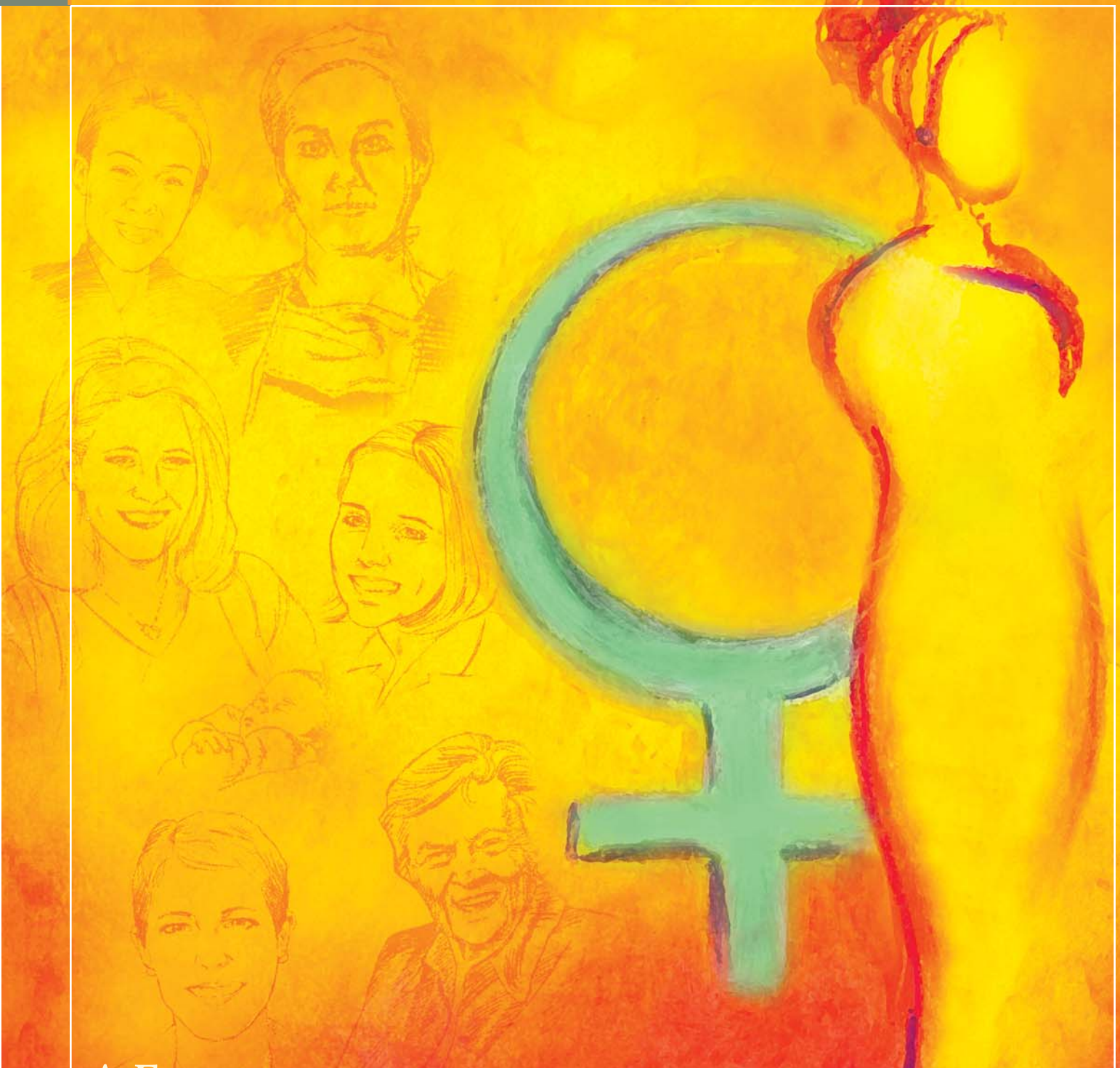
4th Quarter 2006

The University of Tennessee Medical Center and The University of Tennessee Graduate School of Medicine

Frontiers



A Focus on Women's Healthcare —It's Not Just Delivering Babies Anymore

For Alumni and Friends

Calm Beginnings

New Private Room Neonatal Intensive Care Unit
Opening Early 2007

The new Neonatal Intensive Care Unit will be the only in the region with private rooms specially designed to aid in a successful recovery for newborns. The new non-stressful environment of a quiet, light-controlled room promotes the development of premature babies, improves outcomes, and shortens the length of stay.

THE UNIVERSITY OF TENNESSEE
MEDICAL CENTER

EXPANDING THE FRONTIERS OF MEDICINE®

The University of Tennessee Medical Center and The University of Tennessee Graduate School of Medicine Frontiers

4th Quarter 2006

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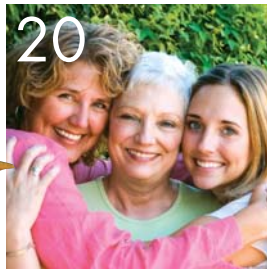

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November 2006

Dear Friends,

Throughout its 50-year history, The University of Tennessee Medical Center has placed special emphasis on patient care for women. From routine obstetrical and gynecological services to specialized care for women experiencing high-risk pregnancies to individualized cancer treatment, the physicians, nurses, and other health professionals at the Medical Center have recognized and met the special needs of our female patients.

This issue of *Frontiers* spotlights the women's services we offer and profiles some of our outstanding people and programs. Over the years we've added new services and steadily renovated and upgraded our facilities to create even more inviting environments. We will continue to do so in the years ahead. Next year we'll open the region's only neonatal intensive care unit featuring private patient rooms and offer amenities to ensure that women and their families go on making the choice to receive their healthcare at The University of Tennessee Medical Center.

We appreciate your past support and look forward to continuing to fulfill the healthcare needs of our community and region.

Sincerely,

Joseph R. Landsman, Jr.
President and Chief Executive Officer
University Health System, Inc.

Dear Alumni and Friends,

In recent years the issue of healthcare for women has risen to new heights with advocates in medicine, government, education, and of course the public. We are working diligently to integrate women's healthcare into all of our residency programs since women's health concerns cover a wide spectrum. While some conditions such as pregnancy, ovarian and cervical cancer, and menopause are unique to women, others affect men and women alike. However, many of these same conditions bring about different symptoms in women thereby requiring specialized knowledge about diagnosis and treatment as well as prevention.

A central piece to this mission is the Department of Obstetrics and Gynecology with four distinct divisions: general obstetrics/gynecology, maternal fetal medicine (high risk pregnancy), gynecologic oncology, and reproductive endocrinology and infertility. Faculty in these divisions practice at the Medical Center and conduct research there to improve the health of women.

