The Israeli Society of Gynecologic Oncology
החברה הישראלית לגינקולוגיה אונקולוגית

הכינוס התשע שנתי

ה – IX

של

החברה הישראלית לגינקולוגיה אונקולוגית

יום חמישי

30 ביוני 2016, כ"ד בסיון תשע"ו

מלון "דניאל", הרצליה

ספר תקצירים

החברה הישראלית לגינקולוגיה אונקולוגית
The Israeli Society of Gynecologic Oncology

חברי ועדה מארגנת:

- פרופ' טליה לוי - יו"ר
- פרופ' עופר גמר
- ד"ר אילן ברוכים
- ד"ר מריו ביינר
- ד"ר אורה רוזנגרטן

ועדת שיפוט תקצירים ועבודות פרס בתחום הקליני, מחקרי ופוסטר מצטיין:

- פרופ' עופר גמר - יו"ר
- פרופ' טליה לוי
- ד"ר אילן ברוכים
- ד"ר מריו ביינר
- ד"ר רמי איתן
- ד"ר אמנון עמית
- ד"ר אלון בן אריה

ועדת בחירות:

- ד"ר רמי איתן - יו"ר
- ד"ר אמנון עמית
- ד"ר מיחאי מאירוביץ

יו"ר עבר – החברה הישראלית לגינקולוגיה אונקולוגית:

- פרופ' יוסף מנצ'ר
- פרופ' שאול ענתבי
- פרופ' גלעד בן-ברוך
- ד"ר חנוך לבבי
- פרופ' עוזי בלר
- פרופ' עמי פישמן
- פרופ' עופר לביא
- ד"ר יעקב קורח

Invited Speakers

Prof. Robert L. Coleman, M.D., FACOG, FACS

Professor, Deputy Chair, Department of Gynecologic Oncology and Reproductive Medicine. Vice Chair, Clinical Research, Ann Rife Cox Chair in Gynecology, Department of Gynecologic Oncology and Reproductive Medicine, The University of Texas MD Anderson Cancer Center, Houston, TX.

Prof. Coleman is a key opinion leader in cancers of the female genital tract. He has authored and co-authored over 400 scientific publications, including over 130 peer-reviewed articles, numerous book chapters, monographs, invited articles and textbooks. Prof. Coleman serves on the Editorial Board of several peer-reviewed scientific publications. He is an active member of many national and international organizations including the Society of Gynecologic Oncology, the American College of Surgeons, American Association for Cancer Research, the American Society of Clinical Oncology, the International Gynecologic Cancer Society, European Society of Gynecologic Oncology and the European Society of Medical Oncology.

In 2015, Prof. Coleman was the 47th President of the Society of Gynecologic Oncology (SGO) and fifth President of the Foundation for Gynecologic Oncology.

Prof. Dan Peer

Director of the Laboratory of Precision NanoMedicine at Tel Aviv University (TAU). He is also the Director of the Focal Technology Area (FTA) on Nanomedicines for Personalized Theranostics, a National Nanotechnology Initiative and the Director of the Leona M. and Harry B. Helmsley Nanotechnology Research Fund.

Prof. Peer's work was among the first to demonstrate systemic delivery of RNAi molecules using targeted nanocarriers to the immune system and he pioneered the use of RNA interference (RNAi) for in vivo validation of new drug targets within the immune system.

Prof. Peer has more than 45 pending and granted patents. Some licensed to pharmaceutical companies and one is under a phase III clinical evaluation. In addition, based on his work, four spin-off companies were generated Leuko Biosciences, Quiet Therapeutics, SEPL Pharma and ART Bioscience aiming to bring nanomedicine into clinical practice. Prof. Peer is currently the President of the Israeli Chapter of the Controlled Release Society, and a Member of the Israel Young Academy of Sciences.

תוכנית הכינוס

הכינוס התלת-שנתי ה - IX של
החברה הישראלית לגינקולוגיה אונקולוגית

יום חמישי, 30 ביוני 2016, כ"ד בסיון תשע"ו, מלון "דניאל", הרצליה

08:50 – 08:00 *התכנסות, רישום, כיבוד קל וסיור בתערוכה*

08:55 – 08:50 **ברכות ודברי פתיחה**
פרופ' טליה לוי, יו"ר החברה הישראלית לגינקולוגיה אונקולוגית

09:00 – 08:55 **פתיחת מושב בחירות והצגת מועמדים**
ד"ר רמי איתן, יו"ר ועדת בחירות

10:00 – 09:00 **מושב I: הצגת עבודות מקוריות**
יו"ר: ד"ר אמנון עמית, ד"ר מריו ביינר, ד"ר רוני שפירא פרומר

SENTINEL LYMPH NODE BIOPSY IN PATIENTS WITH ENDOMETRIAL CANCER: A FEASIBILITY STUDY
Shunit Armon[1], Ami Munro[2], Deborah Neesham[2], Vivek Arora[2], Ramaish Thangamani[4], Penny Blomfield[3]. Meir Lichtenstein[5], Nisha Jagasia[6], Gayanie Ratnayake[2], Orla McNally[2]
[1]SZMC, Jerusalem, Israel; [2]RWH, Victoria Australia; [3]Royal Hobart Hospital, Tasmania, Australia; [4]Launceston General Hospital, Australia; [5]Royal Melbourne Hospital, Australia; [6]Queensland center for Gynaecological cancer, Australia

EVALUATION OF MICROSCOPIC CHANGES IN FALOPIAN TUBES OF PATIENTS WITH UTERINE PAPILLARY SEROUS CARCINOMA (USPC), BY COMPUTERIZED MORPHOMETRIC ANALYSIS
Amnon Amit[1,3], Edmond Sabo[2,3], Yamit Efrat Tamam[1], Geula Klorin[1,2]
[1]Department of Obstetrics & Gynecology; [2]Department of Pathology, Rambam Health Care Campus, Haifa, Israel; [3]Ruth and Bruce Rappaport Faculty of Medicine, Technion – Israel Institute of Technology, Haifa, Israel

CANCER STEM CELLS IN ENDOMETRIAL CARCINOMA
Yael Naaman[1], Monica Huszar[2], Ayelet Harari[2], Yuval Or[1], Adva Cohen-Fredarow[3], Nava Dekel[3], Alon Ben-Arie[1]
[1]Department of Obstetrics & Gynecology, [2]Department of pathology, Kaplan Medical Center, Rehovot, Israel. [3]Department of Biological Regulation, Weizmann Institute of Science

IL-6 AND MET BLOCKAGE REDUCE CHEMOTHERAPY-RESISTANCE AND ALTER CELL`S MOVEMENT IN OVARIAN AND UTERINE SEROUS CANCER
Yossi Levi[1], Ilan Tsarfaty[1], Ilan Bruchim[2]
[1]Department of Clinical Microbiology and Immunology, Sackler School of Medicine, Tel-Aviv University, Tel-Aviv, Israel, [2]Gynecologic Oncology Division and Laboratory of Gynecology Oncology, Department of Obstetrics and Gynecology, Hillel Yaffe Medical Center, Hadera, Affiliated to the Technion Israel Institute of Technology, Haifa, Israel

QUALITATIVE ASSESSMENT VS. SUV MEASUREMENT OF FDG-UPTAKE IN SURGICALLY TREATED CERVICAL CANCER PATIENTS FOR PREDICTION OF PROGNOSTIC FACTORS
Oded Raban, Lina Salman, Gad Sabah, Roie Tzadok, Meital Nidam, Hana Bernstine, Ram Eitan
Gynecologic Oncology Division, Rabin Medical Center, Petah-Tikva, Tel-Aviv University, Tel-Aviv, Israel

CERVICAL CANCER EPIDEMIOLOGY IN FORMER SOVIET UNION IMMIGRANTS TO ISRAEL. A STEP TOWARDS SOLVING THE ENIGMA

Yael Raz[1], Lital Keinan-Boker[2,3], Sophy Goren[4], Daniel Cohen [4], Dan Grisaru[1]

'Department of Obstetrics and Gynecology, Lis Maternity Hospital, Tel-Aviv Sourasky Medical Center, Affiliated to the Sackler Faculty of Medicine, Tel-Aviv University, Tel-Aviv, [2]Israel Center for Disease Control, Ministry of Health, Gertner Institute, Sheba Medical Center, Ramat-Gan, Israel, [3]School of Public Health, Haifa University, Mt. Carmel, Haifa, Israel, [4]School of public health, Sackler Faculty of Medicine, Tel-Aviv University, Ramat Aviv, Tel-Aviv, Israel

ETHNIC DISPARITIES FOR GYNECOLOGIC CANCERS IN ISRAEL

Yfat Kadan[1], Barbara Silverman[2], Limor Helpman[1], Ami Fishman[1].

[1]Gynecologic Oncology unit, Meir Medical Center, Kefar Sava, [2]Israel national cancer registry, MOH, Israel

הרצאת אורח 10:45 – 10:00

יו"ר: פרופ' עמי פישמן, ד"ר אורה רוזנגרטן, ד"ר שלומי שגיא

OPTIMIZING TREATMENT DECISIONS IN CERVICAL CANCER

Prof. Robert L. Coleman, M.D., FACOG, FACS

Vice Chair, Clinical Research and Deputy Chair, Department of Gynecologic Oncology and Reproductive Medicine, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

ASCO UPDATES ON GOG 213

Prof. Robert L. Coleman, M.D., FACOG, FACS

כיבוד קל, סיור בתערוכה ופוסטרים 11:10 – 10:45

מושב II: הצגת עבודות מקוריות 12:10 – 11:10

יו"ר: ד"ר יעקב קורח, ד"ר אילן ברוכים, פרופ' תמר ספרא

LONG-TERM SURVIVORS OF ADVANCED HIGH-GRADE EPITHELIAL OVARIAN CANCER: CLINICAL CHARACTERISTICS

Yasmin Farhadian, Tamar Perri, Gilad Ben-Baruch, Ronnie Shapira-Frommer, Mario E. Beiner, Benny Brandt, Ludmila Irmin, Nissim Zmira, Jacob Korach

Department of Gynecologic Oncology, Sheba Medical Center, Tel Hashomer, Israel, and Sackler Faculty of Medicine, Tel-Aviv University, Tel-Aviv, Israel

PROGNOSTIC FACTORS FOR PREDICTING OPTIMAL CYTOREDUCTION IN OVARIAN CANCER PATIENTS

Effi Yeoshoua, Oded Raban, Ariella Jackobson-Setton, Gad Sabah, Dalia Tsoref, Guy Cohen, Ram Eitan

Gynecologic Oncology Division, Rabin Medical Center, Petah Tikva, Tel- Aviv University, Tel-Aviv, Israel

OUTCOME OF OVARIAN AND PRIMARY PERITONEAL CARCINOMA PATIENTS WHO DID NOT RESPOND TO NEOADJUVANT CHEMOTHERAPY PRIOR TO INTERVAL DEBULKING SURGERY

Michal Levy[1], Joseph Menczer[1], Ayelet Vandel[2], Yossi Mizrachi[1], Erez Ben-Shem[1], Ofri Peled[1], Tally Levy[1]

[1]Division of Gynecologic Oncology and [2]Department of Roentgenology, E. Wolfson Medical Center, Holon, Sackler School of Medicine, Tel-Aviv University, Tel-Aviv, Israel

SILENT POLYMORPHISM IN THE BCL2 GENE DETERMINES RESPONSE TO CHEMOTHERAPY IN HIGH GRADE SEROUS CARCINOMA

Rotem Ben-Hamo[1], Alona Zilberberg[1], Helit Cohen[1], Keren Bahar-Shany[2], Jacob Korach[3], Sarit Aviel-Ronen[4] , Iris Barshack[4,5], Alon Zilka[7], **Keren Levanon**[2,5*], Sol Efroni[1*]

[1]The Mina and Everard Goodman Faculty of Life Science, Bar Ilan University, Ramat-Gan, [2]Sheba Cancer Research Center, Chaim Sheba Medical Center, Ramat-Gan, [3]Department of Gynecologic Oncology, Chaim Sheba Medical Center, Ramat-Gan, [4]Department of Pathology, Chaim Sheba Medical Center, Ramat-Gan [5]Sackler Faculty of Medicine, Tel Aviv University, Ramat Aviv, Israel.[7]The flow cytometry, affinity measurement and Cell imaging unit, NIBN, Ben-Gurion University of the Negev, Beer-Sheva, Israel. Equal contribution*

THE COMBINED EFFECT OF DENDRITIC CELLS AND IGF1 RECEPTOR INHIBITOR ON OVARIAN CANCER PROLIFERATION

Muna Alemi Yahya[1,2], Shilhav Meisel Sharon[2], Shay Hantisteanu[2], Mordechai, Hallak[1,2], Haim Werner[3], Ilan Bruchim [1,2,3]

[1]Gynecologic Oncology Division and [2]Laboratory of Gynecology Research, Department of Obstetrics and Gynecology, Hillel Yaffe Medical Center, Hadera, Affiliated to the Technion Israel Institute of Technology, Haifa, Israel, [3]Department of Human Molecular Genetics and Biochemistry, Sackler School of Medicine, Tel-Aviv University, Tel-Aviv, Israel

COMPLEMENTARY TREATMENT FOR STRESS REDUCTION IN WOMEN WITH OVARIAN CANCER– ASSESSMENT WITH HEART RATE VARIABILITY

Amnon Amit,[1,2], Lior Lowenstein[1,2], Keren Or Chen[3], Geula Korin[1], Amir Weissman[1,2]

[1]Department of Obstetrics & Gynecology, Rambam Health Care Campus, Haifa, Israel; [2]Ruth and Bruce Rappaport Faculty of Medicine, Technion – Israel Institute of Technology, Haifa, Israel; [3]Faculty of Social Welfare and Health Sciences, University of Haifa, Haifa, Israel

SAFETY OF HERBAL MEDICINE USE DURING CHEMOTHERAPY IN PATIENTS WITH GYNECOLOGICAL CANCER: A "BEDSIDE-TO-BENCH" APPROACH

Eran Ben-Arye[1,2], Ofer Lavie[3], Noah Samuels[1,4], Yakir Segev[3], Hazem Khamaisie[5], Elad Schiff[6], Orit Gressel Raz[1], Jamal Mahajna[5,7]

[1]Integrative Oncology Program, Oncology Service, Lin Medical Center, Clalit Health Services, Haifa and Western Galilee District, Israel; [2] Complementary and Traditional Medicine Unit, Department of Family Medicine, Faculty of Medicine, Technion-Israel Institute of Technology, Haifa, Israel; [3]Gynecological oncology unit, Department of Obstetrics and Gynecology, Gynecologic Oncology Service, Carmel Medical Center, Haifa, Israel; [4]Tal Center for Integrative Oncology, Institute of Oncology, Sheba Medical Center, Tel Hashomer, Israel; [5]Cancer Drug Discovery Program, Galilee Technology Center (Migal), Kiryat Shmona, Israel; [6]Departments of Internal Medicine and Integrative Surgery Service, Bnai Zion Hospital, Haifa, Israel; [7]Nutritional Sciences department, Tel Hai College, Kiryat Shmona, Israel

הרצאת אורח 12:40 – 12:10

יו"ר: פרופ' טליה לוי, פרופ' דוד שניידר, ד"ר אבי בן שושן

NANOMEDICINE AS AN EMERGING PLATFORM FOR ANTI-CANCER THERAPY

Prof. Dan Peer

Faculty of Life Science, Department of Cell Research & Immunology, Tel-Aviv University, Tel-Aviv, Israel

מושב III: הצגת עבודות מקוריות 13:20 – 12:40

יו"ר: פרופ' עופר גמר, פרופ' עופר לביא, ד"ר טל ציון

THE HETEROGENEITY OF CANCER STEM CELL MARKERS IN EPITHELIAL OVARIAN CANCER

Osnat Elyashiv[1], Dalit Milo Landesman[2], Manu Smriti Singh[2], Dan Peer[2], Tally Levy[1]

[1]Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Wolfson Medical Center, Holon, Israel ,Sackler Faculty of Medicine, Tel-Aviv University, Tel-Aviv, Israel; [2]Department of Cell Research and Immunology, George S. Wise Faculty of Life Sciences, Tel-Aviv University, Tel-Aviv, Israel

DOES MUCINOUS HISTOLOGY WORSEN PROGNOSIS IN BORDERLINE OVARIAN TUMORS?

