The 44th Meeting of the New England Association of Gynecologic Oncologists

Brewster, Massachusetts

June 6 – 8, 2025

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New England Association of Gynecologic Oncologists

Preamble

In Sturbridge, Massachusetts at the Public House on the Common, a group of physicians from the several states and commonwealths of Connecticut, Massachusetts, Maine, Rhode Island and Vermont were gathered in the afternoon of Saturday, the eighth day of March in the year A.D. nineteen hundred and eighty. These physicians proclaim their existence as gynecologic oncologists in order to advance the practice and science of gynecologic oncology in New England and agree that an organization for such a purpose should be formed and sustained.

It was decreed that this organization henceforth should be known as the New England Association of Gynecologic Oncologists.

It was agreed that invitations to membership should be extended to those who have distinguished themselves by their accomplishments and their extraordinary contributions to the practice and science of gynecologic oncology.

It was agreed that the purpose of the association was to improve patient care by: (1) Enhancing the exchange of medical knowledge among New England physicians treating patients with gynecologic malignancies. (2) Providing a forum for increased communication among gynecologic oncologists in New England which should foster collaborate studies. (3) Encouraging a feeling of camaraderie among gynecologic oncologists and others with common interests.

I hereby agree to the bylaws of this preamble and accordingly affix my signature on Saturday, October 18, 1980.

NEAGO 2025 would like to thank the following sponsors for their generous support!

DIAMOND LEVEL

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The 44th Meeting of the New England Association of Gynecologic Oncologists

PAST NEAGO MEETINGS AND PRESIDENTS

YEAR	LOCATION	PRESIDENT
1980-1981	Treadway Inn, Newport, RI	Murray Joseph Casey, MD
1981-1982	Black Point Inn, Prouts Neck, ME	Charles R. Boyce, MD
1982-1983	Pleasant Bay, Chatham, MA	Henry C. McDuff, Jr., MD
1983-1984	Woodstock Inn, Woodstock, VT	Thomas Leavitt, MD
1984-1985	Trapp Family Lodge, Stowe, VT	Jerome Belinson, MD
1985-1986	New Seabury, Cape Cod, MA	C. Thomas Griffiths, MD
1986-1987	Inn by the Sea, Cape Elizabeth, ME	Charles L. Easterday, MD
1987-1988	The Hilton Inn, Mystic, CT	Stephen L. Curry, MD
1988-1989	Bar Harbor Inn, Bar Harbor, ME	Ernest I. Kohorn, MD
1989-1990	Sheraton Sturbridge Resort, Sturbridge, MA	Richard E. Hunter, MD
1990-1991	The Equinox, Manchester, VT	Robert C. Knapp, MD
1991-1992	Newport Islander, Newport, RI	John C. Lathrop, MD
1992-1993	Chatham Bars Inn, Chatham, MA	Peter E. Schwartz, MD
1993-1994	Harbor House, Nantucket, MA	Arlan F. Fuller, MD
1994-1995	The Williams Inn, Williamstown, MA	William J. Hewett, MD
1995-1996	The Cliff House, Ogunquit, ME	Harrison G. Ball, MD
1996-1997	Ocean Edge, Brewster, MA	Najmosama T. Nikrui, MD
1997-1998	The White Mountain Hotel, N. Conway, NH	Joseph T. Chambers, MD
1998-1999	The Westin, Providence, RI	C.O. Granai, MD
1999-2000	Cranwell Resort, Lenox, MA	Jonathan M. Niloff, MD
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2002-2003	Black Point Inn, Prouts Neck, ME	Hector M. Tarraza, MD
2003-2004	Chatham Bars Inn, Chatham, MA	Walter H. Gajewski, MD
2004-2005	Mt. Washington Resort, Bretton Woods, NH	Robert McLellan, MD
2005-2006	The Equinox, Manchester Village, VT	Michel Prefontaine, MD
2006-2007	The Colony Hotel, Kennebunkport, ME	Annekathryn Goodman, MD
2007-2008	The Wequassett Resort, Chatham, MA	Michael Muto, MD
2008-2009	Wentworth-by-the-Sea, New Castle, NH	Leslie DeMars, MD
2009-2010	Spruce Point Inn, Booth Bay Harbor, ME	Beth Nelson, MD
2010-2011	Stowe Mountain Lodge, Stowe, VT	Valena Soto-Wright, MD
2011-2012	Bar Harbor Regency, Bar Harbor, ME	Marcela del Carmen, MD
2012-2013	Water's Edge Resort & Spa, Westbrook, CT	John Schorge, MD
2013-2014	Hyatt Regency, Goat Island, Newport, RI	Richard G. Moore, MD
2014-2015	The Colony Hotel, Kennebunkport, ME	Susan Zweizig, MD
2015-2016	Ocean Edge, Brewster, MA	Colleen Feltmate, MD
2016-2017	The Hilton Mystic, Mystic, CT	Amy Brown, MD, MPH
2017-2018	The Cliff House, Cape Neddick, ME	Emmanuel Soultanakis MD
2018-2019	Omni Mount Washington, Bretton Woods, NH	Dave Boruta, MD
2019-2020	The Equinox, Manchester Village, VT *(Canceled due to pandemic.)*	Cheung Wong, MD
2020-2021	Held virtually *(Due to pandemic.)*	Cheung Wong, MD
2021-2022	Hotel Viking, Newport, RI	Katina Robison, MD
2022-2023	Portland Regency Hotel, Portland, ME	Leslie Bradford, MD
2023-2024	Sea Crest Beach Resort, North Falmouth, MA	Ashley Stuckey, MD

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Past Award Winners

DIANNON PRIZE

(For the best paper presented by a trainee)

1922 Bjorn Bjornsson, MD
1993 Ricardo Saniz de la Cuesta, MD
1994 Iris Wertheim, MD
1995 Thomas Rutherford, MD
1996 Mitchell Edelson, MD
1997 Annette Chen, MD
1998 Donald Wiper, MD
1999 John Schorge, MD

TRAINEE AWARD

1999 Karen Houck, MD
2000 Eugene P. Toy, MD
2001 Richard Moore, MD
2002 Robert DeBernardo, MD
2002 Tanja Pejovic, MD
2003 Laurent Brard, MD
2003 E. Colin Koon, MD, PhD
2004 E. Colin Koon, MD, PhD
2004 Ami Vaidya, MD
2005 Michael J. Callahan, MD
2005 Viven Lee, MD
2006 Michael Kelley, MD
2006 Katina Robison, MD
2007 Eloise Chapman (Clinical)
2007 Emily M. Ko, MD (Clinical)
2007 Alexander Olawaiye, MD (Basic Science)
2007 Katina Robison, MD (Basic Science)
2008 Leslie Garrett, MD (Basic Science)
2008 Moune Jabre-Raughley, MD (Clinical)
2009 Whitfield Growdon, MD (Basic Science)
2009 Jason Knight, MD (Clinical)
2010 Katrin Kristjansdottir, MD (Basic Science)
2010 Megan Wright, MD (Clinical)
2011 Leslie Bradford, MD (Basic Science)
2011 Elizabeth Lokich, MD (Clinical)
2012 Rachel Clark, MD (Basic Science)
2012 Jessica Hsieh, MD (Clinical)
2013 Kevin Elias, MD (Basic Science)
2013 Emily Hill, MD (Basic Science)
2014 Amy Bregar, MD (Clinical)
2014 Elizabeth Lokich, MD (Basic Science)
2014 Carlton Schwab, MD (Basic Science)
2015 Jonathan Black, MD (Basic Science)
2015 Katelyn Dorney, MD (Clinical)
2015 Kevin Elias, MD (Basic Science)
2016 Kevin Elias, MD (Basic Science)
2016 Jenna Emerson, MD (Clinical)
2017 Roni Nitecki, MD (Clinical)
2017 Matthew Oliver, MD (Basic Science)
2018 Lindsey Beffa, MD (Basic Science)
2018 Amita Kulkarni, MD (Clinical)
2019 Jenna Emerson (Basic Science)
2019 Deanna Glassman (Clinical)
2020 No awards given (Meeting canceled)
2021 No awards given (Virtual; no abstracts)
2022 Julia Dexter, MD (NEAGO Collaborative)
2022 Kate Kurchena, MD (Clinical)
2022 Kaitlin Nicholson, MD (Basic Science)
2023 Jessica St. Laurent, MD (Basic Science)
2023 Sha Sha, MD (Clinical)
2024 Kali Sullivan, BS (NEAGO Collaborative)
2024 William Manning, MD (Basic Science)
2024 Devon Abt Harris, MD (Clinical)

PROGRAM

Friday, June 6, 2025

11:00 am *(Carriage House Foyer)*	**Member/Guest Registration**
11:00 am *(Samuel Nickerson)*	**Exhibition Hall Opens – 2nd Floor**
12:15 -1:15 pm *(Ronald Nickerson)*	**Industry Session: Speaker Lunch sponsored by Eisai** **Title:** *"Learn About a Non-Chemotherapy Treatment Option for Patients with Certain Types of Advanced EC"* **Speaker:** Heidi Godoy, DO *Gyn Oncologist/US Oncology*
1:20-1:25 pm *(Addie Nickerson)*	**Presidential Welcome:** *Elizabeth Lokich, MD*
1:30-2:40 pm *(Addie Nickerson)*	**FIRST SCIENTIFIC SESSION** *(Abstract Schedule on Page 10)*
2:40-3:25 pm *(Samuel Nickerson)*	***Break with Coffee, Snacks and Exhibits – 2nd Floor***
3:25-4:25 pm *(Addie Nickerson)*	**SECOND SCIENTIFIC SESSION** *(Abstract Schedule on Page 11)*
4:45pm *(Samuel Nickerson)*	***Exhibits Close – 2nd Floor***
5:00-6:00 pm *(Addie Nickerson)*	**Keynote Address** *"Communication and Translation in Data and Decisions"* **Speaker:** Emily F. Oster, PhD Brown University Dept of Economics, JJE Goldman Sachs Professor of Economics
6:15-7:30 pm *(Mansion Ballroom)*	**Cocktail Reception … *families are welcome!***

PROGRAM

Saturday, June 7, 2025

7:00 am *(Carriage House Foyer)*	**Registration Opens**
7:00-9:00 am	**Breakfast Buffet** *(Ballroom A/B)* **Exhibition Hall Open** *(Samuel Nickerson Room – 2nd Floor)*
7:30-8:30 am *(Ballroom C/D)*	**Industry Session: Speaker Breakfast sponsored by AbbVie** **Title:** *"Addressing Unmet Needs in Platinum-Resistant Ovarian Cancer"* **Speaker:** Chad A. Hamilton, MD (Colonel, USAF-Retired) *Gyn Oncologist at Ochsner Health - New Orleans, LA* *Associate Research Director, Ochsner Cancer Institute*
8:30-9:40 am *(Addie Nickerson)*	**THIRD SCIENTIFIC SESSION** *(Abstract Schedule on Page 12)*
9:40-10:15 am *(Addie Nickerson)*	**GRANT AWARD UPDATES AND PRESENTATIONS** *(Grant Award Titles and Presenters on Page 13)*
10:15-10:45 am *(Samuel Nickerson)*	***Break with Coffee and Exhibits – 2nd Floor***
10:45 am-11:45 am *(Addie Nickerson)*	**FOURTH SCIENTIFIC SESSION** *(Abstract Schedule on Page 14)*
12:00 -1:15 pm *(Addie Nickerson)*	**Introspective Tumor Board: Sponsored by Genmab** *" Examining the impact of our "other" roles within obstetrics and gynecology."* with Jenna Emerson, MD, *Gyn Oncologist – Compass Oncology, Portland, OR*
1:45 pm *(Samuel Nickerson)*	***Exhibits Close – 2nd Floor***
5:00-6:00 pm *(Mansion Ballroom)*	**Cocktail Hour at Ocean Edge Resort & Golf Club**
6:00-7:30 pm *(Mansion Ballroom)*	**Dinner at Ocean Edge Resort & Golf Club**
7:30-9:00 pm *(Beach 2)*	**Bonfire and S'mores** ***… bring your sandals!***

PROGRAM

Sunday, June 8, 2025

7:00-9:00 am	**Breakfast Buffet** *(Ballroom A/B)* **Exhibition Hall Open** *(Samuel Nickerson Room – 2nd Floor)*
7:30-7:45 am *(Addie Nickerson)*	**NEAGO Business Meeting (Members Only)**
7:45-8:45 am *(Ballroom C/D)*	**Industry Session: Speaker Breakfast sponsored by GSK** **Title:** *"A Treatment Option for Patients with Primary Advanced or Recurrent Endometrial Cancer"* **Speaker:** Dana M. Chase, MD *West Los Angeles ObGyn Oncology – Los Angeles, CA* *Assoc. Professor of UCLA in ObGyn/Div. of Gynecologic Oncology*
9:00-9:50 am *(Addie Nickerson)*	**FIFTH SCIENTIFIC SESSION** *(Abstract Schedule on Page15)*
9:50-10:25 am *(Samuel Nickerson)*	***Break with Coffee and Exhibits – 2nd Floor***
10:25-11:45 am *(Addie Nickerson)*	**SIXTH SCIENTIFIC SESSION** *(Abstract Schedule on Page 16)*
11:00 am *(Samuel Nickerson)*	***Exhibits Close – 2nd Floor***
11:45 am–12:00 pm *(Addie Nickerson)*	**Closing Remarks:** *Elizabeth Lokich, MD, NEAGO President* **Announcement of Trainee Awards** **NEAGO 2026:** *Eric Eisenhauer, MD, NEAGO President-Elect*

ABSTRACT SCHEDULES

(Presenters' names have been listed in bold. Asterisk indicates NEAGO Sponsor.)

