Attacking cervical cancer

MINI-MEDICAL SCHOOL

SPIRITUAL HEALING

CONSTRUCTION JUNCTION
When Congress balanced the nation's budget, they did the right thing. But by cutting millions of dollars in Medicare support for teaching hospitals, they went too far. To save money, they unintentionally hurt programs that could save lives.

The special work done by America's teaching hospitals is suddenly in jeopardy. Although we only account for 6 percent of all hospitals, every year we provide essential health care services to millions of Americans.

We are home to 61 percent of regional trauma centers, 70 percent of burn care units and more than half of all pediatric intensive care units. We lead the world in developing new treatments and cures. We train the nation's doctors. And we do even more. Nearly half of the nation's uninsured who are seeking hospital care find it at our teaching hospitals. So, for millions of Americans, our emergency rooms are the local doctor's office.

Providing all these special services costs us tens of millions of dollars each year and we need the support we get from Medicare to help pay for it all. Please contact Congress today and urge them to protect our nation's teaching hospitals when they're balancing the budget. Because in real life, there are real consequences.

A campaign to call attention to budgetary concerns for academic medical centers has been launched by the American Association of Medical Colleges and includes advertisements similar to the one shown. This advertisement was placed by the School of Medicine in the St. Louis Post-Dispatch in early July.
FEATURES

8 Into the Fold by Holly Edmiston
Medical Center chaplains take a more clinical approach to spiritual care.

12 Turning Point by Linda Sage
Combining radiation and chemotherapy treatments improves survival for women with cervical cancer.

16 Mini-Medical School by Jean Tishler
A high school science teacher gets a hands-on opportunity to study medicine through a new School of Medicine program.

20 A Work in Progress by Robert Boston
A series of colorful photos taken over the last two years reveals the vibrant hues and attractive configurations of the construction process taking place at the Medical Center.

DEPARTMENTS

Pulse

Student Stage

Alumni Report

Reunion 1999

Class Notes
Married team directs genetics division

A MARRIED team of British researchers from Texas is directing the new division of human genetics at the School of Medicine. Michael Lovett, PhD, and his spouse, Anne Mary Bowcock, PhD, came from the University of Texas Southwestern Medical Center in Dallas, where both were associate professors. Lovett was in the departments of otorhinolaryngology, molecular biology and oncology, and Bowcock was affiliated with the departments of internal medicine and pediatrics.

Bowcock has localized several human disease genes, including the gene for familial partial lipodystrophy, a disorder characterized by abnormal distribution of body fat. She also tracked down a gene called BARD1, the protein product of which forms a complex with that of the breast cancer gene BRCA1.

Lovett has developed tools for identifying large numbers of new genes from long pieces of DNA. His long-term goal is to obtain new information about the distribution, evolution and expression patterns of human genes. He also is involved in collaborative studies of genes that cause bone defects and genes involved in hearing loss. Another collaboration focuses on the molecular basis of Cri-du-chat syndrome, in which loss of part of chromosome 5 causes severe mental and physical retardation.

Teitelbaum receives Neuman Award

STEVEN L. Teitelbaum, MD, the Wilma and Roswell Messing Professor of Pathology, received the 1998 William F. Neuman Award from the American Society for Bone and Mineral Research.

Teitelbaum, who also serves as a pathologist at Barnes-Jewish Hospital and St. Louis Shriners Hospital for Children, is an expert on the normal biology and pathology of bone. In the late 1970s, he developed a method of using structural changes in bone to diagnose bone disorders such as postmenopausal osteoporosis. He also showed that vitamin D therapy helps overcome defective bone formation that occurs with kidney failure.

He now studies how osteoclasts degrade bone and has developed an inhibitor that prevents postmenopausal osteoporosis from developing in rats, which may one day lead to a treatment for human osteoporosis.

Johnson named to AMA council

HILARY D. Johnson, a fourth-year student in the Medical Scientist Training Program at the School of Medicine, has been named to the American Medical Association Council on Scientific Affairs. She will serve a one-year appointment.

Johnson is the only medical student appointed to the 10-member council, which also is composed of eight physicians and one medical resident. The primary purpose of the CSA is to advise the AMA on aspects of biomedical research and to help formulate policy on scientific issues, from AMA-sponsored projects to government involvement in research. The CSA also serves as a parent body for several advisory panels including those on cancer, alcoholism and drug abuse.

Johnson served as the AMA-Medical Student Section Liaison to the National Residency Matching Program at the AMA's 1998 annual meeting. She also is an active member of the Missouri State Medical Association having served as its secretary/treasurer in 1997-1998.

Johnson is working on her thesis in the laboratory of Timothy J. Ley, MD, professor of genetics and of medicine. She is developing a mouse model for bone marrow transplant and graft vs. host disease.
Faulty alarm system may trigger asthma symptoms

A L T H O U G H most scientists regard immune cells as the culprit in asthma, a new study suggests that resident airway cells may be at fault. These cells contain an anti-virus alarm system which, if not turned off, triggers persistent inflammation.

"I think this study will change the way people think about asthma," says Michael J. Holtzman, MD, head of the research team.

Holtzman is the Selma and Herman Seldin Professor of Medicine, director of the division of pulmonary and critical care medicine and associate professor of cell biology and physiology. His team reported its findings in the May 1 issue of the Journal of Clinical Investigation (JCI). Lead author Deepak Sampath, PhD, was one of Holtzman's graduate students and now is a researcher with Wyeth-Ayerst.

Holtzman has focused on one of the cellular signaling pathways controlled by molecules in the JAK/STAT family. This pathway responds to cytokines released during viral infection. When it is activated, a protein called Stat1 moves into the nucleus and switches on certain genes. The products of these genes attract immune cells to fight the virus.

The JCI paper suggests that the same JAK/STAT pathway plays a key role in asthma by operating even in the absence of viral infection.

The researchers located Stat1 in epithelial cells they had brushed from people's airways and in biopsy samples of the airway lining. In healthy subjects and subjects with chronic bronchitis, Stat1 was usually in the cytoplasm, where it presumably was inactive. But in samples from 24 people with asthma, it was usually in the nucleus, presumably switching on genes.

The researchers then looked for consequences of Stat1 activation, focusing on the products of genes Stat1 is known to turn on. They found abnormally high levels of three inflammatory proteins in cells brushed from the airway. These were Stat1 itself; ICAM-1, which makes immune cells stick to the airway, and a protein that regulates interferon production. Levels of ICAM-1 correlated with the number of immune cells (mostly T cells) in the biopsy samples.

Finally, the researchers looked for the cause of Stat1 activation. Interestingly, interferon-gamma, a critical anti-viral mediator and the normal trigger for epithelial Stat1 activation, was present only at the usual low level found in subjects with asthma.

"In contrast to what has been presented in the past, asthma appears to be linked to abnormal cytokine signaling rather than to a change in cytokine production," Holtzman says. "Also, the abnormality appears to be localized to a cellular pathway that was not supposed to be part of this disease. Reprogramming of these controls for epithelial immune-response genes helps explain several missing pieces of the asthma story."

Holtzman says the findings offer the first example linking abnormal behavior of JAK/STAT pathways for cytokine signaling to the development of an inflammatory disease. 

Outlook Summer 1999
Neil H. White, MO

White to oversee pediatric endocrinology

NEIL H. White, MD, associate professor of pediatrics, has been named director of the division of pediatric endocrinology and metabolism. White has served as interim division director since the death of Julio Santiago, MD, in 1997.

White also is associate director of the School of Medicine's General Clinical Research Center and a staff physician at St. Louis Children's and Barnes-Jewish hospitals and Missouri Baptist Medical Center. White previously was co-principal investigator for the St. Louis portion of the national Diabetes Control and Complications Trial, which determined that strictly controlling blood sugar levels can prevent or delay serious complications of diabetes. He now is lead investigator for the local portion of the national Diabetes Prevention Trial-Type 1, to determine if taking insulin capsules or injections can prevent or delay early-onset diabetes in those at moderate risk for the disease. White also is participating in several trials of psychological and social interventions to help teens with diabetes, and he is studying the effectiveness of intensive diabetes therapy for children with early-onset diabetes.

"An organ donor saved my brother's life!"

My brother Frank was one of the 60,000 people waiting for an organ transplant. Every day 13 people die while waiting. Fortunately, a donor was found and Frank received a heart transplant. Help end the wait. Decide to become an organ donor and tell your family. Pass life on.

PASS IT ON.

For information call 362-WELL

This public service announcement, featuring Joe Torre, manager of the New York Yankees, promoting organ donation/transplantation will appear on highway billboards in the St. Louis area. An audio version airs on KMOD radio in St. Louis during live broadcasts of St. Louis Cardinals baseball games. The PSA was sponsored by Washington University School of Medicine, Mid-America Transplant Services and Barnes-Jewish Hospital.