Limor Helpman[1,2,3], Mario E. Beiner[1,2], Assaf Yaniv[2], Tamar Perri[1,2], Sarit Aviel-Ronen[1,2], Ludmila Irmin[1], Nissim Zmira[1], Jacob Korach[1,2], Gilad Ben-Baruch[1,2].

[1]Chaim Sheba Medical Center, Tel-Hashomer, Israel; [2]Tel-Aviv University, Tel-Aviv, Israel; [3]Meir Medical Center, Kfar Saba, Israel

SENTINEL LYMPH NODE BIOPSY IN VULVAR CANCER: A MULTICENTER EVALUATION OF PROCEDURE'S FEASIBILITY FOR ISRAELI PATIENTS

Yael Raz[1], Guy Bibi[1], Alon Ben-Arie[2], Michai Meirovitz[3], Schlomo Schneebaum[4], Dan Grisaru[1]

[1] Department of Obstetrics and Gynecology, Lis maternity hospital, Tel-Aviv Sourasky Medical Center, affiliated to the Sackler faculty of medicine, Tel-Aviv University, Tel-Aviv, Israel.[2] Department of Obstetrics and Gynecology, Kaplan Medical Center, Rehovot, Israel, affiliated to the Hebrew university "Hadassah" medical school, Jerusalem, Israel.[3] Department of Obstetrics and Gynecology, Soroka Medical Center, affiliated to Ben Gurion University of the Negev, Beer-Sheva, Israel.[4] Radio guided Surgery unit, Department of Surgery, Tel-Aviv Sourasky Medical Center, affiliated to the Sackler faculty of medicine, Tel-Aviv University, Tel-Aviv, Israel

CANCER CELL REVERSION BY PLACENTA-DERIVED MICRO-ENVIRONMENTAL MOLECULES

Shahar Cohen, Yakir Segev, Amit Damti, Moran Paz, Ido Feferkorn, Gilit Kligun, Meirav Schmidt, Netta Boms-Yonai, Anis Kaldawy, Reuven Kedar, Ron Auslender, Ofer Lavie

Division of Gynecology Oncology, Department of Obstetrics and Gynecology, Carmel Medical Center, Haifa, Israel

IS THERE AN ASSOCIATION BETWEEN RECURRENT PREGNANCY LOSS AND FUTURE RISK FOR FEMALE MALIGNANCIES?

Ron Charach[1], Roy Kessous[1], Ofer Beharier[1], Roslan Sergienko[2] , Eyal Sheiner[1]

[1]Department of Obstetrics and Gynecology, Faculty of Health Sciences, Soroka University Medical Center, Ben-Gurion University of the Negev, Beer-Sheva, Israel; [2]Ben-Gurion University of the Negev, Department of public health, Beer-Sheva, Israel; [3]Soroka University Medical Center, Clalit Health Services (Southern District), Faculty of Health Sciences, Ben-Gurion University of the Negev, Beer-Sheva, Israel

LAPAROSCOPIC MANAGEMENT OF INVASIVE MOLE PERFORATING THE UTERUS

Leonti Grin, Ahmed Namazov, Michael Voldarsky, Eyal Anteby, Ofer Lavie, Ofer Gemer

Department of Obstetrics and Gynecology, Barziali Medical Center, Ben-Gurion University, Ashkelon, Israel

13:30 – 13:20 **סיכום פעילות הועד היוצא**
פרופ' טליה לוי, יו"ר החברה הישראלית לגינקולוגיה אונקולוגית

13:30 **סגירת מושב בחירות**
ד"ר רמי איתן, יו"ר ועדת בחירות

14:15 – 13:30 ***אכילת צהריים***

14:45 – 14:15 **הרצאת אורח**
יו"ר: פרופ' עוזי בלר, פרופ' דני גריסרו, ד"ר צבי ואקנין

IMPACT OF THE ADOPTION OF AN INDIVIDUALIZED PRIMARY SURGICAL TRIAGE ALGORITHM IN ADVANCED OVARIAN CANCER: THE MDACC EXPERIENCE

Prof. Robert L. Coleman, M.D., FACOG, FACS

Vice Chair, Clinical Research and Deputy Chair, Department of Gynecologic Oncology and Reproductive Medicine, The University of Texas MD Anderson Cancer Center, Houston, TX, USA

15:25 – 14:45 **Tumor board**

מנחה: ד"ר מיחאי מאירוביץ

מדיינים: פרופ' רוברט קולמן, ד"ר אלון בן אריה, ד"ר רמי איתן, ד"ר ענבר בן-שחר

הצגות מקרים: ד"ר אילן אטלס, ד"ר יהודה בן-דוד, ד"ר לימור הלפמן

15:30 – 15:25 **חלוקת פרסים לעבודות המצטיינות**
פרופ' עופר גמר, יו"ר ועדת תקצירים

תוצאות בחירות
ד"ר רמי איתן, יו"ר ועדת בחירות

סיום

תקצירים

מושב ו: הצגת עבודות מקוריות **(לפי סדר הרצאות)**

SENTINEL LYMPH NODE BIOPSY IN PATIENTS WITH ENDOMETRIAL CANCER: A FEASIBILITY STUDY

Shunit Armon[1], Ami Munro[2], Deborah Neesham[2], Vivek Arora[2], Ramaish Thangamani[4], Penny Blomfield[3]. Meir Lichtenstein[5], Nisha Jagasia[6], Gayanie Ratnayake[2], Orla McNally[2]

[1]SZMC, Jerusalem, Israel; [2]RWH, Victoria Australia; [3]Royal Hobart Hospital, Tasmania, Australia; [4]Launceston General Hospital, Australia; [5]Royal Melbourne Hospital, Australia; [6]Queensland center for Gynaecological cancer, Australia

Objective: Endometrial cancer is the commonest gynaecological cancer. Sentinel lymph node (SLN) detection has the potential to identify those women who would benefit from adjuvant radiotherapy, whilst protecting others from the morbidity associated with pelvic lymphadenectomy. This pilot study aims to assess the feasibility of two SLN detection methods in patients with apparent early stage endometrial cancer.

Methods/Materials: Patients received a pre-operative intracervical injection of technetium (Tc99m) followed by a SPECT-CT to assess nodal uptake. Cervical injection of patent blue dye was performed intraoperatively and any hot or blue nodes were identified and removed for histological examination. Data was collected regarding patient acceptability, detection rates of SLNs and location of SLNs.

Results: Of the 67 women included in this analysis, 52 received both technetium and blue dye. The detection rate per patient for "hot" nodes was 81% and 66% for blue nodes. Overall, the detection rate per hemipelvis was 62%. The overall detection rate for SLNs in women who received technetium and blue dye (N=52) was 92.3%.
Median pain score for intracervical injections was 4 out of 10.

Conclusion: Good SLN detection rates can be obtained with blue dye and technetium. The addition of a second method significantly increases detection rates Routine use of technetium may be limited by availability of nuclear medicine facilities but appears acceptable to the patient. Further research is needed to ascertain the optimal technique for SLN detection in endometrial cancer.

EVALUATION OF MICROSCOPIC CHANGES IN FALOPIAN TUBES OF PATIENTS WITH UTERINE PAPILLARY SEROUS CARCINOMA (USPC), BY COMPUTERIZED MORPHOMETRIC ANALYSIS

Amnon Amit[1,3], Edmond Sabo[2,3], Yamit Efrat Tamam[1], Geula Klorin[1,2]

[1]Department of Obstetrics & Gynecology; [2]Department of Pathology, Rambam Health Care Campus, Haifa, Israel; [3]Ruth and Bruce Rappaport Faculty of Medicine, Technion – Israel Institute of Technology, Haifa, Israel

Background and aims: uterine serous papillary carcinoma (USPC) is different in clinical and pathological behaviors from endometroid carcinoma, and resembles more ovarian cancer.
Since there is evidence that indicates that the origin of ovarian cancer is the fimbriae of the fallopian tubes, we tried to evaluate changes of the fallopian tubes of patients with USPC.

Methods: We used a novel method of computerized morphometry of the fimbrial epithelium in which a Fast Fourier Transformation (FFT) was applied to images of fimbrial epithelium and the FFT two-dimensional frequency maps were subsequently quantified for nuclear orientation and planar distribution by a co-occurrence matrix analysis. Four morphometrics parameters were evaluated: Homogeneity,contrast,correlation and entropy.
A total of 50 fimbriae reported as "normal" by H&E examination of patients with USPC, EEC and healthy women were evaluated.

Results: Significant differences were found between the fimbriae of patients with UPSC and patients with EEC, as well as between each one of the and the group of the healthy women. However differences were not demonstrated in all four parameters.

Conclusions: Using this novel method, we were able to demonstrate differences in morphometric characteristics in the fimbriae of healthy, UPSC and EEC patients. It is yet to be determined whether these differences indicate that the UPSC originates from the fimbriae or secondery to the uterine disease.

CANCER STEM CELLS IN ENDOMETRIAL CARCINOMA

Yael Naaman[1], Monica Huszar[2], Ayelet Harari[2], Yuval Or[1], Adva Cohen-Fredarow[3], Nava Dekel[3], Alon Ben-Arie[1]

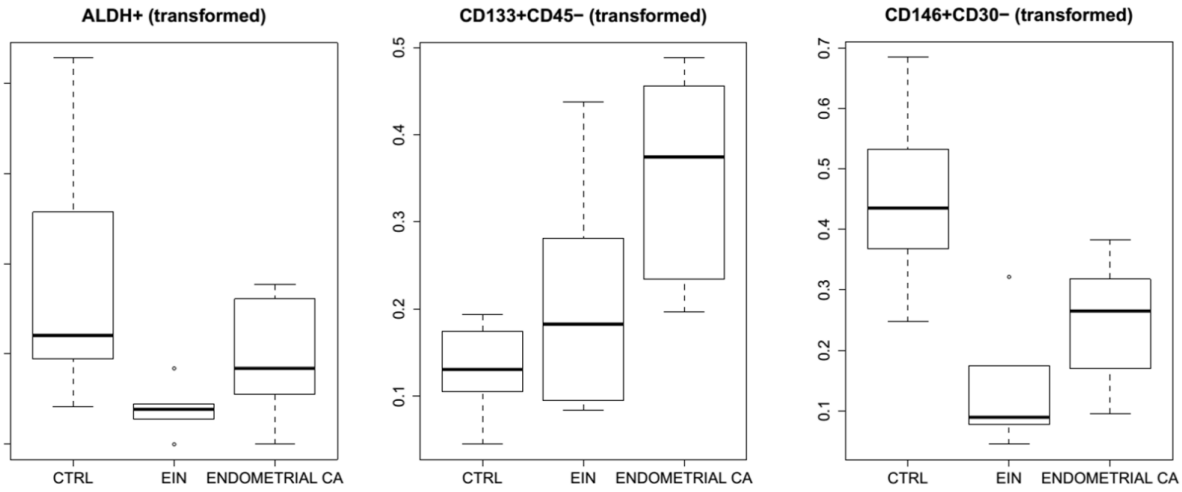
[1]Department of Obstetrics & Gynecology, [2]Department of pathology, Kaplan Medical Center, Rehovot, Israel. [3]Department of Biological Regulation, Weizmann Institute of Science

Objective: To examine the presence of cancer stem (CSC) cells in endometrial carcinoma specimens, compared to normal endometrium, and pre-malignant lesions of the endometrium.

Material and methods: Analysis of human endometrium specimens retrieved from healthy patients, patients with endometrial carcinoma, and patients with pre-malignant lesions of the endometrium, by immunohistochemistry and FACS analysis. CSC markers (CD133 and ALDH1 were evaluated as well as endometrial somatic stem cells marker (CD146).

Results: 23 patients participated in this study- 9 with endometrial carcinoma, 6 with pre-malignant endometrial lesion and 9 controls. CD133+ cells levels were statistically significant elevated in endometrial carcinoma compared to controls (12.8% vs. 1.9%, P=0.0017), and CD146+ cells levels were statistically significant decreased in Endometrial carcinoma and EIN compared to controls (20% vs. 6.8% P=0.008). ALDH1+ cells levels were higher in controls than in pre-malignant lesions (not significant).
Immunohistochemistry results showed a trend of increased levels of CD133+ cells in endometrial carcinoma and pre-malignant endometrial lesions compared to controls, but did not reach statistical significance.

Conclusion: CD133 can be used as a CSC marker in endometrial carcinoma. The low level of CD146 in malignant endometrium implies that these cells are not of somatic stem cells origin.