FIRST SCIENTIFIC SESSION (Friday, June 6, 2025):

TOPIC – "Uterus/Ovary" (1:30 – 2:40 pm)

Moderators – Michelle Davis, MD and Sarah Paraghamian, MD

Abstract #1 Is More Always Better? A Comparative Study of the Real-World Safety and Effectiveness of Metronomic Cyclophosphamide and Bevacizumab With or Without Pembrolizumab for Recurrent Ovarian Cancer. ***Alicia M. Youssef***, *Siguo Li, Sara Bouberhan, Amy Bregar, Varvara Mazina, Alexander Melamed**

Abstract #2 Survival Outcomes and Platinum Sensitivity in 21 vs 28 Day Cycles of Maintenance Bevacizumab for Recurrent Ovarian Cancer. ***Andreea Dinicu***, *Camilla Yu, Meng Yao, Kevin Krivanek, Lindsey Beffa, Kevin Elias*, Robert DeBernardo*

Abstract #3 Analysis of outcomes and demographics of platinum-resistant ovarian cancer patients enrolled on clinical trial in community practice: A Retrospective Observational Study ***Alexandra R. Steck***, *Kiara Rouse, Nidhi Chawla, Barbara Mahar, Jovana Y. Martin, Timothy J. McElrath, Joyce N. Barlin**

Abstract #4 The association of non-puerperal uterine inversion with uterine malignancy: A systematic review. ***Surabhi Tewari,*** *Mary Kathryn Abel, Alexandra Bercow, Amy Bregar, Varvara Mazina, Allison Gockley, Alexander Melamed**

Abstract #5 Impact of GLP1RA plus Progestin Therapy on Uterine Preservation in Reproductive-Age Individuals with Endometrial Cancer and Hyperplasia. ***Tina Yi Jin Hsieh***, *Ting-Tai Yen, Michele Hacker, Katharine Esselen**

Abstract #6 Patterns of recurrence in a uterine-confined historic endometrial cancer cohort stratified by FIGO 2023 stage. ***Emily K. Zitkovsky***, *Alex E. Rosenthal, Kaitlin Nicholson, Sara Castro, Marcos Lepe, Andrew Wiechert, Joanne Jang, Leslie Garrett, Joseph Dottino, Meghan Shea, Katharine M. Esselen**

Abstract #7 Medical Aid in Dying: Practice Trends and Attitudes. ***Julia Greenwald***, *Leslie Bradford***

SECOND SCIENTIFIC SESSION (Friday, June 6, 2025):

TOPIC – "NGS and Genetics" (3:25 – 4:25 pm)

Moderators – Jessica DiSilvestro, MD and Alexander Melamed, MD, MPH

Abstract #8 Germline and Somatic Testing in Patients with Endometrial Carcinosarcoma and Impact of TP53 Somatic Mutation on Survival. *Isabela Covelli Velez,* ***Christina Onyebuchi****, Mary Kathryn Abel, Surabhi Tewari, Marisa Nucci, Michelle R. Davis*, Jessica D. St. Laurent*

Abstract #9 POLE mutated uterine carcinosarcoma (UCS) shows improved survival and significant changes in gene differential expression compared to non-mutated POLE uterine carcinosarcoma cases. ***Corinne Jansen****, Jasmine Ebott, Aileen Fernandez, Marzia Capelletti, Payton De La Cruz, Sharon Wu, Britt Erickson, Joyce Ou, Cara Mathews**

Abstract #10 Paired clinical molecular profiling of primary and recurrent tumors in patients with recurrent endometrial cancer. ***Diana Miao****, Colleen Feltmate*, Jessica St Laurent*

Abstract #11 Tumor molecular profiling by HER2 status among patients with ovarian and endometrial cancer. ***Shriya Perati****, Natalie Sands, Victoria Gill, Payton DeLaCruz, Matthew Oliver, Cara Mathews*, Julia Salinaro*

Abstract #12 Correlation between next-generation sequencing (NGS) versus conventional clinical HER2 testing in uterine serous carcinoma. ***Victoria M. Ettorre****, Stefania Bellone, Natalia Buza, Alessandro D. Santin**

Abstract #13 In vitro and in vivo activity of Datopotamab-deruxtecan, an antibody-drug conjugate directed to trophoblast cell-surface antigen 2 (TROP2) in uterine and ovarian carcinosarcoma. ***Michelle Greenman****, Stefania Bellone, Cem Demirkiran, Tobias Hartwich, Victoria Ettorre, Blair McNamara, Niccolo G. Santin, Namrata Sethi, Elena Ratner, Yang-Yang Hartwich, Alessandro D. Santin**

THIRD SCIENTIFIC SESSION (Saturday, June 7, 2025):

TOPIC – "Disparities/Barriers to Care" (8:30 – 9:40 am)

Moderators – Allison Gockley, MD and Rafael Gonzalez, MD

Abstract #14 Trends and Disparities in Ovarian Preservation for Early-Stage Low-risk Endometrial Cancer. ***Alexa Kanbergs***, *Nuria Agusti, Gabrielle Perkins, Chi-Fang Wu, David Viveros-Carreño, Karla Barajs, Jose Alejandro Rauh-Hain, Roni Nitecki Wilke, Alexander Melamed**

Abstract #15 Impact of primary language on symptom reporting and experience with symptom assessment tools in English- and Spanish-speaking Gynecology Oncology patients. ***Reyes M***, *Castro S, Rivera Casul G, Noor Chelsea N, Shea M, Esselen K**

Abstract #16 A Negative Study with a Positive Finding: An NCDB Study Exploring Disparities in the Administration of Immunotherapy Among Advanced Cervical Cancer Patients. ***Alicia M. Youssef***, *Siguo Li, Alexander Melamed**

Abstract #17 Attitudes and Barriers to Clinical Trial Enrollment in Gynecologic Malignancies. *Taliya Lantsman, Fatima Reyes,* ***Sara Castro***, *Alex Ede Rosenthal, Michele Hacker, Meghan Shea MD**

Abstract #18 Outcomes in Vulvar Cancer: Do Social Determinants of Health Matter? ***Jessica Kloppenburg,*** *Xiao J. Tong, Katherine Leung, Sharmilee Korets, MD (Sponsor: Susan Zweizig**)*

Abstract #19 Exploring the effects of access barriers on stage at diagnosis for patients with uterine malignancies: results from a single-center retrospective. ***Victoria Gill***, *Natalie Sands, Shriya Perati, Liana Haigis, Matthew Oliver, Cara Mathews*, Julia Salinaro*

Abstract #20 Factors Associated with Worsening Financial Toxicity in the First Year of Treatment in a Cohort of Gynecologic Oncology Patients. ***Alex E. Rosenthal***, *Nadiha Noor Chelsea, Annika Gompers, Emily K. Zitkovsky, Katherine Baumann, Michele Hacker, Katharine Esselen**

GRANT UPDATES and AWARD PRESENTATIONS

Moderators – Katina Robison, MD and Katharine Esselen, MD
(9:40-10:15 am)

2024 GRANT UPDATES

2024 Grant

Title: **"The Role of End-of-Life Doulas in Gynecologic Oncology"**
Update presented by Katherine Miller, MD

Members: Gabriela Weigel, MD, Corinne Jansen, MD, Chioma Anaemejeh, BA, Katherine Miller, MD, and Benjamin Margolis, MD

2024 Grant

Title: **"Sentinel Lymph Node Mapping and Detection with Indocyanine Green and Spy-Phi Handheld Camera Technology in Early-Stage Vulvar Cancer (PILOT)**
Update presented by Rafael Gonzalez, MD

Members: Rafael Gonzalez, MD, Katrin Eurich, MD, Jasmine Ebott, MD and Katina Robison, MD

2025 GRANT AWARD WINNER PRESENTATION

Title: "**The impact of serum vitamin D levels on paclitaxel-induced peripheral neuropathy."**
Presented by Janina Pearce, MD, PhD

Members: Janina Pearce, MD, PhD, Jessica DiSilvestro, MD and Katherine Miller, MD

Thank you to our NEAGO Pilot Grant Committee for their hard work during the grant review and selection process of submitted grants!

Grant Review Committee

Katina 'Tina' Robison and Katharine 'Kate' Esselen
(Committee Chairs)

Joyce Barlin, Murray 'Joe" Casey, Leslie Bradford, Amy Brown, Ilana Cass, Paul DiSilvestro, Niki Nikrui, John Schorge, Tom Randall and Ivy Wilkinson-Ryan

FOURTH SCIENTIFIC SESSION (Saturday, June 7, 2025):

TOPIC – "Cervix and Vulva Potpourri" (10:45 – 11:45 am)

Moderators – Katherine Miller, MD and Andrew Wiechert, MD

Abstract #21 Reducing lidocaine waste in the outpatient setting: A single-site quality improvement endeavor. ***Janina Pearce***, *Matthew Oliver**

Abstract #22 Effective detection of inguinal sentinel lymph nodes with intra-operative surgeon injection of technetium-99m. ***Diana Miao***, *Colleen Feltmate*

Abstract #23 Insights from Plastic and Reconstructive Surgery Wound Specialists in Managing Complex Vaginal/Vulvar Toxicities Following Radiation Therapy. *Ovya Ganesa,* ***Stephanie Mueller***, *Natalie Cain, Diana Miao, Colleen Feltmate*, Dennis P. Orgill*

Abstract #24 HPV Vaccination Rates Reflect Post-COVID Vaccine Hesitancy. ***Stephanie Harlow***, *Elizabeth Anderson, Ilana Cass, MD**

Abstract #25 Urine-Based Detection of High-Risk HPV: Advancing Non-Invasive Cervical Cancer Screening. ***Casey O'Brien***, *Amanda Maxfield, Shivaprasad Sathyanarayana, Alison Burklund, Amogha Tadimety, George Zanazzi, Jessica Bentz, Ilana Cass**

Abstract #26 Predicting lymph node metastasis in low-risk cervical cancer patients: Do all patients with stage IA2-IB1 require surgical nodal evaluation? ***Taylor Stewart***, *Nuria Agusti, David Viveros-Carreño, Surabhi Tewari, Alicia Youssef, Amy Bregar, Alejandro Rauh-Hain, Alexander Melamed**

FIFTH SCIENTIFIC SESSION (Sunday, June 8, 2025):

TOPIC – "Costs of Care" (9:00 – 9:50 am)

Moderators – Marguerite Palisoul, MD and Michael Cohen, MD

Abstract #27 Financial Toxicity and Survival Trends in Gynecologic Cancer. ***Rafaela G Toledo***, *Emily Zitkovsky, Katherine Baumann, Nadiha Noor Chelsea, Annika Gompers, Rafael R H Martin, Katharine Esselen**

Abstract #28 Longitudinal Assessment of Cost-Coping Strategies among Gynecologic Oncology Patients. ***Katherine Baumann***, *Annika Gompers, Nadiha Noor Chelsea, Joseph Dottino, Andrew Wiechert, Leslie Garrett, Katharine Esselen**

Abstract #29 Time toxicity of ovarian cancer care in the era of poly (ADP-ribose) polymerase inhibitors (PARPis). ***Katherine Baumann***, *Katharine Esselen*, Joseph Dottino, Rebecca Costa, Stephanie Argetsinger, Dennis Ross-Degnan, Anita Katharina Wagner*

Abstract #30 Venous thromboembolism incidence in patients receiving chemotherapy for gynecologic malignancies. ***Akanksha Srivastava***, *Jessica Kloppenburg, Sharmilee Korets, Susan Zweizig*; Larissa Mattei*

Abstract #31 Impact of Clinical Rotation Exposure on Obstetrics and Gynecology Residents' Specialty Choices. ***Oriana Krivenko***, *Morgan Cheeks, Caroline Tilley, Kate Esselen*, Emily Hinchcliff*

SIXTH SCIENTIFIC SESSION (Sunday, June 8, 2025):

TOPIC – "Case Reports and Genetics" (10:25 – 11:45 am)

Moderators – Matthew Oliver, MD

Abstract #32 Discrepancy Amongst Multifetal Gestations, Molar Pregnancies, and cell free DNA: A Case Report. *William Hayes,* ***Gurpreet Kaur****, Ravi Chokshi, Shaina Bruce, Edward Podczaski, Michael Belmonte, Joel Sorosky**

Abstract #33 Bevacizumab Induced Psychiatric Adverse Effects in A Patient with Ovarian Cancer. ***Lauren Robertson****, Shrisha Maskey, Melissa Henretta, Jennifer R. Jorgensen**

Abstract #34 *(Video Presentation)* A Novel Approach to Minimally Invasive Radical Hysterectomy for Early Cervical Cancer. ***Ashley Goreshnik****, Blair McNamara, Masoud Azodi*
(Sponsor: Alessandro Santin)*

Abstract #35 Malignant Brenner Tumor with Extensive Clear Cell Features: An Uncommon Histologic Finding with Diagnostic Challenges and Its Clinical Significance. ***John A Steinharter,*** *Corinne Jansen, Apsra Nasir, Marzia Capelletti, Hassan Ghani, M. Ruhul Quddus Ashley Stuckey*, Yun-An Tseng*

Abstract #36 Two Cases of High-Grade Serous Ovarian/Fallopian Tube Cancer with Unusual Metastatic Patterns. ***Shrisha Maskey****, Rose Emlein, X. Clare Zhou**

Abstract #37 Pilomatrix-like High-Grade Endometrioid Carcinoma. ***Leah N. Schwartz****, Victoria Wang, Michelle Hirsch, Marissa Nucci, Carolyn Krasner, Colleen Feltmate**

Abstract #38 Predictors of EIN or EC at the time of risk reducing hysterectomy for Lynch Syndrome. *Hadley Reid,* ***Sammy Little****, Andrea Pelletier, Colleen Feltmate*, Jessica St. Laurent*

Abstract #39 Immunohistochemistry for mismatch repair testing on endometrial intraepithelial neoplasia is cost-effective for early diagnosis of Lynch Syndrome. ***Hadley Reid****, Claire Packer, Danika Barry, Colleen Feltmate*, Jessica St. Laurent*

1. Is More Always Better? A Comparative Study of the Real-World Safety and Effectiveness of Metronomic Cyclophosphamide and Bevacizumab With or Without Pembrolizumab for Recurrent Ovarian Cancer

***Alicia M. Youssef**, Siguo Li, Sara Bouberhan, Amy Bregar, Varvara Mazina, Alexander Melamed**
Institution: Massachusetts General Hospital

Objective: To evaluate the efficacy and safety of metronomic cyclophosphamide and bevacizumab alone (CB) or in combination with pembrolizumab (CBP) among patients with recurrent ovarian cancer.

Methods: We conducted a multi-institutional retrospective cohort study of patients treated with CB or CBP for recurrent ovarian cancer from 2012 - 2024. The overall response rate (ORR) was defined as the proportion of patients with a complete or partial response. Net benefit (NB) was defined as the proportion of patients with a response or stable disease. Cox regression models and Kaplan Meier curves were used to estimate and summarize progression-free survival (PFS) and overall survival (OS). Multivariable models adjusted for age, number of prior lines of therapy, time since diagnosis, platinum sensitivity, BRCA status, and Charlson comorbidity index.

Results: We identified 163 patients, of whom 126 (77.3%) received CB and 37 (22.7%) received CBP. Most patients were non-Hispanic White (85.9%), with high grade (96.6%) serous (87.1%), platinum-resistant (76.7%) ovarian cancer. There were no statistically significant differences in age, BRCA status, median number of prior lines, or the proportion of platinum-resistant patients between both groups. The ORR was 19.8 vs 21.6% (p=0.81), and NB was observed in 44.8% vs 41.2% (p=0.71) in the CB arm and CBP groups, respectively. The median PFS was 5.2 versus 4.8 months (HR 1.02; CI 0.67 - 1.55, p=0.37) and median OS was 17.3 vs 15.2 months (HR 1.51; CI 0.93 – 2.46, p=0.96) in the CB and CBP groups, respectively. Adjustment for potential confounders produced similar results for PFS and OS. Seventeen (45.9%) patients in the CBP arm developed an immune reaction. Hospitalization rates were similar in both groups (25.4% vs 21.6%, p=0.64).

