AOGQ 4th International Symposium / MSMR / NESA Days 2014 /

September 19th - 21st 2014
Island of Crete, Greece
Daios Cove Hotel
Welcome note from the Association of Obstetricians and Gynecologists of Quebec

Dear Colleagues:

On behalf of the members of the Association of Obstetricians and Gynecologists of Quebec, I would like to welcome you to this magnificent conference taking place on the majestic island of Crete. It is with great pleasure and pride that our Quebec Obstetricians and Gynecologists join the NESA and MRSM delegations for our fourth International Symposium.

In addition to meeting in a remarkable location, this transatlantic collaboration fulfills our desire and needs to share experiences, models, and tools in order to acquire best practices in specialized medicine.

The Association of Obstetricians and Gynecologists of Quebec (AOGQ) is a union organization that brings together more than 450 physicians specializing in obstetrics and gynecology.

The AOGQ’s goal is to continuously improve the quality of preventive and curative care provided to women in Quebec by promoting the ongoing professional development of its members and the various health professionals who share this mission.

I would like to thank you, dear colleagues, for taking part in this meeting and for contributing to its success.

May this convention enjoy a resounding success, combining quality and competency in medicine in this enjoyable location!

Have a great symposium!

Marc-Yvon Arsenault, President of the Professional Development Committee

Isabelle Girard, AOGQ President

Philippe Laberge, Outgoing President

Robert Sabbah, Outgoing President

Association of Obstetricians and Gynecologists of Québec

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Fax: 514-849-5011
E-mail: info@gynecoquebec.com
Web site: www.gynecoquebec.com
Welcome note from the New European Surgical Academy

Dear participants,

The New European Surgical Academy (NESA) is an international, interdisciplinary surgical institute which was founded in 2004 by leading surgeons from various disciplines in order to enable dialogue among surgeons from different professions.

The main aims of the NESA are:
• Evaluate existing surgical procedures, optimize and rationalize them where necessary
• Introduce new surgical concepts, procedures and ideas
• Create cross-border surgical quality standards based on evidence-based studies.
• Share and transfer the gathered knowledge to countries with limited resources

The NESA has been a pioneer in many improved concepts and modified procedures such as:
• The establishment of the first European natural orifice surgery working group
• The improvement of the trans-Douglas access for abdominal surgery
• The development of the concept, research and implementation of the transoral thyroidectomy
• Scientific assistance to the novel European telesurgical concept and system, the Telelap Alf-x
• Introducing the concept of analyzing surgical steps and avoiding unnecessary ones (e.g., the ten-step vaginal hysterectomy)
• Planning a new international medical school based on humanistic values and a new understanding of the learning process

The NESA DAYS conferences have become a platform for the exchange of surgical knowledge among different disciplines. This year, the NESA DAYS are organized for the second time in cooperation with the Association of Obstetricians and Gynecologists of Quebec, which proved to be constructive as knowledge from both sides of the ocean are merged.

We wish all of you a successful and instructive conference.

Michael Stark, President
Tahar Benhidjeb, Director
Gian Carlo Di Renzo, Secretary General

www.nesacademy.org
## Friday Sept 19th  
*(Daios Cove)*

### Round Table on Abnormal Cervical Cytologies

**Chairpersons:** V. Paraskevaidis, A. Makrigiannakis (Greece)

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| 11h00 | Adverse obstetric outcomes post-treatment and Personalised management of cervical pathology  
M. Kyrgiou, UK |
| 11h30 | An update on prevention of preterm birth – What may be useful for women with CIN treatment  
Phillip Bennet, UK |
| 12h00 | Cervical pathology and cancer prevention in the next 3 decades  
M. Arbyn, Belgium |

### The NESA’s Russian Working Group

**Chairpersons:** O. Mynbaev, Russia / T. Benhidjeb, Abu Dhabi

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<th>Time</th>
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| 11h00 | Keynote lecture - Toward adhesionless endoscopy  
O. Mynbaev, Russia |
| 11h15 | Proactive abdominal application of Zhukovskiy Balloon in Caesarean Section  
Y.G. Zhukovskiy, Russia |
| 11h30 | A mathematical model of the laparoscopic manipulating space  
S. Simakov, Russia |
| 11h45 | A system biology approach to design pre-clinical trials  
I. Kosmas, Greece |
| 12h00 | Experimental studies on transoral thyroidectomy  
T. Benhidjeb, Abu Dhabi |
| 12h15 | Prophylactic Mastectomy  
P. Liakou, Greece |
| 12h30 | Lunch |

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**Saturday Sept 20th**

**Chairpersons:** A. Makrigiannakis, M. Stark, Germany

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<tr>
<th>Time</th>
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| 9h00  | New HPV vaccine  
P. Bessette, Canada |
| 9h30  | The Odyssey of the Pap Smear: Boom Bust and Echo  
G. Vilos, Canada |
| 10h00 | Best treatment options for abnormal pap smears  
M. Roy, Canada |
| 10h30 | Break |
| 11h00 | Lunch |
| 13h30 | Lunch |
Friday Sept 19th
(Daios Cove)

NOVELTIES IN GYNECOLOGIC SURGERY
Chairpersons: V. Tica (Romania), Sylvie Bouvet, Canada

16h00 Novel approach in endometrial ablation
16h20 Review of outcome in mesh surgery in genital prolapse
16h40 Hysteroscopic morcellation: a novel technical approach
17h15 Laparoscopic Hysterectomy; accidents, myths and real world
17h30 Combined surgical and hormonal therapy of endometriosis results in the most effective treatment: a prospective, randomized, controlled trial
17h45 Laparoscopic peritoneal graft for vaginoplasty
18h00

CAESAREAN SECTION
130 YEARS AFTER KEHRER: STATE OF THE ART
Chairpersons: O. Kadayifci, Turkey / A. Tinelli, Italy

16h00 The evidence-based C-section of the XXIst century
16h15 The implementation of a new C-section method in Turkey
16h45 The implementation of a new C-section method in Slovakia
17h00 Management of placenta accreta after previous Cesarean section
17h30 Myomectomy during cesarean section
17h45 Cesarean myomectomy: recent evidences and future outcomes
18h00 Discussion

KEYNOTE LECTURES
Chairpersons: R. Sabbah, Canada / M. Stark, Germany

13h30 Taking the « O » out of the « G »
14h00 The future of chemotherapy – Sequencing Based Assay of FFPE Tumor Samples
14h15 SOGC guideline on treatment of myomas
14h45 Telelap Alf-x – The first clinical application
15h00 Ceremony: Award of professorship diplomas of the Russian State University ‘Moscow Institute of Physics and Technology (MIPT)’ for NESA members by Sergei S. Simakov, Ospan A. Mynbaev and Marina Yu Eliseeva.


15h30 Break
Saturday Sept 20th (Heraklion)

7h45: Transportation to Heraklion

**INTERNATIONAL JOINT MEETING AOGQ & MSRM / REPRODUCTIVE MEDICINE ACROSS THE ATLANTIC**
Chairpersons: M-Y Arsenault (Canada), T. Gurgan

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<tr>
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<tr>
<td>9h00</td>
<td>Is any influence of COS protocols in the endometrium?</td>
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<td></td>
<td>I. Messinis, Greece</td>
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<tr>
<td>9h20</td>
<td>Quebec’s successful IVF program with single embryo transfer</td>
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<td>P. St-Michel, Canada</td>
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<td>9h40</td>
<td>Surgical management of endometriomas impact on fertility</td>
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<td>P. Descamps, France</td>
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<td>10h00</td>
<td>Repeated implantation failure in IVF: novel therapies</td>
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<td>A. Makrigiannakis, Greece</td>
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<td>10h20</td>
<td>Intrauterine pathologies: See and Treat</td>
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<td>T.C. Li, UK</td>
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<td>10h40</td>
<td>Discussion</td>
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<td>Break</td>
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<td>11h30</td>
<td>SATELLITE SYMPOSIUM FERRING</td>
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<td>12h30</td>
<td>“From theory to practice: Steroidogenesis and beyond”</td>
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<td>13h30</td>
<td>SATELLITE SYMPOSIUM MERCK SERONO</td>
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<td>13h30</td>
<td>“The value of producing more Oocytes in ART”</td>
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<td>Lunch Break</td>
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<td>Salpingectomy in the 21st century: Go or Gone?</td>
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<td>P. Gauthier, Canada</td>
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<td>Robotic surgery in gynecological cancers</td>
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<td>W. Gotlieb, Canada</td>
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<td>Modern approach to adenomyosis</td>
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<td>S. Gordts, Belgium</td>
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<td>Preservation of fertility in cancer patients</td>
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<td>A. Rodolakis, Greece</td>
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<td>21h00</td>
<td>Heraklion / Knossos Palace sightseeing and return to Daios Cove</td>
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<tr>
<td>9h00</td>
<td>Modern approach to endometriosis</td>
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<td>9h20</td>
<td>Hysteroscopic myomectomy – an impact of translational research</td>
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<td>9h40</td>
<td>Medical treatments of uterine myomas</td>
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<td>10h00</td>
<td>Caesarien-induced isthmocele: where do we stand?</td>
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<td>10h20</td>
<td>Single port access by application of ‘Endport PPP’ for tubal pregnancy management: a pilot project</td>
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<td>Novelty in intrauterine contraception</td>
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<td>11h00</td>
<td>Thyroid diseases during pregnancy</td>
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<td>11h20</td>
<td>Natural orifice surgery - state of the art</td>
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<td>11h40</td>
<td>An impact of CO2-pneumoperitoneum during prolonged laparoscopy on respiratory parameters:</td>
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<td>11h00</td>
<td>An original article: Hysteroscopic myomectomy and reproductive outcome</td>
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<td>11h40</td>
<td>Break</td>
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Sunday Sept 21st (Daios Cove)
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<td>12h45</td>
<td>G. Zografos, Greece</td>
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<td>12h45</td>
<td>Comparison between transvaginal ultrasound, sonovaginography and nuclear magnetic resonance in the diagnosis of posterior deep infiltrating endometriosis</td>
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<td>13h00</td>
<td>E. Cosmi, Italy</td>
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<td>13h00</td>
<td>Handling complications in gynecologic endoscopic surgery</td>
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<td>13h15</td>
<td>L. Mettler, Germany</td>
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<td>13h15</td>
<td>Minimally invasive breast biopsy</td>
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<td>13h30</td>
<td>N. Michalopoulos, Greece</td>
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<td>13h30</td>
<td>Research without Resources</td>
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<td>13h45</td>
<td>A. Rawandale-Patil, India</td>
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<td>13h45</td>
<td>Erasmus Garden, a way to bring the high Rotterdam perinatal mortality down?</td>
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<td>14h00</td>
<td>T. Schneider, Netherlands</td>
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<td>14h00</td>
<td>Do minimally invasive approaches confer an advantage to inflammatory bowel disease surgery?</td>
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<td>14h15</td>
<td>G. Theodoropoulos, Greece</td>
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<td>14h15</td>
<td>Breast cancer in pregnancy</td>
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<td>14h30</td>
<td>F. Zagouri, Greece</td>
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<td>14h30</td>
<td>Take-home message: A personalized adhesion prevention strategy</td>
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<td>15h00</td>
<td>O. Mynbaev, Russia / M. Stark, Germany on behalf of the international translational medicine &amp; biomodeling research team</td>
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### AOGQ / NESA CLOSING REMARKS

Marc-Yvon Arsenault, Canada / Michael Stark, Germany
ASSOCIATION DES OBSTÉTRICIENS ET GYNÉCOLOGUES DU QUÉBEC

AOGQ 4th International Symposium

AOGQ 4th International Symposium / MSRM / NESA Days 2014
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Scientific Board

Marc-Yvon Arsenault, MD  
*Obstetrician/Gynecologist, Hôpital de LaSalle, (Québec) Canada*  
*President of the Professional Development Committee, AOGQ*

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*Obstetrician/Gynecologist, Centre hospitalier de l'Université Laval, (Québec) Canada*  
*Outgoing President, AOGQ*

Robert Sabbah, MD  
*Obstetrician/Gynecologist, Hôpital du Sacré-Cœur de Montréal, (Québec) Canada*  
*Outgoing President, AOGQ*
AOGQ Speakers and Schedule (Listed alphabetically)

Marc-Yvon ARSENAULT, Obstetrician/Gynecologist, Hôpital de LaSalle, Canada
Novelty in intrauterine contraception - Sunday Sept 21st, Daios Cove, 10h40 – 11h00

Paul BESSETTE, Gynecological Oncologist, Hôpital Fleurimont, Canada
New HPV vaccine - Friday Sept 19th, Daios Cove, 9h00 – 9h30

Emmanuel BUJOLD, Obstetrician/Gynecologist, Centre hospitalier de l’Université Laval, Canada
Caesarien-induced isthmocele: where do we stand? - Sunday Sept 21st, Daios Cove, 10h00 – 10h20

Philippe DESCAMPS, Professor of Obstetrics and Gynecology, Université d’Angers, France
Surgical management of endometriomas impact on fertility - Saturday Sept 20th, Heraklion, 9h40 – 10h00

