FWC Cancer Education

WELCOME!

2022 ANNUAL MEETING SCIENTIFIC DEBRIEF

WHAT PATIENTS SHOULD KNOW

MAY 21ST, 2022

11:30AM TO 12:45PM CST

Patient Advocacy Participation @ 2022 SGO Annual Meeting

- Welcome Connection
- Poster Walk
- Conversations on Innovation: A Focus on Patient Care

Next Year's Annual Meeting

March 24th through March 27th, 2023
Tampa, FL

Foundation for Women's Cancer

Cervical Cancer
SGO 2022 Annual Meeting Updates

Lisa M. Barroilhet, MD, MS
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Madison, WI

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Open vs. minimally invasive radical hysterectomy in early cervical cancer: LACC trial final analysis

Ramirez, MD et al

Real Life Applications

- Open radical hysterectomy is the preferred surgical approach
- RCT underway to evaluate the safety of robotic approaches in smaller tumors (NCT 04831580_)

Purpose: To report on the overall survival outcomes and subgroup analysis of the LACC trial after all patients have completed surveillance at 4.5 years

Methods: Prospective non-inferiority randomized trial of patients with FIGO 2009 stage IA1 (LVSI)-IB1 cervical cancer, who underwent open or minimally invasive surgery. A total of 631 patients (319 MIS and 312 open surgery) were evaluated.

Results:

- Worse DFS in patients who underwent MIS
- More carcinomatosis in patients who underwent MIS
- Few events in MIS patients with tumors < 2cm (warrants further study).

Patient-reported outcomes from the phase 3 randomized, double-blind, KEYNOTE-826 trial of pembrolizumab plus chemotherapy versus placebo plus chemotherapy for the first-line treatment of persistent, recurrent, or metastatic cervical cancer

Monk, MD, FACS, FACOG et al

Real Life Applications

- PDL-1 testing for all cervical cancer patients
- Adding pembrolizumab to standard chemotherapy, even for patients with a new diagnosis

Purpose: KEYNOTE-826 study of patients with persistent, recurrent, or metastatic cervical cancer (NCT03635567), adding pembrolizumab (pembro) to chemotherapy (chemo) ± bevacizumab (bev). We report patient-reported outcomes (PROs) from KEYNOTE-826.

Methods: PRO instruments were the EORTC Quality-of-Life-Core 30 (QLQ-C30), EORTC Cervical Cancer module (QLQ-CX24), and the EuroQol (EQ)-5D-5L VAS, each collected before treatment at cycles 1-14 and every other cycle thereafter. 566 patients were in the PRO analysis.

Results:

- Baseline QOL scores were similar between treatment groups.
- Mean changes from baseline QOL were similar between groups.
- More patients with pembro-chemo had an improved GHS/QoL compared with placebo-chemo (42.1% vs 28.6%).

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Efficacy and safety of cadonilimab, an anti-PD-1/CTLA4 bi-specific antibody, in previously treated recurrent or metastatic (R/M) cervical cancer: A multicenter, open-label, single-arm, phase II trial

Wu et al

Real Life Applications

- Planned Phase III trial, potentially
- Immunotherapy options for recurrent/metastatic disease, regardless of PDL-1 status

Purpose: Cadonilimab (AK104) is a bi-specific antibody against PD-1 and CTLA4. We assessed the efficacy and safety of cadonilimab in immune checkpoint inhibitor (ICI) naïve patients with recurrent/metastatic cervical cancer, regardless of PD-L1 status.

Methods: This multi-center, open-label, single-arm, phase II study enrolled pts with advanced cervical cancer who had progressed on or after two or fewer previous doublet chemotherapy with or without bevacizumab. Pts received cadonilimab 6 mg/kg every two weeks.

