Dear Colleague,

We would like to take this opportunity to update you on some of the exciting clinical and research endeavors of the past year within the obstetrics and gynecology programs at NewYork-Presbyterian Hospital. The Hospital’s affiliations with Columbia University College of Physicians and Surgeons and Weill Cornell Medical College continue to provide our physicians and researchers with important opportunities for the development of technologies and therapies that will produce new ways of preventing, diagnosing, and treating the health issues that face women throughout their lifetime.

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Faculty News

Frank A. Chervenak, MD, Chair, Department of Obstetrics and Gynecology, NewYork-Presbyterian/Weill Cornell, worked closely with Russian colleagues to prepare for the XI World Congress of Perinatal Medicine held in Moscow in June 2013. The Congress drew nearly 2,000 participants from 78 countries. Dr. Chervenak was awarded an honorary doctorate from Ott Scientific Research University of Obstetrics and Gynecology in Saint Petersburg, Russia. A number of other foreign universities have awarded him honorary doctorates, including Research Center for Obstetrics, Gynecology and Perinatology, Moscow.

Mary E. D’Alton, MD, Chair, Department of Obstetrics and Gynecology, NewYork-Presbyterian/Columbia, has been elected to the Institute of Medicine at its 43rd Annual Meeting. Election to the Institute, considered one of the highest honors in the fields of health and medicine, recognizes individuals who have demonstrated outstanding professional achievement and commitment to service. Dr. D’Alton has served as President of the Society for Maternal Fetal Medicine and has held key positions in other professional organizations, including the American Gynecological and Obstetrical Society.

Arnold P. Advincula, MD, a recognized leader in minimally invasive, laparoscopic, and robotic gynecological surgery, has been named Chief of Gynecology at NewYork-Presbyterian/Columbia. Dr. Advincula joins us from Florida Hospital Celebration Health, where he was Medical Director of the Center for Specialized Gynecology and the Gynecologic Robotic Surgery Program. As Chief, Dr. Advincula will expand a number of key areas to include the Center for Endometriosis Treatment and Research and the Center for Women’s Specialized Gynecologic Surgery.

Tamatha B. Fenster, MD, MS, a specialist in minimally invasive laparoscopic and robotic gynecologic surgery, has joined the Department of OB/Gyn at NewYork-Presbyterian/Weill Cornell. Dr. Fenster completed a post-doctoral American Association of Gynecologic Laparoscopists accredited fellowship in minimally invasive robotic and laparoscopic gynecologic surgery at North Shore Long Island Jewish University Hospital.

Marc Goldstein, MD, Director of the Center for Male Reproductive Medicine and Microsurgery at NewYork-Presbyterian/Weill Cornell, received the American Society of Reproductive Medicine’s Star Award.

Kevin Holcomb, MD, has been appointed Director of Gynecologic Oncology in the Department of Obstetrics and Gynecology at Weill Cornell. Dr. Holcomb, who also serves as the Department’s Director of Minimally Invasive Surgery, is active in the development of robotic and laparoscopic surgical techniques for gynecologic cancers.

Sharyn N. Lewin, MD, a gynecologic oncologist at NewYork-Presbyterian/Columbia, serves on the Board of Directors of Gilda’s Club New York City. Dr. Lewin has developed a comprehensive, multidisciplinary team approach to screening, treatment, and overall quality of care for women at high risk for ovarian cancer and those with gynecologic malignancies.

Mark V. Sauer, MD, Vice Chair of Obstetrics and Gynecology and Division Chief, Division of Reproductive Endocrinology and Infertility at NewYork-Presbyterian/Columbia, served as Editor of the second edition of Principles of Oocyte and Embryo Donation, published in March 2013 – 15 years after the publication of the first edition. The new textbook addresses the
many issues affecting men and women engaged in the practice of oocyte and embryo donation, with a primary emphasis on defining the standards of practice and outcomes expected from adhering to established protocols.

Carolyn L. Westhoff, MD, MSc, Director, Division of Family Planning and Preventative Services at NewYork-Presbyterian/Columbia, has been appointed Senior Medical Advisor to Planned Parenthood Federation of America. Dr. Westhoff will oversee the organization’s medical affairs division.