Philippe GAUTHIER, Gynecological Oncologist, Hôpital Notre-Dame, Canada
Salpingectomy in the 21st century: Go or Gone? - Saturday Sept 20th, Heraklion, 14h30 – 14h50

Walter H. GOTLIEB, Gynecological Oncologist, Hôpital général juif-Sir Mortimer B. Davis, Canada
Robotic surgery in gynecological cancers - Saturday Sept 20th, Heraklion, 14h50 – 15h10

Olivier GRAESSLIN, Professor of Obstetrics and Gynecology, Centre Hospitalier Universitaire, France
Review of outcome in mesh surgery in genital prolapse - Friday Sept 19th, Daios Cove, 16h20 – 16h40

Philippe LABERGE, Obstetrician/Gynecologist, Centre hospitalier de l’Université Laval, Canada
Novel approach in endometrial ablation - Friday Sept 19th, Daios Cove, 16h00 – 16h20

Chantal LAFORTUNE, Obstetrician/Gynecologist, Hôpital de LaSalle, Canada
Modern approach to endometriosis - Sunday Sept 21st, Daios Cove, 9h00 – 9h20

Guylaine LEFEBVRE, Obstetrician/Gynecologist, St-Michael's Hospital, Canada
Taking the « O » out of the « G » - Friday Sept 19th, Daios Cove, 13h30 – 14h00

Violaine MARCOUX, Obstetrician/Gynecologist, Hôpital général juif-Sir Mortimer B. Davis, Canada
Medical treatments of uterine myomas - Sunday Sept 21st, Daios Cove, 9h40 – 10h00

Michel ROY, Gynecological Oncologist, L’Hôtel-Dieu de Québec, Canada
Best treatment options for abnormal pap smears - Friday Sept 19th, Daios Cove, 10h00 – 10h30

Robert SABBAH, Obstetrician/Gynecologist, Hôpital du Sacré-Cœur de Montréal, Canada
Hysteroscopic morcellation: a novel technical approach - Friday Sept 19th, Daios Cove, 16h40 – 17h15

Pierre SAINT-MICHEL, Obstetrician/Gynecologist, PROCREA Cliniques, Canada
Quebec's successful IVF program with single embryo transfer - Saturday Sept 20th, Heraklion, 9h20 – 9h40

Dr George A. VILOS, Professor of Obstetrics and Gynecology, Western University, Canada
The Odyssey of the Pap Smear: Boom Bust and Echo - Friday Sept 19th, Daios Cove, 9h30 – 10h00
SOGC guideline on treatment of myomas - Friday Sept 19th, Daios Cove, 14h15 – 14h45
Novelty in intrauterine contraception
Marc-Yvon ARSENAULT, MD
Obstetrician/Gynecologist, Hôpital de LaSalle, (Québec) Canada

Learning objectives:

- Understand the problem of unintended pregnancies.
- Identify the differences between traditional contraception and Long Acting Reversible Contraception (LARC).
- Define advantages of Intrauterine Contraception.
- Learn about a new low-dose Levonorgestrel Intrauterine device.

Summary:

Superior effectiveness LARC in real life

- Prospective cohort (Contraceptive CHOICE Project) 7,486 participants at risk for unintended pregnancy.
- The risk of unintended pregnancy among participants using pills, patch or ring was markedly higher than that among participants who used long-acting reversible contraception (hazard ratio after adjustment for age, educational level, and history with respect to unintended pregnancy: 21.8; 95% confidence interval, 13.7 to 34.9).

Advantages of IUC

Safe – Does not cause PID, infertility or ectopic pregnancy.
Fact - IUDs do not increase the risk of ectopic pregnancy.¹
Fact - The incidence of PID among IUC users is less than 2 episodes per 1000 years of use, similar to that of the general population.¹
The increase in risk of PID associated with IUC use appears to be related only to the insertion process. After the first month of use, the risk of infection is not significantly higher than in women without IUCs.
Fact - IUDs do not increase the risk of infertility.¹
Reversible

A new intrauterine system: Mainly local mode of action

- Has mainly local progestogenic effects in the uterine cavity.
- The high levonorgestrel concentration in the endometrium down-regulates endometrial estrogen and progesterone receptors. The endometrium becomes relatively insensitive to the circulating estradiol and a week local foreign body reaction were observed during use. Thickening of the cervical mucus prevents passage of sperm through the cervical canal. The local milieu of the uterus and of the fallopian tubes inhibits sperm mobility and function, preventing fertilization.

Ease of insertion (Phase II study)

- Investigators rated insertion as “easy” in 226/239 (94.6%) subjects with LNG-IUS 13.5 mg compared to 219/254 (86.2%) with LNG-IUS 52 mg (P value for overall difference vs Mirena®: P<0.01).

- 6 -
Pain of insertion (Phase II study)
• Subjects rated the insertion of LNG-IUS 13.5 mg as less painful compared with LNG-IUS 52 mg ($P$ value for overall difference vs Mirena®: $P<0.001$).

High contraceptive efficacy (Phase III study)
• The 1-year Pearl Index was 0.41 (95% CIs: 0.13 – 0.96) and the 3-years Pearl Index was 0.33 (95% CIs: 0.16 – 0.6).
• Since the use of Jaydess® does not require daily intake compliance by the users, the pregnancy rates in typical use are similar to those observed in controlled clinical trials.

Safety (Phase II and III studies combined)
• In clinical trials (phase II and III studies) with Jaydess®, the incidence of expulsion was 3.2% (54 of 1665 subjects over 3 years) and in the same range as that reported for other IUDs and IUSs.
• There were no cases of PID with Jaydess® in the phase II study. There were 6 cases (2 serious, 4 non-serious) of PID with Jaydess® in the phase III study. All cases of PID were diagnosed clinically based on the investigator’s assessment.
• There were no reports of perforation with Jaydess® in the phase II or phase III studies.
• The overall incidence of ectopic pregnancy with Jaydess® is approximately 0.11 per 100 woman-years. Women with a history of ectopic pregnancies were excluded from clinical trials with Jaydess®.

Conclusions from clinical trials
• High contraceptive efficacy (Pearl Index = 0.33).
• Mean number of bleeding/spotting days decreases over time.
• No new or unexpected safety events.
• Rated as “Easy” to insert by the majority of investigators.
• Most women experienced no pain or only mild pain during insertion.
New HPV vaccine
Paul BESSETTE, MD
Gynecological Oncologist, Hôpital Fleurimont, (Québec) Canada

Learning Objectives:

- Summarize nonavalent vaccine (9vHPV) efficacy against high-grade or any grade cervical, vulvar and vaginal disease, persistent HPV infection and cytological abnormalities.
- Discuss immunogenicity against VPH-9 in adolescents girls, boys and older women.
- Recognize potential adverse events of VPH-9 vaccine (tolerability).

Summary:

Human papillomavirus (HPV) causes virtually all cervical cancer cases and also causes some cases of vulvar and vaginal cancer in females, and anal cancers and genital warts in both females and males. Cervical cancer is the third most common type of cancer among women worldwide. It is estimated that approximately 530,000 women develop cervical cancer annually around the world, with about 85 percent of cases occurring in developing countries.

A new nonavalent HPV vaccine is candidate for potential licensure in late 2014. The V503 (trade name to come), consists of the L1 capsid protein of each of nine HPV strains. The seven cancer-causing HPV types in V503 (16, 18, 31, 33, 45, 52 and 58) cause approximately 90 percent of cervical cancer cases, approximately 80 percent of high-grade cervical dysplasias (cervical precancers) worldwide, and approximately 50-60 percent of cases of low-grade cervical dysplasias. These seven HPV types also can cause vaginal, vulvar and anal cancers and pre-caancers. After HPV types 16 and 18, the five additional HPV types in V503 are the most common cervical cancer-causing types worldwide. HPV types 6 and 11 cause approximately 90 percent of genital warts cases. A gene encoding the L1 protein of each type is expressed in the yeast Saccharomyces cerevisiae. The protein product self-assembles into a non-infectious virus-like particle (VLP) that is similar to the natural virus, but no viral genome is present. The vaccine is administered as a 0.5 mL dose, which contains 20 µg of HPV type 31, 33, 45, 52 and 58 L1 protein, 30 µg of HPV type 6 L1 protein, 40 µg of HPV type 11 and 18 L1 protein and 60 µg of HPV type 16. The VLPs of each type are purified and adsorbed onto an aluminum-containing adjuvant (amorphous aluminum hydroxyphosphate sulfate 500 µg). Dosing regimen is 0-, 2-, 6-month (intramuscular injection).

The pivotal Phase III study (Protocol 001) evaluated the efficacy, safety and immunogenicity of V503 (n=7,099) compared to 4-valent HPV vaccine (n=7,105) in 16-26-year old females. The primary efficacy analysis was conducted in those who received all three doses of vaccine within one year, who were not infected with the relevant HPV types at enrollment and who remained free of infection with the relevant HPV types through Month 7 (per-protocol population).
The results were as follows:
- 96.7 percent reduction (95% CI; 80.9, 99.8) in the combined incidence of high-grade cervical/vulvar/vaginal disease [CIN (cervical intraepithelial neoplasia) 2/3+, VIN (vulvar intraepithelial neoplasia) 2/3+, and VaIN (vaginal intraepithelial neoplasia) 2/3+] caused by HPV types 31, 33, 45, 52, 58 (1 case in the group that received V503 vs. 30 cases in the group that received 4-valent HPV vaccine).
- 97.1 percent reduction (95% CI; 91.8, 99.2) in the combined incidence of cervical/vulvar/vaginal disease of any grade (all CIN, VIN, VaIN) caused by HPV types 31, 33, 45, 52, 58 (3 cases in the group that received V503 vs. 103 cases in the group that received 4-valent HPV vaccine).
- 96.0 percent efficacy (95% CI; 94.4, 97.2) against six-month persistent HPV infection with HPV types 31, 33, 45, 52, 58 (35 cases in the group that received V503 vs. 810 cases in the group that received 4-valent HPV vaccine).

Because 4-valent HPV vaccine does not contain the five additional HPV types in V503, cases of disease caused by these five types in the study group that received 4-valent HPV vaccine were expected. V503 prevented approximately 97 percent of high-grade cervical, vulvar, and vaginal diseases caused by five additional HPV types.

**Non-inferior immunogenicity for the four HPV types (6, 11, 16, 18)** also in 4-valent HPV vaccine was a second primary endpoint in this study. Because 4-valent HPV vaccine has been shown in clinical studies to be highly effective against certain diseases caused by HPV types 6, 11, 16, and 18, few disease endpoints caused by these HPV types were expected, making it difficult to directly assess efficacy of V503 for these four types. Furthermore, Active comparator with 4-valent HPV vaccine was chosen, because of ethical concerns of using placebo. Therefore, antibody levels were evaluated for these four HPV types common to both vaccines. V503 generated immune responses for HPV 6, 11, 16, and 18 (measured by geometric mean titers (GMTs) and seroconversion rates at Month 7) that were non-inferior to those generated by 4-valent HPV vaccine. In the study, the seroconversion rates were 99.8 percent for HPV types 6 and 18 and 100 percent for HPV types 11 and 16 in the V503 group. The corresponding numbers in the group that received 4-valent HPV vaccine were 99.8, 99.9, 100, and 99.7 percent for HPV types 6, 11, 16 and 18, respectively. These results are to support the bridging of the efficacy findings for 4-valent HPV vaccine for HPV types 6, 11, 16, 18 to V503.

Effect of the 9vHPV vaccine on **cytological abnormalities and genital procedures** related to HPV31/33/45/52/58 were also reported in this study. In per-protocol population, the efficacy of the 9vHPV vaccine on the reduction of cytological abnormalities related to the 5 new HPV types was 92.6% (95% CI: 89.7, 94.8). The observed reduction in biopsies and definitive therapies (both cervical and external genital) in an HPV naïve vaccinated population was 91.3% (95% CI: 87.3, 94.3) and 83.3% (95% CI: 66.1, 93.2), respectively.

The **frequencies of adverse event (AE)** reports were generally comparable between V503 and 4-valent HPV. However, there was a higher frequency of injection-site AEs (90.8 percent vs. 85.1 percent), including swelling, pain and erythema in the V503 group. Injection-site pain was mostly reported as mild or moderate in intensity with both vaccines. The majority of injection-site swelling and erythema cases were of small size (less than or equal to one inch). The most frequently reported vaccine-related systemic AEs
(frequency greater than or equal to 2 percent) for V503 compared to 4-valent HPV vaccine, respectively, were: headache (14.6 percent vs. 13.7 percent), pyrexia (5.0 percent vs. 4.3 percent), nausea (4.4 percent vs. 3.7 percent), dizziness (3.0 percent vs. 2.8 percent), and fatigue (2.3 percent vs. 2.1 percent).

**Immunobridging studies** were used for the adolescent population because adolescents are not likely to have been exposed to HPV, and therefore, efficacy against disease endpoints cannot be studied directly. Immunogenicity 'bridging data' is an accepted surrogate for efficacy and is an approach that is accepted by major regulatory agencies.

