANALYSIS OF STEREOTACTIC RADIOTHERAPY IN OVARIAN CANCER: (MITO-RT1 PROJECT)

Authors

Gabriella Macchia 1, Giuseppe Roberto D'Agostino 2, Andrei Fodor 3, Annamaria Cerrotta 4, Rosa Autorino 5, Donatella Russo 6, Elisabetta Perrucci 7, Alice Zamagni 8, Aida Di Stefano 9, Cristina Iftode 2, Savino Cilla 1, Alessio Giuseppe Morganti 8, Cynthia Aristei 10, Nadia Di Muzio 11, Marta Scorsetti 12, Vincenzo Valentini 13, Francesco Deodato 1, Gabriella Ferrandina 14,

1. Radiotherapy Unit, Catholic University, Fondazione Giovanni Paolo II, Campobasso, ITALY
2. Radiotherapy and Radiosurgery, Humanitas Clinical and Research Hospital, Rozzano, Milano, ITALY
3. Radiotherapy, San Raffaele Scientific Institute, Milan, ITALY
4. Radiotherapy Unit, IRCCS, Istituto Nazionale Tumori, Milan, ITALY
5. Gemelli Advanced Radiation Therapy Center, Fondazione Policlinico Universitario A. Gemelli, Rome, ITALY
6. Radiotherapy Unit, Ospedale VITO FAZZI, Lecce, ITALY
7. Radiation Oncology Section, University of Perugia,Perugia General Hospital, Perugia, ITALY
8. Radiation Oncology Center, Department Experimental Diagnostic and Specialty Medicine, Bologna, ITALY
9. Gynecologic Oncology Unit, Fondazione Giovanni Paolo II, Campobasso, ITALY
10. University of Perugia,Perugia General Hospital, University of Perugia,Perugia General Hospital, Perugia, ITALY
11. Department of Radiotherapy, San Raffaele Scientific Institute, Milan, ITALY
12. Radiotherapy and Radiosurgery, Humanitas Clinical and Research Hospital, Rozzano, Milan, ITALY
13. Radiotherapy and Radiosurgery, Fondazione Policlinico Universitario A. Gemelli, Rome, ITALY
14. Gynecologic Oncology Unit, Fondazione policlinico Universitario A. Gemelli, Catholic University, Rome, ITALY

Abstract ID: 3791

Aims
Stereotactic body radiotherapy (SBRT) represents an interesting opportunity in the treatment of ovarian cancer (OC) isolated recurrences or residual lesions after systemic treatment, as well as a valid tool to lengthen the free time of re-challenge with platinum. However, studies on this topic are sporadic and with few cases. The aim of this multicentric retrospective pooled analysis was to collect the largest unselected real-life dataset of OC patients treated with SBRT in the attempt to define the safety and efficacy. Secondary objectives were to identify the best dose/fractionation regimen in terms of local control as well as to describe acute and late toxicities.

Methods
Eight Italian cancer Centers were firstly started the project giving their adhesion to this retrospective pooled analysis. A specific data-set for standardized data collection for ovarian cancer SBRT treatment was developed. Participants were required to fill a data sets including: age, histotype, site of irradiation, previous treatments, best response, toxicity as well as technical/dosimetric data about SBRT treatment. Patients' data were obtained from the historical database of radiation oncologists who joined the study.

Results
Data on 73 OC patients (median age: 63.5, range 40-83) carrying a total of 120 lesions were considered suitable for analysis. Between 2005 and 2018 all patients underwent

SBRT in single or multiple fractions with a median biological equivalent dose (BEDα/β 10) of 76.8 Gy (range 7.5-262.5). Patient and treatment characteristics as well as acute toxicity are detailed in Table 1.
Safety. 52 patients (71.3%) did not experience acute toxicity, the others 21 (28.7%) experienced low grade acute toxicity with no patient showing > grade 2 toxicity. With a median follow-up of 18 months (range: 1 - 120), 68 patients (93.1%) did not experienced late toxicity, the others 5 (6.9%) experienced low grade late toxicity with no patient showing > grade 2 toxicity.
Efficacy. On a per-lesion basis, the 12-and 24-months actuarial local control inside SBRT field were 88.3% and 86.2%, respectively. BED10 > 50Gy was correlated with a better 12-months local control (91.7% versus 72.9%, p=0.034).

Conclusions
Preliminary results on a population-level confirm that SBRT delivered in 1-10 consecutive fractions is safe and well tolerated notwithstanding several previous surgical and systemic treatments. Therefore, this treatment can be considered as a further resource in order to lengthen the free time of re-challenge with platinum.

Keywords
stereotactic Radiotherapy, ovarian cancer

Supplementary material
http://sites.altilab.com/files/159/abstracts/mito-sbrt-ovary-tab.docx,
http://sites.altilab.com/

Gene Discovery through Germline Whole Exome Sequencing in Patients with Endometriosis-Associated Ovarian Cancer

Authors

Eryn Dow 1, ViP Investigators 2, Ian Campbell 3, Paul James 4, Yoland Antill 5, Deepak Subramanian 3,

1. Familial Cancer, Austin Health, Melbourne, AUSTRALIA
2. Familial Cancer, Peter MacCallum Cancer Centre, Melbourne, AUSTRALIA
3. Cancer Genetics and Genomics, Peter MacCallum Cancer Centre, Melbourne, AUSTRALIA
4. Familial Cacner, Peter MacCallum Cancer Centre, Melbourne, AUSTRALIA
5. Familial Cancer, Royal Melbourne Hospital, Melbourne, AUSTRALIA

Abstract ID: 3792

Introduction
Endometriosis is common, effecting 5-25% of women of reproductive age. Its aetiology remains poorly understood, but is likely multifactorial, including hormonal, immunological, and genetic factors. Endometriosis shares several characteristics with malignancy, including a capacity for invasion, and is associated with an increased risk of ovarian cancer, particularly endometrioid and clear cell subtypes. Up to 60% of the underlying familial risk of ovarian cancer remains unexplained by high risk genes, particularly in endometrioid and clear cell cancers where germline BRCA1/2 mutations are less common. With endometriosis' estimated heritability of 51%, and its association with clear cell and endometrioid ovarian cancer, differing genetic predispositions must be considered in this group.

Patients & Method
Women from the Variants in Practice (ViP) research study, which enrols women with ovarian cancer and uninformative BRCA1/2 germline results for further genetic testing, were selected on the basis of clear cell or endometrioid ovarian cancer arising within an endometriotic focus. Germline whole exome sequencing (WES) was performed using next-generation platforms (Agilent SureSelect capture, Illumina HiSeq 2500). Potential loss of function variants were annotated through an established bioinformatics core; annotated data were filtered to exclude artefactual variants and likely irrelevant variants. Variant frequencies per gene were calculated and compared to control populations from publically available data (Genome Aggregation Database) to identify genes of interest with an increased ratio of loss of function germline variants. Further characterisation based on published expression and functional data identified promising gene candidates related to endometriosis associated ovarian cancer (EAOC).

Results
Sixty-four ovarian cancer cases with endometriosis in the histopathology report were identified from the ViP cohort of 610 patients. On review, 25 cases of EOAC were identified, 15 endometrioid, 8 clear cell, and 2 mixed clear cell and endometrioid; 23 patients had adequate DNA for WES. A total of 344 germline loss of function variants were identified in 311 genes, after filtering for poor quality likely artefactual variants and common polymorphisms (allele frequency >0.005 in a population database), as well as excluding uncharacterised proteins, pseudogenes and highly polymorphic genes (immunoglobulins, taste and olfactory receptors). The literature on function, expression and known associations of all 311 genes was reviewed, prioritising them for further investigation. Based on variant quality and a documented function in ovarian cancer or endometriosis, a documented function in other malignancies, or a theoretical function in cancer, 30, 89 and 44 variants were prioritised in 28, 85 and 43 genes, respectively. Of those, 14 were identified as the most likely candidate genes with an increased ratio of

loss of function variants in the cohort compared to control populations ranging from 4.3 to 237.9.

Conclusion

The underlying genetic factors influencing EAOC risk differ from those in high grade ovarian cancer. Using this highly curated population, 14 candidate genes with an increased rate of loss of function variants per gene compared to control populations and a potentially functional relevance to endometriosis and/or ovarian cancers were identified. These genes will be discussed in further detail before characterisation in an expanded patient cohort.

Keywords

Genetics, Endometriosis, Ovarian Cancer, Clear Cell, Endometrioid

Supplementary material

http://sites.altilab.com/files/159/abstracts/esgo-abstract-final.docx, http://sites.altilab.com/

HPV vaccination in Japan: results of a 3-year follow-up survey of obstetricians and gynecologists regarding their opinions toward the vaccine.

Author

Masaaki Sawada 1,

1. Department of Obstetrics and Gynecology, Osaka University Graduate School, Osaka, JAPAN

Abstract ID: 3793

Introduction and Objectives
In Japan, the cervical cancer preventative HPV vaccination rate has dramatically declined, directly as a result of repeated broadcasts of so-called adverse events and the resulting suspension of the government's recommendation. Our previous survey of obstetricians and gynecologists in Japan regarding their opinions toward HPV vaccination revealed that these key specialists were as negatively influenced by the reports of purported negative events as were the general population. Here, we report a 3-year follow-up survey of these clinicians.

Methods
We reused the same questionnaire format as used in our 2014 survey, but added new questions concerning opinions regarding a WHO statement and reports of a Japanese nation-wide epidemiological study related to the adverse events, released in 2015 and 2016, respectively.

Results
The response rate was 46% (259/567): 5 (16.1%) of 31 doctors had inoculated their own teenaged daughters during the time period since the previous survey, despite the continued suspension of the governmental recommendation, whereas in the previous survey none of the doctors had done so. Among the respondents, the majority claimed awareness of the recent pro-vaccine WHO statement (66.5%), and of the report of a Japanese epidemiological study (71.5%), and a majority affirmed they currently held positive opinions of the safety (72.7%) and effectiveness (84.3%) of the HPV vaccine. Conclusions) Our re-survey of Japan's obstetricians and gynecologists regarding their opinions about the HPV vaccine found that their opinions have changed, potentially leading to a more positive future re-engagement for HPV vaccination in Japan.

Keywords
HPV vaccination

Recurrent Vulvar Leimyosarcoma Previously Diagnosed as Lymphoma: a Case Report

Authors

Fitri Adinda Fitri Adinda Novianti Mahdi 1, Tricia Dewi Anggraeni Tricia Dewi Anggraeni 1,

1. Obstetrics and Gynaecology, Faculty of Medicine University of Indonesia, Jakarta, INDONESIA, REPUBLIC OF

Abstract ID: 3802

Leimyosarcoma is a common lesion of malignant mesenchymal tumors in the vulva and the most rare cause of gynecological malignancy with an incidence rate of 1 - 2% of all vulvar malignancies. The average incidence between the ages of 35-50 years. This tumor is commonly found in the labia majora and in the Bartholin gland and although rarely can be found in the clitoris or labia minora. It can also be mistaken for a benign tumor, which can lead to misdiagnosis and incorrect or delayed treatment. Leimyosarcoma is a tumor that grows slowly and can recur in nearby or distant places for some time. The tumor may appear as a painless lump and the most common symptom is the discomfort of the vulva. We report the case of a 29-year-old woman with leimyosarcoma of the vulva. The patient presented with a vulvar mass that she had first noticed 1 month prior. She then diagnoses as a lymphoma and underwent tumor excision. The pathology result shows neurofribroma. Six months after excision the vulvar mass came back. The pathology result was being reviewed and the result was leimyosarcoma. Patient then referred to RSCM diagnosed as a recurrent vulvar carcinoma and performed wide local excision continued with flap by plastic surgeon. The frozen section result was the incision margin free from tumor and the pathology result was spindle cell sarcoma grade 2

Keywords
recurrent vulvar leimyosarcoma, misdiagnosed, wide local excision, flap reconstruction

Supplementary material
http://sites.altilab.com/files/159/abstracts/vulvar-leimyosarcoma-arni.docx, http://sites.altilab.com/

Primary ovarian small cell carcinoma of pulmonary type with enlarged paraaortic lymph node masses: a case report and review of the literature.

Author

Eleftherios G. Klonos 1,

1. 1st.Department of Obstetrics and Gyneacology, Aristotle University of Thessaloniki, Thessaloniki, GREECE

Abstract ID: 3803

Small cell carcinoma of the ovary of pulmonary type, is a rare, aggressive tumor with poor prognosis and its optimal management is unclear. Case presentation: A 55 – year – old Caucasian woman presented with abdominal discomfort and left lumbar pain within a three – week period. At exploratory laparotomy, a 8 cm solid cystic mass of the left ovary was found infiltrating the sigmoid colon, and a bulky mass (11x 7 x 4 cm) in the left paraaortic infrarenal region. Histopathological features resembling small cell carcinoma of the lungs and positive immunohistochemical stains provided a define diagnosis of IIIC ovarian small cell carcinoma of pulmonary type. After six cycles chemotherapy with carboplatin and etoposide, the patient is still alive at 75 months (6 years and 3 months) from initial diagnosis.

Discussion
In this case, the absence of peritoneal involvement and the extensive paraaortic adenopathy is suggestive of a different pattern of spread of this rare tumor. Optimal treatment seems to be radical primary debulking surgery resulting in no residual disease, maximizing the effect of adjuvant chemotherapy for this biological aggressive tumor.

Keywords
Ovarian small cell carcinima pulmonary type; Debulking surgery

PRIMARY MALIGNANT MELANOMA OF THE UTERINE CERVIX: A CASE REPORT

Authors

Damir Danolic 1, Luka Marcelic 1, Ilija Alvir 1, Ivica Mamic 1, Mirjana Pavlovic 2, Lucija Susnjar 1, Vesna Stepanic 3, Krunoslav Cindric 4, Darko Tomica 5, Mario Puljiz 1,

1. Clinical Department of Gynecologic Oncology, University Hospital for Tumors, Sestre milosrdnice University Hospital Center, Zagreb, CROATIA
2. Department of Medical Oncology, University Hospital for Tumors, Sestre milosrdnice University Hospital Center, Zagreb, CROATIA
3. Department of Gynecology and Obstetrics, University Hospital Merkur, Zagreb, CROATIA
4. Department of Gynecology and Obstetrics, University Hospital Center Split, Split, CROATIA
5. Department of Gynecology and Obstetrics, General Hospital Scheibbs, Scheibbs, AUSTRIA

Abstract ID: 3804

Malignant melanomas involving mucosal membranes account for approximately 1% of all melanomas. Most cases of genital tract melanoma occur in the vulva and vagina, and more rarely in the cervix (<2%). Malignant melanoma of cervix is very rare and aggresive neoplasm and regardless of stage and treatment prognosis is very poor. We report a case of a 58-year-old patient who initially presented with increased vaginal discharge and intermittent vaginal bleeding. Speculum examination revealed exophytic, livid tumor on anterior vaginal wall which consumed entire portion of the uterus. Biopsy was taken, and histopathology and immunohistochemistry revealed malignant melanoma. CT scan showed 37x27 mm tumor that infiltrates uterine cervix and proximal part of vagina. CT scan of thorax revealed multiple nodules of size up to 1 cm on both lungs. BRAF and RAS mutation testing was negative. Patient was presented to specialist multidisciplinary team and treated by immunotherapy with pembrolizumab due to advanced stage of disease. After 5 months of treatment MRI revealed further progression of disease. Treatment of cervical melanoma is primarily based on clinical experience with skin melanoma. Optimal management of this rare cancer have not achieved consensus because of its rarity and limited data. Surgical excision of the tumor in wide clear margins should be primary curative approach. In advanced stages chemotherapy and radiotherapy with or without surgical excision are used as a form of palliative treatment. Further studies are needed to standardize treatment options for primary cervical malignant melanoma.

Keywords
melanoma, cervix, treatment, surgery, case report

Phosphatidylinositol 3-kinase inhibitor enhances anti-tumour efficacy in paclitaxel-resistant cervical cancer

Authors

Jae Young Park 1, YounJin Choi 1,

1. Obstetrics and Gynecology, Seoul St. Mary's Hospital, Seoul, KOREA, REPUBLIC OF

Abstract ID: 3805

Background
Cervical cancer is the third most common gynecological malignancy and responsible for 10-15% of cancer-related death in women. Conventional treatment options (e.g., chemotherapy, radiation and surgical resection) are known to be ineffective to most of the patients with advanced or recurrent cervical cancer and it is necessary to find optimal treatment agents. Paclitaxel is a front-line chemotherapeutic agent for cervical cancer (used alone or in combination with other therapeutic agent) with the response rate of 29-63% but chemo-resistance may occur, leading to dismal prognosis. PI3K pathway is considered to play an important role in tumorigenesis and its inhibition may lead to immune-modulatory effect. Therefore, we attempted to investigate whether Phosphatidylinositol 3-kinase (PI3K) pathway-inhibitor would be effective in paclitaxel-resistance cervical cancer

Materials and methods
Naive and palitaxel-resistant ME180 human cervical tumor cells were used and a PI3K inhibitor (Alpelisib; BYL719) was treated. Proteom profiler antibody arrays (Proteom Profiler Human XL Oncology Array, R&D SYSTEMS, USA) and western blot analysis were performed.

Results
HIF-1a, PDGF-AA, VEGF, MMP2 and VE-cadherin were overexpressed in paclitaxel-resistant ME180 cervical cancer cell line when compared to the naive one. However, after treating the PI3K inhibitor (Alpelisib; BYL719) the overexpressed proteins recovered.

Conclusion
Paclitaxel-resistance is known to be related to hypoxia but not many study was investigated to overcome the resistance. We suggest that PI3K inhibitor may enhance antitumor activity in cervical cancer through cascade of signalign events including HIF-1a and VEGF.

Germline and somatic mutations of homologous recombination associated genes in non-serous ovarian cancer

Authors

Kentaro Sugino 1, Kosuke Yoshihara 1, Manako Yamaguchi 1, Nozomi Yachida 1, Yutaro Mori 1, Kaoru Yamawaki 1, Kazuaki Suda 1, Ryo Tamura 1, Tatsuya Ishiguro 1, Sosuke Adachi 1, Masanori Isobe 1, Masayuki Yamaguchi 1, Masayuki Sekine 1, Katsunori Kashima 1, Hirofumi Nakaoka 2, Ituro Inoue 2, Takayuki Enomoto 1,

1. Obstetrics and Gynecology, Niigata University Graduate School of Medical and Dental Sciences, Niigata, JAPAN
2. Division of Human Genetics, National Institute of Genetics Japan, Mishima, JAPAN

Abstract ID: 3807

Introduction
Homologous recombination deficiency (HRD) is a biomarker candidate of PARP inhibitor sensitivity. Although about 50% of high-grade serous (HGS) ovarian carcinoma shows HRD, the prevalence of HRD in non-serous ovarian carcinomas remains unestablished. The aim of this study is to clarify the clinical significance of HRD in non-serous histologic type ovarian carcinomas.

Materials/Patients and methods
Targeted sequencing was performed to assess germline and somatic mutations of 16 HR associated genes, 5 ovarian cancer associated genes (TP53, PIK3CA, ARID1A, KRAS, PTEN) and 4 mismatch repair genes in a total of 209 ovarian carcinomas (101 clear cell, 39 endometrioid, 13 mucinous, 6 low-grade serous (LGS), 50 HGS). Possibility for metastatic mucinous carcinoma was excluded by endoscopic examination and CT scanning. Normal DNA derived from peripheral blood cells was used as control. In germline mutation analysis, nonsense, frameshift, and splicing mutations were used. In addition to these mutation types, non-frameshift indel and missense mutations were used in somatic mutation analysis. This retrospective observation study was approved by the institutional review board.

Results
101 cases were diagnosed as stage I, and the median age was 57 years old. The distribution of germline and somatic mutations in HR associated genes for each histologic type was shown in the supplementary table. Germline and/or somatic HR gene mutations were detected not only in 23/50 (46%) of HGS, but in 2/6 (33%) LGS, 31/101 (31%) clear cell, 10/39 (26%) endometrioid, and 2/13 (15%) mucinous carcinomas, respectively. Intriguingly, deleterious germline mutations in BRCA2 and CHEK1 were detected in two primary mucinous ovarian carcinomas. Non-serous ovarian carcinomas with somatic mutations in HR associated genes tend to show longer progression free survival compared to those without these mutations (P = 0.06).

Conclusion
Our findings demonstrated that PARP inhibitors may give great survival advantage to the patients with non-serous ovarian cancers harboring HR associated gene mutation.

Keywords
Homologous recombination, ovarian cancer, non-serous

Supplementary material
http://sites.altilab.com/files/159/abstracts/esgo2018-abstract-table-v2.pdf,
http://sites.altilab.com/

Sertoli-Leydig (SLCT) and Granulosa cell tumours (GCT): difference in patients and recurrence patterns

Authors

SARA ALVES 1, MIGUEL ABREU 1, SUSANA SOUSA 1, ROSÁRIO COUTO 1, MARTA FERREIRA 1, JOANA SÁ 1, CARLA BARTOCH 1, ALMERINDA PETIZ 1, DEOLINDA PEREIRA 1,

1. MEDICAL ONCOLOGY, IPO PORTO, Porto, PORTUGAL

Abstract ID: 3809

Background
Non-epithelial ovarian tumors account for 10% of all ovarian cancers. Sex cord-stromal tumors are heterogeneous and include: granulosa (GCT), and Sertoli-Leydig cell tumors (SLCT). Presentation is often in early stages, in middle age adults in GCT and under 40 years in SLCT. Recurrence patterns are different with early ones in SLCT and later in GCT.

Methods
Retrospective revision of cases treated in a Cancer Center between 1994-2017.
Information related to patients and disease, including treatments and follow-up was collected from clinical files.
Analysis was performed comparing GCT and SLCT in relation to diagnosis stage and recurrence patterns.
Survival was assessed by Kaplan-Meier method.

Results
23 patients were included, 13 with GCT and 10 with SLCT, median age of 58.9 years (21,3-89,7) and 66 years (38,3-96,5), p=0,24. The majority of cases were detected in early stage: stage I:10 vs 6; stage II: 1 vs 2, stage III: 0 vs 1; stage IV: 1 vs 1.
Two 2 cases of GCT recurred, both with primary stages I; 6 and 8 years after diagnosis. Both patients were submitted to surgery and one of them also to chemotherapy (BEP, 3 cycles). They are both alive. Overall survival was 19.3 years (IC 95%, 15,9-22,8).
Only 1 case of SLCT recurred, after 2years and 9 months of the diagnosed, and she was treated with surgery and chemotherapy. Overall survival is 12.1 years (IC 95%, 7-17).

Conclusions
Our revision showed the differences between recurrence patterns in these diseases, and their indolent behavior even in recurrence setting. Patients with rare tumors must be centralized in specialized centers.

Keywords
Sertoli-Leydig (SLCT); Granulosa cell tumours (GCT)

Squamous cell carcinoma with extended vaginal intraepithelial neoplasia (VAIN) in a patient with Müllerian Agenesis (Mayer-Rokitansky-Kuster-Hauser Syndrome MRKHS) 41 yrs after construction of a neovagina

Authors

Claudia Schmedler 1,

1. Obstretics and Gynaecologie, Landeskrankenhaus Feldkirch, Feldkirch, AUSTRIA

Abstract ID: 3810

Squamous cell carcinoma with extended vaginal intraepithelial neoplasia (VAIN) in a patient with Müllerian Agenesis (Mayer-Rokitansky-Kuster-Hauser Syndrome MRKHS) 41 yrs after construction of a neovagina

Case Report
A 57yr old patient with MRKHS presented with vaginal bleeding and dyspareunia 41yrs after construction of a neovagina by interposition of a small bowel loop
On gynaecological examination a narrow vagina and moderate bleeding were found.
A fixed nodule was palpable 3cm above the introitus in the anterior wall.
On ultrasound a nodule of 1,7cm, distinct from the bladder, was visible. (pic 1)
A biopsy showed a moderately differentiated squamous cell carcinoma of basaloid subtype,
With an extended associated VAIN III, HPV high risk positive. (pic 2)
A MRT showed a nodule of 2,4cm in the vault of the vagina, not clearly separeted from the bladder wall. No free fluid or enlarged Lymph nodes were noted.
A cystoscopy showed no infiltration of the bladder wall.
The interdisciplinary tumor board decided on a combined radio-chemotherapy. The patient received a total of 64 Gray (pic 3) and Cisplatin 40mg weekly for 5 weeks. At the end of the radiotherapy a mild local reaction with reness of the vaginal epithelium was present, which regressed. No nodule was palpable anymore.

Results
MRT control after 6 and 12 months showed no residual tumor or tumor progression (pic 3)

Discussion and Conclusion
Malignomas in a neovagina are rare, but cases have been reported. There are various techniques of constructing a neovagina, and squamous cell carcinomas are most commonly described in skin grafts and adenocarcinomas after interposition of bowel. Squamous cell carcinomas in a bowl graft are extremely rare.
MRKHS can present as hypoplasia or as agenesis. In hypoplasia a malignant transformation of the residual vaginal tissue is possible. In bowel graft a metaplastic transformation of the bowel mucosa into physiological and anatomical squamous cell epithelium, resembling initial vaginal epithelium, is taking place.
In most cases of squamous cell carcinomas of the neovagina a positive HPV result is present. Therefore these patients should be offered a routine screening programm.
Therapeutic options include surgery or radio-chemotherapy. In this case the interdisciplinary tumor board decided on a radio-chemotherapy.
The 1yr follow-up showed no residual tumor and the patient is symptom-free.

Keywords
squamous cell carcinoma, MRKHS, neovagina, small bowel loop

Supplementary material
http://sites.altilab.com/files/159/abstracts/poster-neovagina-lyon.pptx,
http://sites.altilab.com/

The Outcome of Patients with Stage III Gestational Trophoblastic Neoplasia – Does residual lesion on post-treatment imaging matter?

Authors

Mandy Man Yee Chu 1, Siew Fei Ngu 1, Ka Yu Tse 1, Karen Kar Loen Chan 1, Hextan Yuen Sheung Ngan 1,

1. Department of Obstetrics and Gynaecology, Queen Mary Hospital, The University of Hong Kong, Hong Kong, HONG KONG

Abstract ID: 3812

Introduction
The lung was the most common site of metastasis in gestational trophoblastic neoplasia (GTN). The aim of this study is to evaluate the outcome of GTN patients with lung metastasis.

Method
We conducted a retrospective study of all patients with Stage III GTN treated between 2002 and 2017 in a tertiary referral center in Hong Kong. Medical records were reviewed and data were analysed.

Results
Twenty-eight patients with GTN with lung metastasis were identified during the study period. Patients with Stage IV disease (brain / liver metastasis) were excluded. All the lung metastases were detected on pre-treatment chest X-Ray. Among the 28 patients, 16 of them were classified as having high-risk disease with the WHO risk score of =>7, while the other 12 patients had a low-risk disease. Combination chemotherapy was given to all high-risk patients and also 4 patients with low-risk disease (due to suboptimal fall in hCG level during chemotherapy treatment with single agent) while single agent chemotherapy was given to the remaining 8 patients with low-risk disease. None of the patients in this series had surgical resection of the lung metastasis. One patient progressed while on chemotherapy and was subsequently succumbed due to neutropenic sepsis. Twenty-three patients had re-assessment imaging (chest X-ray / Computed Tomography) after completion of chemotherapy with a normal hCG level. Eleven patients (48%) had residual lesion on post-treatment imaging. At a median follow-up of 39 months, two out of the 11 patients with residual lesion on post-treatment imaging were diagnosed to have recurrence (at 6 and 8 months), both treated with chemotherapy and were in remission for more than 7 years. None of the patients with normal post-treatment imaging recurred. All the 23 patients were alive without evidence of disease at the end of the study period.

Conclusion
Residual lung lesion was common after chemotherapy for GTN with lung metastasis. Patients with residual lung lesion might have a higher risk of recurrence compared to patients without residual lesion but the overall survival was not compromised. Expectant management should be offered to all patients with residual lung lesion after chemotherapy but close monitoring with hCG is necessary.

Keywords
Gestational Trophoblastic disease

Comprehensive molecular profiling of adult ovarian granulosa cell tumors (GCT) identifies candidate actionable targets

Authors

Alexandra Leary 1, Joanne Xiu 2, Jeff Swensen 2, Zoran Gatalica 2,

1. Medicine, Gustave Roussy Cancer Campus, Villejuif, FRANCE
2. Caris Life Sciences, Phoenix, UNITED STATES
3. Caris life sciences, PHoenix, UNITED STATES

Abstract ID: 3813

Ovarian sex cord stromal tumors (SCST) are rare and heterogeneous group of neoplasms among which GCTs are the most common. Hot-spot mutations in FOXL2, a gene encoding a transcription factor critical for granulosa-cell development, characterize the majority of adult type granulosa cell tumors. The prevalence of other mutations and targetable alterations in GCT is not well described. We aimed to conduct a comprehensive genomic and proteomic characterization of a large series of GCTs in an effort to identify actionable targets.

Methods and Patients
A total of 305 adult ovarian GCTs were available. Diagnosis was confirmed on central review by expert gynecology pathologists prior to molecular profiling. Next generation sequencing (NGS) was performed using a 592 gene panel on 112 cases. Total mutational burden (TMB) and DNA microsatellite instability (MSI) were calculated from NGS data. Additionally, IHC for estrogen (ER), progesterone (PR) and androgen (AR) receptors as well as PD-L1 (SP142) was performed (for all 305 cases). Biomarker analyses performed by Caris Life Sciences' (Phoenix, AZ)

Results
As expected, the most common alteration was a FOXL2 p.C134W mutation (93%; 98/105). In addition, 37% (37/105) of adult GCTs demonstrated at least one other pathogenic mutation: 17% (17/105) of GCT harbored a PI3K pathway alteration, a further 11% had a mutation in MLL2, a histone methyl-transferase gene, 9% showed a TP53 mutation, and 5% had alterations in DNA repair genes, such as BRIP1 or CHEK2. All cases were microsatellite stable. TMB was low (Mean: 6.1mutations/Mb; range:3-12)with only 6 cases exhibiting ≥10 mutations/Mb. PD-L1 was expressed on tumor cells in 37/232 cases (16%). No gene fusions were identified in the entire cohort.
Among the 300 GCTs tested for hormone receptor expression, 96% (284/296) were PR-positive, 83% were AR-positive and 67% ER-positive.

Conclusion
To our knowledge, we present the first integrated molecular description of such a large cohort of GCTs suggesting possible biomarker-driven treatment options for this rare tumor. In line with previous studies, FOXL2 mutations were present in 93% of GCTs. In addition, oncogenic, potentially actionable mutations were frequent, detected in 40% of cases suggesting GCTs may be eligible to molecular-guided treatment strategies such as mTOR/Akt inhibitors, epigenetic agents or PARP inhibitors in the case of alterations in PIK3CA, MLL2 or DNA repair genes, respectively. PDL1 overexpression or high TMB was only detected in a small subset (15%). Of note, 83% of GCTs were androgen receptor-positive, providing the rationale for ongoing studies of AR inhibitors in metastatic GCT (NCT03464201).

Keywords
adult granulosa cell tumor, molecular profile

MOLECULAR CHARACTERISTICS AND GENETIC APPROACHES OF ENDOMETRIOSIS-RELATED OVARIAN CANCER: A SYSTEMATIC REVIEW

Authors

Dimienescu Oana Gabriela 1, Anastasiu Costin-Vlad 1, Balan Andreea 1, Casap Stela 1, Moga Marius-Alexandru 1, Blidaru Alexandru 2,

1. Department of Medical and Surgical Specialties, Transilvania University of Brasov, Faculty of Medicine, Brasov, ROMANIA
2. Departament X - General Surgery, Carol Davila University of Medicine, Bucharest, ROMANIA

Abstract ID: 3814

Introduction
Endometriosis is a benign gynecological condition that affects approximately 5-10% of reproductive aged women all over the world. The oncogenic role of endometriosis has first been described first in 1952 by Sampson, that proposed a theory of malignant progression. Endometriosis-related ovarian cancer (ERONs) represent a group of tumors including clear cell carcinoma, endometrioid carcinoma and seromucinous borderline tumors that supports the hypothesis that endometriosis is a cancer precursor. The aim of this study was to review the mechanisms whereby genetic and molecular factors can be involved in the neoplastic progression of this pathology.

Methods
A comprehensive research of the literature was performed using PubMed, Scopus, Google scholar and Science Direct databases, up to 31 March 2018. The research had the purpose to identify the original and review papers that mentioned the genetic and molecular factors that are potentially involved in the oncogenic role of endometriosis.

Results
A total of 35 articles met the inclusion criteria and were included in our review. ERONs have different prevalence: 30%-60% are endometrioid carcinomas, 20%-35% clear cell carcinomas, 5%-10% serous carcinomas and 4%-10% mucinous carcinomas. Molecular analyses of the ERONs have identified a series of alterations that involves: the aberrant activation or inactivation of pathways such as PTEN, KRAS, TP53, PIK3 CA, β-catenin and rarely, P53. The loss of heterozygosity (LOH) at the PTEN locus is proved to be present in 10%-20% of endometriosis cases and the patterns of LOH in ERONs are similar. LOH in the Xq region is about 38% of ERONs but it is infrequent in endometriosis. In atypical endometriosis, which is a high risk factor for ovarian cancer, LOH of 10q23 is found in 40% of cases, while in ERONs, LOH of 10q23 is higher than 45%. K-Ras mutation is frequently found in endometriosis-associated carcinoma (10-20% of cases) and in more than 50% of cases of mucinous ovarian carcinoma. B-catenin is encoded by CTNNB1 and the Wnt/β-catenin signaling pathway dysregulation is occurring in 16-38% of ovarian endometrioid carcinoma, for which this mutation seems to be characteristic. PTEN-PIK3CA-mTOR pathway has also been implicated in the tumor progression process, identifying PIK3CA mutation in approximately 46% of clear cell ovarian cancers. The loss of ARID1A, a tumor suppressor gene that encodes BAF250a protein, is the most common molecular change in ERONs and seems also to be an early mechanism. In ovarian cancers, it have been proved that ARID1A mutations are found in 50% of endometrioid cancers and in 73% of clear-cell cancers, compared to approximately 10% of non-ERONs.

Conclusion
Endometriosis is a multi-factorial disease with a strong oncogenic potential. The molecular and genetic mechanisms remain still unclear and there are required future studies that will be the key-point for the early detection and for improved treatment

strategies for ERONs.

Keywords
ERONs, endometriosis, ovarian cancer, PTEN, ARID1A

Network analysis of symptoms among women with recurrent ovarian cancer (oral presentation)

Authors

Young Ji Lee 1, Grace Campbell 1, Teresa Thomas 1, Heidi Donovan 1,

1. School of Nursing, University of Pittsburgh, Pittsburgh, UNITED STATES

Abstract ID: 3815

Background
Uncontrolled cancer- and treatment-related symptoms severely affect quality of life (QOL) and function. Symptom burden is especially high in ovarian cancer (OvCa) patients, who experience an average of 10-12 concurrent symptoms with correspondingly low QOL. Symptom management could be improved with a better understanding of relationships among concurrent symptoms. Network analysis (NA) is a methodology that discovers and visualizes relationships among components of a phenomenon to identify influential components (e.g. based on connectedness to other components). Thus, the goal of this study is to apply NA to a sample of OvCa survivors to identify the most influential symptoms as priority symptoms for intervention development.

Data Source
Ancillary analysis of WRITE(Written Representational Intervention to Ease Symptoms), a longitudinal trial in which OvCa patients (n=497) reported severity of 28 cancer and/or treatment-related symptoms while participating in an online symptom management intervention. Participants completed the symptom assessment on average nine times over the course of 13 months. The mean age was 59.3 years (SD=9.2), and the median time since diagnosis was 37 months (range 7-303). 59.4% of participants had received 3 or more previous treatment regimens. 85% of participants were receiving chemotherapy at the time of enrollment.

Method
We analyzed symptom data collected at baseline (T1; n=497) and 4 months (T4; n=379) of WRITE. Participants rated the severity of each symptom at its worst in the past week on a 0(did not have the symptom) -10(as bad as I can imagine) scale. We dichotomized severity scores using a cut-point of <3 and ≥ 3. Then, we constructed a symptom network and visualized the relationship between symptoms. In this network, the node size represents frequency of each symptom. We added weight to network connections using co-occurrence of symptoms that may represent important relationships between symptoms. After constructing the network of symptoms, we compared T1 and T4 networks. Then, we calculated node-specific centrality measures of each network: betweenness, closeness, and eigenvector using R and the Organizational Risk Analyzer.

Results
A comparison of networks demonstrated no change in network topology; that is, nodes and links were consistent across networks. However, at T1, vomiting had the highest betweenness (0.537), while at T4, weight loss had the highest betweenness (0.387). This result suggests that vomiting and weight loss assert the highest influence over the severity of other concurrent symptoms (a symptom "gatekeeper"). At both T1 and T4, fatigue had the highest eigenvectors (0.450 and 0.527, respectively), indicating that it connects to the highest number of other symptoms.

Discussion

This study was the first to construct symptom networks for ovarian cancer patients. Overall, the structure of symptom networks at the two time points was similar although there were changes over time in network measures. Our result suggests that vomiting, weight loss, and fatigue are priority symptoms to be managed to decrease overall symptom burden in OvCa. Our work can guide symptom management interventions in the future by identifying symptoms that should be specifically targeted to maximize patient QOL and minimize nursing time and resources.

Keywords

Symptoms, network analysis, ovarian cancer, patient reported outcomes

Supplementary material

http://sites.altilab.com/files/159/abstracts/egso-abstract-lee-sna-figure.docx, http://sites.altilab.com/

Advanced mixed germ cell tumour diagnosed in pregnancy – case report

Authors

Marketa Bednarikova 1, Lubos Minar 2, Romana Gerychova 3, Michal Felsinger 2, Eva Jandakova 4, Iva Mihulova 5, Lucie Krikavova 5, Petra Vinklerova 3, Vit Weinberger 2,

1. Department of Internal Medicine, Hematology and Oncology, Medical Faculty of Masaryk University and University Hospital Brno, Brno, CZECH REPUBLIC
2. Oncogynecological Center, Medical Faculty of Masaryk University and University Hospital Brno, Brno, CZECH REPUBLIC
3. Department of Gynecology and Obstetrics, Medical Faculty of Masaryk University and University Hospital Brno, Brno, CZECH REPUBLIC
4. Department of Pathology, Medical Faculty of Masaryk University and University Hospital Brno, Brno, CZECH REPUBLIC
5. Department of radiology and Nuclear Medicine, Medical Faculty of Masaryk University and University Hospital Brno, Brno, CZECH REPUBLIC

Abstract ID: 3816

Background
Diagnosis of malignancy is an uncommon complication of pregnancy requiring a comprehensive multidisciplinary approach. For an optimal therapeutic strategy in this very rare clinical situation, there is still not enough information. We are presenting a case of a patient treated with chemotherapy for advanced germ cell tumor with atypical biologic behavior diagnosed in pregnancy.

