

ANNUAL REPORT

JULY 1, 2016 to JUNE 30, 2017

LEWIS KATZ SCHOOL OF MEDICINE AT TEMPLE UNIVERSITY

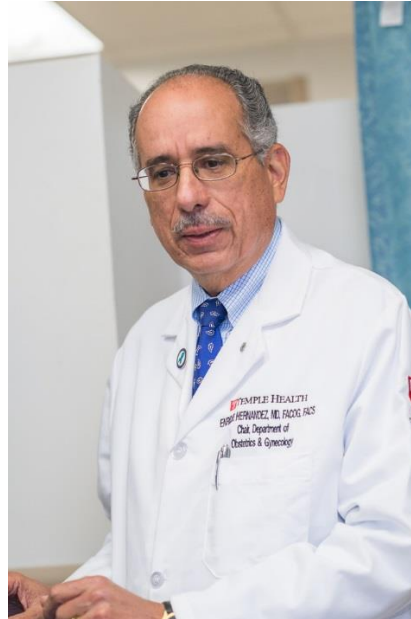
DEPARTMENT OF OBSTETRICS, GYNECOLOGY & REPRODUCTIVE SCIENCES



“EXCELLENCE IN SERVICE”

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In FY17, in partnership with Wedge Medical Center (a mental health and drug/alcohol treatment facility one-block from TUH), we established a Center of Excellence to address opioid addiction during pregnancy. The Center received funding from the Commonwealth of Pennsylvania thanks to the efforts of Dr. Laura Goetzl, Director of the Division of Maternal Fetal Medicine. The Center began to welcome patients in January of 2017 under the direction of Dr. Laura Hart of Maternal Fetal Medicine, who is the medical director of the Center of Excellence, and Dr. Mary Morrison of psychiatry, who is the Center's psychiatric director.

In 2014 Temple University Hospital established Philadelphia's first public cord blood donation program. In January 2017 a woman with acute myeloid leukemia was the first recipient of stem cells derived from cord blood harvested at TUH. Since then 3 other individuals have benefited from this program.

In the spring Dr. Amanda Horton traveled with a group of Temple medical students to Chimborazo, Ecuador. They spent a week staffing a women's clinic with emphasis in cervical cancer screening, the second most common malignancy among women in developing countries.

In FY17 we re-established obstetrical ultrasound services at two of our satellites (Episcopal Hospital and Northeastern Ambulatory Care Center). Two ultrasound technicians were trained to perform first trimester pregnancy ultrasound under the supervision of Dr. Wadia Mulla, director

of our Perinatal Diagnostic Center. The ultrasounds are performed at Episcopal or NACC for the patient's convenience and read centrally by one of the Maternal Fetal Medicine specialists. The Baby Friendly initiative, under the direction of Dr. Gail Herrine, is on its last phase. We are looking forward to our certification visit in FY18. We continue to champion along with the Departments of Nursing and Pediatrics the safe sleep program we called Safe T which provides a box with mattress for all of our babies to sleep in after discharge. This program was modeled after a Finnish program to decrease infant morbidity and mortality. Use of the "Baby Box" has received considerable media attention and should support both a reduction in SIDS (sudden infant death syndrome) rates and improved breastfeeding adherence. Outcomes are being tracked immediately post discharge and at 3 and 6 months.

We have recruited several faculty members to fill vacancies and new positions. The department faculty participates in numerous intra- and extra-mural committees and hold multiple leadership positions. Seven of our faculty members were listed in Philadelphia Magazine 2017 "Top Doctors".

Our residency program is fully accredited and consistently remains citation-free. We received over 900 applications for our five categorical PGY-1 residency positions and interviewed 86 highly qualified applicants. We ultimately ranked 84 applicants and matched in the top third of our rank list. Several of our residents presented their research projects at national meetings. As of this summer a third year resident will be rotating to the Fox Chase Cancer Center, as well as third year medical students. Our gynecologic oncology fellowship program is on its third year. We now have three fellows, one at each year level. We successfully transitioned the fellowship accreditation from the American Board of Obstetrics and Gynecology to the American Council for Graduate Medical Education. The fellowship is directed by Dr. Christina Chu who is based at Fox Chase with the assistance of Dr. Karen Houck at TUH.

We continue to participate in both bench and clinical research. We continue to be a research site for several pharmaceutical industry-sponsored clinical trials. We continue to participate in NIH-funded Gynecologic Oncology Group (now NRG) clinical trials. Our faculty continues to be academically productive with publications in peer-reviewed journals and presentations at national meetings, which are listed in this report.

Our faculty clinical productivity continues to be high with total RVUs (adjusted for clinical FTE) in FY17 in the 66th percentile of MGMA benchmarks. There were 58,693 patient visits to our clinics in FY17. Our hospital patients' average length of stay continues to be low at 2.54 days. Even though we had budgeted faculty and advanced practice nursing vacancies we ended the year with a favorable variance to budget.

In FY17 there were 2642 obstetrical deliveries. The decrease in deliveries mirrors what is happening nationally. For two years in a row the number of births in the United States was lower than in the previous year. In Southeast Pennsylvania there were 10% fewer deliveries in 2015 compared to 2010. Twenty-eight percent of the obstetrical deliveries at Temple University Hospital in FY17 were by cesarean section, which is below the national average (32% in 2015). In FY17 there were 7718 visits to our obstetrical triage unit, a slight increase over FY16. The complexity of the obstetrical cases continues to be high with 1374 visits to our high-risk

obstetrical service. There were an additional 2836 visits for genetic counseling or screening. In FY17 we performed almost 11,000 obstetrical ultrasounds, 946 obstetrical Doppler studies, and 2612 biophysical profile/non-stress fetal tests. The total number of tests and procedures performed at our Perinatal Diagnostic Center in FY17 was 6% more than in FY16. In addition, 483 early pregnancy ultrasounds were done at Episcopal Hospital and NACC since January 2017.

In FY17, 1605 women underwent gynecologic surgery at Temple University Hospital (734 major and 871 minor procedures). This includes 128 major surgical procedures for suspected or documented gynecologic malignancies. One hundred and four abdominal, 174 laparoscopic and 38 trans-vaginal hysterectomies were performed. Sixty-five of the laparoscopic hysterectomies were performed with robotic assistance. A total of 85 gynecologic surgical procedures were performed with robotic assistance at Temple University Hospital. There were 63 procedures for urinary incontinence and/or pelvic reconstructive surgery performed at Temple University Hospital in FY17. In addition to the laparoscopic hysterectomies, there were 64 operative and 87 diagnostic laparoscopy procedures. We also performed 274 hysteroscopies and 173 cystoscopies. There were also 203 postpartum surgical sterilizations performed in the Labor & Delivery operating rooms. The full-time faculty also performs surgical procedures at Holy Redeemer Hospital, Jeanes Hospital and Chestnut Hill Hospital. In FY17 10 robotic-assisted hysterectomies were performed by our faculty at Chestnut Hill Hospital.

In the months, years and decades to come we will continue to strive to completely fulfill our mission:

**TO BE A LEADER IN OUR COMMUNITY, CITY AND REGION IN OB/GYN
CLINICAL CARE, TEACHING AND RESEARCH
AND BY DOING SO BETTER SERVE OUR VULNERABLE PATIENT POPULATION**

II. FACULTY

A. SUMMARY

Enrique Hernandez, MD, FACOG, FACS
Abraham Roth Professor and Chairman

1. *Full-Time Faculty*

Division of Gynecologic Oncology

Karen L. Houck, M.D., (Associate Professor), Director
Enrique Hernandez, M.D. (Professor)

Division of Maternal-Fetal Medicine

Laura Goetzl, M.D., MPH, (Professor), Director, Vice-Chair for Research
Laura Hart, MD (Assistant Professor)
Wadia Mulla, MD (Assistant Professor)

Urogynecology and Pelvic Reconstructive Surgery

Carol Glowacki, MD, (Assistant Professor), Director

Division of Gynecology & General Obstetrics

Juan Diaz, M.D., (Assistant Professor), Director
Arleen Ayala, M.D. (Assistant Professor)
Tanise Branche, MD (Assistant Professor)
Divya Chillapalli (Assistant Professor)
Bruce Carnivale, D.O. (Assistant Professor)
Gloria Diaz, M.D. (Assistant Professor)
Shaliz Dolan, M.D. (Assistant Professor)
Michelle Duncan (Associate Professor)
Gail Herrine, M.D. (Associate Professor)
Amanda Horton, M.D. (Assistant Professor)
Stacey Jeronis, M.D. (Associate Professor), Associate Chair
Bruce Mabine, M.D. (Assistant Professor)
Anthony Milicia, M.D. (Assistant Professor)
Sarah Park, MD (Assistant Professor)
Marisa Rose, M.D. (Associate Professor), Vice-Chair for Education

Adjunct

Gerald Reme, M.D. (Assistant Professor)
Shwetha Shrivatsa, M.D. (Assistant Professor)
Todd Stearns, D.O. (Assistant Professor)
Henry Su, M.D. (Assistant Professor)
Clinton Turner, M.D. (Assistant Professor)

Research

Sarmina Hassan, MBBS., PhD, (Assistant Professor),

Subtotal: 27

2. *Part-Time Faculty*

Division of Reproductive Endocrinology and Infertility

Arthur Castelbaum, M.D., (Assistant Professor), Co-director

Martin Freedman, M.D., (Assistant Professor), Co-director

Division of Gynecology & General Obstetrics

Anthony Mackaronis, MD (Assistant Professor)

Deslyn Mancini, M.D. (Assistant Professor)

Subtotal: 4

3. *Secondary Appointments*

Department of Internal Medicine

Sharon Herring, M.D. (Associate Professor)

Fox Chase Cancer Center, Behavioral Medicine

Suzanne Miller. PhD (Professor)

Subtotal: 2

4. *Affiliate Faculty*

Fox Chase Cancer Center

Stephen Rubin, MD, (Professor), Chief Gynecologic Oncology

Christina Chu, MD, (Associate Professor)

Cynthia Bergman, MD, (Assistant Professor)

Stephanie King, MD, Associate Professor)

Gina Mantia-Smaldone, MD, (Assistant Professor)

Subtotal: 5

5. *Adjunct Faculty*

Allegheny Health Network

Geisinger Medical Center

Holy Redeemer Hospital

Jeanes Hospital
Lancaster General Hospital
Main Line Health Network
St. Luke's Hospital

Subtotal: 54

Total Number of Faculty: 92

B. NEW FACULTY

Tanise Loudon Branche, MD, received her doctor in medicine degree from Howard University and completed a residency in obstetrics and gynecology at Pennsylvania Hospital. She joined the Division of General Gynecology and Obstetrics.

Divya Chillapalli, MD, received her medical degree from New York Medical College, completed a residency in obstetrics and gynecology at Temple University Hospital being elected on her senior year to the post of administrative chief resident. She went on to complete a one-year fellowship in minimally invasive pelvic surgery at Fox Chase Cancer Center. At the completion of the fellowship she joined the faculty of Rowan University School of Medicine at Cooper Medical Center in Camden, NJ.

Michelle Duncan, MD, graduated with a bachelor in arts degree from Harvard Medical College and received her doctor in medicine degree from the University of Michigan. She went on to complete a residency in obstetrics and gynecology at the University of Texas Southwestern Medical Center/Parkland Hospital. After completing her residency she joined a private practice and was a Clinical Assistant Professor at Michigan State College of Human Medicine. In 2009 she joined the medical staff of Virginia Hospital Center and Washington Hospital where she was the Associate Director of the Ob/Gyn residency program and Clinical Assistant Professor of obstetrics and gynecology at Georgetown University School of Medicine. In 2016 she accepted a part-time position on our adjunct faculty. She will now be on our full-time faculty as an obstetrician (i.e., laborist).

Anthony Mackaronis, MD, received his doctor of medicine degree from the Robert Wood Johnson Medical School in Piscataway, NJ. He completed a residency in obstetrics and gynecology at Pennsylvania Hospital after which he joined a private practice in Drexel Hill, PA. He accepted a part-time position in our faculty as a laborist.

Sarah Park, MD, received her doctor of medicine degree from the University of Medicine and Dentistry of New Jersey - New Jersey Medical School. She completed a residency in obstetrics and gynecology at Stony Brook University Hospital where during her senior year she was the administrative chief resident.

C. FACULTY DEPARTURES

Jose De La Mota, MD, joined a private practice in San Diego, CA

Bethany Goins, MD, joined the University of Pennsylvania Health System and will be working at one of their satellites in New Jersey. She will be the associate Ob/Gyn residency program director at Pennsylvania Hospital.

Erin Myers, MD, will be joining her husband in Miami where he is doing a fellowship in Gynecologic Oncology. She will temporarily be working as a locum tenens.

D. HONORS/PRIZES

Christina Chu, MD

Listed in Philadelphia Magazine “Top Doctors” 2017

Arthur Castelbaum, MD

Listed in Philadelphia Magazine “Top Doctors” 2017

Juan Diaz, MD

Listed in Philadelphia Magazine “Top Doctors” 2017
Board of Trustees Society of Ibero-Latin American Medical Professionals

Gail Herrine, MD

Association of Professors of Obstetrics and Gynecology Excellence in Teaching Award
Listed in Philadelphia Magazine “Top Doctors” 2017
American College of Obstetricians and Gynecologists Representative to the United States Breastfeeding Committee
Board member Breastfeeding Resource Center

Laura Goetzl, MD

Listed in Castle Connolly Philadelphia Top Doctors 2016
Listed in Best Doctors in America 2015-16

Enrique Hernandez, MD

Board of Directors East Central Division American Cancer Society
Board of Directors Philadelphia County Medical Society and the Society's
Pfahler Foundation
Board of Regents American College of Surgeons
Listed in Philadelphia Magazine "Top Doctors" 2017

Stephanie A. King, MD

Listed in America's Top Doctors 2017

Stephen Rubin, M.D.

Listed in America's Top Doctors 2017
Board of Directors, American Board of Obstetrics and Gynecology

Henry Su, MD

Association of Professors of Obstetrics and Gynecology Excellence in
Teaching Award

III. RESEARCH

A. Research Grants

1. Peer-Reviewed

Laura Goetzl, MD

Principal Investigator for R01HD069238: Gestational Age Variation in Human Placental Transport Mechanisms Goal: To elucidate gestational age changes in placental transport proteins and to correlate with fetal levels of psychoactive substances. NIH/NICHD 04/01/2012-03/31/2017 (shared support with Shriners)

Principal Investigator for Grand Challenges Explorations Grant for Groundbreaking Research in Global Health and Development funded by the Bill & Melinda Gates Foundation. "Maternal Blood Biomarkers to Assess Fetal Neurodevelopment."

Co-PI with Department of Internal Medicine: Targeting pregnancy-related weight gain to reduce disparities in obesity: a randomized control trial. The study is funded by the Health Resources and Services Administration (HRSA).

**Laura Goetzl, MD and
Laura Hart, MD**

Principal Investigators for Commonwealth of Pennsylvania Grant: Opioid Use in Pregnancy, Center of Excellence. This program is a collaboration between Temple and the Wedge Center, a community-based drug and alcohol treatment facility.

Enrique Hernandez, MD

Principal Investigator at Temple for Gynecologic Oncology Group clinical trials (per capita funding), July 2000 to present.

2. *Commercial/Industrial/Governmental*

Carol Ann Glowacki, MD

Principal Investigator: A single-blind, multi-center, randomized, controlled, non-inferiority clinical study to assess the safety and performance of the Neurotech Vital Compact device compared to the itouch Sure Pelvic Floor Exerciser for the treatment of stress urinary incontinence in female patients.

Enrique Hernandez, MD

Principal Investigator: GOG-3005: (AbbVie Study No.: M13-694) A Phase 3 Placebo-Controlled Study of Carboplatin/Paclitaxel With or Without Concurrent and Continuation Maintenance Veliparib (PARP inhibitor) in Subjects with Previously Untreated Stages III or IV High-Grade Serous Epithelial Ovarian, Fallopian Tube, or Primary Peritoneal Cancer.

Enrique Hernandez, MD

Principal Investigator: YO39523: A Phase III, Multicenter, Randomized, Study Of Atezolizumab Versus Placebo Administered In Combination With Paclitaxel, Carboplatin, And Bevacizumab To Patients With Newly-Diagnosed Stage III or Stage IV Ovarian, Fallopian Tube, or Primary Peritoneal Cancer.

Juan Diaz Quinones, MD

Principal Investigator: A Phase 2B Study to Evaluate the Safety and Efficacy of Elagolix in Pre-Menopausal Women with Heavy Menstrual Bleeding associated with Uterine Fibroids

B. TOTAL RESEARCH DOLLARS EXPENDED: \$772,772 (\$254,134 Opioid use in Pregnancy Grant, \$439,798 NIH funding passed through Shriners, \$78840 other)

C. DEPARTMENT MEMBERS SERVING AS GRANT/AWARDS REVIEWERS

Laura Goetzl, MD, NIH Study Sections (Translational Research in Pediatrics and Obstetric Pharmacology, Behavioral Genetics and Epidemiology)

D. Journal Reviewers/Editorial Board

American Journal Obstetrics and Gynecology
Obstetrics and Gynecology

Journal of Reproductive Medicine
Gynecologic Oncology
Pediatrics
American Journal of Perinatology
Anesthesiology
Anesthesia & Analgesia
British Journal of Obstetrics & Gynecology
International Journal of Gynaecology and Obstetrics
European Journal of Obstetrics, Gynecology and Reproductive Biology
Obstetrics and Gynecology International (Editorial Board, Dr. Hernandez)
New England Journal of Medicine
Topics in Obstetrics and Gynecology (Editorial Board, Dr. Hernandez)
International Journal of Gynecologic Cancer
Medical Journals, Gynecology and Obstetrics: Open Access (Editorial Board, Dr. Hernandez)
Frontiers in Pharmacology (Editorial Board, Dr. Goetzl)
Up to Date
Brain Research (Special Issue Editor, Dr. Goetzl)
Reproductive Toxicology
Translational Behavioral Medicine (Editorial Advisory Board, Dr. Hernandez)
Journal American College of Surgeons
Journal Surgical of Oncology
Archives of Gynecology and Obstetrics

IV. TEACHING PROGRAM

1. Medical Students

This program is directed by Dr. Marisa Rose with Dr. Erin Myers and Dr. Shaliz Dolan as the Associate Clerkship Directors. The site program directors contribute to program development, and other related matters. The final examination is given in the standardized format (shelf-exams). Questions for this examination have been revised. The students' performance in OB/GYN in the USMLE is satisfactory, and residency placement is excellent.

