

Report from the 21st meeting of the European Society of Gynaecological Oncology (ESGO 2019)

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ABSTRACT

This is a report from the 21st Meeting of the European Society of Gynaecological Oncology (ESGO 2019) held in Athens, Greece, November 2–5, 2019. The conference offered state of the art educational sessions, and oral and poster abstract presentations. The general sessions throughout the meeting focused not only on prevention, screening, diagnosis, treatment, and translational research but also on emerging trends. Current innovations in gynecological cancers were also discussed. The new rare tumor guidelines project, a joint initiative with the ESGO-Gynecologic Cancer InterGroup, was officially presented for the first time. Moreover, other developments achieved with other societies, such as the European Society for Medical Oncology for ovarian cancer, the European Federation for Colposcopy for cervical cancer prevention and screening, and the European Society for Pediatric Oncology for gynecologic cancers in adolescents, were presented. Here we highlight the key results of the latest gynecological cancer trials that were presented for the first time at ESGO 2019 and added great value to this prestigious scientific congress.

INTRODUCTION

General Information

Biennially, the European Society of Gynaecological Oncology (ESGO) meeting attracts large numbers of participants from all over Europe and across the world. The 21st ESGO conference (ESGO 2019) was held in Athens, Greece, on November 2–5, 2019, and gathered 3180 participants from 101 countries. Numbers of attendees remained stable compared with 2017 (3200 participants)¹ and have steadily increased since 2015 and 2013 (2804 and 2379, respectively). Interestingly, 938 people attended the conference from outside of Europe: 140 of these from the USA and 78 from South Korea. Among the European countries, the UK was the most represented with 233 attendees,

followed by Greece and Italy, with 171 and 169, respectively. A total of 169 world recognized speakers addressed 75 scientific sessions and 1377 abstracts were presented. Eight satellite symposia completed the prestigious scientific congress. Two hundred congress delegates joined the fourth ESGO run through the beautiful city of Athens, to promote a healthy lifestyle, raise awareness, and beat women's cancers.

The conference was chaired by Professor Denis Querleu (ESGO president), Professor Alexandros Rodolakis (congress president), and Professor Nicole Concin (scientific committee chair). The congress hosted the patient advocacy seminar and the first ever ESGO examination in gynecological oncology.

At the ESGO general assembly meeting during the congress, the results of the recent ESGO council elections were formally announced and the newly appointed council members (Luis Chiva, Maja Pakiz, Jan Persson, Jalid Sehouli, Artem Stepanyan, and Ignacio Zapardiel) and ESGO leaders for the period 2019–2021 (Philippe Morice, president and Jonathan Ledermann, vice president) have begun their terms. The ESGO council also appointed Nadeem R Abu-Rustum to a new position to represent non-European members.

The inauguration lecture of ESGO 2019 was given by Professor Luis Chiva on the SUCCOR study—an international European cohort observational study comparing minimally invasive surgery versus open abdominal radical hysterectomy in patients with stage IB1 (FIGO 2009) cervical cancer operated in 2013–2014.

State of the Art Sessions

Many interesting state of the art sessions were carried out during the conference. In particular, the recent European Society for Medical Oncology (ESMO)–ESGO ovarian cancer consensus conference recommendations² were presented by Professor Glenn McCluggage, Professor Denis Querleu, and Professor Nicoletta Colombo. In this session, the results from a multidisciplinary consensus conference of 40 European experts in the management of ovarian cancer, held in Milan, April 2018, were presented. Pathology and pathologic markers of extrauterine high grade serous carcinoma, surgical management of early, advanced, and recurrent adnexal carcinomas, and an update on chemotherapy and targeted therapy of high grade serous carcinomas of ovary were discussed.

Despite progress in treatment and prevention, cervical cancer remains a worldwide public health problem. As the umbrella society of gynecological oncology across all of Europe, the ESGO council recognized the importance of making ESGO members aware of developments in human papillomavirus (HPV) prevention and cervical cancer screening. This led to a collaboration between ESGO and the European Federation for Colposcopy (EFC) that has reviewed the available literature and developed a task force on prevention of cervical cancer. The task force focused on a statement paper on HPV vaccination and cervical cancer screening,³ presented by Professor Elmar Joura and Professor Jack Cuzick, respectively. There was also a report of a meta-analysis for triage of HPV positive cases presented by Professor Marc Arbyn and a new guideline on the management of pre-invasive lower genital tract disease by Dr Esther Moss.