Case Report
A 32-year-old woman presented with acute abdominal pain and distention caused by pelvic mass at 17 weeks´ of pregnancy, underwent emergent laparotomy with the finding of ruptured ovarian tumor complicated by simultaneous bleeding into the abdominal cavity. Unilateral salpingo-oophorectomy and multiple biopsies of omental cake were performed. Histological examination revealed an advanced dysgerminoma of the left ovary, FIGO stage IIIC minimally. Chemotherapy with carboplatin and paclitaxel was started at 20 weeks' gestation. Subcutaneous metastases were biopsied and histologically verified in the trunk and breast during the chemotherapy. Despite to very good clinical response initially, the disease progressed rapidly in terms of new clinical occurrence of metastases. Therefore, the regime of the chemotherapy had to be switched to cisplatin, vinblastine, and bleomycin since the third cycle at 27 weeks' gestation. Due to symptoms of bowel obstruction caused by progressive disease in the contralateral right ovary with tumorous mass making vaginal birth obstacle the decision for preterm labor via Caesarean section was made and the baby was born after the induction of fetal lung maturation at 30 weeks of pregnancy. The right salpingo-oophorectomy and retroperitoneal metastasis biopsy were performed at the same time. The baby girl was born, 1270g weight and 39cm length with Apgar score 4/8/8 and umbilical artery pH 7,42. Neither maternal nor neonatal infectious or other complications were present during the immediate postpartum period and another six months to date. Except for pure dysgerminoma, the pathologist has recently described a synchronous component of an embryonal carcinoma in the final histology report that was not present in the previous samples even after retrospective review. The patient completed postpartum three cycles of chemotherapy with cisplatin, etoposide, and bleomycin with a good but short-term response again. Subsequently, multiple viable bone metastases among others were described on the PET/MR examination after completion of planned chemotherapy. Patient has been undergoing further line of chemotherapy with gemcitabine and oxaliplatin up to the present.

Conclusion

Presented case report confirms the previously published assumption that diagnosis of advanced germ cell tumour during pregnancy seems to have worse prognosis than in the non-pregnant population. The chemotherapy administered during the second and third trimester of pregnancy is feasible and we did not pick up any its side effects on the child so far.

Keywords

germinal tumors, chemotherapy in pregnancy

ROLE OF CDK12 IN REGULATION OF DNA DAMAGE RESPONSE IN OVARIAN CANCER CELLS

Authors

Klat Jaroslav 1, Dzimkova Marta 2, Paculova Hana 2, Bajsova Sylva 1, Kohoutek Jiri 3,

1. Department of Obstetrics and Gynecology, University Hospital Ostrava, Ostrava, CZECH REPUBLIC
2. Department of Chemistry and Toxicology, Veterinary Research Institute, Brno, CZECH REPUBLIC
3. Veterinary Research Institute, Veterinary Research Institute, Brno, CZECH REPUBLIC

Abstract ID: 3821

Introduction
The DNA-damage-response (DDR) pathway is a cellular mechanism which has evolved to protect cellular integrity by detection and repair of DNA lesions. Previously, our group and others demonstrated that the cyclin-dependent kinase 12 (CDK12) maintains genome stability via regulation of transcription of DDR genes, specifically, BRCA1, RAD51 and others. Since various microRNA (miRNA) are situated within coding genes, we hypothesized that expression of some of them might be also affected by CDK12 depletion. Therefore, we conducted a pilot study focused on identification of candidate miRNAs that might be significantly altered in CDK12 deficient cells.

Methods
Total RNA from parental and CDK12 depleted cell line (ovarian carcinoma) was prepared and TLDA low density array was carried. Indeed, downregulation of CDK12 protein level led to aberrant expression of several miRNAs, among them, miR-152 was significantly affected. By using predictive algorithm, several proteins that might be specifically targeted by miR-152 were examined.

Results
We confirmed that upregulated expression of miR-152 leads to decreased expression of DNMT1, RICTOR and MET proteins which are often found deregulated in rather wide spectrum of oncogenic diseases.

Conclusions
We speculate that CDK12 participates in DDR machinery by two distinct mechanisms, either by orchestrating transcription of DDR genes or by stabilization of DNMT1 protein by blocking expression of miR-152 targeting DNMT1.

The project is supported by the grant of the Ministry of Health AZV16-34152A.

Keywords
DNA damage, CDK 12, ovarian carcinoma

Progesterone Receptor and PTEN mutation as predictive factors of response to hormone therapy in metastatic endometrial cancer.

Authors

Mathias Neron 1, Lucie Allègre 2, Cristina Leaha 3, Fréderic Courtier 4, Nadine Carbuccia 5, José Adelaïde 5, Florence Boissière 6, Max Chaffanet 5, Michel Fabbro 7, Pierre-Emmanuel Colombo 1, Daniel Birnbaum 5, Eric Lambaudie 9,

1. Surgical Oncology, Institut du Cancer de Montpellier, Montpellier, FRANCE
2. Gynecology, Nimes University Hospital, Nimes, FRANCE
3. Pathology and cytology, Institut du Cancer de Montpellier, Montpellier, FRANCE
4. Molecular biology, CRCM, Marseille, FRANCE
5. Molecular biology, Institut Paoli-Calmettes, Marseille, FRANCE
6. Institut du Cancer de Montpellier, Montpellier, FRANCE
7. Clinical oncology, Institut du Cancer de Montpellier, Montpellier, FRANCE
8. Surgical oncology, Institut du Cancer de Montpellier, Montpellier, FRANCE
9. Surgical oncology, Institut Paoli-Calmettes, Marseille, FRANCE

Abstract ID: 3822

Introduction
Hormone therapy is an effective treatment of metastatic endometrial cancer, with few toxicity and low cost. The response rate is interesting, up to 56% of clinical benefit rate is some studies. (Pautier et al., 2016) However, there is still no predictive factor of response well identified. The progesterone receptor is the only factor found, and could be proposed (grade C recommendation) before the introduction of the hormone therapy (ESMO-ESGO-ESTRO Consensus 2015).
The objective of the study was to found new predictive factors of response to hormone therapy in metastatic endometrial cancer by conducting unsupervised analysis.

Materiel and Methods
We conducted a retrospective review of all cases of endometrial cases in two French cancer centers between January 2000 and January 2016.
Inclusion criteria were: metastatic endometrial cancer, treated by hormone therapy, histologic type endometrioïd or serous, and FFPE sample (formalin-fixed paraffin-embedded) available. Exclusion criteria were hormone therapy received for an associated breast cancer and response not evaluable.
The main endpoint (EP1) was clinical benefit defined as partial or complete response of stability longer than 6 months. Secondary endpoints were response longer than 18 months (EP2) and overall survival (OS).
We performed a second histologic assessment by local experts, immunohistochemistry for estrogen (ER) and progesterone receptors (PR) and microsatellite instability-MSI-(hMLH1, hMSH2, hMSH6, PMS2).
We extracted DNA from FFPE tissue to perform molecular testing. We realized analysis by Next-Generation Sequencing (NGS) with a commercial panel testing 495 genes and CGH analysis (Comparative Genome Hybridation).
This study was approved by local ethic committee.

Results
On 1052 screened endometrial cancer cases, 46 completed inclusion criteria and 38 were included. AND extraction was not possible for 3 cases, AND quantity was not sufficient for 3 cases and NGS was not interpretable for 2 cases. Population characteristics were: 33 cases of endométrioïd carcinoma, 6 tumors MSI, 30 tumors with at least one positive hormonal receptor.
3 women presented a thromboembolic event, whose one severe event inducting interruption of treatment.
In multivariate analysis, the only factor associated with EP1 was PTEN mutation

(OR=5.92, p=0.047).
Percentage of progesterone receptor expression was associated with EP2. No MSI tumors presented a long time response.
Prognostic factors of OS were: age (OR=1.06, p=0.045) and at least one positive hormonal receptor (OR=0.26, p=0.031). PTEN did not reach significance (OR=0.32, p=0.077).
For EP1, the association PR+ - PTEN mutated was characterized by: sensibility of 0.47, specificity of 0.94, positive predictive value (PPV) of 0.89 and negative predictive value of 0.62.
For EP2, the association PR+ - PTEN mutated - MSI was characterized by: sensibility of 0.67, specificity of 0.96, PPV of 0.8, NPV of 0.93.

Conclusion
Testing PR, PTEN and MSI status could be an effective option to select good candidates to hormone therapy in metastatic endometrial carcinoma.

Keywords
Endometrial cancer, hormone therapy, predictive factor, NGS, immunohistochemistry

A 34 years old nulliparous patient with a mixoïd leiomyosarcoma of the uterus: a case report

Authors

Nicolas Moser 1, Patrice Mathevet 1,

1. Gynécologie, CHUV, Lausanne, SWITZERLAND

Abstract ID: 3824

Introduction
We present the case of a young patient of 34 years old who was operated for a symptomatic leiomyoma by laparoscopy with the final diagnosis of myxoïd leiomyosarcoma. Uterine sarcomas are rare pathologies accounting for 2-6% of malignancies of the uterine corpus. The prognosis is bad with a survival rate of 40-66% by 5 years. The diagnosis is very difficult in pre-operative time, during the surgery and also in the pathological analysis often requiring several weeks and the opinion of a sarcoma specialist. There is no consensus or guidelines about risk factors and radiological signs for sarcomas. The only risk factor recognized is the age with an increased risk after 55 years old and a virtually zero risk under 35 years old what was the case of our patient. Furthermore, it is now well known that morcellation can worsen the prognosis and increase the risk of recurrence in case of an unknown malignancy of the uterus.

Material and method
The patient in good health, presented oneself by her gynecologist for abnormal bleeding during menstruations. The ultrasonography showed a myoma FIGO 2-5 of 9 cm without an abnormal vascularization. A pelvic MRI was performed without any sign of malignancy. A laparoscopic myomectomy was performed. The first diagnosis was a smooth muscle tumor of uncertain malignant potential (STUMP). After reevaluation by a specialized pathologist, the final pathologic diagnosis was a mixoïd leiomyosarcoma. We performed a TEP-SCAN, which showed a slow uptake in the periphery of the uterus without regional or distant metastasis. The recommendation was to perform a total hysterectomy without ovariectomy.

Results
An open laparoscopic surgery was performed with a cytology of the peritoneal fluid and a full abdomino-pelvic evaluation finding an implant in the anterior wall in the scar of the sus-pubic trocar. There was no other sign of dissemination. We proceed with an excision of this implant and with a total hysterectomy. A residual zone of myxoïd leiomyosarcoma in the uterus and the abdominal wall was found. The peritoneal cytology showed no tumoral cells.
We asked four specialized centers for the treatment and had three propositions: chemotherapy alone, chemotherapy with radiotherapy and following alone. After discussion with the patient, she decided for a follow-up with a MRI each 3 months.
Six weeks after surgery, the patient is well without any pain.

Conclusion
Uterine leiomyosarcoma are rare pathologies with a bad prognosis and a very difficult diagnosis. Usually it occurs in women in the sixth decade but young women are not exempted. Because of the scarcity of these pathology, there is no consensus for the adjuvant treatment.

Keywords
Leiomyosarcoma-young patient

Estradiol and follicle stimulating hormone increase cell viability in adult-type ovarian granulosa cell tumor cells – implications for hormonal therapy

Authors

Ulla-Maija Haltia 1, Marjut Pihlajoki 2, Noora Andersson 2, Lotta Mäkinen 1, Johanna Tapper 1, Hugo Horlings 3, Ursula Turpeinen 4, Mikko Anttonen 4, Ralf Bützow 5, Leila Unkila-Kallio 1, Olli Carpen 5, David B Wilson 6, Markku Heikinheimo 2, Anniina Färkkilä 7,

1. Obstetrics and Gynecology, University of Helsinki and Helsinki University Hospital, Helsinki, FINLAND
2. Children´s hospital, University of Helsinki and Helsinki University Hospital, Helsinki, FINLAND
3. Department of Pathology, The Netherlands Cancer Institute, Amsterdam, NETHERLANDS
4. HUSLAB, Clinical Chemistry, University of Helsinki and Helsinki University Hospital, Helsinki, FINLAND
5. HUSLAB, Pathology, University of Helsinki and Helsinki University Hospital, Helsinki, FINLAND
6. Department of Pediatrics, Saint Louis Children's Hospital, Washington University School of Medicine, Saint Louis, UNITED STATES
7. Radiation Oncology, Dana-Farber cancer Institute, Boston, UNITED STATES

Abstract ID: 3825

Introduction
Adult-type granulosa cell tumors (AGCTs) are sex-cord derived ovarian neoplasms characterized by late relapses. AGCTs harbor a pathognomonic somatic mutation in a gene coding for transcription factor FOXL2 (c.402C>G; p.C134W), however the pathogenesis of these slow-growing tumors is still mostly unveiled and efficient treatments for advanced disease are lacking. AGCTs express various hormone receptors and secrete hormones including estradiol (E2), inhibins, and anti-Müllerian hormone. Follicle stimulating hormone (FSH) has been proposed to contribute in AGCT tumorigenesis. Hormonal therapies, such as aromatase inhibitors, have been empirically used in treatment of recurrent AGCTs, however, only modest response rates have been reported. We aimed to elucidate the hormonal modulation in a large clinical data set and study hormonal effects in AGCT cell models.

Material and methods
The expressions for FSH, estrogen receptors and aromatase (CYP19A1) were studied in tumor tissue microarray (TMA) consisting of 121 primary and 54 recurrent AGCTs using immunohistochemistry and RNA in situ method. All tumors in the TMA were tested positive for FOXL2 mutation. Protein and mRNA expressions were correlated with clinical parameters. Also preoperative serum hormone levels for FSH, E2 and inhibin B were measured in AGCT patients. The effects of FSH and E2 stimulation were assessed in two cell models, established AGCT cell line KGN and primary AGCT cells from six AGCTs. Furthermore, the effect of aromatase inhibitor letrozole on AGCT cell viability was assayed.

Results
Estrogen receptor alpha (ERA) was detected in a minority of AGCTs whereas estrogen receptor beta (ERB) and FSH receptor expressions were abundant. ERB levels were significantly increased in recurrent tumors, implying the role of hormonal modulation in AGCT progression. The G-protein coupled estrogen receptor (GPER) was expressed only weakly in minority of tumors. CYP19A1 expression was positive in half of the studied tumors. None of the hormone receptors had any prognostic significance. Serum FSH and

inhibin B correlated inversely implying regulation of pituitary FSH secretion by tumor-derived inhibin B. We found that FSH induced CYP19A1 expression at mRNA level in all studied tumors, but increased the AGCT cell viability in only three out of six samples. Estradiol stimulation had no effect on cell viability in KGN cells. However, in primary cultured AGCT cells estradiol increased cell viability 23-57% in four out of six samples. Even though estradiol production in AGCTs was suppressed by letrozole, it had no effect on cell viability.

Conclusions
ERB is the main estrogen receptor type in AGCTs and its expression is further increased in recurrent tumors when compared with primary tumors. Aromatase is expressed in subset of AGCTs. We herein report that FSH and estradiol increase viability of AGCT cells supporting the use of anti-hormone therapy in AGCT patient care. Nevertheless, the efficacy of aromatase inhibitors in AGCT treatment needs further exploration.

Keywords
granulosa cell tumor, estrogen, aromatase inhibitor, hormonal therapy

A BLOOD TEST FOR THE DIAGNOSIS OF INVASIVE HPV-ASSOCIATED CARCINOMA: Clinical validation via a prospective study.

Authors

Xavier Sastre-Garau 1, Alexandre Harlé 1, Julia Salleron 2, Jacques Thomas 1, Jessica Demange 1, Priscillia Tosti 3, Claire Charra-Bruneau 4, Frederic Marchal 5, Léa Leufflen 6, Gilles Dolivet 6, Didier Peiffert 4, Agnès Leroux 1, Jean-Louis Merlin 1, Eric Ginoux 7, Raouf Benabdelali 8, Fernando Martin 8, Jean-Marc Costa 8, Sonia LAMEIRAS 9,

1. Biopatholoy, Institut de Cancérologie de Lorraine, Vandoeuvre-Lès-Nancy, FRANCE
2. Biostatistics, Institut de Cancérologie de Lorraine, Vandoeuvre-Lès-Nancy, FRANCE
3. Clinical Research, Institut de Cancérologie de Lorraine, Vandoeuvre-Lès-Nancy, FRANCE
4. Radiotherapy, Institut de Cancérologie de Lorraine, Vandoeuvre-Lès-Nancy, FRANCE
5. Suregery, Institut de Cancérologie de Lorraine, Vandoeuvre-Lès-Nancy, FRANCE
6. Surgery, Institut de Cancérologie de Lorraine, Vandoeuvre-Lès-Nancy, FRANCE
7. Bioinformatics, Life and Soft, Paris, FRANCE
8. Innovation, CERBA, Saint Ouen L'aumone, FRANCE
9. PSL Research University, NGS Platform, Institut Curie, Paris, FRANCE

Abstract ID: 3826

Introduction and objectives
Molecular characterization of tumors allows the detection of circulating tumor DNA (ct-DNA), a minimally and non-invasive method for early cancer detection. Knowing tumor DNA alterations is currently prerequisite limiting ct-DNA detection. This can be overcome by studying human papillomavirus (HPV)-associated tumors, since viral DNA constitutes a tumor marker. However, the extensive polymorphism of HPV genotypes and HPV DNA patterns in tumors, limit HPV detection using current approaches. We have recently developed the Capt-HPV -innovative methodology, allowing the exhaustive molecular characterization of all HPV DNA sequences, encompassing the viral genotype, physical status (episomal or integrated) and genomic insertion locus. Our pilot experiments, comparing biopsy and blood samples from cervical cancer patients, showed that Capt-HPV could be applied to the detection of tumor-associated circulating HPV DNA (ct-HPV DNA). Capt-HPV can therefore be applied as a blood test for the diagnosis of any type of HPV-associated carcinoma, representing more than 200,000 annual new cases in Europe.

Methods
We designed a prospective study including one hundred cases of invasive carcinoma developed in the cervix, vulva, anus and oropharynx. For all patients a tumor biopsy was performed for histology, p16 immunohistochemistry, classical PCR-based HPV detection and Capt-HPV method, and a blood sample (20 ml) for ct-HPV DNA analysis using Capt-HPV method. Viral tumor DNA and plasma-extracted ct-HPV DNA analyses were performed in two different laboratories.

Results
According to the protocol, an intermediary analysis of the first 21 cases was performed. Histology showed that 20 cases corresponded to invasive squamous cell carcinoma developed in the cervix (4 cases), vulva (2 cases), anus (6 cases) and oropharynx (10 cases) and one oropharyngeal carcinoma in situ. Tumor DNA analysis showed that 8 cases were HPV16 positive (cervix 3; anus 4; vulva 1) and 13 HPV negative (oropharynx 10; vulva 1; cervix 1). The comparison between tumor and blood status showed that 6/8 HPV positive tumor were also positive in the blood (sensitivity 75%) whereas all HPV negative tumor were negative in the blood (specificity 100%). The two false negative cases corresponded to one cervical and one vulvar T1N0 carcinomas with respective size of 6 mm (clinical) and 28 mm (radiological). Hybrid cell/viral DNA sequences,

corresponding to integrated HPV pattern, were found in the blood in 5 cases, also detected in the tumor tissue (see supplementary file), and thus corresponding to highly specific tumor markers. Integrated viral DNA was located in 11q14.1, 12p12.1, 12p13.31, 12q15 and 12q21.32 chromosomal bands. Only free viral sequences were found in the plasma and tumor in one case. The patient inclusion is presently closed and data concerning the series of 100 cases will be presented.

Discussion/conclusion

Using innovative Capt-HPV method, exhaustive molecular characterization of HPV features can be provided from blood sample in patients with HPV-positive invasive carcinoma. This allows the biological diagnosis of HPV-positive invasive carcinoma whatever the genotype and molecular pattern the tumor-associated viral sequences, and provides highly specific tumor marker useful for the biological follow-up of patients and the detection of relapse.

Keywords

HPV, ct-DNA, molecular markers, cervical carcinoma

Supplementary material

http://sites.altilab.com/files/159/abstracts/supplementary-file-.pptx, http://sites.altilab.com/

Early-onset continuous CIPN predicts difficulty with life activities at chemotherapy completion

Authors

Grace Campbell 1, Young Ji Lee 2, Teresa Hagan Thomas 3, Heidi Donovan 2,

1. School of Nursing, Acute/Tertiary Care Department, University of Pittsburgh, Pittsburgh, PA, UNITED STATES
2. School of Nursing, Health and Community Systems Department, University of Pittsburgh, Pittsburgh, PA, UNITED STATES
3. School of Nursing, Health Promotion and Development Department, University of Pittsburgh, Pittsburgh, PA, UNITED STATES

Abstract ID: 3827

Introduction and Objectives
Incidence of chemotherapy-induced peripheral neuropathy (CIPN) often manifests as numbness/tingling (N/T) during front-line platinum/taxane therapy for ovarian cancer; prevalence estimates range from 51%-80%. Some women experience CIPN-related disability by the conclusion of chemotherapy, but it is unclear which women are at greatest risk. The aims of this prospective, daily symptom assessment pilot were to identify a) time to onset of CIPN, b) changes in average and peak CIPN severity over time, and c) whether time to CIPN onset is associated with disability after completion of chemotherapy.

Methods
Participants (n=30) were enrolled prior to first-line adjuvant or neoadjuvant chemotherapy for ovarian, fallopian, primary peritoneal, or uterine cancer. CIPN was assessed at baseline and daily during 6 cycles of chemotherapy using a single numbness/tingling (N/T) severity item (0=did not experience to 10=as bad as I can imagine). CIPN-related interference with daily life activities was assessed at the same intervals using MDASI Interference Scale (0=symptoms did not interfere to 10=interfered completely) for six life activities (general activity, mood, work, relations with others, walking, enjoyment of life). Number of days to CIPN onset and to continuous CIPN (>21 consecutive days of CIPN≥ 3) were determined; average, peak, and minimum N/T severity score for each cycle was calculated. Bivariate correlations were calculated between CIPN variables, Cycle 6 interference scores, age and comorbidities.

Results
Of the 30 women (mean age 59.6 years) enrolled, 25 completed at least 3 complete cycles of daily symptom diaries and are included in this analysis. Mean time to first occurrence of CIPN was 26.8 days (range 1-123 days). Mean N/T severity ranged from 1.18 (average), 2.43 (peak), and 1.27 (last day of cycle) during Cycle 1 to 3.05 (average), 4.26 (peak), and 2.95 (last day of cycle) during Cycle 6. N/T severity was highly variable across participants over time: 13 participants never experienced sustained (≥ 21 days) of continuous N/T severity ≥ 3. However, among the 12 participants who did, average time to continuous N/T was 35.0 days (range 0-87). Age was only associated with walking interference at Cycle 1 (0.455, $p < .05$); comorbidities and baseline interference scores were not associated with Cycle 6 interference scores. Earlier onset of continuous N/T was significantly associated with greater interference with general activities, walking, work, and overall mean interference with life (all $p < .05$) at Cycle 6.

Discussion/Conclusions
Time to onset, average, peak, and duration of CIPN is variable among women receiving neurotoxic chemotherapy. Over half of all women do not experience continuous (daily) N/T, returning to no or minimal severity (<3) prior to their next cycle. For the subset of

women who experienced early onset, continuous N/T for ≥21 days, earlier onset was highly associated with disruptions in major life areas including general activities, walking, and work. These preliminary results highlight the importance of intensive, daily assessment for early identification of the subset of women who develop continuous N/T during treatment so that preventive rehabilitation can be initiated.

Keywords
Neuropathy; chemotherapy; disability

A retrospective review of ovarian cancer patients receiving parenteral nutrition.

Authors

Katie Pears 1, Sarah Slater 1, Rosalind Glasspool 1, Alison Mitchell 2, Graeme Doherty 3,

1. Oncology, Beatson West of Scotland Cancer Centre, Glasgow, UNITED KINGDOM
2. Palliative Medicine, Beatson West of Scotland Cancer Centre, Glasgow, UNITED KINGDOM
3. Nutrition, Beatson West of Scotland Cancer Centre, Glasgow, UNITED KINGDOM

Abstract ID: 3828

Introduction
The majority of patients who receive parenteral nutrition (PN) at the Beatson West of Scotland Cancer Centre (BWoSCC) have ovarian cancer and bowel obstruction. A previous study at the BWoSCC only included 10 ovarian cancer patients with bowel obstruction receiving PN. We now have the opportunity to review outcomes in a larger group of patients.

Methods
Using the nutritional team records patients who received PN with solid tumours were identified. A retrospective review of 63 individual case notes of patients who received PN from 2013 to 2017 was completed.

Results
During the above period 63 patients received PN of which 39 had ovarian cancer. 19 patients had platinum sensitive (PS) ovarian cancer (median age 61, age range 38-73) and 17 had platinum resistant (PR) ovarian cancer (median age 60, age range 43-77). 3 patients could not be classified by platinum sensitivity as they did not survive beyond the first cycle of treatment. In 38 patients with ovarian cancer the indication for PN was bowel obstruction. Mean and median hospital stays in ovarian cancer patients were 52.4 (PS: 51.2, PR: 52.4) and 40 (PS: 40, PR 51) days respectively. Inpatient hospital stays ranged from 18-116 days in PS patients and 5-104 days in PR patients. 65% of PS patients who received systemic anticancer treatment (SACT) during obstruction responded to this versus 38% of PR patients. Patients were most likely to respond to SACT during the 1st line of chemotherapy. Both PS and PR patients were on average receiving 3rd line chemotherapy during PN. 15 ovarian cancer patients experienced complications associated with PN which included line sepsis (11 patients), electrolyte disturbance (4 patients) and blocked line (1 patient). The mean and median survival in patients with PS ovarian cancer was 1068 and 1128 days respectively (range 80-2245 days). The mean and median survival in patients with PR ovarian cancer was 694 and 690 days respectively (range 198-1164). The mean survival in all ovarian cancer patients after PN was 110 days (133 days in PS, 104 days in PR).

Conclusion
The majority of PN patients had ovarian cancer and were being treated for bowel obstruction. These patients experience long hospital admissions. A greater proportion of PS ovarian cancer patients responded to SACT during bowel obstruction. Patients receiving 1st line chemotherapy are most likely to respond to SACT. Most patients do not experience complications associated with PN. Patients with PS ovarian cancer survived longer on average. Although the number of patients in this study is much larger than the previous study, numbers are still small. These results do however give an indication of outcomes for patients with ovarian cancer and bowel obstruction who receive PN. Although PS patients do better generally than PR patients it would seem that some PR patients do benefit from PN and SACT for bowel obstruction. Future work should focus on

identifying the correct patients for such treatments.

Keywords
Ovarian cancer, Platinum sensitivity, Parenteral nutrition, bowel obstruction

Gynecological malignancies during pregnancy: Our initial experience in 14 cases

Author

Eleftherios G. Klonos 1,

1. 1st.Department of Obstetrics and Gyneacology, Aristotle University of Thessaloniki, Thessaloniki, GREECE

Abstract ID: 3829

Introduction
Gynecological cancer during pregnancy is relative rare but may cause maternal and neonatal mortality. Diagnosis, management and follow up of these cases requires specialized knowledge and experience to achieve the proper combination of treatment of the pregnant patien's disease and of the neonatal prognosis.

Aim
Determination of maternal and neonatal mortality related to gynecological cancer in pregnancy and the delayed diagnosis and treatment of the malignancies.

material and method
Retrospective study in the gynecological oncology department of 1ST. Department of obstetrics and gyneacology. Including criteria: diagnosis of treatment during pregnancy. Birth of viable embryos (> 25W). excluding criteria: cancer in situ. The collection of data is from the patients files and supplementary due phone communication.

Results
from 05/2004 to 02/2018 a total number of 24,153 of pregnancies 14 oncological cases were enrolled (0,05%). the mean age of diagnosis was 35 years. from all cases, 64.3% diagnosed in 2ND. trimester. the percentage of maternal mortality was 35.7% with an average survival range of 6.6 months. 21.4% of the patients were diagnosed advanced stage (IV). The recurrence of disease was increased by 14.2%.
In 57% of the cases was a delayed diagnosis of the main disease with an average period of 2,8 months. 78.6% was driven to a premature birth (31W3D, mean - weight 1600G) in order to achieve radical treatment.

Conclusions
in 57% of the cancer – cases in pregnancy there was a delayed diagnosis due to underestimating of the symptomatology. only 21.4% of the patients were treated proper avoiding the premature birth.

The Longitudinal Relationship between Ovarian Cancer Survivors Communication of Priority Symptoms and Symptom Severity: Establishing the Need for Appropriate Symptom Communication Patterns

Authors

Teresa Thomas 1, Grace Campbell 1, Young Ji Lee 1, Susan Sereika 1, Heidi Donovan 1,

1. School of Nursing, University of Pittsburgh, Pittsburgh, UNITED STATES

Abstract ID: 3831

Introduction and Objective
Optimal patient-provider communication helps ensure that patients with ovarian cancer receive appropriate, evidence-based symptom management. However, patients struggle to communicate with their healthcare providers about their cancer- and treatment-related symptoms. The purpose of this study is to examine the frequency by which women with ovarian cancer communicate their priority cancer- and treatment-related symptoms with their healthcare providers and the longitudinal impact communication has on their symptom burden.

Methods
Women were recruited from 68 Gynecological Oncology Group (GOG) sites to the Written Representational Intervention to Ease (WRITE) Symptoms (GOG-0259) randomized clinical trial. All participants had a diagnosis of recurrent ovarian, fallopian tube, or primary peritoneal cancer and were experiencing ≥ 3 cancer- or treatment-related symptoms at baseline. Participants completed monthly questionnaires including the Symptom Representation Questionnaire rating the severity of 28 common ovarian cancer- and treatment-related symptoms on an 11-point scale. At baseline, they prioritized three symptoms over which they wanted to gain better control. A 4-item communication questionnaire assessed symptom communication with providers, and was dichotomized as appropriate or inappropriate based on patients' symptom severity score. We also included moderating variables for social support (Interpersonal Support Evaluation List), optimism (Life Orientation Test-Revised), and anxiety (State-Trait Anxiety Inventory). We first analyzed baseline data to determine the participant characteristics associated with varying levels of communication appropriateness with healthcare providers. We performed a stepwise binary logistic regression to develop a predictive model of appropriate or inappropriate symptom communication styles at baseline. Second, we analyzed the impact of communication on symptom burden overtime (baseline, 4, 8, and 12 weeks). We calculated Pearson product-moment correlations to measure the direction and magnitude of the linear relationship between symptom severity and communication appropriateness concurrently and overtime.

Results
Across participants' top three symptoms, 62.2-73.4% of participants reported having appropriate communication with their healthcare providers. Fatigue was the top symptom (n=80, 48.5%) followed by constipation (n=45, 27.3%) and peripheral neuropathy (n=41, 24.9%). Symptom severity was the only significant predictor of appropriate communication at baseline. Women with high symptom severity scores were 36-41% less likely to have appropriate communication at baseline compared to women with low symptom severity scores. Across all three symptoms, severity scores decreased over time, particularly at the 4-week time-point and appropriateness of communication increased over time. Significant negative correlations between severity and future communication existed indicating that women with more severe symptoms one month were less likely to have appropriate communication the following month.

Discussion/Conclusion
These results suggest the development of patterns of communication which impact long-term severity of cancer- and treatment-related symptoms. If women experienced appropriate communication with their healthcare provider, then they may have received symptom recommendations leading to continued decreased severity. If women did not experience appropriate communication, then they did not have the opportunity to receive recommendations and their communication did not improve overtime. This analysis underscores the need for developing strong initial symptom communication between patients and providers to ensure patients' priority symptoms are discussed and managed.

Keywords
symptoms; communication; ovarian cancer; patient reported outcomes

Supplementary material
http://sites.altilab.com/files/159/abstracts/descriptivetable.docx,
http://sites.altilab.com/files/159/abstracts/symcommfigure.docx

A novel approach to identification of therapeutic targets for uterine carcinosarcoma

Authors

Donal Brennan 1, Bruce Moran 2, Michael Wilkinson 1, David Crosby 1,

1. Dept of Gynaecological Oncology, University College Dublin, Dublin, IRELAND
2. Clinical Bioinformatics, Ireland East Health Group, Dublin, IRELAND

Abstract ID: 3835

Background
Transcriptomic studies are often hampered by inappropriate "normal" controls. Comparing tumour samples to truly normal tissue may provide important insights into disease evolution and identify new therapeutic targets, particularly in rare tumours such as uterine carcinosarcoma (UCS) where many transciptomic studies are underpowered. Comparison of high grade tumours to truly normal tissue is likely to identify many thousands of differentially expressed genes (DEG), therefore reverse engineering of transcriptional networks may allow identification of genes that underpin the development and progression of different cancers. These complex transcriptional networks can be distilled down to a small set of key master transcriptional regulators (MTR), defined as a small number of genes that control a disproportionate level of gene expression. MTRs can provide more effective target in terms of therapy but also in the description of underlying cellular functioning compared to list of DEGs.

Methods
RNAseq data from 26 mid luteal phase endometrial samples taken from Caucasian women with unexplained infertility were compared to 43 uterine carcinosarcoma samples (selected for white women) included in the The Cancer Genome Atlas (TCGA) dataset(ref). Differential gene expression was set using a stringent FDR-adjusted significance level of 0.0001, or 0.01%. The VIPER (Virtual Inference of Protein-activity by Enriched Regulon analysis) algorithm was used to identify MTRs. This algorithm calculates computational inference of protein activity, on an individual sample basis, and uses the expression of genes that are most directly regulated by a given protein, such as the targets of a transcription factor, as an accurate reporter of its activity.

Results
We identified 10,563 DEGs between normal mid luteal phase endometrium and uterine carcinosarcoma. Using an extremely stringent adjusted FDR rate of 0.001 we identified 8 MTRs and reducing the FDR rate to 0.01 increased this to 99 MTRs. The top 8 MTRs included ARL5C, BRDT, CRX, FGF23, MUSK, OR8A1, PADI4, SHOX. Many of these MTRs may be associated with the sarcomatous fraction of the tumour including FGF23, MUSK and SHOX.

Conclusion
A comparison of a truly normal cohort to a rare tumour type identified a huge number of DEGs however using reverse engineering techniques we identified a small number of novel MTRs in uterine carcinosarcoma. The identification of Bromodomain Testis Associated Factor (BRDT) suggests that further investigation of epigenetic modifying agents such as HDAC inhibitors or BET inhibitors in UCS is warranted. As these findings have not been previously reported this highlights the benefits of comparing tumour RNAseq data to truly normal tissue as opposed to adjacent normal tissue which is common practice. This may be particularly important in studies of rare tumour types which are often hampered by sample size. A bioinfomatic approach to identify MTRs will overcome the issues expected problems of identification of a an extremely large number of DEGS as outlined in this study.

Keywords
Uterine carcinosarcoma, transcription factor, BET inhibitor

Economic and Humanistic Burden of Uterine Cancer in the United States

Authors

Chizoba Nwankwo 1, Ruchit Shah 2, Shelby Corman 2,

1. Merck & Co., Inc., Kenilworth, NJ, USA, Kenilworth, NJ, UNITED STATES
2. Pharmerit International, Bethesda, MD, UNITED STATES

Abstract ID: 3836

Introduction
Uterine is the most common cancer of the female reproductive organs in the United States (US). An estimated 63,230 women will be diagnosed with uterine cancer this year, with 11,350 disease related deaths. The economic and humanistic burden of uterine cancer in the US has not been adequately assessed. PATIENTS AND METHODS: This was a retrospective, cross-sectional analysis of the Medical Expenditure Panel Survey (MEPS) data from 2006-2015. Uterine cancer cases were identified using ICD-9 CM code 182 or clinical classification software code 25. Cases with a diagnosis of another cancer in addition to uterine cancer were excluded. The control group consisted of women without a diagnosis of cancer. Study outcomes included healthcare resource use, healthcare costs, activities of daily living, quality of life measures (SF-12v2 physical component score [PCS], mental component score [MCS], EQ-5D health utility, and PHQ-2 depression severity). Unadjusted bivariate analyses were conducted using t-tests for continuous variables and chi-square tests for categorical variables. Multivariate generalized linear models (GLMs) which controlled for key socio-demographic and clinical covariates were conducted for adjusted comparisons of study outcomes between uterine cancer cases and non-cancer controls. RESULTS: The final cohort consisted of 269,907 uterine cancer cases and 146,061,609 non-cancer controls. Uterine cancer cases were significantly older (mean age: 60.8 vs 37.0 years), had a higher BMI (mean BMI: 31.3 vs 26.5 kg/m2) and greater comorbidity burden (mean Charlson comorbidity index: 1.5 vs 0.5) compared to controls. Unadjusted bivariate analyses suggested that uterine cancer was associated with higher number of prescriptions (30.4 vs 11.0) and cost ($3,275 vs $975), inpatient visits (0.5 vs 0.1) and cost ($7,244 vs $1,225), institutional outpatient visits (12.7 vs 5.6) and cost ($2,855 vs $1,027), ER visits (0.4 vs 0.2), outpatient physician visits (1.8 vs 0.4) and cost ($1,651 vs $371), and total healthcare costs ($15,337 vs $3,829) (all $P<0.05$). A higher proportion of uterine cancer cases had physical (31.2% vs 10.2%), cognitive (7.8% vs 3.9%), social (13.4% vs 4.3%), and activity (22.4% vs 7.5%) limitations versus non-cancer controls (all $P<0.05$). Mean PCS score (41.5 vs 49.2) and EQ-5D utility (0.79 vs 0.86) was lower among uterine cancer cases versus non-cancer controls (all $P<0.05$). Results from the multivariate GLMs suggested that uterine cancer cases had a significantly higher number of inpatient visits (0.3 vs 0.1) and costs ($6,117 vs 1,446), outpatient physician visits (0.9 vs 0.5) and costs ($1,229 vs $502), institutional outpatient costs ($1,965 vs $1,322), total all-cause healthcare costs ($11,490 vs $4,909), and lower EQ-5D health utility (Beta coefficient = -0.273; $P = 0.013$) compared to non-cancer controls (all $P<0.05$). CONCLUSION: Uterine cancer is associated with significant healthcare resource use, cost burden, and health utility impairment.

