DEPARTMENT OF OBSTETRICS AND GYNECOLOGY
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Delivering Excellence

by Giancarlo Mari, MD, MBA, Professor and Chair, Department of Obstetrics and Gynecology

The Department of Obstetrics and Gynecology (Ob/Gyn) at the University of Tennessee Health Science Center (UTHSC) has undergone numerous changes in the past five years. Since 2008, the department has grown significantly, and it is now one of the most successful practices in the university.

We have come a very long way. In patient care, we have developed protocols on Labor and Delivery, started a quality program in all of our facilities, opened the Fetal Center at Le Bonheur Children’s Hospital, created an internal Reproductive Endocrinology and Infertility (REI) Division, started an in vitro fertilization (IVF) program, launched an ovarian preservation program, opened the Center for High-Risk Pregnancies (CHRP) and added an internal Minimally Invasive Laparoscopy Surgery (MILS) Division. We will launch a Urogynecology Division in summer 2014 and are exploring countless other measures designed to push our standard of patient care further toward excellence.

In education, we have gone from scrambling residency spots to becoming one of the top residency programs in the country. We have the only Maternal-Fetal Medicine (MFM) Fellowship in Tennessee (started in 2009), and we have an MILS Fellowship as well. Both our residency program and MFM Fellowship have been reaccredited for the maximum number of years.

Our department is now one of the top clerkships for UTHSC medical students. World-renowned speakers have come to lecture at our grand rounds, including Drs. Alfred Abuhamad, Beryl Benacerraf, Jan Deprost, John Hobbins, Jay Iams, Charles Lockwood, Pasquale Patrizio, and the current ACOG president, John Jennings, who is an alumnus of UTHSC’s medical school and residency training programs.

The department has also grown in research. In 2008, the department produced
few posters and publications. In the past year, we have published 34 papers in peer-reviewed journals, 17 oral or poster presentations at national and international meetings, created a new enhanced perinatal-neonatal database, and have several grants totaling millions of dollars devoted to progressing our knowledge of reproductive systems and helping us improve outcomes for mothers and their babies.

The department, while based out of Regional One Health, has also improved community service with outreach programs at other off-site locations like Memphis Health Center, Hollywood Healthloop Clinic, Baptist Women’s Hospital, Le Bonheur Children’s Hospital, Methodist Germantown, and now in Mississippi. The Centering Pregnancy and BLUES programs are examples of social services that our faculty perform on a daily basis. Finally, we have also started a midwifery program that serves in the community and delivers babies at Regional One Health.

**INFANT MORTALITY IN MEMPHIS**

Until a few years ago, the chances of a child in the Memphis area reaching his or her first birthday were comparable to a child living in a third-world country. In fact, the United States lagged far behind other countries in the world. The US recently ranked 30th in infant mortality, which is a startling statistic, considering that approximately 17 percent of the U.S. gross domestic product is spent on health care—one of the top health care expenditures of any country in the world.

The infant mortality rate (defined as the number of infant deaths per one thousand live births before reaching the age of one) is often used as an indicator of the level of health of a nation. Several factors contribute to a high infant mortality rate. Low birth weight and congenital anomalies are the top two causes of death for infants, both neonatally (from birth to four weeks of age) and postnatally (four weeks to one year).

Tennessee has one of the highest rates in the United States, with Shelby County’s rate soaring into the double digits. It is these statistics that drew negative attention to the city and surrounding areas. Something needed to be done.

Steve J. Schwab, MD, UTHSC Chancellor, recruited me to Memphis in 2008. I partnered with Reddy Dhanireddy, MD, chief of the Neonatal Intensive Care Unit at Regional One Health and at Le Bonheur, to undertake the responsibility of lowering the infant mortality rate, and we have worked closely together for the past six years.

According to data from the Shelby County Health Department, for the years 2009 to 2012 the total infant mortality rate was markedly lower -- between 9.6 and 10.6 -- for three out of four years, compared to the period from 2005 to 2008 when the rate was between 11.5 and 12.7 for three out of four years. At this writing, the 2012 data is the most recent year for which there are confirmed statistics; however, it is important to note, the rate of infant mortality is trending downward in Shelby County, partly due to the work that has been done at Regional One Health and UTHSC. Several positive changes have been made in the Department of Ob/Gyn during the past five years, and its efforts appear to be paying off. Shelby County Health Department data also shows between 2006 and 2009, the infant mortality rate in Shelby County was nearly unchanged, but it dropped from 13 to 10.6 deaths per 1,000 live births between 2009 and 2012. The most significant change in the infant mortality rate was that of African-Americans, dropping from 19.0 to 14.1
deaths per 1,000 live births from 2006 to 2012.

To address the high infant mortality rate, the department has launched several initiatives, established clinical protocols, formed a Patient Safety Committee, and hired a Patient Safety Nurse—all of which have made Regional One Health one of the safest places to deliver in Tennessee.

Since the inception of the Le Bonheur Fetal Center in 2009, infant deaths due to congenital anomalies have dropped 15 percent. This center takes a multidisciplinary approach, tracking the infant’s progress before, during, and after birth. Each case presenting at the Fetal Center has an assigned treatment team that meets weekly to discuss progress and special concerns.

Mortality rates for premature babies have also dropped 22 percent, because babies are now being delivered later during pregnancy. In the past, severe intrauterine growth restricted (IUGR) babies were delivered prematurely soon after admission to the hospital. For each week a severe IUGR fetus remains in utero between 25 and 29 weeks gestation, the perinatal mortality decreases by 48 percent. Today, we gain several weeks of gestation on many severe IUGR cases. Although the rate of prematurity has not changed, our IUGR babies today are less premature than before. This change in particular has played an important role in the survival of these babies. The partnership between the Department of Ob/Gyn and the Neonatal Intensive Care Units (NICU) at Regional One Health and Le Bonheur has been fundamental to the success of our programs that improve IUGR gestation time.