U.S. News & World Report ranks medical school #4 and BJH #7

WASHINGTON University School of Medicine is one of the top four medical schools in the country, and is No. 1 in student selectivity, according to the U.S. News & World Report 1999 annual rankings of graduate and professional programs.

The school ranked No. 4, following Harvard, Johns Hopkins and the University of Pennsylvania. The rankings appeared in the March 29 issue of the magazine.

In July, the magazine released its 1999 guide to "America's Best Hospitals," and Barnes-Jewish Hospital ranked seventh in the country. It was the only Missouri hospital to be listed on the magazine's prestigious honor roll.

Medical schools were evaluated according to national reputation, research activity, faculty resources and student selectivity. Student selectivity is a quality measure that reflects the entering class's undergraduate grade point average and scores on admissions exams.

"The university community is proud to see the School of Medicine has been in the top five in recent years," says William A. Peck, MD, executive vice chancellor for medical affairs and dean. "It is especially gratifying to see our students again ranked so highly among their peers, a well-deserved credit to them and to our medical faculty and staff who are devoted to training the world's finest physicians and scientists."
Diseased ascending aortas can turn deadly

Researchers here have found that thickening of the aorta at the site where it attaches to the heart can significantly increase the risk of stroke. Reporting in the April 1, 1999, issue of the Journal of the American College of Cardiology, investigators say atherosclerosis, or hardening of the ascending aorta, predicts future brain injury and death.

“This is the first prospective, long-term study of the relationship between atherosclerosis in the aorta and risk of stroke and death. We found that as this important vessel becomes diseased, long-term risk increases dramatically,” says Victor G. Davila-Roman, MD, principal investigator and associate professor of medicine and anesthesiology.

Davila-Roman and colleagues studied 1,957 patients undergoing cardiac surgery. During the surgery, the researchers made images of the ascending aorta using a technique called epiaortic ultrasound. After evaluating the images to detect the presence and severity of atherosclerosis, they followed the patients for an average of three-and-a-half years.

Stroke is a major problem in patients undergoing cardiac surgery. Depending upon patient age and other risk factors, up to 15 percent have strokes during or soon after surgery. The investigators previously had shown that hardening of the aorta was a risk factor for stroke after cardiac surgery.

More than half of the patients in the study had no signs of atherosclerosis. About 24 percent had mild disease, while 13 percent were classified as moderate. The remaining 5 percent had severe atherosclerosis in the aorta.

Although some patients from all four groups suffered neurologic events or died in the years after their surgery, the rates were significantly higher in those with the most advanced atherosclerosis.

In all, the risk of a neurologic event or death increased one and a half times as the severity of the atherosclerosis increased from normal or mild to moderate. And there was more than a 300-percent increase in the incidence of both as the severity of disease progressed from normal or mild to severe.

Most stroke-causing blood clots form in the heart or in the carotid arteries leading to the brain, but the source of about 40 percent of strokes is unknown. Davila-Roman and Benico Barzilai, MD, co-investigator and associate professor of medicine, believe that diseased aortas could explain some of them.

School receives $218.4 million for human DNA sequencing

The School of Medicine has been awarded the University's largest grant ever. Robert H. Waterston, MD, PhD, the James S. McDonnell Professor and head of genetics, will receive a five-year $218.4 million grant from the National Human Genome Research Institute (NHGRI) of the National Institutes of Health (NIH). This total includes $38 million that was announced in March.

The grant is part of a five-year $581.7 million allocation from the NHGRI to three institutions that are sequencing major portions of the human genome. The other two are the Whitehead Institute/MIT Center for Genome Research in Cambridge MA, and Baylor College of Medicine in Houston.

Waterston directs the medical school's Genome Sequencing Center, a leader in the international Human Genome Project.

The human genome is all of the DNA in our chromosomes, and it contains 3 billion genetic letters. In collaboration with the Sanger Centre in Cambridgeshire, U.K., School of Medicine scientists already have sequenced the genome of a roundworm that has 100 million genetic letters. Their preliminary work on human DNA aided the discovery of genes involved in breast cancer and deafness.

The five-year grant will enable researchers here to complete a working draft of up to one-third of the human genome by the spring of 2000. They will hone that version into a highly accurate sequence by or before 2003. The Sanger Centre will complete another third of the genome. Other laboratories in the United States and Europe will sequence the rest.
MEN whose blood tests leave them uncertain whether they have prostate cancer may soon be able to take an additional test to clarify their risk, reducing the need for unnecessary biopsies.

A study of 937 men of intermediate risk for prostate cancer found that the current Tandem free PSA blood test for prostate cancer can be combined with another blood test under development for the human kallikrein 2 enzyme (hk2). Together, the tests identified 91 percent of the men who were cancer-free. The combination of tests also detected 40 percent of the men who had prostate cancer and needed further evaluation.

William J. Catalona, MD, a leader of the multicenter study and a professor of urologic surgery, presented the findings in May at the annual meeting of the American Urological Society.

Since the early 1990s, men 40 and older and men at high risk for prostate cancer have received annual tests to determine the total level of a prostate marker called prostate specific antigen (PSA) in their blood. The protein's level rises when men have the cancer, possibly because it escapes from the prostate as tissue is destroyed.

Doctors are cautious about performing biopsies on the roughly 17 percent of men who have intermediate levels of PSA in the bloodstream — 2.5 nanograms per milliliter to 4 nanograms per milliliter — and negative results on digital rectal exams. Undergoing a biopsy of the walnut-sized gland is invasive and can cost $1,200 or more.

Catalona and his colleagues previously demonstrated that combining the total PSA test with the free PSA test can help catch 95 percent of prostate cancers and reduce needless biopsies in this group by 20 percent. Unlike levels of total PSA, free PSA levels fall with prostate cancer. To reduce reliance on biopsies further — and identify more cancers in early, treatable stages — the investigators determined whether the test for free PSA could be combined with one for the recently identified hk2 enzyme. The enzyme also is produced and secreted by the prostate, but its level in the blood rises with cancer, particularly in more aggressive cancers.

The 937 men in the study already had undergone biopsies to determine whether they had prostate cancer. The researchers then compared the total hk2 with the percentage of PSA that was free in stored samples of their blood. By comparing both this ratio and the free PSA value with the biopsy results, the researchers generated cutoffs for deciding on a biopsy. The study indicated that a free PSA level of 10 percent or less or a ratio of hk2 to free PSA of 0.25 or more would strengthen the argument for performing a biopsy.

AOA fellowship recipient J. Clinton Walker, a first-year medical student, second from right, received the Alpha Omega Alpha Student Research Fellowship from John D. Davidson, MD, Alpha Omega Alpha Councilor, second from left. Alison J. Whelan, MD, associate dean for undergraduate medical education, is at left, and Matthew J. Silva, PhD, research assistant professor in the Department of Orthopaedic Surgery, is at right. Walker used the $3,000 award to conduct an original research project last semester in Silva's laboratory. The title of his project was "Effects of in vitro sodium fluoride exposure on the mechanical properties of mouse femora dose response behavior."
Chole to preside over otolaryngology research group

RICHARD A. Chole, MD, PhD, the Lindburg Professor and head of otolaryngology at the School of Medicine, is the new president of the Association for Research in Otolaryngology (ARO).

The ARO is the principal organization of ear, nose and throat researchers, with 2,000 members. The association emphasizes studies of hearing, deafness and balance disorders. Chole has been a member of the leadership council for the past four years and an ARO member for two decades.

Chole studies the cell biology of osteoclasts, which are bone cells that destroy bone. He also works with experimental models of middle-ear conditions that result from inappropriate osteoclast cell activity. For example, he studies how osteoclasts are activated by cholesteatomas, cyst-like growths on the eardrum that impair hearing if left untreated.

Chole also is known for discovering and developing an animal model for cholesteatoma and for developing a prosthetic device that functions as a replacement for middle-ear bones damaged by injury or infection. And he is co-developer of an antimicrobial tympanostomy tube used to ventilate the ear in patients suffering from repeated ear infections. This device decreases the rate of infections by 50 percent.

Author or co-author of more than 100 scientific articles, Chole also serves on the executive editorial board of Otolaryngology-Head and Neck Surgery. He also has been included in The Best Doctors in America, a directory of leading North American physicians.

DocLink: Critical information to the right person at the right time

MOTOROLA, Inc., a leader in advanced electronic systems and services, in conjunction with BJC and Washington University, has created DocLink -- a clinical information routing service to aid information delivery within the health care industry.

DocLink is a hardware, software and communications services system developed within Motorola's newly formed Healthcare Communications Solutions business, to improve the time-consuming, manual notification process now in place at most health systems and large hospitals.

DocLink was created after BJC and Washington University information executives and medical personnel approached Motorola, requesting a service that could be integrated with existing clinical systems and that would help clinicians manage the alerts and messages they receive.