Conclusion: The addition of pembrolizumab to metronomic cyclophosphamide and bevacizumab was not associated with an improved response rate, PFS, or OS among patients with heavily pretreated recurrent ovarian cancer.

2. Survival Outcomes and Platinum Sensitivity in 21 vs 28 Day Cycles of Maintenance Bevacizumab for Recurrent Ovarian Cancer

***Andreea Dinicu**, Camilla Yu, Meng Yao, Kevin Krivanek, Lindsey Beffa, Kevin Elias*, Robert DeBernardo*
Institution: Cleveland Clinic

Objective: Bevacizumab is administered as maintenance therapy for ovarian cancer in 21-day cycles. Given its 20-day half-life, cycles can be reasonably extended to 28 days to improve quality of life. This study aims to assess differences in overall survival (OS), progression free survival (PFS), toxicity, and response to subsequent treatment of 21-day vs 28-day cycles of bevacizumab for patients with recurrent ovarian cancer.

Methods: This study included patients over 18 diagnosed with recurrent ovarian, primary peritoneal, or fallopian tube cancer, and receiving maintenance bevacizumab from 2018 to 2023. Normally distributed continuous variables were reported as mean and standard deviation. Other continuous and ordinal variables were reported using medians and interquartile range. Cox proportional hazards regression right-censored univariate models and log-rank tests were performed for PFS and OS.

Results: Of 54 patients included, 33 received 21-day cycles and 21 received 28-day cycles. No differences in baseline characteristics were noted. Median PFS was 21.1 months in the 21-day group vs 25.5 in the 28-day group (p=0.17). Five-year OS was 21.7% in the 21-day group vs 53.4% in the 28-day group (p=0.12). The only difference in toxicity included grade 1 non-central nervous system bleeding in 23.8% of the 28-day group and none in the 21-day group (p=0.006). 24 in the 21-day group and 15 in the 28-day group progressed on bevacizumab. Median platinum free interval (PFI) for the first progression was 9 months in the 21-day group vs 18 months in the 28-day group (p= 0.028). No differences were noted in platinum sensitivity at subsequent progressions or in PFI for second and third progressions.

Conclusions: Patients receiving bevacizumab on a 28-day cycle had clinically meaningful improvements in PFS and OS. This finding was not statistically significant perhaps due to sample size. Differences in survival may be mediated by platinum sensitivity. Further studies in larger populations are warranted.

3. Analysis of outcomes and demographics of platinum-resistant ovarian cancer patients enrolled on clinical trial in community practice: A Retrospective Observational Study

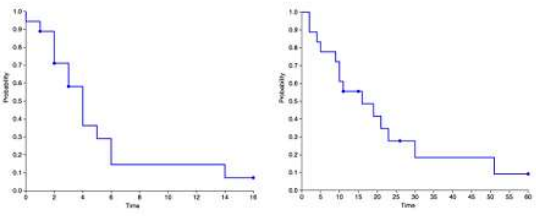
Alexandra R. Steck, *Kiara Rouse, Nidhi Chawla, Barbara Mahar1, Jovana Y. Martin, Timothy J. McElrath, Joyce N. Barlin1** - Institution: Touro College of Osteopathic Medicine-Harlem

Objective: To report on the outcomes and demographics of platinum-resistant recurrent ovarian cancer (PROC) patients enrolled on clinical trial in community practice.

Methods: This retrospective study conducted at a single practice in Albany, NY included 23 PROC patients enrolled in clinical trial over the past 15 years. Exclusion criteria were no treatment, loss to follow-up, or disqualified histology. Survival analyses were performed using GraphPad Prism, and adverse events were graded per NCI CTCAE v5 guidelines.

Results: Eighteen patients were included: one in phase I, nine in phase II, two in phase II/III, and six in phase III. The median age was 59 years, and median BMI was 29.9. The cohort was 94.4% White/Non-Hispanic, with one Hispanic/Latina patient. Forty-four percent had Medicare Part C, and the median travel distance for treatment was 26.8 miles. High-grade serous carcinoma was the predominant histological subtype, and 61% had Stage IIIC disease at initial diagnosis. The median ECOG status before treatment was 1, with two prior lines of chemotherapy. Clinical outcomes included nine partial responses (50.0%), two stable disease cases (11.1%), and seven cases with no response (38.9%). The objective response rate (ORR) was 50%, and the clinical benefit rate was 61.1%. The median progression-free survival (PFS) was 3.0 months, with a median overall survival of 13.0 months. Forty percent of patients experienced at least one hospitalization, with Grade 1 nausea and fatigue being the most common adverse events.

Conclusion: Our findings demonstrate a PFS of 3 months, aligning with established findings in PROC trials. The reported ORR of 50% and clinical benefit rate of 61.1% exceed published outcomes for phase III PROC trials. This study underscores the importance of increasing diversity in clinical trials, as the cohort was predominately white/non-Hispanic.



1. Progression Free Survival Curve. Time (months)
2. Overall Survival Curve. Time (months)

4. The association of non-puerperal uterine inversion with uterine malignancy: A systematic review

Surabhi Tewari, *Mary Kathryn Abel, Alexandra Bercow, Amy Bregar, Varvara Mazina, Allison Gockley, Alexander Melamed** - Institution: Massachusetts General Hospital

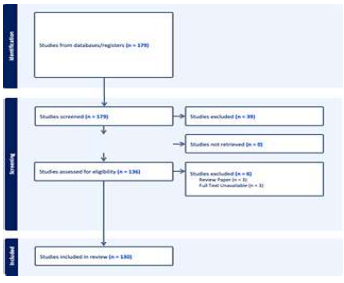
Objective: Cases of non-puerperal uterine inversion (UI) are rare. This systematic review describes the association between non-puerperal UI and uterine malignancy in published case reports and case series.

Methods: We searched MEDLINE, EMBASE, Web of Science, and Cochrane for studies published in English between 1980 – 2024 on the subject of non-puerperal UI. Diagnostic methods, treatment variables, and histopathologic diagnoses were abstracted from included studies. Cases associated with and without malignancy were compared using Wilcoxon rank sum and Pearson's chi-square tests.

Results: Of the 179 studies screened, 130 studies (72.6%) describing 131 cases were included (Figure 1). UI was primarily diagnosed by exam (n= 54, 41.2%), and re-inversion was attempted in 50 cases (40%). A majority of cases described hysterectomy (n= 108, 82.4%) for definitive management; the most common approach was abdominal (n= 87, 69.6%). The most common histopathology was leiomyoma (n= 66, 50.4%), and almost one-third (n= 40, 30.5%) of cases were associated with malignancy, including adenocarcinoma (n= 16, 40%), sarcoma (n= 13, 32.5%), and adenosarcoma (n= 7, 17.5%). Cases of UI associated with malignancy in comparison to benign pathologies occurred in older patients (58.8 years IQR 35.3 vs 44.0 years IQR 13.5, p= 0.012). Re-version attempts (n= 12, 30.0% vs n= 35, 42.2%, p= 0.12) and hysterectomy rates (n= 36, 90.0% vs n= 64, 77.1%, p= 0.14) did not differ between cases associated with and without malignancy, respectively. Abdominal hysterectomy was more common in cases associated with versus without malignancy (n= 31, 77.5% vs n= 52, 62.7%, p= 0.02). All deaths (n= 8, 6.3%) occurred in cases associated with malignancy outside of the peri-operative period.

Conclusion: Of the published cases of non-puerperal UI included, almost 1 in 3 were associated with uterine malignancy. A majority of cases described hysterectomy for management of non-puerperal UI regardless of association with malignancy.

Figure 1



5. Impact of GLP1RA plus Progestin Therapy on Uterine Preservation in Reproductive-Age Individuals with Endometrial Cancer and Hyperplasia

Tina Yi Jin Hsieh, *Ting-Tai Yen, Michele Hacker, Katharine Esselen** - Institution: Harvard Medical School/BIDMC

Objective: Fertility sparing options for endometrial hyperplasia (EH) or early-stage endometrial cancer (EC) women include oral progestin, levonorgestrel-releasing intrauterine device (IUD), and metformin. Given that EH/EC are associated with obesity, there may be potential role for glucagon like peptide receptor agonists (GLP1RA), although its fertility-sparing effects remain unknown.

Methods: Using the TriNetX Global Collaborative Network (5/1/2005–12/31/2023), we identified women ≤45 years old with EC/EH. Those initiating GLP1RA plus progestational agents (P4; including megestrol, megestrol acetate, provera, levonorgestrel-releasing IUDs) formed the GLP1RA group, while two comparator groups received either P4 alone (Cohort A) or metformin plus P4 (Cohort B). Women with hysterectomy before any treatment were excluded. Groups were 1:1 pairwise propensity-score matched for demographics, BMI, HbA1C, comorbidities, antidiabetic/estrogen use, healthcare utilization, and EH/EC diagnosis. Follow-up ended at hysterectomy, 18 months of follow-up, March 30, 2026 (query date), network exit, or loss to follow-up. Hazard ratios (HRs) with 95% CIs were calculated using Cox proportional hazards models.

Results: A total of 641 GLP1RA+P4 initiators were matched to P4-only users (follow-up time: 493.1±110.7 v. 471.9±149.4 days), while 200 GLP1RA+ P4 initiators were matched to metformin +P4 users (follow-up time: 483.3 ± 117.0 v. 491.0 ± 125.5days). Cohort A and B had mean ages of 40.0±7.0 and 41.1±7.3 years old. The GLP1RA + P4 initiators (21.1% EC) showed a significantly lower hysterectomy rate (HR: 0.58, 95% CI 0.41-0.82) compared to the P4-only users (23.9% EC). When compared to metformin+P4 initiators (22.5% EC), GLP1R+P4 initiators (18.9% EC) showed a lower hysterectomy rate (HR: 0.65, 95% CI 0.29-1.43), although the association was insignificant.

Conclusion: GLP1RA-P4 may help preserve the uterus in young women with EC and EH, although its impact on fertility requires further investigation. Further directions include assessing fertility treatment utilization, pregnancy rates, and time to fertility outcome analysis.

6. Patterns of recurrence in a uterine-confined historic endometrial cancer cohort stratified by FIGO 2023 stage

Emily K. Zitkovsky, *Alex E. Rosenthal, Kaitlin Nicholson, Sara Castro, Marcos Lepe, Andrew Wiechert, Joanne Jang, MD, Leslie Garrett, Joseph Dottino, Meghan Shea, Katharine M. Esselen** - Institution: BIDMC

Objectives: Adoption of the FIGO 2023 endometrial cancer staging system has been controversial due to the significant shift and increase in complexity from FIGO 2009. The aim of this study was to assess the use of adjuvant therapy and patterns of recurrence in uterine-confined endometrial cancer (EC) when stratified by FIGO 2023 stage.

Methods: We conducted a single-institution, retrospective study of patients diagnosed with uterine-confined EC after surgical staging from 2017-2021. Pathological samples were reviewed by gynecologic pathologists. Patients were assigned a FIGO 2023 stage based on available tumor characteristics. Demographics, adjuvant treatment received, recurrence, and date of death or last contact were determined via chart review. Standard statistical tests were used for analysis.

Results: Of 372 patients, 32% had FIGO 2023 stage IA1, 29% IA2, 9% IB, 9% IC, 3% IIB and 15% IIC disease. Treatment received was significantly different based on 2023 stage ($p<0.01$) All patients with 1A1 disease, and most with 1A2 disease (89%), were treated with surgery alone. Most patients with stage IB (97%) and IIB (91%) disease received only adjuvant radiation. About half of patients with stage IC (56%) and IIC (51%) EC received chemotherapy and radiation. Rate of recurrence varied significantly by 2023 stage ($p=0.03$; Table 1). Patients with stage IIB and IIC disease were most likely to have pelvic (9%, 9% respectively) and distant (18%, 18% respectively; $p<0.01$). There was no difference among stages in rates of vaginal or nodal recurrences.

Conclusions: In our single-institution, historic cohort, adjuvant treatment for uterine-confined EC varied significantly by FIGO 2023 stage. Incidence of pelvic and distant recurrence varied significantly by 2023 stage, while vaginal and nodal recurrence did not. This study suggests that 2023 staging could be used to optimize adjuvant treatment and surveillance algorithms for uterine-confined EC.

Table 1. Recurrence by FIGO 2023 Stage

Recurrence	IA1 (n=118)	IA2 (n=120)	IB (n=34)	IC (n=32)	IIB (n=11)	IIC (n=57)	Total (n=372)	p-value
Any Recurrence	5 (4.2%)	6 (5.0%)	6 (5.0%)	4 (12.5%)	2 (18.2%)	12 (21.1%)	33 (8.9%)	**0.03**
Vaginal	4 (3.4%)	4 (3.3%)	1 (2.9%)	1 (3.1%)	1 (9.1%)	0 (0%)	11 (3.1%)	0.65
Pelvic	0 (0%)	0 (0%)	1 (2.9%)	1 (3.1%)	1 (9.1%)	5 (8.8%)	8 (2.2%)	**<0.01**
Nodal	2 (1.7%)	1 (0.8%)	0 (0%)	0 (0%)	1 (9.1%)	1 (1.8%)	5 (1.3%)	0.28
Distant	1 (0.8%)	1 (0.8%)	4 (11.8%)	3 (9.4%)	2 (18.2%)	10 (17.5%)	21 (5.6%)	**<0.01**

* No patients with IIA disease in this cohort as disease would not be confined to uterus

7. Medical Aid in Dying: Practice Trends and Attitudes

Julia Greenwald, *Leslie Bradford**
Institution: Tufts University – Maine Track

Objective: Medial Aid in Dying (MAID) refers to the process of a terminally-ill person with a prognosis of six months or less receiving a lethal prescription from a physician to self- ingest and end their own life at will. In the United States, MAID is legal in Oregon, Washington, Montana, Vermont, California, Colorado, District of Columbia, Hawaii, Maine, New Jersey, and New Mexico. The Society of Gynecologic Oncology released a brief recap on the topic of MAID in 2023, calling attention to this therapy becoming increasingly relevant to the practice of gynecologic oncology. We wish to learn more about how gynecologic oncologists feel about MAID based on their own ethical and moral views, if and at what frequency they are prescribing MAID, and what barriers may be making the process more challenging. We hope that this work could spark discussion on this complex topic, help encourage official society guidance, point out opportunities for additional educational resources, and/or suggest ways to reduce barriers to MAID.