Keywords
Uterine Cancer

Lost annual productivity costs due to uterine cancer deaths in the United States in 2014

Authors

Chizoba Nwankwo 1, Shelby Corman 2,

1. Merck & Co., Inc., Kenilworth, NJ, UNITED STATES
2. Pharmerit International, Bethesda, MD, UNITED STATES

Abstract ID: 3837

Introduction
An estimated 11,350 deaths due to uterine cancer are projected to occur in the United States this year. Annual cost of uterine cancer care in the US is estimated at $2.62 billion per year. An average of 17.2 years of life are lost for each uterine cancer death, ranking ninth among all cancers among adults. We constructed an economic model to estimate the annual productivity costs associated with uterine cancer death in the US, for the year 2014. PATIENTS AND METHODS: The model calculated the number of women who would be alive in 2014 if they had not died from uterine cancer, and the lost earnings resulting from early mortality. The age-stratified annual number of deaths from uterine cancer per year (1935-2014) was obtained from the National Center for Health Statistics. Life expectancy by birth year was then used to determine the probability of survival to the age the patient would have been in 2014, had she not died of cervical cancer. The proportion of patients employed and median annual wage per year, including fringe benefits, were obtained from the Bureau of Labor Statistics. The primary model outcome was the total annual productivity costs attributable to uterine cancer deaths in 2014. Results are reported in 2014 US dollars. RESULTS: A total of 558,717 women in the US died of uterine cancer between 1935 and 2014. The model estimated that 111,651 of these women would be alive in 2014 had they not died from uterine cancer; of these, 25,393 would have been part of the work force in 2014 based on age and labor participation rate. The total productivity loss in 2014 due to uterine cancer was estimated at $1.39 billion. CONCLUSION: Uterine cancer deaths in the US are associated with substantial indirect costs owing to lost earnings. Total productivity losses are more than half of the estimated annual direct costs of uterine cancer care.

Keywords
Uterine Cancer

Primary bilateral squamous cell carcinoma of the fallopian tube: a case report

Authors

Sara Giovannoni 1, Daniela Rubino 2, Anna Mandrioli 3, Giacomo Caprara 4, Claudio Zamagni 5,

1. Oncologia Medica, Policlinico Sant'orsola-Malpighi Bologna, Bologna, ITALY
2. Oncologia Medica, Policlinico Sant'Orsola-Malpighi, Bologna, ITALY
3. Oncologia medica Addarii, Policlinico Sant'Orsola-Malpighi, Bologgna, ITALY
4. Anatomia e Istologia patologica, Policlinico Sant'Orsola-Malpighi, Bologna, ITALY
5. Oncologia Medica Addarii, Policlinico Sant'Orsola Malpighi, Bologna, ITALY

Abstract ID: 3838

Introduction
Primary fallopian tube carcinoma has an incidence of 0.1-1.8% af all female genital malignancies. Serous papillary adenocarcinoma is the most common histological subtype (70-80%), followed by endometrioid adenocarcinoma and transitional cell carcinoma. Primary squamous cell carcinoma arising from the fallopian tube is extremely rare, with about ten clinical cases reported in the literature, making the characteristics and prognosis of this subtype not well clarified.
We are reporting a case of bilateral squamous cell carcinoma of the fallopian tube associated with cervical intraepithelial neoplasia.

Case report
A 62 year-old woman presented with history of relapse of cervical intraepithelial neoplasia 3 (CIN3) treated with conization in 2016.
In May 2017 she reported mild vaginal bleeding, without other symptoms. The Papanicolaou test showed CIN3 and HPV16 infection. Clinical examination and vaginal US didn’t releave any pelvic lesion. The thoracic-abdominal CT scan and pelvic MRI were negative.
In June 2017 a total abdominal hysterectomy and bilateral salpingo-oophorectomy were performed.
The histological examination confirmed the presence of CIN3 with HPV16 infection and revealed a high grade bilateral invasive squamous cell carcinoma of the fallopian tube with central necrosis and infiltration of the tubal wall and peritubal soft tissues. Presence of vascular invasion. The endometrium presented a small lesion of intrepithelial squamous cell neoplasia. Parametrium and ovaries were negative for neoplastic infiltration (FIGO stage II). On IHC stains high weight keratins and p63 were positive; WT1 was negative.
She received adjuvant chemotherapy with platinum and taxane for 6 cycles.

Discussion
Primary squamous cell carcinoma of the fallopian tube is a very rare entity and its aetiology, clinical features and prognosis are not well known.
It is important to distinguish primary carcinoma of fallopian tube from metastatic carcinoma secondary from the ovary, uterus or gastrointestinal tract which more commonly involves the fallopian tube. It can be associated with simultaneous ovarian involvement, cervical intraepithelial neoplasia or with HPV infection. The median age of presentation is between 55-60 years. Preoperative diagnosis is very difficult. In our case there was no evidence of disease based on radiological exams. Presenting symptoms may include vaginal spotting or bleeding; abdominal pain or pelvic discomfort.
The current recommendation for surgery is a total abdominal hysterectomy, bilateral salpingo- oophorectomy, omentectomy and lymphadenectomy and the chemotherapy treatment approach is similar to that for ovarian serous carcinoma.

Keywords
fallopian tube cancer

Supplementary material
http://sites.altilab.com/files/159/abstracts/histological-pictures.docx,
http://sites.altilab.com/files/159/abstracts/references.docx

Extended VTE prophylaxis in obese patients who underwent robotic surgery for endometrial cancer

Authors

David Schweer 1, Kristi Balavage 1, Semiramis Carbajal Mamani 2, Jacqueline Castagno 1, Joel Cardenas Goicoechea 1,

1. ObGyn, University of Florida, Gainesville, UNITED STATES
2. Medicine, University of Florida, Gainesville, UNITED STATES

Abstract ID: 3839

Introduction
Robotic surgery for gynecologic malignancy is associated with a lower rate of venous thromboembolism (VTE) than laparotomy. However, guidelines for extended-duration thromboprophylaxis (e.g. 4 weeks) following robotic surgery for gynecologic malignancy are unclear. Obese patients represent a particularly high-risk group for VTE, but prior studies regarding extended thromboprophylaxis after robotic surgery tend to focus on patients with a much lower average BMI. This study aimed to examine the role of extended post-operative thromboprophylaxis in obese patients (BMI>35 Kg/m2) who underwent robotic hysterectomy for endometrial cancer.

Methods
A retrospective chart review of robotic procedures for endometrial cancer performed at the University of Florida from January 2013 to April 2018 was conducted. The primary outcome was a VTE event (e.g. DVT or PE) within the post-operative period.

Results
97 robotic cases for endometrial cancer were included in the final analysis based on BMI >35 (median = 42.3 Kg/m2). 100% received pre-operative thromboprophylaxis with heparin or enoxaparin, and 100% used pneumatic compression devices. 41 patients (42.3%) received extended duration prophylaxis (range = 28-30 days). Three patients in the group that did not receive extended prophylaxis developed a VTE in the 30-day post-operative period (5.4%), versus 0% in the group that did receive extended prophylaxis (P=0.26).

Conclusion/Implications
In obese patients undergoing robotic surgery for endometrial cancer, extended duration thromboprophylaxis may not be necessary to decrease VTE. The low rate of VTE events in this study could possibly be attributed to the high rate of pre-operative pharmacologic and mechanical thromboprophylaxis.

ROBOTIC ASSISTED CYTOREDUCTIVE SURGERY AFTER NEO-ADJUVANT CHEMOTHERAPY IN THE ELDERLY: CASE CONTROL STUDY

Authors

Joel Cardenas Goicoechea 1, David Schweer 1, Semiramis Carbajal Mamani 2, Joseph Grajo 3, Jacqueline Castagno 1,

1. ObGyn, University of Florida, Gainesville, UNITED STATES
2. Medicine, University of Florida, Gainesville, UNITED STATES
3. Radiology, University of Florida, Gainesville, UNITED STATES

Abstract ID: 3840

Introduction
Minimally invasive surgery has become the new standard for endometrial cancer. It is less clear for ovarian cancer given the complexity of the disease. Mission trial demonstrated that interval minimally invasive surgery is safe and feasible for ovarian cancer. However, there is no randomized control trial. The purpose of the study is to assess the safety and feasibility of such complex surgery with the robotic platform. METHODS: IRB approval was obtained. Retrospective study from January 2016 to April, 2018. Inclusion criteria: Stage III-IV Ovarian cancer after neo-adjuvant chemotherapy. Exclusion criteria: Stage I-II ovarian cancer, Surgery upfront. Primary end points: peri-operative outcomes [Estimated blood loss (EBL), hospital stay, optimal cytoreduction, complications].

Results
Twelve cases met inclusion criteria, with six in each group. Age was 76 ± 8 and 70 ± 7-year-old in the robotic and laparotomy group, respectively. Both groups were similar in terms of age, body mass index, ASA score, Ca 125 level, Tumor histology, Stage, and chemotherapy treatment. Overall the peri-operative outcomes were similar in both groups (complications, Optimal cytoreduction, Hospital stay), but the estimated blood loss was significantly higher in the laparotomy group (242 +/- 150 ml. vs. 74 +/-51 ml, $p < 0.05$). Follow up was 35 ± 17 weeks and 26 ± 15 weeks for laparotomy and robotic group respectively. Three cases recurred in the laparotomy group and 2 in the robotic group.

Conclusion
Robotic assisted surgery appears safe and feasible with similar operative outcomes as standard laparotomy. Robotic surgery is associated with lower blood loss.

Keywords
Ovarian cancer, robotic surgery, interval cytoreductive surgery

Gynaecological presentation of systemic malignancies

Authors

Swarnabindu Banerjee 1,

1. Medical oncology, Medical college kolkata india, Kolkata, INDIA

Abstract ID: 3844

Introduction
Round Cell Tumours more so haematolymphoid malignancies presenting with gynaecological symptoms like menorrhagia is not infrequent often those are a component of symptom complex which have a clue towards the eitology. But Round Cell Tumours presenting solely as structural lesions of female genital tract are really uncommon. Here I would depict a series of 10 cases which were treated in the department of Medical Oncology Medical College Kolkata, India between 2014 June to 2017 June.

Material & Methods
Cases were selected from outpatient, indoor and day care records. CT scan of (Thorax +Abdomen + Pelvis) were done in all cases. The diagnosis was established either by image guided biopsy or by laparotomy and subsequently by histopathology and Immunohistochemistry. Epidemiological data including age, type of malignancy, sites of involvement, method of diagnosis, chemotherapeutic drugs, duration of therapy, grade III/IV adverse effects of therapy, and outcome were recorded. Number of cases were too small for any statistical analysis hence only descriptive statistics has been used here.

Results
Number of cases =10. Age range = 5yrs-45yrs.Median age=25 yrs. Median follow up=3.5 yrs. Median duration of symptoms=3mons.Symptoms were pain abdomen in 9 cases abdominal distension in 4 cases, fever in 1case, incidental lump in abdomen detected by mother in 1 case. Sites of involvement were tubes in 9 cases, pelvic and retroperitoneal lympadenopathy in 8 cases, kidney in 1 case, ascites in 1 case, omental thickening in 1case, pleural effusion in 1 case. The diagnosis was established by CT guided core biopsy from adnexal mass in 1 case, retroperitoneal lymph node in 1 case, immunophenotyping of ascitic fluid in 1 case, immunophenotyping of bone marrow in 1 case, rest by laparotomy. The diagnoses were Pre-B ALL in 1 case, ALCL in 1 case, paracervical Ewings Sarcoma in 1 case, ovarian Ewings Sarcoma in 1 case, Burkitts Lymphoma in 3 cases, DLBCL in 2 cases, high grade lymphoma Burkitts like in 1 case. The median latency from symptom onset to start of treatment was 1.5 months. The treatment was by multiagent noncrossresistant chemotherapy according to existing guidelines.1 case of Burkitts Lymphoma and 1 case of DLBCL suffered from toxic death on treatment. Both had an onset of treatment gap from symptom onset of 3 months. Rest are alive till date.

Conclusion
The malignancies described above fall under the category of Round Cell Tumour which are by and large curable malignancies even at advanced stages. These malignancies should be suspected when the adnexal involvement is there with lymphnodal involvement with absence of ascites or omental caking. Immunohistochemistry to be done in every such case and also in cases of poorly differentiated cancer. In cases of diagnostic dilemma early laparotomy should be considered since delay in treatment increases the chance of toxic death.

Keywords
round cell tumours gynacological presentation

Supplementary material
http://sites.altilab.com/files/159/abstracts/gynaecological-presentation-of-systemic-malignancies-new-microsoft-word-document-2.doc, http://sites.altilab.com/

Triple synchronous ovarian carcinomas: an unlikely association of serous carcinoma with large cell neuroendocrine carcinoma and granulosa cell tumor

Authors

Katherine Cochrane 1, Amila Orucevic 1, Kristopher Kimball 2,

1. Pathology, University of Tennessee Graduate School of Medicine, Knoxville, Knoxville, UNITED STATES
2. Obstetrics and Gynecology, University of Tennessee Graduate School of Medicine, Knoxville, Knoxville, UNITED STATES

Abstract ID: 3845

Introduction
Large cell neuroendocrine carcinoma (LCNEC) of the ovary is a rare tumor most often associated with ovarian surface epithelial tumor such as mucinous, or less commonly endometrioid tumor. Its association with serous carcinoma has been reported in only three cases in the literature. Association of granulosa cell tumor with serous carcinoma is even rarer, with two published cases.

Method
We report the case of a 55-year old woman with a longstanding history of rheumatoid arthritis who presented to the emergency department with abdominal pain, early satiety and an unintentional weight loss of 32 kilograms over the previous year. Family history was significant for three maternal aunts with breast carcinoma, and one maternal aunt with breast and ovarian carcinoma, all diagnosed in their fifties. Imaging showed bilateral ovarian masses with elevated CA-125. Surgery revealed extensive metastatic disease resulting in suboptimal tumor debulking.

Results
Pathologic examination revealed three synchronous ovarian primary tumors. The tumors were morphologically and immunophenotypically compatible with serous carcinoma bilaterally and associated with LCNEC in one ovary and granulosa cell tumor in the contralateral ovary. Despite her family history, the patient declined genetic testing. She underwent six cycles of cisplatin and etoposide chemotherapy, and imaging six months post surgery showed no evidence of recurrent or metastatic disease. The patient declined further maintenance treatment and is doing well eight months post-surgery.

Conclusion
To the best of our knowledge, this case is the first report of triple synchronous ovarian carcinomas in the same patient, composed of serous carcinoma, LCNEC and granulosa cell tumor. LCNEC of the ovary is considered to be highly aggressive and its presence in an otherwise usual type epithelial tumor is likely to have a negative prognostic impact. Follow-up of our patient may shed light on the natural course of this unusual combination of aggressive carcinomas, given the patient’s choice not to pursue further treatment.

Keywords
ovary, neuroendocrine carcinoma, serous carcinoma, granulosa cell tumor, synchronous

Therapeutic opportunities in mucinous ovarian carcinoma

Authors

Kylie Gorringe 1, Ian Campbell 2, Clare Scott 3, Prue Allan 4, Dane Cheasley 5, Matthew Wakefield 3, Yoland Antill 6,

1. Research, Peter MacCallum Cancer Centre, Melbourne, AUSTRALIA
2. Researcg, Peter MacCallum Cancer Centre, Melbourne, AUSTRALIA
3. Walter and Eliza Hall Institute, Melbourne, AUSTRALIA
4. Pathology, Peter MacCallum Cancer Centre, Melbourne, AUSTRALIA
5. Researcg, Peter MacCallum Cancer Centre, Melbourne, ARUBA
6. Cabrini Hospital, Melbourne, AUSTRALIA

Abstract ID: 3850

Introduction and Objectives
Mucinous ovarian carcinoma (MOC) is a rare and highly varied subtype of epithelial ovarian cancer, with poor response to ovarian chemotherapies. The GAMuT study is an international effort to understand molecular drivers of this rare tumor with the aim of identifying novel therapeutic options.

Methods
We reviewed 328 cases of MOC (Australia/Canada/US/UK): 120 had suitable frozen tissue. We performed RNAseq (n=67), exome sequencing (n=61), SNP arrays (n=67) and whole genome sequencing (WGS) (n=5) on MOC and precursor lesions. A subset of ~500 genes was further evaluated in a targeted sequencing analysis using DNA extracted from formalin-fixed tissue, including 129 MOC, 23 borderline mucinous tumours (non-invasive) and 23 extra-ovarian mucinous metastases. Existing or new immunohistochemistry data was collected for CK7, CK20, ER, PAX8, p53 and HER2 (n=162-256).
Copy number data generated by sequencing or SNP arrays were evaluated for a homologous recombination deficiency (HRD) score (Marquard et al., 2015). Mismatch repair deficiency was determined by the number of mutations, the presence of a mutational signature or mismatch repair and the presence of an inactivating mutation in one of the mismatch repair genes. HER2 status was determined from copy number data or immunohistochemistry.

Results
We evaluated the genomic and expression data for potential therapeutic options (Table 1). We identified several events that could suggest an existing targeted therapy, including ERBB2 amplification (26%), ERBB3 mutation (4%) and BRAF mutation (9%). Eleven percent were ER positive. MOC could be included in clinical trials for novel agents currently being investigated for genetic events such as TP53 missense mutation (46%), RNF43 mutation (12%), PIK3CA mutation (8%) and KRAS/NRAS mutations (66%). Other frequent events that are not yet targetable include CDKN2A inactivation (57%), ARID1A mutation (9%) and TP53 inactivating mutations (15%). Therapies exploiting homologous recombination deficiency are unlikely to be useful in MOC, as only 1.5% had an HRD score of more than 50. Mismatch repair deficiency was very rare (<1%).

Discussion/Conclusion
MOC is genetically diverse and should be assessed for targetable mutations which may provide novel therapeutic options. Treatment with platinum-based chemotherapy or PARP-inhibitors are unlikely to be effective in the majority of MOC. It is unclear whether immune checkpoint inhibitors would be of use.

Supplementary material
http://sites.altilab.com/files/159/abstracts/esgo-2018-gorringe-table.pdf,

http://sites.altilab.com/

Impact of the delay and the sequence of adjuvant therapies on outcomes in endometrial carcinoma: a multicentric retrospective study.

Authors

Mathias Neron 1, Pierre-Emmanuel Colombo 1, Simon Thezenas 2, Christine Kerr 3, Eric Lambaudie 4, Michel Fabbro 5,

1. Surgical Oncology, Institut du Cancer de Montpellier, Montpellier, FRANCE
2. Biostatistics, Institut du Cancer de Montpellier, Montpellier, FRANCE
3. Radiotherapy, Institut du Cancer de Montpellier, Montpellier, FRANCE
4. Surgical Oncology, Institut Paoli-Calmettes, Marseille, FRANCE
5. Clinical Oncology, Institut du Cancer de Montpellier, Montpellier, FRANCE

Abstract ID: 3853

Introduction
Adjuvant treatments are an important point in the management of endometrial cancer. They are mainly resumed by radiotherapy and/or brachytherapy, but adjuvant chemotherapy is sometimes proposed in high-risk patients (ESMO-ESGO-ESTRO Consensus 2015). Delay in starting adjuvant therapies are well an important topic. There exists some publications on treatment delay and breast cancer, ovarian cancer, but there is few data concerning endometrial carcinoma.
The objectives of this study was to found impact of the delay of radiation therapy, the order of treatment in case of adjuvant chemotherapy and radiotherapy, on local and distant recurrence rates.

Patients and Methods
We conducted a retrospective review of all cases of endometrial carcinoma in two French cancer centers between January 1995 and January 2016. Inclusion criteria were women with endometrial cancer, treated initially at the cancer center (surgery or discussion at the multidisciplinary meeting at the cancer center).
The end-point was local recurrence-free survival (LRFS), metastatic free survival (MFS) and overall survival (OS) defined as the time from surgery to local event, metastatic event and death respectively.
The delay of radiation therapy was the time from surgery to the first day of radiotherapy or brachytherapy. The patients receiving neoadjuvant treatment or adjuvant chemotherapy were excluded from the delay analysis.
The patients receiving adjuvant chemotherapy were clustered in 3 groups: chemotherapy first, radiotherapy first and radiochemotherapy.
This study was approved by local ethic committee.
We reported here preliminary results with only univariate analysis.

Results
714 patients were included. 489 cases were discussed in multidisciplinary meeting, and the non-compliance rate with the meeting's recommendations was 13.7%.
Non-compliance was statistically associated with poor OS ($p<0.001$).
287 received radiotherapy or brachytherapy with available data and were included in the analysis concerning treatment delay. The median delay of radiotherapy was 8 weeks.
Robotic surgery, center of treatment and endometrioïd adenocarcinoma were significantly associated with shorter delay of radiation therapy treatment. The practice of lomboaortic lymphadenectomy was associated with a supplementary delay of 3 weeks ($p<0.0001$).
There was no significant link but a trend between the delay and overall survival (continuous variable, HR=1.05, $p=0.057$). No difference on LRFS, MFS and OS were found after regrouping patients using cut-off values of 6w, 8w and 9w.
Concerning treatment sequence, the majority of patients received chemotherapy first (n=28), then radiochemotherapy (=26) and only six received radiotherapy first. No

difference on outcomes was found between these groups ($p>0.05$).

Conclusion
Our study emphasizes the impact of multidisciplinary meeting on outcomes in endometrial cancer patients. Delay and sequence of adjuvant therapies seems not to have a strong prognostic impact.

Keywords
Endometrial cancer, radiation therapy, delay, sequence, adjuvant therapies

Genomic and functional analysis of Gynecological CarcinoSarcoma

Authors

Puisieux Alain 1, Anne-Sophie Sertier 2, Isabelle Treilleux 3, Sandrine Boyault 4, Anthony Ferrari 2, Mojgan Devouassoux-Shisheboran 5, Janice Kielbassa 2, Laurie Tonon 2, Vincent Le Texier 2, Emilie Thomas 2, Anne-Pierre Morel 1, Roxane Pommier 1, Amandine Charreton 6, Anne Floquet 7, Florence Joly 8, Dominique Berton-Rigaud 9, Gwenaël Ferron 10, Laurent Arnould 11, Sabrina Croce 12, Guillaume Bataillon 13, Pierre Saintigny 14, Eliane Mery-Lamarche 15, Christrine Sagan 16, Ivo Gut 17, Fabien Calvo 18, Alain Viari 19, Isabelle Ray-Coquard 14,

1. INSERM 1052, CNRS 5286, CRCL, Lyon, FRANCE
2. Bioinformatic platform, Synergie Lyon Cancer, Lyon, FRANCE
3. Pathology, Centre Léon Bérard, Lyon, FRANCE
4. Translational Research and Innovation, Centre Léon Bérard, Lyon, FRANCE
5. Pathology, Croix-Rousse University Hospital, Lyon, FRANCE
6. Clinical research, Centre Léon Bérard, Lyon, FRANCE
7. Oncologie médicale, Institut Bergonié, Bordeaux, FRANCE
8. Medical oncology, Centre François Baclesse, Caen, FRANCE
9. Medical Oncology, ICO, centre René-Gauducheau, Saint-Herblain, FRANCE
10. Medical Oncology, CLCC, institut Claudius-Regaud, Toulouse, FRANCE
11. Pathology, Centre JF Leclerc, Dijon, FRANCE
12. Biopathology, Institut Bergonié, Bordeaux, FRANCE
13. Pathology, Institut Curie, Parie, FRANCE
14. Medicine, Centre Léon Bérard, Lyon, FRANCE
15. Pathology, Institut Universitaire du Cancer Toulouse, Toulouse, FRANCE
16. Pathology, Institut de Cancérologie de l'Ouest (site René Gauducheau), Nantes, SPAIN
17. Center for Genomic Regulation (CRG, CNAG-CRG, Barcelona, FRANCE
18. Cancer Core Europe, Institut Gustave Roussy, Villejuif, FRANCE
19. Bioinformatic Platform, INRIA, Lyon, FRANCE

Abstract ID: 3856

Introduction
Gynecologic carcinosarcomas (GCS) are histologically defined as biphasic neoplasms composed of an intimate admixture of carcinomatous epithelial and sarcomatous malignant components. Although these tumors represent a small fraction of newly diagnosed uterine or ovarian cancers, they disproportionately contribute to the population of patients recurring and dying from disease. Due to their rarity and to their histological complexity, genetic and functional studies on GCS are scarce and the intimate mechanisms of initiation and development of these highly aggressive and heterogeneous neoplasms remain largely unknown.

Material and Methods
A collection of 18 GCS, including 13 endometrial GCS and 5 ovarian GCS, was established. Two distinct regions of each tumor were dissected and whole genome sequencing, RNA sequencing and methylation array profiling were performed to determine the genomic and DNA methylome landscapes of GCS.

Results
Two GCS were hyper-mutated tumors (mean SNVs = 37,447) with a paucity of structural rearrangements (mean SVs = 18). These two tumors showed a hypermethylation of the MLH1 promoter, one of the two exhibited a frameshift PMS2 mutation and analysis of mutational signatures identified a signature associated with defective DNA mismatch repair (signature 6). All other GCS exhibited a signature associated with failure of DNA double-strand break-repair by homologous recombination (signature 3) and an APOBEC

signature (signature 13). Twelve of these tumors were characterized by a high number of structural variants, indicating the onset of genomic instability (mean SV=281; SNV = 9,122), whereas 4 GCS showed a moderate number of structural abnormalities (mean SV=62; SNV = 4,452). The most prominent mutations in GCS were TP53 mutations (94% of tumors), mutations affecting the phosphatidylinositol 3-kinase (PI3K) pathway genes (83%; PTEN, 44%; PIK3CA, 33%; PIK3R1, 17%) and mutations affecting chromatin remodeling genes (78%; including SMARCA4, 28%; DNMT3B, 22%; KMT2B, 22%; KMT2C, 22%; NSD2, 17%; HDAC2, 17%; KMT2E, 11%; ARID1A, 11%). Overall, the co-occurrence of these alterations (TP53 mutations, PI3K alterations and mutations affecting epigenetic modifiers) was found in 72% of tumors (13 out of 18), and 9 tumors showed the three events in the two studied regions. Finally, the evolutionary histories of GCS were evaluated in 5 tumors in which pure carcinomatous and sarcomatous elements were isolated by macrodissection. This analysis demonstrated that these elements shared many somatic mutations, establishing unambiguously the common genetic origin of these malignancies, with sarcomatous elements showing EMT features. The finding that roots mutations in GCS are also frequent in gynecological carcinomas strongly supports an epithelial origin of GCS with a progressive evolution relying upon a transdifferentiation process. This dynamic notion implies that carcinosarcomas are the end result of an evolutionary process and that early forms of GCS may be histologically classified as carcinomas.

Phase II study of chemoradiotherapy followed by consolidation chemotherapy using paclitaxel and carboplatin in FIGO stage IIIB/IVA cervical cancer patients

Authors

Yuri Matsumoto 1, Seiji Mabuchi 1, Naoko Komura 1, Eriko Yokoi 1, Kotaro Shimura 1, Mahiru Kawano 1, Tadashi Kimura 1,

1. Obstetrics and gynecology, Osaka University, Osaka, JAPAN

Abstract ID: 3857

Introduction
To improve the prognosis, a phase II study was conducted to evaluate the efficacy and safety of paclitaxel plus carboplatin (TC)-based concurrent chemoradiotherapy (CCRT) followed by consolidation chemotherapy in patients with FIGO stage IIIB/IVA cervical cancer.

Patients and Methods
Patients with newly diagnosed FIGO stage IIIB/IVA cervical cancer patients were eligible for this study. The patients were treated with pelvic external beam radiotherapy plus intracavitary brachytherapy and concurrent weekly carboplatin (AUC: 2) and paclitaxel (35mg/m2) (TC-based CCRT). Three cycles of consolidation chemotherapy involving carboplatin (AUC: 5) and paclitaxel (175mg/m2) were administered after TC-based CCRT. The primary endpoint of this study was the 3-year progression-free survival (PFS) rate and the secondary endpoints were 3-year overall survival (OS) rate. Survival was calculated using the Kaplan-Meier methods and compared using the log-rank test.

Results
Thirty-two patients were enrolled and treated. Overall, the treatment was well tolerated, and 23 patients (71.2%) completed the planned TC-based CCRT. The most frequently observed acute grade 3/4 hematological toxicities were leukopenia and neutropenia, and diarrhea was the most common acute grade 3/4 non-hematological toxicity. After a median follow-up period of 36 months, 10 patients (31.3%) had developed recurrent disease. The patients' estimated 3-year progression-free survival (PFS) and overall survival (OS) rates were 68% and 88%. In comparisons with historical control groups, TC-based CCRT followed by TC-based consolidation chemotherapy was found to be significantly superior to CCRT involving a single platinum agent in terms of OS ($p<0.05$).

Conclusion
In women with FIGO stage IIIB/IVA cervical cancer, pelvic TC-based CCRT followed by TC-based consolidation chemotherapy is feasible and highly effective. Future randomized trials are needed to verify the efficacy of this regimen.

Keywords
TC-based CCRT, cervical cancer, phase II study

Challenges in management of neuroendocrine cervical cancer during pregnancy

Authors

Gil-Ibañez Blanca 1, Rgeiroe Purificación 2, Llurba Elisa 3, Fariñas-madrid Lorena 4, Garcia Angel 5, Diaz-Feijoo Berta 6,

1. ICGON, Hospital CLINIC Barcelona, Barcelona, SPAIN
2. Gynecology, Hospital General Hospitalet, Barcelona, SPAIN
3. Obstetrics, Sant Pau University Hospital, Barcelona, SPAIN
4. Oncology, Vall d'Hebron University Hospital, Barcelona, SPAIN
5. Pathology, Hospital Universitario Vall Hebron, Barcelona, SPAIN
6. Gynecology, Hospital Universitario Vall Hebron, Barcelona, SPAIN

Abstract ID: 3860

Introduction
to report a multidisciplinary management of neuroendocrine cervical cáncer diagnosed during second trimester of gestation. A pregnancy-preserving case.

Materials and Methods
A 34-year-old woman, was referred to our center with a neuroendocrine carcinoma of the cervix clinical FIGO stage IIA1 at 21 weeks of gestation. Legal interruption of the pregnancy was excluded due to religious beliefs. The patient underwent neoadjuvant Chemotherapy (NACT) with 3 cycles of cisplatin (CDDP 50mg/m2) and etoposide (VP 16 100mg/m2) every 3 weeks without relevant toxicity and good fetal development. At 31.4 w, the patient underwent radical hysterectomy with nerve sparing (type C1) and bilateral annexectomy and pelvic and inframesenteric para-aortic linfadenectomy concomitantly to caesarean section. The newborn was born without complications and morphological malformations. There were no intraoperative nor postoperative complications. She completed treatment with chemoradiation and is free of disease at 32 months follow up.

Conclusion
With the rising trend of delaying childbearing, cervical cancer and gestation is an increasing problem in our clinical practice. A multidisciplinary approach between Obstetrics and Gynecological Oncology groups is in these cases crucial in order to optimize maternal treatment and fetal protection without adversely affecting the prognosis of cervical cancer.

Keywords
cervical cancer in pregnancy, neuroendocrine carcinoma, radical hysterectomy post caesarean section, neoadjuvant chemotherapy

Supplementary material
http://sites.altilab.com/files/159/abstracts/figure-1.jpg,
http://sites.altilab.com/

Recurrent PPP2R1A mutations in type-II endometrial cancers: oncogenic mechanisms and therapeutic options

Authors

Michiel Remmerie 1, Dorien Haesen 1, Michael Ohlmeyer 3, Veerle Janssens 1,

1. Cellular and molecular medicine, KU Leuven, Leuven, BELGIUM
2. Cellular and molecular medicine, KU leuven, Leuven, BELGIUM
3. Icahn school of medicine, New York, UNITED STATES

Abstract ID: 3866

Introduction
Type-II, serous cancers account for only 20% of endometrial carcinomas (EC), but are responsible for >50% of EC-associated casualties, due to their aggressive nature. Recently, several studies have revealed distinct molecular profiles for type-I and type-II ECs, indicating a different pathogenesis. Nevertheless, all ECs are still treated with the same standard therapies. The ineffectiveness of these treatments, particularly for type-II EC, emphasizes the need for novel predictive biomarkers and improved (targeted) therapies.
PPP2R1A is mutated at high frequency, specifically in type-II EC (20-40% of cases), although the clinical relevance of this observation is currently unclear. PPP2R1A encodes the Aα subunit of protein phosphatase 2A (PP2A), a Ser/Thr phosphatase with suspected tumor suppressive functions. Here, we present the impact of two of the most recurrent type-II EC-associated Aα mutants, P179R and S256F, on PP2A biochemistry, the oncogenic properties of EC cells, and the cellular response to targeted therapies.

Methodology
Mutants were generated by PCR-based methods, and cloned into different expression vectors. Effects of the mutations on the interaction with other PP2A subunits were tested in pulldown assays. Effects on PP2A activity were tested in in vitro phosphatase assays. For functional assays, both mutants were stably expressed in HEC-1-A cells using a lentiviral approach. Anchorage-independent growth of these cells was assessed in soft agar, and their ability to form tumors was determined upon subcutaneous xenografting in nude mice. Signaling changes were identified by immunoblotting of cell lysates, using antibodies recognizing diverse (kinase) constituents of different oncogenic pathways. Finally, the effects of specific kinase inhibitors and of a new class of pharmacologic PP2A activators (SMAPs) on cell growth were monitored on the IncuCyte device.

Results
Both Aα mutants lost binding to PP2A regulatory B subunits, except to B56δ. However, PP2A-mutant Aα-B56δ complexes showed impaired catalytic activity, due to increased binding to the cellular PP2A inhibitor TIPRL1. This suggested a dominant-negative mechanism, by which Aα mutations specifically impair the function of tumor suppressive PP2A-B56δ complexes. Additional biochemical analyses of EC-associated mutants of PPP2R5D, encoding B56δ, revealed three loss-of-function variants (E290K, E429* and S433I) with significantly reduced Aα and C subunit binding, and significant loss of associated PP2A activity. Thus, PP2A-B56δ function in EC may also be affected by other mechanisms, besides PPP2R1A mutations. Ectopic expression of both Aα mutants in HEC-1-A cells resulted in increased colony growth in soft agar and increased tumor growth in mice – correlating with increased activation of PI3K/AKT/GSK-3β and mTOR/p70S6K pathways, while MEK/ERK signaling was impaired. Hence, we tested the therapeutic effects of kinase inhibitors specifically targeting the hyperactivated pathways, as well as the impact of different PP2A activators. We observed intriguing differential effects of these compounds on cell growth, depending on the PPP2R1A status of the cells.

Conclusion
We identified the oncogenic mechanisms of recurrent PPP2R1A mutants in type-II EC and revealed their potential as predictive markers for targeted therapies. Our data also underscored PPP2R5D mutation as another potential EC biomarker. The implementation of this knowledge in personalized treatments may significantly improve type-II EC patient outcome.

Keywords
PPP2R1A, serous endometrial carcinoma, molecular marker, targeted therapy, phosphatase

Prognosis of the patients treated for uterine carcinosarcoma in rural and urban areas.

Authors

Anna Danska Bidzinska 1, Anna Nasierowska - Guttmejer 2, Elwira Bakula Zalewska 3, Barbara Bidzinska 4, Magdalena Kowalewska 5, Mariusz Bidzinski 6,

1. 1. 2nd Department of Obstetrics and Gynecology, Medical University of Warsaw, Warsaw, POLAND
2. Department of Pathology the Faculty of Medicine and Health Sciences, Jan Kochanowski University Kielce, Kielce, POLAND
3. Department of Pathology, Maria Sklodowska Curie Institute, Warsaw, POLAND
4. Department of Statistics, European Medicines Agency, London, UNITED KINGDOM
5. Department of Molecular Biology, Maria Sklodowska Curie Institute, Warsaw, POLAND
6. Department of Gynecological Oncology, Maria Sklodowska - Curie InstituteSklodowska Curie Institute, Warsaw, POLAND

Abstract ID: 3868

Introduction
Uterine carcinosarcoma are rare tumors that account for less than 5% of all uterine malignancies. Epidemiological registry has shown that incidence and mortality of uterine cancer in urban area is higher than in rural regions. The aim of this study was to determine progression free survival and overall survival for residents of rural and urban areas who suffered from uterine carcinosarcoma.

Materials and methods
Material for analysis was 51 women treated between 2004 – 2010. All patients were treated by using surgery and adjuvant method (41 chemotherapy and 10 radiotherapy). Standard chemotherapy regimen given was Paclitaxel in the dose of 175 mg/m2 and Carboplatin AUC 6. Most of the patients -39, have received 6 cycles of chemotherapy. In two cases the therapy was withdrawn after 4 cycles due to incurable toxicity grade 3 or 4. Radiotherapy consisted of 50,4 Gy as external beam pelvic radiation therapy once a day, 5 days a week and HDR brachytherapy at dose of 22,5 Gy. This method was used in patients treated between 2004 and 2007. No patients were out of observation. The mean time of follow up was 235 weeks (149 – 435 weeks).

Results
Twenty-three women were rural citizen and 28 have been lived in urban area. No differences in some clinical variables in analyzed groups were observed.
Strong correlation in Pearson test was observed between tumor size and lymph node metastasis. Tumor diameter more than 4,5 cm is correlated with high number of node metastases (p=0,015). There were no any differences in progression free survival and overall survival in both groups.

Conclusion
No statistically significant difference in overall survival and progression-free survival make us draw conclusions that uterine carcinosarcoma patients from urban and rural areas have health system that is available and well-functioning. Most significant prognostic factor in carcinosarcoma was nodal status.

Supplementary material
http://sites.altilab.com/files/159/abstracts/figure-1.docx,
http://sites.altilab.com/files/159/abstracts/fifure-2.docx

Old age as a poor prognostic factor in epithelial ovarian cancer: How old is the aged?