Clinical Affiliates Used for Teaching Medical Students

Vahideh Ameri, M.D. Course Director Holy Redeemer Hospital 1648 Huntingdon Pike Meadowbrook, PA 19046	Catherine Bernardini, DO Course Director Bryn Mawr Hospital 130 S Bryn Mawr Avenue Bryn Mawr, PA 19010
James Anasti, M.D. Program Director Department of OB/GYN St. Luke's Hospital 801 Ostrum Street Bethlehem, PA 18015	Andrew Sword, M.D. Course Director West Penn Hospital 4800 Friendship Avenue Pittsburgh, PA 15224
Paul Swanson, M.D. Course Director Geisinger Medical Center 100 N. Academy Ave. Danville, PA 17822	Kathryn Abello, M.D. Course Director Lancaster General Hospital 964 Good Drive, Suite 11 Lancaster, PA 17604

a) Program Accomplishments:

1. FY17 is the fifteenth consecutive year of a successful OB/GYN sub-internship.
2. The web-based self-study modules and practice questions provided by the Association of Professors of Obstetrics and Gynecology is available to all our students.
3. The Blackboard site was redesigned and regularly updated to provide a central clearinghouse for all students enrolled in the MS-3 Ob/Gyn Clerkship. Links to the course syllabus, clerkship objectives, orientation training, educational materials, lecture slides and online learning modules ensure comparability in student education between sites.
4. A longitudinal faculty outpatient experience for the MS-3 clerkship was piloted in 2015 and rolled out in 2016 and continues to be a success in 2017. Faculty members from Temple University School of Medicine, Temple University Hospital participate at multiple office sites.
5. Lunch-time teaching sessions are held with the students and have expanded to every Monday, Wednesday, and Thursday at Temple University Hospital.
6. Faculty members from Temple University School of Medicine, Temple University Hospital lead the core lecture series every Friday afternoon and all Temple students in their OB/GYN block who are in Southeast Pennsylvania attend. The lectures are transmitted to all distant sites by video conferencing.
7. Three students from the class of 2017 applied for an Ob/Gyn residency. The following Temple University School of Medicine students were accepted into an Obstetrics and Gynecology residency in 2016:

	Name	Matched
1	Adrienne Werth	Christiana Care - DE
2	Jessa Suhner	Icahn SOM St Lukes –Roosevelt - NY
3	Kaitlyn Ferrill	St. Lukes–Bethlehem - PA

b) Program Course Offerings:

The following electives are available at Temple University Hospital and other Temple University School of Medicine affiliates:

- i) Temple University Hospital:
 - Women’s Health
 - Gynecologic Oncology
 - Maternal Fetal Medicine
 - Obstetrics and Gynecology Sub-internship
 - Urogynecology
- ii) Holy Redeemer Hospital:
 - Reproductive Endocrinology & Infertility
- iii) St. Luke’s Hospital:
 - Maternal Fetal Medicine
 - Gynecologic Oncology

- Urogynecology
- Obstetrics and Gynecology Sub-internship
- iv) West Penn Medical Center:
 - Gynecologic Oncology
 - Maternal Fetal Medicine
 - Reproductive Endocrinology
 - Obstetrics and Gynecology Sub-internship
- v) Fox Chase
 - Gynecologic Oncology

2. Department of OB/GYN/RS's Involvement with Other Professional Programs

- a. Internal Medicine of Temple University Hospital residency program spends time in our clinics. Emergency Medicine residents spend time in the labor and delivery unit.
- b. Training site for Arcadia University Master of Genetic Counseling program.
- c. Temple University Physician Assistant Program. The PA students are integrated into the medical clerkship through an innovative curriculum supporting inter-professional education and collaboration.
- d. Clinical training site for nurse practitioner students from Temple University's doctor in nursing program

3. Fellowship training

Fellowship Program in Gynecologic Oncology

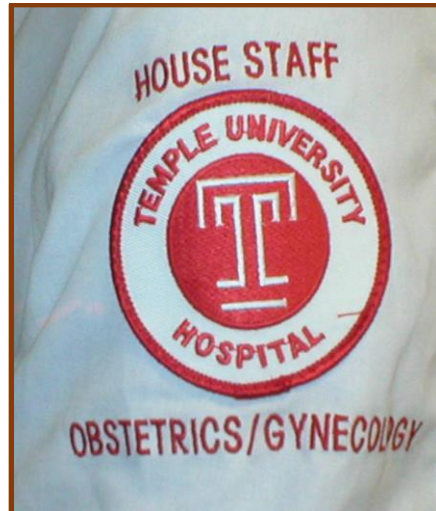
Our fellowship program is entering its third year. Christina Chu, MD, the Program Director, receives assistance from Karen Houck, MD. The fellowship spans the campuses of Temple University Hospital and the Fox Chase Cancer Center, combining the resources of a busy inner city academic hospital with an NIH designated comprehensive cancer center to provide excellent and diverse educational experience for the fellows. We accept one fellow each year through the Match. The program is 3 years, with the first year being dedicated to research activities. The second and third years of the fellowship consist of monthly clinical rotations divided between the Fox Chase and Temple campuses. In addition to surgical cases and in/outpatient gynecologic oncologic care, fellows participate fully in the prescribing and ordering of chemotherapy, as well as consultation and planning for radiation therapy. Two off-service rotations on the Gastrointestinal Surgery Service at Fox Chase and the Surgical Intensive Care Unit at Temple University Hospital will round out the fellows' clinical training.

The Fellows have protected didactic lectures once a week on average. In addition, they are the primary presenters at weekly Tumor Boards at both Temple and Fox Chase. Our Divisions have monthly joint tumor board as well as quarterly joint journal clubs.

Our inaugural fellow is Jennifer Brown, MD who received her residency training at the University of Alabama. She has spent her first year in the laboratory working with James Duncan, PhD on a project examining the kinome in patients with platinum resistant ovarian cancer. Our second fellow is Dr. I. Daniel Benrubi, who comes to us from the University of Florida. He spent his first year in the laboratory of Denise Connolly, PhD developing a project examining the sensitivity of patient derived ovarian cancer cells and xenografts to targeted inhibition by PARP and HSP90. Maureen Roberts, MD, our current first year fellow has entered Denise Connolly's laboratory as well and is working on in vivo lineage tracing in a transgenic mouse model that develops spontaneous ovarian cancer. Both Jennifer and Daniel are currently in the midst of their clinical rotations.

We have successfully transitioned our fellowship to accreditation by the American Council on Graduate Medical Education (ACGME). This summer has also seen the introduction of both Temple PGY3 OBGYN residents and OBGYN clerkship students onto the gynecologic oncology service at Fox Chase. We hope to provide a worthwhile choice for medical students during their core rotation. For residents, our goal is to enhance their educational experience by providing more surgical cases and exposure to the care of complex inpatients, and also to build the fellows' leadership and teaching abilities as they supervise the junior housestaff/students in inpatient as well as operative settings.

4. Residency Program



Dr. Stacey Jeronis has been the Program Director of the Obstetrics and Gynecology program since 2011. It is a fully accredited four year program and consistently remains citation free with the annual RRC review. Dr. Marisa Rose is the Associate Program Director and remains responsible for the educational curriculum and organizing the educational conferences. Dr. Laura Hart was appointed the Associate Program Director with emphasis on resident well-being and development. Dr. Arleen Ayala is in charge of our clinical simulation program with frequent educational sessions in the simulation center. Jaclyn Feeney continues as our full time program administrator and has been instrumental in the stability and organization of our program.

Our residency is a competitive fully approved 4-year program with five residents at each level plus a 6th non-categorical (preliminary) intern. Last year we received 900 applications for our five positions and interviewed 86 highly qualified applicants. We ultimately ranked 84 applicants and matched in the top third of our rank list.

Clinical

At Temple University Hospital the OB/GYN residents rotate through Obstetrics, Maternal-Fetal Medicine, Gynecology, Urogynecology, Night Float and Gynecologic Oncology. At Holy Redeemer Hospital, they gained additional experience in Gynecologic Surgery (with emphasis in laparoscopy), Gynecologic Ultrasonography, and Reproductive Endocrinology and Infertility. Exposure to pregnancy terminations occurs at Temple University Hospital and at the Philadelphia Women's Center. We also have a very busy Family Planning Clinic. Our chief residents spend time in the Breast Clinic with Dr. Kathleen Reilly and our third year residents may apply for a five week elective rotation.

Education and Research

Formal education presentations are held on Wednesday mornings from 7:30am to 9:30am to include Grand Rounds, Morbidity and Mortality Review, Journal Club, and Case Presentations. Third hour presentations typically involve review of ACOG practice bulletins and Chapter reviews from standard textbooks. The Gynecology Tumor Board meets every Wednesday from 10:30am to 12:00pm. Chairman's rounds are on Tuesdays at 7:00am. Gynecology Oncology review occurs every Friday morning at 8:00am and Obstetrics review on Thursday evenings.

On December 14, 2016, we held our 56th Annual Isador & Rose Forman Symposium funded by the Forman family. Our visiting lecturer was Dennis Chi, MD, FACOG, FACS, Deputy Chief and Head, Section of Ovarian Cancer Surgery, Gynecology Service, Department of Surgery at the Memorial Sloan Kettering Cancer Center and Professor of Obstetrics and Gynecology at Cornell University, Weill Medical College.

At this meeting our senior residents presented their research theses, which are listed below.

Jorden Arnett, MD

Impacting Breastfeeding Rates with Initiation of Skin to Skin in an Urban, Underserved Patient Population

Erin Cavanaugh, MD

Effectiveness of a Mindfulness Education Program in Reducing Burnout in Obstetrics and Gynecology Residents

Camilla Guitarte, MD

Incisional Hernia Formation and Associated Risk Factors on a Gynecologic Oncology Service: An Exploratory Analysis

Lauren Maher, MD

Clear Liquids Versus Enhanced Clear Liquids; Effect on Labor Performance

Sarah Zitsman, DO, MPH

Hysterectomy and Peri-Operative Blood Transfusion: Identifying modifiable risk factors

Dr. Lauren Maher was the winner of the Best Resident Research Award for our department.

Three of our chief residents presented their research projects at local and national meetings this year:

Dr. Erin Cavanaugh presented her research as a poster session at the March 2017 APGO/CREOG Annual Meeting held in Orlando, Florida.

Dr. Sarah Zitsman and Dr. Lauren Maher presented their residency thesis at the May 2017 Annual ACOG Clinical and Scientific Meeting in San Diego, California.

Quality and Performance Improvement

We have a robust Quality and Performance Improvement program. 100 percent of our residents participate in a team-approach quality improvement project each year.

Quality and Performance Improvement Projects FY17:

Topic	<i>ICN Admission Rates After Initiation of an Intrapartum Insulin Protocol for Diabetic Laboring Patients</i>	<i>Comparing Emergency Department Dating Scans with Fetal Center Dating Scans</i>	<i>Informed Consent for Delivery in the Outpatient vs Inpatient setting: Provider/Patient Satisfaction and Patient Retention</i>	<i>Improving Post-surgical Outcomes in Inpatients Using ERAS Guidelines</i>	<i>Transitions of Care after Implementation of Inpatient EPIC : Temple OB/GYN</i>
Chief	Jorden Arnett	Erin Cavanaugh	Camilla Guitarte	Lauren Maher	Sarah Zitsman
PGY 3	Tricia Eliasinski	Kate Sanserino	Lauren Maramara	Sarah Martin	Lauren Goetsch
PGY 2	Rachel Pantoja	Jenni Xu	Hema Datwani	Kristin Kean	Nishanth Sidduri
PGY 1	Samantha Jagannathan	Sarah Ackroyd	Katya Papatla	Leah Roberts + Sarah Moreland	Holly Boyd

Academic profile

There is significant scholarly activity among residents with several publications in peer-reviewed journals.

Resident Publications and Presentations FY17:

1. **Guitarte C**, Grant J, Zhao H, Wang S, Ferriss JS, Hernandez E. Incisional hernia formation and associated risk factors on a gynecologic oncology service: an exploratory analysis. *Arch Gynecol Obstet* 2016 (Oct.);294(4):805-11. doi: 10.1007/s00404-016-4100-3
2. Jordan SE, **Papatla K**, Hernandez E. Gestational trophoblastic neoplasia. *Topics Obstet Gynecol* 2017 April;37(6):1-5 doi: 10.1097/01.PGO.0000515499.17019.78
3. **Maher L**, Rose M. Addressing loss of low risk obstetric patients to postpartum care in an inner city hospital (abst). *Obstet Gynecol* 2017 (May);129:54S.
4. **Zitsman S**, Glowacki CA. Rectovaginal fistula. *Topics in Obstetrics & Gynecology* 2017 (Jan);37:1-6.
5. **Zitsman S**, Yu D, Bruce SF, Ramirez-Caban L, Diaz J. Hysterectomy and peri-operative blood transfusion: identifying modifiable factors (abst). *Obstet Gynecol* 2017 (May);129:90S.
6. **Ackroyd SA**, Thomas S, Angel C, Moore R, Meacham PJ, DuBeshter B. Interval robotic cytoreduction following neoadjuvant chemotherapy in advanced ovarian cancer. *J Robot Surg*. 2017 Jun 19. doi: 10.1007/s11701-017-0720-2. [Epub ahead of print].
7. **Cavanaugh E**, Rose M. "An 8-week Mindfulness Based Stress Reduction Course for OB/GYN." Oral abstract presented at CREOG & APGO Annual Conference, Orlando, FL. March 2017.
8. **Cavanaugh E**, Day J, Jeronis S, Rose M. "Global Women's Health: Missed Preventive Screening Opportunities at a Rural Primary Care Clinic in Bolivia." Poster session presented at CREOG & APGO Annual Conference, Orlando, FL. March 2017.
9. **Maher L**, Rose M. Addressing loss of low risk obstetric patients to postpartum care in an inner city hospital (poster). Annual Clinical Meeting American College of Obstetricians and Gynecologists, San Diego, California, May 7, 2017.
10. **Zitsman S**, Yu D, Bruce SF, Ramirez-Caban L, Diaz J. Hysterectomy and peri-operative blood transfusion: identifying modifiable factors (poster). Annual Clinical Meeting American College of Obstetricians and Gynecologists, San Diego, California, May 7, 2017.

Future Plans

In the Next Accreditation System, we are evaluating residents using Milestones and the appointed Clinical Competency Committee meets twice yearly to review the performance of each resident. We have also appointed faculty and residents to participate in a Program Evaluation Committee. This committee continues to plan, develop, implement, and evaluate educational activities of our residency program to promote continued improvement and innovation in the department. Additionally, we have identified Subspecialty Educators in all of the OB/Gyn subspecialties. In partnership with Dr. Jeronis, these chosen educators oversee the specific educational content and will help develop and implement curriculum in their subspecialty area.

We were approved by the RRC for a three year gynecologic oncology fellowship that began in 2016. This is a 3-year fellowship program with clinical time spent at both Fox Chase and Temple Hospital. In the 2017-2018 academic year, the Temple OB/GYN residents will begin to rotate to the gynecologic oncology department of Fox Chase Cancer during their third year of residency.

One of our top priorities this year continues to be resident well-being within our department. The third annual resident retreat is scheduled for autumn 2017. During this retreat the residents will focus on team building, conflict resolution as well as mindfulness to enhance their overall educational experience both clinically and professionally.

Residency Program ACGME Full Accreditation.

PGY-IV	5
PGY-III	5
PGY-II	5
PGY-I	6
<hr/>	
TOTAL	21

Graduating Residents June 2017

Jorden Arnett, MD Private Practice Gifford Medical Center Randolph, Vermont	Erin Cavanaugh, MD Global Women’s Health Fellowship University of Illinois at Chicago Chicago, Illinois
Camilla Guitarte, MD Private Practice Kaiser Permanente Medical Group San Jose, California	Lauren Maher, MD Private Practice Kramer OB/GYN and Associates at Holy Redeemer Hospital Jenkintown, Pennsylvania
Sarah Zitsman, DO, MPH Private Practice Kaiser Permanente Medical Group San Francisco, California	



Chief Residents 2016-17 at the 56th Forman Ob/Gyn Symposium (left to right: front row – Drs. Guitarte, Arnett, Hernandez; back row - Drs. Maher, Zitsman and Cavanaugh)

Incoming Interns June 2017

Miriam Aioub, MD Rutgers New Jersey Medical School	Molli Bascom, DO Philadelphia College of Osteopathic Medicine
Kylee Clyatt, MD University of Pennsylvania, Perelman School of Medicine	Olga Mutter, MD Virginia Commonwealth School of Medicine
Shira Saperstein, MD SUNY Downstate College of Medicine	Molly Singer, MD Case Western Reserve University School of Medicine

V. GRAND ROUNDS

GRAND ROUNDS PROGRAM

Marisa Rose, MD, Grand Rounds Director

Continuing Medical Education (CME) Program 2015-2016

Wednesday, July 6, 2016

7:30am

Presenter: Amanda Roman, MD – Thomas Jefferson University Hospital

Title: **Preterm Birth in Twin Pregnancies**

8:30am

Presenter: Lauren Goetzl, MD

Title: ***In-vivo* Human Models for Assessing Fetal Neurodevelopment Injuries**

Wednesday, July 13, 2016

7:30am

Presenter: Michael Desvigne, MD, CWS, FACS, FAACWS

Plastic and Reconstructive Surgeon

Cancer Treatment Center of America

Western Regional Medical Center

Goodyear, Arizona

Title: **Incision Management: The Final Step for Complex Surgical Procedures**

8:30am

Presenter: PGY-2 Residents

Title: **Research Presentations**

Wednesday, July 20, 2016

Clinical Simulation Laboratory

Wednesday, July 27, 2016

7:30am

Presenter: Sejal Doshi, RPh, Pharm D.

