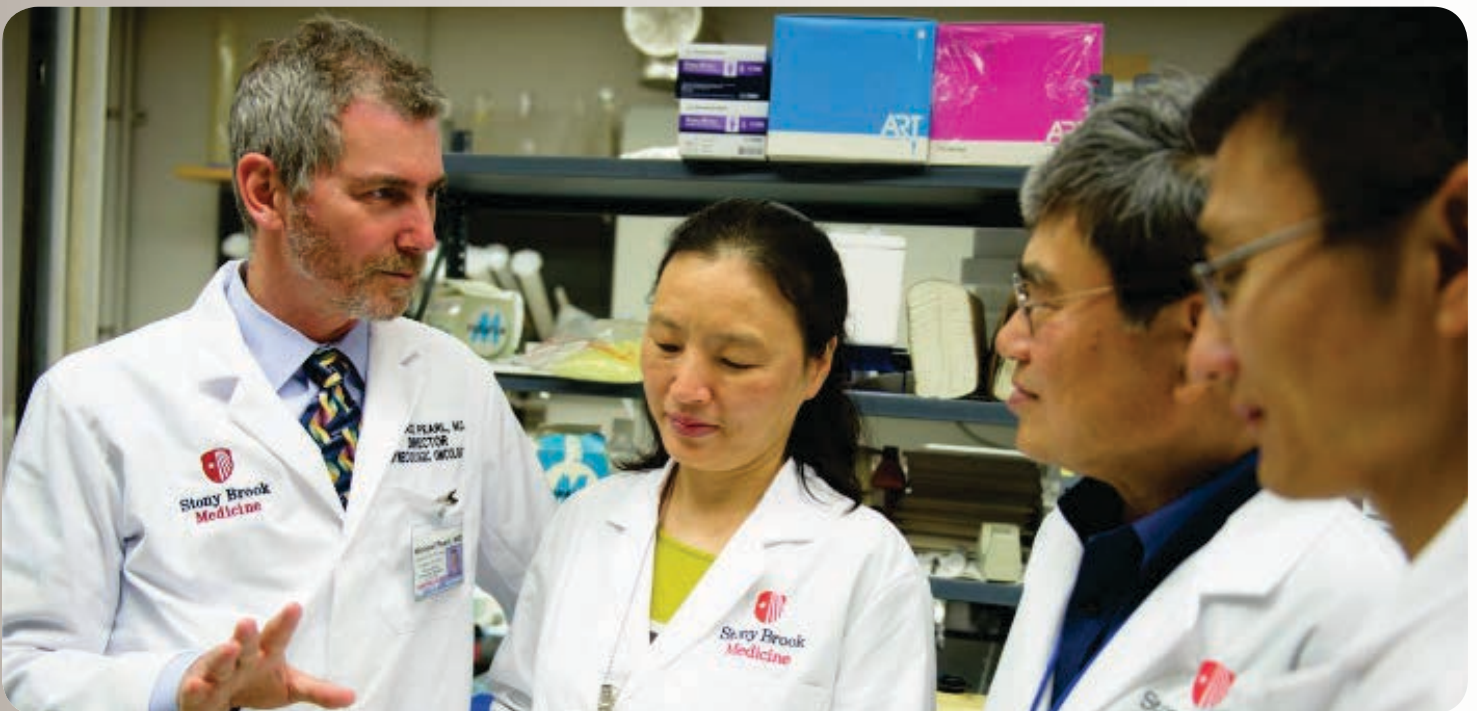




ANNUAL REPORT 2015



DIVISION OF GYNECOLOGIC ONCOLOGY





Director's Statement

Contents

Director's Statement	2
Division Overview	3
Clinical Activity	6
Research Activity	9
Looking to the Future	13
Publications, 2009–2015	15



I shall be telling this with a sigh
 Somewhere ages and ages hence;
 Two roads diverged in a wood, and I--
 I took the one less traveled by,
 And that has made all the difference.
 From Robert Frost, "The Road Not Taken," 1920

Michael Pearl, MD, FACOG, FACS

Professor and Director of the Division of Gynecologic Oncology and Gynecologic Oncology Disease Management Team Leader

Vice-Chair for Research and Faculty Development, Department of Obstetrics, Gynecology and Reproductive Medicine

Where does the time go? I joined the Division of Gynecologic Oncology on August 1, 1994 as a newly minted assistant professor one month after completing my fellowship at the University of Michigan. I took my first night of call as an attending on Labor and Delivery that night, including my first surgical case: a segmental small bowel resection and reanastomosis for a placenta previa percreta that ruptured the uterus and invaded the mid-ileum (Pearl ML et al. Conservative management of placental previa percreta with invasion of the ileum. Arch Obstet Gynecol 58:146–150, 1996). The ensuing decades saw the

division undergo several iterations, none of which were dull, to say the least. Full-time, part-time with a private practice, back to full-time; one hospital, two hospitals, seven hospitals, back to one hospital; two partners, four partners, no partners, back to two partners; two university presidents, four deans, four hospital CEOs, four chairmen and one chairwoman; and yet, three constants: providing the best care for every woman who entrusted us with the awesome responsibility and privilege of caring for her; conducting clinical and translational research that altered the practice of medicine nationwide; and teaching generations

of medical students, residents, and other healthcare professionals the science and, more importantly, the art and humanity of medicine.

I have had the privilege of serving as the Division's Director since 2004. I am, justifiably, I believe, extremely proud of the Division's accomplishments during the past two decades. It takes a team and our team is extraordinary. I am grateful to each and every member. In this, the first annual report of the Division of Gynecologic Oncology, I will summarize our accomplishments since January 1, 2009. To paraphrase Robert Browning, "the best is yet to be."

I have had the privilege of serving as the Division's Director since 2004. I am, justifiably, I believe, extremely proud of the Division's accomplishments during the past two decades. It takes a team and our team is extraordinary. I am grateful to each and every member.

Division Overview



Drs. Henretta, Varughese, and Pearl

MISSION STATEMENT

The Division of Gynecologic Oncology has three overlapping goals: to provide comprehensive, multidisciplinary care for women with known or suspected gynecologic cancers, as well as for those with complicated gynecologic surgical and selected pre-invasive conditions; to conduct research in the development and treatment of these cancers; and to educate healthcare professionals and the public about gynecologic cancers and pre-cancerous conditions.

OVERVIEW

The Division of Gynecologic Oncology treats cancers of the ovary, uterus (endometrium), cervix, vulva, and vagina, as well as the peritoneum and fallopian tube. Together, these cancers account for 13.3% of the new cancers afflicting women annually in the United States. Although substantial strides have been achieved, gynecologic cancers still account for 10% of cancer deaths annually in women.

In Suffolk County, approximately 500 new gynecologic cancer cases are identified annually, compared to approximately 1,200 new breast cancer cases. Compared to New York State, the incidence of cancers of the uterus, ovary, and vulva are higher in Suffolk County, while the incidence of cancers of the cervix and vagina are lower. The incidence of gynecologic cancers in Suffolk County was estimated to increase 4.4-8.9% between 2010 and 2015.