Steven S. Witkin, PhD, was named the William J. Ledger Chair of Infection and Immunology in Obstetrics and Gynecology, established in 2013 at Weill Cornell Medical College. Dr. Witkin’s work focuses on immunologic, infectious, and genetic aspects of disorders affecting women’s health.

**Program Highlights**

**At NewYork-Presbyterian/Columbia:**

Since 2009, NewYork-Presbyterian/Columbia’s Ambulatory Care Network clinics began offering group prenatal or “centering” programs. More than 500 expectant mothers in Inwood and Washington Heights have participated in the program. Studies have shown that this type of group prenatal care results in fewer preterm births and higher birth weights among women at highest risk for adverse perinatal outcomes.

The Family Planning Practice delivers bilingual, bicultural programs and services focused on family planning, routine screening, reproductive health counseling, and general healthcare. The practice, under the direction of Ana Cepin, MD, Associate Medical Director, serves more than 11,000 women and 3,000 men each year in the predominantly Latino, high-risk, low-income neighborhoods in upper Manhattan and the lower Bronx, and is a source of primary health and gynecologic care for many of these patients.

**At NewYork-Presbyterian/Weill Cornell:**

The Female Pelvic Medicine and Pelvic Reconstructive Surgery service continues to grow with the addition of Tirsit S. Asfaw, MD, a urogynecologist trained in abdominal, vaginal, and robotic surgery. Dr. Asfaw and her colleagues apply a variety of approaches for surgical repair of pelvic organ prolapse, including the traditional transvaginal suture repair, as well as graft interposition via an abdominal or vaginal approach, laparoscopy, and robotic assisted sacrocolpopexy.

The Department of Obstetrics and Gynecology has expanded its women’s health care services to NewYork-Presbyterian/Lower Manhattan Hospital. The Hospital’s OB/Gyn practice, directed by Carmen J. Sultana, MD, has general obstetricians and gynecologists, a Perinatal Diagnostic Unit staffed by high-risk obstetricians, and subspecialists in gynecologic surgery and urogynecology. The practice is now available to see patients in family friendly locations convenient for the growing residential Lower Manhattan community.

**Research Initiatives**

**At NewYork-Presbyterian/Columbia:**

Chromosomal Microarray Versus Karyotyping for Prenatal Diagnosis. A new technology – chromosomal microarray analysis – has joined karyotyping as a method for detecting chromosomal abnormalities, demonstrating that it is even more sensitive for identifying small genomic deletions and duplications that are not routinely seen with standard prenatal testing. The findings, published in *The New England Journal of Medicine*, are the result of a multicenter study of 4,450 women over a four-year period led by Ronald J. Wapner, MD, Vice Chairman for Research in Obstetrics and Gynecology and Director of Reproductive Genetics. [New England Journal of Medicine. 2012 Dec 6;367(23):2175-84.]

Robotically Assisted Versus Laparoscopic Hysterectomy Among Women with Benign Gynecologic Disease. Although robotically assisted hysterectomy for benign gynecologic conditions has been reported, little is known about the incorporation of the procedure into practice, its complication profile, or its costs compared with other routes of hysterectomy. Jason D. Wright, MD, and Columbia colleagues examined the usage of robotic-assisted hysterectomy and assessed in-hospital outcomes and costs for robotically assisted hysterectomy compared with laparoscopic and abdominal procedures. The study, which looked at 264,758 women at 441 hospitals across the U.S. from 2007 to 2010, found that the use of robotically assisted hysterectomy for benign gynecologic disorders has increased substantially. However, while robotically assisted and laparoscopic hysterectomy had similar morbidity profiles, the use of robotic technology resulted in substantially more costs. [Journal of the American Medical Association. 2013 Feb 20;309(7):689-98.]
Evaluating a New Drug for Gynecological Cancers. The Division of Gynecological Oncology is participating in the phase III nationwide clinical trial of AMG 386 for women who have been diagnosed with recurrent, partially platinum-sensitive or resistant epithelial ovarian, primary peritoneal, or fallopian tube cancer. The study seeks to determine whether adding AMG 386 to paclitaxel chemotherapy improves the outcome of treatment, compared to treatment with paclitaxel alone. AMG 386 is an angiogenesis inhibitor, designed to slow down or stop the development of new blood vessels in cancer tissues.