Author

YOUJEAN CHANG 1,

1. Departments of Obstetrics and Gynecology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul 06351, KOREA, REPUBLIC OF

Abstract ID: 3869

Objective
Elderly is one of the poor prognostic factors in epithelial ovarian cancer (EOC), but it is not known what is the optimal cut-off of the elderly. This study was to identify the age cut-off as a negative prognostic factor in EOC.

Materials and Methods
Hazard ratio (HR) with p-value was calculated using all possible age cut-offs with stage, histology and grade as co-variate in multivariate cox regression model. The trend of p-value and HR by age cut-off was further plotted in subgroup of histology and in TCGA dataset. In addition, the propensity score matching analysis using the identified cut-off of age was performed.

Results
Age cut-off of sixty-six was shown to be the most significant cut-off for defining old age with independent prognostic power (HR = 1.68; 95% CI, 1.21 to 2.33; p = 0.0017). Analysis of TCGA dataset also showed similar patterns. In survival analysis, patients ≥ 66 years had significantly worse overall survival compared with younger group (56.2 months vs. 87.4 months, p = 0.004), and TCGA cohort showed similar result. Even following propensity scored matching, OS significantly decreased in the elderly (55.8 months vs. 70.4 months, p value = 0.014).
Conclusion
Age of 66 can is the most significant cut-offs for the elderly in ovarian carcinoma, and can be used in the individualized therapies to come.

Keywords
age, elderly, epithelial ovarian cancer, prognosis, propensity scored matching analysis

Catch it Quick: An Audit of the PMB pathway in UHNM

Authors

Thompson Ashling 1, Gooch Laura 1,

1. O&G, UHNM, Stoke, UNITED KINGDOM

Abstract ID: 3870

Background
This audit was undertaken to determine the effectiveness and efficiency of the University Hospital of North Midlands (UHNM) post-menopausal bleeding (PMB) pathway in diagnosing endometrial cancer. The 2 week wait (2WW) PMB clinic at UHNM provides a service to comply with NICE guidance. UHNM trust guidance advises on how to investigate and manage each case based on endometrial thickness, use of Tamoxifen, USS findings and recurrent PMB.

Methods
Patient data was collected from 2WW referrals to UHNM gynaecology from June 2017 to August 2017. In this 3 month period, 115 patients attended a 2WW appointment. All clinic activities were recorded along with USS findings and referral for outpatient hysteroscopy (OPH). The data in this study was obtained from patient records through the intranet patient database and has been anonymised.
This data was analysed to ensure effectiveness of the UHNM PMB pathway by analysing each arm of the pathway. The efficacy of the pipelle biopsy and the relationship between Tamoxifen use and endometrial cancer was also explored. Results
There were 115 referrals, 7 of which were inappropriate as they had a previous hysterectomy. There were 17 pipelle biopsies were taken overall at PMB clinic; 13 diagnostic but 4 insufficient for analysis making this test on 76% accurate in detecting abnormalities.
41 of the 43 patients undergoing hysteroscopy had a pipelle at the time of hysteroscopy. Only 2 of these had insufficient sample for analysis. 5% pipelles in this cohort were insufficient.
Pipelle histology sent from clinic was always reported within 7 days and was therefore always confirmed prior to hysteroscopy reinforcing the importance of the pipelle in the pathway for early diagnosis.
Of the 43 patients sent for hysteroscopy – 14 patients breached the trusts 14 day target. The reasons for breach are broadly divided into patient factor n=4 (medical conditions causing delay/ patient choice) and service provision n=10 (no interpreter/ date provided outside guidelines).
5 patients were diagnosed with cancer through the PMB pathway- NICE guidance states that from GP referral to diagnosis the target is 62 days. 3 of the 5 cancer patients breached the 62 day wait; 1 due to patient choice, 1 due to delayed treatment decision, 1 due to medical co-morbidities affecting fitness for surgery.

Conclusions
Auditing against our PMB diagnostic pathway (as per ET measurements on TVS), we find that 13/27 women with ET5-8mm did not have pipelle in 2ww clinic and went straight to OPH. While compliant with PMB diagnostic pathway, 25/28 women with ET>=9mm went straight for OPH with EB in 2ww clinic. Clinic capacity limitations mean that currently we will not be able to achieve listing for OPH within 7 days of the initial 2ww clinic appointment and this requires new initiatives for example booking. Incidentally, histology is able to be reported within 7 days for pipelles sent from 2 ww clinic and changing the pathway to include pipelle as 1st line investigation even if ET >9mm would improve time to treatment target for patients diagnosed with cancer.

Keywords
PMB, Pipelle, Hysteroscopy, Endometrial cancer

Supplementary material
http://sites.altilab.com/files/159/abstracts/audit-of-pmb-clinic-referrals-june-2017.pptx,
http://sites.altilab.com/

Management of borderline ovarian tumors in women younger than 45 years

Authors

Audrey Chevrot 1,

1. 92210, Institut Curie - Saint Cloud, Saint Cloud, FRANCE

Abstract ID: 3873

One third of borderline ovarian tumors (BOT) occurs in patients under 40 years old. The number of women with BOT who also wish to preserve their fertility will increase. Surgical management of these women has become a significant concern. ArcagyGineco is a group created in order to help in improving the management of patients suffering from gynecological cancers by coordinating clinical trials. The group created the Observatory of Rare Malignant Gynecological Tumors (TMRG) in order to monitor the management of rare gynecological tumors in French expert centers. The main objective of this study is to describe the characteristics of patients less than 45 years suffering from BOT, their surgical management and their postoperative fertility according to data from the TMRG database. Our secondary objective was to analyze the relevance of data held in this database.

This study is a multicenter retrospective study combining data from the TMRG database and data from the medical files of the centers included in the study, complemented by an analysis by questionnaire for postoperative fertility. We have analyzed the percentage of data available in the database to identify the variables of interest and then have collected the missing data from patients' files or by using questionnaires.

We have collected data from 215 patients from 9 French centers who were managed from 1989 to 2016. The TMRG database was informative for histological data (histological type in 98%, and the age at time of surgery (100%). Data related to surgery were less exhaustive (type of initial surgery 46%) as well as data on the size of tumor (29%), the initial CA 125 level (17%) and the rate of restaging surgery (29%). The postoperative pregnancy rate was also poorly available (1% of the patients).

Among the 215 patients, 173 patients were included while 42 were excluded because of data missingness. One hundred and thirty patients (75.1%) underwent fertility conservative treatment and 43 (24.9%) a non-conservative treatment. Patients' age from the "conservative" group was significantly inferior (36.8 vs 30.9 years, $p<0.001$). The initial CA 125 level was inferior to the "non-conservative" group but it was not significant (89 IU/l vs 107 IU/l $p=0.6$). In the conservative treatment group, 55% of patients underwent a unilateral salpingo-oophorectomy, 33% a unilateral cystectomy, 6% a unilateral salpingo-oophorectomy and contralateral cystectomy and in 1% of cases a bilateral cystectomy. The recurrence rate was significantly higher in the conservative group (26% vs 5%, $p=0.04$). Eighty-one percent of nulliparous patients received conservative treatment versus 67% of patients who had already given birth ($p=0.08$). There was no difference between the two groups for mortality rate. We are awaiting the results regarding the fertility of patients who received conservative treatment.
The TMRG observatory allows a national and uniform management of BOT with the help of experts' advice. The analysis of this database reflects the French management for BOT

in women less than 45 years of age. Our study would provide better knowledge of postoperative fertility in these patients and the main criteria which impact this fertility.

Keywords
borderline ovarian tumors - fertility - management

GROWING TERATOMA SYNDROME IN AN UNUSUAL CASE OF AGGRESSIVE STAGE IA IMMATURE TERATOMA OF THE OVARY

Authors

Ariel Glickman 1, Blanca Gil-Ibañez 1, Jaume Pahisa 1, Pere Fusté 1, Marta Del Pino 1, Inmaculada Nicolás 1, Nuria Agustí 1, Nuria Carreras 1, Eduard Mensión 1, Aureli Torné 1,

1. Gynecologic Oncology Unit, Barcelona Clínic Hospital, Barcelona, SPAIN

Abstract ID: 3877

Introduction
Germ cell tumors (GCT) represent less than 3% of all ovarian malignancies. They occur predominantly at young ages. The immature ovarian teratoma is the third commonest of the GCT, accounting for less than 1% of ovarian cancer cases worldwide. Growing teratoma syndrome (GTS) is a clinical entity characterized by a rapidly enlarging benign tumor mass, that arises during or after adjuvant chemotherapy for malignant ovarian GCT in presence of normal tumor markers. Its incidence has been reported to be from 2.5% to 19% of immature teratomas. We report an unusual case of GTS in a patient previously treated for recurrent stage IA immature teratoma of the ovary.

Patients and results
A 32-year-old nulligravida woman underwent right laparoscopic salpingo-oophorectomy because of suspected teratoma. Preoperative transvaginal ultrasound had identified a 12 cm complex cystic ovarian mass, with thin wall, a central solid component of 7 cm in size and two septa. Computed tomography (CT) did not show carcinomatosis nor other signs of disseminated disease. Serum tumor markers were normal except from α-fetoprotein (AFP)=156ng/ml. Removal of specimen was performed within an endobag. Intraoperatory histological examination informed benign teratoma. Final pathology revealed the presence of isolated foci of neuroepithelial immature tissue in one low magnification field of only one histological preparation, prompting the diagnosis of grade-1 stage IA immature teratoma. The cytologic examination of peritoneal washing did not detect malignant cells. Tumor board decided to perform follow-up and this was agreed with the patient.
Three months after surgery the patient consulted again for abdominal pain. Transvaginal ultrasound revealed the presence of a 15 cm complex solid mass in the right adnexal fossa. CT described a vast 20cm pelvic mass, a 7 cm left iliac fossa tumor, two Douglas pouch implants (2 and 2.5 cm), one 1.5 cm subhepatic implant and a 2 cm right iliac fossa implant. Elevated serum tumor markers were: CA-125=250U/ml, CA-19.9=97U/ml, TAG-72=19.8U/ml and AFP=3054ng/ml). Optimal citorreductive open surgery was performed, removing the pelvic tumor, cecal appendix, greater omentum and implants in Douglas pouch, uterine serosa, left ovarian surface, pelvic peritoneum and sigmoid colon serosa. Final pathology revealed a grade-3 immature teratoma in all resected lesions. The patient underwent adjuvant chemotherapy postoperatively with cisplatin, etoposide, and bleomycin (BEP x 4 cycles).
Five months after surgery, a control CT scan was performed showing multiple 3 to 5 cm implants in the abdominal cavity. All tumor markers were normal. Another complete citorreduction that required a right hemicolectomy was achieved. Final pathology informed 39 implants, all of them presenting mature teratoma histology. Close follow-up was agreed.

Conclusion
Immature teratoma is an aggressive tumor that usually shows a good response to chemotherapy. Its aggressiveness remains on the proportion of tissue containing immature neural elements found. The occurrence of GTS should be bared in mind when dealing with immature teratoma. Surgical treatment with no residual disease is

fundamental and should be always attempted. Long-term close follow-up is always needed.

The Impact of Lymph node Metastases on Outcomes in Uterine Carcinosarcoma

Authors

Yin Kwan Jeannie Chik 1, Ka Man Cheung 1, Chung Hang James Chow 1, Wai Lim Carmen Leung 1, Kam Hung Wong 1, Roger Kai Cheong Ngan 1,

1. Clinical Oncology, Queen Elizabeth Hospital, Hong Kong, HONG KONG

Abstract ID: 3879

Objective
To determine the prognostic significance of number of lymph node (LN) metastases and lymph node ratio (LNR), defined as the ratio of number of positive lymph nodes to total number of lymph nodes sampled in patients with Uterine carcinosarcoma (UCS).

Method
We performed a retrospective review on patients diagnosed with UCS treated with total abdominal hysterectomy (+/- pelvic lymphadenectomy) with or without adjuvant treatment at Queen Elizabeth Hospital Hong Kong between 2003 to 2016. The optimal cut-off value for LNR was calculated by receiver operating characteristic (ROC) curves. Univariate and multivariate analysis were performed to confirm the predictive value of the chosen value and to identify additional prognostic factors on overall survival (OS) and relapse-free survival (RFS).

Results
A total of 52 patients were included, the median age were 62 (range 23-91). The median follow-up duration was 51.8 months. 22 (42.3%), 4 (7.7%), 18(34.6%), 8 (15.4%) patients had Stage I, II, III, IV disease respectively, with a 4-year OS of 57%, 100%, 46% and 15% respectively (p=0.006). Lymphadenectomy was performed in 32 (61.5%) patients. The median number of total LN sampled was 29 (range 4-54) and the median number of positive LN was 2 (range 1-11).
ROC curves showed that LNR correlates with OS and RFS (p=0.007 and 0.012 respectively). Those with LNR of <3% and>=3% had 4-year OS of 84.4% and 24.4% respectively (p=0.001), the 4-year RFS were 75% and 13.7% (p=0.016) respectively. For LN positive patients, those with >=3 LNs positive were associated with worse RFS (p=0.055). Each additional positive LN yielded 25% increase in relative risk of relapse. Univariate analysis showed that adjuvant RT improves both OS and RFS (p=0.017 and 0.03 respectively). Multivariate analysis showed that OS and RFS were consistently improved by lymphadenectomy [adjusted hazard ratio (aHR) 0.152, p=0.003 and aHR 0.173, p=0.001]. FIGO stage was associated with worse OS (p=0.009). Adjuvant RT was associated with improved RFS (HR 0.281, p=0.01)
Outcomes of different adjuvant treatments were analysed but significance of results were limited by the small sample size. For patients with stage III disease given adjuvant chemoradiation therapy (n=4), survival was excellent and all patients remained disease-free up to the date of this study (follow-up duration was 21.2-51.8 months).

Conclusion
The number of positive LN and LNR are useful in prognostic stratification in UCS patients with stage III-IVa disease and may allow risk stratification of patients for intensification of adjuvant treatment. Patient with stage III disease who received adjuvant chemotherapy and radiotherapy had excellent survival outcomes compared with historical cohort, suggesting the potential benefit of more aggressive treatment in this group of patients.

Supplementary material

http://sites.altilab.com/files/159/abstracts/ucs-graphs-.pdf,
http://sites.altilab.com/

Primary vulvar Ewing sarcoma / Peripheral primitive neuroectodermal tumor with pelvic lymph nodes metastasis: A case report

Authors

Alaa El Housheimi 1, Dalia Khalifeh 1, Muhieddine Seoud 1, Reem Abdallah 1,

1. Obstetrics and Gynecology, American University of Beirut Medical Center, Beirut, LEBANON

Abstract ID: 3880

Introduction
Ewing sarcoma and peripheral primitive neuroectodermal tumors (PNET) are a group of soft tissue tumors that generally affect the bones. Although they are known to be aggressive tumors, but they are higly chemosensitive. Extraosseous Ewing sarcoma / PNET has been reported in few cases, less than 30 of them are in the vulva.

Case Report
A 27 years old female, presented to us with a 6x4 cm right subcutaneous solid vulvar lesion fixed to the underlying planes, causing pain and discomfort. The lesion has developed over the last 4 months.
Multiple biopsies showed small round cell tumor, abundant necrosis, and absence of architecturally distinct growth patterns. Immunohistochemistry staining showed strong positivity for CD99 and vimentin, favoring the diagnosis of Ewing sarcoma / PNET.
MRI showed a 6 cm lesion in the right vulvar region extending deep and laterally, with close proximity to the muscles of the right lower extremity. Enlarged bilateral inguinal and right external iliac lymph nodes were also reported. PET/CT showed hypermetabolic enlarged inguinal lymph nodes bilaterally, and right pelvic lymph nodes, indicating a stage IVB disease.
After a multidisciplinary discussion, decision was taken to give neoadjuvant chemotherapy and decide on the extent of the surgery based on the response to chemotherapy and the residual disease volume afterwards.
The patient received 3 cycles of Vincristine, Adriamycin, Cyclophosphamide (VAC) alternating with Ifosfamide and Etoposide (IE). PET/CT was repeated after completion of treatment, and showed complete response to chemoherapy with no uptake in the inguinal or pelvic area. On clinical exam, there was a 2x1.5 cm residual tumor at the lower right vulva.
The patient underwent radical local excision of the right vulva with advancement flap. Residual tumor measured 1.6 cm and all margins were free of tumor, with the closest margin being the deep margin, 4 mm away from tumor. She then received 4 additional cycles of adjuvant chemotherapy (total of 7 cycles) and 30 sessions of external beam radiation therapy. She completed the full treatment 12 months after the initial diagnosis. The patient is currently alive without disease 15 months after the initial diagnosis.

Discussion
Vuvlar Ewing sarcoma / PNET has been rarely reported with less than 30 cases found in the literature, of which only 3 cases had presented with metastatic disease. Furthermore, no cases with metastasis to the pelvic lymph nodes were ever reported. Better prognosis was reported in pelvic cutaneous and superficial extraosseous ES / PENT as in our patient, in contrast with the deeper tumors. Due to the unclear treatment recommendations in vulvar ES, our treatment plan mirrored the one of skeletal ES / PNET.

Conclusion
ES / PNET are exceedingly rare in the female genitourinary tract; Nonetheless, they should be considered as part of the differential diagnosis in patients with vulvar lesions.

Accurate pathologic diagnosis and a multidisciplinary approach are of utmost importance, in order to provide early and appropriate treatment

Keywords
Ewing sarcoma, vuvlar malignancies, primitive neuroectodermal tumors

IMMATURE TERATOMA OF THE OVARY: A REPORT ON FOUR CASES

Authors

Mihaela Camelia Tirnovanu 1, Stefan Dragos Tirnovanu 2, Mihnea Oreste Andrei 2, Alexandra Iov 2, Vlad Gabriel Tirnovanu 3, Sebastian Pasat 4,

1. Obstetrics and Gynecology, University of Medicine and Pharmacy „Gr T Popa" I, Iasi, ROMANIA
2. General Medicine, University of Medicine and Pharmacy „Gr T Popa", I, ROMANIA
3. General Medicine, University of Medicine and Pharmacy „Gr T Popa", Iasi, ROMANIA
4. 1st Clinic of Obstetrics and Gynecology, Women Clinical Hospital „ Cuza Vod?", Iasi, ROMANIA

Abstract ID: 3884

Background
Malignant teratomas represents 3% of teratomas, 1% of ovarian cancers, and 20% of malignant ovarian germ cell tumors. Aim: The objective of our study was to evaluate cases with immature teratoma (IT) who underwent surgical treatment in our clinic. Methods: This was a retrospective analysis of 4 women who presented to 1st Clinic of Gynecology from 2006 to 2017. Patient's clinical presentation, operative and pathological details were estimated. Results: Three patients were 18 years old, one diagnosed at 6 months after vaginal delivery. Abdominal mass was the commonest clinical presentation. At the moment of diagnosis the tumor was exclusively unilateral, stage I and grade 3 tumors were found in all cases. Initial management was surgery. Each time unilateral salpingo-oophorectomy was done with omentectomy for staging. Macroscopically IT were large (20-25cm), encapsulated masses which have a prominent solid component. One woman was 25 years old and the diagnosis was established during pregnancy at 13 weeks of gestation by surgery. At 21 weeks she came with stage III and at 23 weeks of pregnancy the fetal death was noticed. After secondary debulking surgery of recurrence the patient died. Recurrence was present at 8 months and 2 years for other two patients. Conclusions: IT was always unilateral and the fertility preserving surgery was the first option. Chemotherapy must be considered for grade 3 patients because of recurrence's high risk. During pregnancy IT seems to be more aggressive.

Keywords
Immature teratoma, treatment, pregnancy

Relation Between The AMH, Estradiol(E2), CA125 and HE-4 Hormone Levels And The Endometrial Biopsy Results Of Patients With Abnormal Uterine Bleeding

Authors

Sinem Ayse Duru Coteli 1, Emine Nilay Bakir 2, Zelihan Gunnur Dikmens 2, Erdem Karabulut 3, Zafer Selcuk Tuncer 4,

1. Department of Obstetrics and Gynecology, Dr. Sami Ulus Maternity and Children Training and Research Hospital, Ankara, TURKEY
2. Department of Biochemistry, Hacettepe University, Ankara, TURKEY
3. Division of Biostatistics, Hacettepe University, Ankara, TURKEY
4. Department of Obstetrics and Gynecology, Hacettepe University, Ankara, TURKEY

Abstract ID: 3885

Introduction
Abnormal uterine bleeding (AUB) is the most frequent symptom for attendance to gynecology clinics. In a woman with AUB it is important to identify endometrial cancer and hyperplasia, biomarkers can be used for this purpose. In this prospective, clinical study we primarily aimed to evaluate the predictive values for anti-mullerian hormone (AMH), estradiol (E2), CA125 and HE-4 levels for endometrial malignancies in patients with AUB.

Materials and Methods
In this prospective study total number of two hundred patients presenting with AUB and whom endometrial sampling is done or patients attending with endometrial biopsy pathology reports to Hacettepe University Hospital between July 2017- December 2017 were included. Based on the histopathological findings of endometrial biopsies, the study participants were stratified as patients with benign pathologies (n=118, 59%), malignant & precancerous pathologies (n=63, 31.5%) and non-diagnostic pathologies (n=19, 9.5%). Patient serum values of the biomarkers were evaluated based on endometrial biopsy results and after this evaluation sub-group analysis was done with malignant & precancerous pathologies.

Results
The mean age of the patients was 49.3±37.7 years (range between 24-87 years). 122 of 200 patients (61%) were premenopausal and 78 of 200 patients (39%) were postmenopausal.
When all three groups of pathologies were included there was no significant difference in CA125 levels between all pathologies ($p=0.443$). The median AMH value was significantly higher with benign pathologies than other groups ($p<0.001$). The median HE4 value was significantly higher in patients with malignant & precancerous pathologies when compared with other groups ($p<0.001$). Also, the mean E2 value was significantly lower in patients with malignant & precancerous pathologies when compared with benign pathologies, but higher than non-diagnostic group ($p<0.001$). The ROMA median score was significantly higher in patients with malignant & precancerous pathologies ($p<0.001$) (Table-1).
When patients with malignant and precancerous pathologies were evaluated with each other there was no difference in the serum AMH levels ($p=0.131$), however serum HE4, Ca125, ROMA scores were high in malignancies ($p<0.05$) and E2 was high in precancerous pathologies ($p<0.05$).
In the sub-group analysis, it was seen that CA125, HE-4 and ROMA score were not able to predict malignancy in the premenopausal group. On the other hand, in the postmenopausal group HE-4 and ROMA score was able to predict malignancy but CA125 was not. For the postmenopausal period the predictive serum value for HE-4 was found to be >51 pmol/L with 79.5 % sensitivity and 80% specificity.

Conclusion

As a result, in patients presenting with AUB, the low serum values of AMH and E2, and the high serum values of HE-4 and ROMA scores can be used to predict malignancy and precancerous conditions. These markers have no superiority to each other foreseeing malignancy. Especially in postmenopausal patients HE-4 and ROMA score is more valuable. More research for new biomarkers is needed in premenopausal patients.

Keywords

Endometrial Cancer, Endometrial Hyperplasia, AMH, E2, CA125, HE-4, ROMA score

Supplementary material

http://sites.altilab.com/files/159/abstracts/table-1.pdf,
http://sites.altilab.com/

Clinicopathologic features of patients with endometriosis in endometriod and clear cell ovarian cancer: Same origin for different tumours?

Authors

Gallego Alejandro 1, Berjón Alberto 2, Garcia Maria Jose 3, Mendiola Marta 4, Brenes Jesús 5, Castelo Beatriz 1, Hernández Alicia 6, Hardisson David 2, Feliu Jaime 1, Redondo Andrés 1,

1. Medical Oncology, La Paz University Hospital, Madrid, SPAIN
2. Pathology, La Paz University Hospital, Madrid, SPAIN
3. _, _, Madrid, SPAIN
4. Traslational Oncology Lab, La Paz University Hospital, Madrid, SPAIN
5. Medical Oncology, Insular University Hospital of Gran Canaria, Madrid, SPAIN
6. Gynecology and Obstetrics, La Paz University Hospital, Madrid, SPAIN

Abstract ID: 3886

Introduction
Historically all women with a diagnosis of epithelial ovarian carcinoma (OC) were managed similarly, independently of the histological subtype. Nowadays we know that these ovarian carcinoma subtypes have heterogeneous histopathological, clinical and molecular features. However, endometrioid and clear cell carcinomas, despite being different, could have the same origin in endometriosis.

Objective
The study aims to analyse the clinicopathologic features and prognosis of the patients with endometrioid carcinoma (EC) and clear cell carcinoma (CCC) according to the presence of endometriosis and comparing with those tumours without diagnosis of endometriosis.

Methods and matherials
We conducted a retrospective observational study of 121 patients with endometrial and clear cell ovarian carcinoma, diagnosed and treated in La Paz University Hospital, from November 1992 until December 2013. An expert pathologist made the histopathological review, using the currently recommended inmunohistochemical algorithm (WT1, p53, Napsin A and PGR). After this review, 29 tumours initially classified as mixed tumours (with a major part of endometrioid or clear cell carcinoma) were excluded. The histological diagnosis of endometriosis was done after the surgery for endometriosis or after the tumour surgery.
Software SPSS ® 18 version was used for descriptive and statistical analysis.

Results
Median age at the time of diagnosis was 50.3 years, 52 in EC and 48.5 in CCC. 47.9% were CCC and 52.1% EC. 24.6% of patients with EC and 19.6% with CCC had family history of ovarian, colorectal or endometrial cancer in first or second degree relatives. 68.6% was diagnosed in early stages and 29.7% in advanced stages (39.6% in CCC and 20.6% EC). Synchronous endometrial cancer was diagnosed in 38.1% of EC and none CCC. 91.5% underwent primary surgery and 76.7% received chemotherapy (71.2% in EC and 93.5% in CCC), most of them 6 cycles of Carboplatin-Paclitaxel (74.1%). 10.7% had macroscopic residual disease after surgery, and 32.3% of patients relapsed, mainly as peritoneal carcinomatosis (46.1%). Progression free survival differences were found between EC and CCC, although there were no statistically significant (Figure 1).
59 patients had endometriosis, 26 with EC (44.1%) and 33 with CCC (55.9%). 46.9% of these patients were diagnosed in advanced stages and 15.9% with a synchronous endometrial cancer. 30.5% relapse (66.7% as peritoneal carcinomatosis). No changes in Ca125 marker were detected in patients with or without endometriosis and no differences

were found in PFS (Figure 2).

Conclusion

EC and CCC are thought to arise from transformed endometriosis, however only half of our patients were diagnosed of endometriosis, more frequently in CCC. There were no statistically significant differences in the features and prognosis regarding endometriosis. Molecular and genetic studies are needed to better understand the relation of endometriosis with EC and CCC.

Keywords

Clear cell ovarian cancer, endometrioid ovarian cancer, endometriosis

Supplementary material

http://sites.altilab.com/files/159/abstracts/figure-1.pdf,
http://sites.altilab.com/files/159/abstracts/figure-2.pdf

OVARIAN GRANULOSA CELL TUMORS: A RETROSPECTIVE STUDY OF 14 CASES

Authors

Mihaela Camelia Tirnovanu 1, Stefan Dragos Tirnovanu 2, Mihnea Oreste Andrei 3, Alexandra Iov 3, Vlad Gabriel Tirnovanu 3, Marina Bran 4, Sebastian Pasat 4,

1. Obstetrics and Gynecology, University of Medicine and Pharmacy „Gr T Popa", Iasi, ROMANIA
2. General Medicine, University of Medicine and Pharmacy „Gr T Popa", I, ROMANIA
3. General Medicine, University of Medicine and Pharmacy „Gr T Popa", Iasi, ROMANIA
4. 1st Clinic of Obstetrics and Gynecology, Women Clinical Hospital „ Cuza Vod?", Iasi, ROMANIA

Abstract ID: 3887

Background
Granulosa cell tumors (GCT) are malignancies with relative favorable prognosis. The objective of this study was to determine the clinical presentation, pathological characteristics, outcome and prognostic factors for patients with GCT. Methods: A retrospective analysis of 14 patients of GST of ovary from 2003 to 2017 was carried out. Clinical and pathological information, sonographic findings, and treatment were obtained from medical records. Results: The average age of the patients was 54 years. 12 patients were at menopause. The most common clinical manifestation at diagnosis was vaginal bleeding. 5 of them presented ascites and one hemoperitoneum. The mean tumor size was 15cm (range, 2-23cm). GCT was always unilateral. The primary treatment consisted of surgery in all patients, based on the age of the patient. At histopathologic evaluation tumors were of adult-type. All cases were in stage IA grade1. For the patients prognosis are important: the presence of Call-Exner bodies (favorable factor) – 3 cases, cellular atypia - 5 cases and mitotic index - 3 patients more than 5/10HPF. One case was associated to endometrial adenocarcinoma. Recurrence occurred for 2 cases, one after 2 years in pelvis and the other one after 10 years with lung metastases. Conclusions: The GCT is one of the rarest forms of ovarian cancer – 1.06% in our study. It presents in early stage. We must think at an ovarian tumor with estrogen activity, when we find it at a women with postmenopausal bleeding. Prolonged surveillance is mandatory because GCT tend to recur years after the initial diagnosis.

Keywords
Granulosa cell tumor, ovary, treatment, prognosis

Report of a rare case of carcinosarcoma Stage IV

Authors

Bermúdez Martinez Mayra Alejandra 1, Schams Martina 1, Hoffmann Thomas 1, Möbus Volker 1,

1. Department of Gynecology and Obstetrics, Klinikum Frankfurt Höchst, Frankfurt am Main, GERMANY

Abstract ID: 3888

A 46 year old Thai woman, GI/PI, was referred to our clinic with two weeks history of nocturnal pyrexia, moderate abdominal pain for 4 weeks, cough, vertigo and obstipation. An abdominal CT scan was performed and showed multiple mesenteric, retroperitoneal and intraperitoneal nodules and tumor masses distributed over the entire abdominal cavity and concentrated at the pelvic region.
In the meantime, blood results indicated severe bacterial sepsis and a positive influenza B blood test. Blood cultures were negative. Serum levels of CA125 and CA15-3 were increased.
Gastroscopy and colonoscopy were carried out without any findings. As laparoscopy revealed extensive peritoneal carcinomatosis, moderate ascites, Fitz-Hugh-Curtis syndrome and massive adhesions enable uterus exposure a representative specimen was taken and submitted for histological examination with the suspicion of genital tuberculosis. A QuantiFERON-TB Gold test was performed with a negative result.
An inconclusive histology showed features of chorioncarcinoma, which would not correlated to negative hCG levels and missing tumor cells in ascites. At that point, patient was deteriorating clinically with no improvement despite appropriated management. The patient underwent laparotomy with omentectomy tumordebulking and resection of disintegrating tumor masses at mesenterium and terminal ileum with ileostomy. A VAC dressing was applied and due to instability the patient was transferred to the intensive unit care.
Histologically, there was a biphasic neoplasm with poorly differentiated mixture of mostly epithelial and sarcomatoid elements with necrotic areas and polymorphonuclear cells. There was a strong suspicion of carcinosarcoma or chorioncarcinoma. Because of still inconclusive results the sample was send to further immunohistochemistry diagnostic to a reference pathology center.
The condition of the patient was continuously deteriorating. Despite care and regular change of VAC the abdominal pressure was increasing daily. The patient passed away four weeks after being admitted to the hospital despite all the treatment due to multiple organ failure.
After dead, the definitive histology revealed a mostly poorly differentiated spindle cell carcinoma with anaplastic components. It was presented the following immunohistochemistry findings: positive reaction for estrogen and progesterone receptors, p63, SAMARCA4 and SMARCB1; the p-53 immunoreactivity was negative such as the reactivity for desmin and caldesmon. These features were categorized with a high probability as a highly aggressive carcinosarcoma with extremely poor prognosis.

Discussion
Carcinosarcoma or malignant mixed Mullerian tumor is a bizarre gynecological tumor with diverse origin and histopathological characteristics with few reported cases in the literature. Because of its aggressive nature, it mostly presents distant metastasis at diagnosis. Its incidence of 2/100.000 and 5-years survival rate at stage I of 50% and at stage IV of 0%. The optimal management is controversial and required multidisciplinary approach which includes surgery, chemotherapy, radiotherapy and hormonal therapy.
In our case, we presented a rare case of a highly aggressive carcinosarcoma at Stage IV in a patient without risk factors and with unusual morphological and immunohistochemically features showing a predominant carcinomatous component with

a marked degree of anaplasia and a less proportion of poorly differentiated sarcomatous component. These unusual features may have hindered the properly diagnosis and treatment.

Keywords
Carcinosarcoma, malignant mixed Mullerian tumor, rare cancer

Pseudomyxoma Peritonei: A Case Report

Authors

Mary Grace Cheng 1,

1. Department of Obstetrics and Gynecoogy, FEU-NRMF Medical Center, Quezon City, PHILIPPINES

Abstract ID: 3896

Introduction
The most common borderline tumor of the ovary is the Mucinous type. It can either be primary ovarian or metastatic from GIT, thus surgical exploration is warranted. This is a case of a 74-year-old Gravida 10 Para 8 presented with abdominal enlargement and post menopausal bleeding. Imaging studies pointed to an Ovarian malignancy. Tumor markers CA-125 and CA-199 were both elevated. This is how our patient presented thus our objectives are to discuss the clinical presentation, use of diagnostic modalities, management approach, postoperative surveillance and prognosis factors in such cases.

Methods
Due to the presence of post-menopausal bleeding, endometrial curettage with frozen section was done revealing Leiomyosarcoma. Exploratory laparotomy findings revealed gelatinous material in the peritoneum with seeding into the omentum, ovaries and appendix. The uterus was adherent to the colon hence the surgical intervention done were BSO with frozen section of the ovary revealing
APMT; appendectomy and omentectomy instead of EHBSO.

Results
Final histopath result of the endometrial curetting revealed adenomatoid tumor. Due to the discrepancy, immunohistochemical staining with desmin and caldesmon were negative implicating absence of leiomyosarcoma. Final histopath results were consistent with DPAM. To determine the primary organ of origin, staining with CK20 was positive and CK7 was negative consistent with metastases from the GIT.

Discussion
Pseudomyxoma peritonei is an intraoperative clinical finding of mucus occupying the pelvo-abdominal cavity. This was present in our patient. Histopathologically, it has 2 variants. Our patient was signed out as the low grade type which involved the ovary and appendix. Given the involvement of the these organs, lead us to the question whether the ovary is the organ of origin or is it a metastasis. Primary mucinous ovarian tumor is commonly unilateral however our patient presented with bilateral masses. Immunohistochemical stains CK7 and CK20 confirmed that this is a metastasis from the gastrointestinal tract. Various literatures reported that tumors of the ovary and appendix have the similar histologic features. Because of this, claims has been made that the appendix is the primary site in DPAM. The symptomatology in this case is secondary to the progressive accumulation of mucinous fluid. Best explained by tumors originating from the appendix, which then spreads into the peritoneal space, bowels, ovaries and uterus via the fimbrial opening. Currently, the sugarbaker procedure is the recommended treatment. However in this case, cytoreduction is not possible hence chemotherapy is the next treatment of choice. Chemotherapy with FOLFOX regimen followed by cytoreductive surgery was contemplated. However, patient was lost to follow up. Currently, it has been 3 years from the time she underwent surgery. On inquiry, she is well with her quality of life restored.

Conclusion
Pseudomyxoma Peritonei is rare and difficult to diagnose pre-operatively due to its multi-organ involvement. Our patient has low-grade type which has better prognosis even with

incomplete treatment. Despite the low grade potential for malignancy and high survival rates, Cytoreductive surgery is still the recommended treatment. This is possibly due to the insufficient studies done in terms of management because of its rarity.

Keywords
Pseudomyxoma Peritonei, DPAM, APMT

Malignant Myoepithelioma of Vulva; How Rare is it?: Case Report

Authors

Fatema Alkhan 1, Emine Karabuk 2, M. Murat Naki 2, Mete Gungor 3, M. Faruk Kose 2,

1. Obstetrics and Gynecology, Salmaniya Medical Complex, Manama, BAHRAIN
2. Obstetrics and Gynecology, Acibadem University Atakent Hospital, Istanbul, TURKEY
3. Obstetrics and Gynecology, Acibadem Maslak Hospital, Istanbul, TURKEY

Abstract ID: 3897

Introduction
Malignant myoepethelial cells are rare cancer cells that commonly occur within the salivary glands. It rarely occurs in the vulva (1). These tumors are composed of epitheliod, plasmatoctoid, spindle-shaped, and clear cells with a characteristic of microscope and immunohistochemical appearance (2). The PubMed database was chosen for research, as it is the most widely used resource for medical literature. The following terms were used for myoepithelioma of the vulva and nine literatures were found.

Case
A 64-year-old woman came to our center for a second opinion after a biopsy result. She was complaining of a non-painful swelling of the left labia majora for six months. After that, she had excisional biopsy. The pathology results revealed Epitheliod Sarcoma. Therefore, the case was discussed in the Tumor Board Meeting and the decision was made for radical vulvectomy with bilateral inguinofemoral lymphadenectomy. We performed the needed surgery on the patient. The pathologist requested the original pathology specimens. The re-review of the original pathology slides showed the myoepithelioma of the vulva. The case was again discussed in the Tumor Board Meeting and recommended for an adjuvant radiotherapy.

Discussion
Malignant myoepithelioma of the vulva are rare tumors and need an expert pathologist. The Pathologist requested to review the first biopsy result that reported Epitheliod sarcoma and our surgery pathology results revealed myoepthelioma. Therefore, all available glass slides and pathology reports were re-reviewed. Immunohistochemically, the tumor cells were positive for these staining EMA, Actin (SMA), Pan-ck (5, 6, 8, 18), CD 34 and Calponin; whereas it was negative for GFAP and TLE 1. There were four mitosis figures per ten high-power field (HPF) and the Ki-69 index was 25%. Therefore, based on that, the final diagnosis was malignant myoepithelioma. The myoepithelioma can present as low or high-grade malignancy, and the grade is the one that determines the overall prognosis. Optimal treatment should comprise radical excision of the primary site, bilateral inguinal lymph node dissection and adjuvant radiotherapy (3).

Conclusion
An Expert pathologist is needed in this field due to the rarity of myoepitheloma. It would be more helpful if there was a bank for soft tissue sarcoma registration. So, sharing the experiences and reviewing the cases may help for better management and guidelines.