As you read through this edition of *Frontiers* you will find that women's health is front and center in our training programs. We believe that our efforts keep our faculty at the forefront of care and will allow our residents to eventually practice in East Tennessee with the knowledge to improve the health of women across the state.

Sincerely,

James J. Neutens, Ph.D.
Interim Dean
UT Graduate School of Medicine

Keeping Women Healthy

a focus on women's health

WOMEN TODAY HAVE A STRONG FOCUS on healthy living and total wellness, and that means getting adequate, accurate medical screenings. From breast care to heart and vascular health, women now have easier access to many recommended exams that allow early detection of disease. A large number of developments in the past few years have improved the quality of these screenings and identified which tests a woman should receive to stay healthy.

Breast cancer is the second leading cause of cancer death in women. Every year more than 211,000 women are diagnosed with the disease. To help healthcare practitioners improve the quality of breast exams, UT physicians, faculty, and staff from a variety of disciplines collaborated to design and offer a pilot training course that is now changing women's healthcare throughout the nation—the Clinical Breast Examiner Certification course.

With the help of breast health professionals across the state, Dr. John L. Bell, a professor of surgery at UT Graduate School of Medicine and surgical oncologist at The University of Tennessee Medical Center's Cancer Institute, and Linda B. Cruze, BSN, RN, of the Medical Center's breast care service, led the project. They coordinated the development of an educational module providing in-depth study that included statistical data and trends, breast anatomy, benign and malignant breast tissue, and diagnostic imaging.

State Attorney General Paul Summers awarded grants to allow Tennessee healthcare professionals to attend pilot offerings at four locations across the state. The pilot program was tested with physicians, physician assistants, and nurses in Knoxville, Memphis, Nashville, and Chattanooga. These practitioners

were trained to provide consistent, lifesaving breast exams, and also received instructor certification that enabled them to teach others. Fifty-four healthcare professionals successfully completed the course and passed skills testing.

"Studies have shown that **early detection does in fact save lives.** Research has shown a 25% to 30% decrease in deaths from breast cancer if found early."

-Kathleen Hudson, MD

The module has been adopted by the National Consortium of Breast Centers as part of its initiative to certify all women's healthcare professionals in breast examinations. The program is known as clinical breast examination certification (CBEC). Tennessee leads the way, with more than 80 clinicians holding this certification.

Another area in which the Medical Center is helping women get more comprehensive screenings is that of providing mammography services. Along with self conducted breast exams and clinical breast exams, regular mammograms are very important in helping to detect breast cancer at its earliest stages. Dr. Kathleen Hudson, a radiologist with the Medical Center, says, "Studies have shown that early detection does in fact save lives. Research has shown a 25% to 30% decrease in deaths from breast cancer if found early."

A mammogram, or X-ray of the breast, can find cancers at an early stage, when they are small and most responsive to treatment. And the Medical Center's use of digital mammography is especially effective for women who have dense breast tissue and women who are younger. One of the differences between digital mammograms and the film mammograms is that a digitized image can be adjusted for size and exposure after the image is made. This allows the radiologist to get a sharper look at minute differences in the breast in areas that might not be as clear on film.

With the help of a grant from the Tennessee Women's Health Initiative, the Medical Center operates a mobile mammography unit that travels throughout the region. It visits businesses, churches, health departments, and senior centers, offering breast exams and mammography

Linda Cruz, BSN, RN (right) demonstrates the proper method for a clinical breast exam to Robin Klebig, nurse practioner.

Jane Kelly, RN performs a 4 Your Heart screening.

Recommended Screenings for Women

Screening Tests	Ages 18-39	Ages 40-49	Ages 50-64	Ages 65 & Older
General Health: Full checkup, including weight and height	Discuss with your doctor or nurse	Discuss with your doctor or nurse	Discuss with your doctor or nurse	Discuss with your doctor or nurse
Thyroid test (TSH)	Start at age 35, then every 5 years	Every 5 years	Every 5 years	Every 5 years
Heart Health: Blood pressure test	At least every 2 years	At least every 2 years	At least every 2 years	At least every 2 years
Cholesterol test	Start at age 20, discuss with your doctor or nurse	Discuss with your doctor or nurse	Discuss with your doctor or nurse	Discuss with your doctor or nurse
Bone Health: Bone mineral density test		Discuss with your doctor or nurse	Discuss with your doctor or nurse	Get a bone mineral density test at least once. Talk to your doctor or nurse about repeat testing
Diabetes: Blood sugar test	Discuss with your doctor or nurse	Start at age 45, then every 3 years	Every 3 years	Every 3 years
Breast Health: Mammogram (x-ray of breast)		Every 1-2 years. Discuss with your doctor or nurse	Every 1-2 years. Discuss with your doctor or nurse	Every 1-2 years. Discuss with your doctor or nurse
Reproductive Health: Pap test and pelvic exam	Every 1-3 years if you have been sexually active or are older than 21	Every 1-3 years	Every 1-3 years	Discuss with your doctor or nurse
Colorectal Health: Colonoscopy			Every 10 years	Every 10 years
Skin Health: Mole exam	Monthly mole self-exam; by a doctor every 3 years, starting at age 20	Monthly mole self-exam; by a doctor every year	Monthly mole self-exam; by a doctor every year	Monthly mole self-exam; by a doctor every year
Oral Health: Dental exam	One to two times every year	One to two times every year	One to two times every year	One to two times every year

Source: National Women's Health Information Center • U.S. Department of Health and Human Services, Office on Women's Health

"Not only should women receive regular mammograms and Pap tests, but they should also monitor their heart health, thyroid, blood sugar, and blood pressure."

-Nirmala Upadhyaya, MD

Although much of the effort to safeguard women's health is focused on breast cancer, women must also pay attention to the health of their hearts. Screenings to detect cardiovascular disease, the No. 1 cause of death in women, are viewed as an important tool in helping to identify risk factors for the disease. Dr. Nirmala Upadhyaya, of University Obstetrics and Gynecology, says "Not only should women receive regular mammograms and Pap tests, but they should also monitor their heart health, thyroid, blood sugar, and blood pressure." to women who might not otherwise take the time or have the access to get proper screening.

Comprehensive cardiac health assessments that evaluate an individual's risk of developing heart disease are becoming more popular and readily accessible because of increased awareness. The Medical Center's 4 Your Heart program, one such assessment, evaluates health history, cholesterol, blood sugar, waist circumference, and electrocardiogram (EKG) results and provides individualized recommendations for risk reduction. Vascular screenings are another important tool in helping to identify risk factors for stroke. They use ultrasound to help identify blood-flow problems in three areas: the carotid arteries, the abdominal aorta, and peripheral vessels.