Ultrasound in Twins. A review by Lynn L. Simpson, MD, Medical Director, Carmen and John Thain Center for Prenatal Pediatrics, has shown that ultrasound is essential for the detection and management of conditions that can complicate dichorionic and monochorionic twin pregnancies. The study was undertaken to assess the evidence that supports the use of ultrasound in twin pregnancies. Although many of the indications for obstetric ultrasound are the same in both singleton and multiple gestations, there are special considerations as well as unique conditions in twins that require additional imaging studies. Twins with monochorionic placentation require heightened scrutiny for monoamnionicity, conjoined twins, twin reversed arterial perfusion syndrome, unequal placental sharing with discordant twin growth or selective intrauterine fetal growth restriction, twin anemia-polycthyemia sequence, and single fetal demise. [Seminars in Perinatology. 2013 Oct;37(5):348-58.]

Preventing Inherited Disorders. Mark V. Sauer, MD, and Michio Hirano, MD, from Columbia University Medical Center and scientists from the New York Stem Cell Foundation Laboratory have developed a technique that may prevent children from inheriting certain genetic diseases. Their study, published online in the journal Nature, demonstrated how the nucleus of a cell can be successfully transferred between human egg cells. This landmark achievement may prevent children from inheriting diseases caused by defective mitochondria, which may lead to stunted growth, kidney disease, muscle weakness, neurological disorders, loss of vision and hearing, and respiratory problems, among others. Transferring the nucleus of an affected human egg cell into a disease-free egg results in an egg that contains all the genome of the original egg without carrying its mitochondrial mutations. [Nature. 19 December 2012. / Nature Medicine. 2013 Dec;19(12):1578-79.]

At NewYork-Presbyterian/Weill Cornell:

Interventions at Home Births. While the number of home births in the United States has grown over the last decade, researchers at NewYork-Presbyterian/Weill Cornell have found that babies born at home are roughly 10 times as likely to be stillborn and almost four times as likely to have neonatal seizures or serious neurologic dysfunction when compared to babies born in hospitals. In the largest study of its kind, which includes data on more than 13 million U.S. births, Amos Grunebaum, MD, Chief of Labor and Delivery, and Frank A. Chervenak, MD, Chair, Obstetrics and Gynecology, and colleagues found that the risk of stillbirth is even greater in first-born babies – 14 times the risk of hospital births. [American Journal of Obstetrics and Gynecology. 2013 Dec 4.]

Group B Streptococcus β-hemolysin/Cytolysin Breaches Maternal-Fetal Barriers to Cause Preterm Birth and Intrauterine Fetal Demise In Vivo. Maternal vaginal colonization with streptococcus agalactiae is a precursor to chorioamnionitis, fetal infection, and neonatal sepsis, but the understanding of specific factors in the pathogenesis of ascending infection remains limited. Using a new murine model, Shari Gelber, MD, PhD, a specialist in high-risk pregnancies, and colleagues found that preterm birth and fetal demise are likely the direct result of toxin-induced damage and inflammation rather than differences in efficiency of ascension into the upper genital tract. [Journal of Infectious Diseases. 2014 Jan 28. Epub ahead of print]

Genetic, Immune, and Infectious Disease Studies in Women's Health. The laboratory of Steven S. Witkin, PhD, the recently named William J. Ledger Chair of Infection and Immunology in Obstetrics and Gynecology, and Director of the Division of Immunology and Infectious Diseases, continues to pursue a number of research avenues in women's health. These include studies into the influence of polymorphisms in fetal and maternal genes encoding cytokines or components of the innate immune system on pregnancy outcome; detection of microorganisms and pro-inflammatory mediators in mid-trimester amniotic fluids and their relationship to pregnancy outcome; and the immune basis for recurrent vulvovaginal candidiasis.