Methods: A HIPAA-compliant REDCap survey (currently in IRB approval process) will be sent to the NEAGO member email list. Eligibility includes all NEAGO members, including physicians and other healthcare professionals. The survey poses questions regarding basic respondent demographics, opinions about MAID, and possible experiences with MAID. The de-identified data will be stored on the REDCap server and will be handled by an honest broker. This study is not powered to make statistical comparisons between groups, but we may perform exploratory analysis with Chi square tests if we have a robust response rate.

Results: Results will be provided in a follow-up abstract, once available.

Conclusion: Conclusion will be provided in a follow-up abstract, once available.

8. Germline and Somatic Testing in Patients with Endometrial Carcinosarcoma and Impact of TP53 Somatic Mutation on Survival

Isabela Covelli Velez, ***Christina Onyebuchi****,*
Mary Kathryn Abel, Surabhi Tewari, Marisa Nucci, Michelle R. Davis, Jessica D. St. Laurent*
Institution: Brigham and Women's Hospital/MGH

Objective: Endometrial carcinosarcoma is a rare, aggressive high-grade endometrial carcinoma. There remains a paucity in the molecular understanding of endometrial carcinosarcoma and opportunity for personalized therapeutics. The objective of this study was to investigate the frequency of germline and somatic mutations in patients with endometrial carcinosarcoma as well as explore trends in survival.

Methods: This is a retrospective chart review study conducted at a single, tertiary hospital. All patients diagnosed with endometrial carcinosarcoma between January 2005 and December 2022 with either germline or somatic testing were included. A Kaplan-Meier curve was used to determine progression free survival (PFS).

Results: Of 210 patients diagnosed with endometrial carcinosarcoma, 53 (25.2%) underwent genetic testing. The majority were stage I (45.3%), White (75.5%), and non-Hispanic (88.7%). Germline mutations were identified in 20.6% of patients (n=34), with CHEK2, BRCA1/2, NBN, RECQL4, and BRIP1 being the most common. All 38 patients with somatic testing had positive mutations, with TP53 being the most frequent (n=31), followed by PIK3CA (n=12) and PTEN (n=9). Nineteen patients had both germline and somatic testing; four had both positive mutations, including two with matching mutations (BRIP1, NBN). Most patients were mismatch repair proficient (84.9%). The median PFS for patients with a TP53 mutation was 18 months, compared to a greater than 50% probability of survival at the longest time point for those without a TP53 mutation.

Conclusion: Germline mutations were present in approximately one-fifth of patients with endometrial carcinosarcoma, and all had somatic mutations. TP53 mutations were associated with worse PFS compared to those without this mutation. Further studies are needed to elucidate the underlying genetics of endometrial carcinosarcoma and their impact on survival.

9. POLE mutated uterine carcinosarcoma (UCS) shows improved survival and significant changes in gene differential expression compared to non-mutated POLE uterine carcinosarcoma cases

Corinne Jansen, *Jasmine Ebott, Aileen Fernandez, Marzia Capelletti, Payton De La Cruz, Sharon Wu, Britt Erickson, Joyce Ou, Cara Mathews**
Institution: Brown Univ/Women & Infants Hospital

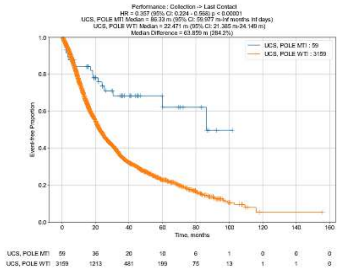
Objective: The current standard of care for UCS is still cytotoxic chemotherapy. As UCS was not included in the foundational molecular-based classification study and results from the RAINBO trial will take years to mature, here, we sought to leverage Caris' large genomic database to compare survival outcomes and molecular profiles of UCS patients with and without POLE mutations.

Methods: 3,218 UCS samples analysed by NGS (NextSeq/NovaSeq) or RNA (NovaSeq) (Caris Life Sciences). TMB totaled somatic mutations found per megabase pair. Real world overall survival (rwOS) was obtained from insurance claims and calculated from tissue collection to last contact. The hazard ratio (HR) was calculated by Cox proportional hazards model, and p-values were calculated by log-rank test. Pre-ranked gene set enrichment analysis (GSEA) analysed transcriptomic differences.

Results: 59 samples (1.83%) were POLE-mt. Median age was lower in POLE-mt compared to POLE-wt (62 vs 68, p<0.0001). POLE-mt patients had a smaller proportion of Black or African American patients (B/AA) but higher of White patients compared to POLE-wt (B/AA: 4.88% vs 34.4%; White: 92.5% vs 59%, p<0.0001). We identified 184 POLE mutations across 59 samples with the most common mutations being P286R (n=20), V411L (n=16) and S1906Y (n=5). Median TMB was higher in POLE-mt (238 vs 4, p<0.0001). rwOS was longer in POLE-mt compared to POLE-wt patients (mOS: 86.3 vs 22.5 mo; HR (95% CI): 0.36 (0.22-0.57), p<0.00001). GSEA of the Hallmarks of Cancer pathways showed enrichment of pathways involved in DNA Damage (NES: 1.50-1.66, FDR<0.05) and immune activity (NES: 1.71-1.95, FDR<0.005) in POLE-mt samples.

Conclusions: In the largest cohort analysis to date of UCS, POLE-mt was associated with improved survival compared to POLE-wt. Further studies are needed to investigate the potential mechanistic link between POLE mutations and DNA damage repair, immunogenicity, and clinical outcomes.

Figure 1: Kaplan Meier Curve: POLE-mt vs POLE-wt.



10. Paired clinical molecular profiling of primary and recurrent tumors in patients with recurrent endometrial cancer

Diana Miao, *Colleen Feltmate*, Jessica St Laurent*
Institution: Brigham and Women's Hospital

Objective: While molecular features of endometrial cancer are increasingly understood as being crucial to determining the prognosis and optimal treatment for newly diagnosed endometrial cancer, the genomic landscape of recurrent disease remains poorly defined. In this study, we describe changes in tumor genomics between paired primary and recurrent endometrial cancer samples.

Methods: Endometrial cancer patients with paired primary and recurrent clinical tumor sequencing were identified from a clinical genomics database (2006-2024). Retrospective chart review was performed to extract patient demographics, pathologic findings, treatment history, and clinical outcomes from therapy. Descriptive statistics were used to analyze tumor genomic characteristics, including mismatch repair (MMR) status, tumor mutational burden (TMB), pathogenic mutations, and copy number variations (CNVs).

Results: Eight patients were identified with targeted clinical sequencing on both primary endometrial cancer and recurrent tumor samples. Recurrent tumor samples were collected at a median of 55 months from initial staging surgery (range 17-70 months). Primary tumor histology included grade 1 endometrioid (N=1), grade 2 endometrioid (N=3), and serous (N=4). ProMisE molecular classification on primary tumors revealed MMRd (N=1), P53 mutant (N=4), and NSMP (N=3). Targetable variants included persistent high-level CCNE1 amplification in two patients. A de novo high-level ERBB2 amplification was found in the metastatic recurrence of a patient who achieved a partial response to trastuzumab deruxtecan. MMRd status was identified in both tumors from one patient and in a recurrent specimen only in another patient (with normal immunohistochemical staining on the primary specimen for MLH1, PMS2, MSH2, and MSH6).

Conclusion: Targeted genomic sequencing of recurrent endometrial cancers should be considered as part of clinical practice, as recurrent tumors may exhibit significant genomic evolution, acquiring new clinically targetable molecular alterations.

11. Tumor molecular profiling by HER2 status among patients with ovarian and endometrial cancer

Shriya Perati, *Natalie Sands, Victoria Gill, Payton DeLaCruz, Matthew Oliver, Cara Mathews*, Julia Salinaro* – Institution: Brown Univ/Women & Infants Hospital

Objective: HER2-directed therapies are increasingly important in the treatment of ovarian and endometrial cancers. Understanding biomarkers associated with HER2 overexpression may inform combinatorial treatment strategies. We aimed to characterize associations between tumor molecular alterations and HER2 status in endometrial and ovarian cancer.

Methods: We conducted a retrospective analysis using a clinical genomics database that includes all patients with gynecologic cancers at our institution who underwent Caris tumor molecular profiling. Patients in the database with ovarian or endometrial cancer who had Caris gastric HER2 immunohistochemistry scores available were included and classified as either HER2 low (0 or 1) or HER2 high (2 or 3). Fisher's exact test was used to evaluate associations between HER2 status and genomic alterations in ARID1A, CCNE1, PD-L1, FOLR1, and HRD-GSS for ovarian tumors and ARID1A, CCNE1, POLE, MMR status, and PD-L1 for endometrial tumors.

Results: There were 173 patients included. In the ovarian cohort (n=81), 27.2% were HER2 high and 72.8% were HER2 low. FOLR1 positivity was significantly more likely in HER2 low tumors (36.5%) than in HER2 high tumors (11.1%) ($p = 0.046$). In the endometrial cohort (n=92), 26.1% were HER2 high and 73.9% were HER2 low. ARID1A alterations were significantly more common in HER2 low tumors (48.6%) compared to HER2 high (22.7%) ($p = 0.047$). CCNE1 amplification was significantly more frequent in HER2 high tumors (22.7%) compared to HER2 low (5.9%) ($p = 0.033$). No other surveyed biomarkers showed significant associations with HER2 status in either endometrial or ovarian cancer.

Conclusion: A clinically significant percentage of patients with both endometrial and ovarian cancer had HER2 high tumors. HER2 low ovarian tumors were more likely to be FOLR positive, suggesting distinct molecular pathways for biomarker-directed treatments. CCNE1 amplification overlapped significantly with HER2 overexpression in endometrial cancer, emphasizing the importance of investigating combinatorial treatment strategies targeting both of these pathways.

12. Correlation between next-generation sequencing (NGS) versus conventional clinical HER2 testing in uterine serous carcinoma

Victoria M. Ettorre, *Stefania Bellone, Natalia Buza, Alessandro D. Santin** - Institution: Yale School of Medicine

Objective: Uterine serous carcinoma (USC) is a rare type of endometrial cancer with a poor prognosis and high recurrence rate. The human epidermal growth factor receptor 2 (HER2), encoded by the c-erbB2 gene, has become a prominent target in advanced/recurrent USC patients. Using clinical HER2 testing (immunohistochemistry (IHC) followed by fluorescence in-situ hybridization (FISH)), up to one-third of USC patients are HER2 positive. However, numerous NGS commercially available platforms can identify c-erbB2 alterations, potentially increasing the number of USC patients eligible for HER2-targeted therapy. The objective of this study was to determine the performance characteristics of NGS testing (Foundation Medicine) for determining HER2 positivity compared to the conventional clinical HER2 testing algorithm for women with USC.

Methods: We searched our NGS database (Foundation Medicine Yale University portal) for patients with USC as well as available/matched conventional clinical HER2 testing results (i.e., IHC/FISH assays). HER2 IHC scoring was considered positive by the Yale pathology department if scored as 3+, or 2+ with HER2 ratio of ≥2.0 by FISH, according to the endometrial cancer-specific HER2 scoring criteria. Positive IHC/FISH results were considered concordant with NGS if called "c-erbB2 gene-Amplified" by Foundation Medicine.

Results: We identified a total of 152 USC patients with clinical HER2 expression/amplification data as well as NGS results. Fifty-three patients (34.8%) were positive for HER2 overexpression/amplification by IHC/FISH. Twenty-nine patients (19.1%) were c-erbB2 amplified on NGS. NGS identified 2 cases with c-erbB2 amplification which were missed by clinical testing. Overall IHC/FISH correlation with NGS was noted to be 82%.

Conclusion: IHC/FISH has a strong correlation with NGS for HER2/c-erbB2 amplification in USC at 82%. Adding NGS to clinical testing can increase eligibility for HER2-targeted therapy and should be performed in tandem with IHC/ FISH in USC. However, clinical HER2 testing remains the gold standard and should not be abandoned.

13. In vitro and in vivo activity of Datopotamab-deruxtecan, an antibody-drug conjugate directed to trophoblast cell-surface antigen 2 (TROP2) in uterine and ovarian carcinosarcoma

Michelle Greenman, *Stefania Bellone, Cem Demirkiran, Tobias Hartwich, Victoria Ettorre, Blair McNamara, Niccolo G. Santin, Namrata Sethi, Elena Ratner, Yang-Yang Hartwich, Alessandro D. Santin** - Institution: Yale School of Medicine

Objective: Carcinosarcoma (CS) is an aggressive gynecologic malignancy that can originate in the uterus or ovary with poor prognosis. Datopotamab deruxtecan (Dato-DXd) is a novel antibody-drug-conjugate (ADC) directed to trophoblast cell-surface antigen (TROP2), a transmembrane-calcium-signal-transducer, to deliver DXd, the topoisomerase I inhibitor payload, to tumor cells. The objective of this study was to evaluate the expression of TROP2 in uterine and ovarian CS and the preclinical activity of Dato-DXd in CS primary tumor cell lines and cell-line derived xenografts.

Methods: We used immunohistochemistry and flow cytometry to evaluate TROP2 expression. Cell viability in CS primary tumor cell lines after exposure to Dato-DXd and a non-targeting control ADC (CTL ADC) was assessed through cytotoxicity assays. Antibody-dependent-cell-cytotoxicity (ADCC) against TROP2 overexpressing and non-expressing cell lines was evaluated with a 4-hour chromium release assay. In vivo activity of Dato-DXd was tested against TROP2 overexpressing CS xenografts by retro-orbital injection of treatment.

Results: Tumor cell lines overexpressing TROP2 were significantly more sensitive to Dato-DXd when compared to CTL ADC ($p=0.008$ and $p=0.04$). Dato-DXd and the monoclonal antibody datopotamab mediated ADCC in TROP2 overexpressing cell lines while no cytotoxicity was detected against TROP2 non-expressing cells in the presence of peripheral blood lymphocytes. Dato-DXd induced significant bystander killing of TROP2 non-expressing tumor cells when admixed with TROP2 overexpressing cells. Tumor growth-inhibition and increased survival occurred in TROP2 overexpressing mice models treated with Dato-DXd compared with controls, with minimal toxicity ($p<0.0001$).

Conclusions: Dato-DXd demonstrates preclinical activity in vitro and in vivo in TROP2 overexpressing CS.