DocLink testing was recently completed at Barnes-Jewish Hospital. "We needed a solution that would fit transparently with our existing automated systems that screen drug orders for appropriate dosing and drug interactions, route the alerts generated by these systems to the responsible clinician and guarantee that the alert is delivered. DocLink provided that solution for us," says Thomas C. Bailey, MD, assistant professor of medicine and director of medical informatics at Washington University.

"The feature that pharmacists liked most was the ability to receive drug-dosing or drug-interaction alerts in real time," says Rich Reichley, a clinical pharmacist at Barnes-Jewish Hospital.
Into the fold
Medical Center chaplains attend to spiritual dynamics of disease

by Holly Edmiston
HOSPITAL clergy are becoming more clinical in how they tend to the spiritual side of sickness.

Long a mainstay of United States hospitals, pastoral care is not about chaplains roaming the halls, periodically popping in on patients to brighten their day. There is now a scientific method to their ministry, and the spiritual care services department at Barnes-Jewish Hospital is leading the way in this new approach.

"Pastoral care historically has avoided thinking about what good we wanted to come from what we do - we just wanted to do good," says Chaplain Arthur M. Lucas, director of spiritual care services at BJH. Today, Lucas and his staff are assigned according to clinical service lines.

Doing so better serves patients because it allows chaplains to collect information they can share with fellow health care providers about the emotional and spiritual concerns of those who are dealing with particular illnesses.

When he joined BJH in 1990, Lucas, a Methodist minister, immediately began to visit with chiefs of service and other medical staff to determine what role the hospital's chaplains played in their departments. He asked them about their overall goals for their departments and, more specifically, what he and his staff could do to help them achieve those goals.

What resulted was a new alignment, whereby clergy become an integral part of the medical care team that patients can rely on for the length of their disease treatment. A visit from the chaplain becomes as routine and familiar as seeing a nurse or technician.

Patient surveys taken since the change show an increase in satisfaction in pastoral care services.

Historically, pastoral care departments were organized denominationally: Catholic patients saw a priest; Jewish patients visited with a rabbi. While that system is still in use, the most common method of organization today is by health services. In this provider-oriented structure, chaplains are assigned hospital floors in an attempt to balance the patient load among available staff.

And while the focus of pastoral care still rests on individual assessment and guidance, chaplains here have found that a clinical emphasis helps them to identify patterns that they can use to help other patients facing similar medical, emotional and spiritual dilemmas. Surprisingly, they have found that people facing the same medical challenges often have more in common spiritually than two people of the same religious faith.

"Patients teach us cumulatively," says Lucas. "The switch to clinically focused assignments allows chaplains to take what they learn from clinical experience and use that to more clearly focus on the unique spirit of the individual.

"We think about a clinical service line from a spiritual perspective," Lucas continues. "Being a member of the cardiology team or the oncology team allows chaplains to focus on a particular medical specialty and the spiritual dynamics inside of that." 

Robert Yim, the cardiology chaplain, has learned through discussions with many heart patients that those who can identify the "one thing" they most wanted after surgery — such as remaining healthy to note a significant family milestone — tended to recover more quickly. He also found that the fears and questions of one heart patient often mirrored another.

Chaplain Cheryl Palmer, a member of the thoracic surgery multidisciplinary team, agrees. "Lung transplant patients need to trust and believe in something greater than themselves," she says. "Patients often say to me, 'I'm not very religious, but I am very spiritual.' They want to acknowledge the importance of that in their lives."
The capacity to trust and believe is not limited to God, Palmer adds. Many of her patients must endure a long wait before receiving a donor lung. Building a network of trust with the people around them – family and friends, other patients, medical and support staff – is a powerful element for getting through the pre-transplant, surgery and post-transplant periods.

Shirley Hicks, 60, of Sunrise Beach MO, says the weekly lung transplant support group meetings were especially helpful. She was lung transplant No. 74 performed by School of Medicine surgeon Joel D. Cooper, MD, Evarts A. Graham Professor of Surgery. Now, eight years post-surgery, she remains active and in good health.

"Friends don’t understand what you’re going through," says Hicks, adding that she valued the one-on-one spiritual care she received from Palmer as a BJH patient. "They care, but they don’t know how frightening it is to not be able to breathe. Everybody in the support group was in the same boat."

Darla Lovasco, RN, an assistant nurse manager on the thoracic surgery floor, says she also has benefited from the chaplain’s presence. Because she often deals with issues of death and dying, Lovasco relies on Palmer as a sounding board, and has even prayed alongside her with patients and their families at the bedside.

In addition to providing care for patients and staff, the spiritual care services department also serves as a nationally accredited clinical pastoral education (CPE) training center. Like all BJH chaplains, Lucas is board-certified with the Association of Professional Chaplains. He also is a certified supervisor with the Association for Clinical Pastoral Education, and heads BJH's efforts in offering chaplaincy post-graduate training.

Hospital chaplains also maintain an alliance with the School of Medicine. Lucas facilitates "Major Religious Traditions and Health Care," a humanities course offered to first-year medical students. It is designed to provide students with basic knowledge of the tenets of major religions in the United States, and to help them understand the role patient and family faith commitments play in decision-making and healing.

"Faith and Medicine," a required course in the core humanities curriculum, offers sessions that further explore the roles religion and spirituality play in health care. Funded by the National Institute for Healthcare Research, the course is a team effort led by Stephen S. Lefrak, MD, assistant dean for the humanities in medicine program, with the help of Thomas H. Gallagher, MD, instructor in medicine, Rabbi Jay B. Goldburg, EdD, DD, and Lucas.

Offering these courses is not an attempt to dismiss the neutral faith community outlook of the medical school nor to turn physicians into chaplains, explains Gallagher, assistant director for the humanities program. The goal, he says, is to let first-year medical students know that spirituality is important to patients and to help them feel more comfortable discussing spiritual issues with their patients.

"Medical students need to recognize that man is more than a machine," adds Lefrak, professor of medicine. "We want physicians to be able to talk about a patient's spiritual needs and put them in touch with the appropriate hospital resources."
Reconnecting [to] life

ROGER* was 10 years old when he became involved with “the life,” a dangerous lifestyle connected with gangs, drugs and violence. At 22, he was in Barnes-Jewish Hospital recovering from multiple gunshot wounds. He had been arrested four times. “A stupid life” is how he describes his past today.

To help young men like Roger, Chaplain Lawrence Olatunde works to help young victims of violence resurrect their faith.

Lawrence Olatunde and Barnes-Jewish Hospital (BJH) spiritual care services director Arthur M. Lucas have implemented a two-phase study called “Community Reintegration Intervention with Violent Victims of Violence.” It poses the questions of whether reintegrating violent individuals into a faith community will reduce their future need for emergency care, and, if so, will that connection lead to an increased quality of life for the individual.

“If you heal the wounds alone, a patient will come back with worse injuries,” says Olatunde, the ER/trauma chaplain at BJH. “If you heal the whole person – body, mind and spirit – they will remain healthy, probably for the rest of their lives.”

Roger was no stranger to the ER. He had been treated for violence-related injuries three times prior to the incident that got him admitted for a long-term stay. Olatunde has noted a common pattern of experiences among patients like Roger that lead to multiple hospital visits. During his four years as a member of the ER/trauma team, he has wondered why this patient population continues to have the same experiences, and what can be done to reduce their chances of becoming repeat victims.

During the study’s initial phase, Olatunde found that nearly every violent victim of violence he encountered was a churchgoer early in life, usually with a parent or other family member. As these individuals reached adolescence and peers began to take on a greater role in their lives, they pulled away from traditional family and church authority. By the time the violent incident occurred, the person had generally lost all contact with his church community.

Olatunde now hopes to prove that the process of dissociation can be reversed. Early faith and remembrance of respect for the authority of clergy carries weight with these young patients, he says. “They may not trust their doctor, nurse or social worker, but they often see someone of the clergy as a person they can believe in.”

At the time of his hospitalization, Roger had expressed a strong faith in God, and believed that God still loved him. With Olatunde’s help, he realized that reconnecting with his church, along with earning a high school equivalency degree and going on to college, were among the first steps he needed to take to end the cycle of violence in his life.

One year later, he has moved from his previous home to another part of town to avoid temptation, and he remains committed to the life changes he has made.

Olatunde believes that many violent victims of violence want to change, but don’t know how, or simply believe it will be too difficult. He works closely with the patients, helping them to analyze every aspect of their lives, including where they live and the influence of family and friends. By first identifying their current lifestyles, patients are then able to design the lives they would like to live in the future.

Olatunde works with area churches to connect each person with the church that will best suit his spiritual needs. Local pastors have been receptive, even though it can be both challenging and frightening to minister to someone with a violent past. They know, he says, that they may be the last hope for these individuals.