The changes made in the UTHSC Department of Obstetrics and Gynecology, along with efforts countywide, have helped to reduce the infant mortality rate in Shelby County. Although the rate is trending downward, there is still work that needs to be done. The department will continue to collaborate with other obstetricians and hospitals in Memphis and surrounding areas to improve upon this success, further develop innovative programs, strive to provide educational opportunities and community outreach, and help children live to—and celebrate—their first birthdays.

Giovacalo Pein
The mission of the Department of Obstetrics and Gynecology at the University of Tennessee Health Science Center is to bring the benefits of the health sciences to the achievement and maintenance of human health with a focus on the citizens of Tennessee and the region by providing an integrated and self-sustainable program of education, research, clinical care, and public service.
In the Department of Ob/Gyn at UTHSC, one of the primary concerns is the education of the next generation of practice professionals. Both residents and medical students rotate through the department, and each group gains valuable insight from UT physicians.

Each year, UTHSC faculty, nurses and residents train more than 160 medical students who are participating in clerkships throughout the university. During their Ob/Gyn rotation, students learn about obstetrical and gynecological issues ranging from labor to sexually transmitted diseases. Associate Professor Thomas Elmore, MD, oversees the education of each medical student during their time in Ob/Gyn.

UTHSC faculty also educate new MDs in the department’s Residency Training Program, headed by Associate Professor Claudette Shephard, MD, and Associate Director Jacques Samson, MD. The program’s mission is to educate residents in the entire breadth of the discipline of obstetrics and gynecology and to foster a lifelong commitment to the promotion of women’s health care.
The Residency Training Program was first accredited at UTHSC in 1970. It has come a long way since then, and even more so since 2008, when it had to scramble to fill four openings. Today, the program welcomes eight new interns and receives more than 500 applications each year. In 2012, the program received continued accreditation for five years and has become one of the more desirable locations to undergo training in the country.

One of the reasons for the success of the residency is that it strives for excellence. Our residents come from all the regions of the United States. The program searches for well-rounded students with superlative academic records, a passion for Ob/Gyn, and a drive to serve the underserved. Prospective applicants must be selfless, motivated, compassionate, understanding of issues endemic to the Mid-South, and determined to find answers in complicated cases.

UTHSC Ob/Gyn residents, once accepted, rotate through Neonatology, Oncology, Reproductive Endocrinology and Infertility, the Surgery Intensive Care Unit, the Neonatal Intensive Care Unit, Surgery, Urogynecology, Maternal-Fetal Medicine, and overnight in-house call. It is a training rotation aimed at providing residents with all of the skills they need to succeed in any situation. While residents are primarily trained at Regional One Health, they also spend time working in different hospitals across the Mid-South, including Baptist Women’s Hospital, Methodist Hospital and the Memphis VA Medical Center.

Additionally, the department organizes the Fetal and Neonatal Imaging Conference and the Contemporary Issues in Obstetrics and Gynecology Conference each year, both national conferences. The Fetal and Neonatal Imaging Conference is held in April in Memphis in cooperation with Le Bonheur Children’s
Hospital. The Annual Contemporary Issues in Obstetrics and Gynecology Conference is targeted to generalists, residents, nurse practitioners, midwives, and primary care physicians. It is organized in Destin, Fla., and 2014 will be the 28th anniversary of this conference. National and international speakers participate in each of these conferences.

Each year, third-year residents are given the opportunity to present their research before a group of their teachers and peers at the Annual Resident Research Forum. At the 2014 forum, John C. Jennings, MD, president of the American College of Obstetrics and Gynecology, was a special guest lecturer.

In very few other places can a young physician see the diversity of patients and educational opportunities that make UTHSC an attractive school.
At Regional One Health, the Department of Ob/Gyn has developed a quality improvement program in Ob/Gyn concentrated on labor and delivery (L&D). Team Events play an important role in process improvement. Team Events are divided into briefs, huddles, and debriefs.

Briefs are the planning process. All members of the team participate. One of these briefs is Team STEPPS (Strategies & Tools to Enhance Performance & Patient Safety), which occurs two times a day in L&D. Huddles are used for problem solving, usually in small groups. The lead physician and the charge nurse meet to discuss the plans for each patient. There are four huddles scheduled every 24 hours on L&D. Debriefs are used to facilitate process improvement. Anyone can request a brief, huddle or debrief.

Of course, there have been other improvements in the standard of care in L&D. The department has:

- Established a morning report sign-out system, where all obstetrical patients are discussed with faculty, residents, nurses and students in a room not accessible to patients and families;
- Created an in-house gynecology team;
- Improved communication between neonatology and obstetrics;
- Organized multi-disciplinary conferences;
- Set up weekly didactics conferences for all residents;
- Made fetal heart rate monitoring present in all L&D areas;
- Organized simulation training; and
- Launched a leadership program for L&D, with MFM physicians taking charge.

In addition, the leaders of the L&D team attended the PROMPT course in London in June 2013, a program that is the only evidence-based program that may improve perinatal outcome. These team leaders ensure that everyone working on L&D is trained with the most up-to-date standards of care possible.

The effort of the team has contributed to the fulfillment of the department’s mission in patient care, education, community service, and research.
The Maternal-Fetal Medicine (MFM) Division of the Department of Ob/Gyn at UTHSC is a multi-disciplinary team of physicians, nurses, sonographers, dieticians, pharmacists and psychologists with one goal: taking care of pregnant women. Specifically, the division sees patients who are considered to be at risk of complication during pregnancy, preceding pregnancy, and immediately after birth.