CURRENT STAFF

The Division of Gynecologic Oncology, directed by Michael L. Pearl, MD, FACOG, FACS, is the only academic subspecialty gynecology oncology practice in Suffolk County. Currently, the Division consists of three physicians, Dr. Pearl, Melissa Henretta, MD, MPH, FACOG and Joyce Varughese, MD, a physician assistant, one part-time and two full-time nurses, a surgery coordinator, and one part-time and full-time administrative assistant.

As the only academic, subspecialty gynecologic oncology practice in Suffolk County, our approach is comprehensive and multidisciplinary. Because we are directly involved with all aspects of our patients' care, from diagnosis and treatment to follow-up, the long-term relationships we develop with our patients and their primary care physicians reduces the probability of any potential problems that can result from fragmented care. We perform all the surgical procedures necessary to treat gynecologic cancer, or its complications, and have extensive experience administering intravenous, oral, and intraperitoneal chemotherapy. Our extended chemotherapy team includes physicians, clinical pharmacists, physician assistants, social workers and nurses.

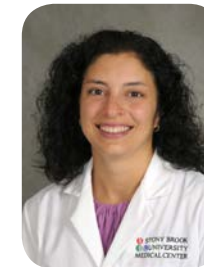
OUR PROVIDERS

Michael Pearl, MD, FACOG, FACS



Dr. Michael Pearl is Professor and Director of the Division of Gynecologic Oncology in the Department of Obstetrics, Gynecology and Reproductive Medicine, as well as the Gynecologic Oncology Disease Management Team Leader at Stony Brook Medicine. He is board certified in Obstetrics and Gynecology, Gynecologic Oncology, and Hospice and Palliative Medicine. He is a member of the American College of Obstetricians and Gynecologists, American College of Surgeons, the Society of Gynecologic Oncologists, and the American Academy of Hospice and Palliative Medicine. In addition to his clinical activities, Dr. Pearl is the chairman of Stony Brook University's Committee (B) on Research in Human Subjects. He is the Principal Investigator (PI) at Stony Brook Medicine for NRG Oncology, a National Cancer Institute-funded cooperative research group dedicated to promoting excellence in the quality and integrity of scientific research. In this capacity, he is responsible as contact PI for seven regional NRG affiliates. Dr. Pearl has authored nearly eighty articles and book chapters in his field and serves as a reviewer for several journals. He has received numerous honors and awards during his career, including several teaching awards from the Department of Obstetrics, Gynecology and Reproductive Medicine and Stony Brook Medicine's highest award for teaching, the Aesculapius Award. Stony Brook also recognized Dr. Pearl with an award for Excellence in Patient Care in a Surgical Discipline in 2014.

Melissa Henretta, MD, MPH, FACOG



Dr. Melissa Henretta is a board-certified Obstetrician Gynecologist and Assistant Professor of Obstetrics, Gynecology and Reproductive Medicine in the Division of Gynecologic Oncology, Stony Brook Medicine. She is a graduate of the Honors Program at the College of the Holy Cross, received her medical degree from the University of Connecticut School of Medicine, and her master's degree in public health from the University of Virginia. She completed her residency in Obstetrics and Gynecology at the Ohio State University Medical Center and her fellowship in Gynecologic Oncology at the University of Virginia. She joined the medical faculty at Stony Brook University after completing her fellowship and was named Program Director for Residency in Obstetrics, Gynecology & Reproductive Medicine in 2014. She has a special interest in the care of patients with a hereditary predisposition to gynecologic cancer and is trained in the da Vinci® S HD™ Surgical System, a robot-assisted surgical platform.

Clinical Activity

OUR PROVIDERS, continued



Joyce Varughese, MD

Joyce Varughese, MD joined the Division of Gynecologic Oncology in 2013 after completing a fellowship at Yale University School of Medicine. Prior to that, she completed her residency in Obstetrics and Gynecology at Yale-New Haven Hospital, where she served as Administrative Chief Resident during her final year. Dr. Varughese is a graduate of Albert Einstein College of Medicine (MD) and Harvard College (BA). She currently serves as a Clinical Assistant Professor in the Division of Gynecologic Oncology in the Department of Obstetrics, Gynecology and Reproductive Endocrinology and provides care to patients with all types of gynecologic malignancies and precancerous conditions. She is trained in robotic surgery and uses this approach where clinically appropriate, especially in endometrial cancer patients. In addition to her clinical activities, Dr. Varughese is actively involved in the training of medical students and residents, both on the wards and in the classroom. She is further involved in a variety of ongoing clinical research projects, including global health projects. She has lectured locally, nationally, and internationally on a variety of Gynecologic Oncology topics and is a member of the American Congress of Obstetricians and Gynecologists, American Society of Clinical Oncology, and the Society of Gynecologic Oncology where she serves on the Legislative and Regulatory Task Force. Dr. Varughese sits on the Admissions Committee of the Stony Brook School of Medicine as well as the Robotic Surgery Steering Committee, Cancer Center Pharmacy and Therapeutics Committee of Stony Brook Hospital.



Marlo Dombroff, PA

Marlo Dombroff, PA has practiced in the field of Gynecology since graduating with honors from Stony Brook University's Physician Assistant (PA) Program in 2001. Nearly half of her career has been spent with the Division of Gynecologic Oncology at Stony Brook University Medical Center. She is currently pursuing a post-professional graduate degree from the Stony Brook PA program, where she continues to excel academically. Ms. Dombroff's role in the Division of Gynecologic Oncology includes preoperative evaluation of all surgical patients, post-treatment surveillance visits, pre-chemotherapy evaluations, enrolling patients for participation in the Division's numerous and diverse research endeavors, as well as running the newly-developed Gynecologic Oncology Survivorship program. In addition to her clinical position in the Division, she is a frequent guest lecturer for the Stony Brook PA Program, educating students on topics such as reproductive and sexual health, genitourinary, hematology, oncology, and professional issues. Moreover, Ms. Dombroff volunteers her time to serve on the Admissions Committee for the Stony Brook PA Program. She is a native Long Islander and lives locally with her husband, two children, and two dogs.

