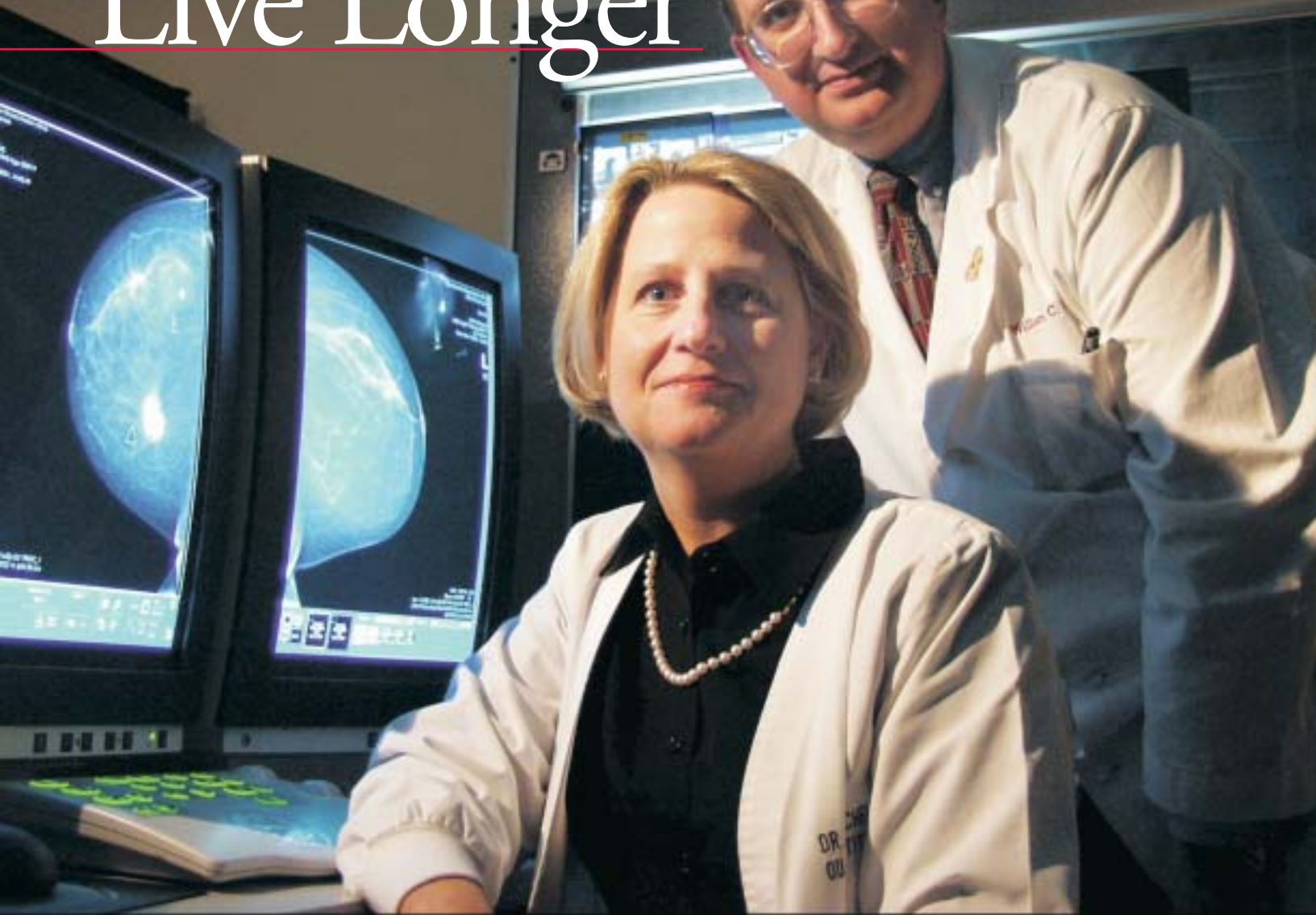


That More Women May Live Longer



The OU Breast Institute is achieving national prominence with a united front in the war against breast cancer.