The quality of surgical care as a component of multidisciplinary management has been shown to improve outcome in different solid tumors. An ESGO working group of international experts has developed a set of quality indicators for surgical treatment of cervical cancer. After a comprehensive literature search for the identification of potential quality indicators, the experts have evaluated the

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relevance and feasibility in clinical practice of each potential quality indicator. Professor David Cibula, Professor Francesco Raspagliesi, and Professor Karl Tamussino presented for the first time the quality indicators for surgical treatment of cervical cancer.⁴

The new rare tumor guidelines project was a joint ESGO-Gynecologic Cancer InterGroup (GCIg) initiative, with the aim of creating a treatment algorithm for rare gynecologic cancers. The French National Group has initiated algorithms for rare tumors. After the ESGO State of the Art Conference organised in Lyon, October 2018, a first draft of the guidelines was presented in Chicago, June 2019, at the GCIg meeting, but they were officially presented for the first time at the 21st ESGO conference by a panel of 10 experts in the field.

A state of the art session dedicated to adolescents with non-epithelial ovarian cancer was delivered. The session focused on the recently developed consensus recommendations for the interdisciplinary management of these rare tumors, in collaboration with the European Society for Pediatric Oncology (SIOPE). Professor Gabriele Calaminus discussed the details of treating cancers in adolescents, Professor Philippe Morice gave a lecture on germ cell tumors in adolescents and young adults, and Dr Dominik Schneider discussed sex cord stromal tumors in adolescents.

Lastly, a joint session with the European Society for Radiotherapy and Oncology (ESTRO) highlighted the historical development of radiotherapy and provided insight into recent biological, technical, and clinical developments. Professor Elzbieta Van Der Steen-Basniak, Dr Christian Kirisits, and Dr Jacob Christian Lindgaard gave lectures on specific methods for the complete workflow, including target definition, technique, planning aims, dose volume constraints, and reporting.

Debate Sessions

A very popular session was the debate on the surgical approach of radical hysterectomy in early cervical cancer. Professor Henrik Falconer supported the role of minimally invasive surgery and presented the newly initiated trial, 'Robot assisted Approach to Cervical Cancer (RACC): a randomized controlled trial',⁵ which aims to assign patients with early stage cervical cancer to either robotic or open radical hysterectomy. In contrast, Professor Pedro Ramirez presented the updated results of the Laparoscopic Approach to Cervical Cancer (LACC) trial⁶ and gave a critical appraisal of recently published evidence comparing different radical hysterectomy approaches.

Another popular debate was on the role of hyperthermic intraperitoneal chemotherapy (HIPEC) in ovarian cancer. The aim of the debate was to highlight the strengths and weaknesses of recent data from the literature, to understand whether it is time to consider HIPEC as a complementary treatment at the time of cytoreductive surgery, and whether HIPEC improves outcome for selected women with advanced ovarian cancer. Professor Willemien Van Driel reported results on the benefit of HIPEC in the setting of interval debulking,⁷ while Professor Ignace Vergote gave a lecture against the use of HIPEC in ovarian cancer.

Lifetime Achievement Award

In 2019, the ESGO council presented two biennial lifetime achievement awards at the congress opening ceremony. Professor Ignace Vergote (Belgium) and Professor Ali Ayhan (Turkey) received their

diplomas for outstanding contribution to the treatment of women with gynecological cancers at the award session.

Helga Salvesen Award

Biannually, the ESGO council award committee recognizes a clinician or translational researcher who made a significant contribution to translational research in gynecological oncology. This year, the ESGO Helga Salvesen Award was received by Professor George Coukos, a leading researcher in ovarian cancer immunotherapy. The laureate is the director of the Department of Oncology at the University Hospitals of Canton Vaud, the director of the service of developmental therapeutics, as well as the director of the Ludwig Center at the University of Lausanne. Professor Coukos scientifically proved the existence of spontaneous immune responses in ovarian tumors and described a role for regulatory T cells and tumor blood vessels. As a result, this finding suggests that ovarian cancer may be susceptible to immunotherapy.

ESGO Run

ESGO organized multiple activities promoting cancer prevention and a healthy lifestyle, such as the ESGO awareness run. Special trophies for the race winners, men and women, were awarded to Dr Willem Jan van Weelden (The Netherlands) and Dr Kathrine Woie (Norway).

Patients' Seminars

The activity of European patient advocacy groups has become an integral element of ESGO meetings. The fifth patients' seminars was a 2 day event organized by the European Network of Gynecological Cancer Advocacy Groups (ENGAGE), a body of over 50 patient organizations from 22 countries representing and facilitating networking and collaboration under the umbrella of ESGO.