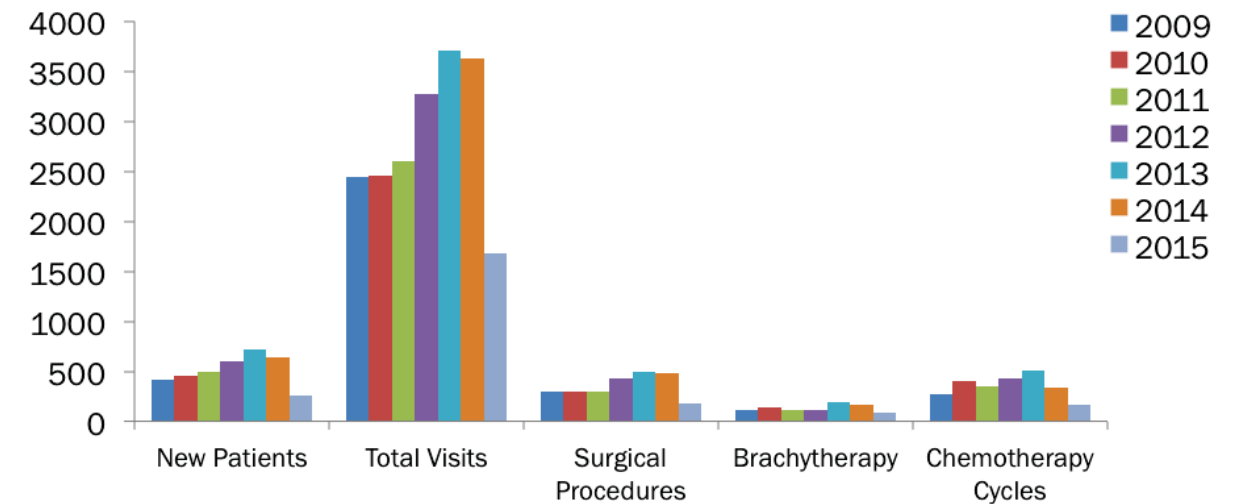
Dr. Henretta was wonderful. I felt comfortable from the minute I walked into her office. She explained everything thoroughly to me . . .

Patient Testimonial

OVERVIEW

From January 1, 2009 to September 2011, clinical volume was limited by Dr. Pearl's capacity as the only Gynecologic Oncologist in the Division. Dr. Henretta joined the Division in September 2011 after completing her fellowship at the University of Virginia. Dr. Varughese joined the division in September 2013 after completing her fellowship at Yale University.

ANNUAL CLINICAL ACTIVITY



RADIATION ONCOLOGY BRACHYTHERAPY PROCEDURES

Year	HDR T&O (Patients)	HDR T&O (Treatments)	HDR VC (Patients)	HDR VC (Treatments)	HDR MUPIT
2009	10	68	27	86	0
2010	9	46	31	106	1
2011	10	36	26	96	0
2012	7	39	23	87	1
2013	12	52	35	137	1
2014	8	23	27	102	0
2015	11	29	10	30	0

Figure and Table reflect data through May 30, 2015

PATIENT CARE PROGRAMS

Minimally Invasive Surgery

The Stony Brook Division of Gynecologic Oncology has an active minimally invasive surgery program. All three surgeons are trained in laparoscopy, with Drs. Henretta and Varughese also certified in robotic-assisted laparoscopic surgery. Dr. Pearl is recognized throughout the region as a vaginal surgeon. The robotic platform (da Vinci® Surgical System by Intuitive Surgical) is primarily used for surgical management of uterine and cervical malignancies, as well as for other gynecologic procedures in obese women. Stony Brook Hospital has two robotic surgery platforms, including dual consoles and a robotic simulator. The robotic system provides patients with less invasive surgical options with decreased side effects of traditional surgery. In 2014, the Gynecologic Oncology Division performed 100 laparoscopic procedures, including 40 robotic procedures, and 36 vaginal hysterectomies.



Dr. Melissa Henretta with the da Vinci® Surgical System

Woman to Woman Program



Participants at National Cancer Survivors Day

In 2014 the Ovarian Cancer Research Fund chose the Gynecologic Oncology Program as one of four sites in the country to receive a \$50,000 grant to establish a Woman to Woman program. The Woman to Woman program seeks to improve quality of care for gynecologic cancer patients by strengthening coping capacities through a patient-to-patient support model. Woman to Woman volunteers—themselves survivors of gynecologic cancers who are at least one year post-treatment—are professionally trained to provide one-on-one emotional support and mentoring; information and resources about gynecologic cancer; and to empower women to advocate for themselves. The program supports women and families through all phases of treatment, recurrence, and recovery, and is offered free of charge to all participants. Program Coordinator, Linda Bily trains all volunteers before they see patients and provides on-going education and support through monthly group meetings. Volunteers see women in a variety of settings and meet them immediately following diagnosis to provide emotional support and peer mentoring throughout the treatment process via telephone, email, or one-on-one visits in treatment centers. Support for partners, family, and other patient caregivers is also available.

Survivorship Program

A cancer survivor is defined as anyone who has been diagnosed with cancer. Due to advances in early detection and treatment, the number of U.S. cancer survivors is growing steadily, so that approximately one in every 25 Americans is now a cancer survivor. Approximately 60% of Americans diagnosed with cancer currently live more than five years. Both the diagnosis and treatment of cancer have a vast and persistent impact on the survivor, including effects on health, physical, and mental states; health behaviors, professional, and personal identity; sexuality and financial standing.

The Division of Gynecologic Oncology at Stony Brook University Medical Center, in recognizing a healthcare system in the U.S. which too often fails to deliver the comprehensive and coordinated follow-up care that cancer survivors deserve, has taken the initiative to develop its own specialized survivorship program. The survivorship program is for those patients who are transitioning from active cancer treatment to post-treatment and wellness. The program focuses on empowering patients to take an active and positive role in their care. Through the program, a specially-trained physician assistant sees each patient and develops an individualized plan to promote health, reduce the risk of cancer recurrence, and provide education on late side effects, which may occur months or even years after treatment is completed. This personalized treatment summary and survivorship plan of care is given to the patient and her primary care doctor. A survivorship visit includes an assessment of late and long-term side effects of cancer treatment, psychosocial support for patients and families, screening referrals to detect other cancers, and recommendations to promote a healthy lifestyle. If appropriate, consults may be provided for a nutritionist, lymphedema specialist, physical therapist, sexual therapist, or weight loss program. Referrals to exercise programs, psychosocial counseling, and survivorship support groups, smoking cessation, genetic counselors, and others may also be suggested.



Participant, National Cancer Survivors Day



Research Activity

CLINICAL SCIENCE

Gynecologic Oncology Group/NRG Oncology Cooperative Group

PI: Michael Pearl, MD

On March 1, 2014, three NCI-funded cooperative oncology research groups, the National Surgical Adjuvant Breast and Bowel Project (NSABP), Radiation Therapy Oncology Group (RTOG), and Gynecologic Oncology Group (GOG), formally merged into a single group, NRG Oncology. NRG Oncology is one of five NCI-funded Lead Protocol Organizations (LPOs). March 1 was also the official start of the NCI's National Clinical Trials Network (NCTN), which replaced the 50-year old Clinical Cooperative Group Program.

At the time of the merger, Stony Brook Medicine was a member of two legacy groups with active enrollment in NSABP and GOG (for various reasons, accrual to RTOG was very limited). Furthermore, the hospital was a parent GOG site with five affiliate sites, several of which had multiple legacy groups. NRG Oncology member sites that participate as an affiliate member in two or more of the legacy groups were required to designate only one site as their parent member. Some institutions that were affiliate members in one or more legacy groups were, or will be able, to qualify to become NRG Oncology Main Members.