BY JUDITH WALL
OU Public Affairs

Photos by Lanny David

Radiologist Debra Mitchell, left, lead investigator in OU's study of computer-aided detection of mammogram abnormalities, is a key player in Dr. William Dooley's team approach to the diagnosis and treatment of breast cancer.

continued

In an amazingly short period of time, the University has assembled a breast cancer team that

We want the University of Oklahoma Breast Institute to be the place in the state of Oklahoma and in this region of the United States that a woman thinks of first when she is concerned about breast health and wants cutting-edge care for breast cancer.

This goal, as articulated by OU Dean of Medicine Jerry Vannatta, is becoming a reality as the University makes a major commitment to breast cancer screening, treatment and research.

Consider these facts:

- ◆ Over the past year, the OU College of Medicine has brought a trio of nationally recognized breast cancer clinicians and researchers to its Breast Institute:
 - The former director of the Johns Hopkins University Breast Center is now director of OU's breast health program. Internationally known breast cancer surgeon and researcher William Dooley recently was honored by the American Academy of Gynecology and Obstetrics for his research into an exciting new method for screening high-risk women.
 - Highly respected breast cancer researcher and clinician Ann Thor comes to OU from Northwestern University. The new chair of the OU Department of Pathology is known for investigating the link between hormones and the development of breast cancer.
 - Radiation oncologist Nina Mayr, a prominent specialist and researcher in the use of radiation therapy to treat breast and uterine cancer, comes to OU from the University of Iowa.
- ◆ As the most sophisticated research center for breast cancer in the state, the OU Breast Institute is able to bring the most up-to-date care to its patients and offer Oklahoma women the opportunity to take part in clinical trials of investigational treatments to prevent and treat breast cancer.
- ◆ Under Dooley's leadership, the OU Breast Institute is the first

in the state to offer the ductal lavage procedure for risk assessment and the first nationwide to use the technique to prevent new cancers.

- ◆ The OU Breast Institute was one of the first breast centers in the state to offer digital mammography and is the only center in the state to use Computer-Aided Detection software to enhance digital images.
- ◆ The OU Breast Institute is the only medical facility in the state offering clinical trials of microwave ablation, which has the potential to kill cancer in the breast without making an incision.
- ◆ Currently, the institute diagnoses one in 10 breast cancers in the state of Oklahoma, and that number is expected to grow with the institute's move into larger quarters in the newly completed OU Physicians clinic building.
- ◆ The OU Breast Institute is one of the very few breast centers in the region offering risk assessment and genetic testing for women who may be at high risk for breast and other cancers.

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The OU Breast Institute was first envisioned in the mid-1980s by the late G. Rainey Williams, who headed the OU Department of Surgery for many years and influenced the careers of scores of OU-educated physicians. Williams believed that patients would be better served if breast cancer screening, diagnosis and treatment were offered in an interdisciplinary setting.

"The Breast Institute was probably the first commitment that the College of Medicine made to interdisciplinary patient care," Dean Vannatta points out.

This was a landmark decision. At that time, an interdisciplinary clinic of any sort went against time-honored organizational and financial practices at academic medical centers. "Dr. Williams took this on because he thought it was the right thing to do," Vannatta explains. "He was willing to share surgical income with the institute because it fulfilled an important



■ The weekly breast tumor conference brings together an interdisciplinary team of specialists to discuss each patient's care. Seated from left are Yuriy Guseve, Susan Edgerton, Ann Thor, Rosemary Zuna, William C. Dooley, Howard Ozer, Nina Mayr, Ronald Squires and Melissa Craft; standing from left, Jianzhou Wang, Carol Sheldon and Eldon Jupe.

patient care and educational mission.”

At other medical centers, however, many such attempts at creating an interdisciplinary breast center proved to be too great a financial liability and were abandoned. The bottom line at the OU Breast Institute has been helped by two endowed positions, one of which honors Williams, still the institute had never done better than break even.

Suddenly, however, over the past year the outlook for the institute has become ever more promising, due in great part to the College of Medicine’s amazingly successful recruiting effort to bring top breast cancer clinicians and researchers to OU.

The recruitment of Dooley and Thor was partly planned and partly fortuitous, Vannatta says. The college needed both a breast cancer surgeon and a new chair for pathology and was in the process of trying to lure Dooley from Johns Hopkins when Thor emerged as a strong candidate for the pathology position.