14. Trends and Disparities in Ovarian Preservation for Early-Stage Low-risk Endometrial Cancer

Alexa Kanbergs, *Nuria Agusti, Gabrielle Perkins, Chi-Fang Wu, David Viveros-Carreño, Karla Barajs, Jose Alejandro Rauh-Hain, Roni Nitecki Wilke, Alexander Melamed,MD** - Institution: MD Anderson

Objective: Approximately 15% of women diagnosed with endometrial cancer are premenopausal. Treatment for early-stage disease involves surgical removal of the uterus and ovaries. Surgically induced menopause poses concerns including increased cardiovascular and cognitive risks. Given evidence supporting oncologic safety, ovarian retention may be considered in early-stage, low-risk endometrioid cancer. This study aimed to assess national trends among women with stage IA endometrioid endometrial cancer and identify patient and sociodemographic factors influencing ovarian retention.

Methods: We conducted a retrospective cohort study using the National Cancer Database, including women under 45 diagnosed with stage IA, grade 1 or 2 endometrioid EC between 2004 and 2021. Time trends were assessed using the Cochran-Armitage trend test, and average annual percent change (AAPC) was calculated using a Poisson model. Group differences were evaluated using Chi-squared or Fisher's exact tests, and logistic regression assessed associations between ovarian retention and exposures of interest.

Results: A total of 4,343 women met inclusion criteria. Between 2004-2021, the rate of ovarian preservation in women with stage IA, grade 1 or 2 endometrioid cancer who underwent hysterectomy declined from 16.8% to 3.7% (AAPC 8.1%; 95% CI, –0.002% to 15.5%; $P < .001$). Logistic regression showed older age (OR 0.94, 95% CI 0.92–0.96, $P < .001$), grade 2 disease (OR 0.47, 95% CI 0.34–0.63, $P < .0001$), and treatment at academic/research institutions (OR 0.74, 95% CI 0.60–0.91, $P = .006$) were associated with decreased ovarian preservation. Race/ethnicity, insurance, income, urban/rural residence, and distance to the diagnosing facility were not significantly associated with ovarian retention.

Conclusions: Despite evidence supporting the oncologic safety of ovarian retention in low-risk endometrial cancer, rates remain low and have declined. Furthermore, patients at academic centers have decreased odds of ovarian retention. Further research is needed to understand the drivers behind these trends.

15. Impact of primary language on symptom reporting and experience with symptom assessment tools in English- and Spanish-speaking Gynecology Oncology patients

Reyes M, *Castro S, Rivera Casul G, Noor Chelsea N, Shea M, Esselen K** - Institution: BIDMC

Background: Effective identification and management of symptoms in patients with advanced gynecologic cancers is essential for high-quality care. However, standardized symptom screening tools are lacking in gynecologic oncology, and the impact of primary language on symptom reporting remains poorly understood.

This study aimed to explore differences in initial symptoms, symptom burden, and reporting preferences between English- and Spanish-speaking patients. A secondary aim was to assess attitudes toward symptom screening tools.

Methods: Patients with advanced or recurrent gynecologic cancer participated in virtual, language-concordant focus groups conducted in English or Spanish. Sessions followed a semi-structured guide and lasted one hour. A validated symptom screening tool was administered, and participants provided feedback. Transcripts were translated, reviewed, and thematically analyzed by three investigators with consensus resolution.

Results: Twenty-one patients participated (85.7% English-speaking; 14.3% Spanish-speaking). The cohort was racially and ethnically diverse with most having ovarian (65%) or uterine (20%) cancer, and 57.1% with recurrent disease. Mis-attribution of symptoms by patients and providers was common and may have contributed to delays in diagnosis. Mood-related symptoms were frequently reported across both language groups, highlighting the need for integrated emotional support. Spanish-speaking patients described more severe symptoms at presentation and greater communication challenges, particularly related to interpreter use. In contrast, English-speaking patients reported a broader range of symptoms, including emotional and treatment-related concerns. Although open-ended conversations were preferred by all participants, checklists were viewed as useful for prompting recall. All English speakers completed the symptom screening tool, whereas none of the Spanish speakers did, suggesting barriers beyond language, including literacy, technological proficiency, and cultural context.

Conclusion: Language plays a critical role in symptom reporting and tool engagement. Culturally and linguistically tailored symptom assessment strategies are needed to address these disparities and promote equitable care for patients with gynecologic cancers.

16. A Negative Study with a Positive Finding: An NCDB Study Exploring Disparities in the Administration of Immunotherapy Among Advanced Cervical Cancer Patients

Alicia M. Youssef, *Siguo Li, Alexander Melamed** Institution: Massachusetts General Hospital

Objective: To investigate the role of race on the administration of immunotherapy (IO) among patients with stage IV cervical cancer following the publication of KEYNOTE-826 in 2021.

Methods: This was a retrospective cohort study utilizing the National Cancer Database (NCDB). We included patients with stage IV adenocarcinoma, adenosquamous carcinoma, and squamous cell carcinoma of the cervix diagnosed in 2022. Proportions were used to estimate the administration of IO. Multivariable models adjusted for age, race, insurance, education, Charlson-Deyo comorbidity scores, geography, distance to treatment facility, as well as treatment facility type, location, and volume.

Results: There were 937 cases identified in the NCDB, of which 368 (39.3%) received IO and 569 (60.7%) did not. A higher proportion of patients received IO at age < 65 compared to > 65 (74.5% vs 25.5%). When controlling for all other variables, higher education was associated with a greater likelihood of IO receipt (RR 1.46, CI 1.10 – 1.95, p=0.01). Patients with Charlson-Deyo comorbidity scores > 2 were less likely to receive IO (RR 0.71, CI 0.52 – 0.98, p=0.038). There were no statistically significant differences in administration of IO associated with treatment center type (RR 1.05, CI 0.89 – 1.23, p=0.55) or center volume (RR 0.95, CI 0.79 – 1.13, p=0.55). Proportions of patients receiving IO in urban verses rural communities was also similar, at 33.3 and 39.4% (p=0.57), respectively. Hispanic patients received IO at higher rates than White, Black, and Asian patients at a rate of 47.2% compared to 37.6%, 38.5%, and 38.1%, respectively. Even after adjustment for demographic and tumor factors, the increased receipt of IO among Hispanic patients could not be explained.

Conclusions: No racial disparities were observed in the administration of IO among racial groups, nor were there disparities recognized among traditionally marginalized groups. Interestingly, the overall administration IO was lower than expected, at 39.3%.

17. Attitudes and Barriers to Clinical Trial Enrollment in Gynecologic Malignancies

Taliya Lantsman, Fatima Reyes, ***Sara Castro****, Alex Ede Rosenthal, Michele Hacker, Meghan Shea**
Institution: BIDMC/Harvard Medical School

Objectives: Clinical trials have resulted in innovation in gynecologic oncology care. Success of these trials requires recruitment of diverse patients. The objectives of this study were to 1) quantify the knowledge and attitudes of gynecologic oncology patients towards clinical trials and; 2) identify areas of potential improvement in trial enrollment.

Methods: Patients with gynecologic cancers seen in medical oncology clinics were invited to complete an IRB-approved survey from February 2024 through September 2024. Chart review was completed to correlate survey results with demographic and clinical data.

Results: Forty-three patients completed the survey with equal distribution in age above (51%) or below (49%) 65. Most were white (70.8%) or African American/AfroLatina (25%) and spoke English (81.6%) or Spanish (16.3%). Diagnoses were predominantly ovarian (51%), endometrial (22.4%), or cervical (10.2%) cancer. While 91% were familiar with clinical trials, only 40% had discussions about trials with their physicians. Patients identified physician encouragement as the largest influence to participate. For most, treatment of cancer symptoms and access to innovative treatment would influence their decision to participate. Effective treatment was the most common perceived benefit while fear of side effects was the most reported barrier to enrollment, followed by cost concerns. More information about trials was the most selected intervention to increase enrollment.

Conclusions: Physicians play a significant role in influencing participation. While almost all patients cite doctors as their initial source of information regarding trials, less than half had discussed trials with providers. This highlights the role that physicians could play in discussing clinical trials with patients and alleviating concerns regarding side effects. Interventions with a focus on availability of care and trial costs may increase trial enrollment. Further research should focus on implementing interventions that address these barriers and increase equity in clinical trial participation.

18. Outcomes in Vulvar Cancer: Do Social Determinants of Health Matter?

Jessica Kloppenburg*, Xiao J. Tong, Katherine Leung, Sharmilee Korets (Sponsor: Susan Zweizig*)*
Institution: UMass Medical Center

Objective: To examine effects of insurance type and Area Deprivation Index (ADI) on vulvar cancer stage at diagnosis, treatment, and outcomes.

Methods: Retrospective cohort study of patients with invasive vulvar cancer are identified by chart review (2017-2023). ADI was categorized into low (5-25), medium (26-35), or high (36-79) national percentile ranks. Lower ADI signifies lower level of socioeconomic disadvantage. Logistic regression was performed to identify the influence of insurance status and ADI on cancer stage at diagnosis, treatment modality (surgery vs chemoradiation), and time from diagnosis to treatment, adjusted for age. Mortality analyses additionally adjusted for stage.

Results: 64 patients were identified: 41 (64%) privately and 23 (36%) publicly insured. Public insurance increased likelihood of diagnosis at stage IV vs stage I (RRR 13.0 p=0.029). ADI was associated with stage at diagnosis: low ADI (lower disadvantage) was associated with earlier stage, and higher ADI with advanced stage (p=0.04). Neither ADI nor insurance had an impact on time from initial visit to first treatment, treatment modality, or mortality. While higher ADI was associated with increased distance to tertiary care center (low=16.8, medium=13.1, high=23.3 miles; p=<0.001), there were no differences observed between rural vs urban zip codes or distance to care for treatment outcomes.

Conclusion: Vulvar cancer patients with public insurance and greater socioeconomic disadvantage had higher likelihood of stage IV disease. These variables did not impact treatment modality, time to treatment, or all-cause mortality. Despite increased odds of advanced disease at diagnosis, suggesting barriers to care delaying initial detection, patients had equivalent care and outcomes once referred to gynecologic oncology. This emphasizes the need for increased routine gynecologic and primary care for timely diagnosis. Future investigation should evaluate the impact of additional social determinants using larger, more diverse populations.

19. Exploring the effects of access barriers on stage at diagnosis for patients with uterine malignancies: results from a single-center retrospective

Victoria Gill, *Natalie Sands, Shriya Perati, Liana Haigis, Matthew Oliver, Cara Mathews*, Julia Salinaro*
Institution: Brown Univ/Women & Infants Hospital

Objectives: Uterine cancer typically presents with early symptomatic bleeding; delayed presentation can result in diagnosis at an advanced stage with poor prognosis and limited treatment options. This study aimed to explore the impact of geodesic distance from our institution and patient-reported distress at intake on endometrial cancer stage at diagnosis and investigate associations of these factors with tumor p53 status, a marker of aggressive disease.

Methods: This retrospective study used a clinical genomics database for patients with gynecologic cancers treated at a single academic institution, focused on primary uterine malignancies. Data on stage at diagnosis, tumor p53 status, home zip code, and distress, (from the NCCN Distress Thermometer), were extracted. Stage at diagnosis was grouped into early (I or II), or late (III or IV), and distress scores into low (0-2), moderate (3-6), and high (7-10). Geodesic distance to our institution was calculated and grouped into 0-10, 10-25, and 25+ miles. Chi-square tests of independence were performed for association analysis.

Results: One hundred patients were identified, with 75 having tumor p53 status available. For patients with distress scores available (n=62), tumor p53 status was known for 53. There was no association between distress and stage at diagnosis, (X^2 (2, N = 62) = 0.67, p = .71), nor between distress and tumor p53 status (X^2 (2, N=53) = 1.13, p=.57). There was no association between geodesic distance and stage at diagnosis (X^2 (2, N = 100) = 0.09, p = .95), nor in tumor p53 status (X^2 (2, N = 75) = 2.41, p = .30).

Conclusions: No evidence was found supporting associations between geodesic distance or distress and late diagnosis of uterine malignancies or tumor p53 status. This may be unique to our patient population, served by multiple academic institutions in the dense states of RI, MA, and CT.

20. Factors Associated with Worsening Financial Toxicity in the First Year of Treatment in a Cohort of Gynecologic Oncology Patients

Alex E. Rosenthal, *Nadiha Noor Chelsea, Annika Gompers, Emily K. Zitkovsky, Katherine Baumann, Michele Hacker, Katharine Esselen** - Institution: BIDMC

Objectives: The objective of this study was to identify demographic, medical, and social factors associated with worsening financial toxicity (FT) over a one-year initial treatment period.

Methods: New patients in our gynecologic oncology clinic were eligible. Patients completed a baseline and three-, six-, and 12-month surveys. Included patients completed a baseline survey and at least one follow-up survey. Chi-square and Wilcoxon rank sum tests were used to compare differences between groups with no decline vs any decline in COST score.

Results: 150 respondents completed the baseline survey and 52% had mild, 36% moderate and 11% severe FT. Over half of patients had benign or preinvasive, 39% had early stage, and 6% had advanced stage disease. Fifty-three percent (n=68) of patients had any decline in COST score. Median decline in COST score was six points. When comparing patients with no vs any decline in COST score, respective mean COST score at baseline was 24 vs 29 ($p<0.01$). Baseline FT ($p<0.01$), advanced stage disease ($p=0.02$), and hospitalization ($p=0.03$) were associated with a decline in COST score. Patients with a decline in COST score were significantly more likely to utilize cost-coping strategies, including avoidance of care and using savings or borrowing money to afford care.

Conclusions: Among a cohort of gynecologic oncology patients with predominantly low risk disease, those with mild FT at baseline were most likely to have worsening FT in the first year of treatment. Hospitalization and advanced disease were associated with worsening FT. These results suggest that all patients, including those with mild FT at baseline, should be included in ongoing screening for FT.

21. Reducing lidocaine waste in the outpatient setting: A single-site quality improvement endeavor

***Janina Pearce**, Matthew Oliver**
Institution: Brown Univ/Women & Infants Hospital

Objective: Health care waste and supply shortages are economic, environmental, and quality of care problems. The objectives of this study were to better understand provider use patterns, obtain actual use data, and project waste and cost savings with alternative stocking strategies for lidocaine in a single-institution, single-clinic site within gynecologic oncology.

Methods: An anonymous survey querying lidocaine use was sent to all gynecologic oncology providers at Women and Infants Hospital at the Blackstone clinic (6 attendings, 4 fellows, and 3 NPs). Care New England pharmacy staff provided current and alternative lidocaine stocking volumes and prices. Actual clinic lidocaine use was logged by medical assistants, then extrapolated to provide an estimate for cost and waste for a 12-month period. This was also calculated for the alternative options provided by the pharmacy team for comparison.