In addition to the previously introduced format of round table discussions aiming to enable patients to share and exchange their knowledge and promote collaborations, an abstract session submitted by patient advocates was included in the program for the first time, and three abstracts were selected for oral presentation. To help patient voices to be heard at ESGO meetings, in 2019, ENGAGE prepared a series of webinars on 'How to submit an abstract' where do's and don'ts of scientific poster presentation were discussed. Also, the 'unique' patient version of the ESGO guidelines, prepared in lay language, were discussed in the presence of, among others, representatives of the WHO. This was also the first time that patient activities were organized outside the venue, involving residents of Athens via interactive discussions on the effects of cancer, bringing public attention to the long term problems faced by survivors.

In 2018, ENGAGE conducted a pan-European survey in 15 countries on patients' expectations regarding doctors' attitudes and the patient-doctor relationship. The results provided the impetus for ENGAGE and ESGO to design the 'improving care' project that was further implemented in 2019 in the Czech Republic (Prague) and Poland (Kielce). The results of the project were presented in Athens and highlighted activities that, with the joint effort of patients, doctors, and hospital staff, allow significant improvements in patients' perceptions of the treatment process.

On September 20, 2019, ESGO and ENGAGE launched the first World Gynecologic Oncology awareness day (World GO day). The results of the campaign, aiming to encourage women to get the

facts, recognize the signs, and take action, with the international campaign '#GOfor...Awareness, Action, Hope, Life' that was held simultaneously in more than 20 countries, were presented.

The ENGAGE general assembly of members appointed Icó Tóth from Hungary as the new ENGAGE co-chair alongside Professor Murat Gultekin (Turkey), replacing Esra Urkmez (USA) who served as leader of the organization since it was established in 2012.

ESGO Examination

The ESGO theoretical examination in gynecological oncology (ESGO exam) is a written test consisting of a set of 100 multiple choice questions that were created after a year of preparatory work by a multidisciplinary team of professionals led by Professor Ignace Vergote. The first edition of the ESGO exam, organized in Athens, was attended by 51 candidates from all over the world who obtained an average score of 69.57%. The pass rate was 78.43% (ie, 40 candidates passed and 11 failed). The successful candidates received an ESGO certificate that certifies a high level of professional competence and excellence on the European scale.

The ESGO exam is designed as a theoretical evaluation and assessment of the knowledge that covers the entire subspecialty curriculum of gynecologic oncology, including the respective areas in surgery, medical oncology, pathology, and radiation therapy. It was created as a potential tool for learning and validation in countries where the subspecialty is not recognized and national training programs do not exist, as well as providing healthcare professionals the possibility of validating their professional theoretical knowledge in countries with existing programs. The next exam will take place at the ESGO state of the art conference in Copenhagen in June 2020.

ENYGO Activities

Basic methods, tools, and stages applied in translational research as well as different aspects of developing clinical trials were discussed extensively during the series of lounge talks 'Young gynecologists and excellence in research', part of the young doctors' track prepared by the European Network of Young Gynae Oncologists (ENYGO). This also included a young investigator session, fellows workshops, where ultrasound evaluation of gynecological cancers and minimally invasive approaches in endometrial cancer by different European schools were presented, and a round table discussion by female experts in gynecological oncology. The latter was designed after the results of a European survey exploring gender disparities in gynecological oncology. The session aimed to discuss, in a highly interactive manner with distinguished female experts, who are successful in the gynecologic oncology field, the role of mentors and sponsorship in the development leaders, gender disparities and how they are treated, and the potentially pivotal role of ENYGO/ESGO in driving change to reduce the gender gap that was declared as influencing career success in gynecological oncology by 80% of women participating in the survey. Two hands-on workshops on colorectal surgery were conducted, and the first North-South ENYGO basketball match resulted in victory for the ENYGO players living closer to the North Pole. National representatives of ENYGO voted Dr Andrei Pletnev from Belarus as the new president of ENYGO replacing Dr Kamil Zalewski.

Cooperation between ENYGO and the *International Journal of Gynecological Cancer (IJGC)* editorial team, led by editor in chief,

Professor Pedro Ramirez, began in 2019. This resulted in the launch of a 3 month long ENYGO-IJGC editorial fellowship designed for fellows interested in the processing of manuscript submission, peer review analysis, revisions, and ultimately production and publication.⁸ A further project from this successful partnership was a series of 'ENYGO morning lounge series with IJGC' chaired by the six editorial fellowships awardees (Dr Gabrielle van Ramshorst, Dr Louise Wan, Dr Aleksandra Strojna, Dr Martina Angeles, Dr Zoia Razumova, and Dr Joanna Kacperczyk-Bartnik) during which experts from the editorial board of IJGC (Professor Pedro Ramirez, Dr Lindsey Struckmeyer, and Professor Luis Chiva) discussed aspects related to the publishing process and gave tips on how to publish in a very informal atmosphere.