Results:

- 111 patients have received at least one dose of cadonilimab.
- After median follow-up of 9.63 months (mo) (range: 0.7-21.4), the IRRC-assessed confirmed ORR in 100 pts evaluable for efficacy was 33.0% with 12 (12.0%) complete responses and 21 (21.0%) partial responders.
- Median PFS was 3.75 mo (95% CI: 2.00-6.41); 6-and 12-mo PFS rates were 41.4% and 21.2%, respectively.
- Median OS was 17.51 months

Efficacy and safety of serplulimab (an anti-PD-1 antibody) combined with albumin-bound paclitaxel in patients with advanced cervical cancer who have progressive disease or intolerable toxicity after first-line standard chemotherapy

An et al

Real Life Applications

Serplulimab plus albumin-bound paclitaxel in advanced cervical cancer may represent a novel potential treatment option that warrants further investigation.

Purpose: This study aimed to determine the efficacy and safety of serplulimab (a recombinant humanized anti-PD-1 monoclonal antibody) plus albumin-bound paclitaxel in patients with advanced cervical cancer who have progressed on or are intolerant to first-line standard chemotherapy.

Methods: This is an ongoing, single-arm, open-label, multi-center phase II study (NCT04150575). Twenty eligible patients with positive PD-L1 expression were given intravenous infusions of serplulimab (4.5 mg/kg) plus albumin-bound paclitaxel (260 mg/m2) every three weeks. The primary endpoints of this study were the adverse events, serious adverse events, and overall response rate.

Results:

- Median follow-up duration was 12.5 months.
- The ORR were 57.1% (n=12; 95% CI: 34.0%-78.2%) and 47.6% (n=10; 95% CI: 25.7%-70.2%), respectively.
- The median PFS assessed by IRRC was 5.7 months (95% CI: 3.0-not reached).
- Low WBC and neutropenia were the most common side effects

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Ovarian Cancer
SGO 2022 Annual Meeting Updates

Elise C. Kohn, MD
Head of Gynecologic Cancer Therapeutics

National Cancer Institute
NCI Cancer Therapy Evaluation Program
Rockville, MD

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A randomized phase 3 trial of intraperitoneal versus intravenous carboplatin with dose-dense weekly paclitaxel in patients with ovarian, fallopian tube, or primary peritoneal carcinoma (a GOTIC-001/JGOG-3019/GCIG, iPocc Trial)

Fujiwara, MD, PhD et al

Caveats to Consider

- **An all-Japanese population with a higher proportion of patients with clear cell OvCa than Western studies that does not represent the real-world distribution of OvCa**
- **up to 8 cycles of chemotherapy and interval debulking were allowed**
- **notably, the actual PFS difference was only 2.87 months, which may have limited clinical significance.**

Hypothesis: Intraperitoneal (IP) carboplatin is superior to intravenous (IV) carboplatin when given with dose dense weekly paxlitaxel for women newly diagnosed with ovarian, fallopian tube, or primary peritoneal cancer (OvCa).

- randomized open label trial in Japan of 655 patients at primary debulking surgery prior to abdomen closure (2010 – 2016)
- 6-8 cycles of treatment were given
- women with bulky disease at randomization could have had interval debulking surgery.
- The primary endpoint was investigator-determined progression-free survival.
- The distribution of OvCa types was serous (64%), endometrioid (9%), clear cell (11%), with other making the rest

Conclusion & Real-World Application:

- Median follow up was 55.7 mo with IP therapy superior (23.5mo) over IV therapy (20.7mo) in the intent to treat population.
- Subset analysis showed benefit was greater in patients with bulky disease.
- No new toxicity signals were identified.
- This study is the fourth to show benefit of IP therapy

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How to train your robot: Artificial intelligence predicts treatment response in ovarian cancer

Glassman, MD et al

Caveats to Consider

- **This study omitted the intermediate group of patients, whose response was 6-12 months, creating an unacceptable bias and introducing uncertainty to the results**
- **The case numbers were small and exploratory**

Hypothesis: An artificial intelligence tumor pattern algorithm could be generated to identify patients who would do better with primary treatment.