Results: Of 13 providers, 12 (92.3%) completed the survey. All respondents (100%) reported using lidocaine injections for in-office procedures. Frequency of perceived use varied: 5/12 (41.7%) reported weekly use, 6/12 (50%) reported monthly use, and 1/12 (8.3%) reported once every few month use. The most common injected volume was 2mL (range 1-5mL), and the most common maximum injected volume was 10mL (range 2-10mL). Extrapolated data from actual-use volumes predict at least two liters of lidocaine waste in a 12-month period. The same calculations with alternative supply volumes predict up to 97.6% waste reduction, and up to 49.5% cost savings.

Conclusion: Utilization of lidocaine in this single-site clinic was less than anticipated based on provider recall, however, still with notable resource waste. Alternatives to the current lidocaine supply exist which can significantly minimize this waste while also providing cost savings. Ongoing work is needed to determine the ideal change in supply and to demonstrate actual-use and cost savings.

22. Effective detection of inguinal sentinel lymph nodes with intra-operative surgeon injection of technetium-99m

***Diana Miao**, Colleen Feltmate*
Institution: Brigham and Women's Hospital

Objective: Technetium-99m (99mTc) injection for sentinel inguinal lymph node (LN) identification is standardly performed by injection of radiotracer by Nuclear Medicine pre-operatively on the day of or day prior to planned radical vulvectomy, requiring an additional healthcare visit and invoking patient pain and discomfort. In this study, we describe outcomes with an alternative clinical workflow with intra-operative (intra-op) 99mTc injection in the operating room following induction to anesthesia.

Methods: A retrospective chart review was performed of all patients who underwent radical vulvectomy with unilateral or bilateral sentinel inguinal LN dissection for vulvar squamous cell carcinoma from June 2023 - March 2025 at a single institution with intra-operative (intra-op) or pre-operative (pre-op) 99mTc and intra-op indocyanine green (ICG) injection.

Results: Twenty patients were included, including 9 patients (16 groins) who received intra-op 99mTc and ICG and 8 patients (13 groins) who received pre-op 99mTc and intra-op ICG. Intra-op 99mTc traced to a sentinel LN in 15/16 groins (94%), while pre-op 99mTc traced in 7/13 (54%) groins. This corresponded to a colocalization rate with both ICG and 99mTc in 15/16 (94%) of groins for intra-op 99mTc and 5/13 (38%) of groins for pre-op 99mTc. There were no positive LN on final pathology in the intra-op 99mTc group, while two patients in the pre-op 99mTc group had metastatic LN involvement with extracapsular spread.

Conclusion: Rates of sentinel LN detection with intra-op 99mTc injection compares favorably to pre-op 99mTc injection. While not directly measured in this study, intra-op 99mTc injection may both improve patient satisfaction by eliminating need for a painful injection while awake and decrease healthcare costs by reducing the number of unique appointments needed for a sentinel LN procedure. Additional optimization of an intra-operative 99mTc injection workflow may improve healthcare quality and efficiency while maintaining high oncologic accuracy for sentinel LN detection.

23. Insights from Plastic and Reconstructive Surgery Wound Specialists in Managing Complex Vaginal/Vulvar Toxicities Following Radiation Therapy

Ovya Ganesa, ***Stephanie Mueller****, Natalie Cain, Diana Miao, Colleen Feltmate*, Dennis P. Orgill*
Institution: Brigham and Women's Hospital

Objective: Radiation therapy (RT) is crucial for treating vaginal and vulvar malignancies, but it is associated with significant toxicities, including chronic pain, sexual dysfunction, and delayed wound healing. These issues can substantially impact the quality of life in cancer survivors and inhibit cancer-directed treatment in patients with recurrent disease. Here, we describe collaborative efforts with Plastic Surgery and Gynecologic Oncology in managing complex radiation-induced wounds.

Methods: Records of two patients with severe vaginal/vulvar radiation wounds treated in a wound center at a tertiary care center were reviewed retrospectively.

Results: Case 1 involves a 71-year-old woman with a history of invasive ductal carcinoma (IDC) in remission and vulvar squamous cell carcinoma (VSCC). After vulvectomy and chemoradiation, she developed acute vulvar toxicity, managed with sitz baths, topical lidocaine, petrolatum jelly, fluconazole, and cephalexin. Three years later, recurrent VSCC required vulvectomy with reconstruction, but she suffered wound dehiscence and necrosis, managed with sharp debridement, hypochlorous acid solution, methylrosanilinium chloride, silver-impregnated hydrofiber dressings, and silicone dressings. Unresolved VSCC required a third vulvectomy.

Case 2 is a 73-year-old woman who developed metastatic endometrial adenocarcinoma, treated with hysterectomy with bilateral salpingo-oophorectomy and chemoradiation. Two years later, she developed a vaginal recurrence with a necrotic mass causing urethral obliteration. Treatment included topical lidocaine, petrolatum jelly, hydrogen peroxide, and nystatin powder. Necrosis was managed with collagenase ointment, sharp debridement, and hyperbaric oxygen therapy with topical hypochlorous acid solution over healing tissue, over a period of several months.
In both cases, wound healing hindered cancer-directed treatment, resulted in multiple hospitalizations, and led to chronic opioid usage.

Conclusion: These cases exemplify strategies to promote wound healing of radiation-induced severe vaginal/vulvar toxicities. A multidisciplinary approach focused on pain, odor reduction, and creating a moist healing environment is often palliative due to the complexity of these cases.

24. HPV Vaccination Rates Reflect Post-COVID Vaccine Hesitancy

Stephanie Harlow*, Elizabeth Anderson, Ilana Cass**
Institution: Dartmouth Hitchcock

Objective: Mandatory COVID19 vaccination policies led to an increase in vaccine hesitancy. Historically, the Human Papilloma Virus (HPV) vaccine has been the subject of vaccine hesitancy compared to other routine vaccines such as Tetanus, Diphtheria, and Acellular Pertussis (Tdap). We assessed HPV vaccinations rates compared with Tdap following the introduction of the COVID19 vaccine in the largest health system in New Hampshire.

Methods: Records of HPV and Tdap administrations for individuals ages 9 - 18 between March 2019 and May 2023 were pulled. HPV initiation and Tdap rates were assessed in three time periods: baseline, prior to the pandemic (3/19-2/20); pandemic, prior to the COVID19 vaccine (3/20-5/21); and post-vaccine, following widespread availability of the COVID19 vaccine for adolescents (5/21-5/23). Rates were also assessed in urban versus rural counties.

Results: Records from 23,237 discrete patients were pulled. Rates of first HPV vaccines per day during each period were: Baseline, 10.38; Pandemic, 10.05; Post-vaccine, 9.14. No significant difference was noted between the baseline and pandemic periods ($p=0.148$), though a significant decrease was noted post-vaccine compared to baseline ($p < 0.001$). Tdap rates in the same periods were 8.18, 8.21, and 9.88, respectively, with a significant increase in Tdap rates post-vaccine compared to baseline ($p < 0.001$). When comparing urban versus rural counties, HPV initiation rates fell in the urban cohort during the pandemic ($p = 0.005$) and post-vaccine ($p < 0.001$) periods compared to baseline, while in the rural cohort, there was no difference across the pandemic ($p= 0.548$) or post-vaccine ($p=0.459$) periods when compared to baseline.

Conclusion: In this large dataset, HPV initiation rates saw a decline, particularly in the urban setting, following introduction of the COVID19 vaccine, while Tdap rates increased post-vaccine. Further research is needed into the root causes of these trends in HPV-specific vaccine hesitancy.

25. Urine-Based Detection of High-Risk HPV: Advancing Non-Invasive Cervical Cancer Screening

***Casey O'Brien**, Amanda Maxfield, Shivaprasad Sathyanarayana, Alison Burklund, Amogha Tadimety, George Zanazzi, Jessica Bentz, Ilana Cass** - Institution: Geisel School of Medicine-Dartmouth

Objective: Improvements in HPV vaccination and screening have decreased cervical cancer mortality, but 15% of patients in the US remain unscreened. Reasons include prior sexual trauma, discomfort and limited access to gynecology providers. HPV testing in urine offers a potential solution to overcome some of these and improve screening. We sought to determine the efficacy of the COBAS 6800 in detecting high-risk HPV DNA in urine compared to cytology.

Methods: Patients receiving a routine pap smear (n=47) or presenting for a colposcopy after an abnormal pap smear (n=38) were identified, consented and a dirty catch urine was collected. Urine was centrifuged and resuspended 4:1, EDTA added, and frozen at -80°C. Once thawed, urine was mixed 1:1 with PCR media and high-risk HPV PCR was performed on COBAS 6800.

Results: 85 patients had paired pap smears and urine samples collected. Thirty-five (41%) had high-risk HPV detected on their pap smears - nine with HPV16, one with HPV18, and 25 with other high-risk HPV. Nine (11%) were diagnosed with CIN II-III based upon colposcopic-directed biopsies. The sensitivity, specificity, and positive predictive value of urine HPV detection compared to cervical cytology HPV testing were 60%, 92%, and 84%, respectively. HPV detection in urine was significantly higher in patients with a current or previous abnormal pap smear (p=0.005, p=0.01, respectively) and was not associated with a higher grade pap smear or biopsy results.

Conclusion: High-risk HPV testing in urine performs well compared to the gold standard cervical cytology with very high specificity and positive predictive values. Detection of HPV in urine correlated with a prior or current abnormal pap smear, but was not seen more in women with high grade compared to low grade cervical dysplasia. Urine HPV testing offers a non-invasive technique which merits further evaluation as a screening tool for cervical cancer.

Detection of high-risk-HPV in urine compared to cervical cytology using COBAS 6800

	Urine HPV positive (n = 25)	Urine HPV negative (n= 60)	
Pap HPV high-risk positive			
HPV 16 (n = 9)	6	3	
HPV 18 (n = 1)	1	0	
HPV HR Other (n = 25)	14	11	
Pap HPV negative	4	46	
History of HPV			p-value
Yes	21 (84%)	23 (38%)	0.27
No	2 (8%)	7 (12%)	
History of Abnormal Pap			
Yes	21 (84%)	33 (55%)	**0.01**
No	4 (16%)	27 (45%)	
Current Pap Result			
Normal, NILM, HPV+,	9 (36%)	41 (68%)	**0.005**
ASCUS, LSIL	15 (60%)	14 (23%)	
ASC-H, AGC	1 (4%)	5 (8%)	
Current Biopsy Result			
ASCUS/CIN1	7 (28%)	4 (7%)	1
HSIL/CIN2-3	5 (20%)	4 (7%)	

26. Predicting lymph node metastasis in low-risk cervical cancer patients: Do all patients with stage IA2-IB1 require surgical nodal evaluation?

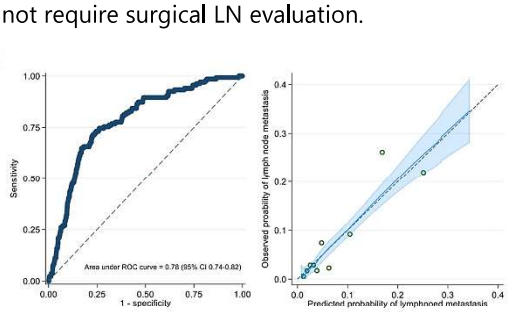
***Taylor Stewart**, Nuria Agusti, David Viveros-Carreño, Surabhi Tewari, Alicia Youssef, Amy Bregar, Alejandro Rauh-Hain, Alexander Melamed** Institution: Brigham and Women's Hospital/MGH

Objective: To preoperatively stratify cervical cancer patients who have a low risk of lymph node (LN) metastasis and may be candidates for simple hysterectomy without surgical LN evaluation.

Methods: We identified patients who underwent cancer-directed surgery, including LN evaluation, ≤ 2cm, squamous cell, adenosquamous, or adenocarcinoma of the cervix in a US Commission on Cancer accredited program between 2010 and 2020. We excluded patients with lymphovascular space invasion (LVSI), stage IA disease, and those with unknown lymph node status, tumor size, grade, or LVSI status. After splitting the cohort into a training set (80%) and a test set (20%), we fit adaptive lasso models to select a subset of predictors and estimate a parsimonious logistic regression model. We inspected covariate patterns to establish predictive simplified clinical criteria. We evaluated the final model's discrimination, calibration, and test accuracy for distinguishing patients at low risk of LN metastasis (<2%).

Results: We identified 8,729 patients where 6,983 were assigned to the training set and 1,746 to the test set. The final model, estimated in the training set, utilized age, tumor size, LVSI status, grade, and grade-by-LVSI interaction as predictors. In the test set, this model had good discrimination (AUC 0.78) and near-perfect calibration (Figure 1). The model had a sensitivity and negative predictive value (NPV) for LN metastases of 97.8% and 99.3%, respectively. The simplified clinical criteria, based on the absence of LVSI and grade 1 tumor of any size, grade 2 tumor <10 mm, or grade 3 tumor < 5 mm had a sensitivity and NPV of 93.3% and 98.5%, respectively.

Conclusions: Using cancer registry data, we developed a predictive model and simplified clinical criteria to identify cervical cancer patients at very low risk for LN metastasis. If validated, this approach could help identify patients who may not require surgical LN evaluation.



Validation of a predictive model for lymph node metastasis in low-risk cervical cancer. The receiver operating characteristic curve shows good discrimination (left). In the calibration curve (right), the smoothed plot of observed versus predicted probabilities (solid line and confidence band) overlies the dashed line that represents perfect calibration.

27. Financial Toxicity and Survival Trends in Gynecologic Cancer

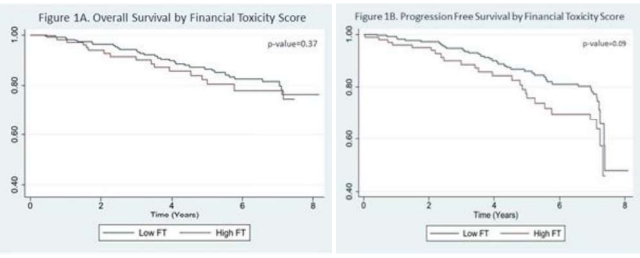
***Rafaela G Toledo**, Emily Zitkovsky, Katherine Baumann, Nadiha Noor Chelsea, Annika Gompers, Rafael R H Martin, Katharine Esselen, MD**

Objective: Financial toxicity (FT) due to cancer is associated with worse quality of life and delays in care, but its correlation with survival outcomes remains underexplored. The aim of this study was to investigate the association between FT and survival in individuals with invasive gynecologic cancers.

Methods: This was a retrospective study of gynecologic oncology patients who completed a FT evaluation using the Comprehensive Score of Financial Toxicity (COST) tool in discrete study periods from 2017-2023. High financial burden was defined as COST <23. Demographic and disease characteristics along with dates of recurrence and death were collected. Kaplan-Meier and Cox proportional hazards regression assessed the association of FT with survival outcomes.