Sr. Medical Science Liaison, Women's Health

Title: **Liletta**

8:30am

Presenter: Enrique Hernandez, MD

Title: **Radiation Therapy**

Wednesday, August 3, 2016

7:30am

Presenter: Susan Fisher, MS, PhD
Title: The Right Study Design to Answer the Right Research Question

8:30am

Presenter: Carol Glowacki, MD
Title: **Pelvic Anatomy**

Wednesday, August 10, 2016

7:30am

Presenter: Jorden Arnett, MD & Sarah Zitsman, DO
Title: **Case Presentation (formerly M&M)**

8:30am

Presenter: Jenni Xu, MD
Title: **Journal Club**

Wednesday, August 17, 2016

7:30am

Presenter: Amy Coleman, Genetics Counselor
Title: **Genetic Family History, Prenatal Genetic screening, (and more!)**

8:30am

Presenter: Enrique Hernandez, MD
Title: **Chemotherapy**

Wednesday, August 24, 2016

7:30am

Presenter: Drs. Cavanaugh, Guitarte, Zitsman & Eliasinski
Title: **Case Lists Review**

Wednesday, August 31, 2016

Clinical Simulation Laboratory

Wednesday, September 7, 2016

7:30am

Presenter: Serban Constantinescu, MD
Title: **Pregnancy after Solid Organ Transplant**

8:30am

Presenter: Rachel Pantoja, MD
Title: **Journal Club**

Wednesday, September 14, 2016

7:30am

Presenter: Susan Fisher, MD
Title: **Scientific Concepts and Research Design 2**

8:30am
Presenter: Marisa Rose, MD
Title: **So Many Pills...**

Wednesday, September 21, 2016

7:30am (Classroom A)
Presenter: Dr. Rose & Dr. Maher, PGY4
Title: **Brief CLER Update**

8:00am (Erny Auditorium)
Presenter: Patrick Croskerry, MD, PhD
Professor of Emergency Medicine
Director, Critical Thinking Program
Division of Medical Education
Dalhousie University
Halifax, Nova Scotia, Canada

Title: **From Mindless to Mindful Practice: Cognitive Bias and Decision Making**

9:00am (Classroom A)
Presenter: Sarah Martin, PGY-3

Title: **Case Presentation (formerly M&M)**

Wednesday, September 28, 2016

7:30am
Presenter: Audrey Uknis, MD
Title: **Osteoporosis: Update on Diagnosis and Management**

8:30am
Presenter: Drs. Arnett, Guitarte, Maher & Martin
Title: **Case Lists Presentation**

Wednesday, October 5, 2016

7:30am-9:00am
Presenter: Ellen Tedaldi, MD
Title: **Annual Update on HIV and Pregnancy**

Wednesday, October 12, 2016

7:30am
Presenter: Chief Residents
Title: **Thesis Presentations**

Wednesday, October 19, 2016
Clinical Simulation Laboratory

Wednesday, October 26, 2016

7:30am
Presenter: Dr. Wadia Mulla
Title: **Preauthorization for Genetic Testing**

7:35am
Presenter: Marcy Witherspoon
Title: **Domestic Violence and Children**

8:30am
Presenter: Drs. Arnett, Guitarte, Maher and Maramara
Title: **Case Lists Presentation**

Wednesday, November 2, 2016 (Residency Interview Day 1)

7:30am
Presenter: Lauren Goetzl, MD
Title: **Zika Infection in Pregnancy: An Update**

Wednesday, November 9, 2016

7:30am
Presenter: Drs. Weiner and Ramsey
Title: **Informatics & Data Management**

8:30am
Presenter: Carol Glowacki, MD
Title: **Updates in Urogynecology**

Wednesday, November 16, 2016 (Residency Interview Day 2)

7:30am
Presenter: Enrique Hernandez, MD
Title: **Gestational Trophoblastic Disease**

Wednesday, November 23, 2016

7:30am
Presenter: Wadia Mulla, MD
Title: **CREOG Review in MFM**

8:30am
Presenter: Janet Berman, MS
Title: **CREOG Review in Prenatal Genetics**

Wednesday, November 30, 2016 (Residency Interview Day 3)

7:30am

Presenter: Arthur Castelbaum, MD

Title: **Review of Reproductive Endocrinology and Infertility**

Wednesday, December 7, 2016 (Residency Interview Day 4)

7:30am

Presenter: Erin Myers, MD

Title: **Endometriosis**

Wednesday, December 14, 2016

Isador Forman Symposium

Wednesday, January 4, 2017

7:30am

Presenter: Erin Myers, MD

Title: **CREOG Review - Obstetrics**

8:30

Presenter: Carol Glowacki, MD

Title: **CREOG Review- Urogynecology**

Wednesday, January 11, 2017 (Residency Interview Day 5)

7:30am

Presenter: Gail Herrine, MD

Title: **Baby Friendly Hospital Initiative; what has it done for us?**

Wednesday, January 18, 2017

7:30am

Presenter: Brenda Horwitz, MD

Title: **Pearls in GI for the Gyn**

8:30am

Presenter: Karen Houck, MD

Title: **CREOG Review in Gyn Oncology**

Wednesday, January 25, 2017

7:30-10:30am

Presenter: Arthur Castelbaum, MD

Title: **CREOG Review - Updates in Reproductive Endocrinology**

Friday, February 3, 2017

Emergency Medicine Sponsored Resident Wellness Day

Wednesday, February 8, 2017

7:30am

Residency Applicants Rank Day

Wednesday, February 15, 2017

7:30am

Presenter: Gordon Morewood, MD, MBA, FASE

Title: **Communication**

8:30am

Presenter: Enrique Hernandez, MD

Title: **Cervical Cancer**

Wednesday, February 22, 2017

7:30am

Presenter: Allyson Saccomandi, SPHR, SHRM-SCP

Title: **Professionalism in Medical Education**

8:30am

Presenter: Kristin Kean, PGY-2

Title: **Journal Club**

Wednesday, March 1, 2017

7:30am

Presenter: Allyson Saccomandi, SPHR, SHRM-SCP

Title: **Behavioral Styles and Communication Workshop**

9:00am

Presenter: Nora Jones, PhD

Title: **Bioethics**

Wednesday, March 8, 2017

Clinical Simulation Laboratory

Wednesday, March 15, 2017

7:30am

Presenter: Jenni Xu, PGY-2

Title: **Journal Club**

8:30am

Presenter: Heather Clauss, MD

Title: **Infections in Pregnancy**

Wednesday, March 22, 2017

7:00am

Presenter: Jorden Arnett, MD, PGY-4
Title: **M&M with Department of Surgery**

8:15am

Presenter: David Fleece, MD
Title: **EPIC Update**

Wednesday, March 29, 2017

7:30am

Presenter: Drs. Cavanaugh, Guitarte, Zitsman
Title: **Case Lists Presentation**

8:30am

Presenter: Kurt Bodison, Associate Director of Environmental Health & Radiation Safety
Title: **Radiation Safety Update**

Wednesday, April 5, 2017

7:30am

Presenter: Sherry L Blumenthal MD, MS Ed., FACOG
Title: **Political Advocacy for OB/GYN Physicians and Women Physicians**

8:30am

Presenter: Carol Glowacki, MD
Title: **Female Genital Mutilation**

Wednesday, April 12, 2017

7:30am

Presenter: Martin Freedman, MD
Title: **Diminished Ovarian Reserve: What's Left in the Tank?**

8:30am

Presenter: Nishanth Sidduri, MD, PGY-2
Title: **Case Presentation (formerly M&M)**

Wednesday, April 19, 2017

Clinical Simulation Laboratory

Wednesday, April 26, 2017

7:30am

Presenter: Jorden Arnett, MD, PGY-4
Title: **Resident's QA/QI Project Presentation**

8:00am

Presenter: Sarah Zitsman, DO, PGY-4
Title: **Resident's QA/QI Project Presentation**

8:30am
Presenter: Kelley Kovatis, MD
Title: **Delayed Cord Clamping**

Wednesday, May 3, 2017

7:30am
Presenter: Allyson Saccomandi, SPHR, SHRM-SCP
Title: **Thriving in Conflict**

9:00am
Presenter: Marisa Rose, MD
Title: **Teaching Medical Students**

Wednesday, May 10, 2017

7:30am
Presenter: Erin Cavanaugh, MD, PGY-4
Title: **Resident's QA/QI Project Presentation**

8:00am
Presenter: Lauren Maher, MD, PGY-4
Title: **Resident's QA/QI Project Presentation**

8:30am
Presenter: Shaliz Dolan, MD
Title: **Bleeding, Infection, Damage to Adjacent Organs...Wait...What?!**

Wednesday, May 17, 2017

7:30am
Presenter: Camilla Guitarte, MD, PGY-4
Title: **Resident's QA/QI Presentation**

8:00am
Presenter: Allyson Saccomandi, SPHR, SHRM-SCP
Title: **Emotional Intelligence**

Wednesday, May 24, 2017

7:30am
Presenter: TU Administration
Title: **Annual Billing Compliance Presentation**

8:30am
Presenter: Martin Freedman, MD
Title: **Polycystic Ovarian Disease**

Wednesday, May 31, 2017

Clinical Simulation Laboratory

Wednesday, June 7, 2017

7:30am

Presenter: Stacey Jeronis, MD

Title: Annual Program Evaluation

Wednesday, June 14, 2017

Thank you for Teaching – Breakfast and Group Discussion: sharing teaching pearls

Wednesday, June 21, 2017

7:30am

Presenter: Bruce Carnivale, DO

Title: **Utilization Review for the OB/Gyn**

8:30

Presenter: Enrique Hernandez, MD

Title: **Gestational Trophoblastic Disease**

Wednesday, June 28, 2017

7:30am

Presenter: Audrey Uknis, MD

Title: **Drug Induced Myopathy**

8:30

Presenter: Roschanak Mossabeh, MD

Title: **Introduction to ICN; Neonatal Resuscitation**



Dr. Dennis Chi (center) 56th Forman Lecturer with Dr. Hernandez (far right) and the Forman family.

Dr. Chi is Deputy Chief and Head, Section of Ovarian Cancer Surgery, Gynecology Service, Department of Surgery, Memorial Sloan Kettering Cancer Center, New York, NY and Professor of Obstetrics and Gynecology, Cornell University, Weill Medical College. The title of his lecture was: “**The Kaizen Approach to Primary Surgery for Advanced Ovarian Cancer**”.

VI. CLINICAL PROGRAMS

A. DIVISIONS REPORT

1. Gynecologic Oncology

The Division of Gynecologic Oncology at Temple University Hospital counts with two board-certified gynecologic oncologists: Enrique Hernandez, MD, FACOG, FACS and Karen L. Houck, MD, FACOG. The Division counts with two oncology nurses and two part-time medical assistants. In addition to the gynecologic oncologists, an Ob/Gyn colposcopist staffs the Division's colposcopy clinic. The mission of the Division is to provide comprehensive care to women with malignant and premalignant gynecologic conditions within the Temple Health Care System in partnership with our colleagues at the Fox Chase Cancer Center. At the Fox Chase Cancer Center American Oncologic Hospital site there are five board-certified gynecologic oncologists (Drs. Stephen Rubin, Christina Chu, Cynthia Bergman, Stephanie King and Gina Mantia-Smaldone). The gynecologic oncologists perform surgery ranging from minimally invasive (including robotic-assisted) to radical surgery (including intestinal and urological). Difficult or high-risk surgery for benign gynecologic pathology is also performed, as well as laser surgery of the lower genital tract.

Clinical

At Temple University Hospital the Division utilizes two days (Tuesdays and Thursdays) in the operating room for open surgery and 1-2 days (Mondays and Fridays) for robotic-assisted surgery. In 2010 we launched our gynecologic oncology robotic-assisted surgery program. In 2012 Temple University Hospital acquired three state-of-the-art, double console Da Vinci SI robots. Two state-of-the-art operating rooms for robotic surgery were built and became fully operational in April 2013. In 2014 Temple University Hospital was the first in the region to acquire the newest DaVinci Xi robotic surgery system. In FY17 we performed 49 robotic-assisted surgical procedures at Temple University Hospital and 10 at Chestnut Hill Hospital. The Division of Gynecologic Oncology provides outpatient and inpatient chemotherapy for women with gynecologic cancers. Approximately 500 chemotherapy treatment cycles were administered to women with gynecologic cancer at the Fox Chase Cancer Center at Temple University Hospital in FY17. The Division of Gynecologic Oncology cooperates with the radiation oncologists in providing radiation therapy to women with gynecologic malignancies. On any given week there are approximately 6 to 12 women receiving radiation therapy for gynecologic malignancies. We perform the placement of the hardware for gynecologic high-dose rate brachytherapy in conjunction with the radiation oncologists. We perform difficult intrauterine implants under ultrasound guidance.

The Division has separate Colposcopy and Tumor Clinics. The Colposcopy Clinic meets on Monday afternoon on the 5th floor of the hospital Zone B. Over one dozen patients are seen at each clinic session. The clinic is staffed by the gynecologic oncologists and by an obstetrician/gynecologist experienced in colposcopy. A weekly multidisciplinary conference reviews colposcopy clinic cases. We also have a Wednesday afternoon session where the chief resident on the oncology service discusses with the patients the Pap smear diagnosis, biopsy results, and treatment plans as established by the Division faculty. Cryocautery continues to be used in the clinic to treat cervical dysplasia when appropriate. However, the residents are exposed to all the modern diagnostic and treatment modalities to include laser, LEEP, and conization. The Tumor Clinic meets on Friday afternoon at the Temple Cancer Center (4th floor Ambulatory Care Center). This provides the patients who are undergoing cancer therapy with on-site laboratory, pharmacy, social work support, a nutritionist and infusion capabilities.

The gynecologic oncologists also see patients in Zone B of Temple University Hospital, one-half day session a week. Even though the bulk of the clinical efforts of the Division are at Temple University Hospital, consultation services are also provided at Holy Redeemer Hospital and at Chestnut Hill Hospital. The Division is able to provide excellent care to over 70 patients each week at the above mentioned sites. Two hundred and thirty surgical procedures were performed at Temple University Hospital by the gynecologic oncologists in FY17. Of these, 128 were major surgical procedures for gynecologic cancer or suspected gynecologic malignancy. Additional procedures were performed at Chestnut Hill and Holy Redeemer hospitals.

Education

As of the spring of 2017 third-year medical students can elect to spend two weeks on the Gynecologic Oncology Service at Temple University Hospital or at the Fox Chase Cancer Center. At Temple University Hospital teaching/work rounds by the attending staff with the residents and the students are consistently done every day. The students are assigned patients to follow. They present and discuss their patients on rounds. The Division's faculty gives at least two formal lectures to the third-year medical students during each block. The Division Faculty gives at least one grand rounds lecture per quarter. The Division continues to have a weekly multidisciplinary gynecologic tumor board. All active cases are presented and discussed including patients receiving chemotherapy and/or radiation therapy. This is a teaching/working conference with participation of residents and students. On the first Thursday of every month the Division holds a joint Tumor Board conference with our colleagues at Temple's Fox Chase Cancer Center campus.

Our residents participate not only in the surgical management of women with gynecologic malignancies, but also are involved in the administration of chemotherapy, the placement of hardware for brachytherapy and the surgical and medical management of complications due to the malignancy or its therapy. The residents are assigned two textbook chapters to read each week and a quiz and discussion is held every Friday.

In FY15 the American Board of Obstetrics and Gynecology approved our application to establish a 3-year gynecologic oncology fellowship at Temple. In FY17 we successfully transitioned our fellowship to accreditation by the American Council on Graduate Medical Education (ACGME). The fellowship program takes advantage of the resources and strengths of Temple University Hospital and Fox Chase Cancer Center. The fellows (one per year) spend one year doing research and two years on the clinical services. Dr. Christina Chu, who is based at Fox Chase campus, is the director of the fellowship program. Dr. Karen Houck, who is based at the Health Sciences campus is the associate director. Jacqueline Feeney who is a Temple University Health System lead administrator for Graduate Medical Education coordinates both the gynecologic oncology fellowship and the obstetrics and gynecology residency programs. In addition to the seven board-certified gynecologic oncologists on our faculty, the program is fortunate to have faculty from the departments of pathology, radiation oncology, and surgery. In addition, the fellows have access to research mentors who are members of the Fox Chase Cancer Center research enterprise or from Temple's Fels Institute for Cancer Research and Molecular Biology. The fellows also have access to the vast academic and research resources of Temple University.