After discussions with the principal investigators at each of our affiliate sites, we are pleased to report that all of our affiliates opted to transition with Stony Brook Medicine as their Main Member. As several of the affiliate sites were members of two or more legacy groups, we immediately increased the breadth of our NRG Oncology unit. Recently, one of our affiliate sites became a Main Member and left our unit. On the other hand, we accepted three additional institutions as affiliates at the request of the GOG. Based upon our historical accrual, the GOG nominated us, and we were accepted, to be a Voting Main Member of NRG Oncology.



Dr. Michael Pearl and Gynecologic Oncology Division team member, Sylvia Macco, RN

Using NYS SPARCS Database for Obstetrics, Gynecologic, and Gynecologic Oncology Outcomes Research

Multiple PIs; Study Manager: Natalie Crnosija, MPH

This study will utilize the New York State (NYS) Statewide Planning and Research Cooperative System (SPARCS) database for multiple research questions examining patient outcomes in Obstetrics, Gynecology, and Gynecological Oncology. The overall aim of projects one through three is to examine readmission rates; the database will provide information for readmissions to all locations in New York. The initial projects include:

- Project 1: The first arm of the study will examine 30-day readmission rates following hysterectomy surgeries.
- Project 2: The second arm of the study focuses on gynecologic oncology patients by examining 30-day surgical readmissions for gynecologic oncology patients.
- Project 3: The third arm of the study will utilize the database to examine all-cause readmissions for ovarian cancer patients.

A Prospective Cohort Study of Post-Operative Recovery for Patients undergoing Gynecologic Oncology Surgery

PI: Alexandra Filippi, MS IV, Michael Pearl, MD

Post-operative recovery is a complex process involving a myriad of physiological and psychological factors. Studies suggest that surgeons are poorly informed as to how well their patients function during the post-operative recovery period. The average length of hospital stay after major gynecological surgery has significantly decreased in recent years from approximately one week to about one to two days, shifting much of the recovery process out of the hospital. The purpose of this prospective cohort study is to elucidate how gynecologic oncology surgery patients recover and function following discharge. We hypothesize that patients who undergo gynecological oncology surgery function well in their post-operative recovery period at home.

Knowledge of and Attitudes towards the Human papillomavirus (HPV) Vaccine among South Asian and South Asian-American Parents

PI: Joyce Varughese, MD, and Masra Shameem, MPH

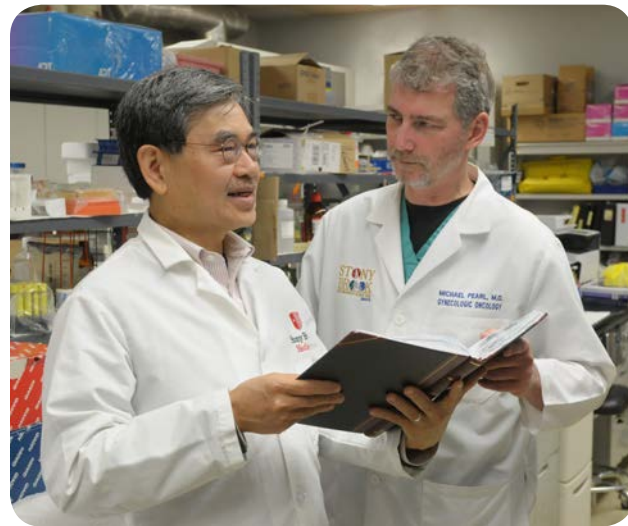
Studies show that the South Asian population generally has limited or a lack of knowledge regarding diseases like breast cancer or diabetes; they also have cultural or religious beliefs that influence their decision to use certain treatments or preventive measures. The lack of knowledge or certain beliefs can significantly impact the health of individuals from this population, as in the case with HPV. Parental knowledge of or beliefs towards HPV or the vaccine may influence whether their children are vaccinated, which may put those not vaccinated at risk for genital warts or cancer. Our study aims to determine whether knowledge, attitudes, and/or beliefs towards HPV and its vaccine among parents from the South Asian population in New York affect whether or not their children will be vaccinated. Another aim is to determine other barriers to vaccination in this population. We hypothesize that parents with less understanding and awareness of HPV and its association with cervical cancer will be less likely to vaccinate their children.

TRANSLATIONAL SCIENCE

Cancer Cell Enrichment Platform; Phase II

PIs: Wen-Tien Chen, PhD, Michael Pearl, MD

Recent studies suggest that circulating tumor cells (CTCs) could represent cancer stem or progenitor cells emigrated in blood and a potential alternative to biopsies as a source of tumor tissue for the detection, molecular characterization, and monitoring of non-hematologic cancers. Although a number of the specific steps in tumor metastasis such as tumor cell invasion, extravasation, and secondary tumor outgrowth have been extensively investigated, the molecular identity of CTCs remains understudied. One of the main reasons for this is that, being extremely rare, CTCs are difficult to isolate, quantify, and characterize. For example, previous investigations on CTC detection in ovarian cancer using antibody-based capture methods resulted in low detection rates ranging from 12–18.7%, while the presence of CTCs defined by anti-epithelial antibody markers alone was not found to affect survival or disease recurrence.



Wen-Tien Chen, PhD and Michael Pearl, MD

During Vitatex' SBIR Phase II Award, we successfully isolated and identified the invasive subpopulation of CTCs (iCTCs) using collagen-based, cellular adhesion matrix (CAM)-coated Vita-Assay™ plates and Vita-Cap™ tubes; the Vita-Assay™ platform identified iCTCs exhibiting the capability to ingest CAM (CAM+). We further identified a panel of tumor progenitor (TP) cell markers, FAP (seprase), DPP4, CD44, KRT8, KRT16, and KRT19, which were specific for iCTCs in the blood of colon, breast, and ovarian cancer. We demonstrated that inoculation of over 500 TP cells isolated by CAM-coated plate from blood, ascites, and primary tumor in patients with ovarian cancer could generate metastases in SCID mice, supporting the role of TP cells including iCTCs in metastasis. Furthermore, the Vita-Assay™ platform and newly discovered TP biomarkers have been developed into a qualified CTC assay using flow cytometry measurement of iCTCs in ovarian, breast, and prostate cancer.

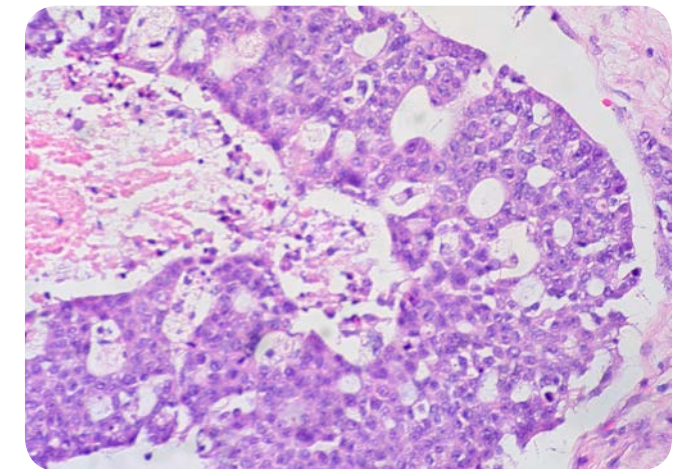
Funding for transition of Vitatex rare cell enrichment platforms to the commercialization stage is currently under negotiation. The successful completion of these discussions may lead to the development of non-invasive blood tests for characterization of different types of epithelial cancers that can be conducted in research and clinical laboratories at multiple institutions, as well as to build a foundation for FDA filing to market these products.

