



Obstetrics, Gynecology & Women's Health Institute

6TH ANNUAL

Research Day

May 12, 2021 via Webex



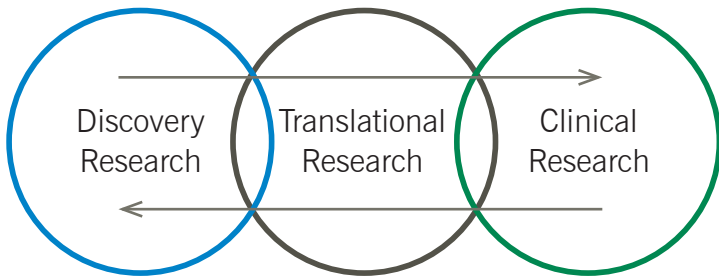
6TH ANNUAL

Obstetrics,
Gynecology &
Women's Health Institute

RESEARCH DAY

May 12, 2021





Key Note Address & Lecture

Paula Amato, MD, MCR
Professor
Department of Obstetrics and Gynecology
Division of Reproductive Endocrinology & Infertility
Oregon Health & Science University

Judges (Oral Presentations)

Mariam AlHilli, MD
Paula Amato, MD
Mariam Cremer, MD, MPH
Jeffrey Goldberg, MD
Rosanne Kho, MD
Giancarlo Mari, MD
Shannon Wallace, MD

Judges (Poster Presentations)

Cara King, DO
Justin Lappen, MD
Amy Park, MD
Stephanie Ricci, MD
Elliott Richards, MD

Agenda

- 7:45 am** **Presenter & Judges Registration**
- 8:15–8:20 am** **Welcome**
Chad Michener, MD
Interim Institute Chair, Ob/Gyn & Women's Health Institute
- 8:20–8:25 am** **Introduction & Welcome**
Ruth Farrell, MD, MA
Vice Chair, Research, Ob/Gyn & Women's Health Institute
- 8:25–9:10 am** **Key Note Address**
Germline Gene Therapy: Promise & Peril
Paula Amato, MD
Professor, Department of Obstetrics and Gynecology
Division of Reproductive Endocrinology and Infertility
Oregon Health & Science University Center for
Health & Healing
- 9:10–9:15 am** **Q&A**

9:15–10:30 am **Graduating Fellow Oral Presentations**

- 9:15 am *Development and validation of the Value of Uterus (VALUS) instrument for women undergoing pelvic organ prolapse surgery*
Olivia Chang, MD, MPH
Fellow, Female Pelvic Medicine & Reconstructive Surgery
- 9:25 am Q&A
- 9:30 am *Antibiotic treatment worsens outcomes following primary platinum chemotherapy in ovarian cancer: Potential role of the gut microbiome?*
Laura Chambers, DO, MS
Fellow, Gynecologic Oncology
- 9:40 am Q&A

- 9:45 am *Single-cell sequencing reveals inflammatory pathway induction in immune cell populations within the tumor microenvironment following intra-operative administration of hyperthermic intraperitoneal chemotherapy (HIPEC) in patients with advanced ovarian cancer*
Max Horowitz, MD, PhD
Fellow, Gynecologic Oncology
- 9:55 am Q&A
- 10:00 am *The role of endometriosis-specific MRI protocol in the diagnosis and management of patients with endometriosis-related pelvic pain*
Miguel Luna, MD
Clinical Fellow, Minimally Invasive Gynecologic Surgery
- 10:10 am Q&A
- 10:15 am *The role of M1 to M2 polarization in the pathophysiology of endometriosis*
Jenna Rehmer, MD
Fellow, Reproductive Endocrinology & Infertility
- 10:25 am Q&A
- 10:30–10:45 am Break**

10:45 am–12:05 pm PGY2 Poster Presentations

- 10:45 am *Risk factors for bacteriuria in urogynecologic patients undergoing preoperative urodynamic testing*
Rachael Baird, MD, MS
- 10:52 am Q&A
- 10:55 am *Prognostic Significance of Groin Metastases at time of diagnosis in patients with high grade serous ovarian carcinoma*
Julia Chalif, MD
- 11:02 am Q&A

- 11:05 am *A retrospective look at pre-eclampsia within the Cleveland Clinic health system: Are there opportunities for early diagnosis and intervention in African-American women?*
Alexandra “Imani” Chatman, MD
- 11:12 am Q&A
- 11:15 am *Evaluating patient satisfaction with 2-week post-operative virtual visits compared to in-office visits: A randomized control trial*
Catherine Keller, MD
- 11:22 am Q&A
- 11:25 am *Spontaneous abortion rate during the COVID-19 pandemic*
Kaia Schwartz, MD
- 11:32 am Q&A
- 11:35 am *Contraceptive counseling through telemedicine: patient characteristics and the quality of counseling*
Rachel Shin, MD, MPH
- 11:42 am Q&A
- 11:45 am *The effect of estrogen therapy on spermatogenesis in transgender women*
Annika Sinha, MD
- 11:52 am Q&A
- 11:55 am *Sarcopenia is associated with higher surgical complexity in patients undergoing interval cytoreduction for advanced epithelial ovarian carcinoma*
Nicole Wood, MD
- 12:02 am Q&A
- 12:05–12:15 am Break**

- 12:15 pm *Reported case numbers and variability in delivery route and volume by obstetrician-gynecologist residents from 2003 to 2019*
Carrie Bennett, MD
- 12:25 pm Discussant Alyssa Herrmann, MD and Q&A
- 12:30 pm *Anastomotic leak following interval debulking surgery with or without hyperthermic intraperitoneal chemotherapy in women with advanced epithelial ovarian cancer*
Morgan Gruner, MD
- 12:40 pm Discussant Jessica Son, MD and Q&A
- 12:45 pm *Longitudinal change in mammographic density with hormonal contraceptive use*
Jonathan Hunt, MD, MBA
- 12:55 pm Discussant Anna Chichura, MD and Q&A
- 1:00 pm *How do endometrial biopsy results correlate with hysteroscopic findings in women presenting with abnormal and postmenopausal uterine bleeding?*
Kate Lintel, MD
- 1:10 pm Discussant Melanie Katz, MD and Q&A
- 1:15 pm *Success rate of bilateral oophorectomy at the time of vaginal hysterectomy for pelvic organ prolapse – Intention Matters*
Cory Messingschlager, MD
- 1:25 pm Discussant Lia Miceli, MD and Q&A
- 1:30 pm *Assessing feasibility and perioperative outcomes with minimally invasive surgery compared with laparotomy for interval debulking surgery with hyperthermic intraperitoneal chemotherapy for advanced epithelial ovarian cancer*
Molly Morton, MD
- 1:40 pm Discussant Anna Chichura, MD and Q&A

1:45 pm *Prenatal hemoglobinopathy screening amongst nulliparous black women in a resident clinic population*
Rebecca Omosigho, MD

1:55 pm Discussant Lia Miceli, MD and Q&A

2–2:55 pm Innovations in Ob/Gyn Lecture

2:00 pm *Anti-Müllerian hormone in the female: From inhibition of Müllerian structures to prevention of ovarian aging*

Laura Detti, MD

Chair, Department of Subspecialty Care for

Women's Health

Faculty, Reproductive Endocrinology and Infertility

2:40 pm Q&A

2:55 pm **Announcement of Award Winners & Closing Remarks**

Ruth Farrell, MD, MA

3:05 pm Group picture of all presenters and award winners

3:30–5 pm Faculty Development / Breakout Sessions

Session 1

How to build, manage, and import data into a research REDCap

Session 2

Writing strong specific aims page: Your elevator speech for grant reviewers

Session 3

What are reviewers looking for in your proposal:

Insights from study section members

Past Research Day Award Winners

Resident Poster Presentation – 1st Place

- 2020 Carrie Bennett, MD
- 2019 Jessica Son, MD
- 2018 Sarah Hershman, MD
- 2017 Caitlin Carr, MD
- 2016 Laura Moulton, DO, MS

Resident Oral Presentation – 1st Place

- 2020 Anna Chichura, MD
Alyssa Herrmann, MD
- 2019 Emily Holthaus, MD
- 2018 Caitlin Carr, MD
Julian Gingold, MD, PhD
- 2017 Laura Moulton, DO, MS
- 2016 Jamie Stanhiser, MD
- 2016 Lisa Caronia Hickman, MD

Fellow Oral Presentation – 1st Place

- 2020 Katie Crean-Tate, MD
- 2019 Elizabeth Conner, MD
- 2018 Tonya Nikki Thomas, MD
- 2017 Kathryn Maurer, MD
- 2016 Linnea Goodman, MD

Key Note Address & Lecture

Paula Amato, MD

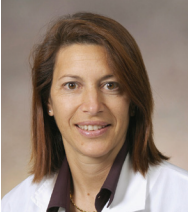
Professor, Department of Obstetrics and Gynecology
Division of Reproductive Endocrinology and Infertility
Oregon Health & Science University Center for
Health & Healing



Paula Amato, MD specializes in the science of caring for patients with infertility, polycystic ovary syndrome, and menopausal issues. Her research interests include stem cells, metabolic-endocrine interactions, and environmental impacts on reproductive health. Dr. Amato finds her work intellectually stimulating and highly rewarding. The science of reproduction and connecting with individuals and families are what inspired her to pursue a career in reproductive endocrinology and infertility.

Originally from Toronto, Canada, Dr. Amato loves the Pacific Northwest and says that OHSU is a great fit for her. In addition to outdoor sports, reading, independent music and film, and ethnic food, Dr. Amato enjoys spending time with her partner and their two dogs.

Judges (Oral Presentations)



Paula Amato, MD

Professor, Department of Obstetrics and Gynecology
Division of Reproductive Endocrinology and Infertility
Oregon Health & Science University
Center for Health & Healing



Jeffrey Goldberg, MD

Professor of Surgery
Cleveland Clinic
Obstetrics, Gynecology & Women's Health Institute
Subspecialty Care for Women's Health
Section Head, Reproductive Endocrinology & Infertility



Mariam AlHilli, MD

Assistant Professor of Surgery
Cleveland Clinic
Obstetrics, Gynecology & Women's Health Institute
Subspecialty Care for Women's Health
Gynecologic Oncology



Rosanne Kho, MD

Clinical Assistant Professor of Ob-Gyn & Reproductive Biology
Cleveland Clinic
Obstetrics, Gynecology & Women's Health Institute
Subspecialty Care for Women's Health
Section Head, Minimally Invasive Gynecologic Surgery



Mariam Cremer, MD, MPH

Associate Professor of Ob/Gyn & Reproductive Biology
Cleveland Clinic
Obstetrics, Gynecology & Women's Health Institute
Subspecialty Care for Women's Health
Global Health/Family Planning



Giancarlo Mari, MD

Cleveland Clinic
Obstetrics, Gynecology & Women's Health Institute
Subspecialty Care for Women's Health
Faculty, Maternal Fetal Medicine



Shannon Wallace, MD

Cleveland Clinic
Obstetrics, Gynecology & Women's Health
Institute
Subspecialty Care for Women's Health
Associate Staff, Female Pelvic Medicine &
Reconstructive Surgery

Judges (Poster Presentation)



Cara King, DO

Cleveland Clinic
Obstetrics, Gynecology & Women's
Health Institute
Subspecialty Care for Women's Health
Associate Staff, Minimally Invasive
Gynecologic Surgery



Mitchell Reider, MD

Assistant Professor of Ob-Gyn &
Reproductive Biology
Cleveland Clinic
Obstetrics, Gynecology & Women's
Health Institute
Subspecialty Care for Women's Health
Director, Family Planning

Judges (Poster Presentation), continued



Justin Lappen, MD

Associate Professor of Ob-Gyn &
Reproductive Biology
Cleveland Clinic
Obstetrics, Gynecology & Women's
Health Institute
Subspecialty Care for Women's Health
Section Head, Maternal Fetal Medicine



Elliott Richards, MD, PhD

Cleveland Clinic
Obstetrics, Gynecology & Women's
Health Institute
Subspecialty Care for Women's Health
Associate Staff, Reproductive
Endocrinology & Infertility



Amy Park, MD

Clinical Instructor of Surgery
Cleveland Clinic
Obstetrics, Gynecology & Women's
Health Institute
Subspecialty Care for Women's Health
Section Head, Female Pelvic Medicine &
Reconstructive Surgery



Stephanie Ricci, MD

Assistant Professor of Ob-Gyn &
Reproductive Biology
Cleveland Clinic
Obstetrics, Gynecology & Women's
Health Institute
Subspecialty Care for Women's Health
Staff, Gynecologic Oncology



Obstetrics, Gynecology & Women's Health Institute
Graduating Fellows

Oral Presentations

Development and validation of the Value of Uterus (VALUS) instrument for women undergoing pelvic organ prolapse surgery



Olivia Chang, MD, MPH

Objective: The objective of this study was to develop a reliable and valid instrument to measure the patient's valuation of her uterus.