BEST ORAL PRESENTATIONS

After the success in 2017, ESGO decided to continue with 'the best ESGO project' and prepared an update for gynecologic oncology professionals on the new scientific data that were presented in Athens. A set of slides of the most innovative original presentations from the ESGO congress was prepared and available for presentation by a representative from each national society during local and national societies meetings. Summarized below are some of the studies that were selected because they were included in the best ESGO slides. The results of these studies were presented for the first time at the ESGO meeting and added great value to the scientific aspects of the congress. Full text abstracts are available in IJGC (volume 29, supplement 4).⁹

Cervical Cancer

SUCCOR study (An international European cohort observational study comparing minimally invasive surgery vs open abdominal radical hysterectomy in patients with stage IB1 FIGO 2009 <4 cm cervical cancer operated in 2013–2014) (abstract-1025-0017-01792)

The role of minimally invasive surgery in the treatment of early stage cervical cancer has been recently questioned by the results from LACC trial,⁶ a randomized trial which showed a survival advantage of open radical hysterectomy compared with a minimally invasive approach. Professor Luis Chiva presented the results from the SUCCOR study.¹⁰ The study aimed to compare disease free survival at 4.5 years in patients who underwent a laparoscopic or robotic radical hysterectomy versus abdominal radical hysterectomy for stage IB1 cervical cancer. Overall, 772 patients were included (91 robotic, 294 laparoscopic, and 387 open). A total of 255 of these patients underwent cone biopsies and were excluded; 51 patients were excluded for other reasons. Hence 466 patients entered the analysis and a propensity matching score was performed to have comparable groups. With a median follow-up of 58 months (73% >4.5 years), survival analysis of the entire cohort showed that there was a significant difference in favor of open surgery for both disease free survival (hazard ratio (HR) 1.94 (95% confidence interval (CI) 1.05 to 3.58), $p=0.033$) and overall survival (HR 4.25 (95% CI 1.4 to 12.9), $p=0.010$). No difference was found in patients with tumors <2cm in size or those with a previous cone biopsy. Looking at possible causes for such results, the use of a uterine manipulator in the minimally invasive approach negatively impacted disease free survival. The conclusion of the study was that radical hysterectomy by minimally invasive surgery

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showed a significantly higher risk of relapse and death. Patients that underwent radical hysterectomy by minimally invasive surgery without using a manipulator showed the same outcome as those undergoing open surgery; protective maneuvers, such as vaginal cuff formation to avoid tumor spillage at the time of the colpotomy in minimally invasive surgery, improved disease free survival in these patients.

Dose dense neoadjuvant chemotherapy followed by sentinel node mapping and laparoscopic pelvic lymphadenectomy and simple trachelectomy in cervical cancer—updated results (abstract-1025-0005-00475)

Classical contraindications to fertility sparing surgery in cervical cancer are tumor diameter >2 cm and deep stromal infiltration.¹¹ Dr Helena Robova presented the updated results of dose dense neoadjuvant chemotherapy followed by sentinel lymph node (SLN) mapping and laparoscopic pelvic lymphadenectomy and simple trachelectomy in cervical cancer. Patients with clinical International Federation of Gynecology and Obstetrics (FIGO) 2018¹² stage IB2–IB3 cervical carcinoma with less than two-thirds stromal invasion were included and subjected to 3 cycles of dose dense neoadjuvant chemotherapy. A combination of cisplatin (75 mg/m²) and ifosfamide (2 g/m², maximum total dose 3 g) was used in squamous cell carcinoma, and cisplatin (75 mg/m²) plus doxorubicin (35 mg/m²) in all adenocarcinomas. Imaging re-evaluation was performed after the third cycle. All patients underwent laparoscopy with SLN and frozen section analysis. If SLNs were negative on the frozen sections, laparoscopic pelvic lymphadenectomy was completed. If the definitive histopathological evaluation after 7 days did not detect metastases in the lymph nodes, simple trachelectomy was performed. From 2005 to 2018, 40 patients were included in the study: 23 (57.5%) had squamous cell carcinoma and 17 (42.5%) adenocarcinoma, and 28 (70%) were FIGO IB2 and 12 (30%) were FIGO IB3. Seven patients developed grade 3 neutropenia and two grade 4 thrombocytopenia. After neoadjuvant chemotherapy, 9 women (22.5%) had no residual disease, 14 (35%) had microscopic disease (<3 mm) and 17 (42.5%) had macroscopic residual disease. In 29 women (72.5%) fertility was spared, 4 women (10%) underwent immediate open radical hysterectomy for positive SLN on frozen section, and 7 women (17.5%) underwent radical hysterectomy for close or positive margins on trachelectomy specimen. Regarding oncological outcomes, 5/29 women (17.2%) experienced recurrence: of these, 4 had local recurrences and 1 distant recurrence (ovary). Three of 29 women (10.3%) died of disease. Fertility was preserved in 29 women but 3 of them lost fertility after treatment for recurrence. Therefore, fertility was spared in 26 women. Among these, 1 patient did not plan to become pregnant, 5 patients are currently planning pregnancies, 1 patient is pregnant, and 19 patients had 23 pregnancies (pregnancy rate 95%); 16 managed to deliver 19 babies, while 2 had miscarriages and 1 patient had four unsuccessful in vitro fertilization attempts. The authors concluded that oncological results in neoadjuvant chemotherapy followed by simple trachelectomy in cervical cancers >2 cm are acceptable and pregnancy results are excellent, but it is still an experimental protocol.