IL-6 AND MET BLOCKAGE REDUCE CHEMOTHERAPY-RESISTANCE AND ALTER CELL`S MOVEMENT IN OVARIAN AND UTERINE SEROUS CANCER

Yossi Levi[1], Ilan Tsarfaty[1], Ilan Bruchim[2]

[1]Department of Clinical Microbiology and Immunology, Sackler School of Medicine, Tel-Aviv University, Tel-Aviv, Israel, [2]Gynecologic Oncology Division and Laboratory of Gynecology Oncology, Department of Obstetrics and Gynecology, Hillel Yaffe Medical Center, Hadera, Affiliated to the Technion Israel Institute of Technology, Haifa, Israel

Background: Ovarian cancer is the leading cause of death from gynecologic cancer in the western world. Metastatic disease remains mostly incurable as patients succumb to Chemotherapy-resistance. IL-6 over expression is predictive of poor clinical outcome. Met, a tyrosine kinase receptor involved in cell survival and movement, over-expressed in 30–40% of ovarian cancer.

Major Objective: study IL-6 and Met signaling inhibition on Cisplatin-resistance and movement inhibition.

Material and methods: Human ovarian (SKOV-3, OVCAR-3, ES-2) and uterine serous (USPC-2) cell lines were treated with Cisplatin, anti-IL-6 antibody (Siltuximab) or si-RNA and Met inhibitor PHA-665752. Viability was measured by XTT-assay. Cell's velocity was measured by scratch assay. SKOV-3 MGTC`s (multi-generation tumor cells) were isolated to evaluate IL-6 and Met –In-Vivo alterations.

Results: Cisplatin increased IL-6 secretion up to 31.29 folds ($0.02<p<0.0006$) and Siltuximab reduced IL-6 level by up to 69% ($p=0.001$). IL-6 Knockdown (si-RNA) increased Cisplatin-sensitivity by 20% ($p<0.042$). MGTC.3 (three In-Vivo period) subgroup (31%) were IL-6 dependent, as 90-100% cells depleted with Siltuximab. Met inhibition decreased proliferation by 70% in SKOV-3`s ($p<0.01$).
Siltuximab reduced cell`s velocity by 27.32% in SKOV-3. MGTC.1 up-regulated IL-6 secretion 4.98-6.08 folds ($0.039< p<0.005$) and increased velocity by 84% ($p<0.01$), potentiating IL-6 in cell`s movement. MGTC.1 was more susceptible to Met inhibition. Cisplatin/PHA-665752 reduced velocity of SKOV-3 by 28% versus 46% in MGTC.1 ($p<0.001$).

Conclusions: 1) IL-6 inhibition is a Cisplatin- sensitizing event.
2) IL-6 and Met inhibition reduce cell`s velocity.
3) In MGTC, IL-6 and Met signaling is dominant, creating a tempting combination personalized therapy.

QUALITATIVE ASSESSMENT VS. SUV MEASUREMENT OF FDG-UPTAKE IN SURGICALLY TREATED CERVICAL CANCER PATIENTS FOR PREDICTION OF PROGNOSTIC FACTORS

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Objective: Higher tumor metabolic activity on FDG-PET measured by maximum standardized uptake value (SUVmax) was shown to be associated with worse prognosis in cervical cancer. The aim of this study is to determine whether the clinical implication of using a qualitative evaluation of FDG uptake is as good as quantitative assessment of tumor metabolic activity for the prediction of prognostic features.

Methods: A retrospective study including cervical cancer patients, who were treated, between 03/2007 and 01/2015, with primary surgery and underwent a pretreatment PET/CT scan at the Rabin Medical Center. Patients' files were reviewed for clinic-pathologic data. All PET/CT scan were evaluated again by a nuclear medicine specialist for tumor size, Lymph-Nodes involvement and metabolic activity features including SUVmax, SUVmean and a qualitative FDG-uptake score.

Results: Twenty six patients with cervical cancer staged 1B1 to 2A, who had a pre-surgery PET/CT scan, were detected. Qualitative FDG-uptake score was classified as high in 16 of scans and Low in 10, and showed positive correlation with SUVmax of the cervical tumor. High Qualitative FDG-Uptake was not associated with prognostic features including histology, LVSI, deep tumor penetration, parametrial involvement, surgical margins involvement and positive Lymph-Nodes. However, no significant correlation was found between SUVmax to prognostic features either.

Conclusion: In this preliminary study, the clinical implication of using qualitative score for tumor metabolic activity did not differ from using quantitative score and both were not associated with prognostic features.

CERVICAL CANCER EPIDEMIOLOGY IN FORMER SOVIET UNION IMMIGRANTS TO ISRAEL. A STEP TOWARDS SOLVING THE ENIGMA

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Objectives: Cervical cancer (CC) is the second most common cancer in women worldwide, with more than 85% of the global burden occurring in developing countries. This can be partly attributed to early detection programs in high-resource countries. CC incidence in Israel is persistently lower compared to other developed countries, despite the lack of a national screening program. Persistent oncogenic HPV infection is obligatory for cervical cancer. Since exposure to the viral pathogen occurs in the second and third decades of life and the prevalence of the HPV virus varies between different geographic areas, an immigrant study can shed light on the environment's role in the etiology of this disease.

Methods: Crossing data from the population registry, the Israeli national cancer registry and the National Bureau of Statistics, we analyzed CC incidence, adjusted Hazard rations and mortality rates in 345,202 immigrants compared with 1,141,236 matching Israeli-born Jewish women.

Results: CC incidence was significantly lower for women who immigrated younger than 12 years of age compared to older immigrants (0.25% vs. 0.5%). In a Cox regression analysis, the former was protective (0.627) and the latter was hazardous (1.27) compared to Israeli-born women. Interestingly, in the immigrants group, only CC patients older than 12 years of age at immigration died of the disease in the study period. Deaths with CC and from cervical cancer were both significantly higher in immigrants as compared to Israeli born Jewish women.

Conclusions: Viral serotypes in Israel rather than ethnicity determine the pattern of CC in Israel.

ETHNIC DISPARITIES FOR GYNECOLOGIC CANCERS IN ISRAEL

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Objective: Israel's unique population is comprised of two main ethnic groups – Jews (75%) and Arabs (21%), both of whom are also prevalent worldwide. Although living in the same geographic region, these populations differ in their genetic backgrounds, culture, as well as socioeconomic status.
This study's objective is to characterize gynecologic cancer prevalence and its unique features among Arab and Jewish women in Israel.

Methodes: Data regarding uterine, ovarian and cervical cancers was collected from the national cancer registry. Available information included disease prevalence, age at diagnosis and death, disease stage and grade and histologic subtypes.

Results: The ASR (age standardized rate) per 100,000 of all cancers is 316 amongst Jewish women compared to 201 amongst Arab women. ASR for ovarian, cervical and uterine cancer, are all significantly higher in the Jewish population.
In situ cervical cancer, is more prevalent in the Jewish population with ASR of 24.5 compare to 4.2 in the Arabs women. There was no difference in stage distribution of invasive diseases. Relative survival of invasive cervical cancer is higher in the Jewish population compared to the Arab population (71.4% Vs 65.9%) while relative survival of ovarian cancer is the same (49.1% Vs 47%).

Conclusions: Disparities in gynecological cancer rates and presentations are evident between Israeli's two major ethnic groups. The lower cancer rates in the Arab women may be attributed to genetics, social and cultural differences. Interestingly, differences are not affected by behavioral and environmental influences, such as obesity and screening rates.

LONG-TERM SURVIVORS OF ADVANCED HIGH-GRADE EPITHELIAL OVARIAN CANCER: CLINICAL CHARACTERISTICS

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Objective: Advanced-stage high-grade epithelial ovarian cancer (HGEOC) is generally associated with poor prognosis. We describe the clinical features of a unique group of long term survivors diagnosed with advanced HGEOC.

Methods: A retrospective analysis of a cohort of 35 patients diagnosed between 1988-2009 at our center for stage IIIc-IV HGEOC, who survived at least 7 years.

Results: Median age at diagnosis was 54 years (range 37-72). Eighteen patients (51%) had known BRCA1/2 mutation. All patients were treated according to standard protocol including debulking surgery and platinum-based chemotherapy. Two received neoadjuvant chemotherapy. Optimal debulking to no macroscopic disease was achieved in 28 patients (80%), 3/35 (8.5%) had residual disease of >1cm. Mean CA-125 value at diagnosis was 804 U/mL (±1765), Median 240 (range 7-9790). Histology was high grade serous in 24/35 (68%), high grade endometrioid in 10/35 (29%) and clear cell in 1/35 (2.8%). At a median follow up of 156 months (14 years, range7-28), 16/35 (45.7%) had recurrent disease, all with an initial platinum free interval of more than 12 months (median recurrence-free survival of 7 years, range 1-19 years). All 35 patients are alive at the end of the follow up period.

Conclusions: Long term survivors in our cohort had high rate of favorable clinical characteristics (BRCA mutation, optimal debulking). Yet these features do not explain in full their favorable prognosis. Additional research comparing genetic and molecular features of long-and-short term survivors with advanced HGEOC, aimed to identify the unique traits of this unusual group of patients, is on-way.

PROGNOSTIC FACTORS FOR PREDICTING OPTIMAL CYTOREDUCTION IN OVARIAN CANCER PATIENTS

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Background: The poor prognosis associated with EOC is due to the advanced stage the disease is usually diagnosed. A common treatment option is neoadjuvant chemotherapy followed by interval cytoreductive surgery. The aim of our research is to investigate whether different parameters may act as prognostic factors predicting successful optimal cytoreductive surgery following neoadjuvant chemotherapy.

Methods: A retrospective study included newly diagnosed patients with stage 3 and 4 epithelial ovarian cancer who received neoadjuvant chemotherapy followed by interval cytoreductive surgery. Patients diagnosed between January 2005-2015 were included in the study. Patient charts were reviewed for clinical-pathologic information. Cytoreductive surgery was considered optimal when less than 1cm residual was left and successful only when no residual macroscopic disease was detected at completion of surgery.

Results: A total of 62 patients were included, of which 35 were categorized as successful and twenty seven with non-successful debulking. CA125 and CA15-3 levels at diagnosis were not shown to predict successful debulking surgery (P =0.773 and 0.554 respectively), nor did the rate of change in their levels during treatment until interval surgery (P=0.679 and 0.455 respectively). No single radiological finding including ascites, omental involvement, pleural effusion, enlarged lymph nodes, or diaphragmatic involvement had a predictive value in achieving successful debulking surgery.

Conclusion: Our data suggests there is no single effective parameter that can predict successful cytoreductive surgery among neoadjuvant treated patients with EOC. As a result of these findings a prospective trial incorporating laparoscopy into the decision making algorithm is planned.

OUTCOME OF OVARIAN AND PRIMARY PERITONEAL CARCINOMA PATIENTS WHO DID NOT RESPOND TO NEOADJUVANT CHEMOTHERAPY PRIOR TO INTERVAL DEBULKING SURGERY

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Aim: To assess the outcome of patients who did not respond to neoadjuvant chemotherapy (NACT) and underwent interval debulking surgery (IDS).

Methods: Clinicopathological data were abstracted from medical records of consecutive OvC and PPC patients, who received NACT and underwent IDS from 2004 to 2015. Chemotherapy consisted of 3 courses of paclitaxel + carboplatin given before and 3 courses given after IDS. The combined presence of two parameters determined response to NACT. 1. Reduction by ≥50% in the greatest diameter of the largest measurable tumor mass demonstrated by CT imaging 2. Reduction of the serum CA 125 level to less than 75 U/mL. Response was considered when both these criteria were present. No response was considered when one or both of these effects where not observed.

Results: The study group comprised 50 patients. Patient characteristics were similar in responders and nonresponders. A response, as defined by us, was observed in only 10 (20%) patients. Progression free survival was similar in the study subgroups. The OS was by about 40% better in the responders than in the nonresponders (62.2% vs. 22.6%). The median survival of the nonresponders was 51 months while that of responders did not reach it.

Conclusion: Our criteria allow the identification of nonresponders to NACT. The OS and median survival were better in the responders than in the non responders. The very low OS of the noresponders to NACT raises the question of whether this subgroup benefits from IDS.

SILENT POLYMORPHISM IN THE BCL2 GENE DETERMINES RESPONSE TO CHEMOTHERAPY IN HIGH GRADE SEROUS CARCINOMA

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Chemotherapy resistance is a major obstacle in the treatment of high grade serous papillary carcinoma, both in the adjuvant setting and in the recurrent setting. The insufficient data regarding molecular mechanisms of chemotherapy refractoriness hinder any progress towards individualization of adjuvant protocols.

We have analyzed publically available whole-exome sequencing data from 348 serous carcinoma patients, 85 endometrial carcinoma patients, and 28 head and neck squamous cell carcinoma patients, all treated with first line paclitaxel-carboplatin combination, and have identified a known synonymous germ-line SNP in the *BCL2* gene serves as a biomarker predicting the response to chemotherapy. Our experimental validation shows that the SNP, although not encoding for an amino acid change, increases the stability of *BCL2* mRNA transcript by significantly altering its RNA secondary structure. Subsequently, BCL2 protein levels are elevated, which results in significantly reduced response to paclitaxel *in-vitro*.

Taken together, our results suggest that *BCL2* genotype may be implemented as a biomarker for poor response to paclitaxel, and may provide rationale for a clinical trial incorporating BCL2 inhibitor in the treatment of a selected subset of gynecological cancer patients.

THE COMBINED EFFECT OF DENDRITIC CELLS AND IGF1 RECEPTOR INHIBITOR ON OVARIAN CANCER PROLIFERATION

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Background: While surgery and chemotherapy can improve survival in epithelial ovarian cancer (EOC), the survival rates remain significantly low. Recent data indicate that immunotherapy could hold promise in improving EOC treatment. Dendritic cell (DC) therapy evokes a positive immune response, yet it did not result in adequate response. The IGF axis has been shown to play an important part in carcinogenesis of several types of tissue, including EOC. To the best of our knowledge, no study investigated the effect of IGF1 receptor (IGF1R) activity in DC and the combined effect on EOC. The aim is to investigate the involvement of IGF1R signaling in DCs and the effect of combined DCs and IGF1R inhibitor treatment on EOC cells growth.

Methods: HL-60 and THP1 leukemic cells were differentiated to DCs. IGF1R and ligand-induced phosphorylated IGF1R levels were measured by Western blotting. NVP-AEW541 (a selective IGF1R inhibitor) treated leukemic cells were differentiated into DCs and co-cultured with EOC ES-2 and SKOV3 cells, thereafter scratch assays were performed.

Results: The differentiation of HL-60 into DCs was associated with decreased levels of phosphorylated and total IGF1R, while, differentiated THP1 cells did not show altered IGF1R level. In-vitro growth assays demonstrated a decreased growth of ES-2 cells into the scratch zone when co-cultured with NVP-AEW541 pre-treated DCs as compared to untreated DCs.

Conclusion: Preliminary data suggest that DC differentiation is associated with IGF1R signaling downregulation. Moreover, inhibition of IGF1R signaling in DCs might decrease EOC growth. Future studies will address the mechanisms of interaction between IGFIR and DC in EOC.