Methods: The Value of Uterus (VALUS) instrument was developed based on existing literature and expert experience with uterine preservation. The resulting VALUS instrument is 9-items and includes a visual analog scale (VAS): "how important is it to you to keep your uterus when you have a gynecologic condition?" To validate the instrument, we recruited 51 women over 45 years old with uterovaginal prolapse who were scheduled to undergo vaginal surgery with or without hysterectomy between 05/2020 to 12/2020. We excluded women who desired future child-bearing, or those with contraindications to uterine preservation. Internal reliability of the instrument was measured with Cronbach's alpha. For convergent validity, in the absence of preexisting tools to measure uterine preferences, correlation between VALUS with the VAS question was evaluated with Pearson correlation coefficient. For known groups validity, VALUS summary scores were compared between women who underwent hysteropexy versus hysterectomy using t-test. Intra-class correlation coefficient was used to assess test-retest reliability with VALUS administered to women twice. Lastly, a receiver operating characteristic (ROC) curve analysis was conducted to identify a cut-off VALUS score for predicting whether a woman would undergo hysteropexy (versus hysterectomy).

Results: 51 patients were recruited (26 patients in the hysterectomy group and 25 patients in the hysteropexy group), with a mean age of 64 ± 10 years. There were no differences in demographics between the two groups. Cronbach's alpha was 0.91, suggesting excellent internal consistency of the items in the VALUS instrument. VALUS was highly correlated to the VAS question with $r=0.91$ (95% CI 0.65-0.89, $p<0.001$). Patients in the hysteropexy group had significantly higher VALUS scores (indicating greater value placed on the uterus) compared to women who underwent hysterectomy (30.0 vs. 18.9, $p<0.001$). Test-retest reliability was good (ICC=0.89) in 42 women who completed the instrument twice. ROC curve analysis identified a VALUS cut-off score ≥ 23 to predict hysteropexy (sensitivity=95.8%; specificity=76%).

Conclusions: VALUS is the first reliable and valid 9-item instrument that measures a woman's valuation of her uterus.

Funding: This study was partially supported by an unrestricted grant from the Foundation for Female Health Awareness.

Faculty Mentor(s): Mark Walters, MD

Antibiotic treatment worsens outcomes following primary platinum chemotherapy in ovarian cancer: Potential role of the gut microbiome?



Laura Chambers, DO, MS

Objective: To determine whether antibiotic treatment (ABX) during platinum chemotherapy impacts progression-free survival (PFS) and overall survival (OS) in ovarian cancer (EOC).

Methods: This was a preclinical animal study with an associated retrospective study. For the animal experiment, C57Bl/6 mice were assigned to two cohorts: ABX or control water. After two weeks, EOC cell lines were injected intraperitoneally (IP). Mice were treated with IP cisplatin 5mg/kg weekly or placebo. Stool samples were processed using 16S rRNA sequencing. The retrospective cohort study was performed in women with newly diagnosed stage III/IV EOC who underwent cytoreductive surgery (CRS) and PC from 2009-2015. ABX for >48 hours, including ABX against gram-positive (G+) bacteria, were recorded. The impact of ABX on PFS and OS was assessed using univariate and multivariable Cox regression models.

Results: In H₂O mice, cisplatin reduced tumor size vs. placebo ($p < 0.001$), but for ABX groups, no response in tumor size was seen with cisplatin vs. placebo ($p > 0.05$). ABX groups had significantly worse survival vs. H₂O (ABX/cisplatin – 64d, ABX/placebo – 66d, H₂O/cisplatin – 84d, H₂O/placebo – 68.5d; $p < 0.0001$). H₂O/CIS mice, with the slowest tumor growth, had significantly increased *Bacteroides* and *Lactobacillus* species vs. ABX/CIS mice (Figure 1). For the patient study, of 424 eligible women, 34.7% ($n = 147$) received ABX, with 11.3% ($n = 48$) treated with anti-G+ ABX. ABX during PC decreased PFS (17.4 vs. 23.1 months, HR 1.50, 95% CI 1.20-1.88, $p < 0.001$) and OS (45.6 vs. 62.4 months, HR 1.63, 95% CI 1.27-2.08, $p < 0.001$) compared to no ABX. Similarly, anti-G+

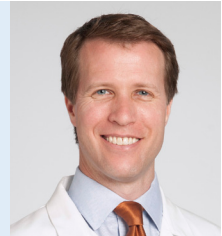
ABX worsened PFS (16.5 vs. 23.1 months; HR 1.85, 95% CI 1.33-2.55) and OS (35.0 vs. 62.4 months; HR 2.12, 95% CI 1.50-3.0, $p < 0.001$). On multi-variable analysis, all ABX and anti-G+ ABX during PC significantly reduced PFS (HR 1.31, 95% CI 1.04-1.65, $p = 0.02$), (HR 1.50, 95% CI 1.07-2.10, $p = 0.02$) and OS (HR 1.52, 95% CI 1.18-1.96, $p = 0.001$), (HR 1.83, 95% CI 1.27-2.62, $p = 0.001$) respectively.

Conclusions: Utilizing a preclinical EOC model, ABX disruption of the gut microbiome led to accelerated tumor growth and decreased survival. Similarly, in this retrospective study of women with newly diagnosed advanced EOC undergoing PC, ABX was associated with decreased PFS and OS.

Funding: Funded by Velosano and RPC grant

Faculty Mentor(s): Ofer Reizes, PhD, Roberto Vargas, MD

Single-cell sequencing reveals inflammatory pathway induction in immune cell populations within the tumor microenvironment following intra-operative administration of hyperthermic intraperitoneal chemotherapy (HIPEC) in patients with advanced ovarian cancer



Max Horowitz, MD, PhD

Objective: Epithelial ovarian cancer (EOC) is a leading cause of cancer death in women. There have been few significant advances in the treatment of advanced EOC in the past decade, and standard of care remains a combination of surgery and chemotherapy. A randomized controlled trial recently showed that hyperthermic intraperitoneal chemotherapy (HIPEC) with cisplatin at the time of interval cytoreductive surgery significantly improves the survival of patients with advanced EOC. Further enhancing the clinical efficacy of HIPEC is dependent on determining the mechanism(s) and cell types that mediate its beneficial effect. We have previously demonstrated in EOC cell lines that: 1) hyperthermia potentiates the cytotoxic effects of cisplatin (albeit modestly), and 2) immune and inflammatory pathways in these cells are uniquely altered by hyperthermic cisplatin.

Methods: To test the hypothesis that immune/inflammatory pathways are critical to the efficacy of HIPEC in patients with advanced EOC, we obtained tumor speci-

mens under an IRB-approved protocol from patients with advanced EOC undergoing interval cytoreductive surgery with HIPEC. For each patient, a portion of omental tumor was obtained before and after HIPEC (90 minutes of cisplatin at 42°C) and specimens were analyzed on a 10X Genomics Single-cell RNA-sequencing platform. Cells were clustered on UMAP plots and their identity was inferred based on their gene expression pattern. We then interrogated which cells demonstrate a heat-shock response.

Results: We found that the most profound response is observed predominantly in immune cells within the tumor microenvironment. Pathway analysis within these cellular sub-populations revealed induction of multiple inflammatory pathways following HIPEC. CGAS (cyclic GMP-AMP synthase) was identified as an upstream mediator of many of these inflammatory pathways within these immune cells in the tumor microenvironment.

Conclusions: Taken together, these data suggest that the synergistic effect of hyperthermia and cisplatin in HIPEC is mediated by induction of inflammatory pathways within immune cells in the tumor microenvironment and that cGAS may be an important regulator of this response. Ongoing translational experiments are underway in a novel mouse model of HIPEC our group has developed to further characterize the role of the immune system in mediating the cytotoxic effects of HIPEC.

Funding: Velosano Funds

Faculty Mentor(s): Ofer Reizes, PhD

The role of endometriosis-specific MRI protocol in the diagnosis and management of patients with endometriosis-related pelvic pain



Miguel Luna, MD

Objective: Preoperative MRI (85% sensitivity, 96% specificity) is helpful in the surgical planning of patients with bowel endometriosis. As yet, there is no comparative study evaluating the significance of preoperative imaging on diagnosis, patient management and surgical outcomes. The primary goal of this study was to evaluate the impact of the endometriosis-specific MRI protocol (EsMRIp) established at the Cleveland Clinic on the diagnosis and management of new patients who presented with endometriosis-related pelvic pain. Proportion of patients un-

dergoing diagnostic laparoscopy, specific treatment modalities - medical, surgical or combined medical/surgical therapy – and surgical outcomes were compared before and after protocol establishment.

Methods: EsMRIp was established at the Clinic in Jan 2017. All new patients >18yoa who presented with endometriosis-related pelvic pain between 2015-2019 were included. Patients who were pregnant, with known cancer or previous diagnosis of endometriosis were excluded. Patient demographics, frequency of diagnostic laparoscopies (defined as absence of preoperative imaging and a surgery performed for the primary purpose of diagnosing endometriosis), treatment modality, operative time, EBL, intra- and postoperative complications, reoperation rates, and hospital length of stay were evaluated.

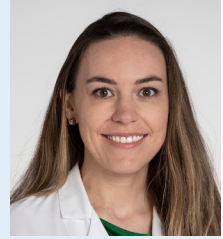
Results: A total of 1,228 new patients were identified and 361 met study criteria. There were no significant differences in patient demographics. EsMRIp has 60.7% specificity and 80% specificity. Diagnostic laparoscopies were performed more often before EsMRIp (41.9% before vs 27.0% after, $p = 0.036$; OR 0.51, 95% CI 0.28-0.96). After EsMRIp, patients were more likely to receive medical therapy alone (50.4% vs. 25.5%) or combined surgical/medical therapy (17.9% vs. 7.3%) and less likely to be treated with surgery alone (16.1% vs. 24.4%) ($p < 0.001$). There were no differences in rates of intraoperative non-gynecologic consultations, postoperative complications, readmissions, or reoperations before and after EsMRIp.

Conclusions: Our preliminary study revealed that institutional implementation of a preoperative EsMRIp was associated with fewer diagnostic laparoscopies and treatment of patients with surgery alone. More patients received medical alone and combined medical and surgical treatments after EsMRIp use. Further prospective studies to validate the above-mentioned trends and evaluate pain and fertility outcomes would be helpful.

Funding: None

Faculty Mentor(s): Rosanne Kho, MD

The role of M1 to M2 polarization in the pathophysiology of endometriosis



Jenna Rehmer, MD

Objective: We hypothesize that the cross-talk between macrophages, neuronal cells, and estrogen-secreting cells provides a conducive microenvironment for lesion development and pathogenesis of endometriosis. We put forth that it is the activation of the alternative M2 macrophage pathway that is critical to endometriosis lesion formation and stabilization.

AIM 1. Test the hypothesis that endometriosis lesions with distinct phenotypes are a consequence of the unique microenvironment signals and interplay of unique cell types within lesions and that these unique signatures are necessary for lesion development and maturation.

AIM 2. Test the hypothesis that the innate immunity, via M1 to M2 polarization, is paramount in lesion development, stabilization, and maturation and that understanding these signaling pathways will lead to targets for therapeutic intervention.

Methods: AIM 1. Perform a systematic transcriptomic delineation of human endometriosis at the single cell resolution. Tissue collection will be from patients with stage III-IV endometriosis. Four distinct phenotypic lesions, peritoneal fluid, and endometrial biopsy will be processed for each of the patients. High through-put single cell-RNA-sequencing will be performed on each sample.