Early disease detection and enhanced knowledge of the risk factors for illness have helped save the lives of many women. And as screenings become more readily available and results more consistently evaluated, women everywhere will enjoy healthier, longer lives.

Lea Anne Law / Heather Grieve

Big Future for Tiny Miracles

The Birth of the New Private Room Neonatal Intensive Care Unit

TINY MIRACLES. SOMETIMES THEY ARRIVE TOO SOON to be greeted by a team of nurses, physicians and anxious parents who are grateful to see them. Fresh from the warmth of the womb, fragile babies are quickly ushered into a world of bright lights, loud hospital sounds, testing and monitoring equipment.

In early 2007, the bustle and brightness will dim to a softly lighted whisper. When their new multimillion dollar nursery is complete, these babies will be nurtured in the best possible environment, provided with soothing comforts and the latest in medical technology.

The journey these babies and their families make, from pregnancy to delivery and the care they receive until the baby goes home, is guided by the Regional Perinatal Program at the University of Tennessee Medical Center.

Each year, 450 mothers are referred by their physicians. Healthcare providers recognize risks early and transfer the mothers. Often, mothers are seen the same day they are referred, by one of seven perinatalogists at the Medical Center, whose specialty is caring for high-risk pregnancies. "Our goal is to get the mother here before the baby is born. Most of the time mothers are the best incubators," says Rita Hillhouse, RN,C, director of the Medical Center's Regional Perinatal Program.

About 800 babies enter the Tom and Katherine Black Neonatal Intensive Care Unit (NICU) each year. Those who arrive in January will be entering a new age of neonatal care.

The NICU is not only a beautiful place, but it is also an environment designed to improve newborns' growth and development. "When babies are exposed to loud noises, their heart rates and blood pressures rise. In quiet, they gain more weight and can go home sooner," says neonatologist Mark E. Anderson, MD, an associate professor of obstetrics and gynecology at the Graduate School of

NICU patient

Medicine. "And they're not around other sick babies or parents. Parents could be getting a virus and not know it. Now with private rooms, other babies won't be exposed as easily."

Neonatalogist Mark S. Gaylord, MD, explains, "What we've learned from research is that if you don't have proper lighting, sound levels, and night-day cycles, babies do not develop properly. Lights that are never turned down and constant activity are detrimental to babies." Gaylord adds, "The sound level in a typical nursery is about like someone mowing a yard." Gaylord also is director of the Medical Center's neonatal transport and medical director of neonatal practitioners. He serves as a professor of obstetrics and gynecology at UT Graduate School of Medicine.

The Medical Center will be one of only two hospitals in Tennessee with private NICU rooms, and one of just a handful nationwide, providing individual rooms for ailing babies. The nursery is divided into secluded coves of 10 to 12 rooms. Stepping inside a cove, you're sealed off from noise, bustle, and lights. Nurses' stations are triangular wedges tucked between two windows, each looking in on an infant.

With a $1.8 million federal grant for equipment, the monitors, ventilators, and "smart" IV pumps are interconnected, pouring their readings into one set of data that can be immediately accessed by staff.

The birth of this new facility began with a plan that was five years in the making. Staff members visited nurseries throughout the Southeast, attended design meetings of the National Perinatal Association, and assembled a team to design the best care for babies, privacy for families, and calm for everyone.

Crimson Parsons was born more than 3 months early and weighed 2 pounds, 3 ounces. She fought numerous struggles in order to survive and finally went home after spending 3 1/2 months in the NICU. Because her family was so greatful for the compassionate care provided by the NICU staff they had her first birthday party at the Medical Center. Many doctors, nurses, and other staff members attended the party.

Crimson Parsons 1 Year Old

Crimson Parsons 4 Days Old

Vicki Miller, RN teaching infant resuscitation.

Neonatlogist:

Pediatrician with additional 3-4 years of education in critical care for newborns.

Maternal Fetal Medicine Specialist/ Perinatalogist:

OB/GYN with additional training and education in the care of women with high-risk pregnancies.

Sound and light engineers, air-conditioning specialists, designers, builders, physicians, nurses, and parents conceived the plan that will soon be born at the Medical Center.

Individual rooms have sound-absorbent floors and paint, more effective temperature control, improved airflow, and "light showers," that allow a nurse working on a chart to spotlight the chart, not the baby. The "smart" beds shift from incubator to warmer mode so the baby doesn't have to be moved, and the bed heats or cools automatically, keeping the temperature constant.

The new facility will smell healthier, too, because all counter-tops will be free of polyvinyl chloride, whose vapors smell like a new shower curtain and may be toxic to babies. The sinks will be cleanly divided between those intended for washing hands and those where mother's might pour breast milk, designed to be drip and splash-free to contain bacteria.

The care for mothers and their babies begins long before they arrive in this new NICU, and continues long after the baby goes home. "We arrange for patients to be followed (medically) and let everyone in the NICU know about a case," says C. David Adair, MD, a perinatologist who is director of maternal-fetal medicine and an associate professor of obstetrics and gynecology at UT Graduate School of Medicine. "Even if one baby has the same ailment as another, everyone's condition is different. So we tailor what we do to what's best for the individual." Mothers and babies also remain together, a key aim of the perinatal program.

As more women postpone childbirth, the risks increase. Referrals may stem from fetal problems like birth defects or involve mothers who have preexisting conditions like diabetes or lupus, who are 35 or older, or who develop certain complications like pre-term labor and pre-eclampsia (a condition involving high blood pressure and swelling).

For parents whose babies may have genetic abnormalities, there are special considerations, fears, and questions. "My job is to educate parents about risks," says Kristin

The Medical Center's perinatal program receives patients from 19 surrounding counties, as shown by Director Rita Hillhouse.

Frazer, MS, a genetic counselor for the perinatology department, "to present parents with the best information so they can make the best decisions."

After a child is born with a genetic abnormality, their care continues, sometimes even through adulthood. A clinical geneticist consults with the neonatologist, then meets with the parents, helping to manage gene-related medical problems and developmental issues, connecting them to the kinds of help they need. "We make sure that parents and child are hooked up with resources in the community," says Ilse Anderson, MD, a clinical geneticist in the Medical Center's medical genetics department.

The Medical Center was designated in 1974 as one of four centers by the Tennessee Perinatal Regionalization Network. Currently there are 5 regional perinatal centers in Tennessee.