References
1. Meenakshi M, McCluggage W. G. Myoepithelial neoplasms involving the vulva and

vagina: report of 4 cases. Human Pathology 2009; 1747-1753
2. Kyriazi M. A, Carvounis E. E, Kitsou M, Arkadopoulos N, Nicolaidou E, Fotiou S, Smyrniotis V. Myoepithelial carcinoma of the vulva mimicking Bartholin gland abscess in a pregnant woman: case report and review of literature. International Journal of Gynecological Pathology 2010; 29-501-504
3. Fukunaga M. Myoepithelioma of the vulva. APMIS 2003; 111: 416-20

Keywords
Vulva, Myoepithelioma, Rare

Menopause hormone therapy in women treated for rare ovarian tumors: Guidelines from the French national network dedicated to rare gynaecological cancer

Authors

Christine Rousset-Jablonski 1, Catherine Lhomme 2, Anne Floquet 3, Isabelle Treilleux 4, Fabrice Lecuru 5, Sebastien Gouy 2, Elsa Kalbacher 6, Catherine Genestie 2, Thibault De la Motte Rouge 7, Gwenaël Ferron 8, Mojgan Devouassoux 9, Jean-Emmanuel Kurtz 10, Moise Namer 11, Florence Joly 12, Eric Pujade-Lauraine 13, Michael Grynberg 14, Denis Querleu 3, Philippe Morice 2, Anne Gompel 15, Isabelle Ray-Coquard 16, Frederic Selle 17, Elodie Adda-Herzog 18, François Planchamp 3, Lise Selleret 19, Christophe Pomel 20, Emile Daraï 19, Nathalie Chabbert-Buffet 19, Patricia Pautier 2, Florence Tremollières 21, Frédéric Guyon 3, Roman Rouzier 22, Valérie Laurence 22, Nicolas Chopin 4, Cécile Faure-Conter 4, Enrica Bentivegna 2, Marie-Cécile Vacher-Lavenu 23,

1. Surgery, Leon Berard Cancer Center, LYON, FRANCE
2. Institut Gustave Roussy, Villejuif, FRANCE
3. Institut Bergonié, Bordeaux, FRANCE
4. Leon Berard Cancer Center, Lyon, FRANCE
5. Hopital Européen Georges Pompidou, Paris, FRANCE
6. CHU Besançon, Besançon, FRANCE
7. Centre Eugene Marquis, Rennes, FRANCE
8. CLCC Institut Claudius Regaud, Toulouse, FRANCE
9. Hospices Civls de Lyon, Lyon, FRANCE
10. CHU Strasbourg, Strasbourg, FRANCE
11. Recommandations pour la pratique clinique Nice Saint Paul, Nice Saint Paul, FRANCE
12. Centre François Baclesse, Caen, FRANCE
13. CHU Paris Centre - hopital Hotel DIeu, Paris, FRANCE
14. Hopital Antoine Beclere, Clamart, FRANCE
15. Hopital Cochin Port Royal, Paris, FRANCE
16. Centre Léon Bérard, Lyon, FRANCE
17. Centre Hospitalier Diaconesse Croix Saint SImon, Paris, FRANCE
18. Hopital Foch, Suresnes, FRANCE
19. Hopital Tenon, Paris, FRANCE
20. Centre Jean Perrin, Clermont Ferrand, FRANCE
21. Hopital Paule de Viguier, Toulouse, FRANCE
22. Institut Curie, Paris, FRANCE
23. Hopital Cochin, Paris, FRANCE

Abstract ID: 3899

Introduction
Indications and contraindications for menopause hormone therapy or hormone replacement therapy (HRT) after rare ovarian tumors are frequent issues in clinical

practice. A panel of experts from the French national network dedicated to rare gynaecological cancers, and of experts in reproductive medicine and gynaecology have worked on guidelines about menopause management and menopause hormone therapy in women treated for ovarian rare tumors.

Methods
A formalized consensus method was used, in the context of insufficient literature with strong level of evidence, and of contradictory data. A panel of 39 experts from different specialties (medical oncology, gynecological surgeons, medical gynecologists, specialists in reproductive medicine, endocrinologists, pathologists, pediatric oncologists) contributed to the preparation of the guidelines, following the DELPHI method. Statements were drafted after a systematic literature review, and then rated through two successive rounds. After these two round, a total of 13 statements finally obtained an acceptable degree of consensus and constituted the recommendations.

Results
Age at menopause, climacteric syndrome, cardiovascular risk, and bone mineral density are criteria taken into account to discuss an HRT prescription. An HRT can be prescribed after a mucinous borderline tumor, or after a serous borderline tumor without any histological high risk criteria. In contrast, in women previously treated for a high risk serous borderline tumor (micropapillary pattern, stromal microinvasion, peritoneal implants), prudence and individual benefit-risk balance evaluation before prescribing HRT has been recommended. In this case, the risk of invasive recurrence (low grade serous adenocarcinoma), potentially hormone-sensitive, is not negligible indeed. Germ Cell Tumors (GCTs) are considered as hormone-independent tumors, and there is no known impact of HRT on the risk of developing GCTs nor on their recurrence risk. Therefore, in women previously treated for a GCT, an HRT can be used. Steroid hormones might have a deleterious impact on sex cord tumors. HRT is thus contra-indicated after a sex-cord tumor, except in case of granulosa tumor stade IA/IB, were an HRT might be discussed after an individual benefit-risk balance evaluation. Mucinous or clear cell adenocarcinoma are hormone-independent tumors and an HRT can be used without restriction after these diseases. Low grade serous or endometrioid adenocarcinoma are potentially hormone-sensitive tumors, and an HRT is thus contra-indicated, except on a case to case basis in stade IA/B diseases.

Conclusion
In the context of a scarce literature, a formal consensus method allowed the elaboration of guidelines, which will help clinicians in the management of these patients.

Keywords
Menopause, hormone replacement therapy, climacteric syndrome, premature menopause

Expression of programmed cell death – ligand 1 in Thai epithelial ovarian/fallopian tube/primary peritoneal carcinoma patients

Authors

Achjima Tankul 1, Irene Ruengkhachorn 1, Suchanan Hanamornroongruang 2, Naravat Poungvarin 3,

1. Gynecologic Oncology Division, Department of Obstetrics & Gynecology, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, THAILAND
2. Department of Pathology, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, THAILAND
3. Department of Clinical Pathology, Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, THAILAND

Abstract ID: 3903

Introduction

Epithelial ovarian/fallopian tube/primary peritoneal carcinoma are the leading cause of death among gynecologic malignancies. Most of the patients are diagnosed in the advanced stage. Mandatory treatment is cytoreductive surgery and adjuvant chemotherapy. A combination of platinum-taxane-based chemotherapy ± bevacizumab has been the standards treatment. Targeted drug combined with chemotherapy has improved the oncologic outcomes in both primary treatment and recurrent setting. Novel treatment modalities are needed, and a variety of targeted therapies directed against molecular targeted in cancer cells and tumor microenvironments are being developed. The Immune system provides a powerful defense mechanism. Its immuno-oncology has been investigated and published, and it has been determined that antigen-presenting cells with co-stimulators to activate cytotoxic T cells are essential to provide the immunity that inhibits tumor cells. Programmed cell death-1 (PD-1), a member of the CD28/CTLA-4 family, is expressed on the surface of activated T cells, B cells and macrophages. The binding of PD-1/ programmed cell death-ligand 1 (PD-L1) is an immune inhibitory checkpoint, with the effects to deteriorate human immunity and allowing tumor progression. Furthermore, the expression of PD-L1 is associated with cancer metastasis and poor prognosis. PD-1/PD-L1 inhibitors have a potential role in the treatment of EOC. Patients who had been diagnosed with platinum resistant EOC and received treatment by nivolumab. Currently, PD-L1 expression in cancer cells is the best predictive marker for response to PD-1/PD-L1 inhibitors.

Purposes

To evaluate the proportion of expressed of programmed cell death-ligand 1 (PD-L1) in Thai epithelial ovarian/fallopian tube/peritoneal carcinoma patients, and the association with the clinicopathological and surgical outcomes. To compare PD-L1 protein expression by immunohistochemistry staining (IHC) with messenger ribonucleic acid (mRNA) expression by quantitative reverse transcription polymerase chain reaction (RT-qPCR) methods.

Material and methods

Patients with a suspected malignant ovarian tumor who underwent cytoreductive surgery were recruited. The patients who had a pathology of epithelial ovarian/fallopian tube/primary peritoneal carcinoma were enrolled. The demographic data, tumor characteristics, surgical outcomes and treatment details were analyzed by descriptive statistics. Numerical data were reported as mean ± standard deviation (SD), or median [interquartile range], as appropriate. Categorical data were presented as number and percent. The categorical variables were compared by chi-square or Fisher exact test, while continuous data was compared by independent t-test and Mann-Whitney test or Kruskal-wallis, as appropriate. Spearman's rank coefficient test was used to determine correlation between protein expression and mRNA expression.

Results
Of a total of 100 patients, high grade serous carcinoma was the most common subtype (42%). Advanced stage of cancer was found in 49% of the studied patients. 10% were receiving neoadjuvant chemotherapy. After primary surgery, 65% of the patients achieved optimal surgery. PD-L1 positive cancer cell expression was found in 23% of the study patients, while the median expression of normalized mRNA was 0.015 [0.004-0.037]. The Spearman correlation coefficient between protein and mRNA expression was 0.041, ($p = .45$).

Conclusions
There was a low expression of PD-L1 protein/mRNA in epithelial ovarian/fallopian tube/primary peritoneal carcinoma. There was a weak correlation of PD-L1 protein/mRNA expression.

Keywords
ovary, cancer, immunotherapy, PD-L1, biomarkers

Surgical staging of lymph nodes in patients with oncogynecological diseases

Authors

Zhanin Daskalova 1, Galina Chakalova 1, Tsvetanka Dyankova 2, Krasimir Angelov 3,

1. Clinic of Gynecology, University Hospital of Oncology, Sofia, Sofia, BULGARIA
2. Surgery treatment, University Hospital of Oncology, Sofia, Sofia, BULGARIA
3. Conservative treatment, University Hospital of Oncology, Sofia, Sofia, BULGARIA

Abstract ID: 3904

Introduction
The condition of the lymph nodes in patients with cancer is of huge importance for determining the individual treatment strategy and are essential prognostic factors. Regional lymph nodes in female genital malignant tumors are inguinal, pelvic and paraortical.

Goal
We have set our goal to analyze the condition of the lymph nodes in patients with oncogenetic diseases with vulvar cancer, vaginal cancer, cervical cancer, endometrial cancer, uterine sarcoma, ovarian cancer and fallopian tube cancer.

Materials and Methods
For the period from 1st January, 2017 to 30st April, 2018, 268 consecutive patients with oncogeneological diseases were operated, who had lymphadenectomy performed on them, in the Clinic of Gynecology at the University Hospital of Oncology, Sofia.

Results
27.4% of the patients were found to have metastases in lymph nodes. The patients with cancer of the vulva, were found to have the highest percentage of metastases (37.3%), followed by patients with cervical cancer (31.9%), uterine sarcoma (31.7%) ovarian cancer (30.3%) and endometrial cancer (23.1%).

Summary
It was found that nearly 1/3 of the patients have metastases in the lymph nodes, which is important for the adjuvant therapy.

Keywords
gynecological cancer, lymph nodes

Supplementary material
http://sites.altilab.com/files/159/abstracts/-en-esgo-lyon-2018-1.doc,
http://sites.altilab.com/

Comparison between PET CT and AGO score for operability evaluation in recurrent ovarian cancer: a retrospective study

Authors

Julie Delvallee 1, Carine Cambra 2, Charles André Philip 2, Claire Bonneau 1, Nicolas Pouget 1, Roman Rouzier 1,

1. 92, Institut Curie, Saint Cloud, FRANCE
2. 92, Institut Curie, Institut Curie, FRANCE

Abstract ID: 3905

Objectives
To compare positron emission computarized tomography (PET CT) in epithelial recurrent ovarian cancer (ROC) with the validated surgical AGO score to predict the feasibility of secondary cytoreductive surgery (SCS) and to determine predictive factors of complete cytoreductive surgery and survival.

Material and methods
We conducted a retrospective multi centric study in Institut Curie (2 sites) between January 1st, 1998 and February 28th, 2018. We screened all the patients treated for an epithelial ROC. Patients were included if they underwent a PET CT before treatment of the ROC. Three group of management were distinguished: neoadjuvant chemotherapy (NAC) followed by surgery (Interval Surgery Group; ISG), chemotherapy alone (No Surgery Group; NSG) and primary cytoreductive surgery (Primary Surgery Group; PSG) followed or not by chemotherapy. The results of the PET CT were compared with the results of the validated AGO score to predict resecability. An AGO score equal to 3 was considered to support the feasibility of surgery. We created a PET-CT assessment that rejected surgery if one of the following item was reported: ascitis>500mL, diffuse carcinomatosis, extra-abdominal lesions, supra-renal and supra-diaphragmatic lymph nodes.

Results
Altogether, 546 patients were treated for a epithelial recurrent ovarian cancer during the study period, among them 216 underwent a PET CT before any treatment. Sixty-five patients underwent SCS : complete cytoreduction was achieved in 58 patients (89.2%) and no case of mortality was reported within 60 days post-surgery. AGO score was positive (in favor of operability) in 6 (23%) patients of the PSG, 14 patients (35,9%) of the ISG and in 135patients (89%) of the NSG. There was no significant difference between the 3 groups (p=0.26). Conversely, PET-CT was negative (did not reject surgery) in 3 patients (11,5%) of the PSG, 25 patients (64,1%) of the ISG and 1 patient (0,7%) of the NSG. PET-CT was significantly more "positive" in the NSG than in PSG and ISG (p<0.05). In univariate analysis, the following TEP items were statistically different between the 3 groups: ascitis (0/0/10 p=0, 0005), diffuse carcinomatosis (8/19/102 p=0, 0006), extra abdominal lesion (7/8/82 p=0,0001) and sus-diaphragmatic nodes (4/4/69 p<0,0001). Progression free survival and overall survival was higher in complete cytoreduction group than for the rest of the patient.

Conclusion
This multicenter study is the first to compare PET CT and AGO score ability to predict complete resection in epithelial ROC. We confirmed that complete cytoreductive surgery remains the best prognostic factor at the recurrence as for initial diagnostic, however a high number of patients with AGO score < 3 at recurrence can be operated initially or after "pseudo-neoadjuvant" chemotherapy and reach complete cytoreductive surgery. Therefore, PET-CT seems to be a more accurate predictor of surgical resection than the AGO score.

Keywords
recurent ovarian carcinoma, PET CT, peritoneal carcinomatosis.

Is Clearance of HPV related to infection with Chlamydia and Ureaplasma after conization?

Author

Kim ChanJoo 1,

1. Dept of Obstetrics and Gynecology, The Catholic University of Korea, St Paul's Hospital, Seoul, KOREA, REPUBLIC OF

Abstract ID: 3921

Aims
Chlamydia trachomatis causing chronic inflammatory diseases has investigated as possible
human papillomavirus (HPV) cofactor in cervical cancer. The aim of this study is to evaluate that clearance of HPV in young women with conization was related with Chlamydia trachomatis, Ureaplasma and Mycoplasma. Here, we evaluated the clearance of HPV after conization and identified other co-factors including Chlamydia.

Methods
This study was conducted on 70 patients who received conization due to CIN-2,3 and CIS at the St Paul's Hospital of the Catholic University of Korea from Jul, 2014 until Dec, 2016. Among them, we evaluated the women under 40 years old. They all were positive for high risk HPV at initial visit. Patients were followed in 4-6 month interval with Pap smear and Anyplex TM Real time PCR HPV 28 detection method which detect 19 high-risk HPV genotype , 9 low-risk genotypes.

Results
The median age of 22 patients was 30 years. Single and multiple HPV detection was 9 (40.9%) and 13 (59.1%). Of the women received conization, median clearance time of those multiple type HPV was 27 month and that was longer than single type HPV(22 month, P>0.05) . The median clearance of women infected with Chlamydia, Mycoplasma or Ureaplasma was 27 months and that was longer than other women without Chlamydia, Mycoplasma, or ureaplasma(16 month, P>0.05).

Conclusions
n a follow-up after conization, women with Chlamydia, Ureaplasma, Mycoplasma showed relatively long time persistence. The relation between HPV and Chlamydia will require follow-up epidemiological studies.

Keywords
HPV, Clearance, Conization, Mycoplasma, Ureaplasma

Laparoscopic management of uterine tumors resembling ovarian sex cord tumors - Pregnancy, recurrence after fertility sparing surgery and literature review

Authors

Murat Api 1, Yasemin Ceylan 1,

1. Obstetrics and Gynecology, Istanbul Medipol University, Istanbul, TURKEY

Abstract ID: 3929

Introduction
Uterine tumors resembling ovarian sex cord tumors (UTROSCT) belongs to a rare group of uterine neoplasms. Although, a limited number of malignant and/or recurrent cases have been reported, UTROSCT is generally described as a tumor with benign behaviour. Since the reported cases of UTROSCT are limited and biologic pattern of the tumor has not been clearly elucidated, there is no consensus in the management of the patients. There are only few cases who have undergone fertility sparing surgery and proceeded with successful pregnancies. The objective of the present report is to review the literature relevant to the case presented herein who was first conservatively managed by laparoscopic UTROSCT resection; then consecutively achieved a spontaneous pregnancy and experienced recurrence which was managed by laparoscopic hysterectomy and bilateral salpingectomy.

Materials and Methods
PubMed was searched with the keyword ''Uterine tumors resembling ovarian sex cord tumors'' from 1976 to 2018. We have found 62 related articles out of 116; from which 128 relevant cases of UTROSCT were analyzed.

Results
Among the reported 128 cases, 11.7% of them were conservatively treated initially. Conservative management has been subsequently followed with 5 live births, including our case, whereas 16 cases were diagnosed with recurrence (2 of them following successful pregnancies) who required definitive treatment. For the patients under 40 years of age, fertility preserving treatment ended up with successful pregnancies in 41.6% (5/12) of cases. Our case presented herein is a 39-year old woman who was initially diagnosed with UTROSCT by hysteroscopic biopsy. To our knowledge, our case is the first to be treated laparoscopically for the recurrence of UTROSCT following laparoscopic fertility sparing surgery proceeding with successful pregnancy.

Conclusion
Fertility sparing surgery via laparoscopic approach seems to be a considerable option of treatment for women with UTROSCT in their reproductive ages. Minimally invasive surgery for UTROSCT is suggested to be applicable in both conservative and definitive management.

Keywords
Uterine tumors resembling ovarian sex cord tumors; laparoscopy, fertility sparing surgery, rare uterine tumors, recurrency

Supplementary material
http://sites.altilab.com/files/159/abstracts/esgo-2018-abstract-tables-1.docx,
http://sites.altilab.com/files/159/abstracts/utrosct-esgo-image.docx

Identifying Language Features Associated with Needs of Ovarian Cancer Patients and Caregivers Using Social Media (Poster)

Authors

Young Ji Lee 1, Hyeju Jang 2, Grace Campbell 1, Giuseppe Carenini 2, Teresa Thomas 1, Heidi Donovan 1,

1. School of Nursing, University of Pittsburgh, Pittsburgh, UNITED STATES
2. Department of Computer Science, University of British Columbia, Vancouver, CANADA

University of Pittsburgh Department: School of Nursing City: Pittsburgh Country: UNITED STATES Speaker: No

Abstract ID: 3930

Background
Social media has gained an attention as a source to learn the perspectives, values, and needs of patients and caregivers in naturalistic settings. A thorough understanding of their concerns and needs is the first step to develop interventions for the target population. Language written in the social media can be cues of needs, however, manually identifying those cues is time-consuming and labor-intensive. As a starting point, we propose a text classification machine learning model using simple natural language processing techniques, to identify language features that are associated with needs of ovarian cancer (OvCa) patients and caregivers on social media data.

Methods
Data were collected from the Cancer Survivors Network online peer-support forum (http://csn.cancer.org). This study included initial postings of patients and caregivers (n=855). First, we coded each posting with 12 types of needs based on the literature (physical; psychological/emotional; family-related; social; interpersonal/intimacy; practical; daily living; spiritual/existential; health information; patient-clinician communication; cognitive needs; miscellaneous), allowing multiple needs annotated for a posting. After excluding postings without needs assigned, we obtained 806 coded postings. We applied machine learning to build a computational model to decide whether a posting has the given need or not. In our model, we used bag-of-words (BOW) features, which consider each word in a posting as a feature to classify needs. Then, we performed chi-square-based feature selection to automatically identify more important features for each need category. After feature selection process, we trained a model using the selected features, and evaluated the model using the F1 score, a performance metric for classification.

Results
Top most frequently occurring needs across postings were social, health information, and psychological/emotional needs (n=686, 326, 266). We also found that 80% of postings described both psychological/emotional needs and social needs (n=216) in the same posting. Our initial model reported F1 scores of 0.92, 0.77, and 0.63 for social, health information, and psychological/emotional, respectively. Words that describe psychological states (e.g., "afraid", "anger", and "anxiety") were important features for the classification of psychological/emotional and social needs, and medical terms (e.g., "abdominal" and "ablation") for physical needs.

Conclusion
We developed an initial model for automatically classifying needs of OvCa patients and caregivers on social media data. Our initial results showed that even using only BOW features can detect needs with high accuracy, which suggests the potential of using multiple language features and classification methods to develop more sophisticated model. Our future work involves exploring other language features (e.g., groups of words

clustered by using topic modeling techniques, taxonomies, etc.). We found out that some postings can indicate multiple needs in the same posting, thus, we plan to take into account correlations between different need categories.

PRIMARY NON-GESTATIONAL CHORIOCARCINOMA OF THE OVARY IN THE YOUNG: A CASE REPORT

Authors

Sittie Jebrailyn Amilhasan 1, Carol Marjorie Pacioles- Flavier 1, Elmer Chua 1,

1. Obstetrics and Gynecology, Davao Doctors Hospital, Davao City, PHILIPPINES

Abstract ID: 3936

Pure ovarian non-gestational choriocarcinoma is an extremely rare case particularly in the pediatric population. It accounts for 0.6% or less of all ovarian neoplasms and believed to have a poor prognosis. We report a case of primary non-gestational choriocarcinoma of the ovary in postmenarcheal young patient with good response to multidrug chemotherapy after surgery.
This is a case of a 14-year-old who complained of abdominal pain with a large abdominopelvic mass. Unilateral Salphingo-oophorectomy was performed. She was initially diagnosed with a solid teratoma on frozen section biopsy, but permanent section biopsy demonstrated a non-gestational choriocarcinoma admixed with solid teratoma. Tumor markers revealed normal β-HCG and alpha-fetoprotein values but an elevated CA 125. Following surgery, multiple courses of chemotherapy consisting of Bleomycin, Etoposide and Carboplatin were given. Patient tolerated the adjuvant treatment and presently has no evidence of disease.

Due to its rarity, there is no available data regarding ideal chemotherapy. Bleomycin, etoposide and carboplatin after surgery proved to be effective in our case.

Keywords
non-gestational choriocarcinoma, ovarian choriocarcinoma

Supplementary material
http://sites.altilab.com/files/159/abstracts/abstract.ngc.doc,
http://sites.altilab.com/

FBXW7 mutations in serous endometrial cancers cause increased levels of potentially druggable proteins and in vitro sensitivity to SI-2 and dinaciclib

Authors

Mary Ellen Urick 1, Daphne Bell 1,

1. Cancer Genetics and Comparative Genomics Branch, National Human Genome Research Institute, National Institutes of Health, Bethesda, UNITED STATES

Abstract ID: 3937

Introduction
Rare, but clinically aggressive endometrial cancers exhibit high frequencies of somatic mutations in the FBXW7 (F-box and WD repeat domain-containing 7) tumor suppressor gene. In fact, somatic FBXW7 mutations have been reported in 17-30% of serous endometrial cancers, 11-28% of uterine carcinosarcomas, and 7-25% of clear cell endometrial cancers. Despite these high frequencies of mutation, the molecular effects of mutated FBXW7 in the context of endometrial cancers have not been determined.

Materials and Methods
We introduced six recurrent somatic FBXW7 mutations into serous endometrial cancer cells using transient transfection and Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) editing and analyzed expression of potentially druggable proteins using Western blotting. The sensitivity of CRISPR-edited FBXW7-mutant serous endometrial cancer cells to targeted inhibitors was tested using cell viability assays; molecular and cellular effects of the inhibitors were studied using Western blotting, apoptosis assays and flow cytometry.

Results
FBXW7 mutations in transiently transfected and CRISPR-edited serous endometrial cancer cells resulted in increased Cyclin E1, steroid receptor coactivator 3 (SRC-3), c-MYC, Rictor, glycogen synthase kinase 3 (GSK3), P70S6 kinase, and protein kinase B (AKT) phosphorylated protein levels. CRISPR-edited FBXW7-mutant serous endometrial cancer cells also exhibited decreased viability in response to SI-2 (a SRC inhibitor) and dinaciclib (a cyclin dependent kinase (CDK) inhibitor) compared to parental cells. Decreased viability was associated with changes in cell cycle distribution and/or increased apoptosis.

Conclusion
Our findings provide the first direct biochemical evidence that FBXW7 mutations result in increased levels of potentially druggable proteins in serous endometrial cancer cells and demonstrate that some of these effects confer increased sensitivity to targeted agents in vitro.

Keywords
FBXW7, mutation, endometrial (uterine) cancer, serous, dinaciclib, SI-2

Use of the Poly (ADP-Ribose) Polymerase Inhibitor Rucaparib in Women with Recurrent Ovarian Carcinoma with Endometrioid and Other Nonserous Histopathologic Subtypes

Authors

Alexandra Leary 1, Jonathan A. Ledermann 2, Ana Oaknin 3, Amit M. Oza 4, Domenica Lorusso 5, Nicoletta Colombo 6, Andrew Dean 7, Andrew Clamp 8, Giovanni Scambia 9, Antonio Casado Herraez 10, Margarita Amenedo Gancedo 11, Eva Maria Guerra 12, Judith Balmaña 3, Anne Floquet 13, Peter C. Fong 14, Robert W. Holloway 15, Martin Pölcher 16, Patricia Roxburgh 17, Ronnie Shapira-Frommer 18, Stefano Tamberi 19, Anna V. Tinker 20, Terri Cameron 21, Lara Maloney 21, Sandra Goble 21, Rebecca S. Kristeleit 22, Elizabeth M. Swisher 23, Iain A. McNeish 24, Robert L. Coleman 25,

1. Gustave Roussy Cancer Center, INSERM U981, and Groupe d'Investigateurs Nationaux pour l'Etude des Cancers Ovariens (GINECO), Villejuif, FRANCE
2. UCL Cancer Institute and UCL Hospitals, London, UNITED KINGDOM
3. Vall d'Hebron University Hospital, Vall d'Hebron Institute of Oncology (VHIO), Barcelona, SPAIN
4. Princess Margaret Cancer Centre, University Health Network, Toronto, CANADA
5. Fondazione IRCCS Istituto Nazionale dei Tumori and MITO, Milan, ITALY
6. European Institute of Oncology and University of Milan-Bicocca, Milan, ITALY
7. St John of God Subiaco Hospital, Subiaco, AUSTRALIA
8. The Christie NHS Foundation Trust and University of Manchester, Manchester, UNITED KINGDOM
9. Policlinico Universitario A. Gemelli IRCCS Università Cattolica del Sacro Cuore Roma, Rome, ITALY
10. Hospital San Carlos Madrid, Madrid, SPAIN
11. Oncology Center of Galicia, La Coruña, SPAIN
12. Hospital Universitario Ramón y Cajal, Madrid, SPAIN
13. Groupe d'Investigateurs Nationaux pour l'Étude des Cancers Ovariens et du sein and Institut Bergonié, Bordeaux, FRANCE
14. Auckland City Hospital, Grafton, NEW ZEALAND
15. Florida Hospital Cancer Institute, Orlando, UNITED STATES
16. Rotkreuzklinikum München-Frauenklinik, Munich, GERMANY
17. Beatson West of Scotland Cancer Centre and Institute of Cancer Sciences, University of Glasgow, Glasgow, UNITED KINGDOM
18. Chaim Sheba Medical Center, Tel Hashomer, ISRAEL
19. Ospedale Civile degli Infermi, Faenza, ITALY
20. BC Cancer Agency, Vancouver, CANADA
21. Clovis Oncology, Inc., Boulder, UNITED STATES
22. University College London Cancer Institute, UCL, London, UNITED KINGDOM
23. University of Washington, Seattle, UNITED STATES
24. Imperial College London, London, UNITED KINGDOM
25. The University of Texas MD Anderson Cancer Center, Houston, UNITED STATES

Abstract ID: 3938

Introduction

The majority of high-grade ovarian carcinomas have serous histology; however, a subset of patients have tumours of endometrioid or clear-cell histology at diagnosis. In a post hoc analysis, we investigated the clinical activity of rucaparib in patients with recurrent ovarian carcinoma with nonserous histology who enrolled in clinical studies in the maintenance (ARIEL3 [CO-338-014; NCT01968213]) or treatment setting (CO-338-010 [Study 10; NCT01482715] and ARIEL2 [CO-338-017; NCT01891344]).

Patients and Methods

ARIEL3 was a randomised, double-blind, placebo-controlled study of rucaparib (Coleman

et al. Lancet. 2017;390:1949-61). A post hoc analysis evaluated investigator-assessed progression-free survival (PFS) in the subgroup of ARIEL3 patients who had high-grade ovarian carcinoma with endometrioid histology. Data for 1 additional patient in ARIEL3 with other nonserous histology are summarised descriptively.

Study 10 and ARIEL2 were open-label, nonrandomised studies that investigated rucaparib (Kristeleit et al. Clin Cancer Res. 2017;23:4095-106; Swisher et al. Lancet Oncol. 2017;18:75-87). Data for patients in Study 10 and ARIEL2 with nonserous histology are summarised descriptively.

For all studies, diagnoses were histologically confirmed locally and tumour responses were assessed by the investigators using RECIST v1.1. No patients with mixed histologies were included in these analyses.

Results: In ARIEL3, 16 of 375 (4.3%) patients from the rucaparib arm and 7 of 189 (3.7%) patients from the placebo arm had endometrioid histology. Of the 16 patients in the rucaparib arm, 3 (18.8%) had a BRCA1 (2 somatic) or BRCA2 (1 germline) mutation. Of the 7 patients in the placebo arm, 4 (57.1%) had a BRCA1 (1 somatic, 1 unknown) or BRCA2 (2 germline) mutation. As of 15 April 2017 (visit cutoff date), median investigator-assessed PFS for the subgroup of patients with endometrioid histology was 13.7 months in the rucaparib arm vs 7.1 months in the placebo arm.
In ARIEL3, 1 patient with transitional histology and a germline BRCA1 mutation who achieved a complete response to their last platinum-based regimen remained progression free for 35.7 months while receiving rucaparib.
Three patients with endometrioid histology and 1 patient with clear cell histology received rucaparib in the treatment setting (Study 10 and ARIEL2). A partial response was achieved by 3 patients: 1 patient with clear cell histology and a germline BRCA1 mutation (9.7 months) and 2 patients with endometrioid histology and a germline BRCA1 mutation (13.6 months and 34+ months [response ongoing]). One patient with endometrioid histology and a germline BRCA2 mutation had stable disease for 7.3 months.
In this small subset of patients from ARIEL3, Study 10, and ARIEL2, treatment-emergent adverse events were consistent with the overall safety profile reported for rucaparib in the overall populations for these studies, with no apparent difference due to histology.

Conclusion
Rucaparib had antitumour activity in a small subset of patients with recurrent high-grade ovarian carcinoma of grade 3 endometrioid and nonserous histology, including carcinomas associated with a BRCA1 or BRCA2 mutation.

Keywords
ovarian cancer, PARP inhibitor, rucaparib, endometrial

Changing a nation: The development and evaluation of a training program for oncology health professionals in the provision of genetic testing for ovarian cancer patients.

Authors

Yoland Antill 1, Kristine Barlow-Stewart 2, Michael Friedlander 3, Betina Meiser 4, Judy Do 4, Suzanne Nevin 4, Margaret Gleeson 5, Maira Kentwell 6, Katherine Tucker 7, Natalie Taylor 8, Judy Kirk 9,

1. Familial Cancer, Royal Melbourne Hospital, Melbourne, AUSTRALIA
2. Medical School, University of Sydney, Sydney, AUSTRALIA
3. Prince of Wales Clinical School, University of new South Wales, Sydney, AUSTRALIA
4. Psychosocial Research Group, Prince of Wales Clinical School, Sydney, AUSTRALIA
5. Familial Cancer Clinic, Hunter Health, Newcastle, AUSTRALIA
6. Familial Cancer Centre, Royal Melbourne Hospital, Melbourne, AUSTRALIA
7. Hereditary Cancer Clinic, Prince of Wales Hospital, Sydney, AUSTRALIA
8. The Cancer Council, NSW, Sydney, AUSTRALIA
9. Familial Cancer Clinic, Westmead Hospital, Sydney, AUSTRALIA

Abstract ID: 3941

Background
Approximately 15% of women with high-grade, non-mucinous, epithelial ovarian cancer (EOC) carry a germline mutation in BRCA1/2 with up to 40% of carriers having no significant family history. Traditional models for mutation testing have relied on a strong family history of breast and/or ovarian cancer with referral to a family cancer clinic (FCC), with referral and testing rates remaining poor in most countries. Newer models of mainstreaming testing into treatment centres have been described with testing outcomes important for treatment planning, but also to enable testing in family members with the aim of reducing the cancer burden associated with these mutations. Accordingly, a nationwide Australian clinical training initiative has been introduced to enable a 'mainstreaming' approach to genetic testing for women with ovarian cancer in all cancer centres.

Methods
A mainstreaming genetic testing training module was developed for use by core educators for small group sessions. The module includes a presentation describing the rationale behind and suggested approach to mainstream testing in EOC patients including consenting and providing results. Non-genetics, healthcare providers were invited to take part in seminars at their local hospital or at local or national educational meetings. Participants were provided with a resource folder including: a flowchart and suggested script for mainstream testing, patient information brochures and specifically designed consent forms and request forms. Completed forms were sent to the laboratories and the local FCC, with results given to the patient by local oncology team members. FCC referral was arranged when the result was: mutation positive, a variant of uncertain significance, or where there was no mutation identified but additional family history of relevant cancers was present. All trainees were surveyed before training to assess perceived skills, competence and barriers using a validated tool in offering genetic testing to women with EOC and will be surveyed again at 12 months to determine changes.

Results
In total, all of the 16 FCCs throughout Australia participated in this clinical and research initiative. One hundred and eighty-five oncology health professionals have been trained in 42 workshops, including 29 hospitals: 85 (45.9%) medical oncologists, 27 nurses (14.6%), 42 (22.7%) gynae-oncologists, 7 (3.8%) obstetricians and gynaecologists, and 24 (13%) 'Other'. 19 of these were within urban areas and 10 from nonurban areas. 12 hospitals have no onsite FCC. At baseline, 114 (73.1%) oncology health professionals

were aware of national referral and testing guidelines; 47 (30.1%) oncology health professionals reported 'Always' referring women who meets guidelines for BRCA1/2 genetic testing, 51 (32.7%) 'Nearly always', 22 (14.1%) 'Sometimes', 14 (9%) 'Very little' and 19 (12.2%) 'Never'.

Conclusions

Non-genetics specialists have demonstrated a willingness to be involved in the provision of genetic testing for selected high-risk groups such as high grade EOC allowing wider testing to individuals without the necessity, in most cases, of additional FCC appointments. This model is being trialled in other tumour types with ongoing plans for assessment of patient and clinician preference and economic evaluations.

Keywords

BRCA1, BRCA2, Ovarian Cancer, Genetic testing

RHABDOMYOSARCOMAS OF THE UTERINE CERVIX: A CASE SERIES FROM TWO LEADING CENTERS.

Authors

Helmut Plett 1, Enzo Ricciardi 1, Giovanni Aletti 2, Philipp Harter 1, Sonia Prader 1, Valentina Fabiola Sangiorgio 2, Michele Peiretti 3, Paolo Maniglio 4, Nicoletta Colombo 2, Andreas Du Bois 1,

1. Gynecologic Oncology, KEM, Essen, GERMANY
2. Gynecologic Oncology, IEO, Milan, ITALY
3. Gynecologic Oncology, University of Cagliari, Cagliari, ITALY
4. Gynecologic Oncology, Sapienza University of Roma, Rome, ITALY

Abstract ID: 3946

Sarcomas represent less than 1% of malignant tumors affecting the uterine cervix according to SEER database; rhabdomyosarcomas (RMS) accounts for about 9%.
We observed 10 cases of adult primary cervical rhabdomyosarcoma at IEO, Milan and KEM, Essen from 1994 to 2016. Median age at diagnosis was 36 years (20-73). Vaginal bleeding and discharge was the symptom of presentation in five patients, one presented with a pelvic mass and in other two was an incidental finding. Median size at presentation was 5 cm (3-9.5), available for seven patients. Six patients had the embryonal botryoid variant, while one patient had a non botryoid embryonal tumor. Three patients had a pleomorphic rhabdomyosarcoma. Eight patients were without nodal and distant metastases. One patient had pelvic nodal metastases with extra nodal extension. Six patients had disease classified IRS I, while the remaining three fell into the II. Primary treatment was surgery alone in seven patients, surgery followed by adjuvant chemotherapy in one patient and neoadjuvant chemotherapy followed by surgery and adjuvant radiation therapy in one patient., NACT (EC) alone in another patient that progressed received a second line with Trabectedin and died of disease after 5 months. Local excision alone in the form of polypectomy was performed in three patients, and total or radical hysterectomy was performed in six patients. No postoperative complications were reported. At the end of primary therapy, six patients were NED, while three patients showed positive surgical margins. At a median follow-up of 23 months (range, 3–186 months), one patient died of disease at 13 months with persistent local disease treated with chemotherapy (VAC/IE) that evolved into hemo- and uroperitoneum. Three patients were NED while other three experienced a first local recurrence. One patient developed distant metastases one month after primary treatment (R1), presenting peritoneal carcinosis and ascites. One patient with persistence of disease was lost at follow up after 6 months. At recurrence, one patient received 4 cycles of Adriamycin plus Ifosfamide followed by three cycles of Ifosfamide plus Etoposide followed by radical surgery. After 1 month, she developed peritoneal metastases and was DOD at 16 months. One patient recurred locally at the vaginal vault and was treated with local excision followed by brachytherapy. At 16 months of follow up she showed a diffuse metastasizing involving bone, liver and lungs. A systemic chemotherapy with 3 cycles VAC/IE followed by metronomic Etoposide as maintenance and bone RT was the treatment of choice. She was AWD at 50 months. The last patient had 3 local recurrences that were always managed conservatively (cone biopsy and/or polypectomy), with the third and last known recurrence during pregnancy. She was NED at 186 months. Our data show that cervical RMS account for at least two groups, demonstrating the existence of low and high-risk patterns. The best predictor appeared to be the IRS clinical group classification system. IRS group I tumors had an overall good prognosis and showed rare recurrences, mainly local after a conservative treatment.