Frozen section examination of sentinel lymph nodes can be used as a decisional tool in the surgical management of early cervical cancer (abstract A-1025-0002-00431)

The SLN procedure decreases lymphadenectomy related complications in early stage cervical cancer management. The study

presented by Dr Agnieszka Rychlik analyzed the clinical utility and role of frozen section examination of SLNs in early stage cervical cancer. A total of 178 patients with FIGO 2018¹² stage IA1–IB2 cervical cancer with bilateral mapping via combined Technetium-99 microsulfur colloid and blue dye were analyzed. Bilateral mapping was detected in 153 patients (86.7%), 19 patients (12.4%) had SLN involvement, 13 (8.4%) with macro-metastases, 3 (2.0%) with micro-metastases and 3 (2.0%) had isolated tumor cells. Only 3 of 153 (2.0%) patients with macro-metastases were inappropriately counseled as a result of the testing and no patient with micro-metastasis was missed. Sensitivity was 81.2% (95% CI 57.0 to 93.4) and the negative predictive value was 97.9% (95% CI 93.9 to 99.3). As a result, performing frozen section SLN as part of the surgical management of early stage cervical cancer can impact the intraoperative decision.

Surgical algorithm for sentinel lymph node detection in early stage cervical cancer (abstract A-1025-0002-01186)

Professor Fabrice Lecuru presented the results of the surgical algorithm for SLN detection in early stage cervical cancer. Data from the SENTICOL I and II trials were re-evaluated.^{13 14} Patients with early stage cervical cancer (FIGO 2009¹⁰ stage IA1 with lymph vascular space invasion to stage IIA1) and radiologically (CT or MRI scan) negative preoperative lymph nodes, were subjected to SLN biopsy with a patent blue and radioactive tracer combined technique, followed by full pelvic lymphadenectomy. The external and interiliac area, bilateral common iliac area, parametrial and presacral area, and low para-aortic areas were retrospectively evaluated, in this order. Most of the patients were stage IB1 (86.3%), squamous cell carcinoma (74.1%) and treated with minimally invasive surgery (91%). In total, 52 (17%) patients had positive SLNs and 61 (20%) patients had positive nodes. Most positive lymph nodes (86%) were located in the external and interiliac area. For all of the regions, in patients with bilateral SLN detection, the sensitivity and negative predictive value were 100%. Therefore, in the case of bilateral negative SLN, full lymphadenectomy could be omitted. This algorithm allows identification of all patients with nodal spread and this may imply a decrease in unjustified pelvic lymphadenectomy.

Patient reported sexual frequency and vaginal functioning in patients with locally advanced cervical cancer following definitive radiochemotherapy and image guided adaptive brachytherapy (EMBRACE study) (abstract A-1025-0010-01166)

Dr Kathrin Kirchheiner and colleagues evaluated the pattern of sexual activity and its association with vaginal functioning in the EMBRACE trial, a study on image guided brachytherapy in locally advanced cervical cancer.¹⁵ Prospective assessment with the European Organization for Research and Treatment of Cancer (EORTC) quality of life questionnaire CX24 was used at baseline prior to treatment, every 3 months after treatment in the first year, every 6 months in the second and third year, and then yearly (2008–2015). In total, more than 50% of women were sexually active after treatment. However, about a third reported sexual functioning problems. Sexual enjoyment was compromised in about 50% of sexually active patients. It was also reported that vaginal dryness and pain during intercourse increased after treatment with minimal or no improvement later. Vaginal shortening and tightening had a steep increase after treatment with no improvement later. Pain during intercourse was significantly correlated with vaginal tightening, shortening, and dryness. The authors concluded that efforts

to prevent vaginal morbidity and provide sexual rehabilitation programs are needed.