“We want to heal the lives of these people so that they can become productive citizens,” says Olatunde. “Our ultimate goal is reconnection — to a faith community and the community at large.”

*Roger is a pseudonym.
New study results lead to major change in treatment of cervical cancer

OF THE NEARLY 14,000 American women diagnosed with cervical cancer each year, almost 5,000 die from the disease. So Corrine Freant counts herself lucky to be alive. In 1995, she received a combination of radiation treatment and chemotherapy as a participant in a clinical trial at Washington University School of Medicine and Barnes-Jewish Hospital. "I think," she says, "it was the only thing that saved my life."

The 74-year-old Florissant accountant got the dreaded news late in 1994. "Any time you hear you have cancer," she says, "you think it's the end of the world." But Freant's world didn't end, though it became very difficult for a time. Today, she cooks and cleans at home and volunteers at her church. And she even completes the occasional tax return.

BY LINDA SAGE
Combining treatments

Most women who have been treated for invasive cervical cancer have received only radiation therapy. But last February, the National Cancer Institute (NCI) alerted physicians to the results of five studies that are changing the standard of care. The research showed that women who take the cancer drug cisplatin periodically during daily radiation therapy are much less likely to die from cervical cancer than those who are treated with radiation alone. They also are more likely to remain cancer-free.

"Until this point, there really have been no major advances in the treatment of women with cervical cancer," says Perry W. Grigsby, MD, professor of radiology. "Now all of these studies have demonstrated an advantage to giving chemotherapy with radiation therapy."

The five studies were available at the School of Medicine, but two became the focus of research. The results from one, SWOG 87-97, were presented in March 1999 at a meeting of the Society of Gynecologic Oncologists, and Grigsby was a co-author. The study focused on women who had their uterus and pelvic lymph nodes removed because of early cervical cancer. The researchers found that combining subsequent radiation therapy with cisplatin plus another cancer drug, 5-fluorouracil, gave better long-term results than radiation therapy alone. The women who underwent the combined treatment had a projected four-year survival rate of 81 percent instead of 71 percent.

The second study, RTOG 90-01, looked at women with bulky tumors that had spread over the cervix or into the wall of the pelvis and couldn't be surgically removed. In some cases, cancer cells also had migrated to lymph nodes in the pelvis. The results appeared in the New England Journal of Medicine on April 15, 1999, and Grigsby and David G. Mutch, MD, associate professor of obstetrics and gynecology and director of the division of gynecologic oncology, were co-authors. Between 1990 and 1997, they and other physicians in their divisions treated about 20 percent of the study's 392 participants, including Corrine Freant. Scientists from the University of Texas M.D. Anderson Cancer Center led the RTOG 90-01 study.

The women were randomly assigned to one of two groups. Both groups received external radiation to the pelvis from a linear accelerator five days a week for seven weeks. During that time, they were hospitalized twice so a radioactive implant could be placed temporarily in the cervix. The rod-shaped implant directly irradiated the cancer cells over several days.

The women in the second group underwent chemotherapy as well. During weeks one, three and, in some cases, six, of the radiation therapy, they received cisplatin plus 5-fluorouracil intravenously. In the laboratory, both drugs have been shown to enhance the deadly effect of radiation. "The idea is that cancer cells that have been irradiated might be more sensitive to chemotherapy," Mutch says. "And chemotherapy might make it more difficult for cancer cells to recover from irradiation."

The researchers followed the women for several years. They found that 58 percent of those who had been treated with radiation alone were alive five years after treatment. But the rate was an impressive 73 percent for those who had received chemotherapy as well as irradiation. So 21 percent of those who survived probably could attribute their recovery to the addition of chemotherapy.

The researchers also determined how many of the study participants were free of cervical cancer five years after treatment. The rate was 40 percent for those treated with radiation alone but 67 percent for those who received irradiation plus...
chemotherapy. Cancer cells both reappeared in the cervix and migrated to distant sites at higher rates in the women who received only radiation.

Because each of the five studies used a different formulation of chemotherapy, the best agent isn't yet determined, though cisplatin, which was used in all of the studies, appears to be beneficial. So the School of Medicine researchers now are participating in a new NCI-funded study that directly compares cisplatin with 5-fluorouracil as an adjunct to radiation therapy. They expect to recruit patients for up to two years.

**Wire loops**

UNLIKE Corrine Freant, 60 to 80 percent of women with newly diagnosed invasive cervical cancer have not had a Pap test in the previous five years. But women who do get screened every year can be treated for abnormalities before they develop full-blown cancer. Pap smears, which were first described in 1943, came into routine use by the 1960s, and deaths from cervical cancer fell by 74 percent between 1955 and 1992.

If a Pap smear shows abnormal cells, such as cells with unusually large and misshapen nuclei, a woman is said to have dysplasia. The cervix then is examined with a magnifying instrument called a colposcope. If abnormal areas are seen on the cervix, the gynecologist will remove a small sample of tissue with forceps or a scraping instrument called a curette to determine whether the patient really has cancer. Alternatively, a cone of tissue may be removed with a scalpel or laser under general anesthesia or with a newer technique called LEEP (loop electrosurgical excision procedure). Using wire loops that are heated by radio waves, LEEP cuts out a thin, round slice of tissue. Performed under local anesthesia in a doctor's office, the procedure takes only 10 to 15 minutes.

Although LEEP now is widely used to remove abnormal tissue from the cervix, its effectiveness as a diagnostic tool has not been thoroughly studied, though it has the advantage of preserving the cells it removes. But in a 1995 paper in *Gynecologic Oncology*, Thomas J. Herzog, MD, assistant professor of obstetrics and gynecology, and colleagues reported that LEEP is an effective biopsy tool if used by experienced physicians. During an 18-month period, they studied LEEP samples from 85 women with cervical dysplasia whose previous diagnostic tests were inconclusive. Eighty-three percent of the samples were adequate for diagnosis, 13 percent were suboptimal, and 4 percent could not be used. The most important factor was the experience of the 10 residents and seven faculty who took part in the study. Only 75 percent of the samples obtained by those who had performed fewer than five LEEPs were adequate, whereas the rate climbed to 86 percent among physicians who had performed five or more.

"So LEEP is an excellent option in experienced hands," says Herzog, who recommends that women ask their physicians how many LEEPs they have performed recently before consenting to the procedure.
Faults in genes

Despite the success of Pap smears, there is still room for improvement. Cervical cytology screening costs the nation nearly $6 billion annually, misses some abnormal lesions and gives positive results to between 6 and 55 percent of women whose cervixes are normal. About $20 billion per year is spent on additional evaluations. “Our long-term goal is to come up with alternatives to Pap smear screening so we can improve the accuracy of screening,” says Janet Rader, MD, assistant professor of obstetrics and gynecology. “We would like to find some nonrandom occurrences, whether biological or genetic, that are associated with the progressive change from dysplasia to invasive cervical cancer.”

In collaboration with Rosalind J. Neuman, PhD, research assistant professor of psychiatry and of mathematics in the College of Arts and Sciences, Rader has determined that women who are infected with human papillomavirus (HPV), the major risk factor for cervical cancer, are statistically more likely to develop invasive disease if their cells make a certain HLA protein. The HLAs—human leukocyte antigens—sit on the surfaces of nucleated cells, distinguishing the tissues and organs of one person from those of another. The hundreds of genes that encode them lie in a region of chromosome 6, and there are several versions—alleles—of each. Because chromosomes come in pairs, each person has two versions of a particular HLA gene, one inherited from the mother and the other from the father.

The researchers are focusing on the DQ stretch of the HLA region, where genes associated with diabetes, melanoma and other diseases are thought to lie. Since the early 1990s, they have studied DNA samples from 96 women with confirmed cervical cancer, also analyzing samples from the women's parents. They found that one version of the gene DQB1, an allele called 0303, was transmitted by one of the patient's parents to high-risk HPV-infected women with cervical cancer at a much higher rate than would be expected by chance. This excess transmission of the DQB1 0303 allele was not seen when the total sample of women—those with and without certain types of HPV—was statistically analyzed.

With Daniela S. Gerhard, PhD, research assistant professor of genetics, Rader also is looking at chromosomal regions that often are missing in the cervical cells of women with invasive cervical cancer. This phenomenon, called lack of heterozygosity, indicates that a gene in the corresponding region of the partner chromosome has gone awry.

When the researchers evaluated 107 cervical tumors, they found that 57 of them had lost genetic material from the short arm of chromosome 6. Most of the abnormalities were in a region called 6p23, which is different from the region that Rader and Neuman are studying. Analyzing 16 samples of parental DNA, they determined that 10 of the patients had inherited the defective chromosome from their fathers and six had acquired it from their mothers. The research suggests that a gene that is important for the development of cervical cancer is located in or very near 6p23.