AIM 2. This will be accomplished through an in vivo endometriosis mouse model utilizing IL-4 receptor α -chain-deficient mice which are unable to produce M2 macrophages. Lesions and control tissues will be identified and extracted and for histological analysis. Peritoneal fluid and blood from the animals will be collected for analysis of innate immunity pathways.

Expected Results: AIM 1. We anticipate that various phenotypic lesions will be comprised of similar cell types, but with unique transcriptomic profiles distinct to phenotype. We predict the M1 to M2 phenotypic transition is required for the maturation and stabilization of ectopic lesions. We expect variation in the relative abundance and transcriptomic activity of M1 and M2 macrophages across phenotypically distinct lesions.

AIM 2. Given the hypothesized role of M2 macrophages to endometriotic lesion

formation, we anticipate that abrogation of this immune pathway will be sufficient to prevent lesion formation.

Conclusions: This study will provide an unprecedented high-resolution characterization of the role of the macrophages in endometriosis by isolation of single cells and exploration of individual transcriptomic profile. This will improve our understanding of endometriosis etiology, expression, and differentiation.

Funding: RPC #347

Faculty Mentor(s): Cara King, DO and Ofer Reizes, PhD



PGY2 Obstetrics & Gynecology Residents

Poster Presentations

Risk factors for bacteriuria in urogynecologic patients undergoing preoperative urodynamic testing

Faculty Mentor(s): Cecile Ferrando, MD, MPH



Rachael Baird, MD, MS

Prognostic significance of groin metastases at time of diagnosis in patients with high grade serous ovarian carcinoma

Faculty Mentor(s): Robert DeBernardo, MD and Laura Chambers, DO



Julia Chalif, MD

A retrospective look at pre-eclampsia within the Cleveland Clinic Health System: Are there opportunities for early diagnosis and intervention in African-American women?

Faculty Mentor(s): Oluwatosin Goje, MD



Imani Chatman, MD

**Evaluating patient satisfaction with 2-week post-operative virtual visits compared to in-office visits:
A randomized control trial**

Faculty Mentor(s): Rosanne Kho, MD



Catherine Keller, MD

Spontaneous abortion rate during COVID-19 pandemic

Faculty Mentor(s): Jonathan Seibert, MD



Kaia Schwartz, MD

**Contraceptive counseling through telemedicine:
Patient characteristics and the quality of counseling**

Faculty Mentor(s): Ashley Brant, DO, MPH



Rachel Shin, MD, MPH

The effect of estrogen on spermatogenesis in transgender women

Faculty Mentor(s): Cecile Ferrando, MD, MPH



Annika Sinha, MD

Sarcopenia is associated with higher surgical complexity in patients undergoing interval cytoreduction for advanced epithelial ovarian carcinoma

Faculty Mentor(s): Mariam AlHilli, MD



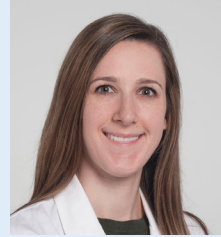
Nicole Wood, MD



PGY3 Obstetrics & Gynecology Residents

Oral Presentations

Reported case numbers and variability in delivery route and volume by obstetrician-gynecologist residents from 2003 to 2019



Carrie Bennett, MD

Objective: The objective of this study was to analyze trends in number and route of obstetric deliveries performed by graduating OB/GYN residents in the United States as logged within the ACGME database.)

Methods: The ACGME case log data were examined for OB/GYN residents graduating between 2003 and 2019. Delivery case volume numbers for spontaneous vaginal delivery (SVD), cesarean delivery (CD), forceps-assisted vaginal delivery (FAVD), and vacuum-assisted vaginal delivery (VAVD) were extracted and analyzed over time using linear regression. To compare variability in logged cases, residents at the 70th percentile for number of cases logged were compared to residents at the 30th percentile for number of cases logged.

Results: Obstetric delivery data for 20,268 OB/GYN residents was collected from 2003-2019. Over this period, the mean SVD numbers significantly decreased over time by 20% from 320.8 ± 138.7 to 256.1 ± 75.6 (slope -2.6, $p < 0.001$), however, no significant difference was noted in reported CD cases, with an 8% increase from 191.8 ± 80.1 to 206.8 ± 69.7 (slope 0.136, $p = 0.873$), per graduating resident. Notably, the mean reported FAVD cases decreased by 75% from 23.8 ± 21.9 to 6 ± 6.8 per graduating resident (slope -0.851, $p < 0.001$). Similarly, the mean VAVD logs decreased by 37% from 23.8 ± 17.1 to 15 ± 9.5 (slope -0.542, $p < 0.001$). The ratio of reported resident case logs comparing volume at the 70th percentile compared to volume at the 30th percentile demonstrated a significant decrease over time for SVD (slope -0.015, $p < 0.001$), CD (slope -0.015, $p < 0.001$) and VAVD (slope -0.033, $p < .001$), but was significantly increased for FAVD (slope .07, $p = .0065$).

Conclusions: In this study of the ACGME reported case logs, we identify that the reported number of obstetric deliveries performed by OB/GYN residents in the United States is changing, with a significant decline appreciated from 2003-2019 in logged numbers of SVD, VAVD and FAVD, without a difference in reported CD cases per graduating resident. Further, substantial variation is seen among resident volume nationwide, with the difference in high and low volume resident FAVD experience increasing over time. Awareness of these data should inform ACGME and

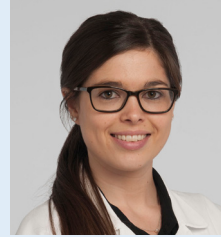
educators about reasonable targets, increased need for simulation, and new ways to teach all modes of deliveries effectively in all residency programs.

Funding source: None

Faculty Mentor(s): Edward Chien, MD, MBA and Laura Chambers, DO, MS

Discussant: Alyssa Herrmann, MD

Anastomotic leak following interval debulking surgery with or without hyperthermic intraperitoneal chemotherapy in women with advanced epithelial ovarian cancer



Morgan Gruner, MD

Objective: To evaluate the incidence and associated risk factors for anastomotic failure following interval debulking surgery with or without hyperthermic intraperitoneal chemotherapy (HIPEC) in women with advanced ovarian cancer.

Methods: We performed a retrospective cohort study in women with stage III/IV high-grade ovarian cancer treated with neoadjuvant chemotherapy followed by interval debulking surgery with colorectal resection and HIPEC from 2017-2020. These patients were compared to a historical control cohort who underwent interval debulking surgery with colorectal resection without HIPEC from 2009-2016. Data was collected for demographics, surgical variables, and perioperative outcomes. The univariate analysis compared progression-free survival and overall survival.

Results: In total, 61 women were identified; 21 (34.4%) underwent interval debulking surgery with HIPEC from 2017-2020, and 40 underwent interval debulking surgery alone from 2009-2016. The mean age at surgery was 63.1 ± 9.2 and 66.3 ± 9.5 years in the interval debulking surgery with and without HIPEC groups, respectively ($p=0.21$). The cumulative incidence of anastomotic leak rate was 8.2% ($n=5$). There was no significant difference in anastomotic leak rate for women who underwent interval debulking surgery with HIPEC (9.5%, $n=2$) versus without HIPEC (7.5%, $n=3$) ($p=0.99$). While there was no difference in progression-free survival (12.2 vs. 13.3 months, log-rank $p=0.31$), overall survival (9.4 vs. 36.8 months, log-rank $p=0.015$) was significantly decreased following postoperative anastomotic leak.

Conclusions: In this retrospective series of women with advanced ovarian cancer, HIPEC was not associated with increased risk for anastomotic leak at the time of interval debulking surgery with colorectal resection and reanastomosis. While

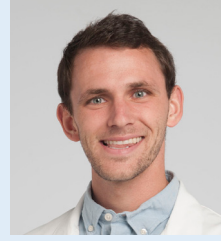
further study is needed, the use of HIPEC alone should not preclude colorectal resection or dictate practices for colonic diversion in women undergoing interval debulking.

Funding source: None

Faculty Mentor(s): Chad Michener, MD

Discussant: Jessica Son, MD

Longitudinal change in mammographic density with hormonal contraceptive use



Jonathan Hunt, MD, MBA

Objective: To describe the longitudinal relationship between mammographic density and hormonal contraceptive (HC) use in reproductive-aged women.

Methods: Patients 35-50 years old who underwent 5+ screening mammograms within a 7.5-year period between 2004-2019 were identified. Demographic, mammographic, and HC use data were collected for a randomly selected cohort. Patients were categorized into four cohorts based on HC exposure before the baseline mammogram: 1) never exposed, 2) always exposed, 3) interval HC start, 4) interval HC stop. Primary outcome was BI-RADS breast density category (BDC) change between initial and final mammograms. Secondary outcome was time to BDC change after HC start or stop.

Results: Of the 723 patients included, those with no HC exposure were more likely to experience a BDC increase compared to those with continuous HC exposure (15.9% vs 7.6%, $P=.04$), but there was no significant difference in the final BDC between groups. Those who started HC during the screening interval had a shorter median time to first inter-screening BDC increase compared to nonusers (13.4 vs 25.3 months, $P=.046$), but were not more likely to increase BDC from initial to final mammogram. Those who discontinued HC during the screening interval were not more likely to decrease BDC from initial to final mammogram when compared to those with continuous HC exposure (14.0% vs 17.4%, $P=.60$).

Conclusions: HC use may be associated with a transient increase in mammographic BDC, but appears to return to baseline with long-term follow-up with or without HC discontinuation.

Funding source: None

Faculty Mentor(s): Pelin Batur, MD

Discussant: Anna Chichura, MD

How do endometrial biopsy results correlate with hysteroscopic findings in women presenting with abnormal and postmenopausal uterine bleeding?



Kate Lintel, MD

Objective: The primary objective of this study was to compare endometrial biopsy pathology results with subsequent operative hysteroscopy pathology in women undergoing evaluation for abnormal and postmenopausal uterine bleeding. The secondary objectives were to describe the length of time from initial endometrial biopsy to hysteroscopic evaluation and to describe intermediate treatments utilized before hysteroscopy.

Methods: This study is a retrospective cohort study of women presenting for evaluation of abnormal and postmenopausal uterine bleeding between January 2015 and December 2019. Patients were identified by their Current Procedural Terminology (CPT) codes for endometrial biopsy and surgical hysteroscopy. Once patients were identified, the electronic medical record was queried and data were collected for patients who met our inclusion criteria. Women were included if they underwent endometrial biopsy followed by operative hysteroscopy within 24 months for abnormal uterine or postmenopausal bleeding. Women were excluded if they underwent more than one endometrial biopsy or hysteroscopy up to five years preceding or any time following the procedures, or who underwent endometrial biopsy followed by hysteroscopy after more than 24 months. All procedures were performed by physicians within the Women's Health Institute throughout the Cleveland Clinic hospital system.

Results: We identified 2223 records based on CPT codes of which 689 met criteria for inclusion. The mean age of the cohort was 49 (\pm 10), 30.1% (206) were postmenopausal and the median duration of abnormal or postmenopausal bleeding leading up to time of presentation was of 3.5 (1.5-9) months. Of the patients who had hysteroscopic pathology demonstrating endometrial polyp, 30.6% (81) had an endometrial polyp detected on endometrial biopsy pathology; and, of the patients who did not have endometrial polyp on hysteroscopic pathology, 9.9%

(42) had an endometrial polyp on endometrial biopsy pathology. Of the patients who had hyperplasia without atypia on hysteroscopy, 28.6% (4) were detected on endometrial biopsy, and of the patients who had hyperplasia with atypia on hysteroscopy, 5.9% (1) was detected on endometrial biopsy. There were 12 cases of confirmed or suspected malignancy on hysteroscopic pathology, of which 8.3% (1) was detected on endometrial biopsy. Of the patients who had insufficient specimen from endometrial biopsy, 21% (15) had insufficient specimen from hysteroscopy. The median number of days from endometrial biopsy to hysteroscopy was 48 (25-95) days. There was no association between number of days between endometrial biopsy and hysteroscopy and hysteroscopic pathology demonstrating hyperplasia or malignancy. Several interval non-surgical treatments were used between the time of the endometrial biopsy and operative hysteroscopy; the most common were: daily oral hormonal therapy (11.3% n=78), high dose oral hormonal therapy (5.7% n=39) and tranexamic acid (1.5% n=10). The overall adverse event rate for hysteroscopy was 1.3% (n=9), with the most common being uterine perforation (0.6%, n = 4) and unexpected bleeding (0.4%, n=3).