“The fortuitous part was that Ann Thor’s area is breast cancer,” Vannatta says.

He explains that when Dooley and Thor realized they were both being recruited by OU, their interest in the University grew. “In a way, they sort of helped recruit each other,” Vannatta says.

Fortuitousness struck again when it was learned that William Yuh, a top candidate for the chairmanship of Radiological Sciences, was married to Nina Mayr, a top-drawer radiological oncologist who specializes in women’s cancers. The recruitment effort quickly widened to include both of these University of Iowa faculty members.

Meanwhile, during all this recruiting, the University was investing in two digital mammography units. And the institute became one of 10 sites in the nation selected for a pilot study of Computer-Aided Detection software designed to flag abnormalities on digital mammograms. Serving as lead investigator for OU’s involvement in the study is radiologist Debra Mitchell, the institute’s director of imaging, with radiologists Kelly McDonough and Carol Sheldon also participating.

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In an amazingly short period of time, the University has assembled a breast cancer team on a par with the best in the nation.

This team is headed by the dynamic Dooley, whose international reputation has brought instant credibility to the OU breast health program. Dooley joined the faculty last February running at full throttle and in complete agreement with Rainey Williams’ original interdisciplinary concept.

“I want to develop a very tightly integrated system where we all work together very closely among all the specialties and begin to blur some of the distinctions between the surgeon and the surgical oncologists and the radiation oncologist,” Dooley says.

With patients following Dooley from the East Coast and his reputation growing in the state, he already has a full patient load. Vannatta says the college soon will be recruiting a second, highly qualified breast surgeon.

The move to the new 178,000-square-foot OU Physicians clinic building has helped ease space constraints and will enhance the Breast Institute’s ability to hire additional staff and perform routine screenings in a timely fashion. Both the Breast Institute

■ Nina Mayr, a highly respected radiological oncologist who specializes in women’s cancers, came to OU from the University of Iowa with her husband, William Yuh, OU’s new chair of Radiological Sciences. They brought with them strong outside support for patient care, research and teaching.



■ Well known for investigating the links between hormones and breast cancer, new pathology chair Ann Thor, formerly at Northwestern University, also is determining which tests best predict how a cancer will respond to a specific treatment.



and the Department of Obstetrics and Gynecology are housed on the new clinic building’s third floor, which is dedicated to women’s health, with convenience and service a high priority. Patients will be able to schedule a Pap test, bone density screening and a mammogram all on the same day.

At the time of the move, 25 individuals were employed by the clinic, including physicians, nurses, technicians, and administrative and clerical staff. One of the nurses, Melissa Craft, has been specially trained to provide genetic counseling and fit prostheses.

There is some concern, however, that the Breast Institute soon will be looking for even more space. Additional staff and more examining rooms will be needed when a second surgeon joins the institute.

“We have moved into a new clinic that we are already close to outgrowing,” Dooley points out. “And we need imaging in the operating rooms. We may need to think about a diagnostic and therapeutic unit that is separate from the screening and health maintenance unit.”

One of the primary things that separates a breast health program at an academic health sciences center from those affiliated with other institutions is its research mission. In addition to his surgical and administrative activities, Dooley brings to OU his investigations of ductal lavage, a procedure that involves inserting a hair-thin catheter into the milk ducts, where 95 percent of breast



cancers are known to originate. This procedure allows physicians to collect large numbers of cells for laboratory examination. His abstract detailing the final results of a large-scale clinical trial of ductal lavage as a method of assessing breast cancer risk was awarded first-place honors at the 2001 meeting of the American College of Obstetricians and Gynecologists.

Oklahoma women at high risk for breast cancer already are benefiting from ductal lavage, which offers the earliest possible diagnosis. In fact, ductal lavage even can detect pre-cancerous cells, and steps can be taken to prevent them from developing into a tumor.

Pathologist Ann Thor brings with her a well-established breast cancer research program funded by the National Institutes of Health. In addition to researching the link between hormones and breast cancer, she is determining which tests best predict how a cancer will respond to a specific treatment. She was the first to report that women who have alterations of the HER-2 gene in their breast cancers are much more receptive to dose-intensive adriamycin, a widely used chemotherapy agent.