Detection of mRNA of CDKN2A, MKI67 and TOP2A in liquid based cytology as biomarker of high grade lesions of uterine cervix (abstract A-1025-0009-00570)

Expression of host cell genes involved in cervical carcinogenesis induced by high risk HPV may be useful to identify patients harboring high grade squamous intraepithelial lesions. Therefore, Dr Núria Carreras Diéguez and colleagues prospectively evaluated the performance of mRNA detection of three biomarkers (CDKN2A, MKI67, and TOP2A) in liquid based cytology to identify these lesions. The observational prospective study included 250 patients referred for colposcopy who underwent liquid based cytology, high risk HPV human testing, colposcopy, at least one biopsy, and CDKN2A, MKI67 and TOP2A mRNA detection in liquid based cytology specimens by reverse transcription and quantitative polymerase chain reaction. The group reported that mRNA detection of CDKN2A, MKI67, and TOP2A in liquid based cytology samples showed similar sensitivity as the Pap test in identifying women with high grade squamous intraepithelial lesions. The results could help to select patients who might benefit from an immediate colposcopy. The study was recognized as the best young investigators' oral presentation at the ENYGO session.

Ovarian Cancer

Maintenance olaparib after platinum based chemotherapy in patients with newly diagnosed advanced ovarian cancer and a BRCA mutation: Efficacy by the timing of surgery and residual tumor status following upfront or interval cytoreductive surgery in the phase III SOLO1 trial (abstract A-1025-0007-0781)

PARP inhibitors have a role in maintenance therapy of recurrent platinum sensitive ovarian cancer patients after a partial or complete response to platinum based treatment. The results showed an improvement in progression free survival irrespective of BRCA status. The phase III SOLO1 trial evaluated the efficacy of olaparib (300 mg twice daily) in newly diagnosed advanced ovarian cancer patients with a BRCA1 or BRCA2 mutation after complete or partial response to platinum based chemotherapy.¹⁶ Maintenance with olaparib provided a substantial progression free survival benefit over placebo (HR 0.30, 95% CI 0.23 to 0.41, $p < 0.001$), but the subgroup analyses presented by Professor Nicoletta Colombo analyzed the efficacy of olaparib in FIGO stage III patients who underwent upfront surgery and had no residual macroscopic disease. Patients were randomized in a 2:1 ratio and the treatment was continued for 2 years if there was no evidence of disease. Progression free survival was significantly improved with olaparib regardless of the timing of surgery; for the upfront surgery, progression free patient percentage was 69% versus 32% (HR 0.31 (0.21 to 0.46)) in the olaparib and placebo groups, respectively, and for the interval surgery, progression free patient percentage was 46.8% versus 19% (HR 0.37 (0.24 to 0.58)) in the olaparib and placebo groups, respectively. Additionally, progression free survival was significantly improved regardless of the residual disease status after surgery; for the no residual disease group, progression free patient percentage was 64.6% versus 28.8% (HR 0.33 (0.23 to 0.46)) in the olaparib and placebo groups, respectively. For the residual disease group, progression free patient percentage was 47.5% versus 24.1% (HR 0.44 (0.25 to 0.77)) in the olaparib and placebo groups, respectively. Therefore, consistent with the

progression free survival benefit seen in the overall population in SOLO1, maintenance olaparib provided a substantial progression free survival benefit across all patient subgroups, including patients with a complete cytoreduction and patients who had undergone upfront surgery and had no residual disease. A substantial progression free survival benefit was seen regardless of the timing of surgery or residual disease status after surgery, indicating that all patients with newly diagnosed advanced high grade ovarian cancer and a BRCA mutation are at high risk of progression and achieve substantial benefit from maintenance olaparib.