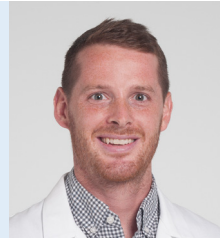
Conclusions: In this study of women with abnormal and/or postmenopausal uterine bleeding undergoing evaluation, the majority of endometrial polyps found on hysteroscopic evaluation were not detected on office endometrial biopsy. Furthermore, several cases of endometrial hyperplasia and malignancy were undetected by endometrial biopsy. Hysteroscopy is a very low risk surgery that can be scheduled within a reasonable amount of time following endometrial biopsy to both evaluate and treat uterine bleeding.

Funding source: None

Faculty Mentor(s): Linda Bradley, MD and Cecile Ferrando, MD, MPH

Discussant: Anna Melanie Katz, MD

Success rate of bilateral oophorectomy at the time of vaginal hysterectomy for pelvic organ prolapse – Intention Matters



Cory Messingschlager, MD

Objective: To determine the incidence of successful bilateral salpingo-oophorectomy (BSO) at the time of vaginal hysterectomy in patients with uterovaginal prolapse, and to evaluate factors associated with successful BSO, including the sur-

geons' determination to perform the procedure.

Methods: This is a retrospective chart review of all women who underwent vaginal hysterectomy for uterovaginal prolapse and consented for concurrent BSO “if possible” and “including extraordinary measures” at a tertiary medical center between January 2014 and December 2019.

Results: A total of 454 patients underwent vaginal hysterectomy for uterovaginal prolapse and were consented for BSO during the study period. Of these, 420 patients (92.5%) were consented for “BSO if possible” and 34 patients (7.5%) were consented for “BSO including extraordinary measures”. “Success” was defined as ability to perform BSO vaginally. The success rate of BSO in all patients was 58.9% (n=267). Of the patients consented for extraordinary measures, the success rate was 91.2% (n=31). The 3 cases where vaginal BSO could not be performed vaginally were successfully completed laparoscopically. Patients who were in the “BSO if possible” group had a success rate of 55.5% (n=233). Patients who had a successful BSO were more likely to have had prior vaginal deliveries (97.8% vs 96.3 %, p=.04), as well as a concurrent posterior repair at the time of hysterectomy (71.9% vs 59.9%, p=.007). Once confounders were controlled for, concurrent posterior repair remained associated with success (adjOR 1.78 [95% CI=1.19-2.65]). Successful BSO was also associated with a longer operative time compared to unsuccessful cases (151 min vs 134 min, p<.001). Patients in the successful BSO group were more likely than the unsuccessful group to have the following indications for BSO: a family history ovarian cancer, personal breast cancer history and/or patient request for definitive removal.

Conclusions: When the pre-operative intention is to perform a BSO with extraordinary measures, the success rate of BSO at the time of vaginal hysterectomy for uterovaginal prolapse is high, compared to when BSO is simply an opportunistic procedure. This suggests that the success rate of BSO at the time of pelvic organ prolapse surgery is closely linked to the surgeon's determination to complete this procedure vaginally.

Funding source: None

Faculty Mentor(s): Cecile Ferrando, MD, MPH and Olivia Chang, MD, MPH

Discussant: Lia Miceli, MD

Assessing feasibility and perioperative outcomes with minimally invasive surgery compared with laparotomy for interval debulking surgery with hyperthermic intraperitoneal chemotherapy for advanced epithelial ovarian cancer



Molly Morton, MD

Objective: To determine perioperative outcomes in women with epithelial ovarian cancer (EOC) undergoing interval cytoreductive surgery with hyperthermic intraperitoneal chemotherapy (HIPEC) via minimally invasive interval debulking surgery (MIIDS) or laparotomy (LAP).

Methods: A single institution cohort study was performed of women with high-grade stage III or IV epithelial ovarian, fallopian tube, and primary peritoneal carcinomas treated at Cleveland Clinic from 2017-2019 contained with a prospectively maintained HIPEC registry. Patient demographics, surgical factors, and postoperative outcomes were collected by retrospective chart review. Statistical analysis performed including continuous measures summarized using means and quartiles and compared using Wilcoxon rank sum tests. Categorical factors were summarized using frequencies and percentages and compared using Fisher's exact tests. Log rank test was performed to determine recurrence free survival.

Results: 50 women identified; ten (20.0%) underwent MIS + HIPEC and 40 (80.0%) LAP + HIPEC. Median age of patients in the MIS group was 71.1 vs. 64.2 years in LAP ($p=0.031$), otherwise characteristics were similar between groups. All patients who underwent MIS and LAP had optimal cytoreduction with no difference in rate of R0 resection (70.0% vs. 77.5%; $p=0.39$). There was no significant difference in ICU admissions, estimated blood loss, operative time, or use of vasopressors. There was no difference in 30 day adverse major and minor events for MIS vs. LAP, but length of stay was decreased for those who underwent MIS (3 vs. 4 days, $p=0.016$). Time to initiation of chemotherapy following surgery was not significantly different between groups (26.2 days vs 32.0 days, $p=0.090$). Interim analysis was performed for RFS at a median follow up duration of 15.1 months, with no difference in recurrence free survival (median 15.0 vs 17.2 months log-rank, $p=0.30$) for MIS vs. LAP.

Conclusions: Our data suggest that HIPEC with MIIDS is safe, effective and has a

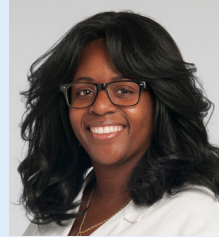
comparable incidence of adverse perioperative outcomes to LAP. Rate of achieving RO cytoreduction was equivalent for both. MIS with HIPEC is associated shorter hospitalization and decreased time between chemotherapy treatments compared to LAP. An MIS approach should not prevent surgeons from utilizing HIPEC where indicated for management of advanced EOC.

Funding source: None

Faculty Mentor(s): Chad Michener, MD

Discussant: Anna Chichura, MD

Prenatal Hemoglobinopathy Screening amongst Nulliparous Black Women in a Resident Clinic Population



Rebecca Omosigho, MD

Objective: To investigate if there an association between post-graduate year status and probability of receiving hemoglobinopathy evaluation at the time of initial prenatal visit in a resident clinic population and the percentage of patients that receive hemoglobinopathy screen at initial prenatal visit (IPV).

Methods: This is a retrospective analysis using the electronic medical recorded of patients at Cleveland Clinic Foundation Westown Physician Center. Nulliparous women that were seen for initial prenatal visit at Westown Physician Center with a resident provider from January 1, 2016 to January 30, 2020 we included. Statistical analysis is reported in medians, quartiles, frequencies, percentages and compared using Wilcoxon rank sum tests. Categorical factors were summarized using frequencies and percentages and were compared using Pearson's chi-square tests or Fisher's exact tests.

Results: When comparing patients without hemoglobinopathy screening ordered at IPV versus not ordered, there is no significant difference in age, gravity and parity. Median age of patient without screening ordered patients was 22.0 (IQR: 19.0-24.0) while ordered patients had median age 21.5 (IQR: 18.0-26.0). Of the 52 women included in the study 14 (26%) of patients had hemoglobin electrophoresis ordered at the time of initial prenatal visit. No patients were identified as having sickle cell trait. There was no significant association between screening ordered and PGY status ($p=0.76$).

Conclusions: Prenatal genetic screening is an important to offer all women especially in populations with high carrier frequencies. In our resident population only one-fourth of women were receiving appropriate screening at the time of IPV. This area deserves continued research at our institution and possible adjustment to EMR for quality improvement in conjunction with resident education.

Funding source: None

Faculty Mentor(s): Stacie Jhaveri, MD

Discussant: Lia Miceli, MD



2019–2020

Resident, Fellow and Faculty Publications

Robotic treatment of bowel endometriosis. Hur C, Falcone T. *Best Pract Res Clin Obstet Gynaecol*. 2020 Jun 12;S1521-6934(20)30089-4. doi: 10.1016/j.bpobgyn.2020.05.012. Online ahead of print. PMID: 32684433 Review.

Genetic Counseling and Germline Testing in the Era of Tumor Sequencing: A Cohort Study. Klek S, Heald B, Milinovich A, Ni Y, Abraham J, Mahdi H, Estfan B, Khorana AA, Bolwell BJ, Grivas P, Sohal DPS, Funchain P. *JNCI Cancer Spectr*. 2020 Mar 5;4(3):pkaa018. doi: 10.1093/jncics/pkaa018. eCollection 2020 Jun. PMID: 32596633 Free PMC article.

Effect of platinum sensitivity on the efficacy of hyperthermic intraperitoneal chemotherapy (HIPEC) in recurrent epithelial ovarian cancer. Costales AB, Chambers L, Chichura A, Rose PG, Mahdi H, Michener CM, Yao M, Debernardo R. *J Gynecol Obstet Hum Reprod*. 2020 Jun 23;101844. doi: 10.1016/j.jogoh.2020.101844. Online ahead of print. PMID: 32590110

Hysterectomy Versus Hysteropexy at the Time of Native Tissue Pelvic Organ Prolapse Repair: A Cost-Effectiveness Analysis. Chang OH, Shepherd JP, Ridgeway BM, Cadish LA. *Female Pelvic Med Reconstr Surg*. 2020 Jun 22. doi: 10.1097/SPV.0000000000000902. Online ahead of print. PMID: 32576734

Fibroblast Growth Factor 21 and Metabolic Dysfunction in Women with a Prior Glucose-Intolerant Pregnancy. Durnwald C, Mele L, Landon MB, Varner MW, Casey BM, Reddy UM, Wapner RJ, Rouse DJ, Tita ATN, Thorp JM Jr, Chien EK, Saade GR, Peaceman AM, Blackwell SC; Eunice Kennedy Shriver National Institute of Child Health Human Development (NICHD) Maternal Fetal Medicine Units (MFMU) Network. *Am J Perinatol*. 2020 Jun 23. doi: 10.1055/s-0040-1712966. Online ahead of print. PMID: 32575141

Risk of urinary tract infection following vaginal delivery: a comparison between intermittent and indwelling bladder catheterization. Akusoba C, Hogue O, Radeva M, Goje O. *J Matern Fetal Neonatal Med*. 2020 Jun 21;1-8. doi: 10.1080/14767058.2020.1777968. Online ahead of print. PMID: 32567434

The Women's Preventive Services Initiative Well-Woman Chart: A Helpful Tool for the Practice of Internal Medicine. Batur P, Phipps M, Gaseem A. *Am J Med*. 2020 Jun 18;S0002-9343(20)30501-5. doi: 10.1016/j.amjmed.2020.05.011. Online ahead of print. PMID: 32565259 Review.

Pregnant Women in Trials of Covid-19: A Critical Time to Consider Ethical Frameworks of Inclusion in Clinical Trials. Farrell R, Michie M, Pope R. *Ethics Hum Res*. 2020 Jul;42(4):17-23. doi: 10.1002/eahr.500060. Epub 2020 Jun 20. PMID: 32562594 Free PMC article.

Evaluation of the ACS NSQIP surgical risk calculator in patients undergoing pelvic organ prolapse surgery. Wherley SD, Chapman GC, Mahajan ST, Hijaz AK, Slopnick EA, Roberts K, El-Nashar S. *Int Urogynecol J*. 2020 Jun 16. doi: 10.1007/s00192-020-04364-8. Online ahead of print. PMID: 32556848

Hysterectomy as a treatment of endometriosis-associated chronic pelvic pain. Falcone T. *BJOG*. 2020 Jun 10. doi: 10.1111/1471-0528.16355. Online ahead of print. PMID: 32521112 No abstract available.