**In summary**, phase III efficacy study of investigational 9-valent HPV vaccine (V503) prevented approximately 97 percent of cervical, vaginal and vulvar pre-cancers caused by HPV types 31, 33, 45, 52, and 58. V503 also generated immune responses to HPV types 6, 11, 16, and 18 that were non-inferior to those generated by Human Papillomavirus quadrivalent (types 6, 11, 16, and 18) recombinant vaccine (4-valent HPV vaccine). V503 includes five more HPV types (31, 33, 45, 52, 58) in addition to the four original HPV types (6, 11, 16, 18) in 4-valent HPV vaccine. To date, it is more than twenty thousand adolescent, men and women who had received this experimental vaccine, with promising efficacy results, excellent immunogenicity and good tolerability. Some can expect a dramatic switch from 4-valent to 9-valent vaccine in the near future and maybe prevent more VPH-related cancers and diseases.
Caesarean-induced isthmocele: where do we stand?
Emmanuel BUJOLD, MD
Obstetrician/Gynecologist, Centre hospitalier de l’Université Laval, (Québec) Canada

Learning Objectives:

- Understand the natural history of isthmocele after caesarean.
- Understand the principles for its primary prevention at the time of cesarean.
- Know the actual best-evidence for management of a pregnancy complicated by an isthmocele.

Summary:

Cesarean has been associated with long-term adverse outcomes, including dysmenorrhea, intermenstrual bleeding, infertility and uterine rupture in future pregnancies. Imaging of uterine scar with ultrasound and hysterosonography has gained a lot of popularity over the last decade. The severity of the scar defect, also called isthmocele, has been associated with gynecologic symptoms and with the risk of uterine scar dehiscence or uterine rupture at delivery. While there are few studies that have looked at risk factors for the presence and the severity of isthmocele, there is a growing interest for its treatment. Several authors reported improvement of gynecologic symptoms after surgical repairs of isthmocele. However, there is no comparative study that evaluated the risks and benefits of such repair and it remains unclear whether the surgical procedures improve or not the scar itself.

The actual best scientific evidences suggest that uterine closure, and most likely a locked single-layer closure including the inner part (endometrial layer) of the hysterotomy is the main risk factor for isthmocele and a major risk factor for uterine rupture and placenta accreta in the next pregnancy. Focus should be directed on the primary prevention of isthmocele and its related complications by using optimal caesarean technique.
**Surgical management of endometriomas impact on fertility**

**Philippe DESCAMPS, PR**  
Professor of Obstetrics and Gynecology, Université d'Angers, France

**Learning Objectives:**

Based on my participation in this CME activity, I will now incorporate the following new clinical strategies into my practice:

- Endometriomas have no influence on number of oocytes retrieved or embryo quality but are associated with a reduced responsiveness to gonadotrophins.
- Surgery has no effects on IVF pregnancy rates and ovarian response to stimulation, IVF has no influence on the size of endometriomas.
- There is a diminution of surgical indications for endometriomas because of potential consequences on ovarian reserve.
- Surgery should be performed in case of pain, if ovarian reserve is good and if endometrioma is unilateral.

**Summary:**

(relationship between ovarian cysts and infertility: what surgery and when?)  
Legendre G1, Catala L2, Morinière C2, Lacoeuille C2, Boussion F2, Sentilhes L2, Descamps P2.

The relationship between ovarian cysts and infertility is a subject of debate, mainly because it is difficult to determine the real impact of the cyst and its treatment on later fertility. For a long time it was hoped that surgical treatment could prevent potential complications (such as rupture or malignancy). For presumed benign ovarian tumors, fertility sparing should be the main concern. The goal of this survey of current knowledge on the subject is to thoroughly explore the potential relationship between cysts, their treatment, and infertility. Our study is based on a review of the literature dealing with the epidemiology of ovarian cysts and the effects of their surgical management in relation to infertility. Analysis of the epidemiologic data, drawn mainly from comparative studies and cohorts, shows that the role of cysts in infertility is controversial and that the effects of surgical treatment are often more harmful than the cyst itself to the ovarian reserve. Surgery does not seem to improve pregnancy rates. When a surgical option is nonetheless chosen, a conservative laparoscopic approach is more suitable. Besides excision, sclerotherapy and plasma vaporization are promising, offering a greater preservation of the ovarian parenchyma, especially in endometriomas. These techniques must be better defined. The context of the infertility is essential, and surgeons and specialists in reproductive medicine should decide management jointly.
Salpingectomy in the 21st century: Go or Gone?
Philippe GAUTHIER, MD
Gynecological Oncologist, Hôpital Notre-Dame, (Québec) Canada

Learning Objectives:

- Screening for ovarian cancer is ineffective and harms outweighs benefits.
- High grade serous ovarian cancer, the most common histologic subtype, originates in the distal fallopian tube.
- Salpingectomy for sterilization instead of tubal ligation and salpingectomy at the time of hysterectomy, if conserving the ovaries, is safe, simple and has the opportunity to save women's lives.

Summary:

Ovarian cancer is still the most frequent cause of death by gynecological malignancy for women in developed countries.

To date, all attempted ovarian cancer screening strategies have failed. Annual surveillance by CA125 and transvaginal ultrasound for ovarian cancer is ineffective, but even worse, diagnostic evaluation following a false-positive screening test result is associated with complications. There is fair evidence that routine screening is ineffective or that harms outweighs benefits.

High grade serous cancer is the most common histologic subtype; the belief is that most of these cancers originate in the distal fallopian tube. In addition, the fallopian tube likely plays a permissive role in the development of the next 2 most common subtypes, endometriosis associated clear cell and endometrioid ovarian cancers, which serve as conduits for passage of ectopic endometrium and infections/inflammatory agents.

Removal of fallopian tubes (bilateral salpingectomy), even in the general population at low risk, will reduce the incidence of ovarian cancer. In a population based retrospective cohort study evaluating 43,931 women who underwent hysterectomy with and without BS or bilateral salpingo-oophorectomy and woman who underwent surgical sterilization by means of BS or tubal ligation, no significant differences were observed in the risks of hospital readmission or blood transfusion; minimal additional surgical time is required for hysterectomy with BS (16 minutes) and BS for sterilization (10 minutes).

Salpingectomy is safe, simple and has the opportunity to save women’s lives.
Robotic surgery in gynecological cancers
Walter H. GOTLIEB, MD
Gynecological Oncologist, Hôpital général juif-Sir Mortimer B. Davis, (Québec) Canada

Learning Objectives:

Understand the potential added value of robotic surgery:
- Who are the patients most benefitting from the robotic approach;
- Sentinel lymph nodes;
- Quality of life;
- Economical analysis of direct health care costs.

Summary:

The focus of health care delivery is shifting towards modalities that provide the best value for patients, which requires optimization of the physical, emotional, and economic aspects of health care.

From a patient’s perspective the value of surgery is increased by decreasing the insult as long as oncological outcomes are maintained. This is best obtained by minimally invasive surgery. The aim of this lecture is not to compare robotics to traditional "straight stick" laparoscopy, but to evaluate how the use of robotics to complement laparoscopy has, and could further decrease the use of laparotomy for treatment of gynecologic malignancies.

The introduction of robotics in gynecologic oncology has rapidly increased the proportion of patients benefitting from MIS (in some centers from 17% to over 95%). In this lecture we will highlight the improved outcome, including the use of immunofluorescent sentinel lymph node technology, and discuss associated issues such as cost, complications, and quality of life.
Review of outcome in mesh surgery in genital prolapse
Olivier GRAESSLIN, PR
Professor of Obstetrics and Gynecology, Centre Hospitalier Universitaire, France

Learning Objectives:
- To discuss the first line treatments.
- To inform of possibilities and limits of surgical treatment.
- To better understand differences between abdominal and vaginal surgical approaches.

Summary:

Sacral colpopexy has superior outcomes to a variety of vaginal procedures including sacrospinous colpopexy, uterosacral colpopexy and transvaginal mesh. These benefits must be balanced against a longer operating time, longer time to return to activities of daily living, and increased cost of the abdominal approach. The use of mesh at the time of anterior vaginal wall repair reduces the risk of recurrent anterior wall prolapse. Anterior vaginal polypropylene mesh also reduces awareness of prolapse, however these benefits must be weighted against increased operating time, blood loss, rate of apical or posterior compartment prolapse, de novo stress urinary incontinence, and reoperation rate for mesh exposures. Posterior vaginal wall repair may be better than transanal repair in the management of rectocele in terms of recurrence of prolapse. The evidence is not supportive of any grafts at the time of posterior vaginal repair. In any case, patients seeking a surgical treatment of their genital prolapse must be fully informed of the specific risk related to each technique. They must also be informed of the long-term results or of the lack of available data, regarding techniques using native tissue or mesh. Adequately powered randomised controlled clinical trials are needed on a wide variety of issues, and they particularly need to include women’s perceptions of prolapse symptoms.
Novel approach in endometrial ablation
Philippe LABERGE, MD
Obstetrician/Gynecologist, Centre hospitalier de l’Université Laval, (Québec) Canada

Learning Objectives:

- To learn about a new ablation technology.
- To understand the importance of scientific evidence in helping clinicians make a better informed decision before acquiring a new technology.

Summary:

Do we really need new technologies in endometrial ablation?

The answer is affirmative, because technologic innovations gradually allow for more efficient, quicker and better devices to safely perform global endometrial ablation (GEA). How significant is this issue? In the USA alone, approximately 400,000 procedures are performed each year and in Quebec, AOGQ’s own statistics show that in 2010, endometrial ablation had surpassed even vaginal hysterectomy as one of the most frequently performed gynecological interventions. Therefore the medical community cannot remain idle in view of these emerging technologies – as long as there is sound scientific evidence about the product.

This talk will focus on one such new technology using a combination of Argon gas and radiofrequency as the underlying mechanism to destroy the endometrial lining in a fast, safe and efficient way. The product’s name is identical to the California based company’s name and is called Minerva. Phase 1 and 2 studies (those performed in laboratory and on extirpated uteri) have been conclusive and more recently, phase 3 clinical studies (one single arm and one multicenter randomized international trial) were completed and the preliminary results are very encouraging. The randomized trial was particularly challenging logistically and unmatched scientifically: the required methodology from FDA was to employ the use of alcaline hematin measurements of the menstrual blood loss via collection of soiled sanitary products to determine eligibility of each subject for study participation. In other words, we obtained the exact amount of bleeding per menses, in milliliters, and the entry threshold was 160 ml, twice the upper limit of normal menstrual flow.

This new technology should be made available commercially within the next two years. Meanwhile the Society of Obstetricians and Gynecologists of Canada will publish its long awaited national guideline on endometrial ablation, in early 2015. It is my understanding that the guideline will recommend use of a GEA technology whenever the uterine cavity is normal, instead of the resectoscope. The simpler, the better.
Modern approach to endometriosis
Chantal LAFORTUNE, MD
Obstetrician/Gynecologist, Hôpital de LaSalle, (Québec) Canada

Learning Objectives:

- Re-examine the pathophysiology of endometriosis, particularly the impaired cellular immune response, estrogen production, inflammatory response and progesterone resistance.
- Propose first, second and third line medical options for the treatment of pelvic pain secondary to endometriosis, concentrating on the relief of symptoms, and not the disappearance of the lesions.
- Review the role of surgery in the treatment of endometriosis (conservative and definitive) with its advantages, risks and downfalls.

Summary:

Endometriosis is a common, albeit benign, but nonetheless debilitating disease for some. It affects between 3% and 10% of women overall in the reproductive age, is prevalent in 12 to 32% of women presenting with pelvic pain, and in up to 50% in infertile women as well as amongst teens presenting with chronic pelvic pain, dyspareunia or dysmenorrhea.

Although historical reports mention time and time again symptoms resembling that of classic endometriosis, it is only in modern medicine that the disease was characterized and given a name. In 1921 John Sampson described classic peritoneal implants and coined these lesions « endometriosis » and established that « chocolate cysts » of the ovaries were in fact ectopic endometrial bleeding. An old disease now had a new name.

Retrograde menstruation, coelomic metaplasia, vascular and lymphatic dissemination, direct transplant of endometrial tissue: regardless of the pathogenesis, it seems now certain that impaired immune function, high local production of estrogens, prostaglandins and cytokines, and progesterone resistance all play an important role in the development and the maintenance of endometriotic lesions.

The World Endometriosis Society published in 2013 a Consensus to establish the best current evidence on the management of endometriosis. It is the first and only global consortium on the treatment of endometriosis to date. Many Associations and Gynecologic Societies have national and international guidelines, but controversies still exist.

Modern treatment of endometriosis essentially focuses on two aspects. First, treating the symptoms and not the disease itself. In that prospect, empirical medical treatment of unequivocal symptomatic endometriosis is now encouraged, without the need for surgery. Laparoscopy and histological confirmation is still considered by some the gold standard for diagnostic, as unfortunately other less invasive methods of diagnostic have proven inconsistent over time. Second, surgery should be reserved for patients who fail to respond to medical therapy, have questionable diagnostic or have a palpable masse. Complete excision of all disease is the ultimate goal. Endometriosis is viewed today as a medical disease with surgical back-up.
Taking the « O » out of the « G »
Guylaine LEFEBVRE, MD
Obstetrician/Gynecologist, St-Michael's Hospital, (Ontario), Canada

Learning Objectives:
In this presentation we will introduce some concepts that may help us answer the following questions:

- Are the requirements for learning the specialty of obstetrics and gynecology realistic for our training programs?
- Can we compare the breadth of the specialty and the length of training, now to the past three decades and into the future?
- Do we have evidence for quality and patient safety relating to surgical experience?
- How do we continuously adapt our practice to the evolution of the specialty?