Since 2009, the division has been growing quickly – now being one of the most successful practices in the university’s health care system. It covers all high-risk pregnancy care at Regional One Health in Memphis, which includes around 4,000 deliveries per year. In addition, it covers four other locations and has a referral base covering five states.

The division has more than 8,000 high-risk patient visits per year and performs high-level ultrasound (approximately 15,000 per year) with 4-D ultrasound capability, fetal echocardiograms, first-trimester screening, prenatal diagnosis, genetic counseling, in-utero intervention and Doppler ultrasonography, as well as many other procedures. The MFM team also works to prevent congenital and adrenal hyperplasia, treat fetal arrhythmias, manage fetal anemia and perform amnioreduction and LASER therapy for twin-to-twin transfusion syndrome (TTTS).

To keep current and continue to hone their skills, MFM physicians at UTHSC engage in regularly scheduled conferences at which they discuss complicated cases. To aid in research, the division also maintains an extensive prenatal and perinatal database.
The MFM fellowship is one of the department’s crowning achievements in education. In 2012, it received five more years of accreditation from the American Board of Obstetrics and Gynecology and is the only MFM fellowship in the entire state of Tennessee.

The MFM fellowship Program at UTHSC develops clinician-scientists who are prepared to conduct research, teach and provide high-quality, subspecialty care. The program, based within the UTHSC College of Medicine and the Department of Obstetrics and Gynecology, serves Regional One Health in Memphis, as well as other affiliated practice sites, and the education of the fellows involves other academic departments and divisions, such as Neonatology, Pathology, Anesthesiology, and Genetics. Fellows learn how to become effective consultants to Ob/Gyn generalists for women with complicated pregnancies and to take an evidence-based approach to medicine.

The doctors of this division are world-renowned physician-scientists who lecture nationally and internationally on a range of topics and have developed procedures that have changed the standard of care in prenatal diagnosis and intervention in the world. Specifically, our MFM physicians have pioneered new treatments for TTTS and have developed a non-invasive method to diagnose fetal anemia with ultrasound, a method which has become the standard of care in the world.

Whether through expertise or education, the MFM Division is dedicated to helping patients take healthy babies home.
UTHSC physicians in the Department of Ob/Gyn deliver nearly 4,000 babies per year in Labor and Delivery (L&D) at the Regional Medical Center for Regional One Health. Attending physicians, residents, nurses and private physicians all work as a team to ensure that each and every patient is taken care of from pregnancy until six weeks postpartum and receives one of the highest levels of care in the region.

Though UTHSC physicians also perform deliveries for regular patients, their specialty is high-risk care. A multi-disciplinary team of physicians and nurses are led by Director of Labor and Delivery Norman Meyer, MD, PhD. Dr. Meyer and his team treat the sickest patients from around the region by building trust with and educating each and every patient.

To help ensure that patients receive the same high quality of care, Regional One Health and the Department of Ob/Gyn recruited Bonnie Miller, RN, to serve as Patient Safety Nurse for L&D. As the first Patient Safety Nurse in the Mid-South, it is Ms. Miller’s duty to ensure that all departmental safety initiatives are implemented and followed in L&D.

Among these initiatives, patients are now encouraged to carry their babies to at least 39 weeks gestation, and physicians administer antenatal steroids to patients who are at risk of preterm delivery. Physicians and nurses now meet several times each day at scheduled intervals to discuss patient care and to ensure that every member of the team is committed to the same treatment plans. Twice each day, all attending physicians, residents, nurses, private physicians, midwives, chaplains, case managers, ante- and postpartum technicians, anesthesiologists, pediatricians, obstetricians and clerks meet to discuss their patients’ care.

L&D at Regional One Health has developed these safety programs, not because it is mandated, but because it is what is best for the patients under their care.
At the Center for High-Risk Pregnancies, UTHSC physicians care for women with complications in pregnancy that may occur before conception or during pregnancy or delivery. Since 2010, Maternal-Fetal Medicine specialists have been working closely with a multi-disciplinary team to carefully monitor patients and provide testing, diagnosis and treatment to women at risk and their babies.

The Center for High-Risk Pregnancies is directed by Jacques Samson, MD, an MFM specialist who completed his fellowship at UTHSC. His team also covers high-risk patients admitted at Methodist Germantown and Baptist Women’s Hospital.

Dr. Samson and his team take great care to answer any of their patients’ questions and provide compassionate, expert care to women and their families. The center’s specialists are up to date on the latest research and treatments, and they often engage in research of their own to further society’s overall medical knowledge. In addition, they take pride in providing a caring and compassionate environment for patients and their babies.
Approximately one-third of the deliveries at Regional One Health are considered high risk. Women identified to be at high risk for maternal and/or fetal conditions are diagnosed and managed through our outpatient service at the High-Risk Clinic. The High-Risk Clinic is directed by Luis Gomez, MD, a board certified MFM specialist who completed his fellowship at the University of Pennsylvania. His team covers all high-risk patients seen at the Regional One Outpatient Center and contributes to the training of UTHSC residents and students rotating in MFM.