“This was important because these were the patients who historically were thought to have the worst prognosis,” she says. “When treated with the appropriate doses and protocol, their survival rate was approximately 90 percent after five years.” HER-2 testing is now a routine step in determining the best treatment plan for a patient.

The reputation of radiological oncologist Nina Mayr and her husband, William Yuh, is such that General Electric, the nation’s largest manufacturer of radiology equipment, and Varian, the largest manufacturer of radiation oncology equipment, have designated OU a Luminary Research and Teaching Site. This means that the two companies are committed to providing the OU Department of Radiological Sciences with the very best technology available for patient care, research and teaching. The Yuh-Mayr team also brings with them NIH-funded research on women’s health and a long history of research collaboration.

With a strong interest in breast-conserving treatment for breast cancer, Mayr also is looking forward to collaborating with Dooley, who has long been a strong proponent of breast conservation.

With major team players now in place and the new clinic facility up and running, there is tremendous excitement at the OU Health Sciences Center for the future of the Breast Institute. An indication of this is Mayr’s enthusiastic description of the institute’s weekly breast tumor conference.

“We discuss every woman’s care, and it’s wonderful—really wonderful! We bring together surgeons, radiologists, pathologists, medical oncologists, and me, the radiological oncologist, and we all work together to see that each woman gets the most advanced treatment and follow-up care. Breast cancer needs specialized care. It’s a very critical disease and requires experts at the top of their field working together and really communicating and collaborating. I believe that is what we have now at OU.”

It is safe to assume that Rainey Williams would be proud.

The OU Breast Institute: *A Personal Vision*

BY WILLIAM DOOLEY, M.D.



This is cutting-edge research

■ In the battle against breast cancer, internationally known breast cancer surgeon and researcher Dr. William Dooley intends to offer Oklahoma women the best possible screening, treatment and long-term, follow-up care through the OU Breast Institute.



Our goal for the OU Breast Institute is to offer the best possible long-term, follow-up care for women who have had breast cancer and women who are at high risk for developing breast cancer. These women have complicated issues, such as how do we manage their breast cancer risk while also managing their risk for heart disease and osteoporosis and menopausal symptoms. Unfortunately, primary care physicians don't feel qualified to deal with these complex issues. We need to develop a primary care subspecialty to deal with this sort of patient. OU could lead the way in this regard.

OU can also lead the way in doing the research studies needed to determine the best way to manage menopausal symptoms in women who have breast cancer and how to reduce their breast cancer risk without elevating their risk for heart disease. These are important issues, but there is no institution doing these things in a significant way. Surgeons research surgical treatment. Medical oncologists research chemotherapy. Radiation oncologists research radiation treatment. But no one is researching survivorship issues. We have the capability and the innovative thinking here at OU to find the best way to deal with these problems.

We need to work with the Department of Obstetrics and Gynecology to integrate care. For example, we can have women on chemotherapy see a gynecologist who is specially trained to deal with the sexual dysfunction issues that arise during their treatment. We were struggling to develop integrated services for our patients at Johns Hopkins, but no institution has really accomplished this yet. I'd like for OU to be first.

One of the things I developed at Hopkins that has become quite popular nationally is evidence-based medicine. This involves a flow sheet of what should be happening to

research comes out, we change protocols very rapidly so patients don't get left out of new advances.

I would like to triple the number of breast cancer patients now being cared for at OU and, in the course of doing so, maximize every opportunity to learn from each case how to provide better treatment in the future. Once we get the full details from the pathologist on how to treat the patient, every bit of breast tumor tissue that is removed should be given to researchers who can use it to understand how to design better treatment in the future.

We know now that the order in which surgery, radiation and chemotherapy are given doesn't make any difference. We also know that chemotherapy fails to work two-thirds of the time, and we don't understand why. So, one of the obvious things to try is to administer chemo before we operate on the patient. Then we have the opportunity to see what's going on and determine why the cells didn't die. This would give us the evidence we need to try another treatment.

Breast health at OU has not been at the cutting edge of new treatment research. We are just beginning to do that. We are, for instance, part of the initial FDA's testing of a microwave ablation device, which could potentially be a very big step forward as we find tumors that are smaller and smaller. We may be able to kill the cells in those tumors without surgery, which makes screening all the more important. Ductal lavage offers a great deal of promise here.