COMPLEMENTARY TREATMENT FOR STRESS REDUCTION IN WOMEN WITH OVARIAN CANCER– ASSESSMENT WITH HEART RATE VARIABILITY

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Background and aims: Following diagnosis of ovarian cancer, women are abruptly faced with the fear of impending death, the burden of difficult treatments, the concern from pain, and uncertainty about the future.
We aimed to assess the efficacy of anxiety reduction following one mode of complementary and alternative medicine (CAM) – the healing touch therapy in newly diagnosed women with ovarian cancer by both subjective and objective approaches.

Methods: prospective study in women who were diagnosed with ovarian cancer and were planned to undergo surgery. Complementary medicine in the form of healing touch was offered to the women. Subjective feelings before and after treatment were documented by a questionnaire. Computerized electrocardiogram was performed before and following treatment. Analyses of heart rate variability by power spectral density to study the autonomic nervous system modulation of heart rate, and nonlinear analyses methods were used to explore "hidden" components of heart rate variability.

Results: significant decrease in tension, agitation, scare, panic, anxiety and nervousness scores ($p<0.001$) with highly significant increase in relaxation, comfort and tranquility scores ($p<0.001$) were found in all women according to the self-reported questionnaires. These were associated with a significant decreased heart rate and the low-frequency band of the power spectral density with a significant decrease in the short-term $\alpha 1$ slope ($p<0.05$) of the detrended fluctuation analysis.

Conclusions: the subjective improved feelings of the women following the healing touch therapy were corroborated by significant changes in heart rate variability, complexity and fractal dynamics of the system.

SAFETY OF HERBAL MEDICINE USE DURING CHEMOTHERAPY IN PATIENTS WITH GYNECOLOGICAL CANCER: A "BEDSIDE-TO-BENCH" APPROACH

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Purpose: To identify herbal medicinal products used by patients with gynecological cancer during chemotherapy and test in vitro for herb-drug interactions.

Patients and Methods: Patients with gynecological cancer referred to a complementary and integrative medicine (CIM) service were asked about their use of herbal medicine during chemotherapy. Three popular herbs were selected for cytotoxicity analysis: wheatgrass (*Triticum aestivum*), European mistletoe (*Viscum album*), and ginger (*Zingiber officinale*). Ephedra (*Ephedra campylopoda*) was selected because of safety concerns, and Oriental mistletoe (*Viscum cruciatum*) due to its context in traditional Arab medicine. Cytotoxicity was examined using XTT assays in cisplatin-sensitive and resistant ovarian cancer cell lines (A2780, A2780CisR), and non-cancer kidney cells (HEK-293). The effect of the selected herbs on carboplatin and paclitaxel cytotoxicity was tested as well. Pro-apoptotic effects were tested using Poly(ADP-ribose) polymerase (PARP) cleavage.

Results: Of 98 patients referred to the CIM service, 42 (42.9%) reported using/intending to use herbal products during chemotherapy. European mistletoe and ginger exhibited significant anti-cancer activity in cisplatin-sensitive and resistant ovarian cells. Wheatgrass and ephedra reduced cytotoxicity of carboplatin on cisplatin-sensitive ovarian cancer cells, while ginger, European and Oriental mistletoe increased chemosensitivity in both cancer cell lines. Wheatgrass, European mistletoe and ginger increased sensitivity to cisplatin-resistant cells treated with carboplatin and paclitaxel. No effect was observed with the addition of any of the herbs on non-cancerous embryonic kidney cells (HEK-293).

Conclusion: Herbal medicine use by patients with gynecological cancer may influence anti-cancer activity of chemotherapy. Integrative physicians can provide "bedside-to-bench" guidance on the safety of these products.

מושב III: הצגת עבודות מקוריות

THE HETEROGENEITY OF CANCER STEM CELL MARKERS IN EPITHELIAL OVARIAN CANCER

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Objective: In recent years, accumulating evidence suggests that the presence of cancer stem cells (CSCs) in epithelial ovarian cancer (EOC) has a role in chemo-resistance and relapse. Identification of these cells by CSC-markers can serve for the development of novel CSC-targeted personal precision nanomedicine. The aim of the present study was to characterize and compare different EOC cells by molecular stem cell markers.

Methods: Cells were obtained from 3 serous EOC established cell lines (NAR, OVCAR-3 and A2780) and from 16 patients with primary and recurrent serous EOC. Cells were cultures both under standard and cancer stem cell media. Cells forming non-adherent (NAD) spheroids were considered as CSCs while adherent (AD) cells were considered as non-CSCs. Known CSCs surface markers such as CD44, CCR5, CD117, CD133, and CD326 were analyzed by flow cytometry. In addition, RNA expression of stem cell marker genes, such as: Nanog, nestin, CD133, CD117, CD147, oct-4, CA-9, and ABCB1 were evaluated by quantitative PCR (qPCR).

Results: All 3 cell lines grew as NAD stable spheres under stem cell media while <50% of the patient samples (cells obtained from tumors or ascites) were capable of forming self-renewing spheres. Both non-adherent spheroids and adherent cells were CD44+ in the cell lines and in cells obtained from patients. However, the other surface markers were inconsistently present in the different cells. Extreme heterogeneity was observed in the qPCR analysis between the cell lines and patient obtained cells and between the AD and NAD cells.

Conclusion: Our study provides insight into the phenotypic variability of EOC. The extreme heterogeneity between EOC cells in regard to CSC markers, might have clinical implications for targeted and tailored therapy against highly expressed stem cells molecules through personalized precision medicine.

DOES MUCINOUS HISTOLOGY WORSEN PROGNOSIS IN BORDERLINE OVARIAN TUMORS?

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Background: Borderline Ovarian Tumors (BOT) are typically indolent neoplasms. Several prognostic factors have been reported to increase the risk of recurrence, but the impact of histology – serous vs. mucinous – remains controversial. We evaluated the association of tumor histology with recurrence and survival in a series of BOT.

Methods: Consecutive patients with BOT treated at a tertiary cancer center 1981-2011 were identified from a prospectively maintained database. Data was extracted from the medical record and compared across histological subtypes. Disease-free and overall survival were assessed using the Kaplan Meier method and the log-rank test, and their association with clinical and pathological variables were evaluated using the Cox proportional hazards method.

Results: 141 serous BOT and 68 mucinous tumors were included in this study. Frozen section was more likely to miss a diagnosis of BOT in mucinous neoplasms (29% vs 8%, p=0.008). Mucinous tumors were more likely to be diagnosed at an early stage (stage I, 99% vs. 72% for serous tumors, p=0.001) and CA125 was accordingly lower (mean, 29 vs 90 for serous tumors, p<0.001).
50 patients (24%) experienced recurrences. Mean DFS was 56 months for mucinous tumors and 65 months for serous tumors (p=0.005). Mean OS was 70 months for mucinous tumors and 87 months for serous tumors (NS).

Conclusions: Mucinous BOT carry a worse prognosis overall with a significantly shorter interval to recurrence, despite earlier stage at diagnosis. They are also more likely to be missed on intraoperative pathology. This warrants a high index of suspicion at surgery and careful follow-up.

SENTINEL LYMPH NODE BIOPSY IN VULVAR CANCER: A MULTICENTER EVALUATION OF PROCEDURE'S FEASIBILITY FOR ISRAELI PATIENTS

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Background: In an effort to reduce postoperative morbidity associated with groin dissection, the use of sentinel lymph node biopsy (SLNB) has been proposed for early stage vulvar cancer patients. We aimed to evaluate the accuracy, safety and outcome of SLNB in early stage vulvar cancer and determine the applicability of this procedure for selected patients in Israel.

Methods: This retrospective multicenter study included 45 patients with T1 squamous cell carcinoma (SCC) of the vulva who underwent SLNB between 2002-2011. SLN was detected using both radioactive tracer and blue dye. All resected nodes underwent pathological examination, the gold standard for determining the efficacy of SLNB. The accuracy, recurrence rates and complications of the procedure were analyzed.

Results: There was a significant correlation between radioactive reading intensity and SLN detection in frozen section (FS) ($P < 0.0003$, $P < 0.0001$). A weaker correlation existed with use of blue dye ($P = 0.04$, $P = 0.09$). For metastatic LNs, the detection rates of both agents were similar. The false negative for metastatic SLN detection in FS was 12.5% while the false positive was 2%. The rate of inguinal recurrence without local recurrence was 4.4%. For patients with unifocal disease and a negative SLN the 7-years survival rate was 94%.

Conclusion: SLNB is an effective and safe procedure for selected Israeli patients with early stage disease. Recurrence rates and disease free survival are similar to reported literature and morbidity is low compared to radical inguinal LNs resection. Our conclusions require further investigation in a larger cohort.

CANCER CELL REVERSION BY PLACENTA-DERIVED MICRO-ENVIRONMENTAL MOLECULES

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Background: Cancer cells can switch phenotype. This has been established as one mechanism by which tumor cells acquire new properties such as drug resistance. Moreover, when exposed to normal microenvironment, cancer cells may be reprogrammed to undergo normal development or acquire normal behavior.
We've previously shown that stem cells isolated from human placenta (pSC) exert anti-proliferative effect on ovarian, lymphoma and renal cancer cell lines, and that this effect is mediated by molecules secreted and incorporated into the extracellular matrix.

Objective: We sought to further characterize the ingredients of the matrix, trying to elucidating a potential mechanism of action.

Methods & Results: Histological analysis revealed that the matrix is rich with collagen, elastin and glycosaminoglycan content. Furthermore, proteomic analysis identified about 1,000 proteins implicated in ECM organization, cell-ECM interaction, immunomodulation and regulation of cell growth. Further look at cancer-related biological pathways identified cell-cycle regulation, maintenance of genomic stability and DNA repair pathways, P53-regulated signaling, caspase- and TNF signaling. Biglycan, a component of embryonic mesenchyme previously suggested to play a key role in tumor cell normalization, was also identified.

Conclusions: This data suggests that the extracellular matrix produced by pSCs is a rich source of biologically-relevant anticancer molecules, and that these molecules may be a key to cancer cell phenotypic changes. Such approach, alone or in combination with conventional therapies, may change the way cancer is treated. Further studies are undertaken in order to investigate the matrix in-vivo potential in an animal model of ovarian cancer.

IS THERE AN ASSOCIATION BETWEEN RECURRENT PREGNANCY LOSS AND FUTURE RISK FOR FEMALE MALIGNANCIES?

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Objective: To investigate whether patients with a history of recurrent pregnancy loss (RPL) have an increased risk for future female malignancies.

Study design: A population-based study compared the incidence of long-term female malignancies in a cohort of women with and without a history of RPL (defined as 2 or more consecutive pregnancy losses). Deliveries occurred between the years 1988-2013, with a mean follow-up duration of 12 years. Women with known malignancies prior to the index pregnancy were excluded from the analysis. Female malignancies were divided according to specific type including ovary, uterine, breast and uterine cervix. Kaplan-Meier survival curve was used to estimate cumulative incidence of malignancies. Cox proportional hazards model was used to estimate the adjusted hazard ratios (HR) for female malignancy after controlling for confounders.

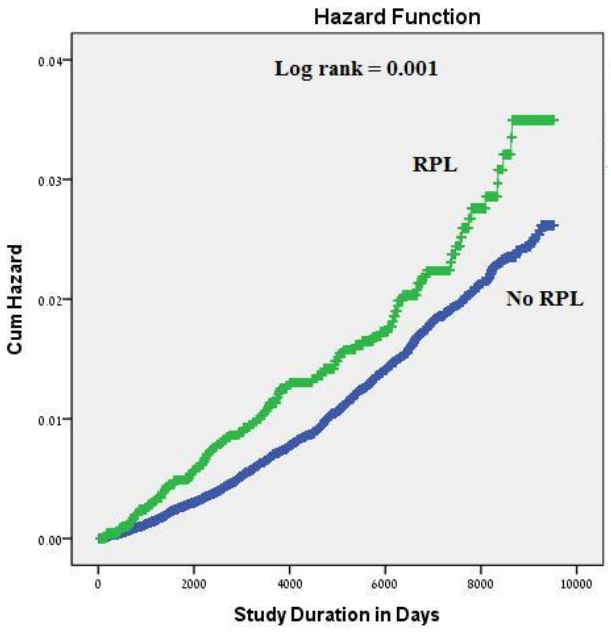
Results: During the study period 106,265 deliveries met the inclusion criteria; 6.6% (n=7052) occurred in patients with a diagnosis of RPL. During the follow-up period, patients with RPL had a significantly increased risk of being diagnosed with female malignancies as a group, and specifically breast and uterine cervix cancer (table). Using a Kaplan-Meier survival curve, patients with a history of RPL had a significantly higher cumulative incidence of female malignancies (Figure).
Using a Cox proportional hazards model, adjusted for confounders such as smoking, parity and diabetes mellitus, a history of RPL remained independently associated with female malignancies (adjusted HR, 1.4; 95% CI, 1.1-1.6; P=0.003).

Conclusion: RPL is an independent risk factor for long-term female malignancies. Patients with a history of RPL may benefit from counseling and screening for breast and uterine cervix cancer.

Female malignancies in patients with and without RPL

	RPL (n= 7052)	No RPL (n= 99,213)	OR	95% CI	P value
Ovary	0.1%	0.1%	1.4	0.6-3.5	0.464
Uterine	0.1%	0.1%	1.2	0.5-3.0	0.651
Cervix	0.3%	0.2%	1.6	1.05-2.42	0.038
Breast	0.8%	0.5%	1.7	1.3-2.2	0.001
Total	1.5%	1.0%	1.6	1.3-1.9	0.001

Kaplan-Meier hazard function analysis curve for female malignancies of patients with and without RPL



LAPAROSCOPIC MANAGEMENT OF INVASIVE MOLE PERFORATING THE UTERUS

Leonti Grin, Ahmed Namazov , Michael Voldarsky, Eyal Anteby, Ofer Lavie, Ofer Gemer

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We present a case of an invasive mole perforating the uterus causing massive hemoperitoneum mimicking an ectopic pregnancy. A 24 year old G1P0A1 was admitted with severe acute onset lower abdominal pain and vaginal bleeding. Seven weeks prior to her admission the patient underwent D&C due to missed abortion. Upon admission, her blood pressure was 90/50 mmHg and heart rate 90 bpm. The abdomen was tender and mild uterine bleeding was noted. Sonography demonstrated large amount of pelvic fluid consistent with blood and a 3x3cm heterogeneous lesion rich in vasculature adjacent to the posterior uterine wall. Hemoglobin decreased in 2 hours from 10.6 to 8.6 mg/dL. The βHCG level was 19,004 mIU/mL. At an urgent laparoscopy 2500cc of blood was present. In the posterior uterine wall a bulging mass, 3 cm in diameter, suggestive of products of conception was observed actively bleeding into the abdomen. The bleeding mass was dissected and hemostasis was secured by sutures and electrocoagulation. Pathology report confirmed the diagnosis of a complete hydatidiform mole. Recovery was uneventful, and the patient was subsequently treated with 5 courses of methotrexate-folinic acid.