Enhanced recovery after surgery in advanced ovarian cancer: a prospective randomized trial (abstract A-1025-0007-00115)

Although many of the enhanced recovery after surgery principles initially developed for colorectal surgery¹⁷ were applied to gynecologic oncology guidelines and clinical practice, the available evidence is based on a range of non-randomized studies at high risk of bias.¹⁸ Information on how to apply this program to advanced ovarian cancer patients is still limited. The results of a prospective randomized trial where patients with primary/recurrent ovarian cancer were randomized to an enhanced recovery after surgery protocol (n=50) or to conventional management (n=49) were presented by Dr Natalia Rodríguez Gómez-Hidalgo on behalf of the PROFAST trial collaborators. Reduction in the median length of stay was considered as a primary outcome. The optimal cytoreduction was achieved in 81.8% of patients and compliance with the enhanced recovery after surgery protocol was >90% for all required items, except for the need for abdominal drainage. Reduction in the median length of stay in the enhanced recovery after surgery group considered as a primary outcome was 2 days compared with conventional management (7 days vs 9 days, $p = 0.009$). The enhanced recovery after surgery group had a lower rate of readmissions compared with the conventional management group (6% vs 20.4% $p = 0.03$) with no increase in morbidity and mortality.

Ovarian cancer detection combining an innovative catheter for uterine and tubal lavage with ultra-sensitive TP53 sequencing (abstract A-1025-0007-01194)

Poor survival after high grade serous pelvic cancer is caused by a lack of effective screening measures. The detection of exfoliated cells in high grade serous pelvic cancer, or precursor lesions, is a promising concept for earlier diagnosis. However, collecting and identifying these cells is challenging. Professor Paul Speiser discussed three studies indicating that the newly developed catheter for uterine and tubal lavage could be used in a potential screening setting.¹⁹⁻²¹ Tumor cells from ovarian neoplasms can be collected with lavage of the uterine cavity¹⁹ and ultra-sensitive DNA sequencing can identify TP53 mutations among these cells showing potential for minimally invasive occult ovarian cancer/serous tubal intraepithelial carcinoma detection.²¹ Based on these results, the authors presented the rationale for the uterine lavage for ovarian cancer early detection (LOVE) trial, a phase II study aiming to investigate the potential of the lavage concept for the screening of BRCA 1 mutation carriers for occult ovarian cancer or serous tubal intraepithelial carcinoma. This was awarded the best oral presentation.

TP53 mutations in cell free DNA as early markers of therapeutic response in platinum resistant relapsed ovarian cancer (PROC)—a prospective translational analysis of the phase II GANNET53 clinical trial (abstract A-1025-0011-00287)

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Dr Adrian Vanderstichele and colleagues tested a hypothesis that detecting tumor specific genetic alterations in cell free DNA obtained from cancer patients allows for quantification of the tumorous fraction—that is, circulating tumor DNA. The aim of the study was to explore the predictive role of early negativization of TP53 mutations in circulating tumor DNA in therapy response. The study was done on cell free DNA samples collected in the GANNET53 trial (n=133) investigating the addition of the Hsp90 inhibitor, ganetespib, to a standard paclitaxel weekly regimen (p+/-G) in platinum resistant ovarian cancer. The results showed that circulating tumor DNA was detectable in 64.6% of baseline samples. Baseline CA125 did not differ between cases with and without detectable circulating tumor DNA at baseline. Moreover, detection of circulating tumor DNA predicted worse overall survival. At the same time, circulating tumor DNA negative status after 4 weeks of treatment predicted better overall survival (paclitaxel mono+circulating tumor DNA negative: progression free survival HR 0.65 (0.33 to 1.29)/overall survival HR 0.28 (0.16 to 0.65)). Circulating tumor DNA negative status after 4 weeks of treatment predicted a better response rate (p=0.047). Interestingly, the highest overall response rate was documented in patients where circulating tumor DNA was detectable and disappeared. Patients, where circulating tumor DNA remained or became detectable, had the worst overall response rate. Quantification of TP53 mutations in cell free DNA of platinum resistant ovarian cancer patients has a prognostic value at baseline. Therefore, favorable early changes during treatment may predict the therapeutic response (early identification of non-responders).

Vulvar Cancer

Radiotherapy as an alternative treatment for inguino-femoral lymphadenectomy in vulvar cancer patients with a metastatic sentinel node: results of GROINSS-V II (abstract A-1025-0028-01830)