“If we find genes that are mutated frequently in patients with cervical cancer, it should be possible to develop a panel of assays that could be used for screening,” Rader says.

Corrine Freant would have benefited from such a test because Pap smears didn't pick up her cancer. So would her mother, who died of cervical cancer. “If a person were to test positive for a genetic abnormality that could be linked to cervical cancer, we would know that she would be at high risk for the disease and definitely should be treated,” Rader says.
On May 11, 1999, I strode down the aisle to the sounds of Elgar's "Pomp and Circumstance" and received my MMD – Mini-Medical Degree – from Washington University's Mini-Medical School. I proudly accepted my official, blue diploma and shook hands with Cynthia Wichelman, MD, assistant professor of medicine, and coordinator and moderator of the university's first mini-medical school.

I have always been fascinated with the workings of the human body. Titles from Preston's *The Hot Zone* to Stein's *Internal Medicine* line my bookshelves. My favorite television programs are "Quincy" reruns and "ER." So, when an opportunity arose in March to listen and learn from some of the finest physicians and researchers in the world, I couldn't pass it up.

As an undergraduate student at the University of Pennsylvania, I earned a degree in the biological basis of behavior. I continued my education as a doctoral student in the Neuroscience Program at Washington University.

During my second year of graduate school, my interest in teaching was sparked when I served as a teaching assistant for an introductory biology class. Learning about biology is one of my greatest joys in life, and I discovered that teaching gave me the opportunity to share that joy with others. My desire to teach burned stronger than my desire to conduct laboratory research, so I left the Neuroscience Program with a master of arts degree and transferred to Washington University's Summer 1999 Outlook.

Tishler with her biology students at Ladue's Horton Watkins High School.
program in secondary education to develop my teaching skills.

Two years ago, I began teaching biology and anatomy and physiology at Ladue's Horton Watkins High School. My research experience helps me to conduct interesting laboratory activities and enables me to convey good problem-solving strategies to my students. I am also anxious to teach my students to communicate intelligently with medical professionals regarding their own health issues and those of their family members. I often have thought that a course in clinical medicine would assist me in achieving this goal. I've even said to my husband that a summertime or evening "medical school" would be ideal for me.

I initially heard about Mini-Medical School from one of my students, whose parents are supporters of Washington University's School of Medicine. The student handed me the program's literature and said, "This sounds like it's right up your alley." The same day, my principal, William Raisch, PhD, slipped the same brochure into my mailbox. I applied immediately.

Mini-Medical School consisted of eight sessions of educational and entertaining lectures, hands-on lab work and tours of Medical Center facilities, such as the Genome Sequencing Center and the Bernard Becker Medical Library and Media/Computer Center.

I was among more than 1,000 people who applied to attend the Mini-Medical School. Just over 100 of us were accepted; participants ranged in age from 13 to 87 and included attorneys, bankers, retirees, accountants, college professors, high school teachers and students, homemakers, researchers, police officers and waitresses.

Dr. Wichelman brought the idea for a mini-medical school to the Medical Center after hearing from a relative who had gone through a similar program at another institution. "I thought that offering such an experience might benefit the university by exposing people to what is available at Washington University and the Medical Center," says Wichelman.

As a science teacher, Mini-Medical School not only met my expectations, it far exceeded them. Every lecture I attended provided me with interesting information to share with my students. Some of the material I was able to use immediately. For instance, William Clutter, MD, delivered his lecture on diabetes the night before I planned to introduce genetic engineering to my students.

After hearing Dr. Clutter's presentation, I decided to begin my lesson with information about how diabetes affects the body and to then focus on the genetic engineering of insulin. Since some of my students have diabetes and many of them know someone with the disease, the lesson was relevant and captured their attention.

Better than ER

The discussion that Dr. Wichelman introduced on emergency medicine also piqued my interest because many of my students watch the popular television program "ER."

She explained the "SOAP" method of dealing with trauma victims after they enter the emergency room. For instance, with trauma victims, emergency medicine physicians must gather subjective information about the patient: type of trauma experienced; relevant past medical history; what medications are being taken; and what, if any, allergies exist. They also must collect objective information about the patient: measure vital signs; make a physical exam; and take cervical, chest and pelvic X-rays. And based on the subjective and objective information, an ER doctor gives an assessment of what is wrong with the patient and recommends a treatment plan.

This information allowed me to forge a link between science class and a television program that my students enjoy. Some of the material that I learned in Mini-Medical School I intend to incorporate into my curriculum next year. For example, after hearing the lecture by Nathaniel Soper, MD, on suturing, I ordered suturing thread,
needles and clamps so that I can share my new stitching skills with my students. I'm also looking for some Glow-Germ. In a session on infectious diseases, Victoria Fraser, MD, had us apply this sticky, glow-in-the-dark substance to our hands, which we then washed. However, when the lights went out there was a great deal of Glow-Germ residue on our skin, demonstrating that most of us do not thoroughly wash our hands. This exercise will show my students how readily infectious diseases can be spread through casual contact.

Finally, Doug Johnson, the researcher who guided us through the Genome Sequencing Center, offered to conduct a similar tour for my biology students. This year, my students ran DNA fingerprints. Next year's tour would complement this activity by showing how gel electrophoresis is used for DNA sequencing on a much larger scale.

I feel very fortunate to have a resource like Washington University in the community and to know that the faculty are so willing to share their expertise and to provide unique learning opportunities for the public.

My Mini-Medical School classmates were as enthusiastic about the program as I. As the last graduate received his MMD, someone shouted, "Is there going to be a Mini-Medical School II?" Dr. Wichelman says it is being considered and that we will all be kept posted via a mini-alumni newsletter!

As a science teacher, my experience was exciting and enlightening, and in talking with my classmates, I learned they gained insights as well.
while working in a sanitarium in Haiti. She rolled up her sleeve and showed the class her positive PPD test—a crimson welt about the diameter of a golf ball. Neilsen, like most of the students, had never seen a positive PPD test, and made a closer inspection of Fraser's forearm. The experience was impetus for Emily to take advantage of the free PPD test administered after class by nurses from Barnes-Jewish Hospital.

Gowned, gloved and ready for OR

Nathaniel J. Soper, MD, professor of surgery, focused on laparoscopic surgery, a procedure he uses to correct gastrointestinal reflux disease, or GERD, which causes severe heartburn. Soper described how he makes four small incisions in the abdomen during the surgery. He then inserts a laparoscope—a snakelike camera about 1/8 to 1/2 of an inch in diameter—into one incision. The camera at the tip of the laparoscope projects an image of the inside of the abdomen onto a television screen inside the operating room. Soper then inflates the abdomen with carbon dioxide through a tube inserted into a second incision. The remaining incisions are used to manipulate the surgical instruments.

In traditional surgery, the surgeon uses a lengthy incision to expose the entire abdomen to peer directly inside the patient. Since laparoscopic surgery is less invasive, there is less risk to the patient, it decreases the length of hospitalization and recovery, reduces the cost and results in smaller scars. The Medical Center is currently constructing 14 new operating rooms for high-tech surgeries such as laparoscopy.

After the lecture, we were gowned and gloved by Barnes-Jewish Hospital operating room nurses for the suture lab. Washington University's Mini-Medical School is the only one in the United States that offers a suture lab. We sat at long tables, where we were given wooden blocks with pieces of artificial skin attached to them. The artificial skins had large slits in them to be sewn up. Medical residents posted around the room taught us how to properly use the surgical needles, thread, forceps and clamps. We also tried our hand at manipulating laparoscopic surgical instruments.

Student Lyman Johnson, 65, a retired market researcher for the Monsanto Co., summed up his experience this way: "People go through life and have absolutely no idea about what makes them go. No longer do you have to be a physician to ask medical question. Because of Mini-Medical School, I'm learning what's going to happen to [me] in the next 20 years...and how to avoid it."
Medical photographer Robert Boston offers an altered point of view from which to survey the vibrant hues and attractive configurations of construction taking place at the Medical Center.
Traffic is temporarily re-routed at Euclid Ave. and Forest Park Ave.

At left: The pedestrian tunnel from Wohl Hospital to St. Louis Children's Hospital and the Clinical Sciences Research Building.
At right: Construction of the new McDonnell Pediatric Research Building at Children's Place and Euclid Ave.
Brightly colored cables that will serve the Ambulatory Care Center frame a construction worker.

The pedestrian tunnel from Children's Place to Wohl Hospital.

The entrance of Wohl Hospital.
The shaded view at the northeast corner of Euclid Ave. and Parkview Drive.

An 8,000-pound headache ball demolishes the former Jewish Hospital Parking Garage.

Pylons halt traffic at the intersection of Euclid Ave. and Forest Park Ave.
THE annual Match Day was held on March 18, and 110 of the 119* graduating medical students took part in the National Residency Matching Program.