Apical suspension is underutilized for repair of stage IV pelvic organ prolapse: an analysis of national practice patterns in the United States. Slopnick EA, Chapman GC, Roberts K, Sheyn DD, El-Nashar S, Mahajan ST. *Int Urogynecol J*. 2020 Jun 8. doi: 10.1007/s00192-020-04342-0. Online ahead of print. PMID: 32507910

Optimal timing of a second postoperative voiding trial in women with incomplete bladder emptying after vaginal reconstructive surgery: a randomized trial. Schachar JS, Ossin D, Plair AR, Hurtado EA, Parker-Autry C, Badlani G, Davila GW, Matthews CA. *Am J Obstet Gynecol*. 2020 Aug;223(2):260.e1-260.e9. doi: 10.1016/j.ajog.2020.06.001. Epub 2020 Jun 3. PMID: 32502559

Efficacy and toxicity of prolonged pegylated liposomal doxorubicin use in women with recurrent epithelial ovarian cancer. Chambers LM, Pendlebury A, Rose PG, Yao M, DeBernardo R. *Gynecol Oncol*. 2020 Aug;158(2):309-315. doi: 10.1016/j.ygyno.2020.04.708. Epub 2020 Jun 1. PMID: 32499072

Risk of Iodine Deficiency in Extremely Low Gestational Age Newborns on Parenteral Nutrition. Kanike N, Groh-Wargo S, Thomas M, Chien EK, Mhanna M, Kumar D, Worley S, Singh RJ, Shekhawat PS. *Nutrients*. 2020 Jun 1;12(6):1636. doi: 10.3390/nu12061636. PMID: 32492945 Free PMC article.

Elagolix Treatment for Up to 12 Months in Women With Heavy Menstrual Bleeding and Uterine Leiomyomas. Simon JA, Al-Hendy A, Archer DF, Barnhart KT, Bradley LD, Carr BR, Dayspring T, Feinberg EC, Gillispie V, Hurtado S, Kim J, Liu R, Owens CD, Muneyyirci-Delale O, Wang A, Watts NB, Schlaff WD. *Obstet Gynecol*. 2020 Jun;135(6):1313-1326. doi: 10.1097/AOG.0000000000003869. PMID: 32459423 Free PMC article.

Systematic interpretation and structured reporting for pelvic magnetic resonance imaging studies in patients with endometriosis: value added for improved patient care. Feldman MK, VanBuren WM, Barnard H, Taffel MT, Kho RM. *Abdom Radiol (NY)*. 2020 Jun;45(6):1608-1622. doi: 10.1007/s00261-019-02182-1. PMID: 31446452 Review.

Apical Suspension Utilization at the Time of Vaginal Hysterectomy for Pelvic Organ Prolapse Varies With Surgeon Specialty. Sheyn D, El-Nashar S, Mahajan ST, Mangel JM, Chapman GC, Hijaz AK. *Female Pelvic Med Reconstr Surg*. 2020 Jun;26(6):370-375. doi: 10.1097/SPV.0000000000000706. PMID: 30807336

National Analysis of Perioperative Morbidity of Vaginal Versus Laparoscopic Hysterectomy at the Time of Uterosacral Ligament Suspension. Chapman GC, Slopnick EA, Roberts K, Sheyn D, Wherley S, Mahajan ST, Pollard RR. *J Minim Invasive Gynecol*. 2020 May 22:S1553-4650(20)30247-8. doi: 10.1016/j.jmig.2020.05.015. Online ahead of print. PMID: 32450226

Surgical and Clinical Reactivation for Elective Procedures during the COVID-19 Era: A Global Perspective. Paraiso MFR, Brown J, Abrão MS, Dionisi H, Rosenfield RB, Lee TTM, Lemos N. *J Minim Invasive Gynecol*. 2020 Jul-Aug;27(5):1188-1195. doi: 10.1016/j.jmig.2020.05.012. Epub 2020 May 22. PMID: 32446972 Free PMC article. No abstract available.

Making the most of the first prenatal visit: The challenge of expanding prenatal genetic testing options and limited clinical encounter time. Farrell RM, Pierce M, Collart C, Edmonds BT, Chien E, Coleridge M, Rose SL, Perni U, Frankel R. *Prenat Diagn*. 2020 May 22. doi: 10.1002/pd.5752. Online ahead of print. PMID: 32441820

Adverse events associated with gender affirming vaginoplasty surgery. Ferrando CA. *Am J Obstet Gynecol*. 2020 Aug;223(2):267.e1-267.e6. doi: 10.1016/j.ajog.2020.05.033. Epub 2020 May 21. PMID: 32446999

Current Trends in Compensation for Fellowship in Minimally Invasive Gynecologic Surgery Graduates: A 6-Year Follow-Up. Shiber LJ, Yao M, Adedayo P, Dassel M. *J Minim Invasive Gynecol*. 2020 May 18:S1553-4650(20)30239-9. doi: 10.1016/j.jmig.2020.05.008. Online ahead of print. PMID: 32439413

JMIG during the COVID-19 Crisis: Drawing on our International Expertise. Frishman GN, Falcone T. *J Minim Invasive Gynecol*. 2020 Jul-Aug;27(5):986-987. doi: 10.1016/j.jmig.2020.05.005. Epub 2020 May 18. PMID: 32425716 Free PMC article. No abstract available.

Use of prophylactic closed incision negative pressure therapy is associated with reduced surgical site infections in gynecologic oncology patients undergoing laparotomy. Chambers LM, Morton M, Lampert E, Yao M, Debernardo R, Rose PG, Vargas R. *Am J Obstet Gynecol*. 2020 May 15:S0002-9378(20)30536-6. doi: 10.1016/j.ajog.2020.05.011. Online ahead of print. PMID: 32417358

Using Video Modules and Simulation Learning to Improve IUD Counseling Among Internal Medicine Residents—a Randomized Controlled Educational Trial. Hirsch H, Batur P, Spencer AL, McNamara M. *J Gen Intern Med*. 2020 May 11. doi: 10.1007/s11606-020-05832-z. Online ahead of print. PMID: 32394139 No abstract available.

Guidelines for standardized nomenclature and reporting in uterus transplantation: An opinion from the United States Uterus Transplant Consortium. Johannesson L, Testa G, Flyckt R, Farrell R, Quintini C, Wall A, O'Neill K, Tzakis A, Richards EG, Gordon SM, Porrett PM. *Am J Transplant*. 2020 May 7. doi: 10.1111/ajt.15973. Online ahead of print. PMID: 32379930

Cervical Cancer Screening with Human Papillomavirus Self-Sampling Among Transgender Men in El Salvador. Maza M, Meléndez M, Herrera A, Hernández X, Rodríguez B, Soler M, Alfaro K, Masch R, Conzuelo-Rodríguez G, Obedin-Maliver J, Cremer M. *LGBT Health*. 2020 May/Jun;7(4):174-181. doi: 10.1089/lgbt.2019.0202. Epub 2020 May 14. PMID: 32407149 Free PMC article.

ACR Appropriateness Criteria® Female Infertility. Expert Panel on Women's Imaging, Wall DJ, Reinhold C, Akin EA, Ascher SM, Brook OR, Dassel M, Henrichsen TL, Learman LA, Maturen KE, Patlas MN, Robbins JB, Sadowski EA, Saphier C, Uyeda JW, Glanc P. *J Am Coll Radiol*. 2020 May;17(5S):S113-S124. doi: 10.1016/j.jacr.2020.01.018. PMID: 32370955

Use of Transabdominal Ultrasound for the detection of intra-peritoneal tumor engraftment and growth in mouse xenografts of epithelial ovarian cancer. Chambers LM, Esakov E,

Braley C, AlHilli M, Michener C, Reizes O. *PLoS One*. 2020 Apr 29;15(4):e0228511. doi: 10.1371/journal.pone.0228511. eCollection 2020. PMID: 32348309 Free PMC article.

COVID-19 Pandemic. Impact on Hysteroscopic Procedures: A Consensus Statement from the Global Congress of Hysteroscopy Scientific Committee. Carugno J, Di Spiezio Sardo A, Alonso L, Haimovich S, Campo R, De Angelis C, Bradley L, Bettocchi S, Arias A, Isaacson K, Okohue J, Farrugia M, Kumar A, Xue X, Cavalcanti L, Laganà AS, Grimbizis G. *J Minim Invasive Gynecol*. 2020 Jul-Aug;27(5):988-992. doi: 10.1016/j.jmig.2020.04.023. Epub 2020 Apr 24. PMID: 32339754 Free PMC article. No abstract available.

Maternal and Neonatal Outcomes Associated with Amniotomy among Nulliparous Women Undergoing Labor Induction at Term. Battarbee AN, Sandoval G, Grobman WA, Reddy UM, Tita ATN, Silver RM, El-Sayed YY, Wapner RJ, Rouse DJ, Saade GR, Chauhan SP, Iams JD, Chien EK, Casey BM, Gibbs RS, Srinivas SK, Swamy GK, Simhan HN; Eunice Kennedy Shriver National Institute of Child Health Human Development Maternal-Fetal Medicine Units (MFMU) Network. *Am J Perinatol*. 2020 Apr 16. doi: 10.1055/s-0040-1709464. Online ahead of print. PMID: 32299106

Predictors for Pelvic Organ Prolapse Recurrence After Sacrocolpopexy: A Matched Case-Control Study. Chang OH, Davidson ERW, Thomas TN, Paraiso MFR, Ferrando CA. *Female Pelvic Med Reconstr Surg*. 2020 Apr 9. doi: 10.1097/SPV.0000000000000874. Online ahead of print. PMID: 32282526

Formation of Vaginal Calculus over Exposed Mesh. Ossin D, Hurtado E. *J Minim Invasive Gynecol*. 2020 Apr 8:S1553-4650(20)30167-9. doi: 10.1016/j.jmig.2020.02.020. Online ahead of print. PMID: 32278066 No abstract available.

Long-term pelvic organ prolapse recurrence and mesh exposure following sacrocolpopexy. Thomas TN, Davidson ERW, Lampert EJ, Paraiso MFR, Ferrando CA. *Int Urogynecol J*. 2020 Sep;31(9):1763-1770. doi: 10.1007/s00192-020-04291-8. Epub 2020 Apr 6. PMID: 32253489

Clinical management of endometriosis. Luna Russo MA, Chalif JN, Falcone T. *Minerva Ginecol*. 2020 Apr;72(2):106-118. doi: 10.23736/S0026-4784.20.04544-X. PMID: 32403909

Reporting and Assessing the Quality of Diagnostic Accuracy Studies for Cervical Cancer Screening and Management. Clarke MA, Darragh TM, Nelson E, Unger ER, Zuna R, Cremer M, Stockdale CK, Einstein MH, Wentzensen N. *J Low Genit Tract Dis*. 2020 Apr;24(2):157-166. doi: 10.1097/LGT.0000000000000527. PMID: 32243311 Free PMC article.

A Systematic Review of Tests for Postcolposcopy and Posttreatment Surveillance. Clarke MA, Unger ER, Zuna R, Nelson E, Darragh TM, Cremer M, Stockdale CK, Einstein MH, Wentzensen N. *J Low Genit Tract Dis*. 2020 Apr;24(2):148-156. doi: 10.1097/LGT.0000000000000526. PMID: 32243310 Free PMC article.

Hepatitis C Virus Antibody Screening in a Cohort of Pregnant Women: Identifying Seroprevalence and Risk Factors. Prasad M, Saade GR, Sandoval G, Hughes BL, Reddy

UM, Mele L, Salazar A, Varner MW, Gyamfi-Bannerman C, Thorp JM Jr, Tita ATN, Swamy GK, Chien EK, Casey BM, Peaceman AM, El-Sayed YY, Iams JD, Gibbs RS, Sibai B, Wiese N, Kamili S, Macones GA; Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) Maternal-Fetal Medicine Units (MFMU) Network. *Obstet Gynecol.* 2020 Apr;135(4):778-788. doi: 10.1097/AOG.0000000000003754. PMID: 32168224

Endometrial cancer in young women: prognostic factors and treatment outcomes in women aged ≤ 40 years. Son J, Carr C, Yao M, Radeva M, Priyadarshini A, Marquard J, Michener CM, AlHilli M. *Int J Gynecol Cancer.* 2020 May;30(5):631-639. doi: 10.1136/ijgc-2019-001105. Epub 2020 Mar 25. PMID: 32213530

A randomized controlled noninferiority trial of reduced vs routine opioid prescription after prolapse repair. Davidson ERW, Paraiso MFR, Walters MD, Propst K, Ridgeway B, Yao M, Ferrando CA. *Am J Obstet Gynecol.* 2020 Mar 19:S0002-9378(20)30339-2. doi: 10.1016/j.ajog.2020.03.017. Online ahead of print. PMID: 32199926

Impact of vaginal brachytherapy on survival in stage I endometrioid endometrial carcinoma. AlHilli M, Amarnath S, Elson P, Rybicki L, Dowdy S. *Int J Gynecol Cancer.* 2020 Jun;30(6):789-796. doi: 10.1136/ijgc-2019-001182. Epub 2020 Mar 16. PMID: 32184268

Extraperitoneal Uterosacral Ligament Hysteropexy: A Novel Treatment for Apical Compartment Prolapse. Ossin D, Ramirez-Caban L, Hurtado E. *Urology.* 2020 Jun;140:181-182. doi: 10.1016/j.urology.2020.02.026. Epub 2020 Mar 13. PMID: 32173380

The role of pharmacotherapy in the treatment of endometriosis across the lifespan. Schwartz K, Llarena NC, Rehmer JM, Richards EG, Falcone T. *Expert Opin Pharmacother.* 2020 Jun;21(8):893-903. doi: 10.1080/14656566.2020.1738386. Epub 2020 Mar 12. PMID: 32164462 Review.