Research

We continue to actively participate in NIH-funded (GOG/NRG) cooperative clinical trials, industry-sponsored and investigator initiated clinical trials

IRB #09-903 GOG 237: Evaluation of Pap smears with atypical glandular cells

IRB # 16-1083 GOG 264: Carboplatin/paclitaxel vs. bleomycin, etoposide, cisplatin for ovarian stromal tumors

IRB #17-6002 GOG 279: Cisplatin/Gemcitabine and radiation for locally advanced vulvar cancer

IRB #17-1005 GOG 3015: A phase III, multicenter, randomized study of atezolizumab versus placebo administered in combination with paclitaxel, carboplatin, and bevacizumab to patients with newly-diagnosed stage III or IV ovarian, fallopian tube, or primary peritoneal cancer. (Pending final IRB approval)

OVARIAN CANCER

Front line

IRB # 16-1072 A Randomized, Open-Label, Multicenter, Phase 3 Study to Evaluate the Efficacy and Safety of Avelumab (MSB0010718C) in Combination with and/or Following Chemotherapy in Patients with Previously Untreated Epithelial Ovarian Cancer. (Open at FCCC)

Platinum Resistant Disease

IRB #15-1056 A Phase 1b Study to Evaluate the Safety, Tolerability and Pharmacokinetics of Mirvetuximab Soravtansine (IMGN853) in Combination with Bevacizumab, Carboplatin or Pegylated Liposomal Doxorubicin in Adults with Folate Receptor Alpha Positive Advanced Epithelial Ovarian Cancer, Primary Peritoneal Cancer, Fallopian Tube Cancer, or Endometrial Cancer. [This trial is currently open only to patients with ovarian cancer and is enrolling into the expansion cohorts for bevacizumab and pembrolizumab. Requires tissue screening to determine eligibility]. (Open at FCCC)

IRB #16-1011 A Phase 1/2, Open-Label Safety and Efficacy Evaluation of CRS-207 in Combination with Epacadostat in Adults with Platinum-resistant Ovarian, Fallopian, or Peritoneal Cancer. [Currently in the Phase II portion of the study]. (Open at FCCC)

Platinum Sensitive Disease

IRB #10-019 Phase I Study of Carboplatin, Pegylated Liposomal Doxorubicin (PLD) and Everolimus in Patients with Platinum-Sensitive Epithelial Ovarian, Fallopian Tube or Primary Peritoneal Cancer in First Relapse. (Open at FCCC)

Recurrence Independent of Platinum Status

IRB #16-1018 Phase 1/2a Study of BMS-986178 Administered Alone and in Combination with Nivolumab and/or Ipilimumab in Subjects With Advanced Solid Tumors. (Open at FCCC)

Biomarker studies

IRB #15-9016 A Blinded Prospective Study of the Performance of HE4 to Predict Recurrence in Patients with Advanced Ovarian Cancer, Peritoneal Carcinoma and Tubal Carcinoma

IRB #15-9017 A Multicenter Prospective Study Of CA125 and HE4 Serum Biomarkers for Monitoring the Response to First-Line Therapy in Women With Primary Epithelial Ovarian, Fallopian Tube or Primary Peritoneal Cancers Excluding Ovarian Tumors of Low Malignant Potential

ENDOMETRIAL CANCER

Recurrent

IRB #17-1020 A Phase 2 Study of Single Agent ONC201 in Recurrent or Metastatic Endometrial Cancer (Open at FCCC)

IRB #16-1026 A Phase 2, Randomized Study of MLN0128 (a Dual TORC1/2 Inhibitor), MLN0128+MLN1117 (a PI3Ka Inhibitor), Weekly Paclitaxel, or the Combination of Weekly Paclitaxel and MLN0128 in Women with Advanced, Recurrent, or Persistent Endometrial Cancer (Open at FCCC)

IRB #16-1082 A Phase 1 Dose Escalation and Cohort Expansion Study of TSR-042, an anti-PD-1 Monoclonal Antibody, in Patients with Advanced Solid Tumors. [Currently enrolling patients with MSI-H endometrial cancer, with at least 1 (must have at least 1 platinum) but no more than 2 prior lines of cytotoxic therapy. Hormonal therapy does not count when judging prior lines]. (Open at FCCC)

CERVICAL CANCER

Front Line

IRB #16-1075 Phase 3 Study of ADXS11-001 Administered Following Chemoradiation as Adjuvant Treatment for High Risk Locally Advanced Cervical Cancer: AIM2CERV (Advaxis IMmunotherapy 2 prevent CERVical recurrence) (Open at FCCC)

Recurrence

IRB #16-1071 A Phase I Open Label Study of GSK3359609 Administered Alone and in Combination with Anticancer Agents in Subjects with Selected Advanced Solid Tumors. [Allowing cervical cancer in the currently enrolling escalation phase when slots available]. (Open at FCCC)

RARE TUMORS

IRB #15-7002 Molecular Analysis for Therapy Choice (MATCH). (FCCC)

IRB #15-1081 A Phase II Basket Study of the Oral TRK Inhibitor LOXO-101 in Subjects with NTRK Fusion-Positive Tumors. (FCCC)

IRB #16-1056 A Phase 2, Open-label Study of Pembrolizumab Monotherapy in Patients with Metastatic High Grade Neuroendocrine Tumors (FCCC)

The following articles were published in full or abstract form in FY17 by members of the Division faculty:

Igwe E, Woodburn J, Davolos J, Shollenberger C, Miller SM, Hernandez E, Ferriss JS. Patient Perceptions and Willingness to Participate in Clinical Trials. *Gynecol Oncol* 2016 (Sept);142:520-524. doi: 10.1016/j.ygyno.2016.06.015

Hernandez E, Weissler MC. Ethics committee town hall on industry representatives in the OR highlights the issues outlined in ACS statement. *Bulletin Am College Surgeons* 2016(Oct.);101:84-85.

Jordan SE, Papatla K, Hernandez E. Gestational trophoblastic neoplasia. *Topics Obstet Gynecol* 2017 April;37(6):1-5 doi: 10.1097/01.PGO.0000515499.17019.78

Jordan SE, Stone D, Yu D, **Ferris JS**, **Hernandez, E**, **Rubin S**. Blood loss from robotic assisted hysterectomy. *J Gynecol Surg* 2017 (Apr);33:47-50
doi:10.1089/gyn.2016.0075

Jordan SE, Micaily I, Serratore D, **Hernandez E**, **Ferriss JS**, **Houck KL**, Miyamoto CT, Micaily B. Image Guided High Dose Rate Intracavitary Brachytherapy in the Treatment of Medically Inoperable Early Stage Endometrioid Type Endometrial Adenocarcinoma. *Brachytherapy* 2017;16 (3): S70.

Tagai EK, **Miller SM**, Wen KY, **Hernandez E**. Formative evaluation of a text message-based intervention for abnormal Pap smear follow-up care. *Annals Behavioral Med* 2017;51: S2565.

Miller SM, Tagai EK, Wen K-Y, Minsun L, Hui S-A, Kurtz D, Scarpato J, **Hernandez E**. Predictors of adherence to follow-up recommendations after an abnormal Pap smear among underserved inner-city women. *Patient Edu Couns* 2017 (Jul);100(7):1353-1359.
doi: 10.1016/j.pec.2017.01.020. Epub 2017 Jan 31.

Cripe J, Handorf E, **Brown J**, Jain A, **Rubin S**, **Mantia-Smaldone G**. National Cancer Database Report of Lymphadenectomy Trends in Endometrial Cancer. *Int J Gynecol Cancer* 2017 May 19. doi: 10.1097/IGC.0000000000001005. [Epub ahead of print]

Andersen CL, Sikora MJ, Boisen MM, Ma T, Christie A, Tseng G, Park Y, Luthra S, Chandran U, Haluska P, **Mantia-Smaldone GM**, Odunsi K, McLean K, Lee AV, Elishaev E, Edwards RP, Oesterreich S. Active Estrogen Receptor-alpha Signaling in Ovarian Cancer Models and Clinical Specimens. *Clin Cancer Res* 2017 Jan 10. doi: 10.1158/1078-0432.CCR-16-1501. [Epub ahead of print]

Meyer LA, Cronin AM, Sun CC, Bixel K, Bookman MA, Cristea MC, Griggs JJ, Levenback CF, Burger RA, **Mantia-Smaldone G**, Matulonis UA, Niland JC, O'Malley DM, Wright AA. Use and Effectiveness of Neoadjuvant Chemotherapy for Treatment of Ovarian Cancer *J Clin Oncol*. 2016 Sep 6. pii: JCO681239. [Epub ahead of print]

Esselen KM, Cronin AM, Bixel K, Bookman MA, Burger RA, Cohn DE, Cristea M, Griggs JJ, Levenback CF, **Mantia-Smaldone G**, Meyer LA, Matulonis UA, Niland JC, Sun C, O'Malley DM, Wright AA. Use of CA-125 Tests and Computed Tomographic Scans for Surveillance in Ovarian Cancer. *JAMA Oncol* 2016 Nov 1;2(11):1427-1433.
doi:10.1001/jamaoncol.2016.1842.

Christian AH, O'Malley D, Barac A, **Miller SM**, Hudson SV. *Patient Educ Couns* 2017 Jul;100(7):1360-1366. doi: 10.1016/j.pec.2017.02.010. Epub 2017 Feb 10.

O'Malley D, Dewan AA, Ohman-Strickland PA, Gundersen DA, **Miller SM**, Hudson SV. Determinants of patient activation in a community sample of breast and prostate cancer survivors. *Psychooncology* 2017 Jan 30. doi: 10.1002/pon.4387. [Epub ahead of print]

Fang CY, Ma GX, Handorf EA, Feng Z, Tan Y, Rhee J, **Miller SM**, Kim C, Koh HS. Addressing multilevel barriers to cervical cancer screening in Korean American women: A randomized trial of a community-based intervention. *Cancer* 2017 May 15;123(6):1018-1026. doi:10.1002/cncr.30391. Epub 2016 Nov 21.

Hudson SV, Ohman-Strickland PA, Bator A, O'Malley D, Gundersen D, Lee HS, Crabtree BF, **Miller SM**. Breast and prostate cancer survivors' experiences of patient-centered cancer follow-up care from primary care physicians and oncologists. *J Cancer Surviv* 2016 Oct;10(5):906-14. doi: 10.1007/s11764-016-0537-4. Epub 2016 Mar 31.

Future Plans

- Strengthen our robotically-assisted surgery training program for our residents and fellows
- Recruit top candidates for the fellowship program
- Continue to fully integrate the Divisions of Gynecologic Oncology at Temple University Hospital and Fox Chase Cancer Center

2. Maternal-Fetal Medicine

The 2016-17 academic year saw stability in the MFM division with no major changes in personnel. The Division is headed by Laura Goetzl, Division Director with two core faculty members, Drs. Laura Hart and Wadia Mulla (Total division FTEs 2.8). The Division joined the Perinatal Research Consortium; a research group led by Columbia University and comprised of more than 10 clinical research centers (Goetzl, site PI). Dr. Hart is the Medical Director for the Temple Wedge Pennsylvania Opioid Center of Excellence that provides clinical care for Opioid dependence. The MFM team also included three clinical nurse coordinators (two in the high-risk outpatient offices and the other in the Prenatal Diagnosis Center) and two part time medical assistants. Five sonographers performed ultrasound examinations under the supervision of our ultrasound manager, Dawn Cramer. The MFM service includes a PGY-3 and PGY-1 resident. The division will continue to fulfill its mission of providing prenatal care to women with high-risk pregnancies and to oversee the prenatal and obstetrical care of all patients at Temple University Hospital.

Clinical Activities

The Maternal Fetal Medicine division provides high-risk obstetrical services in outpatient and inpatient settings. The Maternal Fetal Medicine specialists staff a twice weekly high-risk pregnancy clinic. The combination of broad and deep knowledge in the field of maternal fetal medicine and the available advanced technology enables the team to provide the most up-to-date medical management. The perinatologists provide inpatient and out-patient consultation at Temple University Hospital. Through a very active transfer service, high-risk pregnancies that cannot be managed in other facilities

are transported to Temple University Hospital under the care of the MFM service. Pregnant patients with various medical, surgical and obstetrical complications including diabetes, hypertensive disorders, cardiac disease, pulmonary pathology, poor obstetrical history, history of pregnancy losses, multifetal pregnancies, surgical problems, and cancer are taken care of at Temple University Hospital by the MFM team.

General Obstetrics activities in fiscal year 2017-17 included:

- Our Triage area continued to be very busy and accommodated over 7700 visits.
- Advanced practice nurses (three nurse practitioners and 1 certified nurse midwives) continue to staff the triage area along with a PGY 1 resident under the supervision of the attending physician.
- A nurse midwife, Vivian Lowenstein, assisted with post-partum patients and in monitoring and delivering patients when residents are on their protected didactic time.
- Dedicated labor and delivery anesthesia team continues to serve with 24-hour coverage/7 days a week, with the majority of laboring patients receiving adequate pain control with epidural anesthesia if desired.
- Major advances continue to be made towards obtaining full Baby-Friendly Hospital Certification status through the collaboration of Dr. Gail Herrine, the medical director of our post-partum unit and medical director of Lactation, who is also a board-certified lactation consultant and OB nursing leadership under the new guidance of Georgina Hurley. We are on the 4th of 4 parts on the path to become certified as a Baby Friendly institution and will be planning our final site visit in the late fall 2017. We have continued to focus on promoting immediate skin to skin on labor and delivery and couplet care. Success will be tracked through improvement in our mPINC score: Baseline 62 (in 2013). The 2015 score of 83 showed significant improvement in our practices across all units Labor and Delivery and postpartum.
- Kellogg funding concluded this spring (end of May 2017) and a successful fundraising drive was also used to support a safe sleep program we called Safe T which provides a box for all of our babies to sleep in after discharge. This program was modeled after a Finnish program to decrease infant morbidity and mortality. Use of the “Baby Box” has received considerable media attention and should support both a reduction in SIDS rates and improved breastfeeding adherence. Outcomes are being tracked immediately post discharge and at 3 and 6 months. We continue to gather data but early numbers show that many of our breastfeeding dyads were co-sleeping so we are hoping to have a significant impact on this patient population.
- Perinatal Core Measure PC-05-exclusive breastmilk feeding for this year was up from 23% to 25% (50% is the goal).
- Temple maintained membership in the Keystone 10 program, which is a Pennsylvania Department of Health and Academy of Pediatric funded program to assist Pennsylvania hospitals move along the Baby Friendly Hospital Initiative pathway.
- We will be completing our involvement in the EMPOWER Initiative which is a selective granted program funded by the CDC to promote Baby-Friendly practices. The funding for this program is ending in the fall 2017.
- This year the Maternal Infant Unit was highlighted in the Hospital fundraising Gala. \$400,000 was raised to help support programs such as donor milk for the NICU,

- lactation pods for visitors, patients and employees to breastfeed or express breast milk, etc.
- We continue to have a vibrant cord blood donation program that is one of the most successful in the state. This critical service provides potential stem cell transplants, especially for minority populations for whom available matches are currently more limited. To date four successful transplants have resulted from collections at Temple University Hospital.
 - We established prenatal Yoga classes.
 - Our insulin drip policy was shown to reduce neonatal ICU admissions from hypoglycemia.
 - Quality initiatives that have been ongoing include: Monitoring of blood cell utilization, cesarean delivery rates, and wait times. The Obstetric department was in the top three departments for quality projects and initiatives.
 - Established post discharge telephone calls to guarantee that all our patients have a post-partum appointment
 - Drs. Ayala-Crespo and Mulla are codirecting our Obstetric simulation program – focusing on emergency obstetric situations with high medicolegal liability risk including shoulder dystocia, breech delivery and obstetric hemorrhage. This year we hope to acquire a full body obstetric simulation model to improve drills.
 - We instituted a successful program to provide immediate postpartum long acting contraception (LARC).
 - We instituted twice daily multidisciplinary round on the labor floor which include nursing, obstetric attendings, residents, anesthesiologists, neonatologists and pediatricians.
 - Kimberly Hanson took the helm as the new Nurse Manager of labor and Delivery and Georgina Hurley, RN was appointed as Director of Nursing for Women’s Services.

30-day all cause postpartum readmission rate remains low at 1.28%.

Antibiotic prophylaxis given prior to the skin incision in cesarean sections was 100%.

Rates of elective induction <39 weeks was 0%

Steroid administration at <34 weeks was 100%.

Obstetrical infection rate (post-partum endometritis) remains low at 1.1%.

MFM Activities

1. Temple Prenatal Diagnosis Center

Temple University Hospital has a long-standing Prenatal Diagnosis Center that provides comprehensive prenatal diagnosis, and treatment for high-risk pregnancies. The Prenatal Diagnosis Center operates 5 days a week and is staffed by attending perinatologists. It is supplemented by a full-time perinatal nurse, ultrasonography technicians and support staff. The Prenatal Diagnosis Center provides comprehensive maternal fetal medicine and genetic consultations for high-risk pregnancies within the Temple University Health System and from a number of other referring clinics. We have three state of the art

ultrasound machines that were replaced in 2014. These machines are fully capable of providing 3-D imaging as needed.

This year with the assistance of the hospital; we upgraded our ultrasound software. In addition, we received state approval to add a 4th ultrasound examination room which has expanded our ultrasound volume and is used for diagnostic procedures such as CVS.

During 2016-17, we performed a total of 10957 ultrasounds (2399 anatomy ultrasound examinations, 1492 first trimester nuchal translucency, 2510 transvaginal ultrasounds, 125 fetal echocardiogram, and an additional 4431 otherwise classified as depicted on Chart 1).

The Prenatal Diagnosis Center also provides comprehensive antenatal testing and consultative services around timing of delivery in complicated pregnancies. A total of 2612 antenatal tests (biophysical profile/non-stress test) were provided over the last year. Eight hundred and one umbilical artery Doppler studies were performed to aid in the management of intrauterine growth restriction.

2. Perinatal Genetics

Perinatal genetics is an integral part of the Maternal Fetal Medicine division, and is imbedded in our prenatal diagnosis unit. All services are provided by board-certified genetic counselors: Ms. Janet Ober Berman, MS, LCGC and Amy Coleman, MS, LCGC. The program provides and disseminates genetic information, coordinates screening for genetic disorders of the mother and fetus and provides genetic counseling to the obstetric and pre-conception patients as needed. The most frequent genetic problems encountered include advanced maternal age, abnormal maternal serum screening, history of genetic syndromes and abnormal ultrasound findings. Two thousand one hundred and thirty-six patients received genetic screening or counseling through Temple University Hospital's services in 2016-17. Charts 2 and 3 illustrate our genetic services.

The perinatal genetics and fetal treatment program includes procedures such as amniocentesis, chorionic villus sampling, multifetal reduction and percutaneous umbilical blood sampling (PUBS). Less of these procedures are being performed nationwide due to the availability of non-invasive prenatal diagnosis. Additional services include selective reduction. In the fiscal year, we performed 1263 first trimester screens and 524 patients received non-invasive prenatal diagnosis (NIPT). Paternity testing is also available in collaboration with the DNA Diagnostic Laboratory

Educational activities include training of medical students, OB/GYN residents and genetic counseling interns. Temple's perinatal genetic program is a clinical training site for Arcadia University's Masters of Genetic Counseling program.

3. MFM Satellite Activities

On November 1, 2016, the MFM division opened satellite ultrasound sites at the Episcopal Hospital site and at Northeastern Ambulatory Care Center (Chart 4). Since then 433 obstetrical ultrasounds have been performed at those sites and read by members

of the MFM Division. These sites are available for first trimester ultrasound, first trimester screening in low-risk patients under the age of 35, low-risk anatomy ultrasound examinations in patients with a BMI <35, and growth evaluations. High-risk ultrasounds and antenatal testing will continue to be performed exclusively on the Temple Campus.

4. Obstetric Service

The Maternal Fetal Medicine division supervises the high-risk patients of the obstetrical service.

In the 2016-17 Fiscal Year:

- Total Deliveries 2642
- Our primary cesarean is stable at 14.6%
- Our overall cesarean rate is stable at 28%.

Chart 5 shows the annual number of deliveries at Temple University Hospital from FY2001 to present. Chart 6 shows the mode of delivery of infants delivered at Temple University Hospital in FY17. Charts 7 through 9 depict the number and types of visits of obstetrical patients seen at our two main sites (Residents Clinic at 5th floor Zone B and the Temple University Physicians practice at Temple University Hospital 7th floor Zone B. The total number of new obstetrical patients seen in FY17 at all our sites to include our community practices was 2194. Chart 10 compares the number of obstetrical visits in FY17 to FY16. Charts 11 and 12 demonstrate the origin of the obstetrical patients delivered at Temple University Hospital in 2016-17. Chart 12 also shows that the proportion of adolescent mothers delivered at TUH has dramatically decreased (it was 7.6% in FY17 compared to 10% in FY16 and 16.9% 10 years ago (FY06).