Development of a Genomic Test for Early Detection of High-grade Serous Ovarian Cancer

PIs: Scott Powers, PhD, Kenneth Shroyer, MD PhD, Michael Pearl, MD

Nearly all high-grade serous ovarian cancers (HG-SOCs) harbor TP53 mutations as well as extensive DNA copy number alterations. Recent studies support the proposal that most HG-SOCs result from small cancerous lesions that exist in the lining of the fallopian tube known as tubal intraepithelial carcinomas (TICs). Identical TP53 mutations have been detected in paired tubal intraepithelial carcinoma and concurrent pelvic HG-SOCs, strongly supporting the clonal relationship of the two lesions. Additionally, analysis of DNA copy number alterations in TICs has revealed that these early lesions also harbor extensive alterations similar to those observed in HGSOCs. Despite the extensive heterogeneity of DNA copy number breakpoints seen in HG-SOCs, our preliminary results show that there is much commonality in the epicenters of amplifications and deletions. In fact, our analysis strongly indicates that a panel of ten DNA copy number probes could detect more than 99% of HGSOCs. With the recent development of highly-sensitive digital PCR systems, we hypothesize that it is possible to use DNA copy number probes to detect rare HG-SOC genomes in a background of normal genomes, perhaps as little as one HG-SOC genome in a background of 1×10^6 normal genomes.

Our long-term goal is to develop a genomic test for early detection of TICs so they can be clinically treated by relatively simple surgical procedures, e.g. bilateral salpingectomy on women that have completed their childbearing years, but before they have a chance to develop into HG-SOCs. Such a test would likely be developed in the context of screening a population at high risk of developing the disease (e.g. BRCA1 mutation carriers). Successful early detection would follow the paradigm established by the Pap test, which detects microscopic pre-malignant lesions that arise in the mucosa surface of the cervix, an approach that has reduced cervical cancer deaths by more than 90%.



Serous carcinoma of the Ovary

The successful completion of these discussions may lead to the development of non-invasive blood tests for characterization of different types of epithelial cancers.

Looking to the Future

IN DEVELOPMENT

The Division of Gynecologic Oncology is dedicated to developing new resources and therapies for the community and, most importantly, its patients. The following details future plans and innovative goals set by the Division.

1 Develop a multidisciplinary High Risk Breast and Ovary Program for women with a personal or family history of gynecologic or breast cancer, pre-cancerous conditions, or genetic susceptibility in order to provide: 1) individualized assessment and care; 2) education and counseling about screening options and methods of prevention; 3) opportunities to develop research studies for risk reduction and early detection, collaborative research programs with institutional and corporate partners, and community-based research projects. This program will address an urgent and unmet need, offer a unique and specialized service, provide best practice clinical care, and foster community outreach.

2 In late 2016, the outpatient clinical activities of the Division will move to the Medical and Research Translation (MART) building currently under construction. The MART building will house investigators and projects on cancer research, advanced imaging, and new technologies to advance cancer care. “We are excited about the research breakthroughs that will occur under the roof of the MART,” said Dr. Hannun (Director of the Cancer Center), “But, we also want to stress that the expansion and the facility improvements will be advantageous to our patients. The new accommodations were all designed with input from our healthcare professionals who are devoted to optimal patient care. This project is ultimately for them.”



Dr. Michael Pearl, Sylvia Macco, RN, and Marlo Dombroff, PA with a patient

3 Develop a multidisciplinary Fertility Preservation Program for prepubertal and reproductive age patients if infertility is a potential risk of therapy in order to provide: 1) individualized assessment and care, including access to established fertility preservation technologies; 2) education and counseling about fertility preservation options; 3) opportunities to develop research studies with established and new fertility preservation technologies, collaborative research programs with institutional and corporate partners, and community-based research projects. This program will also address an urgent and unmet need, offer a unique and specialized service, provide best practice clinical care, and foster community outreach.

4 Dr. Varughese is developing an international research and educational program in India, including projects designed to determine the prevalence of BRCA mutations among South Asians and a comparison of allopathic versus Ayurvedic treatments for cervical dysplasia. In addition, she is working with Dr. Mark Sedler and Dr. Srinivas Pentylala on an Obama-Singh grant application for an international collaboration with Amrita Institute for Medical Sciences for studies on women’s cancer screening and postpartum depression.

It is not the critic who counts; not the man who points out how the strong man stumbles, or where the doer of deeds could have done them better. The credit belongs to the man who is actually in the arena, whose face is marred by dust and sweat and blood; who strives valiantly; who errs, who comes short again and again, because there is no effort without error and shortcoming; but who does actually strive to do the deeds; who knows great enthusiasms, the great devotions; who spends himself in a worthy cause; who at the best knows in the end the triumph of high achievement, and who at the worst, if he fails, at least fails while daring greatly, so that his place shall never be with those cold and timid souls who neither know victory nor defeat.

Excerpt from the speech “Citizenship In A Republic” by Theodore Roosevelt

Publications & Honors, 2009–2015

PAPERS

Fan TM, Zhao Q, Chen JJ, CHEN WT, PEARL ML. Clinical significance of circulating tumor cells detected by an invasion assay in peripheral blood of patients with ovarian cancer. *Gynecol Oncol* 112:185-191, 2009.

Miller DS, Blessing JA, Krasner CN, Mannel RS, Hanjani P, PEARL ML, Waggoner SE, Boardman CH. Phase II evaluation of premetrexed in the treatment of recurrent or persistent platinum-resistant ovarian or primary peritoneal carcinoma; a study of the Gynecologic Oncology Group. *J Clin Oncol* 27:2686-2691, 2009.

Walker JL, Piedmonte MR, Spirtos NM, Eisenkop SM, Schlaerth JB, Mannel RS, Spiegel G, Barakat R, PEARL ML, Sharma SK. Laparoscopy compared with laparotomy for comprehensive surgical staging of uterine cancer: Gynecologic Oncology Group Study LAP-2. *J Clin Oncol* 27:5331-5336, 2009.

Hurteau J, Brady MF, Darcy KM, McGuire WP, Edmonds P, PEARL ML, Ivanov I, Tewari K, Mannel RS, Zanotti K, Benbrook DM. Randomized Phase III trial of Tamoxifen versus Thalidomide in women with biochemical-recurrent-only epithelial ovarian, fallopian tube or primary peritoneal carcinoma after a complete response to first-line platinum/taxane chemotherapy with an evaluation of serum vascular endothelial growth factor (VEGF): A Gynecologic Oncology Group Study. *Gynecol Oncol* 119:444-450, 2010.

Laing SX, PEARL ML, Liang S, Xiang LL, Jia L, Fadare O, Schwartz PE, Chambers SK, Kong B, Zheng W. Personal history of breast cancer as a significant risk factor for endometrial serous cancer in women \leq 55 years old. *Int J Cancer* 128:763-70, 2011.