Together with compassionate nurses, diabetic educators, a dietician, social workers, residents and fellows, specialists at the High-Risk Clinic provide diligent care to women with pregnancy disorders. These disorders may include:

- High blood pressure and preeclampsia
- Pregestational or gestational diabetes
- Thyroid and other endocrine disorders
- Chronic renal disease
- Blood disorders including anemia, sickle cell conditions and thrombosis
- Gastrointestinal disease
- Preexisting cardiovascular conditions, such as cardiomyopathy or congenital cardiac lesions
- Common and rare infectious diseases
- Solid organ transplant (kidney, liver, etc.)
- Abnormal prenatal laboratory tests, such as quadruple screen
- Multiple pregnancy (twins, triplets, etc.)
- Advanced maternal age
- Preterm labor, preterm premature rupture of membranes or at risk for these conditions
- Recurrent pregnancy losses
- Morbid obesity
- Fetal growth restriction
- Fetal malformation (minor or lethal)

Every pregnancy is monitored closely through frequent appointments, including not only clinic visits, but also antenatal testing and ultrasound sessions – all conveniently performed onsite.
At the Regional One Outpatient Center, UTHSC physicians perform more than 7,000 ultrasounds per year, a number that has almost doubled since 2008.

The Ultrasound Center is directed by Mauro Schenone, MD, an MFM specialist who completed his fellowship in Maternal-Fetal Medicine at UTHSC. His team sees all patients at the obstetrics clinics and contributes to the training of our residents and UTHSC students rotating in Ob/Gyn.

Dr. Schenone’s team performs consultations for women with at-risk pregnancies, basic ultrasound, comprehensive ultrasound, 3-D and 4-D ultrasound, fetal echocardiography, and Doppler ultrasonography, as well as many other procedures.

In-Utero Interventions

The Maternal-Fetal Medicine team at UTHSC, in collaboration with many pediatric specialists, is trained to perform all common procedures performed in the field of prenatal diagnosis and therapy.

Although there has been a lot of enthusiasm over the last 50 years for in-utero interventions, today very invasive procedures, such as the opening of the uterus to perform surgery on the fetus, are limited to only a few fetal abnormalities. These invasive procedures often carry risks that outweigh their advantages for the fetus compared to after-birth intervention. The enthusiasm for these procedures has greatly decreased, and they have been substituted by minimally invasive intervention. Many procedures can be performed using small instruments with either local or regional anesthesia.
Expectant mothers sometimes have special needs during pregnancy, and the specialists at Le Bonheur Children’s Fetal Center provide maternal-fetal health services for those high-risk pregnancy patients. The Fetal Center is the only center in the area that offers a complete range of services from prenatal diagnosis through fetal interventions. Regional One Health’s prenatal diagnosis team and the CHRP work together with the Fetal Center to ensure that each patient receives the best care available.

It is also one of fewer than 30 centers in the country focused entirely on babies diagnosed in utero with a congenital anomaly. The Fetal Center has helped more than 400 families since opening in 2009.

When a patient comes from another state or drives for hours, the center provides a “one-stop shop.” A patient can have all necessary tests for diagnosis completed in one day (ultrasound, fetal echocardiogram, amniocentesis, and MRI). The patient and her family meet with all of the physicians involved in her care, who answer any and all of their questions and discuss the prognosis of the case.

The Team Approach

The medical team at the Fetal Center includes board-certified maternal-fetal medicine specialists, pediatric specialists, and support staff who help patients plan
for delivery and the baby’s care after birth. The team helps patients understand the baby’s condition at every stage, and partners with families and primary obstetricians to choose the best courses of treatment, both before and after the child’s birth.

**Preparing Siblings**

Often, patients already have children who need help learning about their new sibling’s special needs. Le Bonheur’s child life specialists are available to help. Using age-appropriate resources, child life specialists can help siblings feel like a part of the process.

**Classes for Expectant Mothers**

Classes are available at the Fetal Center for expectant mothers. These classes are free and focus on topics including breastfeeding, sibling preparation, and postpartum support. For more information, please contact the Fetal Center at (901) 287-6981.

**Parent Mentors**

If a patient would like to talk with a family who has been through a similar experience at the Fetal Center, one is available through the Parent Mentor Program. The Fetal Center’s parent mentor can offer support, guidance, and discuss her experience with the Fetal Center.

**Spiritual Care**

Spiritual care advisors are available to speak with families about any ethical issues they may be facing, or to simply pray with them. Having a high-risk pregnancy is stressful, and Le Bonheur’s spiritual staff is available to provide comfort and support.

**Fetal Center Reunion**

This annual event offers an afternoon for families to reconnect with the team that helped care for them during the birth and delivery of their babies. Fetal Center families can also come together and share their experiences and make new friends. The staff at the Fetal Center looks forward to this event every year.
Couples who have trouble getting pregnant sometimes feel as if they are the only ones with the problem. In reality, more than 7 million Americans – both men and women – may experience infertility. The Reproductive Endocrinology and Infertility (REI) Division at UTHSC offers many options to help couples struggling with infertility achieve their dreams of parenthood.

The REI Division provides comprehensive infertility testing and a treatment program for both men and women at the Center for Reproductive Medicine. The center combines cutting-edge science and state-of-the-art equipment to diagnose and treat infertility.

Along with providing a comprehensive approach to treating infertility, the center boasts an imaging center, equipped with both 3-D and 4-D ultrasound capabilities, procedure rooms, and andrology and embryology laboratories. These laboratories are registered with the Food and Drug Administration and the Society for Assisted Reproduction Technologies (SART), and licensed by the state of Tennessee and by Clinical Laboratory Improvement Amendments (CLIA). The center
also provides a comprehensive fertility preservation program for men and women alike. Cancer patients, who must undergo toxic chemotherapy and radiation treatments, are prime candidates for fertility preservation. Eggs, sperm and tissue can be obtained prior to cancer treatment, frozen, and used once the cancer is in remission, and the patient is ready to have a family. The program offers the newest option of ovarian tissue cryopreservation, in addition to the traditional egg and sperm cryopreservation. The UT Center for Reproductive Medicine's slogan is “hope grows, miracles happen,” a testament to their constant commitment to patients.