Summary:
At the annual meeting of the American Association of Gynecologic Laparoscopists in the spring of 2014, Dr. Javier Magrina gave a presidential address on the reality that it may be time to separate the “O from the G”. He presented the evolution of gynecologic surgery in the United States and candidly observed that graduating residents do not have a sufficient surgical volume to maintain, let alone improve surgical skills. In Canada, the Canadian Institute for Health Information (CIHI) collects clinical and demographic data from hospitals across the country that may be used to assess and evaluate both access and quality of care received in this Country. The latest CIHI statistics show that there were more than 2.9 million inpatient hospitalizations in this Country in 2012-13. The most common reason for hospitalization is giving birth and the most common inpatient surgery is caesarean section. No shortage of work for obstetricians, but in parallel to these numbers we see a declining rate of hysterectomy, still claimed to be one of the highest in the world at 339 per 100,000 women. From 2001 to 2008 there was a 22% drop in numbers of hysterectomies in Canada. In 2008/09 there were 33,630 hysterectomies done and a total of 1700 obs/gyn in Canada. Doing the math, there is an average of 19 hysterectomies per “surgeon” per year. We can therefore conclude that the reality in Canada is also that obstetricians are not all gynecologists, at least not all surgeons. How can our specialty adapt to this reality? Is it time to separate?

There are excellent advantages to having a united specialty where at least in theory a graduating specialist can know all there is to know in the reproductive care of women. In practice, it is now common place for residents to pursue fellowship training and therefore have at least seven years of training before they launch their actual practice. Should it take seven years to become a gynecologic surgeon? Then the reality of how to squeeze all of the knowledge in a restricted time frame of five years becomes daunting for program directors and their teams.
A survey of North American obstetrics and gynecology program directors found that while 73% of programs teach laparoscopic skills, only 59% were satisfied with their curriculum. Most programs lacked standard setting in the form of theoretical examinations or skills assessments prior to residents performing surgery on patients in the operating room. The fact is that we just can’t do it all. The reality is that if we must focus on the essential, surely patient safety should rest at the top of our list. As we move to a focus on minimally invasive approaches to surgery, the breadth of what a gynecologic surgeon needs to perfect is likely greater than the residency programs can offer. This leads us to examine the availability of learning new techniques and maintenance of competence in practice.

There is presently mounting enthusiasm in Canada for establishing a recognized subspecialty of pelvic medicine. We now take for granted the existing subspecialties of gynecologic oncology, reproductive endocrinology and maternal fetal medicine, forgetting the battles to recognize the specific areas of competence in each of these spheres of obstetrics and gynecology. Maybe we have already separated while we weren’t looking. Acknowledging the reality of both obstetrics and gynecologic surgery, we could improve our system to accomplish the goals of specific training with more confidence in less time. The competency-based curricula should help guide us through this. We can then empower the specialist in practice to comfortably establish a zone of competence for which they can dedicate time, energy and collaborative relationships. To quote Dr. Magrina “separate does not mean divorce”. Maybe our separation agreement could actually lead to a much better reconstituted family.

References:
1. Magrina J. Isn’t it time to separate the O from the G? JMG 2014; 21 (4) 500-503
Medical treatments of uterine myomas
Violaine MARCOUX, MD
Obstetrician/Gynecologist, Hôpital général juif-Sir Mortimer B. Davis, (Québec) Canada

Learning Objectives:

- Discuss the natural history of fibroids and the current literature regarding the incidence of leiomyosarcomas.
- Evaluate the current medical management options for leiomyomas in the pre-operative period.
- Review the available medical treatment options available as an alternative to surgery.

Summary:

The majority of fibroids are asymptomatic and have a benign, slow-growing course unlikely to require any medical or surgical intervention. For that reason, their incidence is difficult to evaluate but fibroids have been discovered in up to 77% of hysterectomy specimens in one study. Symptomatic fibroids, however, may cause significant morbidity including menstrual abnormalities, iron-deficiency anemia, pelvic pain and decreased fertility. They may have a considerable impact on women’s quality of life as well as their productivity. The pre-operative diagnosis of leiomyosarcomas is challenging and has received a lot of attention recently. The incidence is estimated at about 0.25% at the time of surgery.

Several medical and/or surgical treatment options are available to women with symptomatic fibroids. Medical therapy can be administered as an alternative to surgery or may be used to correct anemia and decrease the volume of the fibroids prior to elective surgery.

Combined oral contraceptives and levonorgestrel-containing intra-uterine devices may be used to decrease menstrual bleeding and have not been shown to promote the growth of the fibroids. GnRH-agonists are used pre-operatively to decrease the volume of the fibroids. Up to 50% reduction in volume may be expected after 3-6 months of therapy in addition to a marked improvement in menstrual bleeding. Selective progesterone receptors modulators (SPRMs) are administered orally and have anti-proliferative effects on the leiomyoma cells. Ulipristal acetate has been shown to result in significant decrease in fibroid volume and improvement of menstrual bleeding. One study recently evaluated the repeated intermittent administration of ulipristal acetate for up to four 3-month courses of therapy with beneficial effects on fibroid volumes and vaginal bleeding. Ulipristal acetate may cause apparently benign and reversible endometrial changes named PAEC (PRM Associated Endometrial Changes). Treatment of women with uterine leiomyomas must be individualized and medical therapy may be considered as an alternative to surgery in some patients.
Best treatment options for abnormal pap smears
Michel ROY, MD
Gynecological Oncologist, L'Hôtel-Dieu de Québec, (Québec) Canada

Learning Objectives:

- Indications for reference in colposcopy.
- Safe period of time for a reference in colposcopy.
- Management of results of a colposcopic examination.
- Indications of a treatment for intraepithelial lesions.

Summary:

In order to lower the costs of referral in colposcopy after an abnormal screening test, a good management is mandatory. Too often, patients are referred for colposcopy after minor atypical cytology or a first positive HPV-DNA.

In this presentation, we will review the modern cervical cancer screening tests and the indications for colposcopic examination according to results of the tests. Recently, HPV-DNA screening programs have replaced cytology.

We will give indications for colposcopy in front of ASC-US, AGC, and abnormal results in pregnant patients, and the management and follow-up of patients after a directed biopsy shows intraepithelial lesions.
Hysteroscopic morcellation: a novel technical approach
Robert SABBAH, MD
Obstetrician/Gynecologist, Hôpital du Sacré-Cœur de Montréal, (Québec) Canada

Learning Objectives:

- Understanding the prevalence and impact of endometrial pathologies.
- Being able to understand the indications for hysteroscopic morcellation.
- Becoming familiar with the most recent technologies for hysteroscopic morcellation.

Summary:

Abnormal uterine bleeding is a main cause of consultation to gynecologists and particularly after 40 years of age. A proper diagnostic workup has to be established and once the diagnosis is made standard treatment protocols should be used.

Today the advent of minimally invasive surgery gives us the opportunity to treat women in an outpatient setting with a short recovery time and minimal discomfort. In addition the diagnosis should first eliminate a neoplastic process and then distinguish between hormonally and ovulatory bleeding from anatomically related causes of bleeding. Anatomically related causes are most often caused by fibroids, adenomyosis or polyps. Up to 40% of women with abnormal bleeding have fibroids which can cause heavy bleeding, pain/cramping, anemia, and infertility. Many treatment options are available from hormonal therapies, mirena iud, classic hysteroscopic resection with resectoscopes, hysterectomy which is too often practiced for benign diseases to more recent innovative technologies in hysteroscopic morcellation.

Hysteroscopic morcellation as seen recently a huge interest with the development of new technologies that need no energy, have a very effective cutting blades which reduce operative time and simultaneous suction which permits the surgeon to obtain a clear view at all times. Also the use of normal saline in these procedures reduces the risk of fluid overload. Moreover the fact of not using thermal energy gives a better histo-pathological analysis of the tissue removed. The simplicity of these procedures make the treatments available on an outpatient basis or ambulatory setting and offers women the possibility to return to their normal activities in a very short time. The advent of aggressive and invasive surgeries as used in the past should no longer be used and the gynecologist of the 21st century should know how to orient, council and treat these patients with minimally invasive procedures.
Quebec’s successful IVF program with single embryo transfer
Pierre SAINT-MICHEL, MD
Obstetrician/Gynecologist, PROCREA Cliniques, (Québec) Canada

Learning Objectives:

- Effect of eSET on the incidence of multiple pregnancies.
- Positive consequences of eSET.
- Negative consequences of eSET.

Summary:

In this presentation, we will review the effect of implementing eSET in good prognosis patients in a funded IVF programme on the rate of multiple pregnancies. The pregnancy rate (PR), the implantation rate (IR) and the multiple pregnancy rate (MPR) will be compared between the other Canadian provinces and the province of Quebec since the start of the funded IVF cycles in August 2010. A brief review of the literature on eSET will be done and we will discuss on the positive and negative consequences of routine eSET on PR, IR and MPR. Finally, we will discuss on the value of considering cumulative pregnancy rate (CPR) and cumulative implantation rate (CIR) to compare effectiveness of eSET and/or eDET as to multiple embryo transfers.
The Odyssey of the Pap Smear: Boom Bust and Echo
George A. VILOS, MD
Professor of Obstetrics and Gynecology, Western University, (Ontario) Canada

Learning Objectives:
- Describe the Birth of the Pap Smear & the Pap Test.
- Summarize the Impact of the Pap Smear & Pap Test.
- Summarize new developments in the management of lower genital tract disease.

Summary:
The Story and Significance of the Pap Smear and the Pap Test

The Story of Dr. Pap: George Papanicolaou was born on May 13, 1883 in Kymi (Euboea, Greece). He attended the University of Athens at 15, studied literature, philosophy, languages, music (talent for violin) and received his MD in 1904, at 21yr, with honors.

In 1907, he went to Jenna and later to Freidburg to study under Ernest Haeckel and August Weisman (brilliant geneticist, inheritance transmitted through sex cells)

In 1910, he received his PhD on sex determination of Daphnia (water fleas). He became a skilled microscopist,

In 1910, back in Kymi, he met Andromache (vibrant personality, well educated, spoke French and played the piano). They were married on Sept. 25, 1910.

Oct. 19, 1913, they arrived in New York with $250 between them. They had no place to go, were met by no one, and spoke no English. Initially they were employed at Gimbel’s department store, Mary sewing buttons for $5 per week and Dr. George (MD, PhD) selling rugs. Dr. George earned additional money by playing the violin and as a clerk at Atlantis newspaper in Astoria, NY.

After 3 wks of selling rugs, Dr. Morgan gave him a job as a technician at Path & Bacteriology, New York Hospital and Anatomy depart of Cornell University under Dr. Charles Stockard. Andromache became his first (unpaid) assistant.

The Birth of the Pap Smear: Stockard’s experiments included effects of alcohol on Guinea pig offspring. Dr. Pap requested permission to use some Guinea pigs to test for periodic vaginal discharge. He used a nasal speculum to examine the vagina of these rodents, took a sample and placed under his microscope. “There were moments of real excitement when the examinations of the first slides revealed an impressive wealth of diverse cell forms and a sequence of distinctive cytologic patterns”. The Pap smear was born.

The birth of the Pap Test: Feb. 1925, he studied vaginal smears volunteered by female workers of New York Women’s Hospital. There was a chance encounter of a smear with cancer. “The first observation of cancer cells in the smear of the uterine cervix was one of the most thrilling experiences of my scientific career”. The Pap test was born.
**The significance of the Pap Test:** It is considered one of the most successful screening tools in history and since its introduction (1950s), Pap testing saves lives.

**New Developments:** Cervical cancer is caused by a sexually transmitted viral infection (HPV). Twelve oncogenic strains are known to be precursors; HPV16 &18 are the most common. As a sexually transmitted infection, cervical cancer is a preventable disease.

**Vaccination Against Cancer:** The National Advisory Committee on Immunization (NACI) recommends the vaccination of boys and girls (age 9-45) to prevent the burden of HPV disease.

**Dr. Pap's Death:** Monday, Feb. 19, 1962 he woke up with chest pain and shortness of breath. He died at Jackson Memorial Hospital few hours later from a massive heart attack. His body was transported to New York and buried at a Presbyterian cemetery in Clinton, New Jersey.

**Ms. Pap (Andromache):** March 1969, the American Cancer Society presented her a special award inscribed "To Mary Papanicolaou, Companion to Greatness". She died Oct 13, 1982, in Miami Beach at 90. Her body was cremated and the ashes were spread over Biscayne Bay in Florida. This final request might have been a subconscious wish to return someday to her beloved motherland by way of the Atlantic.
**SOGC guideline on treatment of myomas**  
George A. VILOS, MD  
Professor of Obstetrics and Gynecology, Western University, (Ontario) Canada

**Learning Objectives:**

- Describe the opportunity for & genesis of fibroids.
- Examine the association of menstruation and the genesis of fibroids.
- Describe the effects of childbirth on fibroids.