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THE PROGNOSTIC SIGNIFICANCE OF HAEMATOLOGICAL PARAMETERS IN WOMEN WITH UTERINE PAPILLARY SEROUS CARCINOMA (UPSC)

Yakir Segev, Grace Younes, Meirav Schmidt, Anis Kaldawy, Yael Goldberg, Ron Auslender, Ofer Lavie

Division of Gynecology Oncology, Department of Obstetrics and Gynecology, Carmel Medical Center, Technion University, Rappaport Faculty of Medicine, Haifa, Israel

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HIGH INCIDENCE OF CARCINOSARCOMA AMONG PATIENTS PREVIOUSELY TREATED WITH TAMOXIEN AS COMAPARED TO UTERINE SARCOMAS IN PATIENTS THAT WERE NOT EXPOSED TO TAMOXIFEN

Yakir Segev, Meirav Schmidt, Ella Arnon, Ron Auslender, Ofer Lavie

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CA -125 LEVELS ARE SIGNIFICANTLY ASSOCIATED WITH PROGNOSTIC PARAMETERS IN UTERINE PAPILLARY SEROUS CARCINOMA

Meirav Schmidt, Yakir Segev, Ron Auslender, Rotem Sade, Ido Feferkorn, Anis Kaldawy, Gilit Kligun, Ofer Lavie

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IS HYSTEROSCOPIC POLYP RESECTION A SAFE ALTERNATIVE FOR THE MANAGEMENT OF PREMALIGNANT AND MALIGNANT ENDOMETRIAL CHANGES?

Osnat Elyashiv, Ron Sagiv, Ram Kerner, Ran Keidar, Joseph Menczer, Tally Levy

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THE PREVALENCE OF HPV TYPES IN WOMEN WITH CIN 2-3 OR CERVICAL CANCER IN HAIFA DISTRICT, ISRAEL

Efraim Siegler[1,3], Karin Sharir[1], Ofer Lavie[1,3], Pnini Saked-Misan[2] Lena Machulki[1], Ron Auslender[1,3], Yakir Segev[1,3]

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Yael Goldberg[1], Ofer Lavie[1, 2], Yoav Siegler[2], Efraim Siegler[1,2], Yakir Segev[1,2], Neta Baum[1] Reuven Kedar[1], Rachel Mandel[1], Ron Auslender[1, 2]

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Efraim Siegler[1,4], Ofer Lavie[1,4], Zvi Vaknin[2,5], Amnon Amit[3,4], Ron Auslander[1,4], The Israeli Colposcopy Network*, Zeev Blumenfeld[2,4]

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Efraim Siegler[1,4], Ofer Lavie[1,4], Tamar Baruch-Finkel[2], Pninit Shaked-Mishan[3], Yakir Segev[1,4], Ron Auslander[1,4], Yael Goldberg[1,4]

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Tamar Perri,[1,2] Ronnie Shapira-Frommer,[2,3] Gilad Ben-Baruch,[1,2] Sarit Kalfon, [1,2] , Mario Beiner[1,2], Benny Brandt[1,2], Ludmila Irmin[1,2], Nissim Zmira[1,2], Jacob Korach[1,2]

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Lena Sagi-Dain[1], Ofer Lavie[1], Ron Auslander[1], Shlomi Sagi[2].

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L. Helpman[a,b,c], M.E. Beiner[a,b], A. Yaniv[b], S. Aviel-Ronen[a,b], T. Perri[a,b], G. Ben-Baruch[a,b], L. Hogen Ben-David[a], A. Jakobson-Setton[a] and J. Korach[a,b]

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Anca Michailovitch[1], Ilan Wassermann[2], David Schneider[1], Mia Polak-Leonov[3], Zvi Vaknin[1]

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תיאור מקרה וסקירת ספרות

עינבר בן שחר, יעל שקי, נעמה מרקוס, שוואלב סרג'יו

מחלקות נשים יולדות ופתולוגיה, המרכז הרפואי זיו והפקולטה לרפואה של בר אילן, ישראל

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Ofer Lavie[1], David Edelman[2], Tally Levy[3], Ami Fishman[4], Ayala Hubert[2], Yakir Segev[1], Eli Raveh[5, 6], Michal Gilon[5, 6], Avraham Hochberg[6]

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Yehuda Ben David, Lior Levi, Avraham Ishay, Shira Baram, Shabtai Romano

Department of Obstetics & Gynecology, Endocrine Institute, Ha'Emek Medical center, Afula, Israel

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Ofer Lavie[1], Yakir Segev[1], Flavio Lejbkowicz[2], Anath Flugelman[2], Sara Dishon[2], Orna Gat[2], Hedy S. Rennert, Gad Rennert[2]

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Limor Helpman[1,3], Omri Zidan[3], Eitan Friedman[1,2,] 3, Sarit Kalfon[3], Mario E. Beiner[1,3], Liat Hogen Ben-David[1], Ariella Jakobson-Setton[1], Tamar Perri[1,3], Gilad Ben-Baruch[1,3], Jacob Korach[1,3].

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Ofer Lavie[1], Meirav Schmidt[1], Michael G. Moskoviz[1], Ron Auslender[1],Ofer Gemer[1], Arie Bitterman[2] ,Grace Younes[1], Yakir Segev[1]

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Yehuda Ben David, Lilach Cohen, Manal Massalha, Lior Levy, Shabtai Romano

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Barliz Waissengrin[2] , Lucia Borgato[3] ,Moshe Leshno[2] ,Elsa Reich[1] ,Julia Smith[1], Franco Muggia[1] ,Tamar Safra[1,2]

New York University (NYU) Cancer Institute, New York ,NY[1]; Tel Aviv Sourasky Medical Center, Tel Aviv, Israel[2]; Instituto Oncologico Veneto (IOV)- IRCCS, Padova, Italy[3]

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התערבות פשוטה לשיפור השרות למטופלות גינקואונקלוגיות הפונות למיון נשים

דנה יוספי, יפעת כדן, עמי פישמן, אדית בן דוד, לילי כהן, לימור הלפמן

האגף לגינקולוגיה ומיילדות, מרכז רפואי מאיר, כפר-סבא, ישראל; הפקולטה לרפואה ע"ש סאקלר, אוניברסיטת תל - אביב, ישראל

Endometrial Carcinoma:

THE PROGNOSTIC SIGNIFICANCE OF HAEMATOLOGICAL PARAMETERS IN WOMEN WITH UTERINE PAPILLARY SEROUS CARCINOMA (UPSC)

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Objectives: Preoperative hematologic parameters: thrombocytosis, leukocytosis and anemia have been demonstrated to be independent poor prognostic factors in ovarian and endometrial cancers. However, little is known about their relation to uterine serous papillary carcinoma (USPC). We evaluated several preoperative hematologic parameters and their association with clinicopathologic features, disease progression and overall survival in USPC patients.

Study Design: This was a retrospective cohort study reviewing charts of all patients with a histologic pure USPC at two gynecologic oncology centers from January 2000 through July 2012. All patients had comprehensive hematologic tests prior to primary surgical treatment and were exposed to the same adjuvant treatment protocol.

Results: The study included 56 patients, mean age at diagnosis 69.4± 15. Six (11%) had platelet count above 400000 10^6/L, of them 4 (66%) were dead at the end of follow up (HR= 1.4, p=0.48; CI 95% 0.5-4.3). The mean hemoglobin level was 12.3g/dl, fibrinogen 437.5mg/dL, and lymphocytes 2013/µL. None of these parameters was significantly associated with 5 year survival. Leukocyte and neutrophil levels were adversely associated with survival. Of 15 patients with leukocytosis >10000/µL, 67% were dead at the end of follow up (HR= 3.98, p=0.003; CI 95% 1.6-9.8). Of the 27 with neutrophils above 65%, 14 (52%) were dead at the end of follow up (HR= 3.1; p=0.015; CI 95% 1.2- 7.8).

Conclusions: In patients with USPC, leukocytosis and neutrophilia are associated with aggressive tumor biology, and may predict a lower 5 year survival.

HIGH INCIDENCE OF CARCINOSARCOMA AMONG PATIENTS PREVIOUSELY TREATED WITH TAMOXIEN AS COMAPARED TO UTERINE SARCOMAS IN PATIENTS THAT WERE NOT EXPOSED TO TAMOXIFEN

Yakir Segev, Meirav Schmidt, Ella Arnon, Ron Auslender, Ofer Lavie

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Objectives: Tamoxifen acts as an estrogen antagonist within the breast tissue of breast cancer patients. In the uterus, tamoxifen is an agonist for some estrogen receptors. Therefore, could lead to either hyperplasia malignant processes in the endometrium. We compared the characteristics of patients that had uterine sarcoma and were previously treated with Tamoxifen versus patients with uterine sarcoma that were not exposed to Tamoxifen.

Materials and Methods: Files of uterine sarcoma patients treated at "Carmel" medical center between 2000 and 2013 were retrospectively reviewed. Patients were divided into two groups: patients with uterine sarcoma that were previously treated with Tamoxifen, versus patients who were not. Data on disease characteristics included, histological type of sarcoma, patients demographics type of treatments and the final outcome.

Results: We identified 66 patients who were diagnosed with uterine sarcoma. Twenty one percent of the women (14) were previously exposed to Tamoxifen, of these 85%, had a characteristic uterine carcinisarcoma while the frequency of carcinosarcoma among patients not exposed to Tamoxifen was 44% (p-value<0.006). Moreover, we have found that the patients with carcinosarcoma, were older than other sarcoma patients (73±7 vs 59±11 p-value<0.000) (Table 1). The mean time from diagnosis to death was 7.37+0.42 years. No differences in overall survival between patients with carcinosarcoma previousely exposed to Tamoxifen was identified (p-value<0.602) (Figure 1). Neither between patients with carcinosarcoma or other types of sarcoma (p-value<0.698) (Figure 2).

Conclusions: Women with uterine sarcoma previously treated with Tamoxifen tend to have a higher incidence of carcinosarcoma.

Table 1: Cases- sarcoma patients exposed to tamoxifen compared to controls- sarcoma patients, not exposed to tamoxifen.

	Exposed to TAM (%)	Not exposed to TAM (%)	P value
Carcinosarcoma	12 (85%)	23 (44%)	0.006<
Mean age (years)	73	59	0.0001<
Diabetes Mellitus	4 (28%)	13 (25%)	0.744<
Hypertension	9 (64%)	34 (65%)	1<
Dyslipidemia	5 (34%)	26 (50%)	0.292<
Heart Disease	4 (28%)	18 (34%)	0.512<
Adjuvant radiation	10 (71%)	26 (50%)	0.136<
Adjuvant chemotherapy	4 (28%)	22 (42%)	0.35<
Overall survival	0.4	0.45	0.602<

Figure 1: Overall survival cases vs controls.

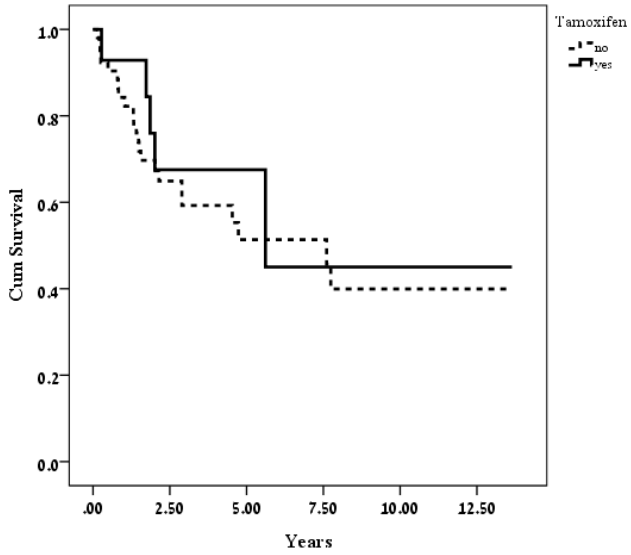
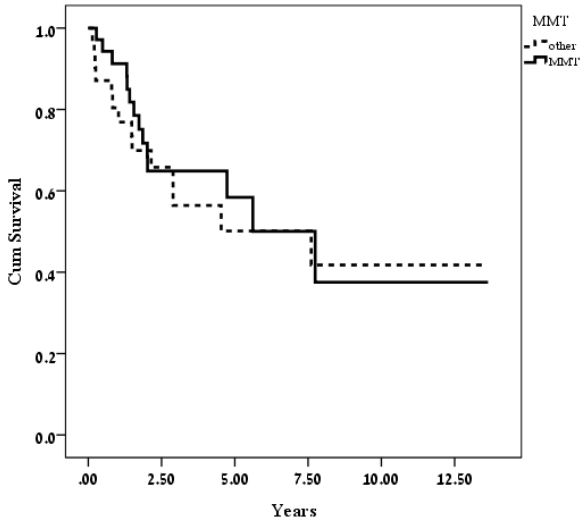


Figure 2: Overall survival carcinosarcoma patients vs other sarcoma patients:



CA -125 LEVELS ARE SIGNIFICANTLY ASSOCIATED WITH PROGNOSTIC PARAMETERS IN UTERINE PAPILLARY SEROUS CARCINOMA

Meirav Schmidt, Yakir Segev, Ron Auslender, Rotem Sade, Ido Feferkorn, Anis Kaldawy, Gilit Kligun, Ofer Lavie

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Background: Uterine Papillary Serous Carcinoma (UPSC) is a highly aggressive subtype of endometrial carcinoma. Histopathologically it resembles the pattern of serous papillary carcinoma of the ovary. Cancer antigen 125 (CA-125) is the most widely used biomarker in epithelial ovarian carcinoma. Its use in UPSC has yet to be evaluated.

Objectives: The purpose of this study was to evaluate the significance of preoperative serum CA-125 as a prognostic factor in patients with UPSC.

Methods: The cohort of the study included all women with UPSC operated in our institution between February 2003 and March 2015. All patients underwent complete surgical staging. Preoperative CA-125 was reviewed retrospectively and correlated with clinical and pathological parameters.