"In Knoxville, we are the only state designated perinatal center and provide the highest level designated for neonatal care (Level III), and we provide every kind of sub-specialist available to treat babies," says perinatologist Mark D. Hennessy, MD, an assistant professor of obstetrics and gynecology at UT Graduate School of Medicine. Under a grant, the Medical Center also provides outreach education programs for patients, doctors, and nurses.

Those comprehensive services are the result of close teamwork between perinatology and neonatology. A closeness symbolized by the short distance from the delivery room to the NICU. Once a woman delivers—whether she has been followed for high risk or not—if her baby is in trouble, the neonatology specialists are one hallway's width away. "There's no moving the sick baby, no taking him or her through tunnels or from one hospital to another," says Janell Cecil, RN, MSN, vice

David Adair, MD, a perinatologist at the Medical Center, performs an ultrasound on a high risk patient.

Vichien Lorch, MD, a neonatologist and medical director of the NICU, examines a baby.

president of women's and children's services at the Medical Center. "We're the only Level III nursery in Knoxville with that proximity."

Although that proximity won't change, come January the face of the 22-year-old NICU will. There to celebrate and use these 21st-century achievements is the perinatology team and a staff of seven neonatologists (one of whom is always in-house, as is a neonatal nurse practitioner), plus 150 nursing staff and 12 respiratory specialists.

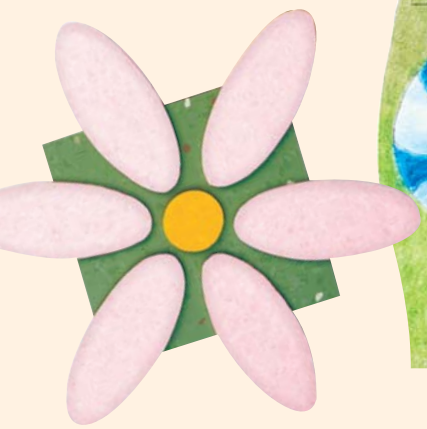
"One baby I remember was born to an older mom who couldn't get pregnant and then had her daughter at 25 weeks says Vichien Lorch, MD. "We saved the only baby she will ever have." Lorch, director of the Division of Neonatology, is a professor of obstetrics and gynecology at the Graduate School of Medicine and knows that it's a special lifetime dedication: "Some of our NICU employees have been working here for 20 years or more. They are truly committed to saving these babies."

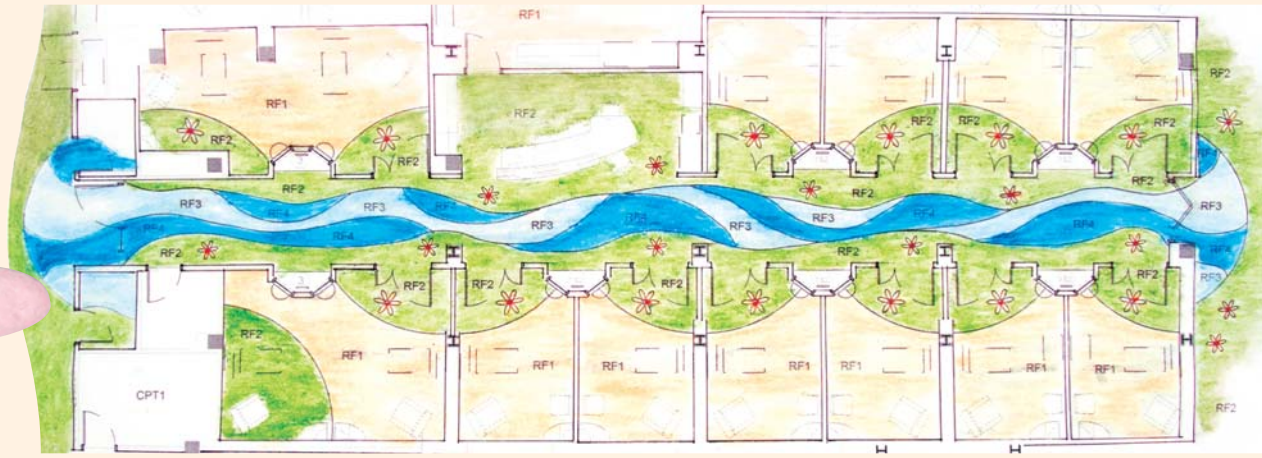
Now, these babies have not only the efforts of those who help their mother make special deliveries, but a unique facility where they can begin their lives.

Dorothy Foltz-Gray

Neonatal Intensive Care Unit

It is a peaceful world where mother and child find nurturing touches of nature. Greeted as if by a flowing stream running beneath your feet, the rubber cushioned floors mimic the look and feel of water with a ribbon of blue hues, surrounded by a green meadow. The accent lighting is dimmed and restful and rimmed in cheerful blossoms. Every touch is thoughtful and caring to create a place where babies can flourish.





Floor schematic of Phase I of the new private room NICU opening early 2007

The Neonatal Intensive Care Unit

of The University of Tennessee Medical Center opened in 1970 due to the generosity of the late Tom and Katherine Black. Since then, nearly 22,000 babies have gone through the Neonatal Intensive Care Unit at the Medical Center. It was designed to enhance the care of sick and/or premature infants and today serves as the regional referral center for East Tennessee.

The Neonatal Intensive Care Unit at the Medical Center is undergoing a major renovation to build individual rooms for the babies to provide them a more soothing, calming environment to help them develop and get well much more quickly.

Renovations That are Being Made

- The region's first and only single-room, certified Level III nursery—the highest designation possible
- Along with the existing Neonatal Intensive Care Unit will be adding a new section containing a 29-bed unit with 19 private rooms and five twin rooms
- State-of-the-art technology and physicians on hand around the clock
- The non-stressful environment of a quiet, light-controlled room that promotes the development of premature babies, improves outcomes and shortens the length of stay
- Renovations will include a family lounge with a kitchenette, gathering place for families, and computer learning station
- Located just steps away from the labor and delivery center and the mother/baby unit

UT College of Pharmacy Program Expands

Knoxville Campus Opening Fall 2007

The University of Tennessee Medical Center has long been recognized for its multidisciplinary approach to patient-focused care. For nearly three decades the Medical Center's pharmacists have been an integral part of the patient care team actively consulting and collaborating with physicians and other healthcare professionals to provide safe, optimal drug therapy. In 1999 the U.S. Institute of Medicine recommended that hospitals integrate their pharmacists into patient care by expanding their presence on patient care units and ensuring their participation in drug-related decisions, a step that increases medication safety. This is the practice model that has been in place at the Medical Center for over 20 years!