**Summary:**

**Bipedalism:** In 1974, Donald Johanson’s team discovered approximately 40% of a hominid skeleton who walked upright 3.2 million years ago in Northern Ethiopia. That evening, the radio was playing the Beatles' song “Lucy in the sky with diamonds” and they named their new found female skeleton Lucy. In 1978, at Laetoli, Tanzania, Mary Leakey’s team found 3 australopithecine footprints, likely parents and a child, frozen in wet ash dated 3.5 million years ago.

**Narrow Pelvis:** Why our ancestors came down from the trees and started walking upright, > 5 million years ago, is still a matter of debate. However, bipedalism required re-alignment of the pelvic structures which resulted in narrowing of the birth canal and transformation from a simple straight cylindrical pipe to a complex convoluted structure in which the planes of the pelvic inlet, mid-pelvis, and outlet are all misaligned.

**Encephalization:** Use of tools appeared approximately 2.5 million years ago and soon after the brain of the Homo sapiens evolved and grew very rapidly. In the last 500,000 years our brain increased from 750cc to 1800cc.

**Evolutionary Conflict:** The evolutionary events of bipedalism and encephalization caused an ‘Evolutionary Conflict’ or obstetrical dilemma. The need to walk with a narrow pelvis and the need to think with a larger head would certainly eliminate natural childbirth which would lead to a dead end or extinction of our species!

**Counter-Evolutionary Adaptations:** To avoid extinction, Lucy’s offspring countered the conflict of childbirth by several additional evolutionary adaptations including delivering smaller babies by shortening gestation and/or restrict fetal growth at term, both of which have been proven to be true. In addition the uterus adapted to pushing the baby through the pelvis by moulding the baby using excessive force over lengthier parturition.

**Neo-Uterus:** As the human head grew in volume, additional myometrial force was required to push a large-headed baby through a narrow pelvis. Recent evidence indicates that the outer two thirds (approximately 90% of the total uterine musculature) is a later acquisition of the uterus from the mesenchyme and brought with it its own blood supply - the uterine arteries.

**Genesis of Fibroids:** Angiography has shown that 94% of all uterine fibroids are supplied by the uterine arteries indicating that the majority of fibroids arise from the outer two thirds of the myometrium. The genesis of fibroids then is a direct consequence of the
evolutionary adaptation of the uterus to deliver the ever enlarging human head through a narrow birth canal directly related to bipedalism

**Menstruation may initiate uterine fibroids:** Dysmenorrhea antecedes fibroid disease. Injury to myometrium occurs during the vasoconstrictive events of menstruation and leads to a myocyte being transformed into a myofibroblast. Fibroid growth is an exaggerated response to tissue repair, resulting in a disordered form of healing & formation of an altered extra cellular matrix. Fibroids are Keloids!

**Fibroid growth:** Fibroids grow from their periphery, and during the secretory phase of the cycle. Small fibroids and the periphery of large fibroids are more biologically active than myometrium.

**Fibroids in Pregnancy:** Most ultrasound studies found that fibroids remain the same size or become smaller during pregnancy.

**Effect of Fibroids on pregnancy outcomes:** A 2010 study of 72,000 pregnancies reported significant differences in odds ratios for placenta previa, abruption, premature rupture of membranes, preterm birth <34 weeks, and intrauterine fetal death, but the differences were all <2% which would not be considered clinically relevant.

**Summary:** Bipedalism provided the opportunity for the origin of fibroids. Menstruation may initiate all uterine disorders including the genesis of fibroids

Childbirth is a natural killer of fibroids
NESA Days 2014
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**Experimental studies on transoral thyroidectomy**  
*Tahar Benhidjeb*  
Consultant, German Board – Surgery; Chairman, Department of Surgery; Chief, General Surgery  
Burjeel Hospital, Abu Dhabi

Aim of our project was the introduction of a technique of thyroid resection that is cosmetically optimal (scarless) and at the same time minimally invasive. The approach that fulfills these criteria is the transoral access. The transoral video-assisted thyroidectomy (TOVAT) was performed on 5 human cadavers and animals with the help of 3 modified 3mm trocars that were introduced through the floor of the mouth under the platysma. Although the surgical feasibility of TOVAT could be demonstrated, we still had concerns about its clinical application, e.g. limitation of the floor of the mouth and close location of lateral vestibulum trocar to the mental nerve. Since clinical application has tremendous implications further refinements of the access and instruments as well as further preclinical studies are mandatory.

**NOS – State of the Art**  
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The concept of Natural Orifice Surgery (NOS) has grown in acceptance since 2000 at the time of its introduction. NOS approaches have shown their feasibility, safety and clinical benefits for the treatment of several surgical diseases. It is necessary to differentiate the approaches that are still being considered experimental from those that are already alternatives to standard minimally invasive procedures. NOS procedures may be approached transorally (thyroidectomy, POEM for achalasia) transgastrically or transvaginally, classified as Totally NOS, Hybrid NOS, NOS-assisted laparoscopy, or using natural orifices only for specimen extraction. These techniques and the NOS application are discussed.
An original article: Hysteroscopic myomectomy and reproductive outcome

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Background: Hysteroscopic myomectomy is a procedure of choice for resection of submucosal myoma. However there is debate about myomectomy in infertile patients.

Objective: To assess reproductive outcome in patients with submucosal myoma who have undergone hysteroscopic myomectomy by monopolar resectoscope.

Setting & design: Two tertiary teaching hospitals and Royan institute, cohort study

Methods & Materials: Women with myoma that had undergone hysteroscopic myomectomy between February 2008 and February 2012 were evaluated. All of them had hysteroscopic resection of myoma by monopolar resectoscope. They used estradiol and progesterone for 2 months after the procedure and hysterosalpingography was done for evaluating the uterine cavity after surgery. The reproductive performance after surgery was evaluated in ICSI, Frozen embryo transfer and IUI cycles.

Statistical analysis: The statistical analysis was done using SPSS version 16. The significance was defined as P<0.05

Results: Three hundred and thirty women with submucosal myoma who were referred to the infertility clinic were enrolled in this cohort. The mean diameter of myoma was 2.55±2.2cm. All were less than 5cm in largest diameter. The type of myoma was M0(48.38%), M1(26.2%) and M2(25.4%) respectively. The mean age was 39.3±4.3 years. The mean duration of infertility was 10.2±2.7 years. The pregnancy rate per embryo transfer after surgery was 18.4% in ICSI and 28.6% in FET cycles.

Conclusion: Hysteroscopic myomectomy is a safe, simple and effective procedure that improves reproductive outcome in infertile patients.

Keywords: Submucosal myoma, hysteroscopy, myoma resection, pregnancy outcome, infertility

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Hysteroscopic myomectomy – an impact of translational research

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The trends in surgery during the last decade have been to less invasive techniques and to exteriorize procedures from theater to office. Probably hysteroscopy was one of the procedures most affected by this tendency. With small diameter optics, new energy sources and the development of new procedures, office hysteroscopy can be used to treat, without anesthesia, almost all the intrauterine pathologies such as polyps, myomas, and even septate uteri. The deep submucous myoma, because of the symptoms, mostly abnormal uterine bleeding and because of direct implications to fertility, is the great challenge of office hysteroscopy. We will present a review of the office hysteroscopic myomectomy, advantages, limitations and results.

The implementation of a new C-section method in Slovakia.

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Slovakia, as well as the entire world, reports a significant increase in the frequency of Caesarean delivery. Its increase in percentage is among the sharpest in Europe. While the frequency of Caesarean section was 12.7% in 1997, in 2013 it reached 30.8%. In 2013 it ranged from 11.8 to 52.5% at 55 maternity wards, with the highest frequency in the largest public hospitals. The average frequency of perinatal centers, altogether six of them in Slovakia, reached 41.1%, and 28.6% in other departments. To compare, the incidence of instrumental delivery was 1.8% (1.2% vacuumextractor delivery and 0.6% forceps delivery). The high number of operations in the world requested a worldwide debate about the safety and effectiveness of surgery techniques. Currently, the most efficient technique considered is the Misgav-Ladach Caesarean. It was first presented in 1994 and the first experience from Slovakia was published in 1999. Professor Michael Stark as the author visited the obstetric department in Trenčín in 2002. Since then, this technique has been used here as the method of choice. In our workplace we have also conducted a retrospective study, in which we compared the presence and severity of adhesions and the risk of uterine rupture, dehiscence or weakening of uterine wall after two different types of Caesarean section. We compared the incidence and severity of adhesions and quality of the scar at the second Caesarean section among the patients who underwent their first and repeated Caesarean sections in our hospital within the period of January 2005 and June 2010. The patients were divided into two groups depending on the type of the first
Caesarean section performed. Group A was formed by females in whom the first section was performed by the Misgav-Ladach technique without peritoneal closure and with single-layer uterine closure. Group B was represented by females in whom a classic Geppert Caesarean section with visceral and parietal peritoneal closure was selected and the uterus was closed in two layers. Within the analyzed time period we recorded the same incidence of adhesions at a repeated Caesarean section after different types of first surgery. We recorded two serious complications among the patients with primary classic C-section only. The single-layer uterine wall suturing seems preferable in our institution. Given all the other known advantages and benefits of the Misgav-Ladach technique, this has become the first-choice method in our department.

To assess the situation in Slovakia we analyzed a questionnaire received from every obstetric department in the Slovak Republic on the preferred Caesarean section type and the relative experience. In 2012 we sent the questionnaire to all 56 delivery departments that were in operation in Slovakia. All the answers cover the principal access to the problems and questions. On that time the Misgav-Ladach technique was used in 33 departments (59%). Of these 33 departments, the original method was used in 13 (40%), with some modifications in 18 of them (54%) and both (original + modification in 2 (6%) departments. In these 33 departments, the Misgav-Ladach technique was used in 70% of patients (median). Myometrium suture was done in 1 layer in 43 departments (77%), in 2 layers in 12 hospitals (21%) and in one institution they used both techniques in 50%. The visceral peritoneum suture was done in 36 departments routinely. The parietal peritoneum suture was done in 44 departments. The skin was closed with intradermal stitches in 30 hospitals (54%), clips were used in 19 (34%) and normal stitches only in 6 departments (11%). We can conclude that the situation in such a small country as Slovakia is very different in incidence and technique of such a common procedure. Critically we can say that the most commonly used technique for Caesarean section in Slovakia is the "suo modo" technique.

Laparoscopic peritoneal graft for vaginoplasty

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We are all performing vaginoplasty with various grafts for the lining of neo-vagina. Overall consensus has emerged of late about preference for a split thickness skin graft from the medial aspect of thighs of the same patient (a classic operation described by ‘McIndoe’). There are some misgivings though, especially the brown pigmentations & leathery feel of this graft. In search of a softer material & to avoid the disfiguring effects of skin graft from the thigh, few colleagues are using amniotic membrane, loop of small bowel, sigmoid colon & occasionally the buccal mucosa as the graft instead of skin.
Peritoneal graft without discontinuity seems an excellent alternative. Till date this was not considered a good option as the vault forming stitches, if applied vaginally, were applied either without checking the surrounding relationship of tissues, or a laparotomy was needed. Using the laparoscopic assistance has been very useful in delineating the upper limit of the neo-vagina, under vision suturing of the vault, evaluation of abdominal organs like ovaries & Genito-Urinary system. A measure of blood supply to the graft area is continued as it is not severed from the abdominal cavity. The property of mesothelial cells of peritoneum for quick implantation on to a raw area also ensures quick & more complete graft uptake. An experience of 35 cases is presented along with video clips to highlight the simplicity of the procedure as well as a follow-up of the neo-vagina. This method appears very attractive from patient’s perspective as she avoids the ugly scars and visual reminders on her thigh and also because of the clean, healthy, pink look of the neo-vagina.

**Management of placenta accreta after previous Cesarean section**

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We researched medical documents of 117 patients with placenta accreta, in combination with a uterine scar after previous cesarean section (CS).

Placenta accreta was diagnosed during pregnancy by ultrasonography of the lower uterine segment, NMRI.

Patients’ age was from 28 to 42 years. 53 out of 117 (45.3 %) patients had undergone one prior CS. Primary cesarean section was scheduled for 52 out of 117 patients (44.4 %).

The pregnant women were divided into two groups: Group 1 – 37 (31.6%) patients who delivered using a transverse lower segment hysterotomy incision; Group 2 – 80 (68.4%) patients that underwent midline laparotomy and corporal cesarean section. In 47 out of 80 (58.7%) patients an uterine artery embolization (UAE) was performed; 18 (22.5%) had a prophylactic balloon occlusion of the internal iliac arteries (BOIA), 15 (18.8%) had no angiosurgical methods.

25 patients from Group 1 had a total blood loss of more than 3 liters, and in 7 cases of 25 the blood loss was more than 5 liters. In the majority of patients metroplasty was performed, and the reproductive function was preserved. Hysterectomy was required in 10 (27%) patients.