Ductal lavage is a technology that's been around in a limited way for decades but never really went anyplace. With the development of microinstrumentation and tubes tiny enough to thread through the milk ducts, the idea has resurfaced. The first clinical trials showed that we can detect premalignant changes in about a quarter of women at high risk for breast cancer. And

Even so, the pathology of examining cells that come from that washing of the ductals is still fairly crude. We need to find better ways to look pathologically for the earliest changes and use the washings to find genes associated with breast cancer. This is one of the things on which Dr. Ann Thor and I will probably work together. And we're trying to establish a collaboration with the University of Kansas to look for genes that predict breast cancer and determine if these precancerous changes we are finding can be reversed with cox-2 inhibitors such as Vioxx and Celebrex. These new anti-arthritis medications do appear to have a useful effect.

We are finding cancer or precancerous changes either pathologically or by genetic tests of the fluid from the nipple even when mammograms, MRI and ultrasound are normal. That's what led me to the endoscope and submillimeter endoscope, which allow us to look extensively throughout the ductal tree. I'm working with an endoscopy company to gain the ability to biopsy through the scope, which will allow us to take off little precancerous lesions at different stages along the course of the duct. By studying these lesions, we can better understand the microbiologic events progressing toward cancer.


This is cutting-edge research that has the potential to grow very rapidly. I envision people coming here from all over the country to seek the very latest in screening and care. Our faculty are beginning to meet and talk about how big we should grow and how rapidly—and what the University and the hospital need to do in terms of allocating resources.

Oklahoma is five to eight years behind other places in the country in the diagnosis and care of breast cancer. We are gathering together here at OU people who are at the top end of research, but we need also to jump way ahead and introduce a totally

that has the potential to grow very rapidly.

each patient at each stage of her treatment. When this sequence does not happen in the right order at the right time, we have an extensive discussion during the weekly multidisciplinary conference. And as new

in about 3 percent of the women, we were able to detect cancers that had not been detected by other screening methods. We found in situ cancers five to 10 years before being detected by a mammogram.

new level of breast cancer care for the women of this state. We want the OU Breast Institute to offer women here an even higher level of care than that available to women on the east and west coasts. 

Little River Zoo:

Where the Once-Wild Things Are

YOU GRADUATE JANET SCHMID
TOOK A SLICE OF BLACKJACK FOREST
AND CREATED A PLACE WHERE ANIMALS
CAN LIVE AND HUMANS CAN LEARN.

BY KATHRYN JENSON WHITE

In Janet Schmid's world, scorpion stings and gnat nips are nothing. Monkey munches and burro bites are what a woman has to watch out for.

"I don't remember ever being afraid of any animal as a child, but later in life I've had some eye-opening experiences," says the person responsible for dreaming up Norman's Little River Zoo and, over the last 12 years, making it real. A scar on her hand commemorates the monkey's biting ways, and a much more impressive one a few inches below her neck reminds her daily of the danger behind the generally charming faces of the more than 400 furred, feathered, gilled and quilled creatures who live in the zoo.

"Our burro tried his best to suffocate me," she recalls. "Their defense is to crush the neck with their jaws to stop the intruder's breathing. Thank goodness he was a short donkey. He got me just below the neck."

Schmid was covering for an absent keeper when she fed donkey before camel. Camel became upset. Schmid turned to

take the donkey's food into the shed to calm the camel. Donkey became more upset than camel.

"He grabbed me in a full-mouth bite and pinned me to the ground for what seemed an eternity," she says. "Someone here heard me screaming, ran into the enclosure and lifted the donkey off me."

Schmid does not hold grudges; Little River Zoo still has the donkey.

"If you get bitten by an animal, it's because you messed up," she insists. "The attack is always the last resort. The donkey bite resulted from human error. In his little donkey mind, he had no options."

continued

Little River Zoo founder Janet Schmid takes time out to offer some encouragement to "Ginger," a mother-in-training. Formerly a pet, the capuchin monkey had trouble raising the 4-week-old offspring clinging to her back and had to be separated from the troop to learn the fine art of motherhood.

PHOTOS BY ROBERT TAYLOR