This innovative and effective model has made the Medical Center's pharmacy program a place of excellence in education and training. In collaboration with the University of Tennessee College of Pharmacy (UTCOP), in Memphis, the Medical Center's pharmacy program was the first and is now the largest clinical training site outside Memphis for senior pharmacy students. More than 1,000 of these students have received their clinical training here over the years; many of them still practice pharmacy throughout East Tennessee.

The first accredited graduate pharmacist residency training program in the region began in 1991 at the Medical Center, again in collaboration with the UTCOP. This training program is currently the largest of its kind in the state and one of the largest in the nation. Pharmacists who have completed this nationally recognized program now practice throughout the region, the nation, and across the globe.

Now the Medical Center is once again collaborating with the UTCOP to open a second College of Pharmacy campus, which will be located at the Medical Center. Students will be able to attend their first year of pharmacy school in Memphis and complete the remaining three years in Knoxville. A new building is being constructed to house the 225 students who will be enrolled in classes on this campus beginning in the fall of 2007. This continuing development in pharmacy education will bring even more highly skilled graduate pharmacists to our region and will ensure that we continue to provide excellent pharmacy services in the years to come.

Robert Moye, PharmD, BCPS

Pharmacist, Larry Shepherd, reviews a patient chart and medication needs with pharmacy residents and a student.

Pharmacist, Jennifer Garrett, explains proper use of an inhaler to a patient.

"OB/GYN is an excellent way to provide healthcare to a diverse group of women across their life span."

-Jim Neutens, PhD
Interim Dean of the Graduate School of Medicine

Obstetrics/Gynecology:
The Cornerstone of Women's Healthcare

"I love the field of women's health."

These sincere words tell us a lot about Jessica Lemmons, MD. She is one of the chief resident physicians in obstetrics/gynecology at UT Graduate School of Medicine, and her words speak volumes about her and about the successful OB/GYN residency program at UT.

In her fourth and last year of residency here, Dr. Lemmons has great passion for what she does. Her energy and enthusiasm propel her through her days, just as they did when she began her professional education about 10 years ago.

"I went to medical school right after high school," the Missouri native explains. "The University of Missouri at Kansas City is a six-year medical school that combines undergraduate coursework with a medical school curriculum. I was eager to get started on my career."

The field of surgery had always intrigued her, but when she interviewed for both surgical and OB/GYN residencies, she recognized a fundamental difference in the two.

"I wanted to have consistency of care with my patients, and the specialty of OB/GYN offered that, along with a heavy emphasis on surgery. I knew this is where I wanted to be," she says.

Jim Neutens, PhD, interim dean of the Graduate School of Medicine, points out, "OB/GYN is an excellent way to provide healthcare to a diverse group of women across their life span." For one thing, participating in the miracle of birth often creates a lifetime bond between a woman and her physician, making healthcare a gratifying experience for both.

The department's chairman, Dr. Robert Elder, notes that during Dr. Lemmons' four years of residency she has received some training in the subspecialties of reproductive endocrinology and infertility (REI), maternal-fetal medicine, and gynecologic oncology, as well as general OB/GYN. REI provides care to couples having trouble with infertility and to women with endocrine problems. Maternal-fetal medicine, or perinatology, helps women with high-risk pregnancies. Gynecologic oncology offers specialized care to women with cancer of the reproductive tract—ovarian, uterine, or cervical.

According to the OB/GYN department chair, Robert Elder, MD, OB/GYN Residents, such as Dr. Lemmons, receive training in the following subspecialties.

- Reproductive endocrinology and infertility (REI)
- Maternal-fetal medicine
- Gynecologic oncology
- General OB/GYN

It's not just delivering babies.

Today's OB/GYN physicians, such as Jessica Lemmons, MD, UT OB/GYN Chief Resident, are well trained in surgery, as well.

Dr. Lemmons explains that when she was looking for a residency program, she purposely sought one with a strong surgical emphasis and diversity of cases. UT Graduate School of Medicine's OB/GYN residency program, she says, is one of the best in the country for these very reasons.

The training she's absorbed excites her. "The attending physicians and surgeons in the UT Graduate School of Medicine OB/GYN program are incredible," she says. "They're experienced and eager to share their knowledge with the residents. The technology we have at UT is first-rate, which helps us provide the best care possible."

Upon completion of her residency, she can go into practice or elect to enter a fellowship in any of the subspecialties she's studied, or even others such as urogynecology, pediatric and adolescent gynecology, or family planning.

Across the nation the number of female physicians specializing in OB/GYN has increased dramatically. While gender is an issue for some patients, most say they simply want a skilled, knowledgeable doctor with whom they feel comfortable and can communicate easily. An OB/GYN's life can sometimes be demanding, but as Dr. Lemmons points out, the joys of the profession more than make up for a few late nights. In her words, "Surgery, caring for patients, managing cases, it's all here. I get to do what I was meant to do."

Kimberly Fortner, MD examines expectant mother while resident Karen Horne, MD observes.

Downtime for Dr. Lemmons often means joining her husband, Logan, in their kitchen.

More women are practicing OB/GYN than ever before. Of the nearly 650,000 physicians across all specialties in the United States, 27% are female. Yet more than 70% of physicians studying in the nation's OB/GYN fellowship and residency programs are women, a five-year trend that continues.

Since 1996, 63% of the OB/GYN resident physicians who have completed programs at UT Graduate School of Medicine have been female, as have 19 of the 31 OB/GYN residents in the last five years. There are a total of 186 residents across many specialties at the Graduate School of Medicine and 70% of them are men.

Dr. Lemmons will complete her residency in June 2007—an OB/GYN physician ready to touch the lives of many women.

OB/GYN's *in Tennessee*

By the Numbers

In Tennessee, there are 735 physicians belonging to the American Board of Obstetrics and Gynecology.

42 of Tennessee's 95 counties have no practicing OB/GYN's who are county residents.

East Tennessee has the best OB/GYN-to-person ratio, with 20,219 people to every OB/GYN. Middle Tennessee follows, with 26,177 people to one. West Tennessee has the highest number of people per OB/GYN, with 30,918 potential patients for every OB/GYN physician in the specialty.

The University of Tennessee Graduate School of Medicine currently has 13 OB/GYN residents and is proud to have recently received a 4-year re-accreditation by the National Residency Review Committee.