Total blood loss in patients with UAE : 10 patients: <1 liter, 16 patients:1-2 liters, 10 patients: 2-3 liters, 9 patients: >3 liters. Bleeding volume in group with BOIA: 7 patients: <1 liter, 7 patients: 1-2 liters, 4 patients: >3 liters. For all the parturients from Group 2 the
uterus incision was sutured without removing the placenta. Then we performed UAE or BOIA. The next step for the majority of patients: excision of the uterine hernia, removal of the placenta and plastic of the lower uterine segment. Placenta was left in the uterus in 2 patients. There was a spontaneous expulsion of the placenta in the late postpartum period. Reproductive function of all patients in Group 2 was preserved.

**Conclusion:** In case of uterine scar after previous cesarean section, placenta previa, placenta on the anterior uterine wall, an ultrasound examination with Doppler measurement should be performed (if indicated – NMRI) for diagnostics of ingrown placenta. The method of choice for ingrown placenta is corporal cesarean section. In the absence of bleeding, it is possible to delay the removal of the placenta.

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**Development of comprehensive next generation sequencing based assay of FFPE tumor samples reveals actionable mutations and paves the way to personalized oncology**

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Somatic mutations emerge as superior biomarkers for rationalized drug selection in combating cancer. In practice, however, there is a tradeoff between the comprehensive whole genome sequencing and the relatively “shallow” reading of the relevant genomic area, where cancer-driving mutations frequently appear. This, and financial considerations, motivated the development of multiple target enrichment tools to allow sequencing of the most relevant regions of the genome, at the deepest possible level. We assessed seven platforms for sensitivity and specificity over a common genomic area, encompassing all frequently mutated exons of up to 150 cancer causing genes; Life Technology® AmpliSeq-Ion Torrent, Illumina® TruSeq, and Agilent® HaloPlex and SureSelect (all but the first were sequenced on Illumina MiSeq and HiSeq2500). We find these technologies to be relatively comparable, and capable of identifying clinically relevant mutations at a high level of reproducibility, and at least 90% specificity and sensitivity. Target enrichment approach allows reading the cancer sample even if the cancer cells represent a small fraction of the tissue collected, and allows a more comprehensive sense of the dynamics of somatic mutations that exist prior to drug treatment and the inevitable acquired resistance. Therefore, we analyzed a number of samples from before and after acquired resistance, and indeed found partial evidence to support the hypothesis that resistant cells are present in the onset of treatment. These results suggest that clinically driven tumor sequencing
should read the samples at relatively high depth, to allow the identification of rare resistant variants, and attempt to treat in accordance to their presence in the first line of treatment

New methods for the diagnosis of dystocia in labour

Antonio Malvasi
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The occiput posterior (OP) is considered to be the most common fetal malposition of a fetus in labor. OP occurs in about 10–25% of pregnancies during the early stage of labor and in 10–15% during the active phase. Delivery of a fetus in such a position could be either the result of the persistency of this position throughout the entire labor, called persistent occiput posterior position, or it may arise from a malrotation during the second stage of labor from an initial non-OP position. OP position diagnosis via digital examination is made by identifying the fetal sagittal suture and fontanels and their location in relationship to maternal pelvis landmarks: it is made when the posterior fontanel is felt toward the sacrum and the anterior fontanel toward the symphysis. The OP position poses challenges in every aspect of labor: prevention, diagnosis, correction, supportive care, labor management, and delivery. Unfortunately vaginal digital examination in OP diagnosis though is very subjective and very dependent on the operator's experience. Ultrasound has become a very useful tool in diagnosis of fetal head position during labor, in both active phase and second stage. In this paper, I show a new algorithm applied to intrapartum ultrasound and based on suitable ultrasound pictures, that sets out, in detail, the quantitative evaluation, in degrees, of the fetal head OP in the pelvis and the birth canal, respectively, in the first and second stage of labor. I tested this computer system in a settle of patients in labor.

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Thyroid diseases during pregnancy

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Thyroid diseases are the second most common endocrine disorder affecting women of reproductive age and when untreated during pregnancy are associated with an increased risk of miscarriage, preeclampsia, gestational diabetes, maternal hypertension, placental abruption, preterm delivery, low birth weight and several neonatal diseases. Current guidelines recommend screening of women at risk including those with a history of thyroid disease, type I diabetes mellitus, autoimmune disease, or a family history of thyroid disorder. Appropriate management results in improved outcomes demonstrating the
importance of proper diagnosis and treatment. Hypothyroidism is the most common pregnancy-related thyroid disorder, affecting 3-5% of all pregnant women. It is associated with several adverse outcomes on both mother and fetus and should be treated with thyroxine supplementation. In women with hypothyroidism during pregnancy, thyroxine treatment is titrated to achieve normal serum TSH and T4 levels. Maternal hyperthyroidism may also have significant adverse impacts. The preferred treatment for hyperthyroidism is antithyroid medications with a goal of maintaining a normal serum free thyroxine level. Such treatment is crucial to avoid hyperthyroidism complications on both mother and fetus during pregnancy. Thyroid nodules may enlarge but the incidence of thyroid cancer is not increased during pregnancy. FNA should be performed for suspicious nodules and, if necessary, thyroid surgery can be done during the second trimester; otherwise, follow-up can safely be conducted postpartum. Close monitoring and treatment of thyroid diseases is important in women during pregnancy and requires a multidisciplinary approach including obstetricians, pediatricians, endocrinologists and endocrine surgeons.

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An impact of CO2-pneumoperitoneum during prolonged laparoscopy on respiratory parameters: literature review
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Indications for laparoscopic surgery during the last decade have widely extended, including patients with advanced risk factors class II and III, obese individuals, and also children. It is related with an application of surgical robots and other state of the art high-tech products in surgical theatre. These technologies have enabled a performance of many surgical procedures through laparoscopic approach. Today it has dramatically improved anesthesiologic management and intra-surgical monitoring of patients and their preparation for surgery. All these innovations and modifications are needed to be proved in comparison with verified generally accepted reliable technologies. Nowadays an application of laparoscopic approach in obese patients has widely increased. Therefore there are conflicting results, since CO2 insufflation upon increased intra-peritoneal pressure is associated with blood gas and acid base changes with respiratory and cardiovascular complications. It causes concern that in obese patients with reduced functional residual capacity CO2-pneumoperitoneum during prolonged laparoscopy can initiate severe blood gas and acid base changes with respiratory and cardiovascular
Comparative outcomes of laminectomy and radiotherapy for spinal metastatic disease

Naira R. Matevosyan
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**Rationale:** Radiotherapy has been a conventional approach in managing spinal metastases. However, surgical reduction decompressing the spinal cord circumferentially, followed by reconstruction and immediate stabilization, has proven to be effective, likewise.

**Objective:** To quantitatively evaluate and compare the surgical reduction and radiotherapy results, based on pre- and post-screening data in the literature.

**Methods:** Cumulative success rates from both treatment modalities were collected from 32 surgical studies presenting 1,022 adult cohorts, 6 radiation studies presenting 486 adult cohorts, and were quantified for heterogeneity using a mixed-effect, univariate and multivariate meta-regression models. The following Mesh terms were employed to recruit the data from PubMed, SCOPUS, and Medline as to the main goal of the study: circumferential spinal cord decompression, reconstruction, and stabilization. The ambulatory status of operated or radiated patients was considered as the primary measurable outcome. The status was measured with the help of a developed screening tool combining the Brice and McKissock scale, Cooper scale, Frankel score, and Tomita scale. The number of spinal lesions was considered as an index unit.

**Results:** Operated patients were twice as likely to regain ambulatory function. The success-outcome rates for surgery and radiation were 85% and 64%, respectively. Neurologic status, overall health, onset of the disease all impacted proper treatment selection.

**Conclusion:** Laminectomy should be considered as the primary choice in in treatment of spinal metastases and can be combined with radiation therapy.

**Keywords:** Ewing’s sarcoma; Laminectomy, Lymphoma, Multiple myeloma, Neuroblastoma, Prostate cancer; Pancreatic cancer; Radio-sensitve tumor; Renal cancer; Seminoma; Vertebrae

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Single port access by application of ‘Endport PPP’ for tubal pregnancy: a pilot project

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Background: The term ‘single port access (SPA)’ has a huge amount of synonyms such as natural orifice trans umbilical surgery (NOTUS); embryonic natural orifice translumenal endoscopic surgery (E-NOTES); trans umbilical endoscopic surgery (TUES); trans umbilical laparoscopic assisted (TULA); single incision laparoscopic surgery (SILS); one port umbilical surgery (OPUS); laparoscopic endoscopic single site surgery (LESSS). It can be a proof of an enormous interest of surgeons and researchers to use the SPA for laparoscopic procedures. Subsequently many manufacturers of medical equipment started to produce suitable SPA tools. The purpose of this pilot project was a feasibility analysis of application of an ‘Endport PPP’ kit with instrumental and flow in channels, and curved instruments for urgent surgical treatment of tubal pregnancy.

Materials and methods: 36 patients with tubal pregnancies admitted for emergency surgery were randomly divided into two groups: SPA group (n=18) and conventional laparoscopic surgery (CLS) group (n=18). Surgical procedures in the SPA group were performed using the ‘Endport PPP’ kit with curved instruments, while in the CLS group conventional laparoscopic instruments with 3 ports were used. The ‘Endport PPP’ kit includes three instrumental and flow-in channels and a kit of curved surgical instruments which are specially designed for this access by the Russian manufacturer of medical tools ‘PPP’ (Kazan, Russian Federation). All instruments were curved with fitted function for SPA: scissors, dissector, nontraumatic fine forceps with spur, L-type and ball-shaped electrodes. Inclusion criteria: confirmed tubal pregnancy; exclusion criteria: concomitant gynecological diseases with combined surgical procedures and obesity.

Endpoints: A population homogeneity by demographic parameters such as age and parity history; intra-and post-surgical parameters including time of surgery, amount of bleeding, patients’ stay in hospital, postsurgical pelvic pain assessed by visual analog scale. Statistical analysis was performed by paired T-test for binary and ANOVA for continuous repeated data.
Results: A population of patients in both groups was homogenous by their age, body mass index and parity history. In addition, surgical parameters such as amount of bleeding (p=0.491), patient discharge time (p=0.511) and pelvic pain reduction (0.770) were comparable, while surgical time was prolonged in patients operated by SPA (p=0.028).

Conclusions: It seems that manipulating parameters and postsurgical recovery of patients operated by the 'Endport PPP' kit and curved instruments were comparable with those of conventional laparoscopy and increased surgery time of single port access was probably associated with the learning period since these instruments were applied for the first time at a surgical theatre for emergency medical service.

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Handling complications in gynecologic endoscopic surgery
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Safe laparoscopic surgery includes the correct knowledge about anatomy, the use of the appropriate apparatuses and instruments as well as good surgical, medical knowledge. Avoiding the word complications, let us talk about quality issues in endoscopic safe surgery.

The goals in laparotomy, vaginal and any kind of endoscopic surgery (be it conventional or robotic) are of course the same.

• Recognition of relevant pathology
• Possibility of radical treatment in endometriosis and cancer
• Minimal trauma, bleeding and tissue laceration
• Adhesion prevention
• Preservation of urogenital tract in women of reproductive age
• Utilization of the best instruments (with as many degrees of liberty as possible, robotic transmission, etc.)

Quality issues may concern the laceration of organs, near the genital tract, which have to be recognized and corrected immediately or whenever they are recognized. Examples of corrections on the ureter, the bladder and the bowels are multiple and let us recognize the wide field of responsibility we have in our surgery. The appropriate treatment has to be reflected and carefully applied according to the patients’ situation. A skilled surgeon can decide whether to stay with his own responsibility or to consult with the urologist or a general surgeon to achieve an optimal final solution in case of necessity.
**Combined surgical and hormonal therapy of endometriosis results in the most effective treatment: a prospective, randomized, controlled trial**

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**Abstract Summary**

In the battle for the most effective treatment of genital endometriosis, this randomized clinical study clearly shows that the best results are achieved with a combined surgical and hormonal treatment, in relation to the recurrence of symptoms.

**Abstract**

**Objective:** Endometriosis is the second most common gynecological disease in women of reproductive age. Unspecific symptoms reflect the diversity of pathological extent and localization as well as individual reaction to the disease. All suggested classifications are limited in their predictive value. This study evaluates three different therapy strategies (hormonal medication, surgical or combined treatment).

**Methods:** Four hundred and fifty patients with genital endometriosis, aged 18 – 44 years, were randomly distributed to three treatment groups at the first laparoscopy. They were re-evaluated at a second-look laparoscopy (D 426/10), one to two months after the three-month hormonal therapy for groups 1 and 3 and five to six months later for group 2 (surgical treatment alone). Outcome data focused on the recurrence and pregnancy rate.

**Results:** The three treatment options – independent of the initial Endoscopic Endometriosis Classification (EEC) stage – achieved an overall cure rate of 50% or higher. A cure rate of 60% was achieved by the combined treatment, of 55% by the exclusively hormonal therapy and 50% by the exclusively surgical treatment. An overall pregnancy rate between 55% and 65% was achieved with no significant difference in relation to the therapeutilical option.