To help cover some of the costs involved with these programs, the Center for Reproductive Medicine partnered with Advanced Reproductive Care, Inc., an organization that specializes in financing assisted reproductive procedures at qualified university-affiliated fertility clinics in the United States. The center at UTHSC is the only Mid-South practice that offers this financing program and is the only member of the organization in the state of Tennessee.

Along with state-of-the-art equipment and facilities, the REI Division boasts several of the Mid-South’s top specialists. The In Vitro Fertilization (IVF) team provides success rates that are among the highest in the country, with more than 80 percent pregnancy rates for fresh IVF cycles across all ages, compared to less than 50 percent nationally.

Daniel Martin, MD, is the director of the REI Division and minimally invasive laparoscopy. He has more than 30 years of experience in the field and is a pioneer in the field of endometriosis and laparoscopy. He is also the director of the Minimally Invasive Laparoscopy (MILS) Fellowship at UTHSC.

Claudette Shephard, MD, is an expert in pediatric and adolescent gynecology. She has more than 20 years of experience and is also the residency director for the department of Ob/Gyn.

Laura Detti, MD, is a double board-certified Ob/Gyn and REI specialist and is the director of the IVF and Fertility Preservation programs at UT Center for Reproductive Medicine (www.memphiscrm.com). She is a 3-D and 4-D ultrasound expert with more than 15 years of experience and also cares for pediatric and adolescent cancer survivors at St. Jude Children’s Research Hospital. She has published extensively on topics such as optimization of IVF, ovarian preservation, and the surgical treatment of uterine abnormalities and has provided new insights in the understanding of Mullerian anomalies. She is frequently invited to present her research and clinical expertise at national and international conferences.

Lucy Williams, ELD, is a certified embryologist and andrologist and is the director of the Embryology Laboratory. She offers 25 years of experience to the Center and has a long-standing record of success in IVF.

The physicians at the UT Center for Reproductive Medicine are committed to overcoming all obstacles along the way to provide the cutting-edge medicine patients deserve.
Patients often require complicated and intensive surgeries in obstetrics and gynecology. In the Department of Ob/Gyn at UTHSC, the Division of Minimally Invasive Laparoscopic Surgery (MILS) is committed to bringing a high standard of care and advanced surgical and clinical techniques to patients of the Mid-South. The division is directed by Dan Martin, MD.

In addition to taking care of patients, the division also trains future specialists in the field in its Minimally Invasive Surgery Fellowship – a two-year AAGL (formerly the American Association of Gynecologic Laparoscopists) and American Society of Reproductive Medicine accredited program. The fellowship’s goal is to graduate surgical specialists who are ready to provide expert, evidence-based, consultative care in any setting, whether academic- or community-based.

**Gynecologic Oncology**

The Division of Gynecologic Oncology is led by Joseph Santoso, MD, and is actively involved in all modalities of care for more than 1,000 new patients annually. Patients who see members of the division have access to the most advanced cancer treatments available anywhere. A multi-disciplinary team provides a full range of diagnostic and treatment services. Primarily, Dr. Santoso and his team see patients out of the West Clinic, but they also admit patients from hospitals all over Shelby County.

UTHSC residents are intimately involved in the care of patients for the division as well. Each resident is expected to participate actively in the diagnosis, staging and treatment of all cancer patients, including chemotherapy, radiation therapy and pathology. The philosophy of the division is to solidify each resident’s ability to evaluate preoperative problems, to refine surgical skills, and to manage postoperative complications in seriously ill patients.
Pediatric and Adolescent Gynecology Clinic

Pediatric and Adolescent Gynecology at UTHSC provides comprehensive, dedicated, age-appropriate care for the newborn through adolescent female. The reproductive health needs of prepubescent and adolescent females differ in many ways from adult women, and close attention to those needs is key to developing trust with younger patients.

Under the direction of Claudette Shephard, MD, the only fellowship-trained Adolescent Gynecologist in the region, the Pediatric and Adolescent Clinic provides comprehensive gynecologic services to girls and young women in Memphis. Dr. Shephard and her staff are uniquely qualified to evaluate the reproductive needs of girls and teens, and they thoughtfully approach the medical and surgical management of problems that may have profound consequences on sexual development and future fertility.

More than 100 different physicians and groups around the region refer patients to Dr. Shephard’s care at UTHSC. The referral network for the clinic covers West Tennessee, Northern Mississippi, Eastern Arkansas, and the bootheel of Missouri. The majority of patients seen there are given medical care in an ambulatory setting with more than 2,000 patients scheduled each year. The issues Dr. Shephard and her team treat include (but are not limited to): abnormalities of development, vaginal bleeding in prepubertal female, vaginal discharge, sexual abuse, breast development, vulvar abnormalities, menstrual disorders, sexually transmitted diseases, and risky sexual behavior assessment and counseling.

The goal of the Pediatric and Adolescent Gynecology service at UTHSC is to provide anticipatory guidance, identify issues, help patients feel comfortable with their bodies, educate patients and their parents, and empower young women to take care of themselves.
The Center for Disease Control estimates that around 33,300 human papillomavirus-associated (HPV) cancers are diagnosed across the United States each year, and the physicians at the Center for HPV and Dysplasia (CHAD), led by Victor Feldbaum, MD, a board certified obstetrician and gynecologist, are dedicated to working with men and women in the Memphis area to prevent such cancers. The CHAD offers treatment for men and women at risk for or identified with dysplasia, including cervical, anal and vulvar dysplasia. Our doctors work to prevent cancers related to HPV through education, screening, evaluation and treatment.