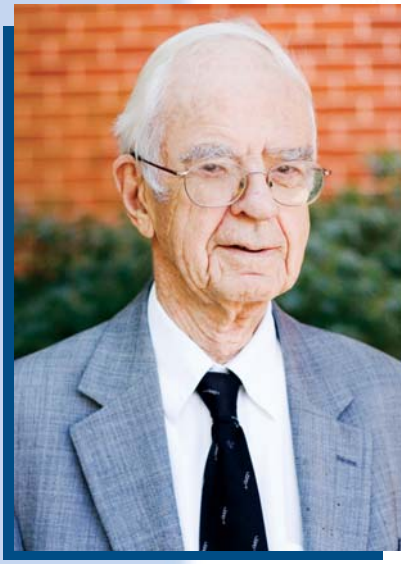
Amanda F. Johnson

In the Beginning... was Dr. Diddle

You can not talk about the obstetric/gynecology training in this area without talking about the contributions of A.W. Diddle, MD. He was instrumental in establishing the OB/GYN department at the University of Tennessee Medical Center in 1956. Dr. Diddle served as chairman of the department until he retired in 1977. At his retirement the A.W. Diddle Endowment was established by his colleagues and former residents to promote education and patient care.

He is responsible for training many high quality physicians including Dr. Glenn Watts, Dr. Bruce Walker, Dr. Bill Vandergriff, Dr. Ray King, Dr. John Semmer, and Dr. Robert Daughtery among many others who practice in this area. He is still active in the residency program and routinely attends Friday grand rounds with the residents. We owe a debt of gratitude for all of Dr. Diddle's accomplishments.

Robert Elder, MD



Albert W. Diddle, MD

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- AAMC Physician Specialty Data: A Chart Book, August 2006
- American Board for Medical Specialties, Annual Report & Reference Handbook, June 2005
- American Medical Association Physician Masterfile, January 2006

We Give Thanks

"No duty is more urgent than that of returning thanks."
~ Unknown

As the time of year approaches when many of us pause and reflect on the people and the blessings we're most thankful for, it seems like the perfect opportunity to express our heartfelt appreciation to all of you who have selflessly donated your time, talents, or financial resources to The University of Tennessee Medical Center and the Graduate School of Medicine.

Whether you're a teenager or a retiree, a homemaker or student or businessperson, and whether your gift has been that of time and compassion or a donation of $1 or $1 million, you help form the backbone of this organization. We want you to know that your commitment to the Medical Center and the Graduate School of Medicine has truly made a difference in the lives of those we serve. Many patients, staff, and Medical Center programs and departments benefit from your generosity every day.

To all our volunteers, you are an extension of the University of Tennessee Medical Center's professional staff, and you can be proud in the knowledge that when you go home you have made a difference in someone's day with a kind word, smile, or action or simply by your presence. Your involvement in activities like delivering gifts, mail, and fresh-cut flowers and supplying refreshments, reading materials, and comforting words, is the embodiment of the Medical Center's mission—to provide a healing environment and improved quality of life for our patients and their families.

To those who sit on the Board of Directors and our Community Advisory Board, thank you for your leadership, your vision, and most of all, your passion in addressing and meeting the healthcare needs of our community. It is through your guidance that we are able to continue providing excellent patient-centered care and outstanding customer service to our patients and their families.

A Spotlight of *Thanks*

THANKS TO THE ENORMOUS GENEROSITY of benefactor Bettie Lane Barnhill Bragg, the University of Tennessee Medical Center and UT Graduate School of Medicine will be propelled toward even greater future success by the gifts set forth in her will.

Bettie Bragg, who earned her master's degree in secondary education from the University of Tennessee in 1951, was a former history teacher and guidance counselor at Oak Ridge High School. She now lives in Texas, but she and her husband, Oscar R. Bragg Jr., made their home in Athens and Ten Mile, Tennessee for 30 years.

Oscar Bragg, a veteran of World War II retired from the L&N Railroad (now CSX) after four decades of service both in the signal department and as a division trainmaster. He lost a battle with esophageal cancer in 1994. Says his wife, "I will never forget the compassionate care delivered to Oscar—and me too—by the physicians, nurses, and staff at the University of Tennessee Medical Center."

Bettie Bragg's contributions to the Medical Center, which include artwork that is displayed on the third floor, began in 1998. As a result of her foresight and goodwill, research will be conducted to find effective treatments for cancer affecting the lung and esophagus. "We're thankful to Mrs. Bragg," says Dr. John Bell, a surgical oncologist at the University of Tennessee Medical Center Cancer Institute.

Bettie Bragg says, "I've established this endowment because it's a good thing to do, and I'm also hoping that it will inspire others to give in order to benefit cancer research."

Alyssa Wilcox

Bettie Bragg, a longtime supporter of The University of Tennessee Medical Center, often visits Knoxville–this year stopping by in October. Her artwork hangs on the third floor of the Cancer Institute alongside portraits of her and her husband, Oscar.

The Evolution of OB/GYN Care

How Women Have Changed Healthcare

Obstetrical and gynecological care has undergone drastic changes over the past 40 years, in large part propelled by the women of the baby-boom generation. A development that opened the door to this rapid evolution came in the early 1960s, when oral contraception was introduced to the public. Women, able to time their reproduction, began taking control of their healthcare in other ways too.

Research shows that women make the majority of healthcare decisions for themselves and their families. Today women are used to seeking information and weighing health options for themselves and their families. The internet provides easy access to information about disease and other conditions, as well as about treatments.

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Advances in technology and procedures have provided women with ever more sophisticated healthcare. Fetal monitors, first used in the labor and delivery process during the 1970s, offer a way to continuously monitor the fetus during labor. And ultrasound technology has continued to advance, providing more accurate views of the fetus and allowing for early diagnosis of problems or complications. As this technology has progressed, getting an ultrasound has become standard in prenatal care; almost all women have the procedure at 18 to 22 weeks of pregnancy.

Another significant introduction is minimally invasive gynecological surgery. Open surgery used to be the only option available when a surgical procedure was needed, and it usually required a lengthy stay in the hospital. But patients today can reap the rewards of advanced technology in the form of minimally invasive surgery, also referred to as "bandaid" surgery or laparoscopic surgery. Some procedures that can now be performed in this way are bladder repair, hysterectomy, repair of pelvic prolapse, tumor and cyst removal, and treatment for endometriosis. Many of these procedures can be done on an outpatient basis, which allows the patient to go home the same day.

Today fetal monitors are a standard component of expectant mothers.