One hundred percent of the participants matched to advanced training positions through the NRMP. Some 61 percent received first-year residency positions at their first choice of institution and 91 percent matched to one of their top three choices. Eight students found positions independent of the NRMP or did not take residencies immediately.

**CALIFORNIA**

Los Angeles
- UCLA Medical Center
  - Family Practice: Susan Greger
  - Pediatrics: Joyce Hsu
  - University of Southern California: OB-GYN, Kala Chandler

San Diego
- Naval Medical Center: OB-GYN, Maureen Farrell
- University of California-San Diego: Internal Medicine, Michele Wilson

San Francisco
- California Pacific Medical Center: Internal Medicine, Xinna Kong
- Kaiser Foundation Hospital: OB-GYN, Sekou Kelsey
- University of California-San Francisco: Pediatrics, Primary, Angela Wong

Stanford
- Stanford University: Internal Medicine, Maria Dans

**COLORADO**

Denver
- University of Colorado: Internal Medicine, Mindy Lam

**CONNECTICUT**

New Haven
- Yale-New Haven Hospital: General Surgery, Dan Eisenberg, Pediatrics, David T. Miller

**INDIANA**

Indianapolis
- Indiana University: Emergency Medicine, Tim Root, Pediatrics, Irene McAtee

**DISTRICT OF COLUMBIA**

Washington
- George Washington University: Orthopaedic Surgery, Julie Grossenbacher, Emergency Medicine, Neal Silka

**ILLINOIS**

Chicago
- Children's Memorial Hospital

**LOUISIANA**

Shreveport
- LSU School of Medicine: Orthopaedic Surgery, Brian Murphy

**MARYLAND**

Baltimore
- Johns Hopkins Hospital: Internal Medicine, Shuaib Latif, Orthopaedic Surgery, Edward Song, Pathology, Mehmet Guler, Poor Kulesza, Psychiatry, Christopher Carroll, Tom Sedlak
- University of Maryland: Internal Medicine, Michael Akon

**MASSACHUSETTS**

Boston
- Beth Israel Deaconess Medical Center: Internal Medicine, Grace Huang, Patrick Yue
- Brigham & Women's Hospital: Anesthesiology, Elise Metzler

* Numbers indicate the total number of graduating medical students.
Massachusetts General Hospital
  Internal Medicine-Primary
  Shauna Birnbaum

MICHIGAN
  Ann Arbor
  University of Michigan
  Family Practice
  Matthew Moore
  Internal Medicine
  Allen Kachalia
  Pediatrics
  Jeanne Van Cleave
  Urology
  David C. Miller

Detroit
  Henry Ford Health Science Center
  General Surgery
  Andrew Goggin

Wasu/Detroit Medical Center
  Internal Medicine
  Dean Preddie

MINNESOTA
  Bloomington
  Health Partners Institute for Medical Education
  Family Practice
  Jana Freed

Minneapolis
  University of Minnesota
  Internal Medicine
  Christopher Erickson

MISSOURI
  Columbia
  University Hospital
  Obstetrics-Gynecology
  Greg Sharp

St. Louis
  Barnes-Jewish Hospital
  Anesthesiology
  Virginia Price
  Dermatology
  Dan Wendelin
  Diagnostic Radiology
  Jeffrey Brent
  Amy Nordmann
  Larry Tang
  General Surgery
  Ben Verdin
  Internal Medicine
  Rakhee Bhayani
  Amanda Cashen
  Peter Crawford
  Ernesto Gutierrez
  Adam Stein

Internal Medicine-Primary
  John Hoffman
  Melissa Norton
  Jenny Quatraro
  Monique Williams
  OB-GYN
  Jennifer Smith
  Plastic Surgery
  Devra Beyar
  Delphine Chen
  Psychiatry
  Dan-Vy Mui
  Jenna Hiestand

St. Louis Children's Hospital
  Pediatrics
  Melanie Everett
  Bill Grossman
  Lisa Kassen
  Hayley Warzel

St. John's Mercy Medical Center
  Family Practice
  Amanda Heidemann

St. Louis University School of Medicine
  Pediatrics
  Lelach Rave

Washington University/Barnes-Jewish Hospital
  Orthopaedic Surgery
  Jon Oda

Washington University
  Neurology
  Andrea Cheng
  Neurosurgery
  Doug Fox
  Ophthalmology
  Lydia Dworkin
  Marc Leibole
  Radiation Oncology
  Anurag Singh

NEW YORK
  New York
  Mt. Sinai Hospital
  Internal Medicine
  Ramiro Jervis
  New York Presbyterian Hospital
  Psychiatry
  Arielle Stanford
  NYU Medical Center
  Internal Medicine
  Lori Wang
  St. Luke's-Roosevelt
  General Surgery
  Laura Gladstone

Rochester
  University of Rochester/Strong Memorial
  Pediatrics
  Megan Richards

NORTH CAROLINA
  Durham
  Duke University
  Internal Medicine
  Edward Hu

OHIO
  Cincinnati
  The University Hospital
  OB-GYN
  Kristin Radliff

Cleveland
  Cleveland Clinic Foundation
  General Surgery
  Ikenna Okereke
  Ophthalmology
  Richard Tam

University Hospitals of Cleveland
  General Surgery
  Teng Lee
  Pediatrics
  Rose Gubitosi-Klug

OREGON
  Portland
  Oregon Health Sciences University
  Internal Medicine
  David Dorr
  Family Practice
  Ariel Smits

WASHINGTON
  Seattle
  University of Washington Affiliated Hospitals
  Psychiatry
  Matt Schreiber

WISCONSIN
  Madison
  University of Wisconsin Hospitals/Clincs
  Anesthesiology
  Pablo Adler
  Internal Medicine
  Rachel Easton

Scheie Eye Institute/University of Pennsylvania
  Ophthalmology
  Ken Shindler

Thomas Jefferson University
  Dermatology
  Jennifer Lung

University of Pennsylvania
  Neurology
  Brian Freeman

Pittsburgh
  University Health Center
  Orthopaedic Surgery
  John Loh

* One student received his medical degree posthumously.
Maloney to occupy Knight Professorship in Orthopaedic Surgery

CHARLES F. and Joanne Knight have established a new professorship in the Department of Orthopaedic Surgery at the School of Medicine. The first occupant of the Knight Distinguished Professorship in Orthopaedic Surgery is William Joseph F. Maloney III, MD, who also is chief-of-service and head of joint replacement surgery at Barnes-Jewish Hospital.

"This distinguished professorship will forever recognize and honor two individuals who have meant a great deal to Washington University," says William A. Peck, MD, executive vice chancellor for medical affairs and dean of the School of Medicine. "Chuck and Joanne Knight have worked hard to make the University and the Medical Center what they are today."

Richard H. Gelberman, MD, head of the Department of Orthopaedic Surgery, says the creation of endowed professorships is vital to the school's goal of both recruiting and keeping top quality researchers and clinicians.

"This type of support is critical to the future success of the department. The partnership of Washington University School of Medicine and Barnes-Jewish Hospital is unique. Very few places have both a top-10 hospital and an outstanding medical school. Those strengths have allowed us to build very quickly, and gifts such as this will allow us to continue to strengthen our department," says Gelberman, who is the Fred C. Reynolds Professor of Orthopaedic Surgery.

Gelberman recruited Maloney to Washington University from Stanford University Medical School in 1996. At Stanford, Maloney was a clinical associate professor of functional restoration in orthopaedics. Maloney will take advantage of the distinguished chair to pursue his research into cartilage repair, identifying mechanisms that stimulate new cartilage formation. In addition, he studies the problem of wear and the biologic response to debris from wear in joint replacement.

Chuck and Joanne Knight have been involved in the St. Louis region and the Washington University community for more than 20 years.

Mrs. Knight is a community leader who has been involved with many charitable causes. She has served for 15 years as a director of Central Institute for the Deaf and of the St. Louis Chapter of the Alzheimer's Association. She is past chairman of the Alzheimer's chapter. She also served on the board of St. Luke's Hospital for 15 years and was the first woman to serve as that hospital's chairman.

She was the Variety Club Woman of the Year in 1997. Ten years earlier, in 1987, Mrs. Knight was named a Woman of Achievement by the Suburban Journals and KMOX Radio.

Chuck Knight, chairman and chief executive officer of Emerson Electric Co., has raised funds to support the St. Louis Public Schools, the Mathews-Dickey Club and the Annie Malone Children and Family Service Center. He is a trustee of the Missouri Botanical Garden and a member of Civic Progress, the executive board of the St. Louis Area Council/Boy Scouts of America and the Business Council.

In 1996, Knight was awarded an honorary doctorate of science in recognition of his service to the University and the community. His work on behalf of the University includes serving as a trustee from 1977 to 1990. In the 1980s, he helped spearhead Alliance for Washington University, a campaign that raised more than $630 million for the University over five years.