5. Obstetrics and MFM Education

- a. Medical students- All third year medical students rotating through Temple University Hospital spend two weeks on the obstetrics service. They are exposed to the maternal fetal medicine service through rotations to the high-risk clinics and inpatient rounds. While on this rotation, they are expected to integrate themselves with the health care teams with assignments in the inpatient and out-patient care areas. The medical students are expected to follow patients, write comprehensive notes, and participate in procedures including deliveries. Their educational experience is through formal and informal didactics from MFM faculty and residents, morning rounds, chapter reviews, journal clubs, and grand rounds. Fourth year medical students can also choose to spend elective time in an MFM rotation. The fourth year MFM elective includes exposure to prenatal ultrasound examinations, high-risk patients with a variety of medical or obstetrical complications, procedures including deliveries, and didactics. The students upon the completion of their rotation are expected to be familiar with the most common high-risk conditions such as preterm labor, premature rupture of membranes, hypertensive disorders of pregnancy, basic prenatal diagnosis, and principles of management.

- b. Resident education-The residents are required to rotate through the Maternal Fetal Medicine service. A PGY3 and PGY1 resident are assigned to Maternal Fetal Medicine and are responsible for admitting, follow-up, and management of high-risk inpatients under the direction of the MFM specialist covering the service. The residents also see patients in the MFM clinics on Tuesday and Thursdays. Mondays and Fridays, the residents undergo ultrasound training at the fetal center. The PGY3 also observes and/or participates in prenatal diagnosis and treatment procedures. We continue to provide a formal training program for transvaginal ultrasound with an online course and image verification required for certification. By the end of the rotation the PGY3 is expected also to be able to perform a basic anatomic evaluation and an accurate transvaginal ultrasound. The PGY1 is expected to be able to measure fetal biometry, perform a biophysical profile and evaluate amniotic fluid. The Maternal Fetal Medicine faculty provides formal and informal lectures in the field of high-risk obstetrics and perinatology. Morbidity and mortality conferences are conducted bimonthly along with the neonatology services and subspecialist from St Christopher Hospital. Obstetric testing scores increased significantly this year for the Ob/Gyn residents.

6. Research Activities

Each Maternal Fetal Medicine attending has a particular area of research interest. The medical students and residents are encouraged to participate in the many clinical and basic science research activities in the division. The diverse field of interest is illustrated below:

Dr. Laura Hart

Dr. Hart is collaborating with Drexel University researchers studying the obstetrical outcomes of morbidly obese women and whether or not induction of labor at 40-week gestation will improve the outcome.

Dr. Hart is planning to do research with opioid dependent pregnant women who will participate in a state-funded treatment program.

Dr. Laura Goetzl

Dr. Goetzl serves as the Division Director for Maternal Fetal Medicine, the Medical Director of Labor & Delivery and the Vice-Chair for Research and Academic Development in our Department. Dr. Goetzl has an active laboratory in the Shriner's Research Institute (MERB6). Her lab is staffed with two associate scientists: Nune Sarkissian-Darbinian, and Nana Merabova. In addition, she has a full-time study coordinator for patient recruitment, Tamara Tatevosian. Dr. Goetzl is a standing member of the PN NIH study section as well as multiple ad-hoc study sections.

Translational Research:

- Placental transport mechanisms for psychoactive medications

- Fetal brain injury secondary to ethanol and psychoactive medications.
- Effects of in utero exposure to inflammation and obesity on neonatal outcomes
- Development of non-invasive biomarkers for fetal brain development

Clinical Research

- Epidural fever
- Normal Labor Mechanisms and Outcomes
- Obesity

Current Funding:

NIH/NICHD (Goetzl) 04/01/2012-03/31/2018 1.8 calendar
R01HD069238 \$ 2,876,828
Gestational Age Variation in Human Placental Transport Mechanisms

Gates Foundation Grant to Develop Non-Invasive Markers of Fetal Brain Development
\$100,000 2014-2016

Dr. Goetzl, Co-PI with Dr. Sharon Herring: Targeting pregnancy-related weight gain to reduce disparities in obesity: a randomized control trial. HRSA

Dr. Goetzl is co-PI on study with Vanderbilt University and the University of Pennsylvania that looks at fetal lung development.

Current Resident Mentees:

- Lauren Maramara – Obesity as a risk factor for failed induction

Dr. Wadia Mulla

Dr. Mulla’s IRB-approved research involves measuring diabetes and pancreatic markers in cord blood. Her research interests are in obesity, gestational diabetes and glucose metabolism.

7. Faculty Mentorship:

Dr. Goetzl works with all of the junior faculty in the department to aid in their academic development. She offers to meet with each faculty member yearly to review their CV, focus their goals and aid them in making academic connections. Dr. Goetzl assists faculty members in grant and manuscript preparation.

The future of Maternal Fetal Medicine at Temple

The goals of the Maternal Fetal Medicine Division for the next fiscal year are:

- a. Continue to pursue an application for maternal fetal medicine fellowship.

- b. Continue to implement evidence-based obstetric and MFM practice protocols in the high- and low-risk obstetric clinics and on labor and delivery.
- c. Add Nitrous Oxide as an option for labor analgesia and anxiolysis
- d. Continue to increase the volume of obstetric ultrasounds at the Prenatal Diagnosis Center.
- e. Continue our work as a center of excellence in the care of pregnant women with opioid use disorders
- f. Develop non-invasive markers of in-utero brain development

3. Gynecology & General Obstetrics

The Division of Gynecology and General Obstetrics is committed to promoting women's health care using the latest and most advanced technology available. Part of our mission is to include our patients as an integral component of the decision making process.

Providers

Dr. Juan J. Diaz is the director of the Division. The other full time faculty physicians are: Drs. Arleen Ayala, Tanise Branche, Bruce Carnivale, Gloria Diaz, Shaliz Dolan, Bethany Goins, Gail Herrine, Amanda Horton, Stacey Jeronis, Bruce Mabine, Anthony Milicia, Erin Myers, Sarah Park, and Marisa Rose.

Adjunct Faculty: Deslyn Mancini, Shwetha Shrivatsa, Todd Stearns, Henry Su, and Clinton Turner.

We also include two nurse midwives, Deborah Appleyard and Vivian Lowenstein, and a nurse practitioner, Theresa Smigo, who helps the faculty and residents with the heavy patient load of the Low-Risk Obstetrics Clinic, 7th Floor Zone B private practice, and in the 8th Floor Family Planning Clinic.

Clinical

The members of this Division see patients at multiple sites, which include: Family Planning Clinic (8th Floor, TUH Out-Patient Building), Episcopal Continuing Health Care Center, 7th Floor TUH Zone B Private Practice, 5th Floor TUH Zone B, Roxborough (Jamestown Medical Office Building), Temple Health at Elkins Park (Salus University Campus), Temple Health at Fort Washington, Northeastern Ambulatory Care Center, Temple Health at Bustleton, at Palmer Park and at Hunting Park.

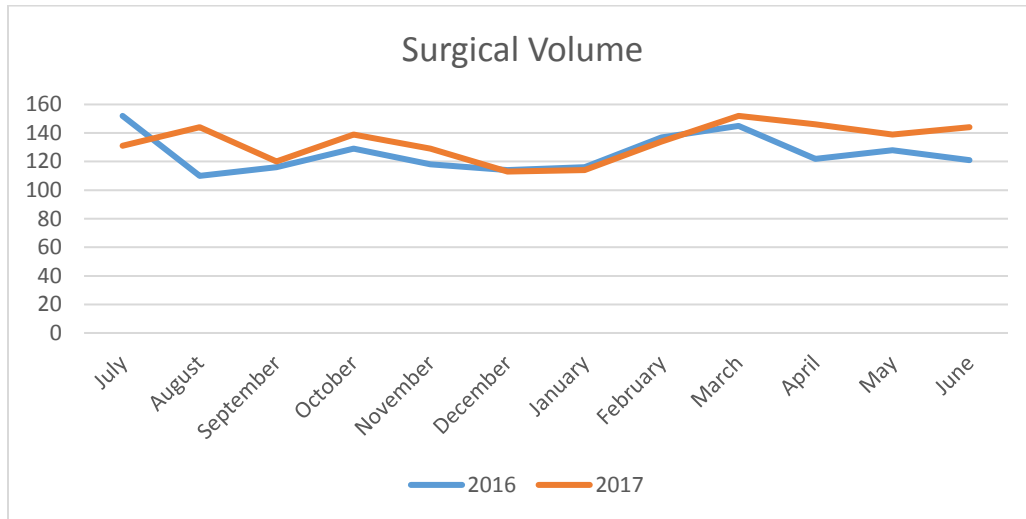
In addition, we see patients referred to Temple for inpatient management from clinics located throughout the city such as Greater Philadelphia Health Action, Esperanza Health Center and Delaware Valley Community Health clinics.

The general gynecological inpatient service team is constituted by an attending physician (service attending), a PGY4, PGY3, PGY2, two interns, the rotating third year medical

students, and a fourth year medical student. This team is responsible for managing gynecological emergency cases, performing elective surgery on patients from the family planning clinic, and caring for these patients post operatively. This team also serves as a consultant for gynecological cases to other departments within our institution.

Surgical Volume for the Benign Gynecology, Urogynecology, and Gynecologic Oncology Services

The department performed 1,605 surgical cases, which represents an approximately 6 % increment in the number of surgeries. This number does not include the 203 Post-Partum Tubal ligations performed in Labor and Delivery.



Patient Satisfaction Scores for Benign Gynecology and Gynecologic Oncology Services from patients admitted to the 5 East Unit.

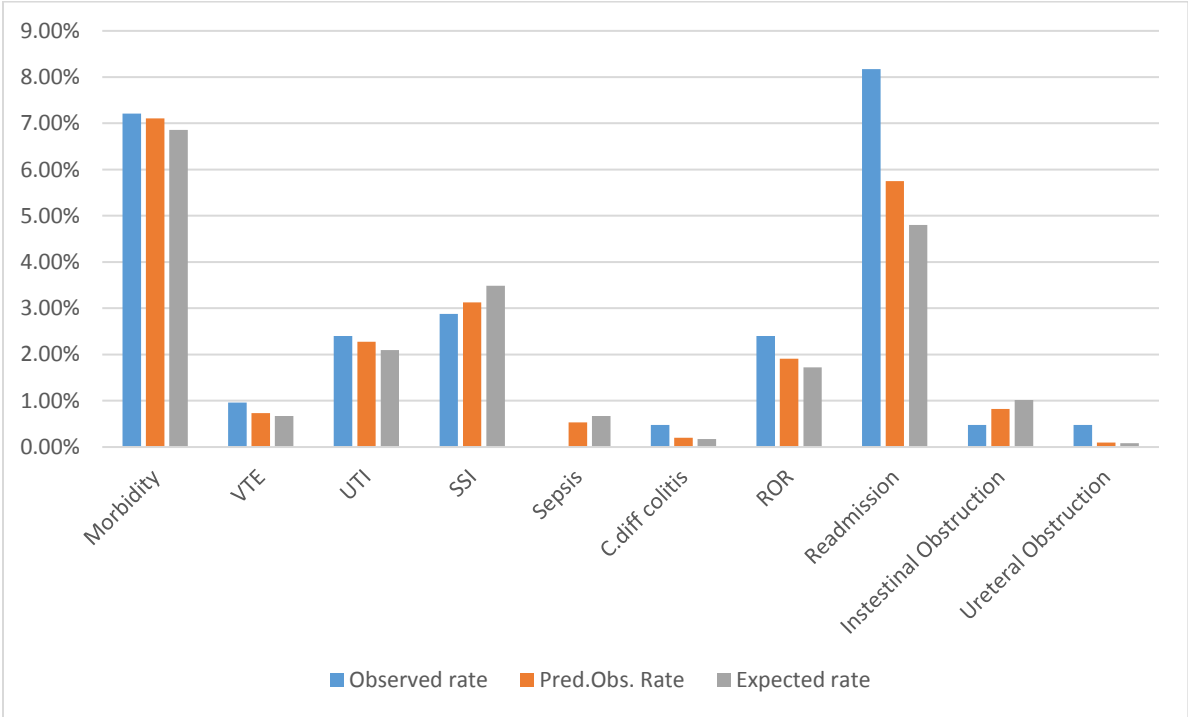
Unfortunately, we only have received 12 surveys from our patients during the first 3 quarters of this year.

Patient Safety

Patient safety is one of the key issues prioritized by the Institute of Medicine as critical for effective health care delivery. Creating a more robust safety program is essential as we build a busier surgical program with more surgeons with different levels of experience.

To keep track of our surgical outcomes we utilize the National Surgical Quality Improvement Program (NSQIP) database. The information is risk adjusted data, and it is collected from our hospital and other major teaching institutions throughout the country. It gives us the opportunity of comparing our outcomes against a large database. An analysis of the odds ratios for the different Patient Safety Quality Indicators show that our results are satisfactory.

NSQIP patient Safety Quality Indicators. Targeted cases calendar year 2016. Benign Gynecology, Urogynecology, and Gynecologic Oncology Services



NSQIP patient Safety Quality Indicators. Targeted cases calendar year 2016

GYN ROR = GYN Unplanned Return to OR

Except for readmissions, all the safety indicators were within the expected rate for the NSQID data. After reviewing the reasons for readmissions we learned that mostly all of the cases had different admission diagnosis, and a trend was not observed.

Education

Medical students:

All third-year medical students assigned to Temple University Hospital spend two weeks in the general gynecological inpatient service. Teaching/work rounds are directed every day by an assigned attending physician. The students are assigned their own patients to follow. They present and discuss the patients during rounds.

Each third year medical student rotating through our department pairs up with an attending physician for one-half day a week providing the medical student with direct one to one instruction.

The core division's faculty gives at least one formal lecture to the third-year medical students during each block. The medical students also participate during surgical procedures.

Residents:

We follow an educational curriculum for the residents which involves weekly faculty-led discussions of the most relevant topics in the field of General Gynecology.

During these discussions the residents learn the principles of preventive health, family planning, and the medical treatment of gynecologic conditions.

We also have a faculty-supervised pre-operative clinic, where the chief resident on the Gynecology Service evaluates and counsels patients before proceeding with surgical treatment. The residents act as a first- or second- assistant during gynecological procedure according to the complexity of the case. Every resident also participates in the daily teaching/work rounds.

Presentations/Publications OBGYN General Division

Cavanaugh E, Day J, **Jeronis S, Rose M.** Global women's health: Missed preventive screening opportunities at a rural primary care clinic in Bolivia. Council on Resident Education in Obstetrics and Gynecology & Association of Professors of Obstetrics and Gynecology (CREOG & APGO) Annual Meeting, Orlando, Florida, March 8-11, 2017.

Cavanaugh E, **Rose M.** An eight-week Mindfulness based stress reduction course for Ob/Gyn residents: a pilot study. CREOG & APGO Annual Meeting, Orlando, Florida, March 8-11, 2017.

Maher L, **Rose M.** Addressing loss of low risk obstetric patients to postpartum care in an inner city hospital (poster). Annual Clinical Meeting American College of Obstetricians and Gynecologists, San Diego, California, May 7, 2017.

Maher L, **Rose M.** Addressing loss of low risk obstetric patients to postpartum care in an inner city hospital (abst). *Obstet Gynecol* 2017 (May);129:54S.

Zitsman S, Yu D, Bruce SF, Ramirez-Caban L, **Diaz J.** Hysterectomy and peri-operative blood transfusion: identifying modifiable factors (poster). Annual Clinical Meeting American College of Obstetricians and Gynecologists, San Diego, California, May 7, 2017.

Action Plan for FY 2017

We are considering the recruitment of a Surgical Physician Assistant (PA) for our Minimally Invasive Gynecologic Surgery (MIGS) program: The assistance of a PA with our minimally invasive procedures will improve our efficiency in the operating room and patient safety. A PA will allow us to promote and grow our robotic and laparoscopic surgery program and will facilitate our residents' training. The residents will get to do more of the procedures rather than being bedside assistants in robotic cases. We will seek support from the hospital leadership in order to hire this new PA.

4. Female Pelvic Medicine and Reconstructive Surgery

Carol Glowacki, MD, FACOG is the Director of the Section of Female Pelvic Medicine and Reconstructive Surgery (also known as urogynecology). She joined the Temple faculty in September, 2012. Dr. Glowacki specializes in problems of the female pelvic floor. These include bladder dysfunction (urinary frequency, urgency and incontinence), pelvic organ prolapse, fecal incontinence, pelvic pain, vulvar pain (vulvodynia or vulvar vestibulitis), painful bladder syndrome (interstitial cystitis), urinary tract infections, hematuria, genito-urinary fistulas, and sexual dysfunction. Following appropriate evaluation and testing, treatment options are discussed and implemented. Treatment options may include medications, physical therapy, pessaries (vaginal support devices) and surgery. Surgical options include outpatient, abdominal, vaginal, minimally invasive and robotic-assisted approaches, depending on the needs and preferences of the patient.

The Section of Female Pelvic Medicine and Pelvic Reconstructive Surgery at Temple emphasizes a transvaginal surgical approach to female pelvic floor dysfunction. Sacral neuromodulation, which utilizes a technology similar to a pacemaker, is approved for treating patients with overactive bladder, urinary retention or fecal incontinence. Botox injections at different sites in the bladder are used and effective in treating bladder symptoms in patients with neurological disorders, as well as refractory overactive bladder.

Dr. Glowacki sees patients at Temple University Hospital, Temple Health at Elkins Park and Center City Philadelphia. The clinical volume continues to increase. The office at Temple University Hospital has increased hours to accommodate more patients and decrease prolonged wait times for both new and follow-up appointments. She operates at Temple University Hospital, Jeanes Hospital and Holy Redeemer Hospital. In FY17, the surgical volume continued to grow with a total of 130 procedures for female pelvic reconstruction performed at all three sites. A second year (PGY 2) or third year (PGY3) gynecology resident was assigned to the urogynecology service. The residents are exposed to the evaluation of the patients with pelvic floor disorders and this frequently includes cystoscopy, urodynamics and other procedures. The residents are also exposed to the medical therapy of pelvic floor disorders and to complex pelvic floor reconstruction procedures. Dr. Glowacki also operates with the Urology residents on their Female Pelvic Medicine and Reconstructive Surgery cases to broaden their exposure to the surgical aspect of the field. Additionally, fourth year students and third year medical students rotate on to the Urogynecology service for sub-internships and Urogynecology clinic, respectively.