Ureter dissection at pelvic surgery for endometriosis. Falcone T. *BJOG.* 2020 Jun;127(7):867. doi: 10.1111/1471-0528.16184. Epub 2020 Mar 12. PMID: 32103621 No abstract available.

RNA Immune Signatures from Pan-Cancer Analysis Are Prognostic for High-Grade Serous Ovarian Cancer and Other Female Cancers. Jones WD, Michener CM, Biscotti C, Braicu I, Sehouli J, Ganapathi MK, Ganapathi RN. *Cancers (Basel).* 2020 Mar 7;12(3):620. doi: 10.3390/cancers12030620. PMID: 32156016 Free PMC article.

First birth from a deceased donor uterus in the United States: from severe graft rejection to successful cesarean delivery. Flyckt R, Falcone T, Quintini C, Perni U, Eghtesad B, Richards EG, Farrell RM, Hashimoto K, Miller C, Ricci S, Ferrando CA, D'Amico G, Maikhori S, Priebe D, Chiesa-Vottero A, Heerema-McKenney A, Mawhorter S, Feldman MK, Tzakis A. *Am J Obstet Gynecol.* 2020 Aug;223(2):143-151. doi: 10.1016/j.ajog.2020.03.001. Epub 2020 Mar 7. PMID: 32151611

Does concurrent posterior repair for an asymptomatic rectocele reduce the risk of surgical failure in patients undergoing sacrocolpopexy? Chang OH, Davidson ERW, Thomas TN,

Paraiso MFR, Ferrando CA. *Int Urogynecol J*. 2020 Mar 7. doi: 10.1007/s00192-020-04268-7. Online ahead of print. PMID: 32146522

Maternal Sense of Control During Childbirth and Infant Feeding Method. Dude A, Fette LM, Reddy UM, Tita ATN, Silver RM, El-Sayed YY, Wapner RJ, Rouse DJ, Saade GR, Thorp JM Jr, Chauhan SP, Iams JD, Chien EK, Casey BM, Srinivas SK, Swamy GK, Simhan HN; Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) Maternal–Fetal Medicine Units (MFMU) Network. *Obstet Gynecol*. 2020 Mar;135(3):583-590. doi: 10.1097/AOG.0000000000003697. PMID: 32028504

Perioperative Safety of Surgery for Pelvic Organ Prolapse in Elderly and Frail Patients. Chapman GC, Sheyn D, Slopnick EA, Hijaz AK, Mahajan ST, Mangel J, El-Nashar SA. *Obstet Gynecol*. 2020 Mar;135(3):599-608. doi: 10.1097/AOG.0000000000003682. PMID: 32028502

Does hysterectomy result in better quality of life than myomectomy? Llarena N, Falcone T. *Fertil Steril*. 2020 Mar;113(3):549-550. doi: 10.1016/j.fertnstert.2019.11.020. Epub 2020 Feb 25. PMID: 32111476 No abstract available.

Vaginal estrogen use for genitourinary symptoms in women with a history of uterine, cervical, or ovarian carcinoma. Chambers LM, Herrmann A, Michener CM, Ferrando CA, Ricci S. *Int J Gynecol Cancer*. 2020 Apr;30(4):515-524. doi: 10.1136/ijgc-2019-001034. Epub 2020 Feb 18. PMID: 32075898

Characterizing the efficacy and trends of adjuvant therapy versus observation in women with early stage (uterine confined) leiomyosarcoma: a National Cancer Database study. Costales AB, Radeva M, Ricci S. *J Gynecol Oncol*. 2020 May;31(3):e21. doi: 10.3802/jgo.2020.31.e21. Epub 2020 Feb 17. PMID: 32266798 Free PMC article.

Use of hysteroscopy in diagnosis and follow-up of acquired uterine enhanced myometrial vascularity. Gingold JA, Bradley LD. *Fertil Steril*. 2020 Feb;113(2):460-462. doi: 10.1016/j.fertnstert.2019.11.006. PMID: 32106997

The Design of a Prospective Trial to Evaluate the Role of Preoperative Frailty Assessment in Older Women Undergoing Surgery for the Treatment of Pelvic Organ Prolapse: The FASt Supplemental Trial. Erekson E, Menefee S, Whitworth RE, Amundsen CL, Arya LA, Komesu YM, Ferrando CA, Zyczynski HM, Sung VW, Rahn DD, Tan-Kim J, Mazloomdoost D, Gantz MG, Richter HE; Eunice Kennedy Shriver NICHD Pelvic Floor Disorders Network (PFDN). *Female Pelvic Med Reconstr Surg*. 2020 Jan 25;10.1097/SPV.0000000000000833. doi: 10.1097/SPV.0000000000000833. Online ahead of print. PMID: 32217922

Elagolix for Heavy Menstrual Bleeding in Women with Uterine Fibroids. Schlaff WD, Ackerman RT, Al-Hendy A, Archer DF, Barnhart KT, Bradley LD, Carr BR, Feinberg EC, Hurtado SM, Kim J, Liu R, Mabey RG Jr, Owens CD, Poindexter A, Puscheck EE, Rodriguez-Ginorio H, Simon JA, Soliman AM, Stewart EA, Watts NB, Muneyyirci-Delale O. *N Engl J Med*. 2020 Jan 23;382(4):328-340. doi: 10.1056/NEJMoa1904351. PMID: 31971678 Clinical Trial.

Evolving ethical issues with advances in uterus transplantation. Farrell RM, Johannesson L, Flyckt R, Richards EG, Testa G, Tzakis A, Falcone T. *Am J Obstet Gynecol*. 2020 Jun;222(6):584.e1-584.e5. doi: 10.1016/j.ajog.2020.01.032. Epub 2020 Jan 22. PMID: 31981513

Low-grade serous ovarian cancer: State of the science. Slomovitz B, Gourley C, Carey MS, Malpica A, Shih IM, Huntsman D, Fader AN, Grisham RN, Schlumbrecht M, Sun CC, Ludemann J, Cooney GA, Coleman R, Sood AK, Mahdi H, Wong KK, Covens A, O'Malley DM, Lecuru F, Cobb LP, Caputo TA, May T, Huang M, Siemon J, Fernández ML, Ray-Coquard I, Gershenson DM. *Gynecol Oncol*. 2020 Mar;156(3):715-725. doi: 10.1016/j.ygyno.2019.12.033. Epub 2020 Jan 20. PMID: 31969252 Review.

Adjuvant therapy for early stage, endometrial cancer with lymphovascular space invasion: Is there a role for chemotherapy? Beavis AL, Yen TT, Stone RL, Wethington SL, Carr C, Son J, Chambers L, Michener CM, Ricci S, Burkett WC, Richardson DL, Staley AS, Ahn S, Gehrig PA, Torres D, Dowdy SC, Sullivan MW, Modesitt SC, Watson C, Veade A, Ehrisman J, Havrilesky L, Secord AA, Loreen A, Griffin K, Jackson A, Viswanathan AN, Jager LR, Fader AN. *Gynecol Oncol*. 2020 Mar;156(3):568-574. doi: 10.1016/j.ygyno.2019.12.028. Epub 2020 Jan 14. PMID: 31948730 Clinical Trial.

Health resource utilization of labor induction versus expectant management. Grobman WA, Sandoval G, Reddy UM, Tita ATN, Silver RM, Mallett G, Hill K, Rice MM, El-Sayed YY, Wapner RJ, Rouse DJ, Saade GR, Thorp JM Jr, Chauhan SP, Iams JD, Chien EK, Casey BM, Gibbs RS, Srinivas SK, Swamy GK, Simhan HN, Macones GA; Eunice Kennedy Shriver National Institute of Child Health and Human Development Maternal-Fetal Medicine Units (MFMU) Network. *Am J Obstet Gynecol*. 2020 Apr;222(4):369.e1-369.e11. doi: 10.1016/j.ajog.2020.01.002. Epub 2020 Jan 10. PMID: 31930993 Clinical Trial.

60S acidic ribosomal protein P1 (RPLP1) is elevated in human endometriotic tissue and in a murine model of endometriosis and is essential for endometriotic epithelial cell survival *in vitro*. Alali Z, Graham A, Swan K, Flyckt R, Falcone T, Cui W, Yang X, Christianson J, Nothnick WB. *Mol Hum Reprod*. 2020 Jan 1;26(1):53-64. doi: 10.1093/molehr/gaz065. PMID: 31899515

Patient-Centered Outcomes After Modified Vestibulectomy. Das D, Davidson ERW, Walters M, Farrell RM, Ferrando CA. *Obstet Gynecol*. 2020 Jan;135(1):113-121. doi: 10.1097/AOG.0000000000003596. PMID: 31809431

A randomized clinical trial comparing vaginal laser therapy to vaginal estrogen therapy in women with genitourinary syndrome of menopause: The VeLVET Trial. Paraiso MFR, Ferrando CA, Sokol ER, Rardin CR, Matthews CA, Karram MM, Iglesia CB. *Menopause*. 2020 Jan;27(1):50-56. doi: 10.1097/GME.0000000000001416. PMID: 31574047

Prospective Evaluation of Molecular Assays for Diagnosis of Vaginitis. Richter SS, Otiso J, Goje OJ, Vogel S, Aebly J, Keller G, Van Heule H, Wehn D, Stephens AL, Zanotti S, Johnson T, Leal SM, Procop GW. *J Clin Microbiol*. 2019 Dec 23;58(1):e01264-19. doi: 10.1128/JCM.01264-19. Print 2019 Dec 23. PMID: 31694966 Free PMC article.

Osteoporosis Management. Tough DeSapri K, Batur P. *J Womens Health (Larchmt)*. 2020 Mar;29(3):287-290. doi: 10.1089/jwh.2019.8195. Epub 2019 Dec 13. PMID: 31834855 No abstract available.

Pelvic organ prolapse recurrence in young women undergoing vaginal and abdominal colpopexy. Hickman LC, Tran MC, Davidson ERW, Walters MD, Ferrando CA. *Int Urogynecol J*. 2019 Dec 11. doi: 10.1007/s00192-019-04139-w. Online ahead of print. PMID: 31828397

Feasibility and Outcomes of Opportunistic Bilateral Salpingectomy in Patients with Traditional Relative Contraindications to Vaginal Hysterectomy. Chichura AM, Yao M, Bretschneider CE, Ridgeway B, Kho RM. *J Minim Invasive Gynecol*. 2019 Dec 5:S1553-4650(19)31336-6. doi: 10.1016/j.jmig.2019.12.002. Online ahead of print. PMID: 31812614

An Abundance of Studies But Dearth of Evidence regarding Endometriosis and Adenomyosis. Abbott JA, Kho R. *J Minim Invasive Gynecol*. 2020 Feb;27(2):241-243. doi: 10.1016/j.jmig.2019.12.003. Epub 2019 Dec 5. PMID: 31812611 No abstract available.