Zemlyak A, Zakhaleva J, PEARL M, Mileva I, Gelato M, Myancik D, McNurlan M. Expression of inflammatory cytokines by adipose tissue from patients with endometrial cancer. *Eur J Gyn Oncol* 33:363-368, 2012.

Walker JL, Piedmonte MR, Spirtos NM, Eisenkop SM, Schlaerth JB, Mannel RS, Spiegel G, Barakat R, PEARL ML, Sharma SK. Recurrence and survival after randomization to laparoscopy versus laparotomy for comprehensive surgical staging of uterine cancer (Gynecologic Oncology Group LAP2). *JCO* 30:695-700, 2012.

McMeekin DS, Sill MW, Abulafia O, Hanjani P, PEARL ML, Rubin SC, Rose PG, Small L, Mangiaracina Benbrook DM. A Phase II trial of thalidomide in patients with refractory uterine carcinosarcoma and correlation with biomarkers of angiogenesis: A Gynecologic Oncology Group study. *Gynecol Oncol* 127:356-61, 2012.

Stevens EE, Yu S, Van Sise M, Pradhan TS, Lee V, PEARL ML, Lee YC, Abulafia O. Hemoglobin A1c and the relationship to stage and grade of endometrial cancer. *Arch Gynecol Oncol* 286:1507-1512, 2012.

Courtney-Brooks M, Scalici J, HENRETTA MS, Modesitt SC, Jazaeri AA, Cantrell LA, Duska LR. Vulvar necrotizing soft tissue infection: A review of a multi-disciplinary surgical emergency and management in the modern era. *Gynecol Oncol Case Rep* 11:6-9, 2013.

Fleming G, Filiaci VL, Marzullo B, Zaino R, Davidson SA, PEARL ML, Makker V, Burke JJ, Zweizig SL, Van Le L, Hnajani P, Downey G, Walker JL, Reyes HED, Leslie KK. Temsirolimus as a single agent and combined with megestrol acetate and tamoxifen in the treatment of metastatic or recurrent endometrial cancer: a Gynecologic Oncology Group Study. *Gynecol Oncol* 132:585-592, 2014.

Kumar A, PEARL ML. Mini-laparotomy versus laparoscopy for gynecologic conditions. *J Minimally Invasive Gynecology* 21:109-114, 2014.

PEARL ML, Zhao Q, Yang J, Dong H, Zhang Q, Golightly M, Zucker S, CHEN W-T. Prognostic analysis of invasive circulating tumor cells (iCTCs) in epithelial ovarian cancer. *Gynecol Oncol* 134:581-590, 2014.

Bierer BE, Barnes M, IRB/RIO/IO WORKING GROUP. Research misconduct involving noncompliance in human subjects research supported by the Public Health Service: Reconciling separate regulatory systems. *Hastings Center Report*, July-August:S2-S27; 2014.

HENRETTA MS, Copeland AR, Kelley SL, Hallowell PT, Modesitt SC. Perceptions of obesity and cancer risk in female bariatric surgery candidates: highlighting the need for physician action for unsuspectingly obese and high risk patients. *Gynecol Oncol* 133:73-7, 2014.

PEARL ML, Dong H, Tulley S, Zhang Q, Golightly M, Zucker S, CHEN W-T. Treatment monitoring of patients with epithelial ovarian cancer using invasive circulating tumor cells (iCTCs). *Gynecol Oncol* 137:229-38, 2015.

PEARL ML, Stevens EE, VARUGHESE J. "Ovarian and fallopian tube cancer." *American Cancer Society Textbook of Cancer*. (In press)

Zigelboim I, Ali S, Lankes HA, Backes F, Moore K, Mutch D, Robison K, Behbakht K, Waggoner S, Ghebre RG, PEARL ML, Ramirez NC, Goodfellow P. Assessing the prognostic role of ATR mutation in endometrioid endometrial cancer: An NRG Oncology/Gynecologic Oncology Group study. *Gynecol Oncol*. (In press)

Goodfellow P, Billingsley CC, Lankes HA, Cohn DE, Broaddus RD, Ramirez N, Pritchard CC, Brinton LA, Backes F, Landrum LM, Geller MA, DiSilvestro PA, Pearl ML, Lele SB, Powell MA, Zaino RJ, Mutch D, Ali S, Hampel H, Chassen AS, Simmons LV, Schmidt AP. Combined MSI, MLH1 methylation analysis and IHC for Lynch syndrome screening for 1002 endometrial cancers from GOG210: An NRG Oncology/Gynecologic Oncology Group study" *JCO*. (In review)

McMeekin DS, Shamshad A, Cohn DE, Mutch D, DiSilvestro PA, Argenta P, PEARL ML, Lele S, O'Downey GO, Van Le L, Zweizig SL, Spirtos NM, Zaino RJ. GOG 210 - A molecular staging study of endometrial carcinoma: Results of surgical and pathologic spread patterns of endometrioid endometrial cancer: An NRG/Gynecologic Oncology Group trial. *Lancet Oncol*. (In review)

Publications & Honors, 2009–2015

ABSTRACTS

Walker J, Piedmonte M, Spirtos N, Eisenkop S, Spiegel G, Mannel R, Barakat R, PEARL ML, Sharma S. Recurrence and survival after randomization to laparoscopy versus laparotomy for comprehensive surgical staging of uterine cancer (Gynecologic Oncology Group LAP2). *Gynecol Oncol* 117 (Abstr #1): 393, 2010. (Abstract). Society of Gynecologic Oncologists 41st Annual Meeting. San Francisco (March)

Hurteau J, Brady M, Darcy K, McGuire W, Edmonds P, PEARL ML, Tewari K, Ivanov I, Zanotti K, Mannel R, Benbrook D. A randomized phase III trial of tamoxifen versus thalidomide in women with biochemical-recurrent-only epithelial ovarian, fallopian tube, or primary peritoneal carcinoma with an evaluation of serum vascular endothelial growth factor: A Gynecologic Oncology Group study. *Gynecol Oncol* 116(3): s1 (SGO#2): S2, 2010. (Abstract). Society of Gynecologic Oncologists 41st Annual Meeting. San Francisco (March)

Dewdney SB, Kizer N, Babb S, Rimmel B, Andaya A, Ali S, O'Malley D, Mannel R, Darcy K, DiSilvestro P, Lele S, PEARL ML, Brinton L, Goodfellow P. Uterine serous carcinoma: increased familial risk for pancreatic cancer and other Lynch-associated malignancies: a Gynecologic Oncology Group study. *Gynecol Oncol* 116(3): s1(SGO#14): S8, 2010. (Abstract) Society of Gynecologic Oncologists 41st Annual Meeting. San Francisco (March)

Spencer R, Wright A, Nilsson M, Prigerson H, Chalas E, PEARL ML, Villella J. Gynecologic oncologists' preferences for end-of-life care: Communication, palliation, or aggressive care in patients with advanced ovarian cancer? Society of Gynecologic Oncologists 41st Annual Meeting. San Francisco (March)