Recently a vaccine approved by the Food and Drug Administration was found to be effective against cervical cancer. This form of cancer is caused by several strains of a sexually transmitted virus, human papillomavirus (HPV). Infection with these high-risk strains can lead to abnormal cell behavior and in some cases to precancerous changes (flagged by abnormal Pap smears) or cancer. HPV is currently the most common sexually transmitted infection in the United States. Although the vaccine is a great step forward for women's health, it is not a replacement for cancer screening. Physicians recommend that routine gynecological examinations, including Pap screening, remain an essential tool in the early detection of cervical cancer.

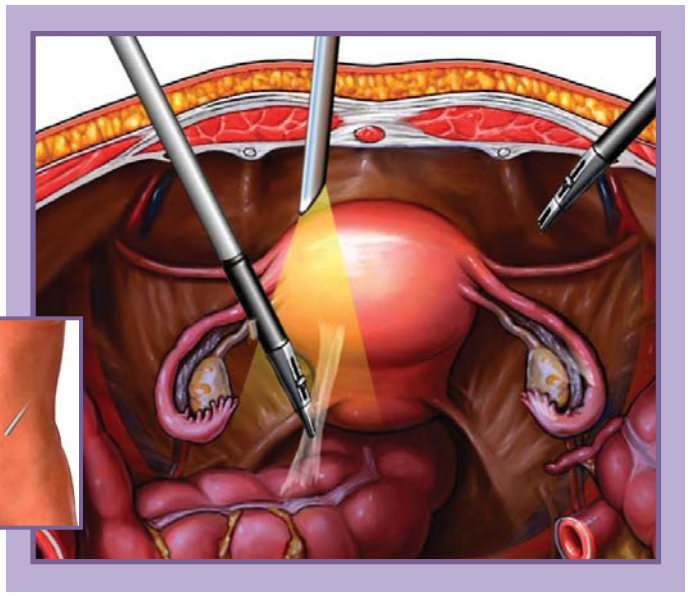
The development of reproductive endocrinology has had a profound effect, giving many people who would previously have been unable to have families the opportunity to do so.

The field includes in vitro fertilization, gamete intrafallopian transfer, zygote intrafallopian transfer, intracytomplasmic sperm insertion, and assisted hatching. All these techniques are the fruit of advanced reproductive technology that helps women achieve pregnancy.

Childbirth has changed from a medical procedure to a profound experience. It used to be that women received general anesthesia during childbirth. In the 1970s, however,

Figure 1

Figure 2



Due to recent technological advances, some women can have a laproscopic hysterectomy (Figure 2) through half-inch to one-inch incisions (Figure 1).

OB/GYN Susan Dodd, MD discusses treatment options with a patient.

the practice was discontinued after research showed the importance of bonding between mother and child immediately after the delivery. Formerly, a woman who had experienced a normal childbirth with no complications would typically stay in the hospital for five days. Today she ordinarily leaves the hospital two days or less after the birth.

Also in the 1970s, the father or other support people were not allowed in the delivery room. They had to stay in the waiting room for hours, until at last they received news of the baby's birth (and gender). Today, though, it is common for a number of support people to be present at the delivery, including a doula. This is a woman experienced in childbirth who provides continuous physical, emotional, and informational support to the mother before, during, and just after delivery; but does not perform clinical tasks like taking blood pressure.

Lamaze was introduced in the 1960s as an alternative method of giving birth by Dr. Ferdinand Lamaze, a French physician. He called it "childbirth without pain."

The past 40 years have also seen an extraordinary amount of medical change affecting women in midlife. Complementary or holistic medicine is now viewed by many as an option for the treatment of menopause. The practice of holistic medicine looks at all aspects of an individual: physical, emotional, spiritual, social, and environmental. There is a focus on the person's overall wellness. As a result, many women are using yoga and herbs rather than the traditional hormone treatments for menopause. Women are also becoming more comfortable with talking to their gynecologists about health issues like infertility, low sex drive, pain, or incontinence.

In the future, we will continue to see more minimally invasive surgical methods, new medications and treatments for menopause, and advances in reproductive technology. There will be more developments in prenatal diagnosis and treatments. Women will also be the focus of more research on cardiac and bone health and on women-specific treatments. All this gives us a lot to look forward to in helping women get better, more comprehensive healthcare.

Robert Elder, MD

Healthcare Coordination

Easy, quick and hassle-free service provided just for you!

THE UNIVERSITY OF TENNESSEE MEDICAL CENTER offers a free healthcare coordination service. The Medical Center provides healthcare coordinators, similar to personal assistants, to make the process of arranging appointments as easy as one phone call. Not only will we make your appointments for you, we will send you patient packets, provide maps, and pick you up at the door to walk you to your appointment, if needed. "Although our service is for anyone, those who are new to the area probably benefit the most," says healthcare coordination supervisor Jeromy Welch. "It always takes time to become familiar with a new community, so just think of how daunting it might be to find a pediatrician, a primary care physician, or specialists like an OB/GYN or a cardiologist in a brand new place. One of the ways we can make things easier is by sending maps of the hospital and giving detailed directions. Hospitals can sometimes be confusing places to get around so, if needed, we'll even meet you at the front door of the Medical Center to lead you to the right place."

While the Medical Center is the only hospital in the area with this type of service, there are other programs like this across the country. Prestigious medical centers such as the Cleveland Clinic, Johns Hopkins, and Cedars-Sinai have similar services. In each setting, as is the case at the Medical Center, coordinators are very knowledgeable about what makes their hospital unique and can tell you more about the specialty services available.

Call toll-free to 1-877-UT-CARES. After talking to one of the healthcare coordinators, you'll see why they were given this memorable telephone number—because they really do care.

1-877-UT-CARES

We really do care.

Health Literacy: The Currency and Language of Healthcare

Today's society has more information available—it's easier to access than ever before—however people still need a better understanding of medical terminology, prescriptions, and procedures. Possessing adequate health knowledge (health literacy) is important in making everyday as well as critical healthcare decisions. Low health literacy can sometimes double the risk for complications, particularly for patients with conditions like diabetes that require a high level of nutrition and medication understanding by the patient (according to the Institute for Healthcare Advancement).

A recent study conducted at UT Graduate School of Medicine underscores the need for communication between physician and patient to give women the knowledge they need to make lifesaving healthcare decisions.

Associate Professor Lorraine Wallace, PhD, and Assistant Professor Nikki Zite, MD, MPH, spent eight months researching the level of patients' healthcare knowledge. Their findings: women's overall understanding was extremely limited pertaining to their annual screenings, the risks associated with abnormal results, and recommended follow-up procedures. One symptom of that lack of understanding is fear, which can undermine follow-up testing and treatment.