Results: The study included 333 participants. The median age was 63 years (interquartile range [IQR], 54–70). Uterine cancer was the most prevalent (50.5%), followed by ovarian (28.5%), cervical (13.5%), vulvar (4.2%), and vaginal (3.3%). Median follow up was 5 years (IQR 2.4–7.1). Recurrence was observed in 88 participants (26.4%), and 61 (18.3%) deceased. Median FT score was 29 (IQR, 21–35.2) and 30.6% had COST scores <23. Patients with higher financial burden trended toward worse overall survival (OS) (HR 1.30; 95% CI, 0.74–2.30) and progression free survival (PFS) (HR 1.54, 95% CI 0.94–2.5); however, these results were not statistically significant (Figures 1A and 1B). In cancer-type sub-analyses, OS and PFS did not differ in uterine or cervical cancer, but ovarian cancer with high FT had a 2.93 (95% CI 1.36–6.32) increased mortality hazard.

Conclusion: There was no statistically significant association between FT and PFS or OS in individuals with gynecologic cancers, though a concerning trend towards worse OS among patients with high FT was observed.



28. Longitudinal Assessment of Cost-Coping Strategies among Gynecologic Oncology Patients.

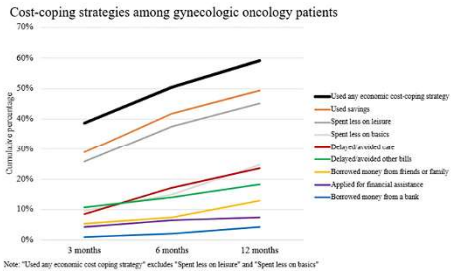
***Katherine Baumann**, Annika Gompers, Nadiha Noor Chelsea, Joseph Dottino, Andrew Wiechert, Leslie Garrett, Katharine Esselen** - Institution: BIDMC

Objective: The comprehensive score for financial toxicity (COST) has been associated with patient utilization of behavioral and economic cost-coping strategies in cross-sectional studies. The objective of this study was to assess the association between baseline COST and other demographic factors with later implementation of cost-coping strategies throughout the first year of gynecologic oncology care.

Methods: This was a prospective study that enrolled a convenience sample of patients at their initial gynecologic oncology visit. Study participants completed a baseline survey, which collected demographic characteristics and assessed COST, and follow-up surveys at 3, 6, and 12 months, which assessed COST and cost-coping strategies. The cumulative percentage of patients utilizing cost-coping strategies was calculated and the association between baseline factors and utilization of cost-coping strategies at any time point was assessed.

Results: Of 93 patients that completed all surveys, 22 (23.7%) delayed or avoided care and 55 (59.1%) utilized an economic cost-coping strategy at one or more time points. Factors associated with delaying or avoiding care included lower (worse) baseline COST (p=0.0002), race (p=0.01), and further distance to hospital (p=0.003), while factors associated with economic cost-coping strategies included lower baseline COST (p<0.0001), younger age (p=0.02), lower education (p=0.01), lower income (p=0.003), and further distance to hospital (p=0.04). Multivariable analysis controlling for age, race, education, and income found that both baseline COST and distance to hospital were associated with delaying or avoiding care (p=0.002, p=0.02) and economic cost-coping strategies (p=0.004, p=0.04).

Conclusion: Baseline COST is associated with implementation of cost-coping strategies during the first year of gynecologic oncology care. Further investigation into the optimal way to screen for patients at risk of implementing cost-coping strategies, such repeating COST assessments or incorporating other variables like distance to hospital, is warranted. Understanding of the specific cost-coping strategies utilized and time of onset can help inform interventions.



29. Time toxicity of ovarian cancer care in the era of poly (ADP-ribose) polymerase inhibitors (PARPis)

Katherine Baumann, *Katharine Esselen*, Joseph Dottino, Rebecca Costa, Stephanie Argetsinger, Dennis Ross-Degnan, Anita Katharina Wagner*

Objective: To assess the time ovarian cancer (OC) patients spend interacting with the healthcare system since advent of poly (ADP-ribose) polymerase inhibitors (PARPis).

Methods: Optum's Clinformatics® Data Mart Database was used to identify patients with incident OC between 2013 and 2021 who received platinum-based chemotherapy. Median percentage of days interacting with the healthcare system was calculated with stratification by time past diagnosis, visit type, and ever-PARPi use.

Results: There were 6,538 patients diagnosed with OC, with 6,538, 5,591, 4,458, and 2,634 spending time in care 0-5, 6-11, 12-23, and 24-35 months past diagnosis. Patients spent a median of 22.1% of days receiving care in the first 0-5 months after OC diagnosis, with fewer days spent in care further out from diagnosis. Most days spent receiving care were with outpatient encounters other than face-to-face encounters with providers. The greatest difference in percentage of days spent in care by PARPi use was observed 24-35 months past diagnosis, with ever-PARPi users spending 4.7% more days in care.

Conclusion: OC diagnoses are time-intensive and, along with efficacy, side effect profiles, and financial toxicity, time toxicity associated with therapeutics like PARPis should be considered in clinical decision-making.

Median percentage of days receiving care, by months past diagnosis, visit type, and PARPi use

Patients	Visit Type	Months past diagnosis			
		0-5	6-11	12-23	24-35
		Days observed			
		182	182	365	365
		% Days spent in care			
All	Outpatient, face-to-face	7.7	4.9	4.1	3.6
	Outpatient, other	15.3	8.7	6.9	6.0
	Inpatient	3.3	0	0	0
	Total	22.1	11.5	9.6	8.2
Ever-PARPi users	Outpatient, face-to-face	7.7	5.4	4.9	4.9
	Outpatient, other	14.9	9.3	8.8	9.3
	Inpatient	3.3	0	0	0
	Total	21.7	12.2	11.2	11.8
Never-PARPi users	Outpatient, face-to-face	7.7	4.6	3.8	3.3
	Outpatient, other	15.3	8.3	6.6	5.2
	Inpatient	3.3	0	0	0
	Total	22.1	11.4	9.0	7.1

30. Venous thromboembolism incidence in patients receiving chemotherapy for gynecologic malignancies

Akanksha Srivastava, *Jessica Kloppenburg, Sharmilee Korets, Susan Zweizig*; Larissa Mattei*
Institution: UMass Chan Medical School

Objective: Venous thromboembolism (VTE) is a common complication in patients with gynecologic malignancies. Currently, there are no guidelines regarding routine VTE prophylaxis in this patient population outside the perioperative setting. The purpose of this study is to assess VTE incidence among gynecologic cancer patients and evaluate its association with chemotherapy exposure.

Methods: A retrospective cohort study was conducted using the TriNetX electronic health record database. We analyzed data from patients with uterine, cervical or ovarian cancer from 2005-2023. Patients with pre-existing coagulopathy or anticoagulation were excluded. We calculated the incidence of VTE from one month to one year after exposure to chemotherapy. Propensity score matching was used to compare this rate to a cohort that did not have exposure to chemotherapy.

Results: We included 220,033 patients with gynecologic malignancy in our study. After controlling for sociodemographic data, BMI and smoking, we found that chemotherapy exposure was associated with an increased risk of deep vein thrombosis (DVT) and pulmonary embolism (PE) (risk ratio [RR] 3.0; 95% confidence interval [CI]: 2.3-3.9; and RR 3.8; CI: 2.8-5.3 respectively). When stratified by cancer type, this trend remained. Chemotherapy exposure was associated with a higher risk of DVT (uterine cancer RR: 3.1 [CI: 2.0–4.7]; ovarian cancer RR: 2.3 [CI 1.5 –3.6]; cervical cancer RR: 4.2 [CI 2.3 – 7.8]). Chemotherapy exposure was similarly associated with a higher risk of PE (uterine cancer RR: 5.9 [CI 3.3–10.6]; ovarian cancer RR: 2.8 [CI 1.7 –4.4]; cervical cancer RR: 3.7 [CI 1.8 – 7.5]).

Conclusion: This large retrospective cohort study demonstrates that VTE risk is increased in patients with gynecologic malignancy exposed to chemotherapy. Further work is needed to identify patients who would benefit from prophylactic anticoagulation while receiving cytotoxic chemotherapy.

31. Impact of Clinical Rotation Exposure on Obstetrics and Gynecology Residents' Specialty Choices

Oriana Krivenko, *Morgan Cheeks, Caroline Tilley, Kate Esselen*, Emily Hinchcliff*
Institution: Northwestern/McGaw

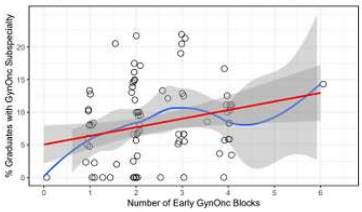
Objective: Fellowship training is increasingly common in obstetrics and gynecology (OBGYN). Limited data exists regarding the impact of clinical exposure on residents' specialty choices. We aim to clarify effects of rotation timing and duration on subspecialty choice, with particular focus on gynecologic oncology (GYO).

Methods: The top 100 ACGME-accredited OBGYN residencies, as ranked by Doximity, were queried for program characteristics, departmental characteristics, rotations by post-graduate (PGY) year, and fellowship match data. Resident characteristics were also collected. Rotations were tallied by subspecialty, with early exposure defined as number of rotations in that subspecialty within PGY1/2 and total exposure defined as all rotations throughout residency (PGY1-4). Data was obtained via publicly available websites or social media. Linear regression and Cuzick's trend test were used for analysis.

Results: Early exposure to subspecialties was common (65% REI, 96.3% GYO, 42.5% URPS, 3.8% MIGS, 52.5% FP, 67.5% MFM), with GYO having the earliest exposure (median 2, range 0-6, all other specialty medians 0-1). Residents from top 25 programs more frequently entered fellowship ($p < 0.001$). In GYO, greater early exposure was associated with a higher percentage of residents entering GYO fellowship ($p=0.02$, Figure 1). Interestingly, total exposure to GYO throughout residency was no longer associated with increased entrance to gynecologic oncology fellowship ($p=0.2$). Additionally, neither early nor total exposure was associated with increased subspecialty fellowship trajectory for any of the other OBGYN fellowship subspecialties (REI, URPS, MIGS, MFM).

Conclusions: Increased early exposure to GYO is associated with increased percentage of residents entering GYO fellowship, while total exposure is not. This association was unique to gynecologic oncology; no association between early exposure and subspecialty fellowship trajectory was noted for other OBGYN subspecialties. Further granular analysis of residents' career intent and trajectory throughout training is warranted.

Figure 1: Early Exposure and GYO Fellowship Trajectory



Linear Regression

Characteristic	Beta	95% CI	p-value
Number of Early GynOnc Blocks	1.3	0.19, 2.4	0.022

[1] CI = Confidence Interval

p-value for Cuzick's Test for Trend
0.03

32. Discrepancy Amongst Multifetal Gestations, Molar Pregnancies, and cell free DNA: A Case Report

William Hayes, ***Gurpreet Kaur****, Ravi Chokshi, Shaina Bruce, Edward Podczaski, Michael Belmonte, Joel Sorosky** - Institution: Penn State Hershey Med Ctr

Objective: Pregnancy has the potential for a variety of maternal challenges, particularly when both abnormal maternal and fetal findings are detected. Contemporary prenatal testing has afforded the opportunity to detect fetal abnormalities at earlier gestational ages, with less invasive techniques, ultimately allowing better care for patients with an abnormal pregnancy. While current non-invasive prenatal testing (NIPT) can analyze fetal DNA with impressive statistical accuracy as early as 9 weeks estimated gestational age, this screening method is not flawless. This presentation discusses the discrepant findings of NIPT and tissue pathology in a patient affected by a twin pregnancy with a fetus and co-existent gestational trophoblastic disease.

Methods: 34-year-old G3 P1011 African American had a beta-hCG quantity of 214,471 mIU/mL at 8 weeks estimated gestational age (EGA). Dating and viability ultrasound revealing a single viable intrauterine pregnancy with a subchorionic hematoma versus an abnormal placenta. Cell free fetal DNA (cffDNA) collected at 10 weeks EGA, suggested triploidy, prompting maternal fetal medicine, gynecologic oncology, and complex family planning consultations. Serial ultrasound, hCG quantities, and cffDNA results concerning for a developing molar pregnancy, ultimately managed via electric vacuum aspiration under ultrasound guidance.

Results: Natera Panorama: High risk for a vanishing twin, unrecognized multiple gestation, or fetal triploidy. Surgical pathology at 14 weeks gestation revealed a p57 negative molar gestation consistent with a diploid molar gestation. This was a twin gestation including fetal parts and a complete hydatidiform mole.

Conclusion: Although NIPT has made notable advancements since its debut as a combination of ultrasonography and nonspecific serum analytes, results of such continue to be most impactful when utilized as an adjunctive screening tool. Our case highlights the importance of refraining from using NIPT results in isolation, and instead, incorporating ultrasound images, lab results, clinical symptoms, and a multidisciplinary team approach to ensure an early and accurate diagnosis and intervention.

33. Bevacizumab Induced Psychiatric Adverse Effects in a Patient with Ovarian Cancer

Lauren Robertson, *Shrisha Maskey, Melissa Henretta, Jennifer R. Jorgensen** - Institution: University of Connecticut

Objective: The monoclonal antibody, bevacizumab (Avastin®), is a valuable treatment option for ovarian cancer. Bevacizumab is well tolerated, with no reported mood-related adverse effects (1). There are reports of psychosis and depression associated with other monoclonal antibodies (2). We present a patient who experienced two psychotic episodes correlated with bevacizumab treatment.

Methods: Demographics, oncologic history, psychiatric symptoms, diagnostic workup, and treatment response were collected and analyzed through chart review.

Results: A 68-year-old woman with a history of depression and stage IIIC ovarian cancer underwent optimal debulking surgery followed by 6 cycles of carboplatin, paclitaxel and bevacizumab (cycles 3-6). Shortly after beginning chemotherapy, she developed cognitive changes and depression. Bevacizumab and olaparib maintenance therapy was started. After two maintenance cycles, she presented with paranoid delusions. Workup, including CT head, brain MRI, urine analysis, blood counts and electrolyte studies, was unremarkable. Psychiatric evaluation found no definitive medical cause, leading to a diagnosis of depression with psychotic features. Due to the uncertainty of bevacizumab's role, olaparib alone was continued. Psychiatric symptoms resolved. Thirteen months later, the patient developed disease recurrence and was started on pembrolizumab based on tumor genomics. After four cycles, she developed disease progression and was started on docetaxel/carboplatin with bevacizumab added after 3 cycles. After only 2 cycles of bevacizumab, the patient presented with delusion ideation and catatonia. Full diagnostic workup was again negative. Her symptoms resolved with psychiatric treatment and discontinuation of bevacizumab.