- Retrospective study using still frames from laparoscopy videos from 113 patients to train (70%), validate (10%), then test (20%) a deep learning model
- Images used were from diaphragm, omentum, peritoneum, and pelvis.
- Two morphologic patterns were designed from those with an excellent response (PFS≥12mo; 53% of cohort) v. those with poor response (PFS≤6mo).
- Sensitivity was 100%; however, specificity was only 63%, in that some patients who had a poor response to therapy were classified as excellent responders.

Conclusion & Real-World Application:

- Study tried to create a simple model to discriminate outcomes
- This is one attempt to reduce the heterogeneity of OvCa into a prognostic model.
- To date, no model has had sufficient strength upon validation testing to justify its use to make clinical treatment recommendations for people with OvCa.

RNAseq biomarkers IFIT1B and VSTM5 predict progression free survival and clinical benefit in a multi-site phase I/II trial of olapairb and tremelimumab for gBRCAm recurrent ovarian cancer

Adams, MD et al

Caveats to Consider

While the response rate was encouraging, the PFS was lower than we usually see from treatments for patients with platinum-sensitive OvCa recurrence.

The study team explored safety and activity of the combination of olaparib, a PARP inhibitor, and tremelimumab, a form of immunotherapy (anti-CTLA4) in treatment of women with germline or somatic deleterious BRCA1/2 mutations and platinum-sensitive recurrent OvCa.

- Olaparib (300mg twice daily) and tremelimumab (10mg/kg iv every 4 wks for 4 or 6 doses, followed by every 12 wks) was administered to up to 49 patients.
- RNAseq was performed on the archival tissue from 30 patients
- The response rate was 39% with a median progression-free survival (PFS) of 3.4 months.

Conclusion & Real-World Application:

Examination of a selected number of genes identified lack of IFIT1B expression as correlating with a better PFS which is hypothesis-generating, to be tested and validated prior to application to patients.

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Efficacy and safety of niraparib as maintenance treatment in patients with newly diagnosed advanced ovarian cancer using an individualized starting dose (PRIME Study): A randomized, double-blind, placebo-controlled, phase 3 trial

Li, MD et al

Caveats to Consider

Caution should be raised given recent results of OS in 2L/maintenance niraparib suggesting that some patient populations may have a good PFS but worse OS.

Hypothesis: A dose adjusted niraparib maintenance after front line adjuvant treatment could be safely used in Chinese patients with OvCa.

- A double-blind, placebo-controlled study of niraparib accrued 384 patients in a 2: 1 randomization, stratified by g/sBRCA status, HRD status, receipt of NACT, and best response to adjuvant therapy
- Dosing was 200mg daily for patients with weight<77kg; 300mg daily was used for those with weight≥77kg and platelet count ≥150,000/uL, which is similar to the current US dosing guidelines.
- 33% of pts were gBRCAm.
- The median follow up was 27.5mo and the outcome showed PFS 24.8 v 8.3 mo.

Conclusion & Real-World Application:

- Treatment benefit was observed across all subgroups and OS is premature.
- No new toxicity signals were identified
- Results of this study mirror results seen with niraparib across several other 1L maintenance studies.
- Suggests that if there are pharmacogenomic differences between Chinese and other populations, those do not affect the overall toxicity or benefit of niraparib.
- The use of treatment selection guidelines that are similar to those in the US confirm that the dose of 200mg niraparib is equiactive.

Efficacy and safety of mirvetuximab soravtansine in patients with platinum-resistant ovarian cancer with high folate receptor alpha expression: Results from the SORAYA study

Matulonis et al

Caveats to Consider

These preliminary results are of interest, but absent a randomized study with stratifications, interpretation of the value of this still investigational agent remains fraught.

Hypothesis: Single agent mirvetuximab soravtansine (MIRV) would be active in patients with recurrent platinum-resistant OvCa who had folate receptor (FR) high (≥75% of cells with ≥2+ cancer cell staining intensity).