Keywords
Cervical Rhabdomyosarcoma; Treatment; Diagnosis

Supplementary material
http://sites.altilab.com/files/159/abstracts/table.docx,
http://sites.altilab.com/

The masquerades of female pelvic tuberculosis: A case of early invasive adenocarcinoma with multiple pelvic lymphadenopathy.

Authors

Su Jeong Lee 1, Ja Hyun Koo 1, Namkoong Jeong 1, Keun Ho Lee 2, Tae Chul Park 3, Jong Sup Park 2, Chan Joo Kim 1,

1. OBGY, The Catholic University of Korea, ST. Paul's Hospital, Seoul, KOREA, REPUBLIC OF
2. OBGY, The Catholic University of Korea, ST. Mary's Hospital, Seoul, KOREA, REPUBLIC OF
3. OBGY, The Catholic University of Korea, ST. Mary's Hospital, Ujeongbo, KOREA, REPUBLIC OF

Abstract ID: 3947

The incidence of adenocarcinoma of the uterine cervix is increasing. And Microinvasive adenocarcinoma of the cervix has been thought to behave more aggressively than its microinvasive squamous cell carcinoma of the cervix counterpart. We report a case of a 42-year-old woman with screening cytology 'HSIL' and cervical conization exhibiting microinvasive cervical adenocarcinoma with 5mm thickness of AdenoCIS. Based on the histological result of endocervical portion with adenoCIS, a modified radical hysterectomy was performed. Pelvic MRI identified a multiple abnormal lymphadenopathy in right external and internal iliac chains with no discernible cervical tumor mass.During operation, excision of abnormal enlarged right external iliac and common iliac lymph node was done. Frozen section of those demonstrated chronic granuloma. Findings of lymph node was consistent with tunerculosis including chronic granulomas with multinucleated giant cells. After 7 month TBc medication with isoniazid, rifampicin, ethambutol and pyrazinamide, the patient continues follow-up evaluation for 38 month. Findings of the multiple pelvic lymphadenopathy in cervical adenocarinoma is rare case and also important because it is poorly symptomatic and potentially it would be very harmful if missing the time of proper trearment.

Keywords
pelvic tuberculosis, cervical microadenocarcinoma

Supplementary material
http://sites.altilab.com/files/159/abstracts/esgo-the-masquerades-of.docx,
http://sites.altilab.com/

A Huge Ovarian Mucinous Cystadenoma, size matters

Author

Abdulaziz Alobaid 1,

1. Women's hospital, King Fahad Medical City, Riyadh, SAUDI ARABIA

Abstract ID: 3948

A 53-year-old postmenopausal woman presented with a huge abdominal-pelvic distention that started ten months ago and was progressively increasing in size. It was associated with on-off abdominal pain, nausea and urinary retention. Systemic review was remarkable for severe decreased appetite, cachexia and immobilization with bedsores. Past medical and surgical history were unremarkable.

On physical examination, vital signs were remarkable for tachypnea. Upon admission, the body weight was 172 kg. On general examination, the patient looked ill, lethargic, cachectic and lying on her right side with a huge abdominal distention. Abdominal examination was remarkable for a cystic, diffuse, tense and palpable mass with scattered foci of pressure ulcers. The abdominal circumference was 181 cm. On per-vaginal examination, vulva, vagina and cervix were normal.

The patient was consented for exploratory laparotomy. The patient remained on her right side throughout the entire procedure as it was difficult to mobilize the mass. Away from the pressure ulcers foci, a midline incision of about 35 cm in the healthy skin was performed (Figure 3). The mass was resected (73 x 51 x 42 cm) and 84 liters of mixed serous-mucinous fluid were drained from it through multiple holes. A frozen section biopsy was consistent with benign mucinous cystadenoma. The origin of the mass was identified to be the right ovary, and right salpingo- oophorectomy was done. The left ovary had a multilocular mass of 15 cm in diameter, and left salpingo-oophorectomy was successively performed. There was no ascites; abdominal organs and omentum were normal. The estimated blood loss was 1100 ml and the surgery went uncomplicated. Histopathological examination confirmed the diagnosis of bilateral benign mucinous cystadenoma.

Postoperatively, the patient was transferred intubated to the intensive care unit. In the first few days post-operation, there was about 6-8 liters/day of serous fluids draining from the abdominal cavity. Patient was extubated 11 days post-operation.
At discharge, the patient’s pressure ulcers improved with granulation tissue. The poor muscle power improved with physiotherapy. Nutritional assessment was done on a daily basis as she was given high-caloric and high-protein diet. Home care was arranged.
The patient was discharged home in good condition at 14 days post-operation. The pre-operative patient body weight was 172 kg, and the postoperative weight was 64 kg. Thus, it is believed that the tumor weighed about 100 kg. At a postoperative 3-month follow-up in the outpatient clinic, the patient showed up in good condition without evidence of recurrence.

We report that it is technically feasible to manage an extremely large-sized benign mass with satisfactorily perioperative outcomes. This should be done through a multidisciplinary approach that demands an orchestrated collaboration between different specialists to yield an optimized perioperative care.

Keywords
ovarian mucinous cystadenoma

Supplementary material
http://sites.altilab.com/files/159/abstracts/img-0715.jpg,
http://sites.altilab.com/files/159/abstracts/img-0730.jpg

Laparoscopic management of primary vaginal clear cell carcinoma in a woman without diethylstilbestrol exposure

Authors

Yeliz Aykanat 1, Murat Api 2,

1. Gynaecology and Obstetrics, Istanbul Medipol Mega University Hospital, Istanbul, TURKEY
2. Gynaecologic Oncology, Istanbul Medipol Mega University Hospital, Istanbul, TURKEY

Abstract ID: 3950

Introduction
Primary vaginal clear cell carcinomas (PVCCA) are rare female genital tract malignancies, which constitute 5-10% of vaginal cancers. There is a linkage between the PVCCA and intrauterine diethylstilbestrol (DES) exposure. Since the incidence of PVCCA is rare the clinical behavior, pathology, genetic characteristics and the prognosis of the disease has not been clearly elucidated. Although bimodal age distribution, mean age 22 years in women with exposure to DES and 55 years in postmenopausal women with no history of DES, but who may have pelvic endometriosis, here we present a young women at the age of 29 without in utero DES exposure or endometriosis.

Patient
A 29 years old woman (gravida 1, para 1), presented with intermittent postcoital vaginal bleeding for 6 months. She had a strong family history of endometrial cancer. Pelvic examination showed suspicious ulcerative lesion located in the posterior vaginal fornix. Histopathologic evaluation of vaginal biopsy revealed clear cell carcinoma. Patient had no records of prenatal DES exposure and urogenital abnormality. Magnetic resonance imaging (MRI) and positron emission tomography–CT revealed a 18 mm right iliac lymphadenopathy and 13 mm lesion in the posterior vaginal fornix without para-vaginal invasion. Based on the preoperative diagnosis of clinical stage III PVCCA (International Federation of Gynecology and Obstetrics) patient underwent laparoscopic radical hysterectomy with bilateral salpingectomy accompanied by vaginectomy, pelvic lymph node dissection and ovarian transposition. The definitive pathology confirmed PVCCA and vaginal adenosis with positive pelvic lymph node at right iliac level and classified as stage III. Patient received adjuvant chemo/radiotheraphy.

Results
During 18 months follow-up, there was no local recurrence or metastasis. Though, the patient presents with vaginal stricture due to the adjuvant radiotherapy. After the operation vaginal length was shortened to 3 cm and at the end of the adjuvant radiation brachytherapy, there was almost no vaginal space left over. Nevertheless, no significant decrease was detected in female sexual score index and neither patient nor her husband was complaining about quality of their sexual life.

Conclusion
Since PVCCA is rare, there is no consensus on the treatment modality. The treatment methods should be selected according to the stage of the cancer, surgeon’s experience and patient’s clinical status. We performed laparoscopic surgery for the resection of PVCCA. The management with minimally invasive surgery provides a shorter recovery period and commencing of subsequent chemo/radiotherapy if necessary.

We want to present our abstract as an oral presentation.

Keywords
Clear cell carcinoma, Vaginal carcinoma, Vaginal adenosis

Supplementary material
http://sites.altilab.com/files/159/abstracts/figure-2-word.docx,
http://sites.altilab.com/files/159/abstracts/figure-1-word.docx

GENE EXPRESSION OF ATP-SYNTHASE AS A PROGNOSTIC FACTOR IN PATIENTS WITH OVARIAN CANCER.

Authors

Patrycja Ziober-Malinowska 1, Krzysztof Ku?ak 2, Marcin Stanis?aw Bobi?ski 1, Jan Kotarski 1, Rafa? Tarkowski 1,

1. I Department of Gynaecological Oncology and Gynaecology, Medical University, Lublin, POLAND
2. I Department of Gynaecologic Oncology and Gynaecology, Medical University, Lublin, POLAND

Abstract ID: 3951

The aim of the study was a comprehensive evaluation of gene expression in ovarian cancer tissue and normal gonads using macroarrays methods, as well as seeking differentiation markers and genes influencing the outcomes of women with ovarian cancer.

Material and methods
The study was conducted in 48 women treated for ovarian cancer in the Department and Clinic of Gynecology Oncology and Gynecology, Medical University of Lublin between 2004 and 2008. Surgical treatment of patients studied was supplemented with chemotherapy.
Gene expression was assessed by comparing the normal tissue and tumor tissue using MacroArrays method (BD AtlasTM Human Cancer 1.2 Array, BD Biosciences Clontech, USA).

Results
Gene expression analysis showed that ATP-synthase present in the tumor tissue have differences in their expression compared to normal tissue. ATP-synthase expression correlated with survival of patients with ovarian (ROC 0,306, p=0,007).

Conclusion
Gene expression of ATP-synthase correlates with the overall survival of patients of ovarian cancer.
Further studies on the for mentioned genes and their products are required to asses their viability as biomarkers.

Keywords
ovarian cancer

Supplementary material
http://sites.altilab.com/files/159/abstracts/fig-1..docx,
http://sites.altilab.com/

Non-dysgerminomatous Tumours of Ovary: Clinical Outcome

Authors

Francis James 1, Pallavi Nair 1, Susan Mathews 1, John Joseph 1, Jagath Krishna 3, Suchetha Sambasivan 4, Aswin Kumar 1,

1. Oncology, Regional Cancer Centre, Trivandrum, INDIA
2. Oncology, Regional cancer Centre, Trivandrum, INDIA
3. Biostatistics, Regional cancer centre, Trivandrum, INDIA
4. Gynaec Oncology, Regional cancer Centre, Trivandrum, INDIA
5. Oncology, Regional Cancer centre, Trivandrum, INDIA

Abstract ID: 3952

Introduction & Objective
Ovarian germ cell tumours are rare neoplasms with high curability. This study aims to identify clinical features, treatment, type of recurrences and survival in patients with non- dysgerminomatous germ cell tumor of ovary.

Patients and Methods
Retrospective analysis of patients with non dysgerminomatous germ cell tumors treated at our centre over eleven years (Jan 2005 – Dec 2015) was carried out. Patient demographics, tumour characteristics, treatment details, pattern of recurrences, treatment offered for recurrences were recorded and Disease Free Survival (DFS) and Overall Survival (OS) were estimated. Results: One hundred and eleven patients were included in the analysis. The mean age at diagnosis was 23.8years (range 14 to 52 years). Thirty-three patients (29.9%) had yolk sac tumors, 40 patients (36%) had malignant immature teratoma, 37 patients (33.3%) had mixed germ cell tumor and 1 patient had embryonal carcinoma. Sixty-two patients (55.8%) had stage I disease at presentation (32 with IA disease and 30 with IC disease). One patient had stage II disease, 36 (32.4%) had stage III and 12 (10.8%) had stage 4 at presentation (2 in the liver, 6 in the lung, 2 in the liver and adrenals and 2 in the liver and lung). Ten patients (9%) were diagnosed at the time of pregnancy. Sixty-four patients (57.6%) had right sided tumors at presentation, 45 patients (40.5%) had left sided tumors and 2 patients had bilateral tumors. Twenty patients received primary surgical treatment from our center. Twelve patients (12.6%) received neoadjuvant chemotherapy, majority of them were treated with BEP regimen. One hundred and eight patients underwent surgery (82 were treated with conservative surgery and 26 patients had radical surgery). Eighty-one patients received chemotherapy and majority of them were treated with BEP regimen. One patient who had metastatic disease at presentation underwent second surgery after adjuvant chemotherapy. Thirteen patients had recurrence after primary treatment. Four of them were successfully salvaged and is on follow up. Six of them defaulted while on second line or third line treatment. One patient developed a second primary and died following treatment for the same. One patient expired during second line treatment due to febrile neutropenia. OS was 90.6% and DFS was 84.3% at 3years. The median follow up was 71 months.

Conclusions
Ovrian Non dysgerminomatous tumours are rare and have high rate of cure in limited resource setting also. Conservative surgical treatment appears adequate.

Keywords
Germ cell neoplasm ovary, treatment

Supplementary material
http://sites.altilab.com/files/159/abstracts/os-dfs.pptx,
http://sites.altilab.com/

INFLUENCE OF SINGLE AND MULTI-AGENT CHEMOTHERAPY ON OVARIAN FUNCTION AND FERTILITY IN PATIENTS WITH GESTATIONAL TROPHOBLASTIC NEOPLASIA

Authors

Sonia Magni 1, Daniela Giuliani 1, Federica Paola Sina 1, Galli Francesca 2, Lamanna Maria 1, Delle Marchette Martina 1, Lorenzo Ceppi 1, Robert Fruscio 1, Cristina Maria Bonazzi 1, Fabio Landoni 1,

1. Clinic of Obstetrics and Gynecology, San Gerardo Hospital, Monza, ITALY
2. Department of Oncology, IRCCS - Istituto di Ricerche Farmacologiche "Mario Negri", Milano, ITALY

Abstract ID: 3953

Introducton and objectives
Gestational trophoblastic neoplasia (GTN) is a group of rare malignant placental diseases that usually occurs in women of reproductive age. Based on FIGO prognostic score, patients are classified as low-risk and high-risk disease. Low-risk GTNs are treated with a single-agent chemotherapy, usually methotrexate, while high-risk GTNs are treated with multi-agent chemotherapy, usually EMA/CO (etoposide, methotrexate, actinomycin D, cyclophosphamide, vincristine). Chemotherapy can be gonadotoxic and it can be correlated to risk of premature ovarian failure and infertility. The aim of this retrospective study was to compare ovarian function, fertility outcome and menopause occurrence after chemotherapy for GTN.

Methods
258 patients treated for GTN (excluding placental site trophoblastic tumor and epithelioid trophoblastic tumor) at San Gerardo Hospital from 1981 to 2016 were identified. Patients older than 45 years at the time of diagnosis, undergoing primary surgery or salvage hysterectomy for resistant disease or considered lost at follow-up were excluded from the study (72 women). Among the remaining 186 patients, 77 underwent single-agent chemotherapy (group A) and 109 received combined treatment because of high risk disease or low-risk disease resistant to single-agent chemotherapy (group B). Non parametric tests were used to compare patient outcomes.

Results
186 patients treated for GTN were eligible for the study. At a median follow-up of 14.8 years, three patients had premature ovarian failure (6.7% in group A vs 6.1% in group B, p=1). There was no difference regarding age of menopause (median age 47 years, p=.230). Transient amenorrhea occurred in 17 patients of group A (23%) and in 50 of group B (48%) (p=.0007). Persistent oligo-amenorrhea occurred in 5 patients of group B (5%), with no events in group A (p=.077). Childbearing desire was similar between the two groups (P=.930). The overall conception success rate was 75% in group A and 61% in group B (p=.035) whereas considering only women who desired to conceive it was higher and no significative difference between the two groups could be found (97% in group A and 92% in group B, p=.294). Overall 231 pregnancies occurred, with 25 conceptions within 12 months of completing chemotherapy (early pregnancies). Live births rate was 75%, miscarriages rate was 19%, stillbirths and ectopic pregnancies rate were 1%. Regarding the 25 early pregnancies, 80% resulted in live births, 16% in miscarriages, 4% in ectopic pregnancies. No differences were observed for pregnancy outcomes between group A and B and between early and late pregnancies. A trisomy 16 was found after a miscarriage with early conception, two late pregnancies were medically interrupted for trisomy 18 and 21 and one baby was born with esophageal atresia. No other congenital malformation or chromosomal abnormalities were reported (overall incidence 1.7%).

Conclusions
Both single-agent and multi-agent chemotherapy can be safely administered to women of reproductive age with childbearing desire. Persistent amenorrhea can be a rare adverse effect of multi-agent chemotherapy. Pregnancy outcome are similar between the two groups both in early (<12 months) and late (>12 months) pregnancies.

Keywords
Gestational trophoblastic neoplasia, chemotherapy, fertility, ovarian function, pregnancy

Malignant germ cell tumors and sex cord-stromal tumor clinical experience in a tertiary spanish hospital

Authors

Coves Asuncion 1, Oliver Reyes 1, Lopez Gregorio 1, Alvarez Carmen 1, Seoane Jose Miguel 1, Tejerizo Alvaro 1,

1. Gynecology, Hospital 12 de Octubre, Madrid, SPAIN

Abstract ID: 3955

Introduction
Non-epithelial ovarian tumors account for approximately 10% of all ovarian cancer. Malignant germ cell tumors usually develop in young females in whom fertility is important. Granulose cell tumor, the most common type of sex cord-stromal tumor, occurs more often in middle age and postmenopausal women.
The aim of this study is to describe the clinico-pathological features and treatment of non-epithelial ovarian tumors in a Spanish tertiary hospital.

Methods
Observational retrospective study. Data from 25 patients with non epithelial ovarian cancer were collected between 1999-2017 in "12 de Octubre" hospital, Madrid, Spain. Twenty (80%) were germ cell tumors and 5(20%) were sex cord-stromal tumors.

Results
Ten (40%) patients were affected by immature teratomas, 6 (24%) by dysgerminoma, 3(12%) by yolk sac tumor, 1(4%) by embryonal carcinoma and 5 (20%) by granulose cell tumors. Table 1 collects main data of the study.
Mean age at diagnosis was 27 years (range 10-75). Mean age was 22, 18, 22, 30 and 52 for immature teratoma, dysgerminoma, yolk sac tumor, embryonal carcinoma and granulose cell tumors, respectively.
Information of clinical presentation was available in 11 patients. Five of these presented abdominal pain and distension. One presented acute abdomen because of torsion of the tumor. Another one had obstructive uropathy. Four patients were incidental diagnosis, two in cesarean context and the others in postmenopausal bleeding study context.
Eleven (44%) patients were stage IA disease, while 4(16%) were stage IC. Three (12%) patients were stage IIB, while 5(20%) were IIIC. Two (8%) patients were classified as stage Ix.
Surgery was the first treatment for 23(92%) patients. Only 2(8%) received neoadjuvant chemotherapy (1 dysgerminoma IIB, 1 granulose cell tumors IIIC).
Most of the patients, 19(76%) underwent fertility sparing surgery. Six (24%) underwent radical surgery: 3 postmenopausal patients; 1 who had already completed her child-bearing, 1 with previous anexectomy because of tuboovaric abcess, and 11 years old patient, with dysgerminoma stage IIB disease.
Fourteen (56%) patients received adjuvant chemotherapy. Seven (28%) underwent surgery alone. We do not have any data about 4(16%) patients. Table 2 collects distribution by histology groups.
Median follow-up period was 119 months (range: 19-223 months).
Recurrence disease occurred in 4(16%) patients: 1 out of 6 patients (16%) affected by granulose cell tumors stage IC, in 2 out of 10(20%) with immature teratoma stage IIIC and 1 out of 6(16%) patients with dysgerminoma stage IA disease with thoracic recurrence.
Two (8%) patients died. One of them because of the tumor (dysgerminoma stage IA with thoracic recurrence). The other one due to unknown cause.
Five years progression free survival was 67%. Five years overall survival was 89%.
Figure 1 and 2 shows Kaplan-Meier curve.

Conclusion
In our study most of non-epithelial ovarian tumors are diagnosed at an early stage (stage I in 60%). Given the youth of patients (mean age at diagnosis 27), fertility sparing surgery was the main treatment (72%). This appears to be safe, with excellent survival after long- term follow-up.
Adjuvant chemotherapy is not always recommended, stage IA dysgerminoma, inmature teratoma and granulose cell tumors do not require further adjuvant chemotherapy.

Keywords
Germ cell tumor, granulose tumor

Supplementary material
http://sites.altilab.com/files/159/abstracts/tabla-1.pdf,
http://sites.altilab.com/files/159/abstracts/tabla-2-y-figura-1-y-2.pdf

Neutropenic septic shock during chemotherapy in gynecologic cancer: Clinical course and characteristics

Author

Ji-Geun Yoo 1,

1. Gynecologic Oncology, The Catholic University of Korea, Seoul, KOREA, REPUBLIC OF

Abstract ID: 3958

Introduction
In many advanced gynecologic cancer patients, intravenous chemotherapy has been taking an important part of treatment options. Chemotherapy provided survival benefits to cancer patients, but at the same time has a risk of bone marrow suppression and combined infection, and occasionally cause lethal septic shock, which is associated with a mortality rate of 40%. Still, there is only a few reports about chemotherapy-related neutropenic septic shock in gynecologic malignancies. The purpose of this study is to determine clinical characteristics and course of septic shock in gynecologic cancer patients.

Methods
In this single-center retrospective study we reviewed medical records of gynecologic cancer patients who had treated with chemotherapeutic agents between January 2009 and December 2017. Neutropenic septic shock is defined as neutropenia <1g/L with septic shock that requires inotropics to maintain normal blood pressure. We divided the events into two groups according to survival. Statistical analysis was performed for the clinical characteristics by Mann-Whitney U-test.

Results
Total 1363 patients received at least 1 cycle of chemotherapy for gynecologic malignancies. Among them, 22(1.6%) patients experienced 25 events of neutropenic septic shock. Six events of death were occurred, and the mortality ratio was accounted for 24%. There was no significant difference between events of death group and survive group according to age, BMI, FIGO stage, mean CRP at the time of diagnosis of septic shock, the lowest neutrophil count during the event, and peak body temperature.
Six events occurred during the primary treatment course. We experienced two events of septic shock who received chemotherapeutic agents only once. According to the chemotherapeutic regimen, carboplatin-paclitaxel combination chemotherapy accounted for the largest proportion (24%). Two-thirds of events had identified bacteria on culture test. Most common pathogen isolated was E. coli (7/17, 41.2%).
In the event of survivor group, mean recovery time was 2 days of initial treatment. Meanwhile, for events of death group, the average time from initial treatment of septic shock to death was 54.8 hours.

Conclusion
Neutropenic septic shock is a lethal complication of chemotherapy, but there is a few research in gynecologic malignancies. Through this study, we confirmed the incidence and high mortality, and clinical course.

Keywords
Septic shock, Gynecologic cancer

Difference in preference of advance care planning and palliative care between gynecological cancer patients and other cancer patients

Authors

Kang EunKyo 1, Lee Jihye 2, Choo Jiyeon 2, Min Jeonghee 2, Yun Young Ho 1,

1. Family Medicine, Seoul National University Hospital, Seoul, KOREA, REPUBLIC OF
2. College of Medicine, Seoul National University, Seoul, KOREA, REPUBLIC OF

Abstract ID: 3961

Introduction
Palliative care and Advance Care Planning (ACP) improve the quality of life and life satisfaction of cancer patients and their families, when provided at the appropriate time. However, gynecological cancer patients often tend to misunderstand and avoid palliative care and ACP documentation. The purpose of this study is to assess recognition and preference of palliative care and ACP in gynecologic cancer patients compared to other cancer patients.

Materials/Patients and methods
The survey was conducted at 10 hospitals, approved by institutional review board (IRB). Those patients who visited out-patient department in the hospitals were randomly asked to participate in the survey. The informed consent form was provided to the patients to help them understand the study and before assessing whether each patient was suitable to participate in the study. The selection criteria of the study were whether the patient was 20-year-old or older, willing to participate in the study, understood the purpose of the study, and diagnosed with any type of cancer. The survey questionnaire included following contents: treatment preference according to life expectancy, needs of early palliative care, recognition and intention regarding ACP and physician orders for life-sustaining treatment (POLST) according to clinical condition. The total of 610 female cancer patients completed the questionnaire.

Results
There was no significant difference in sociodemographic characteristics between non-gynecological female cancer patients and gynecological cancer patients. Gynecological cancer patients showed slightly higher recognition of POLST and ACP compared to other cancer patients, but the difference was not statistically significant. The intention to document ACP in gynecological cancer patients was significantly lower in two cases: when they were healthy and when they were just diagnosed severe illness ($p<0.05$). The difference in intention to document ACP tended to reduce as the life expectancy decreased (p for trend = 0.009). Furthermore, gynecological cancer patients showed lower preference of palliative care than other cancer patients in end-of-life stage ($p<0.05$).

Conclusion
This nationwide survey shows that compared to other cancer patients, gynecological cancer patients have a comparatively low preference of ACP documentation and palliative care. Understanding such characteristics of gynecologic cancer patients is necessary in order to provide the appropriate ACP consultation and palliative care at the right time.

Keywords
Gynecological cancer, Cancer patients, Difference, Advance care planning, Palliative care

Supplementary material
http://sites.altilab.com/files/159/abstracts/table-figure.docx, http://sites.altilab.com/

The relation between TORC1 and TORC2 expression and response on mTOR inhibitors treatment in uterine sarcoma and carcinosarcoma cell lines

Authors

Bobi?ski Marcin 1, Ok?a Karolina 1, Bednarek Wies?awa 1, Wertel Iwona 1, Wawruszak Anna 2, Kotarski Jan 1,

1. Ist Chair and Department of Gynaecological Oncology and Gynaecology, Medical University of Lublin, Lublin, POLAND
2. Department of Biochemistry and Molecular Biology, Medical University of Lublin, Lublin, POLAND

Abstract ID: 3962

Introduction
mTOR inhibitors (mTORi) is one of the most promising group of anticancer agents considered to be active against uterine mesenchymal malignancies. A few recently published trials revealed its (their) activity but in most of them only a part of patients responded to the treatment. No biomarkers allowing to assess the response to mTOR inhibitors were identified so far. Taking into consideration the mechanisms of intracellular activity of first (rapamycin) and second (INK 128) generation of mTORi, targeting TORC1 and both TORC1 and TORC2, respectively, we aimed to assess the expression of mentioned mTOR complexes in selected uterine sarcoma and carcinosarcoma cell lines and to analyze its (their) relation to the response to rapamycin and INK 128 treatment.

Materials and methods
Four cell lines derived from uterine leiomyosarcoma (MES-SA), endometrial stromal sarcoma (ESS-1), carcinosarcoma (SKUT-1, SKUT1B) were selected to be used in the study. The control normal line was HSF (human skin fibroblasts). Cell from cultures were harvested and used to prepare paraffin embaded slides. The expression of TORC1 and TORC 2 was visualized using immunochemistry according to antibody manufacturer recommendations and assessed by semiquantitive method as no expression/weak expression/strong expression/very strong expression.
To reveal the response to mTORi treatment, cells were cultured in presence of rapamycin in concentrations 0.25–2500 ng/ml and INK128 in concentrations 0.1–100 ng/ml for 96 h. Cell viability was assessed using MTT test. The response of cell lines was expressed as IC50 value.

Results
Very strong expression of TORC1 was detected in MES-SA cell line, weak In SKUT-1 and SKUT-1B, no expression was found in HSF an ESS-1 lines. The expression of TORC2 was considered as very strong in MES-SA cell line, as weak in HSF, SKUT1, SKUT-1, and ESS-1.
IC50 for rapamycin was achievable for ESS-1 and MES-SA and valued 661.6 ng/ml and 1.1 ng/ml respectively. For INK 128 it was measured for SKUT-1, SKUT1B, ESS-1 and MES-SA the values were figured as 214.2 ng/ml, 78.8 ng/ml, 18.7 ng/ml and 3.7 ng/ml respectively.

Conclusion
Our data show that very strong expression of TORC complexes is related to good response to mTORi as it was observed in leiomyosarcoma cell line. We noted that endometrial stromal sarcoma cell line presented some sensitivity for rapamycin in spite of no expression of TROC1. This finding can be explained by limited sensitivity of immunochemistry, and it is worth to point out that IC50 value was over 600 times higher comparing to leiomyosarcoma cell line response. Weak expression of both TORC complexes in carcinosarcoma cell lines corresponds with relatively high concentration of

INK 128 necessary to achieve half maximal inhibition of cells viability. Interestingly, we did not observe significant impact of tested substances on normal cells (human skin fibroblasts) in concentrations that were sufficient to affect the most sensitive cancer cell lines.

Keywords
uterine sarcoma, carcinosarcoma, mTOR

Recurrent High-Grade Vaginal Intraepithelial Neoplasia

Authors

Giorgio Bogani 1, Fabio Martinelli 1, Antonino Ditto 2, Valentina Chiappa 2, Umberto Leone Roberti Maggiore 2, Alice Indini 2, Domenica Lorusso 2, Francesco Raspagliesi 2,

1. Gynecologic Oncology, National Cancer Institute, Milano, ITALY
2. ITALY

Abstract ID: 3963

Introduction and Objectives
High-grade vaginal intra-epithelial neoplasia (vaginal HSIL) is a rare conditions, being its incidence approximately 100-fold lower than cervical intraepithelial neoplasia.
Here, we aimed to investigate outcomes of women presenting with recurrent vaginal HSIL.

Methods
Data of consecutive women diagnosed with recurrent vaginal HSIL after primary treatments were retrieved. Risk of developing new recurrence over the time was assessed using Kaplan-Meier and Cox models.

Results
Data of 117 women were available for the analysis. At primary diagnosis, 41 (35%), 4 (3.4%) and 72 (61.6%) patients had had LASER, pure surgical and medical treatments, respectively.

Secondary treatments included
CO2 LASER ablation and medical treatment in 95 (81.2%) and 22 (18.8%) cases, respectively. After a mean (SD) follow-up of 72.3 (39.5) months, 37 (31.6%) out of the entire cohort of 117 patients developed a third vaginal HSIL recurrence. Median time to recurrence was 20 (range, 5-42) months. Patients with recurrent vaginal HSIL undergoing medical treatments were at higher risk of developing a new vaginal HSIL recurrence in comparison to women having LASER treatment (p=0.013, log-rank test). Considering the subgroup of 41 patients having primary LASER treatment, the execution of medical treatments at the time of vaginal HSIL recurrence is associated to a slightly but not significant increased risk of recurrence (p=0.148, log-rank test). After we corrected our results for type of treatment used for recurrent vaginal HSIL, we observed that the execution of primary LASER treatment was independently associated with a slightly risk of developing new vaginal HSIL recurrence (HR: 0.46 (95%CI: 0.21, 0.99); p=0.050). The other variable that is independently associated with a new vagina HSIL recurrence is the persistent infection from HPV16 or 18 (HR: 3.87 (95%CI: 1.15, 13.0); p=0.028). Nine (7.7%) patients developed cancers arising in the lower genital tract.
Conclusions: Patients with recurrent vaginal HSIL are at high risk of developing persistent vaginal dysplasia. Our data underline that the choice of primary treatment might have an impact of further outcomes, therefore patients with diagnosis of vaginal HSIL have to be centralized in centre specialized in their treatment and in LASER therapy.

Keywords
High-grade vaginal intra-epithelial neoplasia, VaIN, LASER, HPV

Prognostic factors for recurrence and survival in uterine leiomyosarcoma

Authors

E Sun Paik 1, Jae Hong Kang 1, Jihye Kim 1, Myeong Seon Kim 1, Soo Young Jeong 1, Chel Hun Choi 1, Tae-Joong Kim 1, Byoung-Gie Kim 1, Duk-Soo Bae 1, Jeong-Won Lee 1,

1. Obstetrics and Gynecology, Samsung Medical Center, Seoul, KOREA, REPUBLIC OF

Abstract ID: 3968

Objective
The aim of this study was to determine possible prognostic factors in patients with uterine leiomyosarcoma (LMS).

Methods
This study retrospectively investigated 48 patients with uterine LMS treated in Samsung Medical Center between 2008 and 2017. To analyze the prognostic significance of factors for recurrence-free survival (RFS), overall survival (OS), and survival after recurrence, the log-rank test and Cox proportional hazards model were used for univariate and multivariate analysis.

Results
Of the 48 patients, twenty-nine patients (60.4%) experienced recurrence and 16 patients (33.3%) died within a median follow-up period of 20 months (range, 3–99months). On multivariate analysis, older age, presence of residual tumor after surgery, lower mitotic count, and history of adjuvant radiotherapy at first treatment were significantly associated with better RFS. Presence of residual tumor after surgery and severe nuclear atypia were associated with poor OS. In analysis of survival after recurrence, hematogenous recurrence, severe nuclear atypia, and presence of residual tumor at primary surgery were significantly associated with worse prognosis. Notably, residual tumor status at primary surgery was associated with RFS, OS, and survival after recurrence.

Conclusions
We demonstrated possible prognostic factors for RFS, OS, and survival after recurrence for patients with LMS. These results may provide useful information for patients with LMS.

Clinical, pathological study and therapeutic peculiarities of ovarian carcinosarcoma

Authors

RAJA BRIKI 1, KHALID OUAZZANI TAIBI 1, SAFIA ERNEZ 1, MEHDI MAKNI 1, SASSI BOUGHIZANE 1, HEDI KHAIRI 1,

1. Department of Gynecology and Obstetrics, Farhat Hached's university hospital, Sousse, TUNISIA

Abstract ID: 3969

Itroduction and objecitves
Ovarian carcinosarcoma is a rare ovarian tumor that accounts for less than 1% of ovarian cancers. Less than 300 cases have been reported in the literature.
Through our study, we propose to:
◦ Identify the clinical, radiological and histological peculiarities of these tumors, insisting on the contribution of immunohistochemistry in their diagnosis,
◦ Identify management arrangements,
◦ Clear the relevant prognostic factors,
◦ Study the evolutionary profile in order to evaluate the impact on patient survival.

Matherial and methods
We report a retrospective and descriptive study of seven cases of ovarian carcinosarcoma diagnosed at the Gynecology-Obstetrics Department of Farhat Hached Teaching Hospital of Sousse, Tunisia, over a period of 5 years (January 2007 to December 2011).

Results
Seven patients diagnosed with ovarian carcinosarcoma were studied.
Their average age was 50 years, with an average parity of 5.4.
All patients consulted at a late stage (III and IV) with an average tumor size of 10.4 cm at the time of diagnosis.
The mode of revelation of the disease was mainly pelvic pain followed by abdominal distension and deterioration of the general condition.
In five cases, pelvic ultrasound showed a large, heterogeneous and compartmentalised pelvic-abdominal solid and cystic mass.
There was no radiological specificity of ovarian carcinosarcoma compared with other malignant ovarian tumors.
The CA125 was high in all cases, however, does not exceed the value of 102 IU / ml.
Four patients underwent radical surgery.
The macroscopic appearance of the tumor was fleshy, solid and cystic with foci of necrosis and hemorrhage. Four tumors were homologous, and three heterologous whose mesenchymal component was seat of rhabdomyo-sarcoma in one case and chondrosarcoma in two cases.
Immunohistochemistry detected anti-cytokeratin antibodies in 6 cases and anti-Desmin antibody in one case.
Six patients were treated with chemotherapy.
The average survival of our patients was 13.8 months. Three patients developed hepatic metastases and one patient developed pulmonary metastasis.
The poor prognostic factors that could be identified were age greater than 55 years and the advanced stage of the disease.

Conclusion
Multicentric studies are needed to optimize the management of these rare tumors to improve the prognosis clouded by a diagnosis often late because of a poor clinical presentation, a low specific radiology semiology, a lower chemo-sensitivity and a increased risk of relapse and metastasis.

Keywords
Carcinosarcoma, Ovary, Gynecology

Supplementary material
http://sites.altilab.com/files/159/abstracts/ovarian-carcinosarcoma.docx,
http://sites.altilab.com/

Sex cord-stromal tumors of the ovary: clinical and pathological study of 13 cases

Authors

RAJA BRIKI 1, ONS KAABIA 1, KHALID OUAZZANI TAIBI 1, SAFIA ERNEZ 1, MEHDI MAKNI 1, SASSI BOUGHIZANE 1, HEDI KHAIRI 1,

1. Department of Gynecology and Obstetrics, Farhat Hached's university hospital, Sousse, TUNISIA

Abstract ID: 3970

Introduction
Ovarian sex cord-stromal tumors are uncommon neoplasms that represent approximately 7% of all ovarian tumors. These tumors, which develop from cells arising from the primitive sex cords or stromal cells, comprise a diverse group. As a result, these tumors are currently subdivided as pure stromal tumors, pure sex cord tumors, or mixed sex cord-stromal tumors.
Ovarian sex cord-stromal tumors differ from the more frequent epithelial neoplasms via strong associations with hormone-mediated syndromes, presentation in a broad age range, and the near-ubiquitous diagnosis of low-stage disease with a good outcome.

Material and methods
This is a descriptive study of all cases of malignant tumors of the Sertoli Leydig cell ovary diagnosed at the pathology laboratory of the Farhat Hached Hospital of Sousse, Tunisia, since the creation of the center's cancer register over a 12-year period from 2004 to 2016.