The FPMRS service will expand to the Urology Department in FY18 with a combined Urology/ FPMRS clinic to improve the FPMRS exposure for the urology residents. Due to the increased volume seen in the Female Pelvic Medicine and Reconstructive Surgery clinics, we hope to be able add a second physician to the service. This provider would enhance the exposure of residents to FPMRS in both the Gynecology and Obstetrics department and Urology department at Temple University Hospital since this is required of both residency programs.

5. Reproductive Endocrinology and Infertility

PGY-4 and PGY-2 residents spend three days each week in the outpatient offices of Drs. Castelbaum and Freedman, Co-Directors of The Division of Reproductive Endocrinology and Infertility. Residents gain proficiency in performing vaginal ultrasonography for the evaluation of ovarian follicles, endometrial thickness, and uterine anomalies. Residents also perform many first trimester pregnancy ultrasounds. They evaluate and treat pregnancies of unknown location and ectopic pregnancies.

PGY-4 and PGY-2 residents participate in the initial evaluation of infertile couples. The resident integrates history, physical findings, ultrasonographic images and laboratory

data in formulating a differential diagnosis and establishing an evidenced-based treatment plan.

PGY-4 and PGY-2 residents are exposed to evidence based ovulation induction protocols including clomiphene citrate, aromatase inhibitors, gonadotropins, gonadotropin agonists, gonadotropin antagonists, and luteal phase estradiol priming. They become proficient in interpreting ultrasound and hormonal data in order to maximize pregnancy rates while minimizing the risks of high order multiple gestations and ovarian hyperstimulation syndrome. They also perform, under supervision, many of the 500 hysterosalpingograms performed annually.

Drs. Castelbaum and Freedman opened a state of the art In Vitro Fertilization (IVF) and Surgicenter facility in 2011, templated upon prior Reproductive Medicine Associates IVF laboratories. Residents are actively involved in the evaluation of patients undergoing IVF and embryo transfer. They gain experience in pre-IVF assessment including ovarian reserve testing, uterine evaluation and semen analysis interpretation. They also are exposed to IVF ovulation induction regimens tailored to patient's unique infertility issues. Residents attend oocyte retrievals and embryo transfers. They also observe IVF laboratory procedures including ICSI, embryo biopsy, laser assisted hatching, embryo/oocyte cryopreservation and embryo/oocyte thawing. Residents participate in outpatient diagnostic hysteroscopies and mock embryo transfers. They are exposed to thoughtful evidenced-based patient counseling to minimize the number of embryos transferred and lower the risk of multiple gestations. Approximately forty-percent of IVF patients elect to have their embryos biopsied at the blastocyst stage for Comprehensive Chromosomal Screening. Transfer of a single euploid embryo has resulted in implantation rates of 55 to 60% in women up to age 42. Trainees also gain experience in interpreting pre-implantation genetic results

At the conclusion of their rotation, it is expected that PGY-4 and PGY-2 Resident will be capable of managing all aspects of the initial work-up of infertile patients. They should also be proficient in managing ovulation induction with oral medication, and gain experience in performing transvaginal ultrasonography.

Drs. Castelbaum and Freedman give a total of eight Grand Round lectures annually for the Department of Obstetrics, Gynecology and Reproductive Sciences. Drs. Castelbaum and Freedman also lecture third year medical students during their Obstetrics and Gynecology rotation. Fourth-year medical students can take advantage of a 4-week elective in Reproductive Endocrinology and Infertility (REI) with Drs. Castelbaum and Freedman. Four to seven senior medical students rotate annually. Their experience mirrors that of the 3rd and 4th year Residents. The students taking this elective are required to present one formal talk on a REI topic. Five to ten first-year medical students also shadow Drs. Castelbaum and Freedman for an initial exposure to evidenced-based infertility treatment.

Since 2007 Drs. Castelbaum and Freedman offer consultation services at Temple University Hospital. They project increasing the number of new patient visits during the

next academic year. It is hoped that junior level obstetrics and gynecology residents will have the opportunity to participate in the evaluation of these patients as well, providing them with an earlier exposure to the field of Reproductive Endocrinology.

6. Administration

Revenue/Expenses:

The Department had another exciting year continuing to streamline the operations and expenses associated with the three large practices which had joined us in the prior year. In addition, due to vacancies in budgeted faculty and advanced practitioner positions, our activity to budget was unfavorable; charges - 11%, payments - 5% and visits – 7%

Even with these challenges we ended the year with a favorable variance to budget.

Our faculty remained productive with RVUs up 17% from FY16 . Faculty productivity as measured by adjusted (by clinical FTE) RVUs was at the 66th percentile of MGMA compared to a budgeted target of 65%.

Staffing:

24	Clerical/secretarial staff
33	Clinical staff
5	Advanced Practice Providers
9	Administrative staff
2	Research staff
2	Genetic Counselors
<u>1</u>	<u>Academic Education coordinator</u>
76	Total staff

New Staff Recruitment:

Recruited two key staff; a billing manager for our practice plan activities and a program manager for our Center of Excellence for Opioid addicted pregnant women.

Accomplishments:

- Established successful Center of Excellence for Opioid addicted pregnant women. Funded by a \$500,000 grant from the Commonwealth of Pennsylvania, this program is a collaboration between Temple and the Wedge Center, a community-based drug and alcohol treatment facility. Another partner is the Maternity Care Coalition. The Coalition provides peer-counseling along with case-management services.

- Continued participation with Temple University Hospital and our lead role in the implementation of the Baby Friendly Program into the outpatient practices and increased resources and education for breastfeeding. This also included championing, along with TUH Nursing and Pediatrics, the idea for distribution of the Temple Baby Boxes to all delivering patients. Developed outpatient practice protocols and teaching tools for implementation across the Temple Health System. These tools will be shared with outside agencies within our outreach area.
- IT updates: Continued to improve and streamline the EPIC electronic medical record for OB/GYN services, as well as supported TUH with both preparation for implementation of their inpatient EPIC EMR and upgraded GE Viewpoint software for the Fetal Center.
- Established perinatal ultrasound services with the Radiology departments at Temple's Northeast Ambulatory Care Center and Episcopal Hospital locations for their sonographers to work with our Maternal Fetal Medicine faculty offering these services to the community closer to their homes.

VII. SERVICE

The Department of Obstetrics, Gynecology and Reproductive Sciences is involved in a variety of community service activities. A few of these activities are described below:

A. COMMUNITY OUTREACH EVENTS

1. Participated in the following health fairs promoting all of our general OBGYN and subspecialty services:
 - a. Annual Temple University employee benefits fair
 - b. First annual Temple University Hospital community Health Fest
 - c. Kensington Hospital Health Fair
2. Hospital participant in the annual Delaware Valley NOCC (National Ovarian Cancer Coalition) walk/run.

B. FAMILY PLANNING

1. Family Planning Services Grant through Access Matters – more than 7,000 visits in FY2017 at Temple GYN/Family Planning Clinic site and over 8,000 visits at Student Health Services.

2. The Healthy Women Program (HWP) is a breast and cervical cancer early detection program that provides free clinical breast examinations, mammograms, pelvic exams and Pap Smears, education, and follow-up diagnostic care for abnormal results to uninsured and underinsured women 21 – 64 years of age. In FY 2002, the Breast and Cervical Cancer Prevention and Treatment (BCCPT) program was introduced as a funding source for women whose cancer screenings show breast or cervical cancer or pre-cancerous conditions. The BCCPT program provides a fast track Medical Assistance application approval, providing the patient full coverage for all treatment within five days of the application date. The HWP also supports other departments in the Temple Health System, including Diagnostic Imaging, Surgery and Colposcopy Clinic.

Our department has been a recipient of HWP funds for over 20 years.

3. HIV Education and Prevention Expansion Project. The grant for this project ended January 1, 2017. However, we still provide opt-out annual HIV screenings to all GYN/family planning patients, per the requirements of the Title X program. Additionally, we continue to make available rapid HIV testing to family planning patients via the 60 second INSTI® test, along with the following services: Linkage of HIV positive clients to care and treatment, and for at-risk clients, behavioral interventions through counseling sessions, condom distribution, and STI screening and treatment.
4. Satellites operating under the Family Planning umbrella

Student Health Services (operated by Student Health), provides family planning services, STI testing and gynecology examinations to University students at all their locations.

C. OTHER

Dr. Amanda Horton was the faculty advisor to a group of Temple medical students (Temple Emergency Action Corps) that spent a week in Chimborazo, Ecuador. They staffed a clinic for women emphasizing cervical cancer screening, the second most common cancer in women in developing countries.

In 2014 Temple University Hospital established Philadelphia's first public cord blood donation program. In January 2017 a woman with acute myeloid leukemia was the first recipient of stem cells derived from cord

blood harvested at TUH. Since then 3 other individuals have benefited from this program.

D. COMMITTEES

The faculty participate on a number of intra- and extra-institutional committees. These include:

Dr. Ayala

Director L&D laboratory
Director Ob/Gyn Clinical Simulation
Epic Physicians Oversight Committee

Dr. Carnivale

TUH OR Committee
Health Partners Utilization Management

Dr. Juan Diaz

LCME Self-study Subcommittee
Robotic Surgery Committee
eCare Ambulatory Steering Committee
Finance Committee Medical Faculty Senate
Peer Review
AAGL Annual Meeting Abstract Review Committee
Board of Trustees Society of Ibero-Latin American Medical Professionals

Dr. Dolan

OB/Gyn Residency Clinical Competency Committee

Dr. Glowacki

TUSM Personnel and Faculty Affairs
OB/Gyn Residency Clinical Competency Committee
“GIN” Rounds

Dr. Goetzl

IRB
Chair, Search Committee for Chairperson Department of Family Medicine
Chair, Departmental Appointments and Promotions Committee
Perinatal Core Measures
PI/Patient Safety
OB Relationship Building
EPIC Physician Champion
Dean’s Advisory
Perinatal Research Society – Council member
Philadelphia Maternal Mortality Review

Philadelphia L&D Leadership Group
Research Committee Society for Obstetric Anesthesia and Perinatology
Nominating Committee Society of Reproductive Investigation

Dr. Goins

OB/Gyn Residency Clinical Competency Committee
TUSM Personnel & Faculty Affairs
LCME Self-study Subcommittee

Dr. Hart

Residency Clinical Competency Committee
LGBTQ Alliance Task Force
Graduate Medical Education Committee

Dr. Herrine

Perinatal Core Measures
Baby Friendly Steering Committee
Breastfeeding Task Force
PI/Patient Safety
OB Relationship Building
OB & PI Committee
Baby Friendly Policy Committee (Chair)
Philadelphia Multihospital Task Force
ACOG's Breastfeeding Expert Workgroup
American College of Obstetricians and Gynecologists Representative to
the United States Breastfeeding Committee
Board member Breastfeeding Resource Center

Dr. Horton

Director, Ob Triage

Dr. Houck

OB/Gyn Residency Clinical Competency Committee
Robotic Surgery Committee

Dr. Jeronis

Claims Committee
Peer Review Committee
Medical School Admissions Committee

Dr. Mulla

Director Prenatal Diagnosis Center

Dr. Rose

LCME Self-study Subcommittee
Student Learning Environment and Appeals Committee

Interviewer for Admissions Committee
Endocrine/Reproductive Organ Systems Review Committee
Clerkship Directors Committee
Transfusions Committee
OB/Gyn Residency Clinical Competency Committee
Residency Wellness Committee
Departmental Appointments and Promotions Committee
Education and Curriculum Committee
Graduate Medical Education Committee
GME Wellness Subcommittee

Dr. Hernandez

LCME Self-study Steering Committee
LCME Self-study Medical Committee - Students Standards – Co-Chair
OB Relationship Building Committee
Diversity Council
Curriculum Committee
American College of Surgeons
 Regent
 Ethics Committee
 Member Services Committee
 Finance Committee
American Cancer Society, East Central Division
 Board Member
Pennsylvania Medical Society
 House of Delegates
Philadelphia County Medical Society
 Board Member
 Nominations Committee
 Budget and Finance Committee
 Bylaws Committee
 Resolutions Committee
College of Physicians of Philadelphia
 Board of Directors member
 Admission to Fellowship Committee
Society of Gynecologic Oncology
 International Affairs Committee

VIII. PUBLICATIONS AND PRESENTATIONS (FY17)

A. PUBLICATIONS

Guitarte C, Grant J, Zhao H, Wang S, **Ferriss JS**, **Hernandez E**. Incisional hernia formation and associated risk factors on a gynecologic oncology service: an exploratory analysis. *Arch Gynecol Obstet* 2016 (Oct.);294(4):805-11. doi: 10.1007/s00404-016-4100-3

Igwe E, Woodburn J, Davolos J, Shollenberger C, **Miller SM**, **Hernandez E**, **Ferriss JS**. Patient Perceptions and Willingness to Participate in Clinical Trials. *Gynecol Oncol* 2016 (Sept);142:520-524. doi: 10.1016/j.ygyno.2016.06.015

Hernandez E, Weissler MC. Ethics committee town hall on industry representatives in the OR highlights the issues outlined in ACS statement. *Bulletin Am College Surgeons* 2016(Oct.);101:84-85.

Jordan SE, **Papatla K**, **Hernandez E**. Gestational trophoblastic neoplasia. *Topics Obstet Gynecol* 2017 April;37(6):1-5 doi: 10.1097/01.PGO.0000515499.17019.78

Jordan SE, Stone D, Yu D, **Ferris JS**, **Hernandez E**, **Rubin S**. Blood loss from robotic assisted hysterectomy. *J Gynecol Surg* 2017 (Apr);33:47-50 doi:10.1089/gyn.2016.0075

Jordan SE, Micaily I, Serratore D, **Hernandez E**, **Ferriss JS**, **Houck KL**, Miyamoto CT, Micaily B. Image Guided High Dose Rate Intracavitary Brachytherapy in the Treatment of Medically Inoperable Early Stage Endometrioid Type Endometrial Adenocarcinoma. *Brachytherapy* 2017;16 (3): S70.

Tagai EK, **Miller SM**, Wen KY, **Hernandez E**. Formative evaluation of a text message-based intervention for abnormal Pap smear follow-up care. *Annals Behavioral Med* 2017;51: S2565.

Miller SM, Tagai EK, Wen K-Y, Minsun L, Hui S-A, Kurtz D, Scarpato J, **Hernandez E**. Predictors of adherence to follow-up recommendations after an abnormal Pap smear among underserved inner-city women. *Patient Edu Couns* 2017 (Jul);100(7):1353-1359. doi: 10.1016/j.pec.2017.01.020. Epub 2017 Jan 31.

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Darbinian N, Darbinyan A, Merabova N, Bajwa, A, Martirosyan D, **Goetzl L**. Ethanol-mediated alterations in oligodendrocyte differentiation in human model. *Alcoholism: Clinical and Experimental Research*, 2016;40(6).

Gn MZ, Malik A, **Hart LA**, Mukherjee A, Reese AC. Hydronephrosis secondary to an ectopic decidual reaction in the urinary bladder. *Urology*. 2017 Aug;106:e11-e12. doi: 10.1016/j.urology.2017.05.002. Epub 2017 May 10. PMID: 28499763

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Cripe J, Handorf E, **Brown J**, Jain A, **Rubin S**, **Mantia-Smaldone G**. National Cancer Database Report of Lymphadenectomy Trends in Endometrial Cancer. *Int J Gynecol Cancer* 2017 May 19. doi: 10.1097/IGC.0000000000001005. [Epub ahead of print]

Andersen CL, Sikora MJ, Boisen MM, Ma T, Christie A, Tseng G, Park Y, Luthra S, Chandran U, Haluska P, **Mantia-Smaldone GM**, Odunsi K, McLean K, Lee AV, Elishaev E, Edwards RP, Oesterreich S. Active Estrogen Receptor-alpha Signaling in Ovarian Cancer Models and Clinical Specimens. *Clin Cancer Res* 2017 Jan 10. doi: 10.1158/1078-0432.CCR-16-1501. [Epub ahead of print]

Meyer LA, Cronin AM, Sun CC, Bixel K, Bookman MA, Cristea MC, Griggs JJ, Levenback CF, Burger RA, **Mantia-Smaldone G**, Matulonis UA, Niland JC, O'Malley DM, Wright AA. Use and Effectiveness of Neoadjuvant Chemotherapy for Treatment of Ovarian Cancer *J Clin Oncol*. 2016 Sep 6. pii: JCO681239. [Epub ahead of print]

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Christian AH, O'Malley D, Barac A, **Miller SM**, Hudson SV. Patient Educ Couns 2017 Jul;100(7):1360-1366. doi: 10.1016/j.pec.2017.02.010. Epub 2017 Feb 10.

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Paredes I, Herrera Gonzalez A, Row K, Shi A, **Anasti J**. Changing the timing of the postpartum visit: decreasing short interval pregnancy rates (abstract). *Obstet Gynecol* 2017 (May);129:163S.

Lennon J, Herrera Gonzalez A, Dierking E, **Anasti J**. Amniotomy affects the uterine protein creatinine ratio accuracy in the diagnosis of preeclampsia (abstract). *Obstet Gynecol* 2017 (May);129:32S.

A. PRESENTATIONS (Extramural)

Faykina M, Darbinian N, **Goetzl L**. Developing Novel Non-invasive Neonatal Blood Testing to Measure Human Neonatal Brain Injury. Harrisburg, PA Undergraduate Research Day, Harrisburg, April 24, 2017.