- 106 patients meeting the FR high criteria were enrolled in a single arm study.
- The median follow up was 8.5 mo.
- 34 of 105 patients had an objective response (32.5%) which was confirmed by blind independent central review (31.6%).
- The response rate was not affected by number of prior regimens or prior exposure to PARPi.
- The most common treatment related adverse event was ocular, as expected with 451% all grade blurred vision, 36% all grade keratopathy, and 29% all grade nausea resulting in dose reductions in 19%, dose delays in 32% and drug discontinuation in 7% of participants.

Endometrial Cancer
SGO 2022 Annual Meeting Updates

Nita K. Lee, MD, MPH

Associate Professor of Obstetrics & Gynecology
Assistant Director of Comprehensive Cancer Center
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Foundation for Women's Cancer

Genomic alterations, molecularly targeted therapy and race: Real world data from the Endometrial Cancer Molecularly Targeted Therapy Consortium

Alvarez-Secord, MD et al

Founding Consortium Sites

Duke University, New York University, Inova Fairfax Hospital, Johns Hopkins University, Ohio State University, University of Oklahoma, University of California - LA, University of North Carolina - CH, Washington University

Conclusions & Real-World Application

- For patients with endometrial cancer, tumor genomic and molecular testing is becoming standard
- Knowing the results of this testing may offer more matched treatment options
- Benefit of collaborative Team Science approach is demonstrated and offers more productive testing and includes more diversity of patients who have endometrial cancer

Purpose:

1) Understand the use and benefit of genomic testing (molecular changes and mutations) in patients with advanced/recurrent endometrial cancer
2) Examine what proportion of patients who had testing had an “Actionable” genomic change
3) Assess differences in the molecular or genomic changes and race
4) Determine if using molecularly targeted therapy improves response to the treatment or survival

Methods:

- Creation of a multi-center consortium of shared information and data about patients with endometrial cancer
- Data was reviewed from the database created about different clinical factors (age, race, stage, treatment, survival) and pathology and molecular factors (ex. genomic testing, protein expression patterns)

Results:

- Information from 994 patients was reviewed across 12 centers
- Racially diverse group was used (ex. 67% W, 23% B)
- 76% had had tumor genomic molecular testing
- 54% had an “Actionable” genomic change
- 79% got Matched Therapy based on those results
- Those getting matched therapy:
  - Time until progression ~ 7.6 mon (PFS)
  - Survival overall ~ 24.4 mon (OS)

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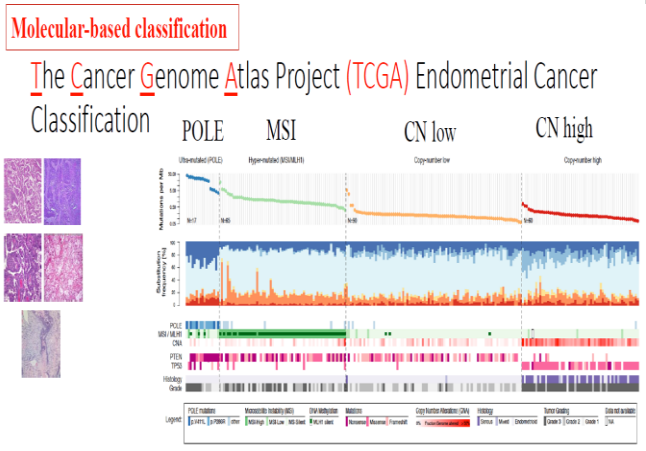
Molecular subtype stratified response to adjuvant therapy in endometrial cancer

Jamieson, MBChB et al

Conclusions & Real-World Applications

- Molecular classification may help us better guide therapy after surgery
- May help avoid chemotherapy in groups where is does not show a benefit in survival
- Can avoid overtreatment (ex. POLEmut)
- May help to better direct patients to more targeted therapies that match their tumor classification



Purpose:

1) Assess and understand how patients with EC respond to therapy after surgery based on the molecular classification of their tumors.

2) Can molecular classifications of the tumors at the time of surgery help to predict how patients may do with specific types of additional therapy?

(four molecular subtypes (MMRd, POLEmut, NSMP, and p53abn).