At the Medical Center, Knight served as chairman of Barnes Hospital from 1991 to 1995 and Barnes-Jewish Hospital from 1996 to 1998. He engineered the formation of BJC Health System, and served as board chairman of that system from 1993 to 1998 while continuing to serve on the board of Barnes-Jewish Hospital from 1996 to 1998. Currently, he is chairman emeritus of Barnes-Jewish Hospital.

"We are honored to endow this professorship, which will fund the important research Bill Maloney is leading," the Knights say. "His work and commitment exemplify the qualities that make Washington University School of Medicine one of the top schools in the nation."
Simon gift reflects physician’s ‘generosity of spirit’

by Nancy Mays

SOME 40 years ago, when Jerome J. Gilden, MD, was getting his orthopaedic surgery practice off the ground, he cared for first-time patient Mildred Simon. For Gilden, the visits seemed routine — Simon was a 60-something woman who had broken her hip — but instead they marked the beginning of a 40-year friendship and a lasting legacy for the School of Medicine’s Department of Orthopaedic Surgery.

Simon, who died in 1998 at the age of 105, left a $4 million bequest to the department in honor of Gilden. The gift will be used to fund the Jerome Gilden Chair and the Mildred Simon Chair, each with $1.5 million endowments. The remaining $1 million will fund unrestricted orthopaedic research.

“It was overwhelming to learn of the gift,” says Gilden, an assistant professor of orthopaedic surgery and much-beloved surgeon who cared for Simon until her death. “She was a remarkable woman.”

Richard H. Gelberman, MD, Fred C. Reynolds Professor of Orthopaedic Surgery and head of the department, says the generosity of the gift reflects Gilden’s generosity of spirit.

“It is a direct result of the compassionate and quality care Dr. Gilden has provided for so many years,” he says.

Simon was born in Newport AR, eventually settling in St. Louis with her husband, Herbert, who died in 1940. She was an active philanthropist, particularly generous to Barnes-Jewish Hospital, and a dedicated member of Temple Israel in Creve Coeur.

Her rabbi, Alvin Rubin, says Simon never lost her Southern flare for humor or her plain-spoken ways.

“She was a funny woman who told things as they came to her. She didn’t mince words. Ever,” he says.

The two enjoyed weekly phone calls and visits until her death.

“I would take her cookies when I’d go to visit,” says Rubin. “And every time she’d say, ‘You don’t have to do that.’ Then in the next breath, she was asking, ‘But what kind did you bring me?’”

Gilden also enjoyed Simon’s upbeat nature.

“I would see her in her home, and it was always a delight,” he says.

That Gilden’s care inspired such a generous gift is testament to his compassionate nature, says Gelberman.

Gilden is a 1952 graduate of the School of Medicine. His professional affiliation with the medical school began in 1958, after he completed his orthopaedic surgery residency at the University of Cincinnati. He eventually rose to serve as chief of the division of orthopaedic surgery at Jewish Hospital, a post he held for 26 years.

Gilden also served as the team physician for the St. Louis Blues Hockey Club for many years. He started as the club’s orthopaedic surgery consultant in 1967 and later became the team’s physician. He also served as chief of the panel of physicians that provides medical care for the Blues.

In addition to his dedication to sports medicine, Gilden is known for his expertise in joint replacement and spine surgery.
Eliot Society elects new membership chair and launches scholarship program

James W. Fleshman Jr., BS ’75, MD ’80, associate professor of surgery at the School of Medicine and chief of the section of colon and rectal surgery at Barnes-Jewish Hospital, will chair the medical school Eliot Society Membership Committee in 1999-2000.

As the new chair, Fleshman announced the Eliot Society's new Scholars in Medicine Program and encouraged its support.

"I am pleased to tell you that clinical excellence at Washington University has become the No. 1 priority," says Fleshman. "In view of this change, it is appropriate that the Eliot Society supports the new Scholars in Medicine Program with scholarships for incoming medical students. We can be proud that our institution continues its commitment to training leaders for the future of health care."

The Eliot Society’s newly established Scholars in Medicine program matches private sponsors with medical students. The first sponsor-student match is Ann Flipse, MD ’59, and first-year medical student Cathy Hermann.

"I am so pleased that the School of Medicine has instituted the annually named scholarship," says Flipse, who is an adjunct associate professor of medicine at the University of Miami. "As a faculty member, I understand the pressures our students are under today in their journey to become physicians, and it is rewarding to my family to feel that we have helped someone a little."

The best part was having the opportunity to get to know medical student Cathy Hermann. We look forward to following her career."

The Scholars in Medicine Program was established in response to Eliot Society members who wanted to increase their annual support to $2,500 from $1,000, and to provide financial support to medical students. The number of scholarships awarded each year will be dependent on the amount of money raised for the program.

"The program is special because it opens the door to establishing a personal relationship between sponsor and recipient," says Phillip E. Korenblat, MD, who helped initiate the medical school program.

To learn more, contact Sue A. Ghidina, senior director of annual giving, at (314) 286-0012 or at ghidan@msnotes.wustl.edu.

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The 1999 Reunion Award recipients

Back row, from left: Thomas B. Ferguson, MD; Robert E. Hermann, MD '54; C. Garrison Fathman, MD '69. Front row: Gordon Bloomberg, MD; Carolyn B. Robinowitz, MD '64; Morton E. Smith, MD and Morris D. Marcus, MD '34.

Alumni achievement awards

C. Garrison Fathman, MD '69, is professor of medicine, chief of the division of immunology and rheumatology and director of the Center for Clinical Immunology at Stanford University. Fathman is a founding member of the Clinical Immunology Society and will become president in 2000. He chairs the new NIH Hyperaccelerated Award-Mechanisms in Immune Disease Trials Study Section and has held positions in numerous other organizations.

Robert E. Hermann, MD '54, is emeritus consultant to the Cleveland Clinic Foundation Department of General Surgery, which he chaired from 1969 to 1992, and where he served as senior surgeon from 1992 to 1994. Hermann is past president of the Association of Program Directors in Surgery and has been a consultant to review many surgical residency programs. The American College of Surgeons awarded him the Distinguished Service Award in 1994.

Carolyn B. Robinowitz, MD '64, is academic dean and professor of psychiatry at Georgetown University School of Medicine, and one of eight women in the nation who heads a medical school. She joined Georgetown in 1995 as associate dean for students and professor of psychiatry. Her honors include the Harvey Schein Memorial Award from the American Association of Directors of Psychiatric Residency Training, the American Psychiatric Association's Vestermark Award for Education, and the American Medical Women's Association's Presidential Award.

Alumni/faculty awards

Gordon R. Bloomberg, MD, is professor of clinical pediatrics at the School of Medicine and also in private practice. He is president of the medical staff of St. Louis Children's Hospital and represents community pediatricians on the board of directors of the Washington University Physicians Network. Bloomberg has been the major co-investigator with Robert C. Strunk, MD, in the childhood Asthma Management Program clinical trial funded by the National Heart, Lung, and Blood Institute.

Thomas B. Ferguson, MD, is emeritus professor of surgery in the division of cardiothoracic surgery at the School of Medicine. During his 35-year career at the medical school, Ferguson trained more than 100 residents and fellows in the cardiothoracic program. He was recognized in 1980 with the Sydney S. Pearl MD Award for Inspirational Teaching. He has received many other honors, including the Distinguished Service Award from the Society of Thoracic Surgeons.

Morris D. (Ted) Marcus, MD '34, is emeritus professor of clinical medicine at the School of Medicine, where he has held a faculty appointment since 1937. He directed the Department of Dermatology at St. Louis County Hospital for 49 years and at The Jewish Hospital of St. Louis for more than 40 years. Marcus developed the syphilis clinic at the St. Louis County Health Department and was active in educating the community about the disease. He co-authored the book, Diseases of the External Ear.

Distinguished service award

Morton E. Smith, MD, is professor emeritus of ophthalmology and pathology and associate dean emeritus at the School of Medicine. He is currently professor of ophthalmology at the University of Wisconsin School of Medicine. During his 30-year career at the medical school, Smith was repeatedly named "Teacher of the Year" and "Professor of the Year" by medical students and residents. He received the Founders Day Faculty Award for excellence in teaching in 1976. A 1996 Ophthalmology Times poll voted him one of the best 100 ophthalmologists in America.
Richard Wyatt, MD '69, Linda Wyatt, and Ann Ainsworth, MD '69, share a laugh at the class dinner.

Paul DeBruine, MD '59, displays his woodworking talent at the "Docs Off-Duty Unscientific Program."

1954 Classmates Gerald Behrens, MD, Robert Parsons, MD, Norman Leffler, MD, Robert Leyse, MD, and David Globus, MD, congratulate Robert Hermann (fourth from left) on his Alumni Achievement Award.