Results: 42 women met the study criteria. Mean pre-operative CA-125 was found to be significantly associated with disease stage. Patients with disease Stage I to IV had a mean pre-operative CA-125 levels of 15.76±12.16 U/ml, 28.4±19.51 U/ml, 63.15±93.95 U/ml and 132.77±78.45 ($p<0.002$) respectively.
Levels of CA-125 were significantly associated with positive cytology ($p<0.003$), omental disease ($p<0.001$), pelvic or para-aortic lymph node metastasis ($p<0.004$) and adnexal involvement ($p<0.001$). A cut-off value of 35 U/ml provides a sensitivity and specificity of 63.6% and 85.7% respectively for LN involvements (AUC=0.76,$p<0.013$). 75% and 82.4% for omental disease (AUC=0.85,$p<0.002$) and 58.3% and 83.3% for adnexal involvement (AUC=0.80,$p<0.002$) **.**

Conclusions: In patients with UPSC, preoperative CA-125 levels correlate with the extent of the disease and thus can be used as a prognostic factor. This can assist the clinician in tailoring the treatment approach and in counseling the patients.

IS HYSTEROSCOPIC POLYP RESECTION A SAFE ALTERNATIVE FOR THE MANAGEMENT OF PREMALIGNANT AND MALIGNANT ENDOMETRIAL CHANGES?

Osnat Elyashiv, Ron Sagiv, Ram Kerner, Ran Keidar, Joseph Menczer, Tally Levy

Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Wolfson Medical Center, Holon, Israel; Tel-Aviv University, Tel-Aviv, Israel

Objective: The standard treatment of endometrial cancer (EC) and complex atypical hyperplasia (CAH) is hysterectomy with bilateral salpingo-oophorectomy. In the last decade, several centers have attempted to perform hysteroscopic resection of these endometrial lesions as an alternative to hysterectomy. In the present study, we evaluated the safety of this procedure in regard to residual uterine pathology.

Methods: We conducted a retrospective chart review of 1701 women who underwent hysteroscopic polypectomy at our center during the years 1998-2016. Patients with CAH and endometrioid type EC who underwent hysterectomy were included in the study. Patients with non-endometrioid pathology were excluded. The operative and pathological reports of the hysteroscopy and hysterectomy procedures were revised.

Results: 40 women (2.3%) were diagnosed with uterine pathology: 19 with EC and 21 with CAH. Thirty women (75.0%) underwent hysterectomy and were included in the study group. The median age was 62 years (range 35-83 years). Most women (86.6%) presented with postmenopausal bleeding or menorrhagia. In 11 patient (36.6%) more than one polyp was removed. The median size of the polyps was 2 cm (range 1-4cm). In 23 women, there were no other endometrial findings during the hysteroscopy except for the removed polyp. Only in 2 of them (8.7%) no uterine pathology was found in the hysterectomy specimen. Interestingly in both cases, the polyp harbored well differentiated EC.

Conclusions: Our results indicate that hysteroscopic evaluation of the uterine cavity and polyp resection are not enough for the eradication of pre-malignant and malignant endometrial lesions. This alternative should be reserved for well-selected cases such as for fertility preservation and for patient with surgical risk factors that after the hysteroscopic procedure will receive further medical treatment.

Cervical Carcinoma:

THE PREVALENCE OF HPV TYPES IN WOMEN WITH CIN 2-3 OR CERVICAL CANCER IN HAIFA DISTRICT, ISRAEL

Efraim Siegler[1,3], Karin Sharir[1], Ofer Lavie[1,3], Pnini Saked-Misan[2] Lena Machulki[1], Ron Auslender[1,3], Yakir Segev[1,3]

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Background and Aims: Human Papilloma Virus (HPV) is classified as biologic carcinogen causing cervical cancer. We intend to identify the HPV types responsible for cervical cancer and pre-cervical cancer in Israel.

Methods: This was a retrospective study which included 226 women, diagnosed with CIN 2-3 and 115 women diagnosed with cervical cancer, and tested for HPV typing.

Results: HPV was detected in 92.9% of women with CIN 2-3 and HPV–HR was detected in 85.8% of them. In women with cervical cancer HPV was positive in 96.5%, and HPV–HR detected in 93%. The most common HPV types among the CIN 2-3 were 16(42%), 31(8.8%) and 18 (4.9%) and in the cancer patients HPV 16 (57.4%), 45 (9.6%), and 18(7.8%). The chief complaint led to cancer diagnosis was post menopause bleeding (27%), while abnormal Pap test lead to CIN 2-3 diagnosis in 75.2% of the women. The common PAP finding was ASCUS (36.4%) in CIN 2-3 group and HSIL in cancer group (32.1%). Only 22.6% of women diagnosed with cancer were diagnosed due to abnormal Pap test and 76.9% of them were diagnosed at stage I, as compared to women diagnosed with cancer following symptoms, of them 57.1 % were diagnosed at stage I ($p<0.07$).

Conclusions: HR HPV types were found in 93% and 85.8% of the cancer and CIN 2-3 patients respectively. The most common HPV types in cervical cancer women were 16, 18 and 45. Women diagnosed with cancer because abnormal Pap test were in earlier stages compared to women diagnosed following symptoms.

TRANSVAGINAL ULTRASOUND – THE ADDITIVE VALUE IN THE ASSESSMENT OF EARLY CERVICAL CANCER CLINICAL STAGING

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Objectives: To assess the additive value of trans-vaginal ultrasound (TVUS) in evaluating tumor size and parametrial involement, in the triage of cervical cancer.

Methods: Consecutive cases of invasive cervical cancer, which were referred for TVUS and PET-CT after conization, and before treatment decision were reviewed. Operability was based on tumor size smaller than 4 centimeters, no parametrial involvement by TVUS and negative lymph nodes by PET-CT. Final pathology results were reviewed.

Results: 73 consecutive cases were evaluated for cervical cancer from 4/2011 to 12/2015, 27 at the operated group and 46 at the non-operated (control) group. In the operated group, the TVUS estimated tumor size matched the final pathology in 25/27 cases. Parametrial involvement was correctly ruled out by TVUS in all cases, as was confirmed by pathology. The NPV of the TVUS for parametrial involvement was 100%. In addition, PET-CT ruled out correctly lymph node and distant metastases in 23/27 cases, resulting in a specificity of 95.6% and NPV of 84.6%.

Conclusions: TVUS assessed adequately the tumor size and the parametrial involvement in cases of early cervical cancer. In cases of the non-operated tumors, we find good correlation between the clinical examination, TVUS and lymph-node involvement as assessed by PET-CT. TVUS and PET-CT should be used concomitantly for evaluation tumor size, parametrial involvement, pelvic and distant metastases in the triage assessment of early cervical cancer.

SHOULD THE RISK OF CERVICAL CANCER IN PREGNANT WOMEN WITH CIN 2-3 AND THE SAFETY OF LLETZ DURING THE FIRST 15 WEEKS OF PREGNANCY LEAD TO REVISION OF GUIDELINES?

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Introduction: CIN 2-3 is a premalignant lesion and LLETZ is the recommended treatment. During pregnancy observation is recommended because the belief that during pregnancy there is no progression to malignancy and the treatment is associated with severe complications.
The aim of this study is to describe the Israeli experience in pregnant women diagnosed with CIN 2-3.

Methods: 101 pregnant women were diagnosed with CIN 2 or CIN 2-3 between January 2006 and January 2016. All 16 patients with CIN 2 diagnosis were followed without treatment and evaluated after delivery. From the 85 women with CIN 2-3, 43 women were followed up and 42 have undergone LLETZ during the first 15 weeks of pregnancy

Results: In 43 women who were observed the final pathological results were: 3 (7.1%) had cervical cancer, 28 (66.6%) had CIN 2-3, 11 (26.2%) had CIN1 or normal histology.
42 women underwent LLETZ during the first 15 weeks and the diagnoses was invasive cancer in 3 (7.1%) women, CIN 2-3 or AIS in 36 women (85.7%) and 3 patients (7.1%) had CIN 1 or normal histology. None of them suffered severe bleeding.
34 women continued their pregnancy, 30 (88.2%) of them had term deliveries, two (5.8%) had late premature deliveries (34, 36 weeks), one pregnancy is ongoing, one women had missed abortion. (2.9%) .

Conclusions: In 7.1 % of the women diagnosed with CIN 2-3 during pregnancy, the final histology was invasive cancer.
The LLETZ procedure during the 15 weeks first trimester of pregnancy is safe.

COULD NEGATIVE HPV-HR TYPING RESULTS AFTER LLETZ SERVE AS A NEW RISK FACTOR FOR CONSERVATIVE TREATMENT OF EARLY STAGE CERVICAL CARCINOMA?

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Introduction: The treatment of invasive cervical cancer is tailored according to the FIGO recommendations. The standard treatment for women with early-stage cervical cancer (IA2-IB1) is radical hysterectomy. The possibility of a less aggressive approach for those patients with low-risk early-stage disease was explored by many, using parameters such as the depth of invasion, tumor diameter, lymph node status and lymph-vascular space invasion. We examined whether the HPV-HR DNA typing, taken after LLETZ, before final treatment, can predict cervical residual disease at the final surgical specimen and serve as a new risk factor.

Methods: Patients, who were diagnosed with invasive cervical cancer after LLETZ procedure, had HPV typing test before and again after the LLETZ. Final surgical specimen was examined for residual cancer. Patients were grouped according to HPV-HR DNA results of the second examination.

Results: 26 patients were available. 13 patients, who were negative for HPV-HR types they had before the LLETZ no residual invasive cancer was detected at the final surgical specimen. The negative predictive value was 100%. In 10 out of 13 with positive HPV-HR, residual cancer was found in the final surgical specimen, and another 2 had CIN 3 /AIS. Only one women with positive HPV-HR has normal histology at the final specimen.

Conclusions: Though a small cohort, we think that HPV-HR typing following LLETZ procedure is an important parameter that should be considered before deciding the type of operation in women with early cervical cancer, especially in those wishing to preserve their fertility.

ANTI PD-1 ANTIBODIES IN RECURRENT METASTATIC CERVICAL AND OVARIAN CANCER

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Aim: Immune checkpoint-inhibitors that block PD1-signalling had proved antitumor activity in various cancer types. We assessed the safety and efficacy of Anti-PD1-antibodies in recurrent metastatic gynaecologic malignancies.

Materials and methods: We retrieved medical records of patients with recurrent metastatic cervical (n=9) and ovarian (n=11) cancers, treated off-label with anti-PD1-antibodies, either intravenous Pembrolizumab, 2mg/kg q3w or Nivolumab, 3mg/Kg q2w. Imaging scans were reviewed.

Results: Patients received 1-12 cycles (median=4). Eight received<4 courses due to early clinical deterioration. No grade 3-4 toxicities were observed. 9/11 ovarian cancers were high-grade and 2 low-grade serous carcinoma, all platinum resistant. 9/11, with median ECOG performance status 3 who were heavily pre-treated, showed neither response nor clinical benefit. 2/11 (18%) achieved partial response at first radiological assessment, with relatively short time to progression (2 and 3 months). Both received only two prior treatment lines and had ECOG 0-1. Six cervical cancer patients with three or more prior chemotherapy lines and one with one previous line had no response, however 2/9 (22%) had complete response of intra- and extraperitoneal disease. Both had ECOG 0-1 and received only one prior chemotherapy line. One response lasted 13mo, and diseases progressed 5mo after discontinue of anti-PD1-antibodies. The patient is now re-challenged with Pembrolizumab. The other response lasted 8mo and is ongoing.

Conclusions: In our series, anti PD1 antibodies had no effect in heavily pre-treated ovarian/cervical cancer. Its safety and clinical efficacy in selected patients with good performance status early in the course of disease, is encouraging and warranting large-scale studies.

Ovarian Carcinoma:

CLINICAL USE AND OPTIMAL CUTOFF VALUE OF CA15-3 IN EVALUATION OF ADNEXAL MASS: RETROSPECTIVE COHORT STUDY AND REVIEW OF THE LITERATURE

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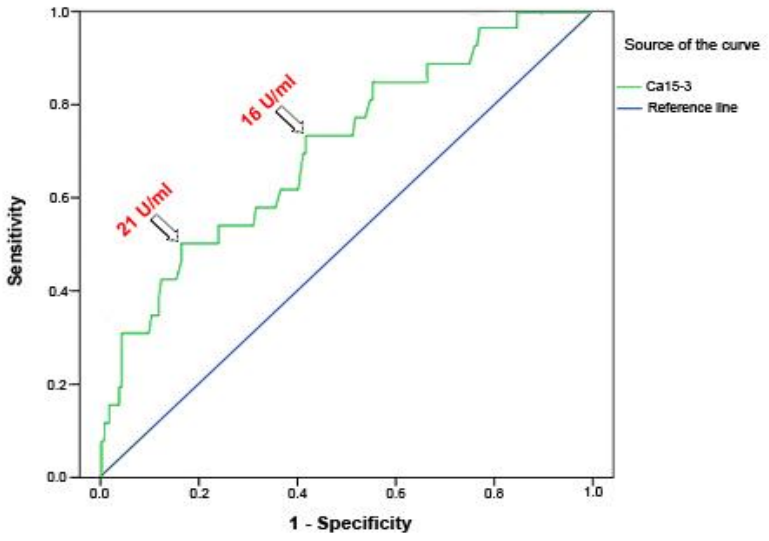
Objective: To estimate the diagnostic performance and reference values of serum Ca15-3 levels in the triage of adnexal masses.

Methods: This retrospective cohort study was carried out in 481 patients referred to the Gynecology Department at Carmel Medical Center due to adnexal mass. All patients underwent surgery with histopathologically confirmed diagnosis and preoperative measurements of serum Ca-125 and Ca15-3. Receiver operating characteristics (ROC) curves were used in an effort to define the optimal cutoff value.

Results: Combination of Ca125 with Ca15-3 elevated the sensitivity of Ca125 alone (from 86.9% to 93.2%, p=0.029), along with reduction of its specificity (from 80.5% to 69.5%, p=0.005) in differentiation between malignant and benign cases. According to ROC curve, Ca15-3 level of 21 U/ml was shown to be the optimal reference value for malignancy detection. All cases with Ca15-3 levels above 44.5 U/ml were malignant, mostly of primary ovarian source.

Conclusions: As Ca15-3 assessment allowed detection of significantly more malignancy cases, we believe that measurement of this marker in combination with Ca125 is worthwhile in patients presenting with adnexal masses. The cutoff of 21 U/ml seems to be the optimal value in this specific population. High Ca15-3 levels (above 44.5 U/ml) strongly direct to a diagnosis of malignancy, mostly of primary ovarian tumors rather than breast malignancy, thus the necessity of mammography or breast sonography should be reconsidered in these cases.



ROC curve analysis for Ca15-3 in patients with normal Ca125 levels.

FERTILITY PRESERVATION IN PATIENTS WITH BORDERLINE OVARIAN TUMORS : HOW DOES IT IMPACT DISEASE OUTCOME?