Methods:

1) Identified Patients with EC who had undergone molecular testing
2) Outcomes of Overall survival, Disease-specific survival, Progression Free Survival were calculated and compared for patients with different clinical risk types and molecular types for all of the types of additional therapy:
   - None
   - Vaginal radiation vault brachytherapy (VB) only
   - External beam (pelvic) radiation (EBRT) ± VB
   - Chemotherapy (± any RT including EBRT or VB)

Results:

1) 2495 patients with EC were included
2) The molecular subtypes were 641 (25.6%) MMRd, 184 (7.4%) POLEmut, 1233 (49.5%) NSMP and 437 (17.5%) p53abn
3) Patients with MMRd and NSMP ECs, there was no observed benefit in OS, DSS, or PFS from chemotherapy used either alone or in combination with radiation compared to radiation only

2) Patients with p53abn EC, there was a trend (0.054) towards improved survival with the use of chemotherapy compared to radiation alone in higher risk clinical groups

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Overspending driven by dose specific packaging of Lenvatinib for endometrial cancer

Aviki EM et al

Conclusions & Real-World Applications

- Packaging cots patients and payors up to $168,000,000 annually for dose reductions
- Authors successfully called for drug manufacturers of Lenvatinib to implement and promote an unrestricted pill exchange program
- Drug company committed to improving and changing the company's dose exchange program

Purpose:

1) Estimate the excess annual revenue from dose reductions due to Lenvatinib's unique packaging.
2) Address issues of novel targeted agent cost, known need for dose reductions, packaging of oral cancer drugs, health care spending waste and financial toxicity concerns

Methods:

1) Decision model created using current dose packaging vs alternative packaging (no additional cost for dose reductions using dose reduction friendly starter pack or no cost pill exchange)
2) Modelling requires assumptions of cost and how drug will be used based on prior trials and available cost information.

Results:

1) Current packaging results in estimated overspending of $167,890,342 compared to alternative packaging or pill exchange
2) If starting at a lower dose for all, overspending is $35,841,758
3) If dose exchange program, overspending is also less $ 35, 841,758

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Homologous recombination deficiency (HRD) signature-3 in ovarian and uterine carcinosarcoma correlates with preclinical sensitivity to Olaparib, a PARP inhibitor

Tymon-Rosario J et al

Conclusions & Real-World Applications

- A subset of ovarian and uterine tumors in carcinosarcoma have a HRD signature that could be used for targeted drugs (PARPi)
- Important to look at the genetic and molecular patterns across tumor types
- Important to look at the diversity of tumors and high risk tumors that patients are diagnosed with in uterine cancer
- Caveat: Preclinical data is important and can guide therapeutics but needs trials in Phase 1-3 to move to patient care.

Purpose:

1) Use whole-exome-sequencing data from tumor samples of ovarian and endometrial carcinosarcoma to investigate the preclinical role of Olaparib in in vitro (cell lines) and in vivo (live mouse xenograft model)

Methods:

1) 10 cell lines were grown and created using patients' tumors collected during primary surgery
2) WES data were analyzed for the HRD molecular signature
3) Olaparib activity was checked in the cell lines using different assays ex. Cell-viability, cell apoptosis (cell death)
4) Olaparib activity was tested in mice that that CS tumors with HRD signature.

Results:

1) The pattern of mutations (mutational signature) in the cell lines saw several pathways of interest in cancer development
2) There were genetic signature differences in OC and UC CS
3) In cell lines, the sensitivity to Olaparib correlated with HRD signature
4) Olaparib induced cell death in the CS cell lines with HRD signature
5) PARPi sensitivity is associated with G2/M cell cycle arrest (growth arrest) in cell lines
6) Olaparib impairs tumor growth in mouse models

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Race/COVID/Survivorship/Wellness SGO 2022 Annual Meeting Updates

Heidi S. Donovan, PhD, RN

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Ketogenic diet promotes epithelial ovarian cancer progression and alters tumor gene expression in vivo

&

The impact of ketogenic diet on the gut microbiome and tumor growth in an in vivo epithelial ovarian cancer model

Alhilli, MD et al
Tewari, BS et al

Real Life Applications

More studies are needed to evaluate the role of diet on tumor growth or suppression – especially on human tumor cells. This study raises concerns about keto diets (e.g. low/no carbohydrate diet) for cancer patients.