Prioritizing Women's Health in Germline Editing Research. Farrell RM, Michie M, Scott CT, Flyckt R, LaPlante M. *AMA J Ethics*. 2019 Dec 1;21(12):E1071-1078. doi: 10.1001/amajethics.2019.1071. PMID: 31876472

The cost-effectiveness of human papillomavirus self-collection among cervical cancer screening non-attenders in El Salvador. Campos NG, Alfaro K, Maza M, Sy S, Melendez M, Masch R, Soler M, Conzuelo-Rodriguez G, Gage JC, Alonzo TA, Castle PE, Felix JC, Cremer M, Kim JJ. *Prev Med*. 2020 Feb;131:105931. doi: 10.1016/j.ypmed.2019.105931. Epub 2019 Nov 23. PMID: 31765712

New Frontier: Role of the Radiologist in Uterine Transplantation. Feldman MK, Hunter SA, Perni UC, Liu P, Quintini C, Tzakis AG, Flyckt R. *Radiographics*. 2020 Jan-Feb;40(1):291-302. doi: 10.1148/rg.2020190123. Epub 2019 Nov 22. PMID: 31756124

Medical Malpractice Litigation in Non-Mesh-Related Pelvic Organ Prolapse Surgery: An Analysis of 91 Cases. Yao B, Slopnick E, Sheyn D, Chapman G, El-Nashar S, Hijaz A, Mahajan S. *Female Pelvic Med Reconstr Surg*. 2019 Nov 18. doi: 10.1097/SPV.0000000000000795. Online ahead of print. PMID: 31804234

Cost-Effectiveness of Sacral Neuromodulation versus OnabotulinumtoxinA for Refractory Urgency Urinary Incontinence: Results of the ROSETTA Randomized Trial. Harvie HS, Amundsen CL, Neuwahl SJ, Honeycutt AA, Lukacz ES, Sung VW, Rogers RG, Ellington D, Ferrando CA, Chermansky CJ, Mazloomdoost D, Thomas S. *J Urol*. 2020 May;203(5):969-977. doi: 10.1097/JU.0000000000000656. Epub 2019 Nov 18. PMID: 31738113 Free PMC article. Clinical Trial.

Thy-1 predicts poor prognosis and is associated with self-renewal in ovarian cancer. Connor EV, Saygin C, Braley C, Wiechert AC, Karunanithi S, Crean-Tate K, Abdul-Karim FW, Michener CM, Rose PG, Lathia JD, Reizes O. *J Ovarian Res*. 2019 Nov

17;12(1):112. doi: 10.1186/s13048-019-0590-5. PMID: 31735168 Free PMC article.

Clinical Performance of Radiofrequency Ablation for Treatment of Uterine Fibroids: Systematic Review and Meta-Analysis of Prospective Studies. Bradley LD, Pasic RP, Miller LE. *J Laparoendosc Adv Surg Tech A*. 2019 Dec;29(12):1507-1517. doi: 10.1089/lap.2019.0550. Epub 2019 Nov 8. PMID: 31702440 Free PMC article.

The personal utility of cfDNA screening: Pregnant patients' experiences with cfDNA screening and views on expanded cfDNA panels. Farrell RM, Agatista PK, Michie MM, Greene A, Ford PJ. *J Genet Couns*. 2020 Feb;29(1):88-96. doi: 10.1002/jgc4.1183. Epub 2019 Nov 3. PMID: 31680382

Evaluation of non-completion of intraperitoneal chemotherapy in patients with advanced epithelial ovarian cancer. Chambers LM, Son J, Radeva M, DeBernardo R. *J Gynecol Oncol*. 2019 Nov;30(6):e93. doi: 10.3802/jgo.2019.30.e93. PMID: 31576687 Free PMC article.

In Search of Mobile Applications for Urogynecology Providers. Wallace SL, Mehta S, Farag S, Kelley RS, Chen KT. *Female Pelvic Med Reconstr Surg*. 2019 Nov/Dec;25(6):439-442. doi: 10.1097/SPV.0000000000000580. PMID: 29649079

Postoperative Bowel Symptoms Improve over Time after Rectosigmoidectomy for Endometriosis. Bassi MA, Andres MP, Bassi CM, Neto JS, Kho RM, Abrão MS. *J Minim Invasive Gynecol*. 2019 Oct 24:S1553-4650(19)31261-0. doi: 10.1016/j.jmig.2019.10.009. Online ahead of print. PMID: 31669552

The JMIG Issues New Guidelines on Statistical Reporting and p-values. Wilson JR, Falcone T. *J Minim Invasive Gynecol*. 2020 Jan;27(1):1-3. doi: 10.1016/j.jmig.2019.10.006. Epub 2019 Oct 17. PMID: 31629795 No abstract available.

Extrapelvic Endometriosis: A Systematic Review. Andres MP, Arcoverde FVL, Souza CCC, Fernandes LFC, Abrão MS, Kho RM. *J Minim Invasive Gynecol*. 2020 Feb;27(2):373-389. doi: 10.1016/j.jmig.2019.10.004. Epub 2019 Oct 13. PMID: 31618674 Review.

Emergency contraception: Links between providers' counseling choices, prescribing behaviors, and sociopolitical context. Wagner BG, Cleland K, Batur P, Wu J, Rothberg MB. *Soc Sci Med*. 2019 Dec;242:112588. doi: 10.1016/j.socscimed.2019.112588. Epub 2019 Oct 4. PMID: 31630008

Vulvar and gluteal manifestations of Crohn disease. Moreno AC, Goje O, Piliang MP, Batur P. *Cleve Clin J Med*. 2019 Oct;86(10):645-646. doi: 10.3949/ccjm.86a.19062. PMID: 31597081 No abstract available.

Tracking-A Flexible Obstetrics and Gynecology Residency Curriculum. Reed VR, Emery J, Farrell RM, Jelovsek JE. *Obstet Gynecol*. 2019 Oct;134 Suppl 1:29S-33S. doi: 10.1097/AOG.0000000000003464. PMID: 31568038

A National Survey of Profiles of Clerkship Directors in Obstetrics and Gynecology. Morgan HK, Graziano SC, Craig LB, Everett EN, Forstein DA, Hampton BS, Hopkins L, McKenzie ML, Pradhan A, Royce C, Madani-Sims S, Morosky CM; Undergraduate Medical Education Committee, Association of Professors of Gynecology and Obstetrics. *Obstet Gynecol*. 2019

Oct;134(4):869-873. doi: 10.1097/AOG.0000000000003471. PMID: 31503156

Antenatal ultrasound compared to MRI evaluation of fetal myelomeningocele: a prenatal and postnatal evaluation. Munoz JL, Bishop E, Reider M, Radeva M, Singh K. *J Perinat Med*. 2019 Sep 25;47(7):771-774. doi: 10.1515/jpm-2019-0177. PMID: 31487264

Association Between Features of Spontaneous Late Preterm Labor and Late Preterm Birth. Glover AV, Battarbee AN, Gyamfi-Bannerman C, Boggess KA, Sandoval G, Blackwell SC, Tita ATN, Reddy UM, Jain L, Saade GR, Rouse DJ, Iams JD, Clark EAS, Chien EK, Peaceman AM, Gibbs RS, Swamy GK, Norton ME, Casey BM, Caritis SN, Tolosa JE, Sorokin Y, Manuck TA; Eunice Kennedy Shriver National Institute of Child Health Human Development Maternal-Fetal Medicine Units Network. *Am J Perinatol*. 2020 Mar;37(4):357-364. doi: 10.1055/s-0039-1696641. Epub 2019 Sep 17. PMID: 31529452 Free PMC article.

Effect of Vaginal Mesh Hysteropexy vs Vaginal Hysterectomy With Uterosacral Ligament Suspension on Treatment Failure in Women With Uterovaginal Prolapse: A Randomized Clinical Trial. Nager CW, Visco AG, Richter HE, Rardin CR, Rogers RG, Harvie HS, Zyczynski HM, Paraiso MFR, Mazloomdoost D, Grey S, Sridhar A, Wallace D; NICHD Pelvic Floor Disorders Network. *JAMA*. 2019 Sep 17;322(11):1054-1065. doi: 10.1001/jama.2019.12812. PMID: 31529008 Free PMC article. Clinical Trial.

Effect of Behavioral and Pelvic Floor Muscle Therapy Combined With Surgery vs Surgery Alone on Incontinence Symptoms Among Women With Mixed Urinary Incontinence: The ESTEEM Randomized Clinical Trial. Sung VW, Borello-France D, Newman DK, Richter HE, Lukacz ES, Moalli P, Weidner AC, Smith AL, Dunivan G, Ridgeway B, Nguyen JN, Mazloomdoost D, Carper B, Gantz MG; NICHD Pelvic Floor Disorders Network. *JAMA*. 2019 Sep 17;322(11):1066-1076. doi: 10.1001/jama.2019.12467. PMID: 31529007 Free PMC article. Clinical Trial.

Treatment of neuroendocrine carcinoma of the cervix with a PARP inhibitor based on next generation sequencing. Rose PG, Sierk A. *Gynecol Oncol Rep*. 2019 Sep 12;30:100499. doi: 10.1016/j.gore.2019.100499. eCollection 2019 Nov. PMID: 31649992 Free PMC article.

Fertility Preservation in Women With Endometriosis. Llarona NC, Falcone T, Flyckt RL. *Clin Med Insights Reprod Health*. 2019 Sep 3;13:1179558119873386. doi: 10.1177/1179558119873386. eCollection 2019. PMID: 31516316 Free PMC article. Review.

Sleep, quality of life, and depression in endometrial cancer survivors with obesity seeking weight loss. Nock NL, Dimitropoulos A, Zanotti KM, Waggoner S, Nagel C, Golubic M, Michener CM, Kirwan JP, Alberts J. *Support Care Cancer*. 2020 May;28(5):2311-2319. doi: 10.1007/s00520-019-05051-1. Epub 2019 Sep 2. PMID: 31478164

Current controversies in tubal disease, endometriosis, and pelvic adhesion. Goldberg JM, Falcone T, Diamond MP. *Fertil Steril*. 2019 Sep;112(3):417-425. doi: 10.1016/j.fertnstert.2019.06.021. PMID: 31446901 Review.

Developing as an Academic Medical Educator in Obstetrics and Gynecology. Graziano SC, Page-Ramsey SM, Buery-Joyner SD, Bliss S, Craig LB, Forstein DA, Hampton BS, Hopkins L, McKenzie ML, Morgan H, Pradhan A, Everett EN; Undergraduate Medical Education Committee, Association of Professors of Gynecology and Obstetrics. *Obstet Gynecol*. 2019 Sep;134(3):621-627. doi: 10.1097/AOG.0000000000003417. PMID: 31403603

Management of genitourinary syndrome of menopause in female cancer patients: a focus on vaginal hormonal therapy. Crean-Tate KK, Faubion SS, Pederson HJ, Vencill JA, Batur P. *Am J Obstet Gynecol*. 2020 Feb;222(2):103-113. doi: 10.1016/j.ajog.2019.08.043. Epub 2019 Aug 29. PMID: 31473229 Review.

Undifferentiated endometrial carcinoma: a National Cancer Database analysis of prognostic factors and treatment outcomes. AlHilli M, Elson P, Rybicki L, Amarnath S, Yang B, Michener CM, Rose PG. *Int J Gynecol Cancer*. 2019 Sep;29(7):1126-1133. doi: 10.1136/ijgc-2019-000465. Epub 2019 Aug 17. PMID: 31422353

Defining the relationship between vaginal and urinary microbiomes. Komesu YM, Dinwiddie DL, Richter HE, Lukacz ES, Sung VW, Siddiqui NY, Zyczynski HM, Ridgeway B, Rogers RG, Arya LA, Mazloomdoost D, Levy J, Carper B, Gantz MG; Eunice Kennedy Shriver National Institute of Child Health and Human Development Pelvic Floor Disorders Network. *Am J Obstet Gynecol*. 2020 Feb;222(2):154.e1-154.e10. doi: 10.1016/j.ajog.2019.08.011. Epub 2019 Aug 14. PMID: 31421123

NCCN Guidelines Insights: Ovarian Cancer, Version 1.2019. Armstrong DK, Alvarez RD, Bakkum-Gamez JN, Barroilhet L, Behbakht K, Berchuck A, Berek JS, Chen LM, Cristea M, DeRosa M, ElNaggar AC, Gershenson DM, Gray HJ, Hakam A, Jain A, Johnston C, Leath CA III, Liu J, Mahdi H, Matei D, McHale M, McLean K, O'Malley DM, Penson RT, Percac-Lima S, Ratner E, Remmenga SW, Sabbatini P, Werner TL, Zsiros E, Burns JL, Engh AM. *J Natl Compr Canc Netw*. 2019 Aug 1;17(8):896-909. doi: 10.6004/jccn.2019.0039. PMID: 31390583

Running in place: The uncertain future of primary care internal medicine. Nielsen C, Batur P. *Cleve Clin J Med*. 2019 Aug;86(8):530-534. doi: 10.3949/ccjm.86a.19075. PMID: 31385788 No abstract available.