Harmon B, Hwang S, Parker T, PEARL ML, Tornos C. Factors influencing accuracy frozen section diagnosis of ovarian mucinous tumors: A review of 100 cases. USA and Canadian Academy of Pathology 99th Annual Meeting. San Antonio, Texas (March)

Patel K, Pandaya D, PEARL ML, Tornos C. Number of lymph nodes in staging for endometrial cancer: Is the minimum required by GOG protocols feasible? USA and Canadian Academy of Pathology 99th Annual Meeting. San Antonio, Texas (March)

Parker T, Harmon B, Hwang S, PEARL ML, Tornos C. Impact of subspecialization on the intraoperative diagnosis of ovarian lesions: A review of 831 cases. American Society of Clinical Pathology Annual Meeting/WASPaLM XXVI World Congress. Las Vegas (October)

Stevens E, Yu S, Van Sise M, Pradham T, Lee V, PEARL ML, Chun Y, Abulafia O. Hemoglobin A1c and the relationship to stage and grade of endometrial cancer. American College of Obstetricians and Gynecologists District II Meeting. New York (October)

Kumar A, PEARL ML. Mini-laparotomy versus laparoscopy for benign gynecologic conditions. American College of Obstetricians and Gynecologists District II Meeting. New York (October)

Miller D, Filiaci V, Fleming G, Mannel R, Cohn D, Matsumoto T, Tewari K, DiSilvestro P, PEARL ML, Zaino R. Randomized Phase III noninferiority trial of first-line chemotherapy for metastatic recurrent endometrial carcinoma: A Gynecologic Oncology Group study. *Gynecol Oncol* 125: 771-3, 2012. (Abstract) Society of Gynecologic Oncology Annual Meeting on Women's Cancer. Austin, Texas (March)

CHEN WT, Dong H, Zhao Q, Yang J, Zhang Q, Zucker S, PEARL ML. Prognostic analysis of invasive circulating tumor cells (iCTCs) to monitor epithelial ovarian cancer. American Association of Cancer Research Annual Meeting. San Diego (April)

CHEN WT, Zhao Q, Yang J, Dong H, Zhang Q, Fan T, Golightly M, Dessio W, Madajewicz S, HENRETTA M, PEARL ML. Circulating tumor cells with the invasive phenotype predict progression-free and overall survival in preoperative patients with benign and epithelial ovarian cancer. American Association of Cancer Research Annual Meeting. Washington, DC (April)

HENRETTA M, Stevens E. Beyond the dark side of the moon: Evaluating the quality of web-based information at the end of life. Society of Gynecologic Oncology 44th Annual Meeting on Women's Cancer. Los Angeles (March)

Monk BJ, Huang H, Penson RT, Davidson SA, PEARL ML, O'Malley DM, Bender DP, Boente MP, Martin LP, Chan JK. Health related quality of life associated with every-3-week paclitaxel vs dose dense weekly paclitaxel in combination with carboplatin with or without bevacizumab for primary ovarian cancer: Gynecologic Oncology Group Study 262. *Gynecol Oncol* 133:58 (SGO #139), 2014. Society of Gynecologic Oncologists Annual Meeting on Women's Cancer. Tampa, Florida (March)

HENRETTA MS, Copeland AR, Kelley SL, Hallowell PT, Modesitt SC. Perceptions of obesity and cancer risk in female bariatric surgery candidates: highlighting the need for physician action for unsuspectingly obese and high-risk patients. *Gynecol Oncol* 133(1):73-7, 2014. Society of Gynecologic Oncologists Annual Meeting on Women's Cancer. Tampa, Florida (March)

Harmon B, PEARL ML, HENRETTA M, and Tornos C. The increasing frequency of bilateral salpingectomy in patients with benign GYN conditions. College of American Pathology Annual Meeting. Chicago (September)

Liu C, Harmon B, Shroyer K, Korman M, Hwang S, PEARL ML, HENRETTA M and Tornos C. Monoclonal PAX-8 in mucinous ovarian tumors: A study of 59 cases of primary and metastatic tumors. College of American Pathology Annual Meeting. Chicago (September)

Richardson DL, Sill MW, Cho JK, PEARL ML, Kehoe SM, Hanjani P, Zhou XC, Van Le L, Landrum LM, Gray HJ, Coleman RL. A randomized placebo controlled Phase IIB trial of weekly paclitaxel plus/minus pazopanib in persistent or recurrent ovarian cancer. 15th Biennial Meeting of the Gynecologic Oncology Society-IGCS. Melbourne, Australia (November)

Publications & Honors, 2009–2015

Regenbogen E, Oleszak SP, Corrado T, Shroyer ALW, Vanner E, Goldstein J, PEARL ML. Monitoring hypopharyngeal pH in patients undergoing general endotracheal tube anesthesia; a pilot study. 95th Annual Meeting of the American Broncho-Esophageal Association. Boston (April)

Billingsley CC, Cohn DE, Mutch DG, Broaddus R, Ramirez N, Lankes H, Ali S, Pritchard CC, Brinton LA, Backes FJ, Landrum L, Geller M, DiSilvestro PA, PEARL ML, Lele SB, Goodfellow PJ: Clinical implications for MSI, MLH1 methylation analysis and IHC in Lynch screening for endometrial cancer patients: an analysis of 940 endometrioid endometrial cancer cases from the GOG 0210 study (SGO #3624). Society of Gynecologic Oncologists Annual Meeting on Women's Cancer. Chicago (March)

Mutch D, Powell M, Schmidt A, Dahiya N, Broaddus R, Ramirez N, Trichter D, Ali S, Lankes H, O'Malley D, Moxley K, Geller M, DiSilvestro PA, PEARL ML, Lele SB, Goodfellow P: Clinicopathologic features associated with defective DNA mismatch repair (MMR): a GOG 0210 cohort study of 1041 endometrioid endometrial cancer cases (SGO #4262). Society of Gynecologic Oncologists Annual Meeting, Women's Cancer. Chicago (March)

Myers A, Filiaci VL, Zhang Y, PEARL ML, Behbakht K, Makker V, Hanjani P, Zweizig S, Burke J, Downey G, Leslie KK, Birrer MJ, Fleming GF. Tumor mutational analysis of GOG 248, a phase II study of temsirolimus or temsirolimus and alternating megestrol acetate and tamoxifen for advanced endometrial cancer (EC): An NRG Oncology/Gynecologic Oncology Group study. American Society of Clinical Oncology Annual Meeting. Chicago (May)

Arti M, Zhang Z, Dehdashti F, Koh W-J, Ali S, Mannel R, Moxley K, DiSilvestro P, PEARL M, Duane S, King V, Plante M, Zhou X, Gold M. Utility of PET-CT to evaluate retroperitoneal lymph node metastasis in high risk endometrial cancer. ACRIN 6671/GOG 0233. American Society of Clinical Oncology Annual Meeting. Chicago (May)

EDUCATION & COMMUNITY OUTREACH

The Division of Gynecologic Oncology provides didactic and clinical education for medical students, resident physicians, nurses, and physician assistant students in hospital and ambulatory settings. By participating in local, regional, national, and international Grand Rounds, members of the Division provide continuing medical education (CME) for physicians in many specialties. They also provide valuable information to the community on prevention, diagnosis, and management of gynecologic cancers through a range of support groups and lecture series.