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[a]*Chaim Sheba Medical Center, Tel Hashomer,,* [b]*Tel Aviv University,* [c] *Meir Medical Center,* ISRAEL

Introduction: Borderline ovarian tumors (BOT) are typically indolent neoplasms. Since many are diagnosed in younger women, fertility conservation is an important consideration. Our objective was to identify features impacting on recurrence and survival in a series of BOT, and to assess the safety of a fertility-sparing approach.

Methods: This is a historical cohort of consecutive BOT treated at a single institution over 30 years (1981-2011). Data on surgical approach (fertility sparing or otherwise) as well as disease stage, CA125 levels, histological features, chemotherapy and follow up data were collected. Recurrence and survival were assessed using the Kaplan Meier method and associations with the variables assessed were investigated using Cox proportional hazards models.

Results: 213 cases with sufficiently complete data were identified. Mean follow-up was 75 months. Mean age at diagnosis was 39 years. Of 132 women age 40 years and below at diagnosis, 112 (85%) had a fertility-sparing procedure and 60 (46%) had conservation of an involved ovary. 50 patients (24%) developed recurrences; 48 of them were treated surgically. Multivariable regression analysis found only fertility preservation (HR= 2.57; CI 1.1-6; p=0.029) and advanced stage (HR=4.15; CI 2.3-7.6; p<0.001) to be independently associated with recurrence. 11 patients (5%) died of their disease. Fertility preservation was not associated with compromised OS.

Conclusions: BOT carry a good prognosis overall, although the risk of recurrence is higher for advanced stage disease. Fertility preservation is also associated with a higher risk of disease relapse; however, as most relapses are localized and may be salvaged with surgical treatment, overall survival is not compromised.

MALIGNANT TRANSFORMATION OF ENDOMETRIOSIS IN ABDOMINAL SURGICAL SCAR – A CASE REPORT AND REVIEW OF THE LITERATURE

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Introduction: The incidence of endometriosis in scar is less than 1% of all endometriosis cases. A malignant transformation of endometriosis in abdominal surgical-scar (MTEASS) is very rare, and only 45-cases are reported in the current literature. The therapeutic approach has not been determined due-to the limited experience. We report a case of clear-cell carcinoma (CCC) emerging from endometriosis in cesarean-section scar (CS-S), involving the abdominal fascia and muscles. We also report an updated review of literature regarding MTEASS to allow a better understanding and treatment options for this phenomenon.

Case presentation: A 47- year-old woman presented with a voluminous mass in the CS-S involving the lower-abdominal-wall fascia and muscles. She reported having an emergency CS, 22-years ago. An-ultrasound-guided needle-biopsy revealed a CCC. She underwent a radical resection of the abdominal-wall tumor, total abdominal hysterectomy (TAH), bilateral salpingo-oopherectomy (BSO) and reconstruction of the abdominal wall defect with mesh. The final pathology report revealed a CCC adjacent to endometriosis, with positive surgical margins. She started adjuvant chemotherapy with paclitaxel and carboplatin.

Discussion: In all of the patients reported with MTEASS, it was related to uterine surgery, mainly CS. The average delay was about 19-years. CCC was the most prevalent histology. Most of the patients were treated by extensive surgery and chemotherapy and/or radiation. Death was reported in 39% of the patients.

Conclusion: ETEASS is rare and aggressive. It is mostly related to CS. It can be diagnosed many years post surgery. The treatment is mainly, extensive surgery and chemotherapy.

שינויים חשודים לממאירות באנדומטריומה בהריון- דילמה אבחנתית וסוגיות טכניות בהתערבות כירורגית
תיאור מקרה וסקירת ספרות

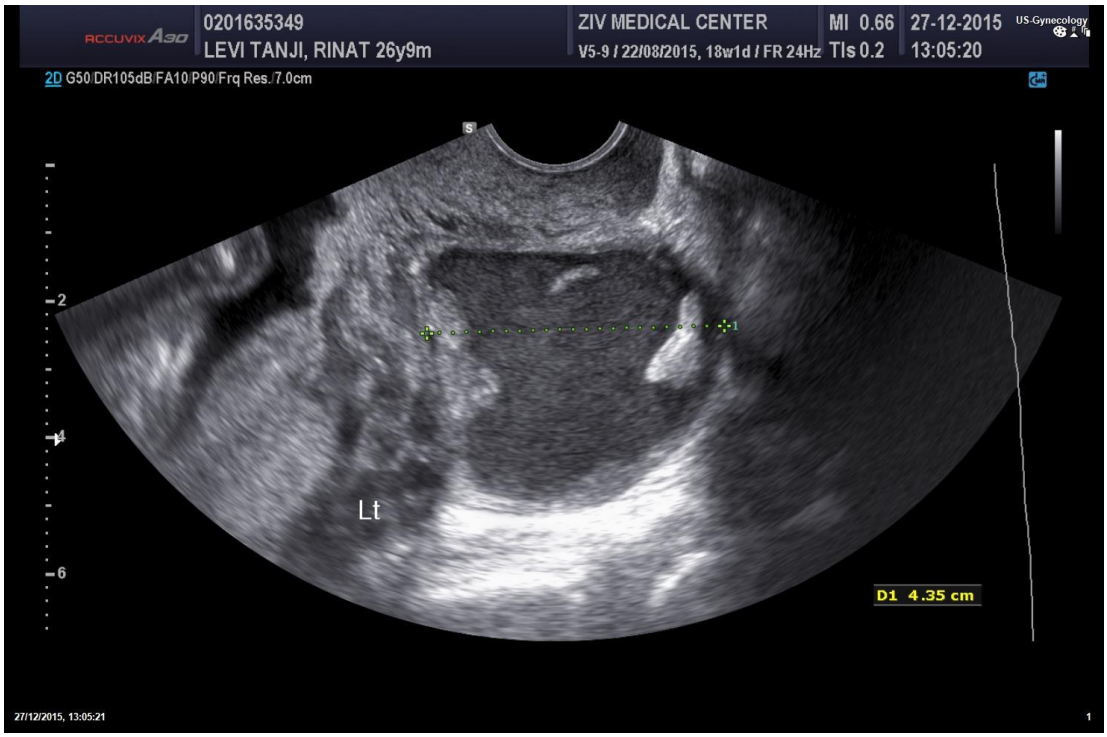
עינבר בן שחר, יעל שקי, נעמה מרקוס, שוואלב סרג'יו

מחלקות נשים יולדות ופתולוגיה, המרכז הרפואי זיו והפקולטה לרפואה של בר אילן, ישראל

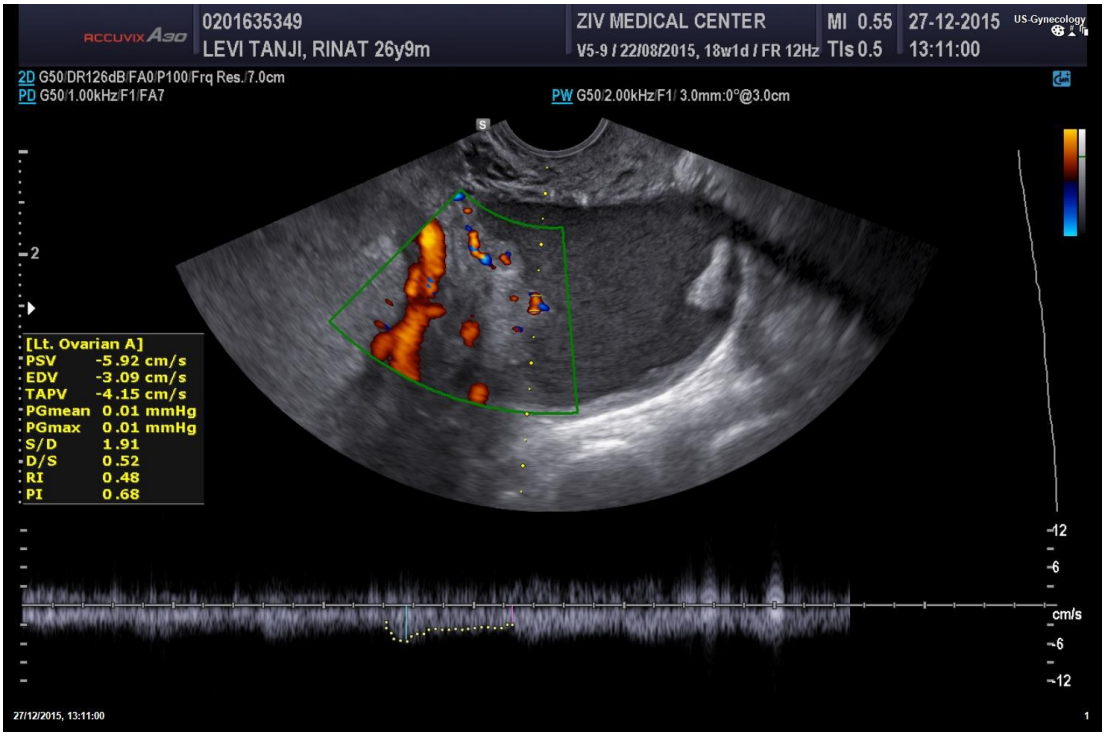
תיאור מקרה: בת 26 נשואה ללא ילדים התקבלה להערכה בשבוע 2+18 להריונה בשל ממצא שחלתי מורכב משמאל. ברקע בריאה .אין סיפור משפחתי של סרטן. במסגרת בירור דיסמינוריאה ודיספראוניה. התגלתה לפני שנה ב US ציסטה חשודה לאנדומטריומה בגודל 5 ס"מ. הומלץ על ידי רופא מטפל על טיפול שמרני וניסיון כניסה להריון. הרתה ללא קושי אך בסקירת מערכות מוקדמת נצפתה גדילת ממצא בשחלה שמאלית ל 8-7 ס"מ. ב US בקבלתה - עובר חיוני עם דופק תואם לגיל הריון. שחלה ימנית תקינה. שחלה שמאלית - ממוקמת בדוגלס, בתוכה ממצא ציסטי עם תוכן עכור בגודל 71 מ"מ. 2 פפילציות סולידיות בגודל 21 ו 12 מ"מ בולטות לתוך החלל. זרימות ערות בתוך פפילציות ותנגודת RI – 0.48 . ללא נוזל באגן. סמנים – 280 – 125 CA. בהשוואה לממצא שהודגם במסגרת בירור לפני שנה לא נראו פפילציות בתוך ממצא וגודל הציסטה היה 5 ס"מ. לאחר דיון והצגת אופציות לבני הזוג הוחלט על ביצוע lt ovarian cystectomy והחלטה על טיפול דפנטיבי בהתאם לתשובת פתולוגיה סופית. לאחר החתמה על הסכמה מדעת בוצעה לפרוסקופיה פתוחה. שבה התגלתה שחלה מוגדלת ל 8 ס"מ דבוקה לרחם ולדופן אגן שבעת קילופה התגלו בתוכה ממצאים פריכים. תשובת פתולוגיה - ציסטה אנדומטראלית שפירה ורקמה פריכה הוגדרה כרקמה דצידואלית.

דיון: דצידואליזציה הוא תהליך שבו אנדומטריום נורמאלי במהלך הריון משתנה לרקמה מותאמת לקליטת ההיריון. שינוי זה שמתווך על ידי פרוגסטרון גורם להיפרטרופיה של תאים סטרומליים אנדומטריאליים והתעבות הרירית. יצירה של רקמה אקטפית דצידואליץ (deciduosis) יכולה להתרחש באיברים שונים בינהם בציסטות אנדומטריאליות בשחלה. במקרים אלו האבחנה בין ממצאי שפיר לממאיר קשה ביותר ומהווה אתגר לרופא העוקב שכן בשני המקרים יש זרימת דם ערה בתוך ממצאים סולידיים שבולטים לתוך הממצאים הציסטיים. הסמן CA 125 בשני המקרים גבוה מהנורמה ולא עוזר לאבחנה. יש חשיבות שהתופעה הזו תהיה מוכרת לציבור הגיניקו-אונקולוגים שכן ממצאים מסוג זה מגיעים לפתחם לעיתים קרובות והמשמעויות של ביצוע פעולות כירורגיות הינו מאתגר במיוחד לאור גודל הרחם והסיכונים להפלה או לידה מוקדמת.

תמונה 1 - מדגימה פפילציות בתוך ממצא ציסטי



תמונה 2 - מדגימה זרימה בתוך ממצא סולידי ותנגודת



A PHASE 1/2A, DOSE-ESCALATION, SAFETY, PHARMACOKINETIC, AND PRELIMINARY EFFICACY STUDY OF INTRAPERITONEAL ADMINISTRATION OF BC-819 (H19-DTA) IN SUBJECTS WITH RECURRENT OVARIAN/PERITONEAL CANCER

Ofer Lavie[1], David Edelman[2], Tally Levy[3], Ami Fishman[4], Ayala Hubert[2], Yakir Segev[1], Eli Raveh[5, 6], Michal Gilon[5, 6], Avraham Hochberg[6]

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Background: H19 is a paternally imprinted, oncofetal gene expressed in various embryonic tissues and in 85% of the ovarian tumors.
H19-DTA (BC-819) is a DNA plasmid that drives the expression of the diphtheria toxin gene under the regulation of the H19 promoter sequence and therefore is a potential treatment to various tumors that overexpress the H19 gene, among them – ovarian cancer.

Objective: To assess the safety and efficacy of intra peritoneal (IP) instillations of H19-DTA (BC-819) plasmid in treating ovarian/peritoneal cancer patients with advanced recurrent disease.

Methods: A phase 1- 2A multi-centric trial included 14 eligible patients who were either platinum-refractory or platinum resistant with positive H19 expression.
Patients were treated IP with escalating weekly doses of BC-819 for a maximum of 6 to 9 weeks.
Dose limiting toxicities (DLT) were assessed after the first course of treatment for each patient and each subsequent cohort was enrolled once each subject had completed the first course of treatment and its 4-week follow-up period.
The occurrence of adverse events (AEs) and response to treatment were assessed after the induction course and then periodically.

Results: During the study, no DLT's were observed. Only 5 grade 1 and 2 AEs which occurred in 4 patients were considered as possibly related to BC-819. The best tumor response seen was stable disease.
Median survivals of 3.2, 5.3 and 6.5 months were observed for the 60, 120 and 240 mg cohorts, respectively.

Conclusions: BC-819 can be considered safe and well tolerated in intraperitoneal doses up to 240 mg, while survival results may suggest an antitumor effect.
Hybridization of intraperitoneal chemotherapy with the biological treatment of BC-819 should be further evaluated in phase 2 & 3 studies.