**Conclusions:** In the battle for the most effective current treatment of genital endometriosis, this clinical randomized study shows the lowest incidence of recurrences for the combined surgical and medical treatment and improved pregnancy rates for any medically treated patients with or without surgery. The highest cure rate (stage 0) of endometriosis was achieved in the combined group.

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Minimally invasive breast biopsy
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The introduction of screening mammography has significantly increased the detection rate of early, non-palpable breast lesions. Diagnostic workup and treatment of these lesions have changed considerably over the past few decades, and the management of breast cancer has been evolving toward minimally invasive approaches.

For a long time, wire-guided open surgical breast biopsy was considered to be the standard diagnostic procedure for non-palpable lesions. Hence accurate, this procedure is associated with high morbidity and costs. Moreover, up to 80%–90% of women with non-palpable breast lesions turn out to have benign disease and, in retrospect, undergo unnecessary surgery. A minimally invasive procedure offers better options, and therefore image-guided percutaneous biopsy techniques have been developed. Advances in imaging have enabled accurate identification and localization of suspicious breast lesions.

Image-guided percutaneous breast biopsy has been proven to provide accurate histologic diagnosis. Several different percutaneous biopsy techniques are applied to obtain material of non-palpable lesions such as fine needle aspiration (FNA), large-core needle biopsy and vacuum-assisted needle biopsy.

Today, international guidelines state that at least 90% of breast cancer patients should have received a pre-operative diagnosis of malignancy and percutaneous image-guided biopsy techniques should be the standard procedure achieving this diagnosis.

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Toward adhesionless endoscopy
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When laparoscopy was introduced as a surgical approach, it was expected that laparoscopy in itself would substantially decrease adhesion formation (AF) since it was to exclude macrosurgery “adhesiogenic” factors. Then, when observations presenting AF after laparoscopic procedures accumulated, researchers started to study the impact of laparoscopic conditions on AF resulting in controversial conclusions. In several series of
experimental studies we have shown that a severe inflammation triggered by surgical trauma is the key factor in the pathogenesis of postsurgical complications, whereas CO2-insufflation results in moderate inflammation and less AF. Monopolar coagulation (MC) resulted in more severe and extended AF than that triggered by mechanical damaging. Pronounced adhesion severity after MC was corresponded with analogous experimental models by other teams. MC produces severe trauma with subsequent acute and prolonged inflammatory reactions due to an additional trauma to the underlying tissues, which leads to significantly increased AF. We assume that in our experiments a severe trauma induced by MC could be a triggering factor of tPA inhibition. We observed a visceral peritoneal lesion-site dependent predisposition to the AF. Severe and extended lesion site adhesions were more pronounced in the visceral peritoneum than in those of the parietal peritoneum. These findings may improve our insights into AF pathophysiology and open new perspectives in developing future adhesion prevention strategies. The NESA has initiated studies and distributed surgical know-how toward standardization of surgical procedures with the just needed surgical instruments in order to simplify surgical procedures and to avoid replacement of surgical skills by superfluous technologies.

Myomectomy during caesarean section
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Introduction: For the problem of uterus fibroids and caesarean section, we decided to combine the Tsirulnikov technique with myomectomy during caesarean section, to prevent the risk of haemorrhage.

Method: The study was done at the university hospital centre of Mahajanga, Madagascar from 2007 to 2013.

Results: We recruited 3037 caesarean sections, 104 fibroid uteri, 63 without myomectomy and 41 with myomectomy. In 33 patients, we performed caesarean section combined with the anti-haemorrhage Tsirulnikov technique followed by myomectomy. For 9 patients, myomectomy was not performed using that technique.

Discussions: We used the classical technique of myomectomy. It is beneficial for the patients, who are in general without social security and low income, and live far from a medical centre in our country. So it is interesting to use the occasion of a caesarean section to perform myomectomy in order to avoid a second surgical intervention. The exceeding cost concerns only one more suture unit. We did not use any more medicine, and no more complications were found.

At least, longer duration of operation, but covered by the habitual loco-regional anaesthesia, more bleeding without need of blood transfusion.
Two patients were already pregnant again, with prophylactic caesarean section, without specific complications during pregnancy and delivery.

**Conclusion:** This technique is beneficial, especially for low income countries. For a better assessment, more studies will be needed.

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**Research without resources**

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**Introduction:** Upgradation of medical technology solely depends upon generation of newer ideas. Many medical professionals generate excellent ideas but these are lost in the chaos of their daily choirs. This thirty minute presentation tries to inspire and guide innovators towards the desired goal.

**Material and methods:** Evolution of an "Idea" into an “Innovation” is a process involving multiple components namely “The innovator”, “The inventory” and “The innovation as a final product”. The presentation elaborates the essential qualities of an innovator, the methodology to analyze problems, to develop, augment and conglomerate different ideas in order to evolve a virtual final innovation. Prototype building, opportunities and marketing strategies form the next rung of the ladder. The talk also highlights the importance of conducive and democratic work environment, essential qualities of an idea and an innovation and the importance of saving the dollar during research.

**Conclusion:** It is possible to innovate even in a small and remote setup provided you know your resources and learn how to utilize them.

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**Unconventional ways to bring a high perinatal mortality down.**

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200,000 immigrants, most of them in the southern part of town, live in another world than the population of the good neighborhoods in the north.
Their living conditions, lifestyle and relative poverty are causes of a higher perinatal mortality (12.8/1000 births), the highest in the Netherlands and higher than in the slums of London, UK.

The ErasmusMC has 2.200 deliveries/year and 60% of our patients are black. To try to diminish perinatal mortality we started two activities out in the streets.

1) the other info meeting about delivery at the ErasmusMC.

For the delivery info meetings, 6 times/year, in a big class room in the university, only higher educated, ‘white’ people come. We miss more than half of our patients.

To counter this we started ‘black info’ afternoons in small community centers with food and a theater play about a badly ending pregnancy for all our patients and people in their neighborhood. We report about the proceedings.

2) Erasmus Gardens for mothers with children from minus 1 to 4 years old.

We try to get the mothers out of their houses by offering programs to do something outside with their small children, we offer ‘soup’ lunches and bake bread outside. We report about the proceedings.

A mathematical model of the laparoscopic manipulating space
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Nowadays laparoscopy has been established as the golden standard for the surgical treatment of a variety of intra-abdominal diseases and pathologic conditions of pelvic cavity, while open surgery is increasingly being regarded as outdated and thus may not be the treatment of choice of many pathologic conditions in the abdominal and pelvic cavities for much longer. Carbon dioxide (CO2) is intraperitoneally insufflated to extend the abdomen in order to maintain the laparoscopic manipulating space. An excess of CO2 entails specific metabolic side effects, such as respiratory, cardiovascular and blood gas, acid base parameters changes, as well as local disturbances in the peritoneal cavity such as decreased peritoneal pH and blood circulatory deteriorations with mesothelium hypoxemia during laparoscopic surgery. These metabolic changes are generally controlled by lung ventilation with increased volume/pressure and respiratory rate. However, an
application of laparoscopy for a wide range of population including children, obese individuals, and patients with cardiovascular and respiratory diseases might produce unfavorable side effects and complications. Laparoscopic surgery in such population is associated with the question how to avoid complications by CO2 insufflation at the optimal manipulating space. Therefore a mathematical model that is based on the patient-specific functional anatomy of respiratory and cardiovascular systems, changes of abdominal cavity volume seems to be promising for further both scientific and practical development of the laparoscopic technique.

We propose a mathematical model of intra abdominal space during laparoscopic procedures. It accepts as inputs mechanical properties of the abdominal wall, age, body mass index, diameters of the body at the specific positions, abdominal organs elasticity and body position on the table. Taking into account these inputs we apply our original algorithm to transform reference 3D meshed body model to preoperative patient-specific anatomy using 1mm resolution and thorough organ and tissue detailization. The use of adaptive meshes allows us to run simulations even on a laptop. At the next stage pressure load simulations are performed providing abdominal space volume and shape depending on the input parameters.

Telelap Alf-x – The first clinical application
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Objective: In the past, surgeons used their fingers to palpate, evaluate and manipulate tissues. When endoscopy and, later, telesurgery were introduced, the fingertips lost their primacy in favor of optical force feedback.

In order to overcome these shortcomings, the EU initiated the Telelap Alf-x project. This system combines the advantages of both laparotomy and endoscopy, providing force feedback while working endoscopically. Among its features are tactile sensing, free access to the patient from all sides and angles, a high degree of versatility and 3D vision.

Methods and procedures: In order to assess the validity of this system, experimental preclinical procedures in various surgical fields were performed and after approval for clinical use in Europe for abdominal and thoracic surgery, clinical application has started.

The parameters examined were:

1. Use of the instruments
2. Force feedback transmission
3. Safety, reliability, ergonomics
4. The 3D Stereo Vision system
5. Docking time
6. Cost-effectiveness

7. Results

At the Gemelli University Hospital, Rome, 146 gynecological procedures have been performed, with an average docking time of 7.6 minutes, and the average operation time for cystectomies and bilateral adnexectomies were less than 1 hour. The average duration for total hysterectomy with adnexectomy was 164 minutes. Detailed reports concerning these parameters as well as the results compared to endoscopy will be presented.

**Conclusions:** This system proved to be efficient. No conversion was needed, and no technical problem occurred in the first 146 cases. Its use and further development promise a simplification of complex surgical procedures.

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**The evidence-based C-section of the XXIst century**

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As most abdominal operations have endoscopic alternatives, caesarean section will remain the only abdominal operation in the future. Therefore it is of utmost importance to constantly evaluate the different steps for their necessity and for their optimal way of performance.

The modified Joel-Cohen method results in a shorter incision to delivery time, lower rate of febrile morbidity compared to the traditional Pfannenstiel incision.

Opening peritoneum using bi-digital stretching rather than sharp instruments proved to be safer, and exteriorization of the uterus makes stitching easier and avoids unnecessary bleeding. Suturing the uterus with one layer only results in stronger scars and reduced pain.

Leaving both peritoneum layers open reduces adhesions and results in reduced need for painkillers and closure should be avoided in all other surgical disciplines as well, including endoscopy.

The fascia being sutured continuously with first knot underneath the fascia prevents irritation in the sub-cutis, and, by a right-handed surgeon, from the right to the left, proved to be ergonomic.

Since the introduction of this modified and simplified method, it has been evaluated by dozens of peer-reviewed publications from different countries. Without exception, all showed various advantages of this method: shorter operation time, shorter hospitalization, quicker mobilization, less blood loss, lower rate of febrile morbidity, lower costs, and less need for painkillers.
Only 10 instruments and three sutures are needed, which simplifies the workload of nurses.

This operation is recommended as universal routine method for caesarean section and its principles should apply to all surgical disciplines.

Unfortunately, however, the rate of caesarean section is increasing all over for very unjustified reasons. The difficulties in natural childbirth are results of a big head and narrow pelvis, and evolution therefore enabled the delivery at the cost of half-baked babies who need many years' support compared to other mammals. Repeated generations born by caesarean section, when the sizes of the head and pelvis are no longer factors, might lead to a diversion from the Darwinian route and result in unfavourable physiognomic and developmental features. A hypothetical model of possible development will be presented.

The ten-step vaginal hysterectomy
Michael Stark
The New European Surgical Academy

Most surgical procedures are based on traditions rather than evidence-based facts. The New European Surgical Academy deals with the optimization of surgical procedures. As an example for this process, the modified vaginal hysterectomy will be introduced.

The vaginal route should always be considered when hysterectomy is indicated, due to quicker recovery, lack of abdominal scar and shorter hospital stay. Different ways to perform vaginal hysterectomy were described, based usually on local and indvivial experience and traditions.

All steps of seven different methods were analyzed for their necessity. It was found out that there are only twelve steps common to all these methods. These were analyzed, compared to alternatives and omitted when not found. As a result, only ten non-replaceable steps remained, which were evaluated as a modified method in a prospective randomized study compared to the time-honoured Heaney method

The result was a shorter operation time, quicker mobilization and less need for painkillers. This operation does not need any high-tech equipment. Thereafter, this operation was introduced and is now in use in many hospitals.

Classical contra-indications for Vaginal Hysterectomies, such as big uteri, previous Cesarean sections and nulliparity, were not shown to cause a significantly higher complication rate and should not be considered as contra-indications for the vaginal route.
Phosphatidylethanol (PEth): a novel >6 glasses/day alcohol test for screening at the intake visit in the pregnant population

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Introduction: Perinatal alcohol abuse is a problem in the Netherlands. Assessments show that around 35-50% of women in the Netherlands still consume alcohol while being pregnant. It seems that a certain amount of alcohol intake is still accepted during pregnancy, even more with higher educated women. Perinatal alcohol abuse is associated with perinatal complications, miscarriages and stillbirth. In addition, the peril for the child to suffer from physical disorders, health, behavioral, emotional and intellectual problems increases. Alcohol consumption during pregnancy can lead to Foetal Alcohol Syndrome (FAS) and Foetal Alcohol Spectrum Disorder (FASD). To provide an appropriate treatment it is crucial to identify (excessive) alcohol abuse during pregnancy as early as possible. Most women lie about their alcohol consumption, therefore a reliable alcohol biomarker is needed. At this moment the analysis of Fatty Acid Ethyl Esters (FAEE) is implemented in standard care Sophia Children’s Hospital. The detection of FAEE provides an objective estimate of prenatal chronic alcohol exposure. FAEE are detected in meconium and can only supply information about alcohol use after birth. Until now, developed markers can’t be used to give information about chronic alcohol abuse and alcohol abuse during a long period during pregnancy. Phosphatidylethanol (PEth) describes a direct alcohol biomarker which can identify heavy drinking. The concentration of PEth in human blood correlates with the amount of consumed alcohol. PEth can proof alcohol consumption after weeks of abstinence. It is independent of gender, age, medication and non-alcohol related diseases. False-positive results can be ruled out. There are different homologues of PEth. PEth 16:0/18:1 and PEth 16:0/18:2 are the most common forms in human blood, Peth 16:0/18:1 is the most important homologue.