The CHAD boasts stringent research protocols, state-of-the-art colposcopy and imaging equipment, and educational support for those affected by and seeking to prevent HPV. CHAD physicians assess each patient’s risk factors individually, ensuring that the best care be given to each patient on a case-by-case basis. The CHAD also has access to UTHSC’s multi-disciplinary team in special circumstances without needing to refer the patient to an outside center.
Regional One Health has one of the nation’s oldest and largest neonatal intensive care units, which was named for its founder, Sheldon B. Korones, MD. Approximately 4,000 babies are born at the hospital each year. While healthy babies spend time in the well-baby nursery before heading home with their mothers, more than 1,300 premature or critically ill newborns are treated in the Korones Newborn Center each year.

Since opening in 1968, more than 45,000 premature babies, some weighing just one pound, have been treated successfully. The Newborn Center credits its success to a multi-disciplinary approach to caring for patients. In addition to the expert care provided by physicians, nurses and other health care providers, the Korones Newborn Center is staffed with specially trained social workers and perinatal workers who help the whole family cope with the inevitable challenges of dealing with premature or critically ill newborns.

To date, 46 physicians have been trained in Neonatal/Perinatal Medicine at the Newborn Center, and 600 scientific papers have been published by the facility’s medical team.

Ramasubbareddy Dhanireddy, MD, is the Medical Director of the Korones Newborn Center.
The BLUES Project (Building Lasting Unshakeable Expectations into Successes) is a community outreach and research project led by Linda Moses, MD, that provides education, counseling and social support to its participants from the onset of prenatal care until the child’s second birthday. Its mission is to help families have full-term, healthy babies by assisting parents in developing their own support system and empowering mothers to establish and achieve attainable life goals.

The BLUES Project is a culturally competent and culturally responsive approach to addressing infant mortality and health disparities. Since 2003, The BLUES Project has worked tirelessly to combat the risk factors of infant mortality and prematurity. The project’s leadership hopes to demonstrate that the psychosocial aspects of the program play a significant role in decreasing infant mortality. It is the goal of the BLUES Project to become a national model for care.

In conjunction with traditional prenatal care, the BLUES Project offers high-quality prenatal and postpartum education including, but not limited to: self-care during pregnancy; avoiding drugs, alcohol and/or tobacco; the importance of birth spacing; coping with threats of domestic violence and/or sexual assault; dangers of sexually transmitted infections; nutrition; postpartum depression; the benefits of breast feeding; parenting education; recognizing appropriate developmental milestones; and job readiness/education attainment.
For more than 20 years, the Department of Ob/Gyn has worked with St. Jude Children’s Research Hospital to help cancer survivors with gynecologic and reproductive issues related to their cancer treatments. UTHSC providers – Laura Detti, MD; Victor Feldbaum, MD; Wendy Likes, PhD, DNSc; and Owen Phillips, MD – see patients at St. Jude for gynecological care from adolescence until well after their cancers have been cured. Treatments range from routine gynecologic care to managing disorders related to cancer therapy, ovarian insufficiency, HIV and hormone therapy.
Katherine Apostolakis-Kyrus, MD
Instructor
901.448.2531
tkapos1@uthsc.edu
MFM Division

Laura Detti, MD
Associate Professor
901.866.8220
ldetti@uthsc.edu
REI Division

Thomas Elmore, MD
Associate Professor
901.448.4785
telmore@uthsc.edu
Student Clerkship Division
Presentations

**Katherine Apostolakis-Kyrus**

**Presentations**


**Brian Brocato**

**Presentations**

**Shephard C and Brocato B.** Simulation: maternal code, shoulder dystocia and documentation. Presented at the 27th Annual Contemporary Issues in Obstetrics and Gynecology; August 1, 2013; Sandestin, Fla.


**Brocato B.** Fetal cardiovascular issues in multiple gestation. Presented at the 2nd Annual Fetal & Neonatal Imaging: Analysis across a Life Border Conference; March 16, 2013; Memphis, Tenn.

**Johnson MK, Tate D, Brocato B, Gomez L and Mari G.** The development of new onset preeclampsia in the postpartum period: are we missing something? Presented at the 60th Annual Meeting of the Society for Gynecologic Investigation; March 2013; Orlando, Fla.


**Samson J, Schenone M, Brocato B, Tate D and Mari G.** Middle cerebral artery Doppler ultrasonography in fetuses with congenital CNS abnormalities and prediction of perinatal death and VP shunt placement. Presented at the 60th Annual Meeting of the Society for Gynecologic Investigation; March 2013; Orlando, Fla.

**Samson J, Schenone M, Brocato B, Tate D and Mari G.** Perinatal outcomes by birthweight in IUGR fetuses delivered at > 25 weeks. Presented at the 60th Annual Meeting of the Society for Gynecologic Investigation; March 2013; Orlando, Fla.

**Samson J, Schenone M, Brocato B, Tate D and Mari G.** Perinatal outcomes of stage 0 IUGR fetuses. Presented at the 60th Annual Meeting of the Society for Gynecologic Investigation; March 2013; Orlando, Fla.


**Tate D, Johnson MK, Gomez L, Brocato B and Mari G.** Is delivery of the placenta really the end? A look into postpartum persistence of hypertensive disorders. Presented at the 60th Annual Meeting of the Society for Gynecologic Investigation; March 2013; Orlando, Fla.


**Brocato B.** Intrauterine resuscitation: what is the evidence? Presented at the 27th Annual Contemporary Issues in Obstetrics & Gynecology; July 31, 2013; Sandestin, Fla.