Conclusion: This case highlights a rare psychiatric reaction to bevacizumab. While widely used, the psychiatric effects of bevacizumab remain unclear. The onset of symptoms after repeated administration raises concerns for alteration of neuropsychiatric pathways caused by bevacizumab. Clinicians should monitor for mood and cognitive changes in patients receiving bevacizumab. Further research is needed to explore this adverse effect and guide appropriate monitoring and management strategies.

34. A Novel Approach to Minimally Invasive Radical Hysterectomy for Early Cervical Cancer
(VIDEO PRESENTATION)

Ashley Goreshnik, *Blair McNamara, Masoud Azodi (Sponsor: Alessandro Santin*)* - Institution: Yale University

Objective: Numerous hypotheses exist regarding the reason for worse outcomes detected among patients who underwent minimally invasive vs open hysterectomy for early-stage cervical cancer in the LACC trial, including the use of a uterine manipulator and exposure of the cervical tumor into the peritoneal cavity at the time of colpotomy. This video presentation aims to demonstrate a novel technique for minimally invasive radical hysterectomy using a pursestring suture prior to colpotomy for tumor containment.

Methods: After extensive counseling, a patient with clinical Stage IB2 cervical squamous cell carcinoma opted for a minimally invasive approach for management of her cancer. She underwent robotic-assisted laparoscopic radical hysterectomy and bilateral salpingectomy. There was no uterine manipulator and a pursestring technique was used to prevent exposure of the cervical tumor to the peritoneal cavity. The surgical video highlights key components of the radical hysterectomy with a pursestring technique and examines the resected specimen to demonstrate how the cervical tumor is completely contained within the vagina.

Results: The pursestring technique was a successful approach to ensure containment of the cervical tumor throughout the surgery, with no exposure of the tumor to the peritoneal cavity at any point.

Conclusion: In patients who opt for minimally invasive surgery following extensive counseling regarding the currently available data, risks, and benefits regarding route of hysterectomy for Stage I cervical cancer, the pursestring technique is a feasible approach that minimizes hypothesized causes of decreased progression-free and overall survival rates among patients undergoing minimally invasive versus open radical hysterectomy.

35. Malignant Brenner Tumor with Extensive Clear Cell Features: An Uncommon Histologic Finding with Diagnostic Challenges and Its Clinical Significance.

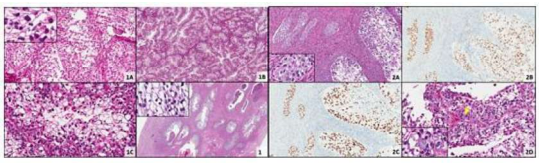
John A Steinharter, *Corinne Jansen, Apsra Nasir, Marzia Capelletti, Hassan Ghani, M. Ruhul Quddus, Ashley Stuckey*, Yun-An Tseng*
Institution: Brown Univ/Women & Infants Hospital

Objective: This is the first reported case of a malignant Brenner tumor (MBT) with extensive clear cell features mimicking ovarian clear cell carcinoma (CCC). Diagnostic challenges and clinical impact discussed herein.

Methods (case report):
Initial diagnosis via intraoperative and permanent histologic sections was consistent with ovarian CCC. Commercial next-generation sequencing (NGS) and an artificial intelligence (AI) tumor differential tool predicted a 0% ovarian CCC likelihood but an 80–90% urothelial origin, prompting re-evaluation.

Results/Discussion: Despite CCC-like nuclear/architectural patterns, molecular discordance led to re-review. The tumor cells exhibiting clear cell features showed positive expression of urothelial markers by IHC. A component of benign Brenner tumor was also identified in additional tumor sections. The new histologic and IHC findings confirmed the diagnosis of MBT of the ovary with extensive clear cell features. NGS data provided the first clue of misdiagnosis and triggered histologic re-evaluation. The current molecular data on MBT is limited to smaller case reports and case series. This MBT harbored CDKN2A/B loss and a triple molecular phenotype (MDM2 amplification/TP53 wild-type/TERT wild-type), supporting the diagnosis and correlating with literature. Although management guidelines for ovarian CCC and MBT overlap, this case underscores the role of molecular data in correcting misdiagnosis. In this case report we review emerging clinical and prognostic data.

Conclusion: This case highlights the importance of integrating clinical, histologic, IHC, and molecular findings. AI tools are valuable adjuncts with proper oversight. MBT should be considered in the differential diagnosis of ovarian neoplasms with clear cell features. Extensive sampling, IHC, and molecular analysis (particularly the MDM2/TP53/TERT triplet phenotype) are essential for accurate diagnosis.



Initial pathologic evaluation of the ovarian tumor (1A-1D). (1A) The frozen section of the ovarian tumor shows extensive clear cell changes (10x). Inlet: High power view of the marked cytologic atypia in clear tumor cells. (1B) The permanent section shows tumor cells with an expansile growth pattern replacing the ovarian stroma (2x). (1C) The permanent section shows histologic features characteristic of a clear cell carcinoma (20x). (1D) The permanent section shows a clear cell borderline tumor component in the background (2x). Inlet: High power view of the mild cytologic atypia in the clear tumor cells.

Pathologic re-evaluation of the ovarian tumor (2A-2D). (2A) Nests of benign Brenner tumor are adjacent to the tumor area with clear cell changes (10x). Inlet: High power view of benign Brenner tumor. (2B) GATA3 is diffusely positive in both the benign Brenner tumor and the tumor area with clear cell changes (10x). (2C) p63 is diffusely positive in both the benign Brenner tumor and the tumor area with clear cell changes (10x). (2D) Intraluminal mucin often observed in benign Brenner tumor is present in the tumor area with clear cell changes (20x). Inlet: High power view of intraluminal mucin.

36. Two Cases of High-Grade Serous Ovarian/Fallopian Tube Cancer with Unusual Metastatic Patterns

Shrisha Maskey, *Rose Emlein, X. Clare Zhou**
Institution: University of CT/Hartford Health Care

Objective: High-grade serous carcinoma (HGSC) of the ovary and fallopian tube typically presents as adnexal masses, with peritoneal metastases, involving the omentum and visceral organs. It spreads via lymphatic pathway to pelvic and para-aortic nodes. This study presents two unusual cases of HGSC where extraovarian metastatic sites, rather than adnexal involvement, were the primary and dominant sites of disease burden, challenging standard presentation of the disease.

Methods: Clinical presentation, imaging, pathology, treatment course, and outcomes were reviewed.

Results: A 62-year-old female was found to have left inguinal lymphadenopathy (3cm). Biopsy confirmed HGSC, likely GYN primary. No adnexal pathology was detected on PET. Surgical resection, including inguinal lymph node excision, robotic hysterectomy, BSO, lymphadenectomy, and omentectomy, led to a final diagnosis of Stage IVB fallopian tube carcinoma. Notably, the left inguinal lymph node was the dominant disease site.

A 77-year-old female presented with a 3 cm splenic lesion. One year later, imaging revealed a 7 cm right adnexal mass and a 5 cm splenic lesion. Surgical resection, including robotic hysterectomy, BSO, lymphadenectomy, omentectomy, and splenectomy led to a final diagnosis of Stage IVB right tubo-ovarian HGSC. The splenic metastasis was as large as the primary tumor. She received chemotherapy followed by maintenance Olaparib, since a germline BRCA2 mutation was identified.

Conclusion: With these two cases, we illustrate HGSC's potential to present with dominant extraovarian disease before clinically evident adnexal involvement. These atypical patterns can pose significant diagnostic challenges underscoring the need to consider broad differential diagnoses. PET is a useful diagnostic tool for clarifying primary disease site and metastatic pattern. Multidisciplinary team approach is essential for achieving accurate diagnosis and appropriate management.

37. Case Report: Pilomatrix-like High-Grade Endometrioid Carcinoma

Leah N. Schwartz, *Victoria Wang, Michelle Hirsch, Marissa Nucci, Carolyn Krasner, Colleen Feltmate**
Institution: Brigham and Women's Hospital

Introduction: Pilomatrix-like high-grade endometrioid carcinoma (PiMHEC) is a recently described rare, aggressive form of FIGO grade 3 endometrioid carcinoma which can arise from the uterus or ovary. To date, only seventeen cases have been described in the literature and are characterized by the shared presence of solid basaloid appearance, ghost cell keratinization, and diffuse beta-catenin expression, as well as the absence of PAX8, estrogen receptor, and progesterone receptor expression. PiMHEC carries a uniquely poor prognosis, with a high rate of distant metastasis and mortality, with 53% of reported cases DOD within 24 months.

Case Presentation: We present the case of a 39-year-old female who presented to the emergency department with abdominal pain and abnormal vaginal bleeding. Pelvic ultrasound demonstrated a 10cm complex right adnexal mass. MRI of the pelvis showed no evidence of lymphadenopathy or metastasis and CT scan of the chest revealed innumerable pulmonary nodules. Tumor markers were notable for elevated CEA and CA 19-9. Less than a month later, the patient re-presented with acute onset back pain and CT of the pelvis was notable for new bilateral hydronephrosis, peritoneal carcinomatosis, and hepatic lesions. Biopsy of the pelvic mass showed a solid basaloid appearance, ghost cell keratinization, and geographic necrosis; IHC staining was PAX8 and ER negative, diffusely positive for beta-catenin, and MMR proficient. She received initial treatment with carboplatin, paclitaxel, and pembrolizumab followed by maintenance pembrolizumab, and repeat imaging demonstrated interval decrease in size of the primary tumor and metastatic lesions. She subsequently underwent palliative modified radical hysterectomy, bilateral salpingo-oophorectomy, and removal of a right pelvic sidewall tumor. Intra-operative findings supported a primary ovarian tumor. She is currently continued on maintenance pembrolizumab.

Conclusion: Although there is growing consensus regarding the histopathologic features of PiMHEC, no optimal treatment has been described and prognosis remains extremely poor.

38. Predictors of EIN or EC at the time of risk reducing hysterectomy for Lynch Syndrome

Hadley Reid, ***Sammy Little****, Andrea Pelletier, Colleen Feltmate*, Jessica St. Laurent*
Institution: Brigham and Women's Hospital-MGH

Objective: Lynch syndrome (LS) confers up to a 60% lifetime risk of endometrial cancer. Patients are advised to undergo risk reducing hysterectomy (rrhyst) at completion of childbearing. Previous studies have estimated a 10% risk of endometrial pathology, at time of rrhyst. We examine predictors of endometrial pathology at time of rrhst.

Methods: This is a retrospective study examining demographic and clinical characteristics of a cohort of patients with LS seen at an academic health system from 5/12/2012 through 10/14/2024. Patients were included if they had a documented LS pathogenic germline variant (PGV) and hysterectomy with documented prophylactic indication due to known LS. Patient demographic and clinical variables were abstracted from the electronic medical record. Student t and fisher exact tests were used for predictors of pathology at time of rrhyst.

Results: 301 patients met inclusion criteria. They were mostly White (93%), non-Hispanic (91%) and pre-menopausal (median age 49, range 21-74). All LS PGVs were represented, EPCAM (4), MLH1 (54), MSH2 (52), MSH6 (80) and PMS2 (112). 38% of patients underwent pre-operative sampling prior to rrhst. There were 9 (3%) patients who had an ultimate diagnosis of endometrial cancer and 4 (1%) who had EIN. These were all grade 1 stage 1A cancers except one case of clear cell and one uterine tumor resembling sex cord stromal tumor. There was no difference in risk of endometrial pathology at time of rrhst by LS PGV (p=0.33), age (p=0.55), personal history of colon cancer (p=1), parity (p=0.1) or pre-operative BMI (p=0.42).

Conclusions: Asymptomatic LS PGV carriers undergoing rrhyst can be counseled that the risk of discovering endometrial pathology at the time of hysterectomy is low, 4% in our cohort. There were no significant predictive factors for endometrial pathology at time of rrhst to inform pre-operative counseling and biopsy for patients planning rrhyst.

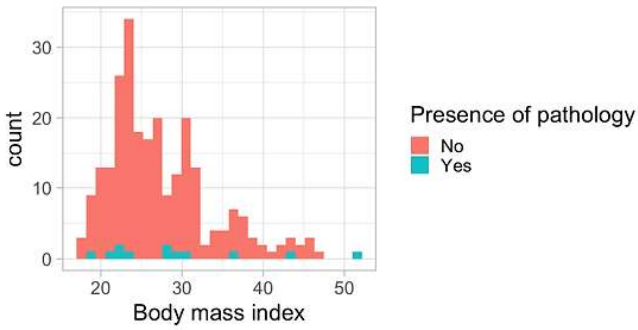


Figure 1: Distribution of body mass index by presence of endometrial pathology at time of risk reducing hysterectomy for LS

39. Immunohistochemistry for mismatch repair testing on endometrial intraepithelial neoplasia is cost-effective for early diagnosis of Lynch Syndrome

Hadley Reid, *Claire Packer, Danika Barry, Colleen Feltmate*, Jessica St. Laurent*
Institution: Brigham and Women's Hospital-MGH

Objective: Lynch Syndrome (LS) is a hereditary cancer syndrome characterized by mismatch repair protein (MMR) deficiency that increases the lifetime risk of colorectal, endometrial, and ovarian cancers. Endometrial intraepithelial neoplasia (EIN) is a precursor lesion to endometrial cancer (EC). There is evidence that EIN can be a precursor to LS-associated EC, however there is currently no recommendation to evaluate EIN for evidence of LS. We sought to understand if immunohistochemistry (IHC) of EIN for MMR loss was cost effective to identify cases of LS.

Methods: A decision analysis with Markov model was created with the initial decision point of IHC testing for MMR deficiency at time of EIN diagnosis or standard care with no IHC. Probabilities, costs, and utilities in the model were drawn from the published literature. Patients in the pre-operative IHC testing arm with a positive result underwent genetic counseling and germline genetic testing. Patients who had a post-operative diagnosis of EC on final surgical specimen underwent post-operative IHC, genetic counseling and germline testing. All patients diagnosed with LS were underwent enhanced colorectal cancer screening. A starting age of 45, cycle length of 1 year, and a time horizon of 35 years was used.

Results: Utilizing a 4.5% probability of an EIN sample being MMR deficient, MMR testing of EIN samples was less costly ($17,871 vs $17,928) and more effective than no IHC testing (31.25 QALYS vs 31.22 QALYs). Performing IHC on EIN was the dominant strategy. In a hypothetical cohort of 10,000 patients with EIN with 5,000 randomized to each arm we found that performing IHC on EIN would lead to the diagnosis of 28 additional patients with LS, a 24% increase in diagnoses, compared to testing EC samples after hysterectomy alone.

Conclusions: Pre-operative IHC for MMR loss on EIN is a cost-effective strategy for identifying additional cases of LS.

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