"Mock IRB Review", OHRP Research Community Forum: On the Legal and Ethical Frontline. New York. 2009.

"Innovations in the Management of Cervical Cancer: Prevention and Treatment 2010". Grand Rounds. Department of Obstetrics and Gynecology. Huntington Hospital. Huntington, New York. 2010. Conversations". Society of Gynecologic Oncology Annual Meeting on Women's Cancer. Austin, Texas

"Management of the Abnormal Pap Smear." 36th Annual Family Medicine Update. Department of Family Medicine. State University of New York at Stony Brook. Stony Brook, New York. 2010.

"Mock IRB Review", CUNY Fall IRB Symposium: New Decade-New Problems Or Are They The Same Ones Repackaged? New York. 2010.

"Integrating Palliative Medicine Practice in the Care of Surgical Patients with Life-Threatening Illness." CME Saturday. State University of New York at Stony Brook. Stony Brook, New York. 2010.

"Palliative Care of the Woman with Cancer". Ovarian Cancer Survivors' Course. Foundation for Women's Cancer. Latham, New York. 2011.

"A Homage to Clinical Trial Participants". Community Update. National Cancer Survivors' Day. State University of New York at Stony Brook, Stony Brook, New York. 2011.

"Cancer Genetics." Grand Rounds. Department of Obstetrics, Gynecology, & Reproductive Medicine. State University of New York at Stony Brook, Stony Brook, New York. 2011.

"Supportive Care in Malignant Bowel Obstruction: Medical Management, the Role of TPN, and Difficult Conversations". Society of Gynecologic Oncology Annual Meeting on Women's Cancer. Austin, Texas. 2012.

"Understanding the Influence of Heredity in Breast and Ovarian Cancer." Community Update. Stony Brook Medicine Cancer Center. State University of New York at Stony Brook, Stony Brook, New York. 2012.

"Screening for Ovarian Cancer; It's Not As Easy As Taking a Blood Sample". Community Service Lecture, State University of New York at Stony Brook. Stony Brook, New York. 2013.

"Screening for Ovarian Cancer; It's Not As Easy As Taking a Blood Sample". Grand Rounds. Department of Obstetrics, Gynecology & Reproductive Medicine, State University of New York at Stony Brook. Stony Brook, New York. 2013.

"New and Current Treatments in the Fight Against Cancer: Gynecologic Cancers". Community Outreach Lecture. Organizations of the East End Oncology Networking Group. Riverhead, New York. 2013.

"Ovarian Cancer Awareness Seminar". Community Outreach Lecture. The Coalition for Women's Cancer. Southampton, New York. 2013.

"Minimally Invasive Surgery for the Management of Endometrial Cancer: Hype or Help?" Suffolk County Clinic Day. Hauppauge, New York. 2013.

Publications & Honors, 2009–2015

EDUCATION & COMMUNITY OUTREACH, continued

“Endometrial Cancer and Minimally Invasive Surgery.” Grand Rounds. Department of Obstetrics, Gynecology, & Reproductive Medicine. State University of New York at Stony Brook, Stony Brook, New York. 2013.

“Long Term Effects of Cancer Treatments on Fertility”. Cancer Survivorship Series for Healthcare Providers. Leukemia and Lymphoma Society. Melville, New York. 2013.

“Palliative Care of the Woman with Cancer”. Ovarian Cancer Survivors’ Course. Foundation for Women’s Cancer. Albany, New York. 2014.

“Turn the Town Pink (and Teal): The Role of Heredity in Breast and Ovarian Cancer.” Community Outreach Lecture. Farmingville, New York. 2014.

“The Signs of Gynecologic Cancer Most Women Ignore.” Community Outreach Lecture, North Babylon, New York. 2014.

“Everything You Ever Wanted to Know About Tumor Markers (but were afraid to ask)”. Grand Rounds. Department of Obstetrics, Gynecology, & Reproductive Medicine. State University of New York at Stony Brook, Stony Brook, New York. 2014.

“Role of Heredity in Breast and Ovarian Cancer.” Community Update. Stony Brook Medicine Cancer Center. State University of New York at Stony Brook, Stony Brook, New York. 2014.

“Cervical Cancer Screening Guidelines”. Regional Cancer Centre, Thiruvananthapuram, Kerala, India. 2014

“Oncofertility”. Clinic Day. Suffolk County Obstetrics and Gynecology Society. Nesconset, New York. 2014.

“Update on Cervical Cancer Screening Guidelines”. Grand Rounds. Department of Obstetrics, Gynecology, & Reproductive Medicine. State University of New York at Stony Brook, Stony Brook, New York. 2014.

“Cervical Cancer Screening”. Spring Community Update. Stony Brook Cancer Center, Stony Brook, New York. 2015.

“Supporting Seriously Ill Patient/Family Preferences for Life Sustaining Treatments Suing the NY State MOLST (Medical Orders for Life Sustaining Treatments).” Grand Rounds. Department of Surgery, State University of New York at Stony Brook. Stony Brook, New York. 2015.



Dr. Joyce Varughese

“Cervical Cancer”. Grand Rounds. Department of Family Medicine, State University of New York at Stony Brook. Stony Brook, New York. 2015.

“HPV and the Cancer Connection: Cervical Cancer”. Community Outreach Lecture. Molloy College, Rockville Center, New York. 2015

HONORS & AWARDS

Michael Pearl, MD

2007–2015	Top Doctors: New York Metro Area, Castle Connolly
2008–2010	Guide to America’s Top Obstetricians and Gynecologists, Consumers’ Research Council of America
2008, 2009	Patients’ Choice Award, Castle Connolly
2009–2013	Guide to America’s Top Oncologists, Consumers’ Research Council of America
2010	Aesculapius Award for Teaching, Stony Brook University School of Medicine
2012–13	Patients’ Choice Award, Castle Connolly
2014	Excellence in Patient Care in a Surgical Specialty Faculty Award, Stony Brook University School of Medicine

Melissa Henretta, MD, MPH

2013	CREOG Excellence in Teaching Award
------	------------------------------------

Joyce Varughese, MD

2014	Participant, AAMC Early Career Women Faculty Professional Development Seminar
------	---

Content: Michael Pearl, MD
Editing: Elizabeth Roemer and Jessica Waldmann
Design: Jessica Waldmann
Images and Photography: Gynecologic Cancer Ribbons, p. 8, Courtesy of Foundation for Womens Cancer; Serous Carcinoma of Ovary (2008) p. 12, Courtesy of Ed Uthman; Photography on pp. 2, 4, 5, 10, 13, and 23 by Jeanne Neville, Media Services, Stony Brook University School of Medicine
© The Division of Gynecologic Oncology, Stony Brook Medicine