HYPERANDROGENISM IN POST MENOPAUSAL WOMEN WITHOUT APPARENT OVARIAN PATHOLOGY DUE TO LEYDIG CELL HYPERPLASIA

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הופעה חריפה של תסמינים שמעידים על היפראנדרוגניזם בנשים שלאחר הבלות, הינה תופעה חריגה. עלייה בחשק המיני, שיעור יתר, שנוי במבנה הגוף למבנה שרירני, עבוי הקול ואף עלייה חדה ברמת ההמוגלובין וההמטוקריט מעבר לרמות הנורמליות, הן כלן תסמינים שמעידים על עלייה ברמת האנדרוגנים בסרום בנשים שלאחר הבלות.

בכל הנשים נמדדו רמות טסטוסטרון פי שניים עד ארבעה מהנורמה.

בירור אנדוקרינולוגי מקיף שלל בעיות ביותרת הכליה בכל המקרים ולא נצפה כל ממצא סונוגרפי שמעיד על פתולוגיה שחלתית.

נציג ארבעה מקים בהם תסמינים של היפראנדרוגניזם הופיעו באופן חריף בנשים שנמצאות בבלות מספר שנים.

למרות היעדר ממצאים סונוגרפים או הדמייתים אחרים (CT MRI) , בכל הנשים בוצע ניתוח לפרסקופיה ולמרות היעדר ממצא מאקרוסקופי חריג בשחלות, בוצעה כריתה של שתי הטפולות. בכל הנשים נמצאה היפרפלזיה של תאי ליידינג בשחלה אחת, או אף בשתיהן. רמות טסטוסטרון ירדו מיד לאחר כריתת הטפולות לערכים בתחום הנורמה.

מסקנות: תסמינים של עודף פעילות אנדורגנית בנשים פוסטמנפאוזליות, מחייבים בירור אנדוקריני למקור הטסטוסטרון המוגבר. במדה שנשלל מקור אדרנלי, כריתת השחלות מחוייבת ומביאה לנסיגה במרבית התסמינים.

BRCA Mutation:

DIRECTED SEQUENSING VERSES ORIGIN RELATED MUTATION SCREENING: A COMPARISON OF TWO METHODS FOR IDENTIFICATION MUTATION IN THE BRCA GENES

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Background: Patients with any ovarian and young breast carcinoma should have a genetic counselling followed by assessment for various mutations in the BRCA1 and BRCA2 genes.

Until 2013 mutations were assessed mainly according to the self-reported origin of the patients. After 2013 and a result of the development of new technologies, we started using a comprehensive kit on the Nanochip system which examines automatically 14 mutations on the two BRCA genes. These mutations include all the non-private mutations formerly reported in Israel, even if in very low prevalence.

The purpose of this analysis was to compare the two gene screening methods for clinical outcome and to evaluate if the Nanochip approach has clinical advantages in detecting unexpected mutations which would not have been detected by the individual approach.

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Methods: This is a retrospective review of all patients undergoing assessment of the BRCA 1 or 2 germline mutation in the Clalit National Familial Cancer Consultation Service.

Results: Altogether and over all years of operation, more than 153000 genetic testing for BRCA 1 or 2 germline mutation were performed in 36000 individuals. By using a genetic counseling process followed by specific origin-related mutation screening for the BRCA1-2 genes, we identified 18 new (non-classical) mutations in 3638 (0.6%) tested individuals. By using the Nanochip system –based panel, on some 3000 people, we identified 2 new mutations which would have been diagnosed by the "old" approach because they were origin-related. Comparing the origin specific mutation screening system to the automatic 14 mutations screening system suggests that the origin-specific process was longer (21 vs 7 days respectively), and more expensive than the automated process (average 400 NIS vs <100NIS respectively).

Conclusion: The automatic BRCA multiple mutation panel testing is shorter and cheaper than the former approach of individual mutation screening, but has no clinical advantage to the patient.

YOUNG WOMEN WITH EPITHELIAL OVARIAN CANCER: PREVALENCE OF BRCA MUTATIONS AND CLINICAL CORRELATES

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Introduction: Epithelial ovarian cancer (EOC) diagnosed at a young age is suggestive of an inherited predisposition, primarily germline BRCA1/2 mutations. The putative effect of BRCA mutations on disease course is understudied in young EOC cases. The current study assessed the prevalence of BRCA mutations in young Israeli EOC patients and evaluated the association of BRCA mutation with disease patterns and outcomes.

Methods: Consecutive EOC patients diagnosed ≤50 years in a single institution between 1995-2011 were identified. All EOC patients are referred for genetic counseling and testing for the predominant Jewish BRCA mutations. Demographic, clinical, pathologic and genetic data were collected. A comparative analysis between BRCA mutation carriers and non-carriers was undertaken; survival was compared using the Kaplan Meier method and associations with BRCA mutation status and other variables analyzed using the Cox proportional hazards method.

Results: Overall, 186 patients diagnosed with EOC ≤50 years were included. Mean age at diagnosis 44 years, and mean follow-up was 70 months. Of 113 patients with documented BRCA testing, 49.6% (n=57) carried a BRCA germline mutation compared with 29% in the general Israeli EOC population (p=0.001). Compared with non-carriers BRCA mutation carriers had a higher rate of serous tumors (75% vs. 63%, p=0.04), tended to be diagnosed at an advanced stage (64% vs. 52%, p=0.25), had higher CA125 levels at diagnosis (mean, 401 vs. 157, p=0.001) but showed no significant difference in recurrence or overall survival (HR=1.032 and 1.13, NS).

Conclusions: BRCA mutations encountered in 50% of young Jewish EOC patients are associated with predominantly serous tumors and high CA125 levels at diagnosis. BRCA mutation status does not seem to impact on recurrence or survival in these patients.

CLINICAL AND PATHOLOGICAL CHARACTERISTICS OF INCIDENTAL DIAGNOSTIC EARLY OCCULT MALIGNANCY FOLLOWING RISK-REDUCING SALPINGO-OOPHORECTOMY IN BRCA MUTATION CARRIERS

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Background: Carriers of familial BRCA mutations are at high disposition to early development of ovarian tubal or peritoneal cancers. The definite preventative treatment for these cases is early, risk-reducing, bilateral salpingo-oophorectomy. The objectives of the study were to describe the incidence and source of early occult malignancy in cases of risk-reducing salpingo-oophorectomy for patients who carry an Ashkenazi Jewish BRCA mutation, and to characterize the clinical and pathological characteristics of this unique population.

Methods: Retrospective data was collected from our gynecologic oncology unit from January 2002 through July 2012. Patients were included based on a positive test for BRCA1 or BRCA2 mutation with subsequent bilateral salpingo-oophorectomy.

Results: 92 cases of BRCA mutations were included: 53 BRCA1, 37 BRCA2, and 2 with both mutations. Following risk-reducing salpingo-oophorectomy, 5 of the patients (5.4%) were found to have early occult adnexal malignancy upon pathology study. Of these five patients, three cases found to have a malignancy originates from the ovaries and in the remaining two patients the neoplasia was identify in the fallopian tubes with no involvement of the ovaries.

Conclusions: A 5.4% incidence of early occult malignancy in adnexal pathology of bilateral salpingo-oophorectomy in carriers of one of the Ashkenazi Jewish BRCA mutations is consistent with the range of previously conducted studies. Two cases demonstrated malignancy origins within the fallopian tube with sparing of the ovaries to their entirety, supports the clinic concept of the fallopian tubes as the originating organ for part of ovarian or peritoneal malignancies in BRCA mutation carriers.

BRCA MUTATIONS IN ARAB ISRAELI MUSLIM POPULATION – A CASE REPORT AND LITERATURE REVIEW

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Background and Aims: Muslims are considered as the largest minority and consist of about 20% of the population in Israel.
Although there is evidence for a reduction of breast cancer incidence in the Israeli Jewish population, there is an increase in the incidence of breast cancer; as well as lower ages of discovery and a more aggressive disease among Israeli Muslims.
There are reports among other Muslim countries, consistent with higher prevalence, lower age of disease initiation, and more aggressive disease, Compared with breast cancer statistics of western countries.
Germline mutations in BRCA1 and BRCA2 genes can be detected in high risk Breast\Ovarian Cancer Families.
Other genes associated with increased risks of breast \ ovarian cancers; include genes connected to syndromes such Fanconi anemia.
Fanconi anemia is connected to higher breast\ovarian cancer through the PALB2 Gene, Known also as FANCN Gene.
Mutations in BRCA2 (also known as FANCD1), and Mutations in BRCA1 (also known as FANCS), can cause Fanconi anemia subtypes.

Methods: This is a Case report and a literature review.

Results: Here we describe a case of 3 young Arab Israeli female cousins, in which one of them (33 Y/O) known to be Fanconi anemia Carrier, and has also been found to harbor BRCA1 Mutation. The 2 other cousins (ages 24 and 35), have been found to harbor Ovarian serous Carcinoma and Borderline Serous Carcinoma, Respectively.

Conclusions: Knowledge of these rare but important mutations can reveal some of the unknown reasons for the different, more aggressive statistics of ovarian and breast cancer among Muslim population in Israel and perhaps other Muslim populations worldwide.

BRCA MUTATIONS AND OUTCOME IN EPITHELIAL OVARIAN CANCER (EOC) – EXPERIENCE IN ETHNICALLY DIVERSE GROUPS

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BACKGROUND & OBJECTIVES: Epithelial ovarian cancer (EOC) patients with BRCA mutations have been shown to have better prognosis than non-hereditary cases matched for stage and age at diagnosis and history. This is especially true of the Ashkenazi-Jewish (AJ) population. We analyze our experience in our ethnically diverse patient cohort from NYC, Israel and Italy.

MATERIALS & METHODS: A retrospective chart review of patients diagnosed with Stage IC-IV EOC between 1995-2014 at the NYU Cancer Institute, Tel Aviv Sourasky Medical Center and Padova Clinical Cancer Centers 585 (out of about 1200 patients) were tested for BRCA mutations and evaluated.

RESULTS: Out of 585 evaluated patients (median age 60 [33-86] years), 98 are carriers of the BRCA1 mutation, 34 are carriers of BRCA2 (132 BRCA1/2 carriers total), and 453 tested negative for either mutation. This yields 77/294 (26.2%) AJ carriers and 55/291 (18.9%) non-AJ carriers. AJ patients had the following BRCA 1 : 185delAG (49), 5382insC (8), and BRCA2 :6174del (17) mutations. Non-AJ carriers were divided by ethnicities into non-Ashkenazi Jewish, Caucasian, African-American, Hispanic, or unknown. Non-AJ Jewish patients had BRCA1 mutations in 185delAG (16), 5382insC (1), and BRCA2 mutations in 6174delT (5). Non-Jewish Caucasians exhibited the widest variation of mutation types, with 1 mutation each at the following BRCA1 site (Table 2). Non-Jewish Caucasians also exhibited the following mutations in BRCA2 (Table 2).
OS was significantly prolonged for BRCA carriers at 82.5 months versus 50.7 months (P=0.0012).

CONCLUSIONS: Our data reports a wide variety of BRCA mutations in an ethnically diverse EOC population and confirms that EOC patients positive for *BRCA* mutations have a better prognosis with a longer median survival compared to patients with non-hereditary disease. Our research suggests that patients who are at high risk for BRCA mutations based on family history may benefit from early genetic testing and intervention.

התערבות פשוטה לשיפור השרות למטופלות גינקואונקלוגיות הפונות למיון נשים

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מבוא: זמני ההמתנה במיון נשים עלולים להיות ארוכים, בפרט בשעות הערב והלילה. כאשר מדובר במטופלת אונקולוגית קיים בנוסף קושי מצד הצוות הרפואי במיון, בהתמודדות עם מורכבות רפואית ונפשית רבה מהרגיל. מטרת העבודה הייתה לקצר את זמני ההמתנה של המטופלות האונקולוגיות במיון נשים ולייעל את השירות הניתן להן.

שיטות: נתונים אודות סיבות הפנייה והאבחנות וזמני המתנה לאחות, לרופא ולסיכום התיק נאספו מספרי המיון ומהגיליונות הרפואיים הממוחשבים. הושוו שתי תקופות, לפני ההתערבות (12/2014 עד 2/2015) ואחריה (06/2015-09/2015).
ההתערבות:

- יצירת פרוטוקולים ותרשימי זרימה לטיפול בסיבות פניה שכיחות בקרב מטופלות אונקולוגיות.
- העברת תדריכים לצוות הרפואי והסיעודי.
- מענה טלפוני למטופלות אונקולוגיות על ידי צוות סיעודי מיומן.
- הדרכה וחינוך של המטופלות בנושא סיבות ותזמון הפניה למיון.
- שיתוף פעולה בין המיון למחלקת האשפוז בבירור וניוד המטופלות.

תוצאות: עומס הפניות הכולל למיון היה דומה בשני פרקי הזמן שהושוו. מספר הפניות בקרב מטופלות אונקולוגיות פחת ב 10%. מרבית הפונות למיון היו מטופלות עם סרטן שחלה. פיזור סיבות הפנייה למיון היה מעט שונה בשתי התקופות. בתקופה לאחר ההתערבות חל שיפור בכל מדדי ההמתנה למעט פרק הזמן מבדיקת רופא ועד לסיכום התיק, אך לא הגיע למובהקות סטטיסטית (p=0.15).

	לפני התערבות	אחרי התערבות
מספר פניות	49	44
מספר פונות	30	27
סיבות פניה שכיחות ביותר	מיימת, אנמיה, חום	חום, חולשה, בחילות/הקאות
משך המתנה ממוצע לאחות (דקות)	41	28
סך משך המתנה ממוצע במיון (דקות)	178	166

סיכום: התכנית התקבלה באופן חיובי בקרב הצוות ועזרה להפיג חלק ניכר מהחששות הקיימים בנוגע להתמודדות עם המטופלות הגינקואונקולוגיות. השיפור במספר הפניות ובזמני ההמתנה, אף שלא הגיע למובהקות סטטיסטית, מדגים כיצד תכנית התערבות פשוטה תורמת לייעול השירות, ללא השקעת משאבים גדולה.

הכינוס מוקדש לכל הנשים הנלחמות
באומץ ובגבורה במחלת הסרטן,
אותן אנו מלווים בהערכה בלתי פוסקת
ובתמיכה מתמדת

החברה הישראלית לאונקולוגיה מודה לחברות

על עזרתם ותמיכתם בפעילותה

Platinum

Roche

Gold

MSD SANOFI Rafa.

AstraZeneca ETHICON

PART OF THE Johnson&Johnson FAMILY OF COMPANIES

Silver

MEDIPAZ

מנכירות הכינוס:

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