For example, 4,000 wives, mothers, daughters, and sisters are taken from us each year by a disease that is nearly 100 percent curable and easily detected. "Women's lack of knowledge about these tests leads to anxiety," explains Dr. Wallace. That fear may underlie the reason for missed appointments. A surprising number of women who are referred for further testing after an abnormal Pap test result won't keep the appointment that could save their lives. If patients better understood the screening test, steps might be taken that could virtually eliminate cervical cancer. Therefore in this case, knowledge could literally cure cancer.

For more information about residency programs or research studies, please call 544-9290.

Even though most women have had Pap tests regularly since the age of 18, the knowledge of this common procedure is very low. The study finds that almost one third of women don't clearly know what a Pap test is, and 37.9% who are referred for a colposcopy don't understand the procedure. Nearly 45% cannot describe the meaning of an abnormal Pap test, and nearly half of women can't identify a single risk factor that would contribute to an abnormal result.

"Realizing this, we as physician educators are incorporating into UT's academic program ways to help residents better anticipate what it takes to meet a patient where she is in her understanding about her health needs. Physicians must encourage patients to ask the appropriate questions that can lead to better understanding of a medical situation," Dr. Wallace explains.

The Graduate School of Medicine has taken a proactive role by researching where women are in their understanding and by introducing a new health literacy component into its Fall 2006 physician education curriculum.

"Physicians must realize that they need to counsel patients more so they can determine a patient's level of understanding and better know the patient's lifestyle and risk factors," says Dr. Zite. "There is plenty of room for improvement in patient education. This study can help us know where to start."

The role of physician as a counselor and teacher not only builds the trust needed for a patient relationship, it can save lives.

Lea Anne Law

"Physicians must realize that they need to counsel patients more so they can determine a patient's level of understanding and better know the patient's lifestyle and risk factors."

-Nikki Zite, MD, MPH

Women's Screenings

Who should have Pap tests? All women, at age 21 or within three years of their first sexual intercourse, whichever happens first. National guidelines recommend a Pap test each year for three years in a row. If the results show no problems, the test should be performed every two to three years, unless a physician recommends screening more often.

What factors can lead to abnormal results?

- Cigarette smoking
- First intercourse at an early age
- Multiple sexual partners
- Infection with a sexually transmitted disease
- Positive test results for human papillomavirus (HPV)

Nikki Zite, MD, MPH and Lorraine Wallace, PhD have invested interest in educating women.

If you are a physician or allied healthcare professional, researcher, or faculty member seeking continuing education, you may be interested in this sampling of upcoming activities offered through the UT Graduate School of Medicine Office of Continuing Medical and Dental Education.

CME Course Calendar

Fall • Early Winter 2006

Dean's Multidisciplinary Grand Rounds: Using Vascular Imaging to Enhance CVD Risk Assessment November 8, 2006 Wood Auditorium, UT Medical Center	*Thomas Barringer, MD, MS, will discuss current vascular imaging modalities that are ready for clinical use. He will also demonstrate how to interpret CT coronary artery calcium scores and how to better understand carotid IMT results. Barringer is an associate professor of family medicine at the University of North Carolina at Chapel Hill.*
Ben Alley Endowed Lecture: The Surgical Correction of Obstructive Sleep Apnea Syndrome and Other Applications of Orthognathic Surgery in 2006 November 11, 2006 Morrison's Conference Center, UT Medical Center	*Obstructive sleep apnea (OSA) can be a debilitating, even life-threatening condition. Oral and maxillofacial surgeons and sleep-medicine specialists will get the information they need to properly diagnose and treat OSA and algorithms for surgical and nonsurgical management will be discussed. The guest speaker is Scott B. Boyd, DDS, PhD, professor and chairman of the Department of Oral and Maxillofacial Surgery at Vanderbilt University Medical Center.*
Third Annual Hematology Conference: Update on Selected ASH Topics January 20, 2007 UT Conference Center	*This third annual conference is a briefing on the research presented at the 2006 international conference of the American Society of Hematology (ASH). Topics include hemostasis and thrombosis, myeloma, myelodysplastic syndromes, lymphoma, and acute leukemia. The stellar list of guest speakers includes Drs. Jean-Pierre Issa and Michael Keating of the University of Texas's, MD Anderson Cancer Center, Dr. John Greer of Vanderbilt University's, Ingram-Vanderbilt Cancer Center, Dr. Craig Kessler of Georgetown University's, Lombardi Comprehensive Cancer Center, and Dr. Robert Orlowski of the Lineberger Comprehensive Cancer Center at the University of North Carolina at Chapel Hill.*

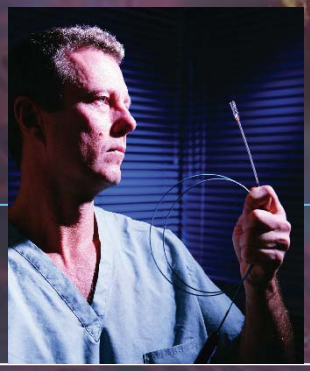
The fall 2006 academic year marks the University of Tennessee's 15th year of educating physicians at the UT Graduate School of Medicine. In the next few issues we'll offer glimpses into a remarkable past, from the early days of medical education on the Tennessee frontier to the harvesting of specific research cells that have made their way around the globe and back. Join us as we salute 15 years of contributions and milestones.

From leeches, elixirs, and herbs to pharmaceutical nanotechnology, diagnostic molecular imaging, and DNA-gene transfer, medical education in Tennessee has a rich and fascinating history. It started more than 200 years ago when Native Americans taught settlers to use what grew from the earth for healing. In 1794, more formalized education began with the founding of Blount College, which in 1879 became the University of Tennessee. By 1911, UT was the home of the largest medical college in the country—a program that has not only survived but excelled.

Today UT Graduate School of Medicine in Knoxville has twelve medical and dental training programs, fellowships in eight specialties, and scores of continuing education opportunities. Our scientists and physicians conduct world-class research in serious medical ailments, including Alzheimer's and Huntington's diseases, cancers, and reproductive disorders. The school's areas of excellence include research in neurodegenerative diseases, cancer biology, immunology and imaging and tracer development.

To register or for more information, call 865-544-9190 or visit our website www.tennessee.edu/cme.

Not just state-of-the-art. One-of-a-kind.



At UT Graduate School of Medicine in Knoxville, we're conducting medical research that cannot be done anywhere else. Through unique partnerships, our world-class researchers and faculty physicians have access to equipment available nowhere else on earth. That often means UT is the first to move breakthrough treatments from labs to patient care.

We're building a healthier world beginning right here in Tennessee. And that's work we can all appreciate.

CONTRIBUTION

Finding tomorrow's treatments, today.

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