Purpose: To evaluate changes in tumor immune cells, gut microbiome and tumor growth in mice fed a ketogenic diet. The hypothesis was that a ketogenic diet could protect against tumor growth.

Methods: In this pre-clinical study, 30 tumor bearing mice were fed either a ketogenic diet (10% protein, 0% carbohydrate, 90% fat), a high fat diet (10% protein, 15% carbohydrates, 75% fat), or control diet (CD) (10% protein, 77% carbohydrates, and 13% fat) (n=10 mice per group). Tumor growth was monitored weekly. Stool was collected at baseline, 4 weeks, and endpoint.

Results:

- Mice fed a ketogenic diet had a nine-fold increase in tumor volume compared to only 2-fold increase in those receiving a high fat diet, and 3-fold increase in those receiving the control diet.
- Ketogenic mice also had changes in the tumor micro-environment that were more favorable to tumor development.
- Mice who received a ketogenic diet also had increased gut microbial diversity over time and changes in the relative bacteria compared to other diets.

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Effect of racism on cancer care in women with gynecologic cancers

Alvarez, MS et al

Real Life Applications

Racism continues to contribute to psychological and physical stress in Black patients in the US and may also contribute to delays in treatment that could reduce the benefit of treatment.

Purpose: To evaluate whether increased race-based stress was associated with treatment interruptions in women undergoing cancer care.

Methods: Seventy-two women completed a brief health history and the Brief Index of Race-Related Stress. Associations between race-related stress, treatment interruption, length of interruption, time to treatment initiation were evaluated.

Results:

- Black patients undergoing treatment for gynecologic cancer reported significantly higher levels of race-related stress than White patients.
- The experience of racism was associated with increased treatment interruptions, longer time to treatment initiation, and longer treatment interruptions.

Race matters: Disparities in the use of maintenance therapy in ovarian cancer (OC)

Schrader, MD et al

Real Life Applications

It is important to understand why racial differences persist in healthcare delivery to optimize outcomes for ALL patients.

Purpose: To evaluate the influence of race, insurance status, and median income on the initiation of maintenance therapy by women with platinum sensitive ovarian cancer completing primary or secondary treatment.

Methods: Using 4 years of health record data, the relationship between the use of maintenance therapy and race, insurance status, and census-tract median household income was evaluated in all women eligible for maintenance therapy (n=180).

Results:

- Fewer black patients (20%) received maintenance therapy than white patients (41%).
- This difference was not explained by insurance status or household income.

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Impact of COVID-19 on gynecologic oncology patients: an SGO COVID-19 and Gynecologic Cancer Registry study

Glaser, MD et al

Real Life Applications

Gynecologic Oncology patients diagnosed with COVID-19 are at high risk of hospitalization, delay of treatments, and death. The underlying causes of racial disparities in hospitalizations and death need to be addressed.

Purpose: To describe outcomes for individuals with gynecologic cancer in the U.S. who had concurrent COVID-19 infection.

Methods: The Society of Gynecologic Oncology "COVID-19 and Gynecologic Cancer Registry" was established to document outcomes in patients with Gynecologic Cancer and a confirmed COVID-19 infection.

Results:

- Among 312 patients with gynecologic cancer, 28% experienced delays in treatment (most often chemotherapy) due to a COVID infection.
- Delays averaged 3-4 weeks.
- 30% of patients receiving chemotherapy at the time of COVID infection required hospitalization.
- Minoritized patients and those with advancing age were more likely to be hospitalized and had a higher risk for death.
- 8% of hospitalized patients died.

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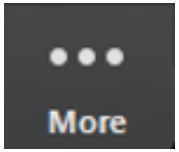
5-minute break then Breakout Rooms

When you come back from your break, you'll be able to choose whichever breakout room you'd like to enter.
This is your time to ask questions and dive deeper!