At present, no generally established guidelines exist for the management of SLN micro-metastasis (≤ 2 mm deposit) or isolated tumor cells (≤ 0.2 mm) in patients with invasive squamous cell carcinoma of the vulva. Results of the GROINSS-V II, a prospective, multicenter, phase II trial investigating whether radiotherapy is a safe alternative to inguino-femoral lymphadenectomy in vulvar cancer patients with a metastatic SLN were presented for the first time by Dr Maaikje Oonk at the 21st ESGO conference. Metastases in SLN of any size were identified in 324 of 1552 (21%) patients in which radiotherapy was planned to be delivered to the groin(s) (50 Gy). In the case of a negative SLN, patients were followed-up for ≥ 2 years. After 54 months of follow up, interim analysis revealed that in the group of patients with SLN-metastasis > 2 mm radiotherapy was not a safe alternative to inguino-femoral lymphadenectomy and increased the risk of groin recurrence. The previously defined stopping rule was immediately applied and the protocol was amended. In the following part of the study, only patients with SLN micro-metastasis received radiotherapy, while those with SN metastasis > 2 mm and/or extra-nodal extension underwent inguino-femoral lymphadenectomy (with radiotherapy if > 1 metastasis or extra-nodal extension). Radiotherapy to the groins in patients with SLN metastasis ≤ 2 mm resulted in a very low groin recurrence rate (1.6%; 95% CI 0% to 3.8%) and minimal treatment related toxicity in the majority of patients (5/118 (4.2%) grade 3 toxicity, no grade 4 or 5 toxicity). In patients with tumors < 4 cm and a negative SLN, an isolated groin recurrence rate of 2.6% (95% CI 1.7% to 3.5%)

was observed and supported the fact that one may safely omit inguino-femoral lymphadenectomy.

Miscellaneous

When to stop futile treatment towards end of life in gynecological cancer patients: a population based study in Oslo county, Norway (abstract A-1025-0008-00759)

Gynecological cancer patients have a high symptom burden, especially when it comes to recurrence. By using palliative chemotherapy, only half of patients experience an improvement in quality of life. Dr Kristina Lindemann and her team performed a retrospective observational study including 163 patients who died of gynecological cancer between 2015 and 2017 in Oslo county, Norway. The aim of the study was to evaluate the end of life care in patients with gynecological cancer as well as to identify possible gaps and patterns. The results showed that 61% of patients died of ovarian carcinoma and 29% received more than three lines of treatment. The remaining 39% died of endometrial, cervical, or other gynecological cancers.

Although approximately 60% of all patients wished to die at home, only 10% ultimately did so: 9–25% of patients died in nursing homes where there was no structured palliative care offered.

Patients referred to palliative care within the last 30 days before death had a higher risk of receiving chemotherapy. This suggests that an early referral could reduce the chance of overtreatment at the end of life, such as palliative chemotherapy or invasive procedures which are indicators of poor quality of life. The modified Glasgow prognostic score, a C reactive protein/albumin ratio, was also evaluated as a possible prognostic score before the start of palliative chemotherapy. This showed that patients with a score of 2 had poorer survival as well as a higher chance of receiving chemotherapy at the end of life care.

Child development at 6 years after maternal cancer diagnosis and treatment during pregnancy (abstract A-1025-0005-01198)

Dr Tineke Vandenbroucke and her team reviewed data from the registry of the International Network of Cancer, Infertility and Pregnancy (INCIP) looking at the 6 year outcome of 132 children born to mothers who had been treated for cancer during pregnancy compared with a control group of 132 children born after uncomplicated pregnancies and to healthy mothers. The primary endpoints assessed were cognitive development, general health problems, and cardiac structure/function. In the treatment group, 97 children (73.5%) were prenatally exposed to chemotherapy (alone or in combination with other treatments). The children in the treatment group were three times more likely to wear glasses (14.9% vs 4.2%) compared with the control group. Cisplatin led to hearing loss in 3 of 14 (21.4%) children and although within the normal range, the mean verbal IQ score was lower (6 points) (p<0.05) in the treatment group, and visuospatial long term memory was affected (p<0.05). The authors concluded that special attention is needed for the early evaluation and additional stimulation of early language development in children to prevent delay in language development and verbal intelligence.

CONCLUSION

ESGO's 21st meeting was one of the largest meeting in the world dedicated solely to gynecological cancer. The scientific research was of high quality, and increasing numbers of

researchers choose the ESGO congress to present their data for the first time. This brief report includes only a small fraction of the scientific information presented at the biannual meeting, and we encourage the readers to explore these topics further on the ESGO eAcademy website²² and in *IJGC* (supplement 4, volume 29).⁹

In between biannual meetings, ESGO also organizes state of the art conferences. These meetings focus on postgraduate education and are dedicated to a specific topic in gynecological cancer treatment and care. In 2020, the fourth ESGO state of the art conference will focus on the presentation and discussion of guidelines and standard operational procedures that ESGO has developed for the treatment of gynecological malignancies and will be held in Copenhagen, Denmark, June 17–19, 2020. The 22nd ESGO biannual conference will take place in Prague, Czech Republic, October 23–26, 2021.

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