Is High-intensity Focused Ultrasound Effective for the Treatment of Adenomyosis? A Systematic Review and Meta-analysis. Marques ALS, Andres MP, Kho RM, Abrão MS. *J Minim Invasive Gynecol*. 2020 Feb;27(2):332-343. doi: 10.1016/j.jmig.2019.07.029. Epub 2019 Aug 1. PMID: 31377454 Review.

The Balance of Parenting and Professional Life Among Gynecologic Subspecialists: A Unicorn? Ridgeway B. *J Minim Invasive Gynecol*. 2019 Sep-Oct;26(6):991-992. doi: 10.1016/j.jmig.2019.07.012. Epub 2019 Jul 24. PMID: 31351223 No abstract available.

Authors' reply re: Plagiarism and data falsification are the most common reasons for retracted publications in obstetrics and gynaecology. Chambers LM, Michener CM, Falcone T. *BJOG*. 2019 Sep;126(10):1289-1290. doi: 10.1111/1471-0528.15828. Epub 2019 Jul 2. PMID: 31267670 No abstract available.

Managing Genitourinary Syndrome of Menopause in Breast Cancer Survivors Receiving Endocrine Therapy. Sussman TA, Kruse ML, Thacker HL, Abraham J. *J Oncol Pract.* 2019 Jul;15(7):363-370. doi: 10.1200/JOP.18.00710. PMID: 31291563 Review.

Infertility: A practical framework. Flyckt R, Falcone T. *Cleve Clin J Med.* 2019 Jul;86(7):473-482. doi: 10.3949/ccjm.86a.18068. PMID: 31291181 Review.

Reduction in skin and mucosal toxicity with pegylated liposomal doxorubicin utilizing every 2-week dosing. Rose PG, Purpura D, Petersen L. *Anticancer Drugs.* 2019 Jul;30(6):636-639. doi: 10.1097/CAD.0000000000000795. PMID: 30973518

Thickened Endometrium in Postmenopausal Women With an Initial Biopsy of Limited, Benign, Surface Endometrium: Clinical Outcome and Subsequent Pathologic Diagnosis. Dermawan JKT, Hur C, Uberti MG, Flyckt R, Falcone T, Brainard J, Abdul-Karim FW. *Int J Gynecol Pathol.* 2019 Jul;38(4):310-317. doi: 10.1097/PGP.0000000000000525. PMID: 29750705

Optimizing Perioperative Outcomes with Selective Bowel Resection Following an Algorithm Based on Preoperative Imaging for Bowel Endometriosis. Abrão MS, Andres MP, Barbosa RN, Bassi MA, Kho RM. *J Minim Invasive Gynecol.* 2020 May-Jun;27(4):883-891. doi: 10.1016/j.jmig.2019.06.010. Epub 2019 Jun 22. PMID: 31238150

Fetal growth patterns in pregnancy-associated hypertensive disorders: NICHD Fetal Growth Studies. Mateus J, Newman RB, Zhang C, Pugh SJ, Grewal J, Kim S, Grobman WA, Owen J, Sciscione AC, Wapner RJ, Skupski D, Chien E, Wing DA, Ranzini AC, Nageotte MP, Gerlanc N, Albert PS, Grantz KL. *Am J Obstet Gynecol.* 2019 Dec;221(6):635.e1-635.e16. doi: 10.1016/j.ajog.2019.06.028. Epub 2019 Jun 19. PMID: 31226296

Multimodal opioid-sparing postoperative pain regimen compared with the standard postoperative pain regimen in vaginal pelvic reconstructive surgery: a multicenter randomized controlled trial. Petrikovets A, Sheyn D, Sun HH, Chapman GC, Mahajan ST, Pollard RR, El-Nashar SA, Hijaz AK, Mangel J. *Am J Obstet Gynecol.* 2019 Nov;221(5):511.e1-511.e10. doi: 10.1016/j.ajog.2019.06.002. Epub 2019 Jun 12. PMID: 31201808 Clinical Trial.

To the Point: a prescription for well-being in medical education. Hopkins L, Morgan H, Buery-Joyner SD, Craig LB, Everett EN, Forstein DA, Graziano SC, Hampton BS, McKenzie ML, Page-Ramsey SM, Pradhan A, Bliss S; Undergraduate Medical Education Committee, Association of Professors of Gynecology and Obstetrics. *Am J Obstet Gynecol.* 2019 Dec;221(6):542-548. doi: 10.1016/j.ajog.2019.05.012. Epub 2019 Jun 7. PMID: 31181180 Review.

Ventral-onlay buccal mucosal graft urethroplasty for the treatment of female urethral stricture: a step-by-step video for Female Pelvic Reconstructive Surgeons. Petrikovets A, Sun HH, Kiechle J, Chapman GC, Gonzalez CM, Hijaz A. *Int Urogynecol J.* 2019 Dec;30(12):2191-2193. doi: 10.1007/s00192-019-03987-w. Epub 2019 Jun 4. PMID: 31165219

Cerebral White Matter Disease and Response to Anti-Cholinergic Medication for Overactive Bladder in an Age-Matched Cohort. Sheyn D, Mahajan ST, Hijaz A, Slopnick E, Chapman

G, El-Nashar S, Mangel JM. *Int Urogynecol J*. 2019 Oct;30(10):1755-1761. doi: 10.1007/s00192-019-03988-9. Epub 2019 May 31. PMID: 31152187

Neuroendocrine Tumor or Endometriosis of the Appendix: Which Is Which? Abrao MS, Myung LHJ, Averbach M, Kho RM. *J Minim Invasive Gynecol*. 2020 Jan;27(1):15-16. doi: 10.1016/j.jmig.2019.05.007. Epub 2019 May 21. PMID: 31121310 No abstract available.

Adnexectomy at the time of vaginal hysterectomy for pelvic organ prolapse. Slopnick EA, Sheyn DD, Chapman GC, Mahajan ST, El-Nashar S, Hijaz AK. *Int Urogynecol J*. 2020 Feb;31(2):373-379. doi: 10.1007/s00192-019-03967-0. Epub 2019 May 21. PMID: 31115610

Effects of myomas and myomectomy on assisted reproductive technology outcomes. Fortin CN, Hur C, Radeva M, Falcone T. *J Gynecol Obstet Hum Reprod*. 2019 Nov;48(9):751-755. doi: 10.1016/j.jogoh.2019.05.001. Epub 2019 May 8. PMID: 31077869

Does surgical platform impact recurrence and survival? A study of utilization of multiport, single-port, and robotic-assisted laparoscopy in endometrial cancer surgery. Chambers LM, Carr C, Freeman L, Jernigan AM, Michener CM. *Am J Obstet Gynecol*. 2019 Sep;221(3):243.e1-243.e11. doi: 10.1016/j.ajog.2019.04.038. Epub 2019 May 7. PMID: 31075245

Perioperative Interventions to Minimize Blood Loss at the Time of Hysterectomy for Uterine Leiomyomas: A Systematic Review and Meta-analysis. Gingold JA, Chichura A, Harnegie MP, Kho RM. *J Minim Invasive Gynecol*. 2019 Nov-Dec;26(7):1234-1252.e1. doi: 10.1016/j.jmig.2019.04.021. Epub 2019 Apr 27. PMID: 31039407 Review.

To the point: undergraduate medical education learner mistreatment issues on the learning environment in the United States. Pradhan A, Buery-Joyner SD, Page-Ramsey S, Bliss S, Craig LB, Everett E, Forstein DA, Graziano S, Hopkins L, McKenzie M, Morgan H, Hampton BS. *Am J Obstet Gynecol*. 2019 Nov;221(5):377-382. doi: 10.1016/j.ajog.2019.04.021. Epub 2019 Apr 25. PMID: 31029660 Review.

Plagiarism and data falsification are the most common reasons for retracted publications in obstetrics and gynaecology. Chambers LM, Michener CM, Falcone T. *BJOG*. 2019 Aug;126(9):1134-1140. doi: 10.1111/1471-0528.15689. Epub 2019 Apr 21. PMID: 30903641

Delayed recognition of lower urinary tract injuries following hysterectomy for benign indications: A NSQIP-based study. Bretschneider CE, Casas-Puig V, Sheyn D, Hijaz A, Ferrando CA. *Am J Obstet Gynecol*. 2019 Aug;221(2):132.e1-132.e13. doi: 10.1016/j.ajog.2019.03.015. Epub 2019 Mar 26. PMID: 30926265

Anesthetics' role in postoperative urinary retention after pelvic organ prolapse surgery with concomitant midurethral slings: a randomized clinical trial. Alas A, Martin L, Devakumar H, Frank L, Vaish S, Chandrasekaran N, Davila GW, Hurtado E. *Int Urogynecol J*. 2020 Jan;31(1):205-213. doi: 10.1007/s00192-019-03917-w. Epub 2019 Mar 23. PMID: 30904934

Workplace Harassment and Discrimination in Gynecology: Results of the AAGL Member Survey. Brown J, Drury L, Raub K, Levy B, Brantner P, Krivak TC, Bradley L, Naumann RW. *Minim Invasive Gynecol*. 2019 Jul-Aug;26(5):838-846. doi: 10.1016/j.jmig.2019.03.004. Epub 2019 Mar 13. PMID: 30878643

Effect of Treatment of Mild Gestational Diabetes on Long-Term Maternal Outcomes. Casey BM, Rice MM, Landon MB, Varner MW, Reddy UM, Wapner RJ, Rouse DJ, Biggio JR Jr, Thorp JM Jr, Chien EK, Saade GR, Peaceman AM, Blackwell SC, Van Dorsten JP; Eunice Kennedy Shriver National

Institute of Child Health and Human Development Maternal-Fetal Medicine Units (MFMU) Network. *Am J Perinatol*. 2020 Apr;37(5):475-482. doi: 10.1055/s-0039-1681058. Epub 2019 Mar 13. PMID: 30866027 Free PMC article.

Structured Ultrasound and Magnetic Resonance Imaging Reports for Patients with Suspected Endometriosis: Guide for Imagers and Clinicians. Mattos LA, Goncalves MO, Andres MP, Young SW, Feldman M, Abrão MS, Kho RM. *Minim Invasive Gynecol*. 2019 Sep-Oct;26(6):1016-1025. doi: 10.1016/j.jmig.2019.02.017. Epub 2019 Mar 6. PMID: 30849475

Does spinal anesthesia lead to postoperative urinary retention in same-day urogynecology surgery? A retrospective review. Alas A, Hidalgo R, Espaillet L, Devakumar H, Davila GW, Hurtado E. *Int Urogynecol J*. 2019 Aug;30(8):1283-1289. doi: 10.1007/s00192-019-03893-1. Epub 2019 Feb 27. PMID: 30810782

Perioperative adverse events in women undergoing concurrent urogynecologic and gynecologic oncology surgeries for suspected malignancy. Davidson ERW, Woodburn K, AlHilli M, Ferrando CA. *Int Urogynecol J*. 2019 Jul;30(7):1195-1201. doi: 10.1007/s00192-018-3772-6. Epub 2018 Oct 2. PMID: 30280203

The relationship of maternal glycemia to childhood obesity and metabolic dysfunction‡. Landon MB, Mele L, Varner MW, Casey BM, Reddy UM, Wapner RJ, Rouse DJ, Tita ATN, Thorp JM, Chien EK, Saade G, Grobman W, Blackwell SC, VanDorsten JP; Eunice Kennedy Shriver National Institute of Child Health and Human Development Maternal-Fetal Medicine Units (MFMU) Network. *J Matern Fetal Neonatal Med*. 2020 Jan;33(1):33-41. doi: 10.1080/14767058.2018.1484094. Epub 2018 Jul 18. PMID: 30021494