You can switch between the rooms at your leisure using the 'Breakout Room' button on your zoom toolbar.

If you don't see it, try clicking the 'More' button



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Educational Materials & Webinars

Brochures

Updated

Gynecologic Cancer Awareness *(also available in Spanish)*

CA-125 Levels

Clinical Trials

Cervical Cancer

Endometrial Cancer

Ovarian Cancer

Vulvar & Vaginal Cancers

Our team is currently working to produce translations of all brochures in Spanish and Chinese!

Fact Sheets

Carcinosarcoma

Uterine Leiomyosarcoma

Uterine Serous Carcinoma

Malignant Ovarian Germ Cell Tumors

Vulvar & Vaginal Melanoma

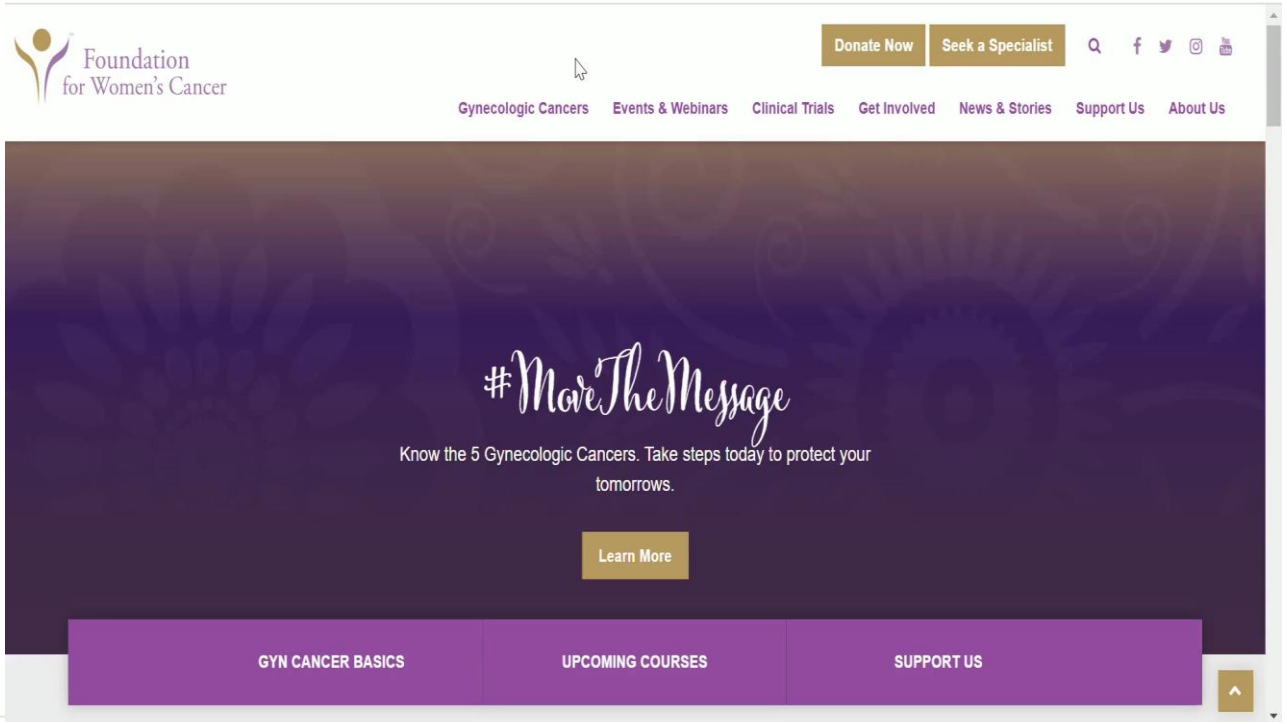
More coming soon!

Webinars

Addressing Financial Challenges While Living as a Gynecologic Cancer Survivor

All About Wellbeing – Balancing Your Mind, Body, and Spirit

& more!



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Thank you so much for coming!

We hope to see you again soon!

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