Results
13 cases of ovarian cancer with Sertoli Leydig cell tumors between 2004 and 2016 were collected.
The onset of the first signs of the disease ranged from 14 years to 79 years with a median age of 30 years.
At diagnosis, seven patients were in genital activity; the others were menopausal.
Two women had a personal carcinological history: one was operated on a borderline tumor of the ovary and the other on a basal cell carcinoma of the face.
Clinical presentation can be divided into two major signs: endocrine signs present in 76.92% of cases and non-endocrine signs present in 53.84% of cases.
Pelvic ultrasound was performed in all patients. The use of computed tomography (CT) was performed in 8 patients. The scan confirmed in most cases the existence of the tumor and allowed a local, regional and remote study of possible lesions.
All patients underwent surgical exploration. It was performed in 6 patients by laparoscopic and 7 patients by laparotomy from the outset.
Peritoneal carcinomatosis was present in 5 patients.
At the end of the clinical, radiological and surgical explorations, the tumor can be classified into anatomo-clinical stages according to the FIGO classification: 10 patients were in stage I and 3 patients were in stage III.
Four of our patients had metastasis during the course of development, and accounted for 30.76% of the cases.
For overall survival, five of the thirteen patients are still alive; representing an overall survival rate of 38.46%.

Conclusion
The rarity of sex cord-stromal tumors contributes to a low index of suspicion; therefore, a thorough knowledge of clinical, pathological and radiologic findings of these tumors is important and allows radiologists to narrow the differential diagnoses for ovarian tumors, thus facilitating surgical planning and the avoidance of inappropriate treatments.

Keywords
Ovarian tumor, Tumor of sexual cords, Sertoli Leydig, Pathological anatomy

Supplementary material
http://sites.altilab.com/files/159/abstracts/ovarian-sex-cord-stromal-tumors.doc,
http://sites.altilab.com/

Breast cancer and pregnancy: about a case series and a review of literature

Authors

SAFIA ERNEZ 1, RAJA BRIKI 1, MEHDI MAKNI 1, KHALID OUAZZANI TAIBI 1, SAMIR HIDAR 1, SASSI BOUGHIZANE 1, HEDI KHAIRI 1,

1. Department of Gynecology and Obstetrics, Farhat Hached's university hospital, Sousse, TUNISIA

Abstract ID: 3971

Introdiction
Breast cancer associated with pregnancy is a rare entity. Its prognosis is globally bleak because of the young age of onset and the diagnostic delay related to pregnancy mammary modifications.

Materials and Methods
We studied 9 cases of pregnancy-associated breast cancer collected at the Gynecology Department of Sousse, Tunisia. We compared our results with those of literature and tried to identify the particular points of this management as well as specify the prognosis of this association.

Results
Average age of our patients was 33, with extremes of 24 and 44 years.
Average parity was 1.7.
The tumor was classified T1 in 4 cases and T3 in 2 cases.
Axillary lymph nodes were palpable in 4 cases.
Mammography was performed in 100% of cases.
In our series, there have been 6 therapeutic interruptions of pregnancy, and only 3 cases of pregnancies have been completed.

Discussion and Conclusion
Breast cancer associated with pregnancy is often late-onset in relation to the general population with a larger tumor size and lymph node metastasis in 89% during pregnancy compared to 55% for the general population.
The goal of management is to offer an optimal treatment for the mother by limiting the risks to the fetus as much as possible.
Surgical treatment has the same indications as outside pregnancy; conservative treatment may be offered only if radiation therapy can be postponed. Chemotherapy is avoided during the first trimester, however it has no major fetal risks in the 2nd and 3rd trimesters for the FEC (5 fluoracile, epirubicin, cyclophosphamide) and FAC (5 fluoracile, anthracycline, cyclophosphamide) type combinations.
No hormone therapy or targeted therapy is currently possible during pregnancy or breastfeeding.

Keywords
Breast, Cancer, Pregnancy, Prognosis

Supplementary material
http://sites.altilab.com/files/159/abstracts/breast-cancer-and-pregnancy.docx, http://sites.altilab.com/

The mutational and copy number landscape of ovarian carcinosarcoma

Authors

Darren Ennis 1, Gareth Bryson 2, Suzanne Dowson 3, Ros Glasspool 4, Patricia Roxburgh 3, David Millan 2, Andrew Biankin 3, Iain McNeish 1, Susanna Cooke 3, Scottish Genome Partnership 3,

1. Surgery & Cancer, Imperial College London, London, UNITED KINGDOM
2. Pathology, QEUH, Glasgow, UNITED KINGDOM
3. Cancer Sciences, University of Glasgow, Glasgow, UNITED KINGDOM
4. Medical Oncology, Beatson West of Scotland Cancer Centre, Glasgow, UNITED KINGDOM

Abstract ID: 3975

Introduction
Ovarian carcinosarcomas (OCS) account for approximately 5% ovarian cancer cases, but have been specifically excluded from large treatment-defining clinical trials. They present at late stage and have a poor prognosis. Originally considered to be a type of sarcoma, these biphasic tumours are now considered to be epithelial, with biphasic differentiation occurring during tumour development. Due to their exclusion from clinical trials, little is known of the biology of this disease. We sought to identify the genomic abnormalities in OCS.

Materials /Patients and methods
Archival FFPE samples from 18 OCS cases were identified. Next-generation sequencing (custom 377-gene panel; Illumina NextSeq500; 2 x 75bp PE) was performed on micro-dissected carcinomatous and sarcomatous components as well as metastatic deposits. Copy number (CN), indel and SNV analysis was performed on each component. Immunohistochemistry for immune cell populations and RNAseq analysis on matched carcinoma/sarcoma samples are on-going.

Results
Median age at diagnosis was 70.9 years (range 49.4-74.6). 11 cases were stage 3 or 4 at diagnosis. Median overall survival was 32.2 months. 17/18 cases had high-grade serous carcinoma (HGSC) morphology in the carcinoma component; the remaining case arose within a G2 endometrioid tumour. Tumours had genomic profiles similar to HGSC, including near-ubiquitous TP53 mutation (17/18 cases, including 17/17 HGSC-derived cases), CCNE1 amplification (4/18), BRCA2 loss or mutation (4/18), inactivation (by SNV) or disruption (by rearrangement) of NF1 and CDKN2A (2/18 each), deletion of RB1 and PTEN (2/18 each) and MYC amplification (1/18 cases). The endometrioid-derived case lacked TP53 mutations but contained mutations in KRAS and ERBB2 in both carcinoma and sarcoma components. As with HGSC, genomes were structurally and numerically chaotic with an average of 3.3 high-level gains and 1.4 likely homozygous losses per sample, as well as 3.9 sequence-level mutations. There were no consistent SNV/indel differences between carcinoma and sarcoma components, with at least one point mutation shared in all sample pairs. On average, carcinoma-sarcoma pairs differed by a single mutation, with 100% SNV concordance in 50% of cases. By contrast, cases showed much more diversity in CN profiles between carcinoma and sarcoma, with a mean of 10.6 genes (range 0-36) having different CN states between the two. The most commonly different genes were FGF3, which showed relative gain in the carcinoma in 4/16 cases, and MDM2, which showed relative gain in the sarcoma in 3/16 cases. Metastases showed substantial genomic divergence from their corresponding primary, indicating early seeding of metastatic sites.

Conclusions

There are few mutational differences between carcinoma and sarcoma components in OCS, with shared point mutations indicating a clonal origin. By contrast, there is diversity in CN profiles. Metastases show substantial genomic divergence from their corresponding primary, indicating early metastatic seeding. Overall, OCS cases with a high grade serous carcinoma component have genomic profiles that are very similar to classical HGSC, including ubiquitous TP53 mutation. These tumours should be included in clinical trials that recruit patients with HGSC.

Vaginal Cancer: About 16 Cases

Authors

MEHDI MAKNI 1, RAJA BRIKI 1, KHALID OUAZZANI TAIBI 1, SAFIA ERNEZ 1, ESSLEM GANA 1, CYRINE CHELLY 1, SASSI BOUGHIZANE 1, HEDI KHAIRI 1,

1. Department of Gynecology and Obstetrics, Farhat Hached's university hospital, Sousse, TUNISIA

Abstract ID: 3976

Introduction
Vaginal cancer is a rare cancer; it represents 1 to 2% of gynecological cancers and mainly concerns the elderly woman.

Objective
To evaluate the epidemiological, clinical and therapeutic aspects as well as the prognosis of vaginal cancer.

Patients and Methods
This is a retrospective study of 16 cases of vaginal cancer listed from January 2004 through December 2017.

Results
The average age was 56.12 years old [22-75]. The median age was 65 and 56% were over 60 years old.
The majority of cancers were squamous cell carcinoma (n = 7) and FIGO stage IV (n = 7).
The treatment was radiotherapy in 15 cases, one patient had concomitant chemotherapy to radiotherapy, and two were operated on: colpohysterectomy and abdominal perineal amputation.
Overall survival at 5 years was function of the initial tumor extension. It was on average 60% for T1 or T2 tumors, 28% for T3 or T4. It is important to correlate these statistics with the advanced age of patients.

Conclusion
Vaginal cancers are rare and aggressive cancers. Advances in surgery and radiotherapy have significantly improved tumor control of malignant epithelial tumors of the vagina. In non-epithelial tumors chemotherapy has taken a prominent place.

Keywords
Cancer, Vagina, Pathology, Prognosis

Supplementary material
http://sites.altilab.com/files/159/abstracts/vaginal-cancer.docx, http://sites.altilab.com/

Papillary Serous Adenocarcinoma of the Endometrium: Surgical management and prognosis

Authors

KHALID OUAZZANI TAIBI 1, RAJA BRIKI 1, SAFIA ERNEZ 1, CYRINE CHELLY 1, ESSLEM GANA 1, MEHDI MAKNI 1, SASSI BOUGHIZANE 1, HEDI KHAIRI 1,

1. Department of Gynecology and Obstetrics, Farhat Hached's university hospital, Sousse, TUNISIA

Abstract ID: 3977

Introduction
Papillary serous adenocarcinoma of the endometrium accounts for less than 10% of uterine cancers. Although rare, he is responsible for 39% of deaths.
The aim of this work is to evaluate the treatment and prognosis of this cancer through a retrospective study.

Pathients and Methods
Retrospective study of 16 cases of managed in the gynecology department at Farhat Hached University Hospital in Sousse, Tunisia.
Demographic, surgical and pathological data as well as survival were analyzed.

Results
The average age of the patients was 71.5 years old.
The average body mass index was 25.9 kg / m2.
A preoperative histological diagnosis was obtained in 87.5% of cases.
Laparotomy was the preferred approach (83%).
Peritoneal cytology, infracolic omentectomy, pelvic and para-aortic lymphadenectomy were performed in 81.2%, 31.2%, 63.7% and 28.7% of cases, respectively.
According to the FIGO classification, there were 56.2% early stages and 43.8% advanced stages.
Pelvic lymphadenectomy, FIGO, and adjuvant radiotherapy had an impact on survival.

Conclusion
Uterine serous carcinoma is more rare and poorer prognosis than endometrioid carcinoma of endometrium with also different epidemiological characteristics. It is therefore necessary to intensify our efforts in field of continuing medical education and to improve dissemination of standards in order to guarantee patients optimal care of this pathology.

Keywords
Cancer, Endometrium, Anatomopathology, Papillary serous adenocarcinoma

Supplementary material
http://sites.altilab.com/files/159/abstracts/papillary-serous-adenocarcinoma-of-the-endometrium.docx, http://sites.altilab.com/

Uterine sarcomas in the Tunisian center: clinical features, pathological findings and prognostic factors

Authors

KHALID OUAZZANI TAIBI 1, RAJA BRIKI 1, SAFIA ERNEZ 1, CYRINE CHELLY 1, ESSLEM GANA 1, MEHDI MAKNI 1, ABDELJALIL KHLIFI 1, SASSI BOUGHIZANE 1, HEDI KHAIRI 1,

1. Department of Gynecology and Obstetrics, Farhat Hached's university hospital, Sousse, TUNISIA

Abstract ID: 3978

Introduction
Uterine sarcomas are rare tumors representing less than 5% of malignant tumors of the uterus. The three main histological forms are carcinosarcoma, leiomyosarcoma and endometrial stromal sarcoma. Adenosarcoma and rhabdomyosarcoma account for less than 5% of cases.

Objective
(1) To study clinical and pathological features of uterine sarcomas
(2) To identify prognostic factors of uterine sarcomas.

Pathients and Methods
A retrospective, descriptive and analytical study, spread over 18 years (1993-2011) and involving 57 cases of uterine sarcoma treated in the Obstetrics and Gynecology Department of the Farhat Hached University Hospital, Sousse, Tunisia.
Clinical and paraclinical data, FIGO stage, and treatment and follow-up data were collected and analyzed.

Results
The average age was 48, with extremes of 26 to 69 years.
Metrorrhagia was the most common initial symptomatology in 36 patients. Other reasons for consultation of abdominal and pelvic pain, pelvic mass and leucorrhea.
The physical examination found abdominal and/or pelvic mass in 36% of cases, and a tumor delivered by the cervix in 12.5% of cases.
Pelvic ultrasound was first-line and showed in most cases a uterine tumor suggestive of a fibroma with no evidence of malignancy.
The time between onset of initial symptomatology and histological diagnosis was 2 to 24 months. The diagnosis was strongly suspected before the initial intervention in 38% of cases.
A total hysterectomy with bilateral adnexectomy was performed in 39 cases. It was associated with an omentectomy and pelvic lymphadenectomy in 18 cases. The distribution of tumors by histological type was as follows: 38 cases of leiomyosarcomas, 3 cases of carcinosarcoma, 2 cases of adenosarcoma, 11 cases of endometrial stroma sarcoma (high grade and low grade), 2 cases of rhabdomyosarcoma, 1 case granulocytic sarcoma and 1 case of undifferentiated sarcoma.
The tumor stages according to FIGO were: stage I in 30 cases, stage II in 12 cases, stage III in 6 cases and stage IV in 3 cases.
Radiation therapy was indicated in 15 cases. Chemotherapy was done in 13 cases.
The 5-year overall survival rate was 17.5% and the recurrence-free survival was 15%.
The prognostic factors for overall survival were age and the FIGO stage in univariate analysis, whereas in multivariate analysis, only the FIGO stage persists as an important prognostic factor. For survival without recurrence, only the histological type was found as a prognostic factor in univariate analysis.

Conclusion

Uterine sarcomas are rare tumors with poor prognosis. These tumors have no specific symptomatology and are characterized by great anatomopathological heterogeneity. Their diagnosis must be early because survival is correlated with the tumor stage at discovery. Paradoxically, this diagnosis is often delayed and posed retrospectively during the histological analysis of the operative specimen.

Keywords
Uterine Sarcomas, Pathology, Prognosis

Supplementary material
http://sites.altilab.com/files/159/abstracts/uterine-sarcomas.docx,
http://sites.altilab.com/

Uterine tamponade for a case of gestational choriocarcinoma with heavy vaginal bleeding

Authors

Rozilla Khan 1, Huda Saleem Abbasi 1,

1. Obstetrics & Gynecology, Aga Khan University Hospital, Karachi, PAKISTAN
2. Obstetrics & Gynecology, Aga Khan University Hospital, Karachi, PAKISTAN

Abstract ID: 3980

Introduction
Choriocarcinoma is a highly invasive tumor derived from trophoblast cells, which has a high chance of bleeding due to high vascularity and affinity of trophoblast for blood vessels. We are presenting a case of gestational choriocarcinoma with life-threatening haemorrhage. She was successfully treated in our hospital, which provides a clinical reference for this difficulty.

Case review
23 years old Para 1 LMP 4 months back, with very heavy vaginal bleeding, non painful 3 months with lower back pain 2-3 weeks had gynecological procedure one month back in Afghanistan with laparotomy. No histopathology or notes were available.

On Admission BP 90/50mmHg, pulse 110 bpm, Hemoglobin of 4.7gm/dl and Bhcg 54623 mIU/ML, coagulation profile and A mass was felt protruding through the cervix, which was soft and friable and extending on to posterior and left vaginal wall . She was managed in the Emergency room with fluid and blood product replacement, and uterine and vaginal packing with ribbon gauze was performed. She was managed supportively and subsequently CT Chest + Abdomen/Pelvis scans were done which showed:
A Heterogeneously enhancing soft tissue density lesion identified within the cul de sac which is inseparable from the uterus, measuring 12.1 x 5.6 cm. It is compressing the mid ureters resulting in mild proximal hydroureter and hydronephrosis bilaterally. Multiple areas of patchy infiltrates identified in both lungs with surrounding ground glass haze and subtle soft tissue density nodules. The differentials included Metastatic deposits vs alveolitis.

Intervention
The vaginal pack was removed after 12 hours and a tissue biopsies were taken from the polypoid growth. Torrential bleeding occurred resulting in hypovolemeic shock at which the patient was packed again with ribbon gauze and nasal Packing forceps were used to pack the uterus and vagina
Biopsies from the mass were consistent with GTD in the backdrop of beta-HCG levels >50,000. Her care was subsequently taken over by the Oncology Service and she was started on Chemotherapy (EMA-CO). The vaginal and uterine packing was kept in place for 72 hours. She was kept on ceftriaxone and metronidazole for 5 days. She remained well, and vaginal bleeding stabilized.

Outcome
She received chemo 7 cycles of EMACO and remained stable and returned home in stable condition. Follow-up at 3 years post EMACO showed that the patient was in remission. It has been difficult follow-up the patient due to the political situation in Afghanistan. This precludes her fertility status, but the intervention allowed her condition to remain stable while chemotherapy was delivered for a favorable outcome.

Lesson learnt
The diagnosis of choriocarcinoma may be difficult, especially in the setting with the limit of medical resources. While some studies have looked at uterine artery embolization, our

study looked at uterine packing to accomplish this. this may be useful in low resource settings.

Key words
Gestational choriocarcinoma, Uterine Tamponade, Massive haemorrhage

PIK3R1 mutations may contribute to development of endometrioid and clear cell types of ovarian cancer, while allelic loss to serous type.

Authors

Iwona K. Rzepecka 1, Bozena Konopka 1, Agnieszka Podgorska 1, Agnieszka Budzilowska 1, Agnieszka Dansonka-Mieszkowska 1, Pawel Leszczynski 1, Martyna Lukasik 1, Urszula Piekarska 1, Andrzej Tysarowski 1, Jolanta Kupryjanczyk 1,

1. Department of Pathology and Laboratory Diagnostics, Maria Sklodowska - Curie Memorial Cancer Center and Institute of Oncology, Warsaw, POLAND

Abstract ID: 3982

Introduction
The phosphoinositide 3-kinase (PI3K) signaling pathway is frequently activated in ovarian cancer, especially in endometrioid and clear cell types. This cascade is regarded as a promising candidate for therapeutic interventions. Our previous studies revealed that ovarian tumors exhibit alterations in one or more components of this cascade, e.g. mutations in the PIK3CA, PTEN and KRAS genes. In this study we aimed to determine the status of PIK3R1, a gene encoding the p85α regulatory subunit of PI3K.

Patients and methods
142 ovarian tumors were analyzed for PIK3R1 mutations with the use of the single-strand conformation polymorphism (SSCP) and/or sequencing methods. The PIK3R1 copy number alterations (CNA) analysis was performed for 198 tumors using quantitative PCR (qPCR) method. Associations between variables were studied using the two-sided Fisher's exact test, $\chi 2$ test or Student's t-test.

Results
Five PIK3R1 mutations were found in 142 (3,5%) ovarian carcinomas. All mutations were deletion or deletion/insertion type. PIK3R1 mutations were detected in three endometrioid (3/26, 11,5%) and two clear cell (2/19,10,5%) carcinomas. They were more frequent in FIGO stage I-II (4/42, 9.5%) than in FIGO III-IV carcinomas (1/95, 1.1%, P = 0.038). There were no significant associations between PIK3R1 mutations and tumor grade or patient's age. PIK3R1 mutations tended to be more frequent in PTEN mutant tumors (2/12, 16.7%) than in PTEN wild-type (3/130, 2.3%) tumors (P = 0.057). PIK3R1 mutations were mutually exclusive with PIK3CA mutations. PIK3R1 CNA was found in 70 out of 198 (35.4%) ovarian cancers. There were 28.3% (56/198) allelic losses and 7.1% (14/198) amplifications at the PIK3R1 locus. Specifically, the gene allele loss was detected in 42 out of 126 (33.3%) serous, 4 out of 26 (15.4%) endometrioid, 5 out of 19 (26.3%) clear cell, two undifferentiated, one mucinous and in two ovarian cancers of mixed type. Allelic loss was more common in serous cancers (42/126, 33.3%) than in other tumor types (14/72, 19.4%, P = 0.0368). The copy number loss was more frequently observed in advanced FIGO III-IV stages (52/152, 34.2%) than in FIGO stage I-II (4/46, 8.7%, P = 0.0006). High-grade cancers had a higher frequency of allelic losses (48/139, 34.5%) than low-grade tumors (8/59, 13.6%, P = 0.0008). Among the 122 informative tumors assessed for PIK3R1 CNA and PTEN LOH, the PIK3R1 loss was more frequent in tumors with a concomitant PTEN loss (45%, 18/40) than in tumors with retained PTEN alleles (20.7%, 17/82; P = 0.005).

Conclusion
PIK3R1 mutations may play a role in development of endometrioid and clear cell types, while allelic loss in serous type. The PIK3R1 and PTEN aberrations frequently coexist in ovarian cancers.

Keywords
ovarian cancer, PIK3R1, p85?, mutations, CNA

PPARgamma Activation and XIAP Inhibition Mutually Augment their respective Anticancer Effects in Granulosa Cell Tumors of the Ovary

Authors

Simon Chu 1, Dilys Leung 2, Trang Nguyen 1, Maria Alexiadis 3, Peter Fuller 3,

1. Hormone Cancer Therapeutics, Hudson Institute of Medical Research, Melbourne, AUSTRALIA
2. Fiona Elsey Cancer Research Institute, Melbourne, AUSTRALIA
3. Steroid Receptor Biology, Hudson Institute of Medical Research, Melbourne, AUSTRALIA

Abstract ID: 3983

Introduction
Ovarian granulosa cell tumors (GCT) are hormonally active cancers characterized by indolent growth and late, invasive relapse. GCT are unusual in that they have an unexplained propensity for late recurrence. ~80% of patients with aggressive or recurrent tumors die from their disease. Aside from surgery the therapeutic options are very limited. We have identified the nuclear receptor peroxisome proliferator-activated receptor-gamma (PPARgamma) and the X-linked inhibitor of apoptosis protein (XIAP) as potential specific therapeutic targets. PPARgamma, a transcription factor that impedes proliferation and promotes terminal differentiation in granulosa cells (GC), is highly expressed in GCT. Its activity however is transrepressed by constitutive activity of the critical pro-survival NF-kappaB signaling pathway. Constitutive NF-kappaB signaling is potentially a consequence of a positive feed-forward loop involving XIAP, which is also highly expressed in GCT. As a potent inhibitor of apoptosis, XIAP is an attractive therapeutic target. We have shown in vitro that inhibiting XIAP releases NF-kappaB transrepression, and together with PPARgamma activation, induces apoptosis. We thus hypothesize that XIAP antagonism sensitizes GCT to pro-apoptotic strategies such as PPARgamma activation.

Methods and Results
Using two GCT-derived cell lines, KGN and COV434 cells, we investigated the anti-tumor effects of combined XIAP inhibition using Smac-mimetics and PPARgamma activation using thiazolidinediones (TZD). Transactivation assays revealed that NF-kappaB transrepression of PPARgamma can be relieved by NF-kappaB or XIAP inhibition. Combined Smac-mimetic and TZD treatment significantly induced apoptosis, reduced cell viability and proliferation in the GCT-derived cells in monolayer and 3D spheroid culture, as well as in a primary GCT explant model. We used the xCELLigence RTCA system to monitor cell invasion and showed that the Smac-mimetic and TZD co-treatment caused a significant delay in cell invasion. Cellular bioenergetic profiling of the KGN cells was assessed using the Seahorse XFp system, and we demonstrate that the combined treatment compromises cell metabolism in KGN cells. We utilized stable isotope labeling with amino acids in cell culture (SILAC) to identify differentially expressed proteins in the KGN cells following TZD and Smac-mimetic co-treatment. We identified a total of 32 differentially expressed proteins, 22 of which were upregulated by ≥1.5 fold with the combined treatment. Upregulated proteins included several involved in metabolic processes including acyl-CoA desaturase (4.50-fold), phosphoglycerate kinase 1 (2.87-fold) and α-enolase (1.75-fold). As PPARgamma plays a pivotal role in lipid and glucose metabolism, upregulation of these proteins is a consequence of PPARgamma activity being restored.

Conclusion
This study provides evidence that PPARgamma and XIAP co-treatment has anti-neoplastic effects in GCT. As therapeutics that target these proteins are already in clinical

or pre-clinical use, expedient translation to the clinic is possible. We propose that a combination therapy involving the abrogation of XIAP may be of greater efficacy for the treatment of GCT and potentially other ovarian cancer subtypes.

Keywords
Granulosa Cell Tumor, PPARgamma, XIAP, Smac-mimetics, therapeutics

Treatment of vulvo-vaginal melanoma: experience with moderm immunotherapy

Authors

Ronnie Shapira-Frommer 1, Tima Davidson 2, Guy Ben Betzalel 3, Nethanel Asher 3, Tamar Perri 4, Jacob Korach 4, Gal Merkel 3, Jacob Schachter 3,

1. Oncology Institute, Sheba Medical Center, Ramat-Gan, ISRAEL
2. Nuclear Medicine, Sheba Medical Center, Ramat-Gan, ISRAEL
3. Ella Institute for Immuno-Oncology, Sheba Medical Center, Ramat-Gan, ISRAEL
4. Onco-gynecological ward, Sheba Medical Center, Ramat-Gan, ISRAEL

Abstract ID: 3984

Introduction
Melanomas of gynecological origin are poorly represented in published series of melanoma. Being much rarer than cutaneous melanomas, series describing the outcome of modern immunotherapy for metastatic disease are lacking as well as standard of care guidelines for the treatment of loco-regional disease. Vulvo-vaginal melanomas may present with multi foci as well as common recurrence with further primary lesion- a phenomenon described as field disease. Herein we describe a single site experience with patients treated for vulvo-vaginal melanoma.

Patients and Methods
Patients who were treated for local disease and patients treated for metastatic disease since 2013 when modern immunotherapy became available for melanoma are included in this case control analysis.

Results
23 patients were treated since 2013. Median age was 65 years (range 21 to 79). 16 presented with vulvar melanoma and 8 with vaginal melanoma. 12 required several resections for regional additional primary lesion (field disease). 17 were treated with systemic therapy for metastatic or locoregional non resectable disease (7/10: vaginal/vulvar). 5 patients for stage IIIc disease, 2 with stage IV M1a disease, 8 with M1B disease and 2 with M1c disease. All received anti PD1 antibodies (pembrolizumab or nivolumab) monotherapy, of them as first line in 11 patients. 5 received Ipilimumab, 4 received combined Ipilimumab and Nivolumab, 3 received Interleukin 2 based therapy and 4 received chemotherapy. Response rate to anti PD antibodies was 6% with PR in one patient (6%), SD in 7 (41%) of whom 2 experienced pseudoprogression followed by prolonged stability (27 and 39 months) and PD in 9 patients (53%). Median PFS was 8 months. Grade 3/4 toxicity occurred in 3 patients (arthritis, colitis, DM type1). 1 patients achieved CR to combined ipilimumab and nivolumab post pembrolizumab failure. One achieved CR twice in response to ipilimumab and one achieved CR with chemotherapy given following failure of 2 immunotherapy lines. One patients only had BRAF mutation and responded to BRAF and MEK inhibitors. Median overall survival of all immunotherapy treated patients was 66 months (range 1.5 to 120) with no significant difference between patients with IIIc/IVM1A to M1B/M1c disease (66 vs 14 p=0.305).Vaginal melanoma correlated with worse outcome compared to vulvar melanoma (12 vs 66 mo, p=0.006, HR-0.19 95%CI 0.04-0.8).

Conclusion
Immune checkpoint inhibitors may induce prolonged benefit and durable survival in patients with locally advanced and metastatic vulvovaginal melanoma.

Keywords
Melanoma, vulvar, vaginal, pembrolizumab, nivolumab, ipilimumab

Immunohistochemical analysis of Nidogen I expression in epithelial ovarian cancer tissues in comparison to normal ovarian tissues - preliminary findings.

Authors

Rafa? Tarkowski 1, Krzysztof Ku?ak 1, Anna Ku?ak 1, Patrycja Ziober - Malinowska 1, Karolina Fr?szczak 1, Wies?awa Bednarek 1, Jan Kotarski 1,

1. I Chair and Clinic of Gynaecological oncology and Gynaecology, Medical University of Lublin, Lublin, POLAND

Abstract ID: 3985

Background and Aims
Late diagnosis of ovarian cancer is one of the most impactful factors regarding mortality of this disease. 70% of cases are detected and treated in stages III to IV according to latest FIGO data. Molecular studies of ovarian cancer hope to identify new biomarker proteins enabling an early diagnosis. Nidogen 1 is a basal membrane protein which could be relevant in both development and metastatic mechanism of ovarian cancer.

Methods
Paraffin embedded epithelial ovarian cancer tissues of 40 patients who underwent surgery in the Ist Chair and Clinic of Gynaecologic Oncology Medical University of Lublin. As a control we selected 20 normal ovarian tissue samples (paraffin embedded) from patients who underwent surgery due to benign conditions. Monoclonal mouse NID-1 antibodies (R&D systems) and DAB-H staining was performed according to the manufacturers guidelines. Light microscope was used and the obtained images were analyzed. From each sample 3 sites with most expression were selected and classified according to the localization of the expression (either intracellular, extracellular or no expression).

Results
In the group of ovarian cancer samples 83% (SD=0,23) presented intracellular expression, 14%(SD=0,27) presented and 3% of the viewed sties presented no expression. The control tissues presented 5% (SD=0,1) expression for intracellular matrix, 1%(SD=0,05) for the extracellular matrix and 94%(SD=0,11) presented no expression, p>0,001 (Student's t-test) respectively.

Conclusions
Epithelial ovarian cancer tissues present a significantly higher expression of the Nidogen 1 protein compared to the normal ovarian tissues. Further studies are required to evaluate its role in ovarian cancer pathogenesis.

Keywords
Nidogen 1, Ovarian cancer

ΔN/TAp63 Expression Ratio in Cervical Cancer: the Diagnostic and Clinicopathological Value

Authors

Dawn Chung 1,

1. Department of Obstetrics and Gynecology, Yonsei University Wonju College of Medicine, Wonju, KOREA, REPUBLIC OF

Abstract ID: 3986

p63 is a transcription factor of the p53 family, which involves in cell differentiation and proliferation of epithelium. Unlike p53, p63 is not highly mutated in human cancers, so it can be desirable targeting this tumor suppressor pathway. Among isoforms of p63, TAp63 has a transactivation (TA) domain at its N-terminal, and ΔNp63 does not have a TA domain. ΔNp63 is known to be expressed in several cancers. Recently, it has been reported that ΔN/TAp63 expression ratio as well as single isoform overexpression involve some pathogenesis of diseases. The aim of this study was to investigate the expression levels of TAp63 and ΔNp63 mRNA in cervical cancer tissue and analyze their ΔN/TAp63 expression ratio as a potential complement diagnosis.

The expression levels of TAp63 and ΔNp63 mRNA in 40 normal, 30 CIN1, 38 CIN3, and 52 cervical cancer formalin-fixed paraffin-embedding (FFPE) tissue samples were examined by quantitative reverse transcription polymerase chain reaction (RT-qPCR). The inhibitory effect of ΔNp63 siRNA was investigated using ME180 cell lines.

ΔNp63 showed significant overexpression in cervical cancer tissues compared to normal tissues, while TAp63 showed no statistically significant difference between normal and cervical cancer. Notably, ΔN/TAp63 expression ratio in cervical cancer samples was significantly increased compared to that in precancerous low grade intraepithelial lesion (LSIL) and low grade intraepithelial lesion (HSIL) samples. Among the clinicopathological parameters of cervical cancer, the patients with positive ΔN/TAp63 expression ratio showed statistical correlation with larger tumor size. ($p = 0.04$) Additionally, ΔNp63 siRNA effectively inhibited cervical cancer cell line ME-180.

In conclusion, ΔN/TAp63 expression ratio is ancillary diagnostic and ΔNp63 could be a target marker of cervical cancer.

Keywords
Cervical cancer, Diagnosis, Therapeutic target, TAp63, ?Np63, ?N/TAp63 expression ratio

Mutational Landscape of Adult Granulosa Cell Tumors of the Ovary from Whole Exome Sequencing

Authors

Simon Chu 1, Maria Alexiadis 2, Dilys Leung 3, Simone Rowley 4, Ian Campbell 4, Peter Fuller 2,

1. Hormone Cancer Research, Hudson Institute of Medical Research, Melbourne, AUSTRALIA
2. Steroid Receptor Biology, Hudson Institute of Medical Research, Melbourne, AUSTRALIA
3. Fiona Elsey Cancer Research Institute, Melbourne, AUSTRALIA
4. Cancer Genetics Laboratory, Peter MacCallum Cancer Centre, Melbourne, AUSTRALIA

Abstract ID: 3987

Introduction
Granulosa cell tumors (GCT) represent a unique subset of malignant ovarian tumours. Adult GCT are defined by the C134W somatic mutation in the FOXL2 gene. Although GCT have a better prognosis than epithelial tumors, late recurrences occur which usually lead to the patient's demise. Currently, reliable methods of predicting, nor the molecular mechanisms of relapse/aggressive behaviour are known. In this study, we sought to identify the additional somatic mutations responsible for recurrence and/or aggressive behaviour.

Methods
Tumoral DNA from 24 fresh frozen, FOXL2 mutation positive, aGCT (14 x stage 1 and 8 x stage 3) were subjected to whole exome sequencing using the Agilent SureSelect Human All Exon V5 capture system. Two of the stage 3 aGCT also had matched blood samples. The initial variant predictions were filtered to require that the variant was present in ≥33 bidirectional reads, with the variant allele frequency ≤ 0.70. Remaining germline SNPs or common sequence artefacts were eliminated by comparing against a database of 147 in-house germline exome sequences, and the 1000 Genome, Exome Variant Server and ExAC databases. Copy Number Analysis from the exome data was also performed.

Results
In all cases, the FOXL2 mutation was confirmed, a de facto positive control. The analysis identified on average 64 coding and essential splice-site variants (SNV and/or indels) in each aGCT. The matched germline data was used as reference for the 2 paired samples in a separate analysis. This analysis identified 25 coding SNVs and/or indels across the 2 paired samples. Recurrent mutations were not identified, while pathway analysis did not identify recurrent mutations in any specific pathway.
Copy number analysis confirmed previous cytogenetic observations that trisomy at chromosomes 12 and 14 occurs in ~30% of GCT and monosomy at 22 in ~40%; other large scale changes are more random and less frequent. There is a gain on chromosome 7 consistent with our previous observations for expression at the HOXA locus.
We also examined two hot-spot mutations in the telomerase (TERT) promoter, using targeted PCR on the samples in the whole exome. 42% of the aGCT were heterozygous for the -124C>T TERT promoter mutation. Interestingly, 29% of the stage 1 aGCT were heterozygous for the mutation whereas 67% of the recurrent aGCT contained the mutation. Our analysis also included a stage 1 aGCT which had then recurred at a later date; both the primary and metastatic tumor contained the -124C>T TERT promoter mutation.

Discussion/Conclusion
This first comprehensive exome-wide analysis of the mutational landscape of aGCT suggests that recurrence and/or aggressive behaviour is not defined by activation or loss

of specific genes or pathways however further studies are needed to exclude a role for splice-variants or genomic rearrangements. The functional significance of the copy number changes also requires further characterisation, although the observed changes appear not to correlate with tumor stage or behaviour. The apparent correlation of the presence of the TERT promoter mutation with tumor recurrence, suggests that TERT promoter mutation in a stage 1 GCT may be of prognostic significance.

Keywords
granulosa cell tumor, FOXL2, stromal tumors, telomerase promoter

Locally Advanced Large-Cell Neuroendocrine Carcinoma of the Uterine Cervix: A Case Report

Authors

Mirjana Mikovic 1, Aleksandar Tomasevic 1, Brankica Rakovic 1, Dragoslava Marjanovic 1, Predrag Petrasinovic 1, Vesna Plesinac-Karapandzic 1,

1. Radiation oncology for gynaecological malignancies, Institute for Oncology and Radiology of Serbia, Belgrade, SERBIA

Abstract ID: 3989

Locally Advanced Large-Cell Neuroendocrine Carcinoma of the Uterine Cervix: A Case Report
Mirjana Mikovic1, Aleksandar Tomasevic1, Brankica Rakovic1, Dragoslava Marjanovic1, Predrag Petrasinovic1, Vesna Plesinac-Karapandzic1,2
1Department of Radiotherapy, Clinic for Radiation Oncology and Diagnostics, Institute of Oncology and Radiology of Serbia, 2Faculty of Medicine, University of Belgrade, Serbia
Background: Large-cell neuroendocrine carcinoma (LCNEC) of the uterine cervix is a very aggressive type of tumor even at an early stage. Despite a multimodal treatment approach, locally advanced stage is often associated with extremely poor prognosis.
Case report: A woman, age 45 at diagnosis, was presented clinically with a large 8cm, stage IIIb (FIGO) tumor mass of the cervix. Multiple biopsies patohystologically verified LCNEC. An MRI of the abdomen and pelvis revealed large pelvic mass, dimensions 9x8 cm, (LLxAP) and two liver hemangiomas. The brain CT was normal and at chest CT, several micro nodular lesions (with calcifications), by diagnostic parameters, were considered as insignificant, with recommendation for closely monitoring. Total transcutaneous (TRT) dose of 46 Gy was delivered to the whole pelvis in 25 fractions, concomitant with 5 cycles of weekly cisplatin based chemotherapy (40 mg/m2) and combined with 5 intracavitary brachytherapy applications (central tube and two ovoids, weekly) with a dose of 7 Gy to reference point A/ per application. The tumor showed an excellent response to concomitant definitive chemoradiotherapy (CCRT); the effect was estimated as gross partial regression. Because of initial tumor volume, clinically visible residual Tu (1,5 cm) at the end of CCRT and aggressive tumor nature, by the decision of the tumor board, the patient's treatment continued every three weeks with systemic Etoposide - Cisplatin based chemotherapy regiment (CDDP 75 mg/m2, Etoposide 100mg/m2/tree days). After 3 cycles of chemotherapy, there was a clinically minimal rest tumor of the cervix (5 mm) with no evidence of disease progression at chest x-ray and ultrasound of abdomen. The chemotherapy continued up to 6 cycles. Now, ten months after diagnosis, the patient is in excellent condition and with no other clinical signs of disease. Further, full evaluation, including a chest CT scan and MRI of abdomen and pelvis (every 3 months) is scheduled for close follow-up.