Methods: Freezing the blood samples before sample preparation is required. Extraction of PEth from blood was applied by isopropanol and acetonitrile. The analysis is performed by liquid chromatography tandem mass spectrometry. To determine a cut-off value for heavy-drinkers (>60g alcohol/day), a consumption-study was set up. Results were compared with data found in literature.

Results: It was possible to confirm 210ng/ml of PEth 16:0/18:1 as a cut-off value for heavy drinkers. The limit of detection is 92ng/ml, the limit of quantification is 150ng/ml. Linearity (r²) was 0.98. The analysis satisfies the requirements for validation aspects. A larger group of volunteers for a second consumption research is gladly seen, so the cut-off value can be extended for the measurement of smaller daily alcohol intake levels. At this
moment the development of a study to analyse blood of all pregnant women treated at the Erasmus MC is started.

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Do minimally invasive approaches confer an advantage to inflammatory bowel disease surgery?

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Laparoscopic approach can be regarded as one of the major technical advances, which has turned into the standard of care in many colorectal diseases and has offered short and long-term benefits over the open approach. However, its acceptance and wide spread for Crohn’s disease (CD) surgical management have been slower than for other benign, or even malignant, conditions. CD patients are, theoretically, ideal candidates for minimally invasive surgery: they are often young and active patients, for whom the benefits of laparoscopic approach in terms of cosmesis and postoperative recovery are essential, and they usually have little abdominal fat, making them suitable for advanced laparoscopic techniques. The reduced intra-abdominal adhesions and abdominal wall trauma following laparoscopy, as compared to open approach, might improve long-term results and facilitate the unfortunately frequently required reoperation in CD patients. Numerous studies and meta-analyses have nowadays demonstrated the safety and benefits of laparoscopic approach for CD surgery. The laparoscopic approach for small bowel non-penetrating CD management is associated with improved surgical outcomes as compared to the open approach and it may be safely proposed to patients with complex CD, with penetrating or recurring behavior. Despite the longer operative times and the initial higher costs of laparoscopy, there is numerous level I and II evidence emphasising the important short-term advantages (postoperative recovery and hospital stay) and long-term benefits (adhesions and incisional hernias) of the laparoscopic proctocolectomy and ileal pouch-anal anastomosis for ulcerative colitis over open procedures.
Cesarean myomectomy: recent evidences and future outcomes
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Myomas are the most common benign tumor of the genital organs of women of childbearing age. In some women, fibroids are present for years without any symptoms and are discovered accidentally during a gynecological examination. In others, they cause significant morbidity and can cause the need for multiple surgical procedures. Moreover, compared to the past, the trend of delayed childbearing and the advances of modern techniques of assisted reproduction leads to a steady increase of pregnant women with fibroids. In fact, a high percentage of cesarean sections (CSs) in women with fibroids was noticed during the first half of the twentieth century and later studies confirmed this.

Myomectomy during CS was considered an intervention with high risk of intraoperative and postoperative complications, until hysterectomy. Thus, many obstetrics recommend cesarean myomectomy (CM) just in cases of difficulty for fetal extraction and lower uterine segment suturing. Conversely, many reports showed that CM was not associated with increased morbidity, synthesizing two operations in one; in fact, CM avoids the risks of re-laparotomy and further anesthesia, reducing costs of re-hospitalizations, costs of re-operations and indirect costs of absence from work. Finally, the problem is to remove or not remove during cesarean section (CS). In our experience, the intracapsular CM could be a reliable, feasible and safe obstetric procedure. Meticulous attention to gentle hemostasis, sharp pseudocapsule dissection, adequate approximation of the myometrium edges and all dead spaces to prevent hematoma formation, can further increase the safety of the procedure, without significant complications by experienced obstetricians.

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Bowel obstruction due to ovarian cancer: patterns of surgical management
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Malignant bowel obstruction (MBO) is a challenging problem occurring particularly in cancer patients with advanced gynecological and gastrointestinal cancer. In patients with ovarian cancer, MBO is reported to an incidence of 5 – 40%. Clinical manifestation and surgical management is depend on multiple factors:
• single site vs multiple sites
• partial vs complete occlusion
• small vs large intestine
• pelvic vs mesenteric vs omental localization

The majority of patients with ovarian cancer who suffer MBO have recurrent disease. These patients have poor prognosis and they should undergo aggressive surgery only if it is part of an optimal surgical cytoreduction.

In our series of 72 patients with ovarian cancer operated in a six year period, the incidence of MBO was 29%. Left colectomy and anterior rectum resection was the most frequent surgical procedure (9 cases) while 5 patients underwent subtotal colectomy and 4 patient right colectomy. Eight patients had an ostomy (4 illeostomy and 4 colostomy). Multi-organ resection was performed in 7 patients.

Surgical management of bowel obstruction due to ovarian cancer is a high demanding procedure. Defined surgical strategies help the surgeon to overcome the difficulties of peritoneal carcinomatosis. However, the surgeon and the medical oncologist must use their knowledge and clinical judgment to develop an appropriate, individualized plan in order to help the patient.

Managing female genital mutilation during delivery in Yoseftal Hospital
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Background: Female Genital Mutilation/Cutting (FGM/C) defined by WHO and the UN agencies as “the partial or total removal of the female external genitalia or other injury to the female genital organs for non-medical reasons” affects more than 125 million girls and women worldwide.\textsuperscript{1} The World Health Organization classification of FGM include the following; Type I – Partial or total removal of the clitoris/prepuce, Type II – Partial or total removal of the clitoris and labia minora, with or without excision of labia majora, Type III – narrowing of the vaginal orifice with creation of a covering seal by cutting and apposition of the labia minora/majora, with or without excision of the clitoris, Type IV – All other harmful procedures for non-medical purposes e.g.: pricking, piercing, incision, scraping and cauterization.\textsuperscript{2} The genital cutting is often performed before puberty, with over 3 million girls being at risk every year. FGM/C is concentrated in 28 African countries, where it is an accepted custom that is perpetuated by tradition. However, an increasing number of women, who have undergone FGM, are presenting to healthcare professionals in Europe and North America where there is a significant number of African immigrants. As such, it is crucial to increase awareness of FGM/C and vast complications associated with the procedure. There is an increased risk of obstetric complications such as prolonged delivery, lacerations, instrumental delivery, hemorrhage, and difficult delivery in women who have
undergone FGM/C.³ Complications like fistula, incontinence, and increased risk of child morbidity and mortality are also possible with the more serious Type III FGM/C.

**Problem Statement:** Diagnosis and management of Type III FGM prior to delivery and during labor in order to prevent serious complications.

**Methods:** Between 2007 and 2013, 200 pregnant Sudanese and Eritrean women delivered at Yoseftal Hospital, in Eilat, Israel. Five cases of Type III FGM were identified. However, the first case of Type III FGM was initially missed because the staff was not aware of the FGM issue. A Grade 3 perineal tear and multiple vaginal lacerations occurred in this patient. In the next 4 cases the diagnoses were made during pregnancy and during labor before delivery. In order to prevent complications, an incision was made in the scar after obtaining informed consent from the couple. The delivery of all four women was without complication and plastic reconstructive surgery was done to restore normal anatomy.

**Conclusions:** Midwives and obstetricians should be made aware of Female Genital Mutilation issues in African obstetrics patients and the potential complications during delivery. Managing these cases by taking medical history and diagnosis before labor, may significantly reduce the obstetrics complications of Type III FGM.

**Sources**


**Managing Female Genital Mutilation during Delivery in Yoseftal Hospital**

- [Image of a medical procedure]  
  - **Step 1:** Diagnosis  
  - **Step 2:** Cutting of Scar  
  - **Step 3:** Reconstruction  
  - Normal Genitalia
Comparison of the effects of laparoscopic, and open, surgery of tubal anastomosis on female infertility

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Objective: To compare the effects of laparoscopic and open surgery of tubal anastomosis on women in fertility.

Methods: 60 cases of women with tubal stenosis and/or after fallopian tube sterilization underwent oviduct anastomosis between Jan. 2006 and Dec. 2010 in the Second Affiliated Hospital of Nanjing Medical University. The patients were randomly divided into laparoscopic surgery group (laparoscopic group, 30 cases) and open surgery group (open group, 30 cases). The skill of fallopian tube suture called “Single-Stitch suture” was used in laparoscopic oviduct anastomosis. Repatency rate and pregnancy rate of the two groups were analyzed respectively.

Results: All operations were successfully completed. Bilateral tubal repatency rate was 100% of all patients during the operation. The pregnancy rate of laparoscopic surgery group (86.7%) was higher than open surgery group (66.7%) within 24 months after surgery, but there was no significant difference (P > 0.05).

Conclusion: The pregnancy rate after laparoscopic oviduct anastomosis with “Single-Stitch suture” was higher than open surgery. Our study indicates that laparoscopic oviduct anastomosis is safe, feasible and effective.

Keywords: Oviduct anastomosis; laparoscopic surgery; open surgery; oviduct repatency rate; pregnancy rate

Preventive abdominal application of Zhukovskiy Balloon in Cesarean section in a series of 289 cases

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Objectives: Preventing bleeding and endometritis following CS in non-pharmacological and non-invasive way.

Background: The main complications of CS are haemorrhage (9-13%) and puerperal endometritis (up to 27%), starting in the uterine cavity. The cavity of uterus is the unavoidable “dead space” where blood clots accumulation and concealed bleeding may start.

Methods: Free Flow Balloon Tamponade (FFBT) Kit was primarily designed for CS and consists of a Zhukovskiy Balloon itself, a tank, a connecting tube and a probe-plug. The
procedure begins with probe-plug insertion through the incision, it is passed directly into
the vagina via the cervix. The probe simplifies the insertion stage even through
the immature cervix without any injury risk. Next the balloon catheter is connected to the
proximal end of the probe. The probe along with the catheter are further advanced through
the cervix until the balloon is placed in the uterine cavity. Immediately after the closure of
the incision the balloon is filled with sterile warm solution. For this we connect the catheter
with the tank using the "communicating vessels" principle. We work with the minimal
sufficient pressure needed. Thus we avoid unacceptable dangerous overstretching of the
newly stitched uterine incision. At the same time the inflow tube remains open, so the
balloon easily expels excessive liquid back into the tank, responding uterine contractility.
After 2-3 hours the deflated balloon is removed via vagina. So the cavity is left dry, clean
and well-ventilated.

Results: The described method was used in 289 cases of CS in the group of pregnant
women with high risk of hemorrhage. 113 patients (39.1%) had elected CS and 176 cases
of CS (60.8%) were urgent. Main risk factors were: anomaly of labor activity 39.4%;
placenta previa and its premature detachment 20.2%; two and more uterine scars 19%;
obesity 16%; fetal macrosomia 15%; multiply pregnancy 12.8%; polyhydramnion 10.6%
etc.

The data showed the high efficiency of the method for the prevention of CS complications.
In nearly 98% we managed to prevent the pathological blood loss in the group of high risk
pregnant women. Surgical methods were required in 2 cases only. In both cases
morphological causes of bleeding were revealed: extended laceration of the cervix and
small part of placenta accreta. There was not any puerperal endometritis in the given
patient group.

Conclusions: The intraoperative transabdominal application of Zhukovskiy Balloon in CS
proves to be efficient to prevent postpartum hemorrhage and endometritis for patients of
high complications risks.

Greek guidelines in breast cancer
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Guidelines provide a helpful, flexible synthesis of the available high-quality information
and prove to be instruments which assist the clinician in evidence-based decision making.

International organizations and scientific societies have already published their guidelines
on breast cancer diagnosis and treatment (e.g. National Comprehensive Cancer Network
(NCCN), National Institute for Health & Clinical excellence (NICE), Canadian Cancer
Society, European Society of Medical Oncology (ESMO), American Society of Clinical
Oncology (ASCO), National Breast & Ovarian Cancer Centre (Australia) etc.).
Nevertheless, as socio-economic differences as well as cultural, geographic and ethnic variations exist, there is a great need for national guidelines. Implementing and following these guidelines proves to be an important step towards optimal treatment of patients with breast cancer.

A couple of years ago the first consensus meeting for Greek guidelines in breast surgical oncology took place in Athens. The current worldwide knowledge was discussed and decisions were drawn on the diagnosis and treatment of breast cancer taking into account national socio-economic factors.