Mark Schreiber, MD '75, and Patricia Penkeske, MD, '74.
From left: Richard Aach, MD '59, Marilyn Bookchin, Robert Bookchin, MD '59, and Janet Aach.

WUMCAA president Dolores Tucker, MD '74, presents the gavel to the incoming president, John Hubert, MD '75.

Reunion attendees on a tour to view the changes at the Medical Center.

Bradley Greger, Susan Greger, MD '99, and Gbola Amusa, MD '99.

Thomas Osteen, MD '74, entertains at the "Docs Off-Duty Unscientific Program."

Ronald DeGuerre, MD, and Bruce Broudy, MD, at the Class of '74 dinner.
Reunion 1999

Maria Dans, class president, responds as the Class of '99 is welcomed into the alumni association.

Alumni/Faculty Award honoree Gordon R. Bloomberg, MD, and wife, Terry, center, with daughters, from left, Jane Bloomberg Langsam, Judy Bloomberg, MD '88, and Jill and Jacqui Bloomberg.

George Reinhardt, MD '64, left, greets classmate Ronald Evens, MD, at the dean's luncheon.

Morton Smith, MD, recipient of the 1999 Distinguished Service Award, enjoys a dance with his daughter, Erica.

Russell Sheiden, MD '49, and Mary Lou Reesler at the Class of '49 dinner.
William Peck, MD, dean of the School of Medicine, presents the Alumni Achievement Award to Carolyn Robinowitz, MD '64.

Karen Wright and Jeffrey Wright, MD '79, at the class dinner.

From left: Alexander Ling, MD, C. Stuart Exon, MD, and Virgil Loeb Jr. MD, all from the Class of '44, at the welcoming cocktail party.

Back row from left: '69 classmates Barry Seigel, MD, C. Garrison Fathman, MD, and (front row) Richard Karchmer, MD, with Class of '69 scholars Sandra Klein, Emily Engelland and Judy Liu.

John Fischer, MD '49, reminisces at the reunion banquet on behalf of the 50th year class.

David Wilson, MD '84, is "floored" at the class dinner by classmates Jennifer Wray Cole, MD, Susan Rollins, MD, Margaret Mahoney, MD, and Roberta Leeffler, MD. Standing behind them (from left) are Edward Rollins, MD, Jan Friedman, MD, Eric Suka, MD, Ronald Wainz, MD, Howard Rowley, MD, and Will Ross, MD.
Robert Lund, MD '49 (standing), visits with Charles Carleton, MD '49, and Carleton's grandson and namesake, Charles, at the class dinner.

Thomas Baranski, MD, Michael Steinberg, MD, and William Schroer, MD, all from the Class of '89.

Standing, from left: Benjamin Milder, MD '39, Bernard Adler, MD '37; seated: Jeanne Milder, Ralph Berg, MD '26 and Ruth Berg. Berg was the alumnus from the earliest class who attended the reunion banquet.

Kim and Jon Friedman, MD '84, with daughter Elisse Mackenzie Friedman.

Jeffrey Hoffmeister, MD, Anthony Magalski, MD, John Perry, MD, Miriam Light, MD, and Patrick Light try to identify classmates' children at the Class of '89 dinner.

Ann Randolph Flipse, MD '59, her son Jay Flipse, Jean Leahy, and David Leahy, MD '59.
**Class Notes**

**50s**

Marvin E. Levin, MD '51 has edited the book, *The Uncomplicated Guide to Diabetic Complications*, published by the American Diabetes Association. His co-editor is Michael A. Pfeiffer, MD, professor of medicine at the East Carolina University School of Medicine, Greenville NC.

Yvonne Buchanan Manley, NU '56 has written a book titled *Renaissance: A New Beginning* for women with breast cancer. She also counsels breast cancer patients on how a positive attitude influences healing and coping vs. a patient viewing herself as a victim. Manley received an MA in communications with a major in group psychology from New York University in 1964. In addition to her work with breast cancer patients, she has designed other programs to help physicians communicate with HMOs and other aspects of today's medicine, to enhance communication between medical personnel and patients, and to promote growth between the medical and nursing professions. She would enjoy hearing from anyone interested in this work and can be reached at (212) 753-7068.

Michael Treister, MD '67 presented an interactive exhibit titled "The Electronic Medical Record Using Widely Available Word Processing Software: Our Experience in Over 20,000 Patients Using Word Perfect," to the annual meeting of the American Academy of Orthopaedic Surgeons in Anaheim and to the Mid-America Orthopaedic Association meeting in Bermuda. He has handouts from the presentation for the asking. Contact him at Treister Orthopaedic Services, Ltd. 1431 North Western Avenue, Ste. 510, Chicago IL 60622.

Peter L. Apicella, MD '90, and his wife, Sherri, welcomed Julianna Elizabeth on Feb. 5, 1999. She weighed 8 lbs., 4 oz., and is their second child. He writes that all is well in Salem OH, both with family and his radiology practice.

Kelley M. Oliphint, HA '91 has been named vice president for professional and surgical services at The Methodist Hospital in Houston. He has held a variety of positions there since 1991 and was instrumental in the hospital's opening of the Reflux Center and the Bone Marrow Transplant/Cell and Gene Therapy Program. In his new role he is responsible for many of the outpatient ancillary departments and serves as liaison to the medical staff for internal medicine, family medicine and plastic surgery.

Craig Kohlbrecher, OT '95, is senior occupational therapist at St. Elizabeth's Hospital in Belleville IL. He is also a state-licensed Emergency Medical Services Lead Instructor.

Jonathan D. Primack, MD '95 completed his ophthalmology residency at the Mt. Sinai Medical Center in New York. He received a scholarship from the Heed Ophthalmic Foundation to begin a two-year fellowship in cornea and refractive surgery at Harvard Medical School.

Elaine Leo, HA '96 recently bought "a little house on a golf course" in Memphis TN.

Gayle L. Allenback, OT '98, works as a per diem occupational therapist at a hospital and a home-based care agency in Las Vegas.

**60s**

**IN MEMORY**

Edith Edwards Roos, MD '54, died of brain cancer on Nov. 12, 1998, in Littleton CO. She was one of only three women in her medical school class. She and her classmate, David B. Roos, MD, were married the day after their graduation. Both served in the United States Air Force, after which she completed a residency in anesthesiology at the University of Colorado Medical Center. She was a pioneer in anesthesiology for cardiac surgery, originating several new techniques. She also was known for the anatomic drawings she did for her husband's publications on new procedures in thoracic and vascular surgery. Her husband and five children survive.

Charles Edward Filides, MD '41, died Jan. 5, 1997, in Olney IL. He was a general surgeon. During World War II he served with the 27th Evacuation Hospital Unit. He is survived by his widow, Johnsie Flock Filides.

Harold M. Cutler, MD, HS '42, a retired otolaryngologist in St. Louis, died Feb. 22, 1999, at his home at the age of 90. He was in private practice for more than 50 years and was a former assistant professor at Washington University School of Medicine. He is survived by a son, John Cutler, MD '80 and a daughter, Emily J. Cutler.

Warren A. Bowersox, MD '43, died Feb. 19, 1999, in Pacific MO, where he had lived since his retirement in 1983. He served in the military in World War II and then completed his residency in general surgery. His wife, Lucille, survives.

Alfred Howard Richardson, HA '53, died in Placerville CA, on April 11, 1999. He had been the administrator at Placerville Pines until his retirement in 1980. Prior to that, he had been an administrator at The Finley Hospital in Dubuque IA for 20 years. He served in the Ninth Infantry as a surgical technician during World War II. His wife, Rosemary, preceded him in death in 1997. Four children survive.
Here's how it works...

If both you and your spouse are .......... age 50
And create a Deferred-Payment Gift Annuity with ................ $10,000
Which will begin paying income to both of you at ...................... age 65
The two of you will receive annual lifetime income of ..................... $1,440
Which is a return of ........................................ 14.4%
of the amount you transferred.
Your immediate charitable deduction is ................................. $4,027*

Finally, the amount remaining from your gift will be used for a purpose you choose at Washington University School of Medicine.

*Amount of the charitable deduction may vary slightly.

Sample Rates of Return

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Advice from your tax or legal advisor should be sought when considering these types of gifts.
Graduation day brings smiles to the faces of Amy Sullivan Nordmann, left, and Maria C. Dans who were among 123 students to receive degrees from the School of Medicine on May 14. Nordmann was one of six to receive the MD/MA degree, and Dans was one of 101 students to receive the MD degree. Sixteen students received the MD/PhD degree.
A work in progress:
A series of colorful photos taken over the last two years reveals the vibrant hues and attractive configurations of the construction process taking place at the Medical Center. This covered walkway, one of 10 photos in this issue, runs north along Kingshighway to St. Louis Children's Hospital. For more on this story, please turn to page 20.