**Brocato B.** Female sexual dysfunction: diagnosis and treatment. Presented at the 27th Annual Contemporary Issues in Obstetrics & Gynecology; August 2, 2013; Sandestin, Fla.

**Publications**


**Presentations**

**Detti L.** Diagnosis and treatment of infertility. Presented at the 27th Annual Contemporary Issues in Obstetrics and Gynecology; August 2, 2013; Sandestin, Fla.

**Detti L.** Polycystic ovarian syndrome: characteristics & controversies. Presented at the 27th Annual Contemporary Issues in Obstetrics and Gynecology; August 2, 2013; Sandestin, Fla.

**Detti L.** Doppler in reproductive endocrinology ultrasound. Roundtable discussion, American Society for Reproductive Medicine 2013 Annual Meeting; October 11-16, 2013; Boston, Mass.

**Detti L, Carter C, Williams L, Osborne S, Martin D and Uhlmann R.** Goserein fosters bone elongation, but does not prevent ovarian damage, in cyclophosphamide (CTX) – treated pre-pubertal mice. Presented at the American Society for Reproductive Medicine 2013 Annual Meeting; October 11-16, 2013; Boston, Mass.


**Detti L.** Moderator of the session “Fertility Preservation III” at the American Society for Reproductive Medicine 2013 Annual Meeting; October 11-16, 2013; Boston, Mass.


**Elsaccar O, Martin D, Detti L,** Feldbaum V and Azari A. Endometriosis obliterating the Pouch of Douglas – was it ever rectovaginal? Presented at the 42nd Annual AAGL Global Congress on Minimally Invasive Gynecology; November 12, 2013; Washington, D.C.


**Publications**


Tate D, Johnson MK, Gomez L, Brocato B and Mari G. Is delivery of the placenta really the end? A look into postpartum persistence of hypertensive disorders. Presented at the 60th Annual Meeting of the Society for Gynecologic Investigation; March 2013; Orlando, Fla.

**Publications**


**GIANCARLO MARI**

**Presentations**


**Mari G**. In-utero medical and surgical intervention. Presented at the 2nd Annual Fetal & Neonatal Imaging: Analysis across a Life Border Conference; March 16, 2013; Memphis, Tenn.


Johnson MK, Tate D, Brocato B, Gomez L and **Mari G**. The development of new onset preeclampsia in the postpartum period: are we missing something? Presented at the 60th Annual Meeting of the Society for Gynecologic Investigation; March 2013; Orlando, Fla.


Samson J, Schenone M, Brocato B, Tate D and **Mari G**. Middle cerebral artery Doppler ultrasonography in fetuses with congenital CNS abnormalities and prediction of perinatal death and VP shunt placement. Presented at the 60th Annual Meeting of the Society for Gynecologic Investigation; March 2013; Orlando, Fla.

Samson J, Schenone M, Brocato B, Tate D and **Mari G**. Perinatal outcomes by birthweight in IUGR fetuses delivered at >25 weeks. Presented at the 60th Annual Meeting of the Society for Gynecologic Investigation; March 2013; Orlando, Fla.

Samson J, Schenone M, Brocato B, Tate D and **Mari G**. Perinatal outcomes of state 0 IUGR fetuses. Presented at the 60th Annual Meeting of the Society for Gynecologic Investigation; March 2013; Orlando, Fla.


Tate D, Johnson MK, Gomez L, Brocato B and **Mari G**. Is delivery of the placenta really the end? A look into postpartum persistence of hypertensive disorders. Presented at the 60th Annual Meeting of the Society for Gynecologic Investigation; March 2013; Orlando, Fla.

**Mari G**. Diagnosis of fetal anemia with ultrasound. Presented at L’Emorragia in Sala Parto; April 2013; Abano Terme, Italy.

**Mari G**. Diagnosis and management of the IUGR fetus. Presented at L’Emorragia in Sala Parto; April 2013; Abano Terme, Italy.

**Mari G**. Fetal anemia. Presented at the International Day of Maternal-Fetal Medicine at the University of Siena; July 1, 2013; Siena, Italy.

**Mari G**. IUGR: what have we learned after 15,000 publications? Presented at the International Day of Maternal-Fetal Medicine at the University of Siena; July 1, 2013; Siena, Italy.

**Mari G**. The small fetus. Presented at the 27th Annual Contemporary Issues in Obstetrics and Gynecology; July 31, 2013; Sandestin, Fla.

**Mari G**. Non-invasive diagnosis of fetal anemia. Presented at the 39th Annual High Risk Obstetrics Seminar at Vanderbilt University; December 6-7, 2013; Nashville, Tenn.

**Mari G**. Use of Doppler interrogation in clinical obstetrics. Presented at the 2014 AIUM Annual Convention; March 30, 2014; Las Vegas, Nev.
Mari G. IUGR and infant mortality. Presented at the 46th annual Matt Weiss Symposium; April 4, 2014; St. Louis, Mo.

Mari G. Non-invasive diagnosis of fetal anemia. Presented at the 46th annual Matt Weiss Symposium; April 4, 2014; St. Louis, Mo.

Mari G. Doppler ultrasonography: physical principles, image optimization and safety considerations. Presented at the Advances in Maternal Fetal Medicine Ultrasound; May 28-30 2014; Moscow, Russia.

Mari G. ISUOG guidelines: use Doppler ultrasonography in obstetrics. Presented at the Advances in Maternal Fetal Medicine Ultrasound; May 28-30, 2014; Moscow, Russia.

Mari G. IUGR: diagnosis and management. Presented at the Advances in Maternal Fetal Medicine Ultrasound; May 28-30, 2014; Moscow, Russia.