Goetzl L, Darbinian N, Merabova N, Patel K, Tarantal AF, Barry PA. Non-Invasive Assessment of Fetal CMV Infection and Injury via Fetal Neuronal Exosomes: A Non-Human Primate Model. Oral Presentation. Society for Reproductive Investigation, Orlando, FL. March 15-18, 2017. 64th Annual SRI Meeting

Goetzl L, Martirosyan D, Darbinian N, Merabova N, Fugarolas K, Menkiti O. Neuronal Exosome Synaptopodin: An Early Predictor of Therapeutic Response to Controlled Hypothermia (poster). 64th Annual SRI Meeting (Society for Reproductive Investigation), Orlando, FL March 15-18, 2017

Goetzl L, Hart L, Grebennikova S, Merabova N, Sarkissian N. Fetal Neuronal Exosome Morphine Receptor Levels and Maternal Opioid Use (poster). 64th Annual SRI Meeting (Society for Reproductive Investigation), Orlando, FL March 15-18, 2017

Goetzl L, Goetzl EJ, Merabova N, Lauretti E, Tatevosian G, Martirosyan D, Darbinian N. Maternal Plasma Fetal Neuronal Exosomes: A Non-Invasive Tool to Interrogate In-Utero Neuronal Injury. SfN, San-Diego, November 2016

Merabova N, Tatevosian G, Bouret SG, Park S, Darbinian N, Simmons R, **Goetzl L**. Effect of Maternal Obesity on Fetal Brain Development: Impairment in the expression of axon guidance cues. SfN, San-Diego, November 2016

Darbinian N, Goetzl EJ, Merabova N, Lauretti E, Tatevosian G, Martirosyan D, **Goetzl L**. Fetal Neuronal Exosome MiR-9 and its Downstream Targets BDNF, REST and Synapsin: Robust Non-Invasive Maternal Biomarkers of EtOH Mediated Fetal Brain Injury. SfN, San-Diego, November 2016

Jordan S, Walters K, Yu, D, **Houck KL**, **Hernandez E**. Lack of cardiotoxicity in patients treated with more than 6 Cycles of pegylated liposomal doxorubicin (poster). Pennsylvania Medical Society House of Delegates and Annual Education Conference, Hershey, Pennsylvania, October 22, 2016.

Jordan SC, Micaily, I, **Hernandez E**, **Ferriss JS**, Miyamoto CT, Li S, Micaily B. Image-guided high-dose rate intracavitary brachytherapy in the treatment of medically inoperable early-stage endometrial adenocarcinoma (poster). American Brachytherapy Society 2017 Annual Meeting, Boston, Massachusetts, April 20-22, 2017.

Walters K, **Jordan S**, Yu, D, **Houck KL**, **Hernandez E**. Lack of cardiotoxicity in patients treated with more than 6 Cycles of pegylated liposomal doxorubicin. Annual meeting Mid-Atlantic Gynecologic Oncology Society, Baltimore, Maryland, October 13, 2016.

Platsoucas CD, Larry F, Jung W-J, Tsygankov AY, Gaughan J, **Hernandez E**, Freedman RS, Oleszak EL. Clonally expanded gamma/delta ($\gamma\delta$) TCR+ T cells are present in Tumor specimens from patients with epithelial ovarian carcinoma (EOC) tumors. Lysis of ovarian carcinoma tumor targets by Jurkat T-cell lines transduced with clonally expanded γ - and δ -chain TCR. BIT's 10th Annual World Cancer Congress -2017 (WCC-2017), Barcelona, Spain May 19-21 2017.

Platsoucas CD, Larry F, Jung W-J, Tsygankov AY, Gaughan J, **Hernandez E**, Freedman RS, Oleszak EL. Clonally expanded gamma/delta ($\gamma\delta$) T-cell receptor (TCR)-expressing T cells are present in epithelial ovarian carcinoma (EOC) tumors. T-cell lines transduced with clonally expanded γ - and δ -chain TCR transcripts lyse ovarian carcinoma tumor targets. BIT's 5th International Congress of Gynaecology and Obstetrics (ICGO-2017), Prague, Czech Republic, May 27, 2017.

Tagai EK, **Miller SM**, Wen KY, **Hernandez E**. Formative evaluation of a text message-based intervention for abnormal Pap smear follow-up care. 38th Annual Meeting and Scientific Sessions of the Society of Behavioral Medicine, San Diego, California, March 29-April 1, 2017.

Maher L, **Rose M**. Addressing loss of low risk obstetric patients to postpartum care in an inner city hospital (poster). Annual Clinical Meeting American College of Obstetricians and Gynecologists, San Diego, California, May 7, 2017.

Zitsman S, Yu D, Bruce SF, Ramirez-Caban L, **Diaz J**. Hysterectomy and peri-operative blood transfusion: identifying modifiable factors (poster). Annual Clinical Meeting American College of Obstetricians and Gynecologists, San Diego, California, May 7, 2017.

Cavanaugh E, Day J, Jeronis S, Rose M. Global women's health: Missed preventive screening opportunities at a rural primary care clinic in Bolivia. Council on Resident Education in Obstetrics and Gynecology & Association of Professors of Obstetrics and Gynecology (CREOG & APGO) Annual Meeting, Orlando, Florida, March 8-11, 2017.

Cavanaugh E, Rose M. An eight-week Mindfulness based stress reduction course for Ob/Gyn residents: a pilot study. CREOG & APGO Annual Meeting, Orlando, Florida, March 8-11, 2017.

Gonzalez Rios AR, Gutierrez J, Schirtz J, Mehta S, Levie MD, **Anasti J**, Lucente V. Failed endometrial ablation: Who is at risk? 45th Global Congress on Minimally Invasive Gynecology (American Association of Gynecologic Laparoscopists), Orlando, Florida, November 14-18, 2016.

Lam MC, Hunt J, **Anasti J.** Neutrophil to lymphocyte ration: A marker for preterm labor (poster). Annual Clinical Meeting American College of Obstetricians and Gynecologists, San Diego, California, May 9, 2017.

Paredes I, Herrera Gonzalez A, Row K, Shi A, **Anasti J.** Changing the timing of the postpartum visit: decreasing short interval pregnancy rates (poster). Annual Clinical Meeting American College of Obstetricians and Gynecologists, San Diego, California, May 8, 2017.

Lennon J, Herrera Gonzalez A, Dierking E, **Anasti J.** Amniotomy affects the uterine protein creatinine ratio accuracy in the diagnosis of preeclampsia. Annual Clinical Meeting American College of Obstetricians and Gynecologists, San Diego, California, May 6, 2017.

IX. CONTACT INFORMATION

Chairman's Office

(215) 707-3002

Practice Locations:

Faculty OB/GYN Practice

Temple University Hospital
7th floor, Zone B
Broad and Tioga Streets
Appointments: (215) 707-3008

GYN/Family Planning Clinic

Temple University Hospital
8th floor, Zone B
Broad and Tioga Streets
Appointments: (215) 707-3232

OB/High-Risk OB/Diabetes in Pregnancy Clinics

Temple University Hospital
5th Floor, Zone B
Broad and Tioga Streets
Appointments: (215) 707-3008

Gynecologic Oncology

Temple University Hospital
7th floor, Zone B
Broad and Tioga Streets
Appointments: (215) 707-3015

Holy Redeemer Hospital

1648 Huntingdon Pike
Meadowbrook, PA 19046
Appointments: (215) 707-3015

Chestnut Hill Hospital

8815 Germantown Ave., Ste. 46
Appointments: (215) 707-3015

Temple Cancer Center

3401 N. Broad Street
4th floor, Zone D
Appointments: (215) 707-3015

Colposcopy Clinic

Temple University Hospital
5th Floor, Zone B
Broad and Tioga Streets
Appointments: (215) 707-3008

Maternal-Fetal Medicine Consultation

Temple University Hospital
5th floor, Zone B
Broad and Tioga Streets
Appointments: (215) 707-3008

Perinatal Diagnosis Center

Temple University Hospital
8th floor, Zone B
Broad and Tioga Streets
Appointments: (215) 707-3648

Obstetrics & Gynecology

Episcopal OB/Gyn Practice

100 E. Lehigh Avenue
Philadelphia, PA 19125
Appointments: (215) 707-1840
(215) 707-1118

Roxborough OB/Gyn Practice

Jamestown Medical Building
Suite 107
525 Jamestown Avenue
Appointments: (215) 483-7700

Women's Care at Northeastern

2301 E. Allegheny Ave. Ste. 180
Appointments: (215) 926-3700

Jeanes GYN Associates-Temple NE

9931 Old Bustleton Ave. Suite 203
Appointments: (215) 602-8900

Palmer Park Practice

1741 Frankford Ave., Suite 100
Philadelphia, PA 19125
Appointments: (215) 425-2424

Fort Washington

515 Pennsylvania Avenue
Fort Washington, PA 19034
Appointments: (215) 707-3008

Urogynecology

Temple University Hospital

7th Floor, Zone B
Broad and Tioga Streets
Appointments: (215) 707-3008

Temple Health – Salus

8380 Old York Road, Suite 100
Elkins Park, PA 19027
Appointments: (215) 707-3008 or
(215) 517-5000

Center City Office

Medical Arts Tower
255 S. 17th Street
21st Floor, Suite 2101
Philadelphia, PA 19103
Appointments: (215) 707-3008

Appointments for
**Reproductive Endocrinology and
Infertility:**
215-938-15

X. Illustrations and Charts

Chart 1. Procedures performed at Temple's Prenatal Diagnosis Center in FY17

TOTAL = 14542 (6% increase over FY16)

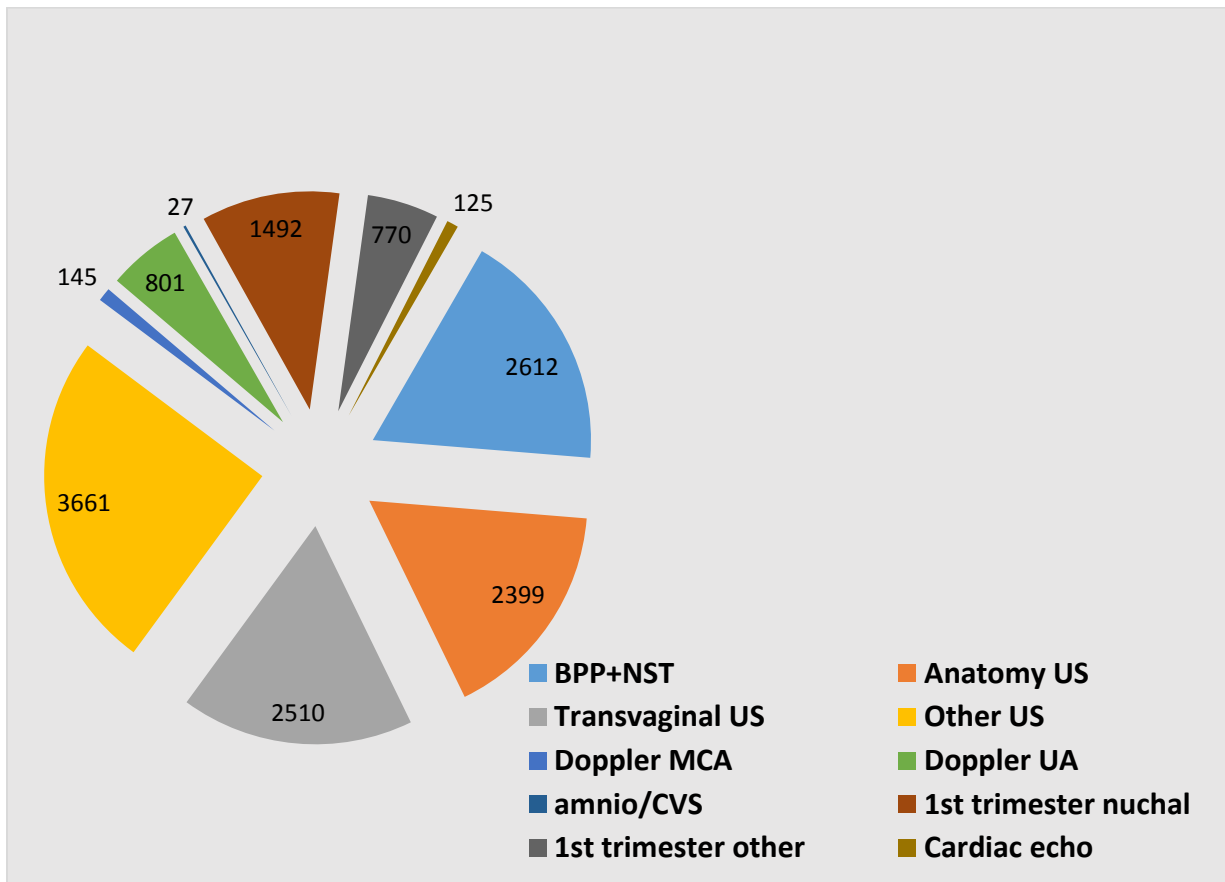
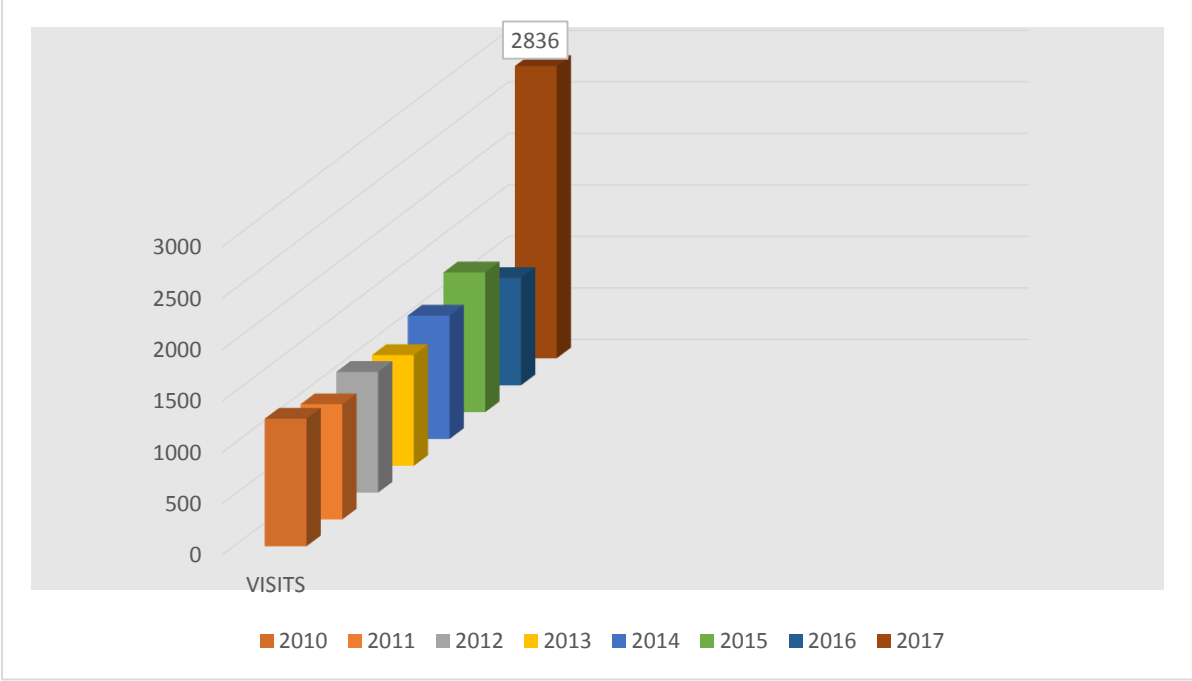
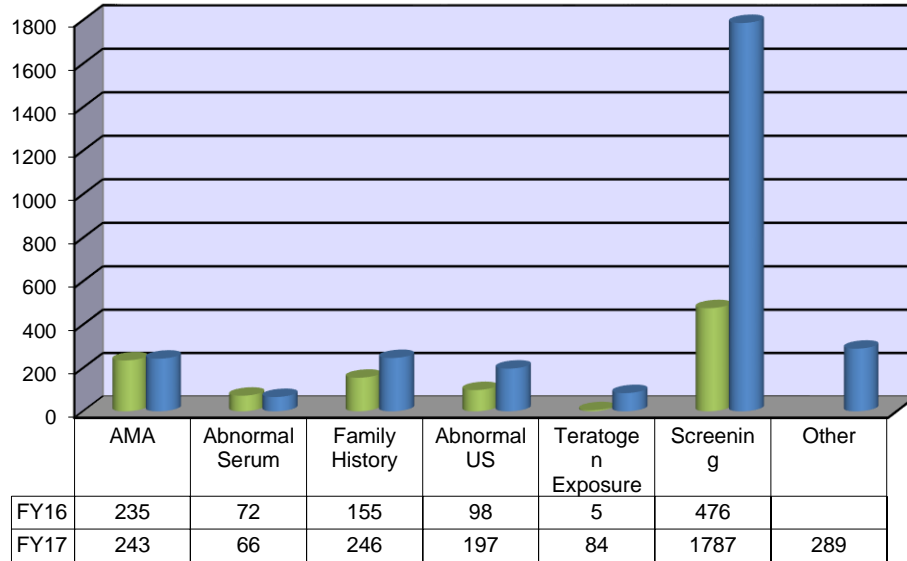


Chart 2. Genetic screening and counseling visits at Temple University Hospital FY10-FY17



YEAR	2010	2011	2012	2013	2014	2015	2016	2017
VISITS	1247	1126	1179	1080	1201	1358	1041	2836

Chart 3. Genetic Screening and Counseling FY17 (AMA = Advanced Maternal Age)



FY17 other include (some patients had more than one indication):

Abnormal carrier screen 207
Consanguinity 1
Preconception counseling 18
Recurrent pregnancy losses 18
Unknown paternity 1
Other 44

Chart 4. Satellite MFM Activities (Northeastern Ambulatory Care Center), inactive since 2014. Obstetrical ultrasound services reactivated on November 1, 2016 at NACC and Episcopal Hospital.