Conclusion
Definitive concomitant radio-chemotherapy seems to be an effective treatment modality in locally advanced LCNEC tumor; however, further systemic chemotherapy and close monitoring are necessary due to aggressive form of disease.
Key words: large cell neuroendocrine carcinoma, cervix, chemoradiotherapy

oral or poster presentation

Keywords
large cell neuroendocrine carcinoma, cervix, chemoradiotherapy

OUTCOMES AFTER PRIMARY SURGERY OF UTERINE SARCOMA: RETROSPECTIVE CASE SERIES STUDY.

Authors

Vegas Ana 1, López Irene 1, Montero Nerea 1, Salvaro Alejandra 1, Millán Carlos 1, Miró María 1, Pérez Francisco J. 2, Moratalla Enrique 1,

1. Gynecology, Hospital Universitario HM Montepríncipe, Madrid, SPAIN
2. Pathology, Hospital Universitario HM Montepríncipe, Madrid, SPAIN

Abstract ID: 3990

Introduction
Uterine sarcomas are rare tumors, they constitute 8% of uterine tumors. There are different subtypes of uterine sarcomas based on the hystopathological exam: leiomyosarcoma, endometrial stromal sarcoma, undifferentiated uterine sarcoma and adenosarcoma. Natural history and response to the treatment is different depending on the tumor subtype. More evidence is needed to clarify and individualize the best treatment in each case.
We sought to determine the time to recurrence and survival after primary surgical treatment of uterine sarcomas in our hospital.

Patients and methods
A retrospective, case series study was performed including all patients who were diagnosed of uterine sarcoma and underwent primary surgical treatment in two tertiary hospitals between October 2010 and January 2017. Demographic data, hystophatology of the tumour, stage at the diagnosis, surgical procedures, complications and adjuvant therapies were collected from the patient records. Time to recurrence and survival were the main outcomes of the study.

Results
Eight patients received surgical treatment due to the diagnosis of uterine sarcoma in this period. Mean age at diagnosis was 46 (22-62) years. The most frequent complaint that led to the diagnosis was abnormal uterine bleeding.
Radical abdominal hysterectomy was the main surgical procedure. One patient also received pelvic and para-aortic lymphadenectomy and another one additional extensive surgical procedures including omentectomy and appendicectomy. All the patients received adjuvant chemotherapy and radiotherapy.
Regarding to hystopathologic exam, 50% of sarcomas were endometrial stromal sarcoma (ESS) and 37,5% Leiomyosarcoma (LMS) and one case of undifferenciated uterine sarcoma (US) (12,5%). All cases except for one ESS were high grade sarcomas.
Following FIGO classification of uterine sarcomas, stage at diagnosis was more advanced in patients with US and LMS. The patient with the US and two of LMS presented stage IV and the other one with LMS stage IIIB, whereas patients with EES were diagnosed in a lower stage, three presented stage IB and the other one stage IIIC.
Mean time until the first recurrence was 21,4 (6-68) months. All patients with LMS and US decesased and the overall survival was 12,75 (2-34) months. One patient with ESS did not survive after a surgery complication with a massive bleeding. The other three patients with ESS are still alive after more than two years since diagnosis. The patient with the low grade ESS, had presented four recurrences, and the two others had presented one and two recurrences, all cases treated with surgery and chemotherapy.
Five year survival rate for EES was 66,7%.

Conclusions
Being conscious of the limitations of our study, the small size and the heterogeneity of our series our findings suggests that uterine sarcoma is a devastating disease, with a poor prognosis and high local recurrence and metastatic rates. Nowadays treatment is

based on radical surgery, chemotherapy and radiotherapy, however, further studies are needed to identify new therapies.

Keywords
Uterine sarcoma, leiomiosarcoma, primary surgery

Mullerian adenosarcoma: a clinicopathologic and management review of 5 cases

Authors

Martín Blanco Carmen 1, Díaz González Esperanza 2, Pérez Mies Belén 2, Sánchez Martínez María Concepción 2, Moratalla Bartolomé Enrique 2,

1. Gynecology and Obstetrics, Ramón y Caja Universitary Hospital, Madrid, SPAIN
2. Gynecology and Obstetrics, Ramón y Cajal Universitary Hospital, Madrid, SPAIN

Abstract ID: 3992

Introduction
Adenosarcomas are mixed Mullerian tumors of the female genital tract. Most of this type of neoplasms arise from the endometrium and with less frequency, endocervix, lower uterine segment or myometrium. However, they can be found in the ovaries or in extrauterine tissues possibly related to endometriosis. They constitute less than 0,5% of uterine malignancies and 5% of uterine sarcomas. They are characterized by a benign epithelium and a sarcomatous stroma being typically low grade. In most cases it is diagnosed in stage I, with a 5-year overall survival of 60-80%. However, adenosarcoma with sarcomatous overgrowth , defined as the presence of pure sarcoma occupying at least 25% of the tumor, show a decreased 5 year overall survival and a increased risk of recurrence.
Usually , this type of tumors affect old postmenopausal women, with a peak of incidence between sixth and seventh decades, although a 30% of the cases appear in premenopausal women.
Patients with adenosarcomas usually debut with abnormal uterine bleeding. It can frequently be seen as a polypoid mass protruding through the external cervical os.
Limited data of the clinicopathologic features and optimal management is available. Hysterectomy with bilateral salpingo-oophorectomy is recommended. The role of lymphadenectomy is uncertain, and currently is not indicated as the incidence of lymph node metastasis is rare. Regarding adjuvant therapy, it is not clear which adjuvant treatment should be given to improve the outcomes of these patients. Additional data is required to determine the best strategies for these patients.

Material and methods
We analyze 5 cases of uterine adenosarcoma diagnosed between 2000 and 2018 in our Hospital.

Mean results
The mean age of presentation is 45 (range 33-58). All the patients underwent total hysterectomy with bilateral salpingectomy at the time diagnosis was made. The bilateral oophorectomy was performed in 3 patients. In one case, a 33 year old woman with stage Ia adenosarcoma, the hysterectomy was postponed until the patient fulfilled her reproductive desires, performing surgery fifteen months after diagnosis was made.
The 80% of the cases were diagnosed in stage I . The remaining 20% was a case of adenosarcoma with heterologous elements, showing striated muscle differentiation (70% rhabdomyoma and 30% embryonal rhabdomyosarcoma). Only this patient received adjuvant chemotherapy due to presence of recurrence risk factors, presenting local recurrence 6 months after surgery in vaginal vault, treated with radiotherapy. This patient currently has a followed-up period of two years.

One patient shows complete remission with a followed-up period of 18 years. The other patients have a period of progression-free survival of 2 years, 1 year and one has a recent diagnosis.

Conclusion

Adenosarcomas are rare tumors. Most cases are diagnosed in early stages. However, the presence of myometrial invasión, heterologous elements including rhabdomyoblastic differentiation, linfovascular invasión, necrosis, sarcomatous overgrowth confer a high risk

Keywords

adenosarcoma, mullerian, uterine, tumor

Improving the Quality of Life after Radiotherapy

Authors

Liana Svampane 1, Ella Nesterenko 1,

1. Riga East University Hospital, Oncology Centre of Latvia, Riga, LATVIA

Abstract ID: 3993

Objectives
The aim of the study was to periodically investigate the repair of vaginal mucous membrane for patients after radiotherapy.

Materials and Methods
The study includes 63 patients after a regimen of radiotherapy, using it as the only and primary method of treatment including postoperative radiotherapy. Seven patients were 30-39 years old, nine were 40-49 years old, 18 were 50-59 years old, 20 were 60-69 years old, six were 70-79 years old and three were 80 years old or older.
After radiotherapy the patients had three follow-up visits: after one month, after four months and after seven months.

Results
Thirty-three patients underwent 3D conformal radiotherapy, 28 patients had combined radiotherapy (3D conformal and cavity therapy) while two patients had cavity therapy. Further treatment was appointed depending on the type of administered radiotherapy and evaluating local changes after therapy. Local changes like colpitis or vaginitis were observed after combined radiotherapy. Therefore, first vaginal capsules were administered to locally treat gynaecological inflammations. Twelve patients received such local therapy after combined radiotherapy. Afterwards, Feminella suppositories were administered according to the following schedule: one per day for ten days, continue three per week for three months and two per week for three more months.
The follow-up after one month had the following patient response after treating with Feminella. Twenty-eight patients had completely normal mucous membrane, 30 patients had local changes in inflammation while five patients had dropped out of the study. After the four months follow-up, 37 (28+9) patients had completely normal mucous membrane, 21 patients had local changes in inflammation while five patients had dropped out of the study. Finally, after the seven months follow-up, 40 (28+9+3) patients had completely normal mucous membrane, 18 patients had local changes in inflammation while five patients had dropped out of the study.

Conclusion
Feminella suppositories are suitable for vaginal mucous membrane repair and the improvement of quality of life after radiotherapy, including the reduction of local vaginal inflammation and improvement of urination and sexual functions.

Keywords
vaginal mucous membrane repair, radiotherapy, Feminella

THE CLINICAL OUTCOMES OF NEOADJUVANT DOSE-DENSE DOXORUBICIN-CISPLATIN CHEMOTHERAPY IN COMBINED TREATMENT OF LOCALLY-ADVANCED CERVICAL CANCER

Authors

Olga Smirnova 1, Nikolay Bondarev 2, Elena Ulrikh 2, Nikolay Mikaya 2, Olga Lavrinovich 2, Anna Petrova 2, Irina Meshkova 2, Andrey Mischenko 2, Anna Artemyeva 2, Adel Urmancheeva 2, Igor Berlev 2,

1. Oncogynecology, N.N. Petrov National Medical Research Center of Oncology, Ministry of Health of the Russian Federation, St. Petersburg, Russia, SAINT-PETERSBURG, RUSSIAN FEDERATION
2. Oncogynecology, N.N. Petrov National Medical Research Center of Oncology, Ministry of Health of the Russian Federation, St. Petersburg, Russia., SAINT-PETERSBURG, RUSSIAN FEDERATION

Abstract ID: 3994

Objective
To evaluate the clinical outcomes of doxorubicin-cisplatin neoadjuvant chemotherapy (NACT) in patients with locally advanced cervical cancer (CC) IB2 - IIB stage.
Materials and Methods: We analyzed the efficacy and side-effects of dose-dense neoadjuvant cisplatin (75 mg/m2)/ doxorubicin (35 mg/m2) chemotherapy administered intravenously in 10-days interval in a prospective cohort study of 70 patients (27-68 years (mean age 45 years) with locally advanced CC. The subsequent radical surgery (Piver III) was performed in 82.8% of patients.

Results
The clinical effect as complete response was observed in 7.1%, partial response in 75.7% and stable disease in 8.6% of cases. In six patients (8.6%) progression of disease was observed. The complications rate was acceptable. The remission rate was observed in 91,4% of cases during the 24 months follow up period.
Disease recurrence was diagnosed in 2 patients (2,8%) with post-NACT partial disease regression.

Conclusion
Dose-dense neoadjuvant chemotherapy is an acceptable option for locally advanced cervical cancer treatment in thoroughly selected patients and requires long-term follow up results.

Keywords
locally advanced cervical cancer, dose-dense neoadjuvant chemotherapy, NACT, pathomorphological response, ypCR

Syringoid eccrine carcinoma of the vulva: differential diagnosis, treatment and follow-up.

Authors

Grazia Carrara 1, Giuseppe Scibilia 1, Andrea Benedetto Di Stefano 1, Basilio Pecorino 1, Maria Cristina Teodoro 1, Giuseppa Scandurra 2, Maria Grazia Tranchina 3, Paolo Scollo 1,

1. Maternal and Child, Obstetrics and Gynecology Division, Cannizzaro Hospital, Catania, ITALY
2. Oncology Division, Cannizzaro Hospital, Catania, ITALY
3. Anatomical Pathology Division, Cannizzaro Hospital, Catania, ITALY

Abstract ID: 3996

Introduction
Syringoid eccrine carcinoma (SEC) is an extremely rare malignant adnexal tumor with eccrine differentiation first described by Freeman and Wilkemann in 1969 as eccrine epithelioma. Its name originates from histological pattern which resembles that one of a syringoma by showing ductal, cystic and comma-like epithelial components in a fibrocollagenous matrix. Fewer than 50 cases have been reported under the name of SEC and its synonysms. Due to limited availability of literature, there is a lack of a universally accepted staging system and the diagnosis and management of these tumors are difficult.

Objectives
The aim of this study is to report the extremely rare case of a syringoid eccrine carcinoma of the vulva occurred in a 33 years old woman who referred to our Gynecology Unit on January 2017, and to review other recent cases described in literature speculating on differential diagnosis, prognostic criteria, management and follow up.
Methods. Accepted criteria on haematoxylin and eosin sections were used to make the diagnosis. Two pathologists evaluated formalin-fixed tissue sections independently, reaching the same conclusions. Fourteen manuscripts about various locations' syringoid eccrine carcinoma were rewieved.

Results
The patient underwent a right anterior hemivulvectomy with minor labrum preservation, without complications and next day discharge. Resection margins were tumor-free, obtaining oncologic radicality (FIGO stage: IB, Nx). Since SEC has commonly a local recurrence disposition and a potential for distant metastasis, the patient underwent a clinical gynecological evaluation and ultrasonographic bilateral inguinal lymph nodes examination in June 2017, which were found to be negative. The following control in 3 months was negative, too.

Discussion
Despite the low number of cases described in literature, it is unanimously acknowledged that the recommended treatment of all subtypes of sweat gland carcinomas is wide surgical excision associated with regional lymph node dissection in case of clinically positive nodes because of SEC potential for destructive local tissue infiltration and regional as well as distant metastasis.
On one hand local reccurrences of these tumors may be massive; on the other, metastases rarely occur, yet they are not impossible. In literature, there are reports indicating both single-agent and combination chemotherapy have been used infrequently and, at best, have shown only a temporary benefit.
Sweat gland carcinomas are commonly considered radio resistant.
Prognostic factors are difficult to identify because of the small number of reported cases. Size, histological type, lymph node involvement above all and distant metastases are

those considered more relevant. Several features are associated with a poor prognosis: tumor depth > 7 mm, more than 14 mitotic figures on high powered magnification, infiltrative margins; an acute change to a rapid growing lesion could be suggestive for a transition to malignancy.
Survival rates are substantially unknown due to the lack of data. For what concerns apocrine adenocarcinomas, patients without lymph nodes involvement have a 56% 10-year disease-free survival rate, which decrease to 9% if nodes are involved.

Conclusion
SEC should be taken into consideration in vulvar cancer differential diagnosis. A frequent follow up is essential to detect early recurrence or distant metastases.

Keywords
syringoid eccrine carcinoma, adnexal tumors, sweat gland carcinomas, syringomalike tadpole morphology, perineural invasion.

Supplementary material
http://sites.altilab.com/files/159/abstracts/table.docx,
http://sites.altilab.com/files/159/abstracts/figures.docx

QUALITY INDICATORS (QIs) IN RARE OVARIAN CANCER MANAGEMENT SUGGEST A REGIONAL-LEVEL ORGANISATION

Authors

Luca Fuso 1, Annamaria Ferrero 1, Elisa Piovano 3, Eugenio Volpi 4, Davide Marenco 5,

1. Gynecology Obstetrics, ASO Mauriziano, Torino, ITALY
2. Gynecology Obstetrics, ASO Mauriziano, Torino, ITALY
3. Gynecology Obstetrics, Ospedale Regina Montis Regalis di, Mondovi' (CN), ITALY
4. Gynecology Obstetrics, Ospedale S. Croce e Carle, Cuneo, ITALY
5. Ospedale S. Croce Moncalieri, Moncalieri, ITALY

Abstract ID: 3997

Introduction
Rare ovarian tumours represent about 25% of all ovarian cancers. The uncommonness of these diseases and the great variability of age, histological subtypes and stages lead to multiple and compound therapeutic strategies.
A project has been conducted - at Regional level within the Piedmont Region Cancer Care Network (PRCCN) providing a quality control of treatment for malignant epithelial ovarian cancer (clinical audit). As an add-on to this project, an exploratory study has been proposed to the PRCCN which likewise aims to describe patterns-of-care, assess the adherence to clinical guidelines, identify determinants of appropriateness of care of ovarian rare tumours.

Materials and methods
To this purpose, the centres participating to the oncology network were invited to collect retrospectively low incidence ovarian tumors. Investigated histotypes were identified through specific research strings in the pathological archives
The following histotypes were used as inclusion criteria: a) sex cord-stromal tumours, germ-cell tumors ;b) small cell carcinomas, and rare epithelial cancers: mucinous, clear-cell, carcinosarcoma, adenosarcoma, malignant Brenner tumors and low-grade serous carcinomas. ; c) All non-serous, and serous borderline tumors with peritoneal implants and/or with micro papillary aspects.
Quality indicators of diagnostic and therapeutic pathway have been proposed through a review of existing literature and documents (including EORTC-GCG process quality indicators for ovarian cancer, The French national network ovarian rare tumours website, www.ovaire-rare.org,).

Results
474 Patients diagnosed with rare ovarian tumours were included retrospectively, over a 10 year period, (among 5 centres, pilot study). Adherence to guidelines for diagnosis, surgery and chemotherapy were reported together with QI indicators. The retrospective study allowed us to identify areas of weakness in the diagnostic and therapeutic pathway that could be the object of management optimization. Two items have been identified: 1) classification and 2) management setbacks. Finally the collection of rare tumors will be proposed to all the participating centers to the PRCCN with the rationale of a rare ovarian tumors registry able to identify the need for expert pathology review, patients' files discussion in dedicated regional multidisciplinary tumor board and finally optimising appropriateness of care of ovarian rare tumours.

Conclusion
it is expected that the management of rare cases with a regional-level organization will be of benefit not only for patients, but also for epidemiological, clinical and biological research.

A case of primary uterine diffuse large B-cell lymphoma

Authors

Grzegorz Szewczyk 1, Maria Bedynska 2, Anna Borawska 3, Elzbieta Michalak 4, Boyana Mikulska 2, Tomasz Maciejewski 2,

1. Department of General and Experimental Pathology, Medical University of Warsaw, Warsaw, POLAND
2. Department of Obstetrics and Gynecology, Institute of Mother and Child, Warsaw, POLAND
3. Department of lymphatic system neoplasms, National Institute of Oncology, Warsaw, POLAND
4. Department of Pathology, Institute of Mother and Child, Warsaw, POLAND

Abstract ID: 3999

Introduction
Primary lymphoma of the female genital tract (PLFGT) is a rare entity, constituting 0.2 to 1.1% of all extranodal lymphomas. Ovaries are the most common location of PLFGT, followed by the uterine cervix while the uterine corpus involvement is very rare and most commonly secondary to a systemic lymphoma affecting the cervix. We report a case of woman with primary diffuse large B-cell lymphoma confined to the uterine corpus.

Materials /Patients and methods
A 84-years old woman presented at our Clinic complaining of pelvic pain, abdominal distension and bloating without any abnormal genital bleeding. Pelvic mass was noted in gyneacological examination. Transvaginal ultrasound demonstrated diffuse enlargement of the uterus, loss of endometrial enhancement with poor differentation between the endometrium and myometrium without any visible mucosal abnormality. Computed tomography scans revealed enlarged uterus measuring 98x92x85mm with intramural calcified leiomyoma and 17 mm layer of fluid in the uterine cavity. Neither significant lymphadenopathy nor other organomegaly was found by imaging analysis.
She underwent total hysterectomy with bilateral salpingectomy during an open surgery.
Results: The histological evaluation of the specimen showed diffuse infiltration of CD20-positive atypical small lymphoid cells confined to the uterine corpus and B-cell small lymphocytic lymphoma was suspected. The re-evaluation of histologic specimen revealed infiltration of medium- to large-sized cells that stained positive for CD20, Bcl-2 and negative for CD3, CD5, CD10 leading to a diagnosis of diffuse large B-cell lymphoma in spite of and Ki67 positivity in 40% of all lymphocytes and cyclD1 expression in part of the cells.
To perform a complete staging the patient underwent positron-emission tomography (PET), total-body computed tomography (CT), haematochemical examinations and echocardiographic assessment. PET scan did not demonstrate any sites of increased activity also in the vaginal cuff and postoperative area. CT scans were negative for lymphadenopathy and/or organomegalies. The final diagnosis was extranodal diffuse large B-cell lymphoma, ABC type with cyclD1 expression. Despite the discrepancies between primary and second histological examination and fact that no sites of residual disease were found on imaging she was submitted to immunochemotherapy with four cycles of R-CHOP without vincristine to avoid polyneuropathy (rituximab + cyclophosphamide, liposomal doxorubicin and dexamethasone). The early clinical treatment tolerance was good and follow-up PET/CT were planned every three month within first year.

Conclusion
This case demonstrates the difficulties in diagnosis of PLFGT which is a very rare disease. Also it emphasizes treatment dilemmas in elderly patients diagnosed with aggresive lymphoma without any disease activity sites present.

Keywords
uterine tumor, lymphoma

French National Network dedicated to Rare Ovarian Malignant Tumor: epidemiologic data and comparison with a French regional cancer registry

Authors

Elsa Kalbacher 1, Isabelle Ray Coquard 2, Sophie Woronoff 3, Mojgan Devouassoux 4, Anne Floquet 5, Fernando Bazan 1, Patricia Pautier 6, Isabelle Treuilleux 7, Catherine Genestie 8, Martin Demarchi 1, Laurent Courtois 9, Rajeev Ramanah 9, Fabrice Lecuru 10, Laura Mansi 1, Eric Pujade-Lauraine 11, Frederic Selle 12, Philippe Morice 13, Thomas Delapparent 14, Jean-jacques Terzibachian 14, Sabrina Croce 15, Marie-Paule Algros 16, Marie-cecile Vacher-lavenu 17, Laurent Arnould 18, Gwenael Ferron 19,

1. Medical Oncology unit, CHU jean Minjoz, Besancon, FRANCE
2. Medical Oncology unit, Centre léon Berard, Lyon, FRANCE
3. Registre des Tumeurs du Doubs et du Territoire de Belfort, CHU, Besancon, FRANCE
4. Pathology unit, HÔPITAL DE LA CROIX-ROUSSE, Lyon, FRANCE
5. Medical Oncology unit, CLCC Institut Bergonié, Bordeaux, FRANCE
6. Medical Oncology unit, Gustave roussy, Villejuif, FRANCE
7. Pathology unit, Centre léon Berard, Lyon, FRANCE
8. Pathology unit, Gustave roussy, Villejuif, FRANCE
9. Gynecology department, CHU jean Minjoz, Besancon, FRANCE
10. Gynecology department, L'Hôpital Européen Georges Pompidou, Paris, FRANCE
11. Medical Oncology unit, Hôpital Hôtel-Dieu, Paris, FRANCE
12. Medical Oncology unit, Groupe Hospitalier Diaconesses Croix Saint-Simon, Paris, FRANCE
13. Gynecology department, Gustave roussy, Villejuif, FRANCE
14. Gynecology department, Hopital trevenans, Trevenans, FRANCE
15. Pathology department, Institut Bergonié, Bordeaux, FRANCE
16. Pathology department, Hopital jean minjoz, Besancon, FRANCE
17. Pathology department, Hopital cochin, Paris, FRANCE
18. Pathology department, Centre leclerc, Dijon, FRANCE
19. Gynecology department, CLCC Institut Claudius Regaud, Toulouse, FRANCE

Abstract ID: 4000

Introduction
Rare Ovarian Tumors (ROT) include several histological types: sex cord-stromal tumors (granulosa or Sertoli-Leydig cell tumor) germ cell tumors, serous borderline tumor with invasive implant, mucinous borderline or invasive carcinoma clear cell carcinoma, carcinosarcoma. They represent more than 20% of all ovarian cancer. One of the major issues is to recognize these tumors and not to under estimate the right incidence as no systematic review is proposed at the international level.

Methods
The French National Network dedicated to Rare Ovarian Malignant Tumors is organized with 3 national and 22 regional expert centers. It has been supported by the French National cancer Institute (INCa). One of the major goals is to exhaustively register patients with rare ovarian cancer. We focus this sub study on the activities of the French network of ROT from its beginning in 2011 to 2015, and this epidemiologic information in a region where a general registry is performing registration on a population-base, from 1995 to 2015. We compare our capability to consider this network able to report strong data for incidence as all patients were systematically reviewed for histology. We analysed data of the website of the French network and data of population-based cancer registry in Doubs (a French region): histology type, age, and pathologic review.

Results
In the national network from 2011 to 2015 there was a yearly progression of patients

inclusion; in the Doubs region 58 patients were recruited. In the Doubs cancer registry from 1995 to 2015, there were 211 patients with malignant ROT, among them 63 patients for the 4 last four years. Since 2011, number of patients with malignant ROT registered is quite similar between the two different approaches. However patient data from the cancer registry reported an oldest population compared to those from the national network. Moreover the distribution among histologies of ROT is different: in the website of the French network, sex cord-stromal tumor constitute 21% of malignant ROT (2nd larger group after borderline tumor). In the registry of Doubs, the mucinous tumors are the most frequent.

Conclusion
The French national network provide medical advices, guidelines dedicated to rare ovarian tumor which are helpful for doctor, patients, families and health systems, to develop research and collaborative projects and international cooperation. From an epidemiologic point of view, the national network is useful. Combination of two approaches French network and cancer registry provide realistic incidence of rare tumors.

Keywords
French National Network, Rare Ovarian Malignant Tumor, epidemiology

Secondary cytoreductive surgery in recurrent uterine leiomyosarcoma.

Authors

Bizzarri Nicolò 1, Ghirardi Valentina 1, Di Fiore Giacomo 1, Scambia Giovanni 1, Fagotti Anna 1,

1. Gynecologic Oncology, Catholic University of the Sacred Heart - Policlinico A. Gemelli IRCCS, Rome, ITALY

Abstract ID: 4001

Introduction
Sarcomas of the uterus are rare gynecological tumors as they constitute only 3% of uterine malignancies. Among these, leiomyosarcoma of uterus represents one of the most aggressive histologic types. Very few papers have assessed the role of secondary cytoreduction in the treatment of recurrent uterine leiomyosarcoma. The aim of this study is to evaluate the surgical and oncological outcomes of patients with recurrent uterine leiomyosarcoma treated with secondary cytoreductive surgery in a tertiary referral center.

Materials and methods
All consecutive patients operated for recurrent uterine leiomyosarcoma between 01/2010 and 01/2018 at our Institution with confirmation of leiomyosarcoma at secondary cytoreductive surgery histology were included. All patients operated for recurrent endometrial stromal sarcoma or carcinosarcoma, have been excluded. Demographic, surgical and pathologic data was retrieved from medical and surgical records. Intra-operative complications were graded according to CTCAE 4.03 system and post-operative complications according to Clavien-Dindo classification. Follow-up data were collected. Progression-free survival and overall survival were calculated from the time in months from the date of the cytoreductive surgery to the date of first progression, last follow-up or death and from the date of the cytoreductive surgery to the date of the last follow-up or death related to the uterine leiomyosarcoma, respectively.

Results
40 patients underwent secondary cytoreductive surgery for uterine leiomyosarcoma in the study period (in the same period 85 were women newly diagnosed with uterine leiomyosarcoma). Most of the patients underwent complete cytoreduction to no residual macroscopic disease and received adjuvant chemotherapy after the surgery. Majority of the women recurred with large pelvic masses requiring bowel and/or urinary tract surgery and high complexity procedures to achieve complete cytoreduction. Surprisingly, in some cases (approximately 20%) the recurrence was localized in pelvic lymph nodes only. Major intra- and post-operative complications were not common findings in this group of women despite the radicality of the surgery required. Survival outcomes in relation to cytoreduction result and progression-free interval are also presented.

Conclusion
Secondary cytoreduction to no residual disease is one of the most important prognostic factors in recurrent uterine leiomyosarcoma but it requires radical surgical procedures and referral to tertiary centers. The low incidence of major intra- and post-operative complications emphasizes the feasibility of the surgical treatment in patients with a poor prognosis.

Keywords
uterine leiomyosarcoma, recurrence, secondary cytoreduction, debulking surgery

Obstetric outcomes amongst women treated with chemotherapy for gestational trophoblastic neoplasia

Authors

Anastasios Tranoulis 1, Dimitra Georgiou 1, Alexandros Laios 1, John Tidy 2,

1. Gynaecological Oncology, St James's University Hospital, Leeds, UNITED KINGDOM
2. Sheffield Trophoblastic Disease Centre, Weston Park Hospital, Sheffield, UNITED KINGDOM

Abstract ID: 4002

Introduction and Objectives
Gestational trophoblastic neoplasia (GTN) represents a rare placental malignancy spectrum effectively treated with single (SEC) - or multi-agent (MEC) chemotherapy. Given that GTN usually affects women of childbearing age, post-chemotherapy pregnancy safety becomes an important consideration. We performed a meta-analysis of the pregnancy rates and most accurate obstetric outcomes in GTN women treated with chemotherapy.

Methods
A systematic search of MEDLINE, EMBASE, Web of Science, and Cochrane Database was performed. Studies that reported obstetric outcomes of GTN women treated with SEC or MEC were located. We performed a single-proportion meta-analysis for the outcomes of conception/pregnancy rate (PregR), term live birth (TLBR) rate, first and second trimester spontaneous abortions rate (T1/T2 SAR), stillbirth rate (SBR), premature delivery rate (PremDR) and foetal/neonatal malformation rate (MalR).

Results
Pooled results from seven studies enrolling 1374 women rendered a summary proportion of 85.85% (95% CI, 80.16-90.7) for the outcome of PregR (I2=81.65%, p<0.0001). Pooled results from ten studies enrolling 6752 pregnancies rendered a summary proportion of 75.84% (95% CI, 73.43-78.17) for the TLBR outcome (I2=76.62%, p<0.0001). Pooled results from 25 studies enrolling 5439 pregnancies rendered a summary proportion of 14.62% (95% CI, 12.7-16.65) for the T1/T2 SAR outcome (I2=72.46%, p<0.0001). Pooled results from 26 studies enrolling 6752 pregnancies rendered a summary proportion of 1.32% (95% CI, 0.95-1.75) for the SBR outcome (I2=40.83%, p=0.016). Pooled results from 21 studies enrolling 5781 pregnancies rendered a summary proportion of 5.06% (95% CI, 4.01-6.2) for the PremDR outcome (I2=64.77%, p<0.0001). Pooled results from 24 studies enrolling 4685 pregnancies rendered a summary proportion of 1.76% (95% CI, 1.35-2.23) for the MalR outcome (I2=26.11%, p=0.12). Pooled results from four studies enrolling 137 pregnancies rendered a summary proportion of 1.87% (95% CI, 0.71-3.9) for the MalR outcome (I2=0%, p=0.72).
Pooled results from six studies enrolling 336 pregnancies following MEC rendered a summary proportion of 2.73% (REM, 95% CI, 1.28-5.07) for the MalR outcome (I2=7.65%, p=0.36). Pooled results from four studies enrolling 137 pregnancies achieved within 12 months post-chemotherapy rendered a summary proportion of 1.87% (95% CI, 0.71-3.9) for the MalR outcome (I2=0%, p=0.72).
Direct comparison meta-analysis between SEC and MEC was not statistical significant for the outcomes of PremDR [OR= 1.69 (95% CI 0.81-3.5), p=0.15, I2=0%, p=0.48)] and MalR [OR= 2.97 (95% CI 0.71-12.31), p=0.132, I2=23.06%, p=0.27)].

Conclusions
Nearly nine of 10 women with strong desire for childbearing will achieve future pregnancy, whilst favourable obstetric outcomes should be anticipated. MEC does not appear to increase the incidence of chromosomal or congenital abnormalities. Women

who become pregnant within 12 months post-chemotherapy for GTN can be reassured of a likely favourable outcome; notwithstanding the safest option is still to delay pregnancy for a year.

Keywords
GTN, chemotherapy, fertility, obstetric outcomes

INFLUENCE OF SINGLE AND MULTI-AGENT CHEMOTHERAPY ON OVARIAN FUNCTION AND FERTILITY IN PATIENTS WITH GESTATIONAL TROPHOBLASTIC NEOPLASIA

Authors

Sonia Magni 1, Daniela Giuliani 2, Federica Paola Sina 2, Francesca Galli 3, Lorenzo Ceppi 1, Maria Lamanna 1, Martina Delle Marchette 1, Robert Fruscio 1, Cristina Maria Bonazzi 2, Fabio Landoni 1,

1. Department of Medicine and Surgery, University of Milan-Bicocca, Milan, ITALY
2. Clinic of Obstetrics and Gynecology, San Gerardo Hospital, Monza, ITALY
3. Department of Oncology, IRCCS - Istituto di Ricerche Farmacologiche "Mario Negri", Milan, ITALY

Abstract ID: 4008

Introdiction and Objectives
Gestational trophoblastic neoplasia (GTN) is a group of rare malignant placental diseases that usually occurs in women of reproductive age. Based on FIGO prognostic score, patients are classified as low-risk and high-risk disease. Low-risk GTNs are treated with a single-agent chemotherapy, usually methotrexate, while high-risk GTNs are treated with multi-agent chemotherapy, usually EMA/CO (etoposide, methotrexate, actinomycin D, cyclophosphamide, vincristine). Chemotherapy can be gonadotoxic and it can be correlated to risk of premature ovarian failure and infertility. The aim of this retrospective study was to compare ovarian function, fertility outcome and menopause occurrence after chemotherapy for GTN.

Methods
258 patients treated for GTN (excluding placental site trophoblastic tumor and epithelioid trophoblastic tumor) at San Gerardo Hospital from 1981 to 2016 were identified. Patients older than 45 years at the time of diagnosis, undergoing primary surgery or salvage hysterectomy for resistant disease or considered lost at follow-up were excluded from the study (72 women). Among the remaining 186 patients, 77 underwent single-agent chemotherapy (group A) and 109 received combined treatment because of high risk disease or low-risk disease resistant to single-agent chemotherapy (group B). Non parametric tests were used to compare patient outcomes.

Results
186 patients treated for GTN were eligible for the study. At a median follow-up of 14.8 years, three patients had premature ovarian failure (6.7% in group A vs 6.1% in group B, p=1). There was no difference regarding age of menopause (median age 47 years, p=.230). Transient amenorrhea occurred in 17 patients of group A (23%) and in 50 of group B (48%) (p=.0007). Persistent oligo-amenorrhea occurred in 5 patients of group B (5%), with no events in group A (p=.077). Childbearing desire was similar between the two groups (P=.930). The overall conception success rate was 75% in group A and 61% in group B (p=.035) whereas considering only women who desired to conceive it was higher and no significative difference between the two groups could be found (97% in group A and 92% in group B, p=.294). Overall 231 pregnancies occurred, with 25 conceptions within 12 months of completing chemotherapy (early pregnancies). Live births rate was 75%, miscarriages rate was 19%, stillbirths and ectopic pregnancies rate were 1%. Regarding the 25 early pregnancies, 80% resulted in live births, 16% in miscarriages, 4% in ectopic pregnancies. No differences were observed for pregnancy outcomes between group A and B and between early and late pregnancies. A trisomy 16 was found after a miscarriage with early conception, two late pregnancies were medically interrupted for trisomy 18 and 21 and one baby was born with esophageal atresia. No other congenital malformation or chromosomal abnormalities were reported (overall incidence 1.7%).

Conclusions
Both single-agent and multi-agent chemotherapy can be safely administered to women of reproductive age with childbearing desire. Persistent amenorrhea can be a rare adverse effect of multi-agent chemotherapy. Pregnancy outcome are similar between the two groups both in early (<12 months) and late (>12 months) pregnancies.

Keywords
Gestational Trophoblastic Neoplasia, Chemotherapy, Fertility, Ovarian function, Pregnancy

Survival and Reproductive Function After Treatment of dysgerminoma of Ovarian Tumor - case report

Author

Dina Kurdiani 1,

1. Tbilisi Cancer Center, Tbilisi, GEORGIA

Abstract ID: 4014

Dysgerminoma
dysgerminomas are relatively uncommon among all ovarian neoplasms (Accounting for only about 2 percent), they account for 32.8 percent of malignant ovarian germ cell tumor.
The majority of cases (75 percent) arise in adolescents and young adults, in whom they account for about onethird of all ovarian malignant neoplasms.
Because of their predilection for Youngwomen, they are one of the more common ovarian malignant neoplasms detected during pregnancy Nevertheless, dysgerminoma can occur at any age;
Case reports have described patients with dysgerminoma between 7 months and 70 years of age.

Patient at age 18 years admitted with a chief complain of acute pain abdomen, fever. On Clinical examination she was found to have a tender solid tumor of 52-67mm size, mobile more towards left side. Surface is irregular. No evidence of ascites.
Staging laparotomy done and left ovary is seat of solid tumor failing to the right site of peritoneal cavity.
Capsule is intact. No adhesions, no ascites. Other ovary cystic measuring 2/3 cm and no evidence of growth in rest of abdomen. Left salpingooperectomy done on 9th may ,2015 CA125, AfP, HCG and LDH levels are within normal limits.

By X-ray chest P/A view and the Usg of total abdomen, no evidence of metastasis

Morphological report
dysgerminoma ovary stage IA, CD117 positive, NSE positive, Ki67 75%

Tumor limited to one ovary (capsule intact) no tumor on ovarian or fallopian tube surface; no malignant cells in ascites or peritoneal washings.

Follow up
It consists of physical examination, tumour markers (LDH, β HCG) every 1-2 months for one year, every 2 months in the 2nd year, every 3 months in the 3rd year, every four months in the 4th year, every 6months in the 5th year and annually thereafter.

After 1 year patient came for checking, LDH increase, MRI finding shows lymph nodes large in size, MRI shows again lymph nodes large in para aortic location, in Douglas liquid, patient underwent diagnostic laparoscopy operation – biopsy of dextra ovary, taking liquid for checking +par aortic lymhnodes dissection, biopsy taken from the omentum, histopathological examination shows nothing abnormality.

Conclusion
75-80% of dysgerminoma has presented at stage 1a, can be treated by conservative surgery alone. Even though the dysgerminomas are radio sensitive, radiotherapy abandoned due to high success rates with platinum based chemotherapy as well as avoiding long term complications from radiation including sterility and early menopause. Prognosis of patients with GCT of ovary has improved significantly as a result of cisplatin based chemotherapy after conservative surgery. The menstrual function and reproductive

function of the patient are preserved. These patients need lifelong follow up because of recurrence of the tumor.