Publications


Dan Martin

Presentations


Elsaccar O, Martin D, Detti L, Feldbaum V and Azari A. Endometriosis obliterating the Pouch of Douglas – was it ever rectovaginal? Presented at the 42nd Annual AAGL Global Congress on Minimally Invasive Gynecology; November 12, 2013; Washington, D.C.

Ginn D and Martin D. Microscopic endometriosis implant concealed within an obturator hernia. Presented at the 42nd Annual AAGL Congress on Minimally Invasive Gynecology; November 12, 2013; Washington, D.C.


Publications


Norm Meyer

Presentations


Meyer N. Substance abuse and pain management in pregnancy. 10th Annual Mid-South Seminar on the Care of the Complex Newborn. January 24, 2014; Memphis, Tenn.

Publications


Owen Phillips

Presentations


Jacques Samson

Presentations


Samson J, Schenone M, Brocato B, Tate D and Mari G. Middle cerebral artery Doppler ultrasonography in fetuses with congenital CNS abnormalities and prediction of perinatal death and VP shunt placement. Presented at the 60th Annual Meeting of the Society for Gynecologic Investigation; March 2013; Orlando, Fla.

Samson J, Schenone M, Brocato B, Tate D and Mari G. Perinatal outcomes by birthweight in IUGR fetuses delivered at >25 weeks. Presented at the 60th Annual Meeting of the Society for Gynecologic Investigation; March 2013; Orlando, Fla.

Samson J, Schenone M, Brocato B, Tate D and Mari G. Perinatal outcomes of stage 0 IUGR fetuses. Presented at the 60th Annual Meeting of the Society for Gynecologic Investigation; March 2013; Orlando, Fla.


Publications


JOE SANTOSO

Publications


MAURO SCHENONE

Presentations


non-human primates. Presented at the 60th Annual Meeting of the Society for Gynecologic Investigation; March 2013; Orlando, Fla.


\textbf{Schenone M}. Laboratory and ultrasound screening for fetal aneuploidy. Presented at the 27th Annual Contemporary Issues in Obstetrics and Gynecology; July 31, 2013; Sandestin, Fla.


\textbf{Schenone M}. Reduced uterine perfusion pressure does not influence the endocannabinoid system (ECBS) transcripts in the rat model. Placenta. 2013;34(9):A27.


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\textbf{CLAUDETTE SHEPHARD}

\textit{Presentations}


\textbf{Shephard C}. The case for adolescent pregnancy. Grand Rounds speaker at Methodist Le Bonheur Children’s Medical Center; June 2013; Memphis, Tenn.

\textbf{Shephard C}. Simulation and training in modern obstetrics, gynecology and neonatology. Presented at the 27th Annual Contemporary Issues in Obstetrics and Gynecology; August 1, 2013; Sandestin, Fla.

\textbf{Shephard C} and Brocato B. Simulation: maternal code, shoulder dystocia and documentation. Presented at the 27th Annual Contemporary Issues in Obstetrics and Gynecology; August 1, 2013; Sandestin, Fla.


\textbf{Publications}


**Danielle Tate**

**Presentations**


Johnson MK, **Tate D**, Brocato B, Gomez L and Mari G. The development of new onset preeclampsia in the postpartum period: are we missing something? Presented at the 60th Annual Meeting of the Society for Gynecologic Investigation; March 2013; Orlando, Fla.


Samson J, Schenone M, Brocato B, **Tate D** and Mari G. Middle cerebral artery Doppler ultrasonography in fetuses with congenital CNS abnormalities and prediction of perinatal death and VP shunt placement. Presented at the 60th Annual Meeting of the Society for Gynecologic Investigation; March 2013; Orlando, Fla.

Samson J, Schenone M, Brocato B, **Tate D** and Mari G. Perinatal outcomes by birthweight in IUGR fetuses delivered at > 25 weeks. Presented at the 60th Annual Meeting of the Society for Gynecologic Investigation; March 2013; Orlando, Fla.

Samson J, Schenone M, Brocato B, **Tate D** and Mari G. Perinatal outcomes of stage 0 IUGR fetuses. Presented at the 60th Annual Meeting of the Society for Gynecologic Investigation; March 2013; Orlando, Fla.


**Tate D**. Johnson MK, Gomez L, Brocato B and Mari G. Is delivery of the placenta really the end? A look into postpartum persistence of hypertensive disorders. Presented at the 60th Annual Meeting of the Society for Gynecologic Investigation; March 2013; Orlando, Fla.

**Tate D**. Asthma exacerbation in pregnancy – diagnosis and management. Presented at the 27th Annual Contemporary Issues in Obstetrics and Gynecology; July 30, 2013; Sandestin, Fla.

**Tate D**. Endocrine OB emergencies: diabetic ketoacidosis & thyroid storm. Presented at the 27th Annual Contemporary Issues in Obstetrics and Gynecology; July 30, 2013; Sandestin, Fla.

**Publications**


**Edwin Thorpe**

**Presentations**


Thorpe E. HSV infection in pregnancy. Presented at the 27th Annual Contemporary Issues in Obstetrics and Gynecology; July 31, 2103; Sandestin, Fla.

Thorpe E. HIV and the GYN patient. Presented at the 27th Annual Contemporary Issues in Obstetrics and Gynecology; August 2, 2013; Sandestin, Fla.
Publications


TODD TILLMANNNS

Presentations


Publications


SARAH WOODS

Presentations


ROGER YOUNG

Presentations

Young R. Organ-level coordination of uterine contractions: it’s not what it’s supposed to be. Grand Rounds, University of Tennessee Health Science Center; October 8, 2013; Memphis, Tenn.
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APPENDIX