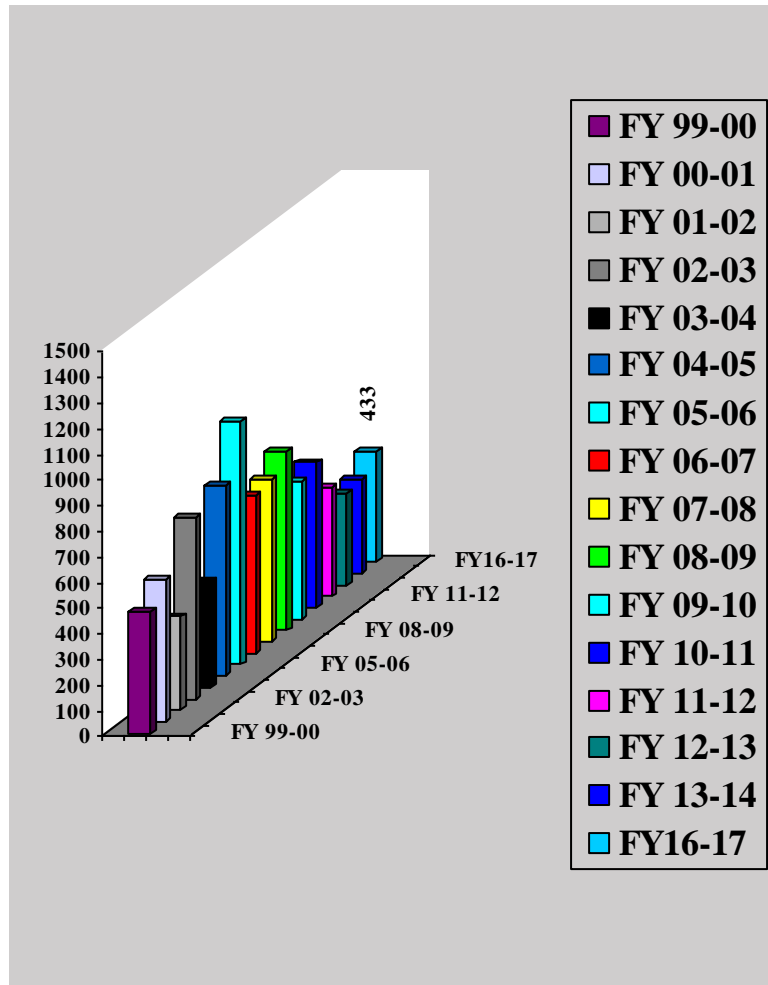


Chart 5. Obstetrical Deliveries at Temple University Hospital

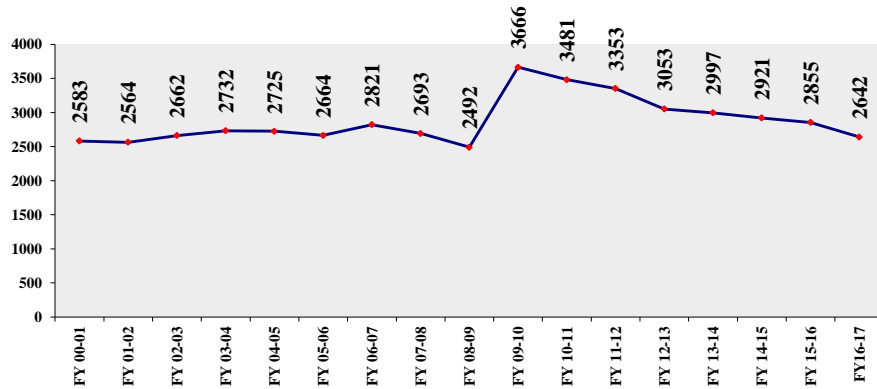


Chart 6. Mode of Delivery at Temple University Hospital FY17

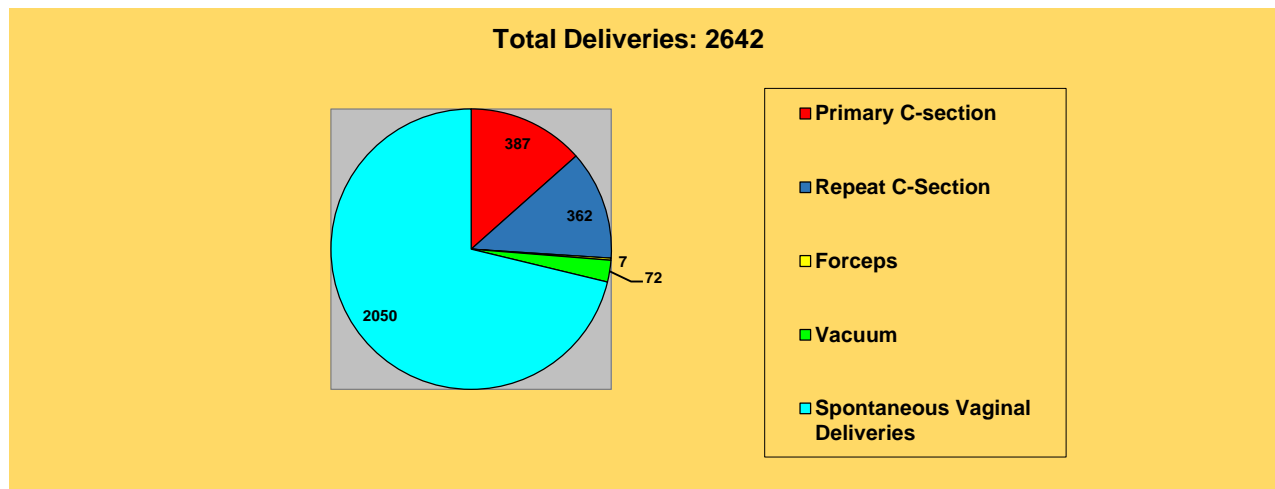


Chart 7. New Obstetrical patients (low-risk) seen at the Residents Clinic

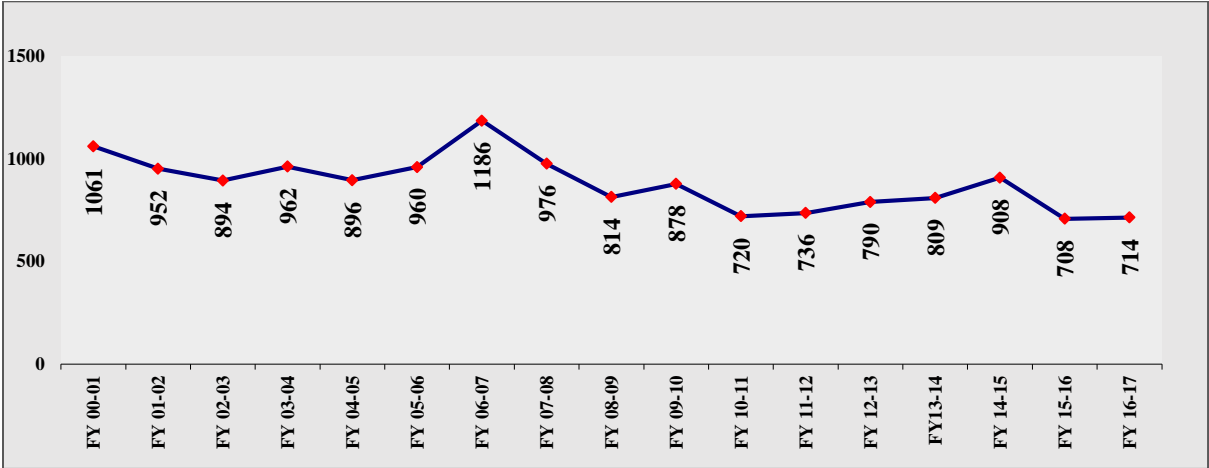


Chart 8. Total obstetrical visits at the Residents Clinic

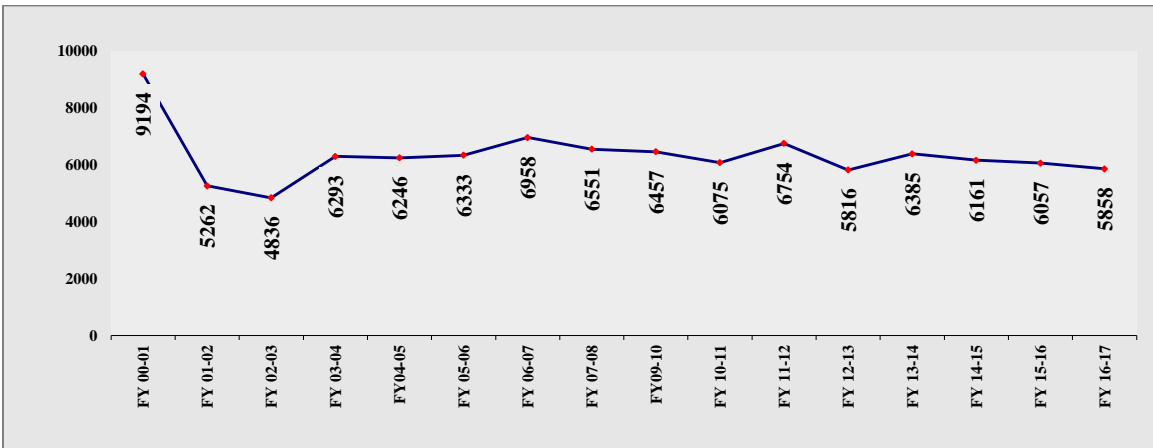


Chart 9. Outpatient obstetrics: High-Risk (HR), and low-risk at obstetrical visits Temple University School of Medicine FY17

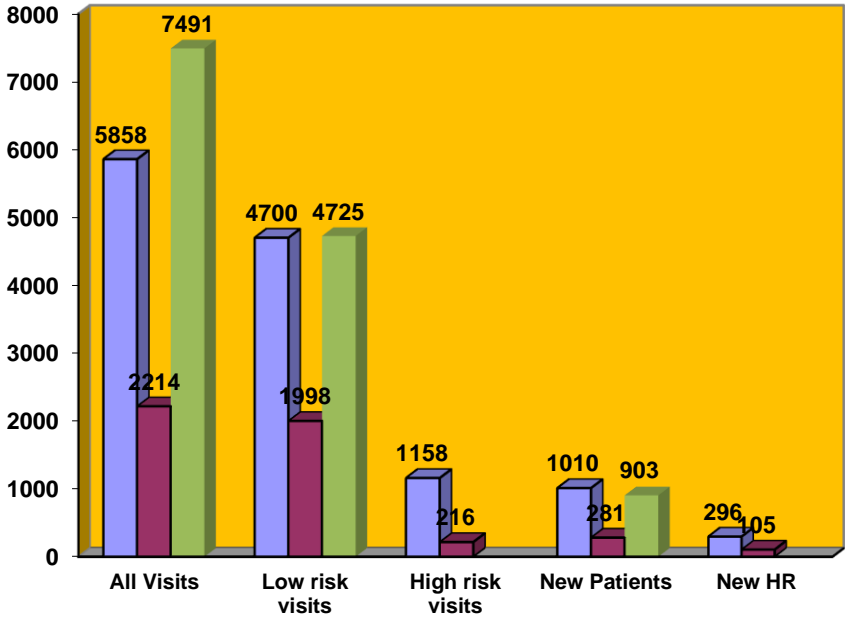
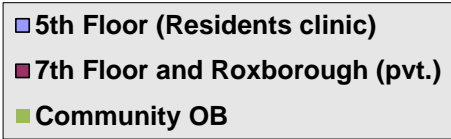


Chart 10. Obstetrical visits at all sites FY16 vs FY17

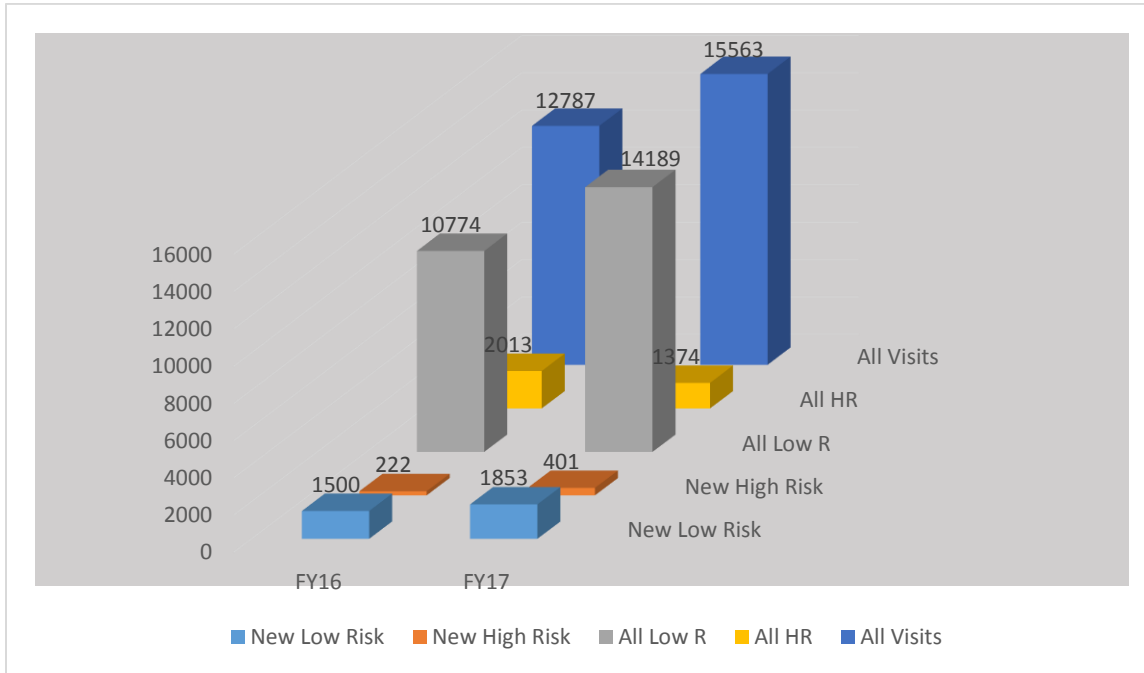


Chart 11. Deliveries at Temple University Hospital by referral source FY17

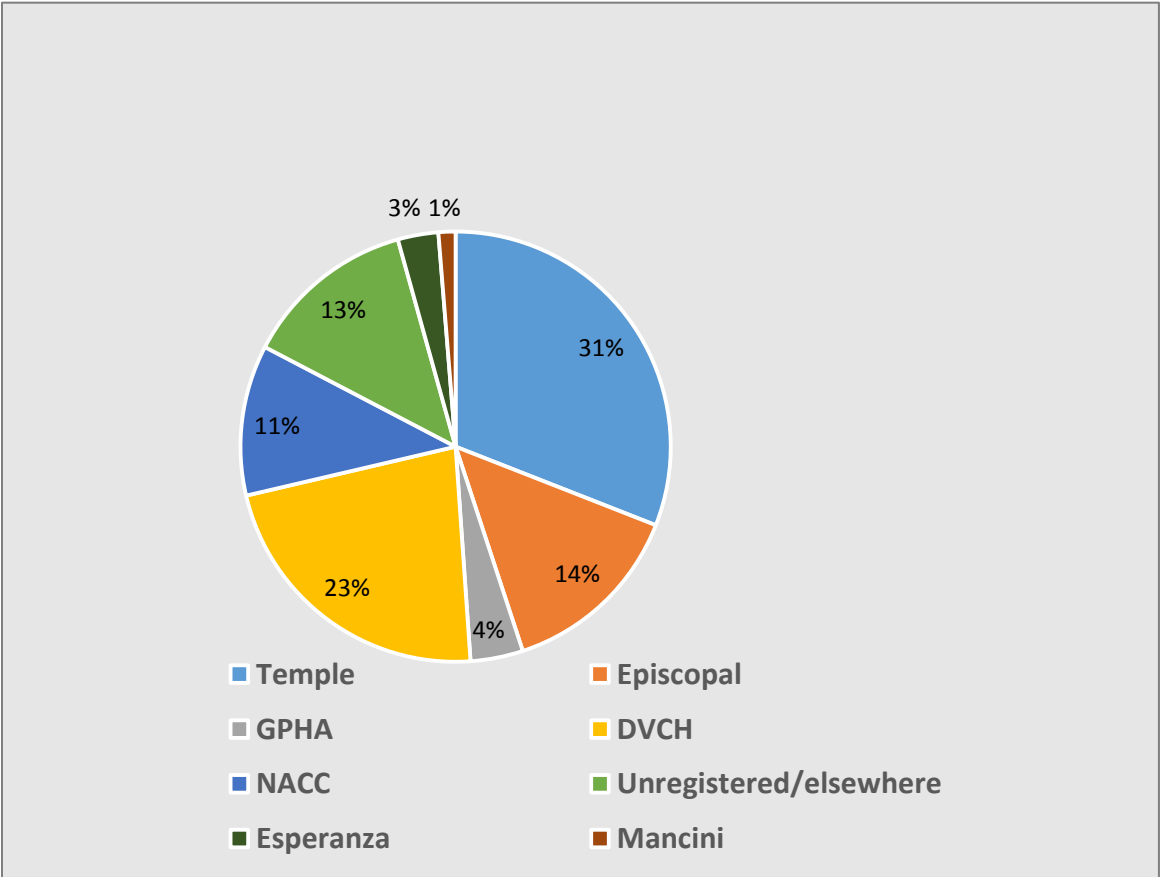
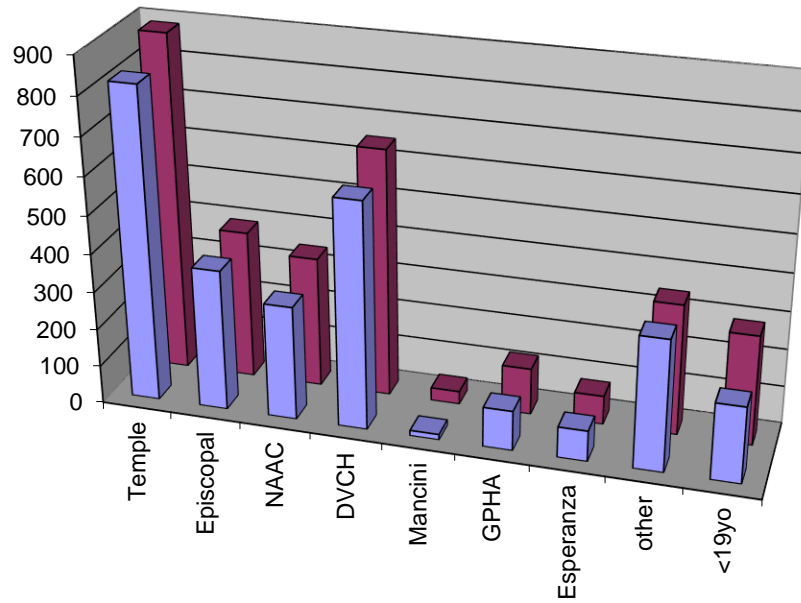


Chart 12. Site of prenatal care of patients delivered at Temple University Hospital and number of teenage mothers.



	Temple	Episcopal	NAAC	DVCH	Mancini	GPHA	Esperanza	other	<19yo
2017	823	372	301	597	14	105	81	346	201
2016	888	392	345	652	34	123	76	345	290

*Proportion of adolescents delivering at TUH was 7.6% in FY17 compared to 10% in FY16 and 16.9% 10 years ago (FY06).

Organizational Chart – September 2017

Department of Obstetrics, Gynecology and Reproductive Sciences

