Metastasized cancer, a diagnosis that many people fear more than any other. Ready to seed tumors elsewhere in the body, single metastatic tumor cells circulate in the bloodstream undetectable by current available diagnostic methods. Many cancer patients could be saved if physicians had a rapid method that allowed them to spot metastatic cancer cells early enough to intervene with more aggressive therapeutic treatments.

Such a method could be the long-term outcome of basic research recently funded by a $50,000 seed grant from BIO5, The University of Arizona Institute for Collaborative Research. Led by Ronald Heimark, PhD, professor of surgery and chief of the Section of Surgical Research, the study “Nanotechnology and Microdevices for the Capture of Circulating Metastatic Cancer Cells” aims at building a microdevice that can capture single cells based on certain characteristics unique to their cell surface. This research could one day lead to a diagnostic method far superior to existing ones because it can detect and quantify single cancer cells.

Metastases are secondary tumors disseminated by the original tumor that spread to other parts of the body. In many cases, metastasizing cancer cells are on their way to infiltrate other, often remote, body tissues, before the original tumor is even detected or therapeutic measures have succeeded in wrestling down the primary tumor.

“One of our goals is to capture metastatic cancer cells from the blood and then use microanalytical tools to further analyze the properties of these cells and their response to therapeutics,” says Dr. Heimark.

But the range of possible applications is even broader. “We are developing a pilot technology that makes it possible to isolate a distinct population of cells from very large numbers of cells,” explains Dr. Heimark. “If the method works with cancer cells, it could be used for other types of cells, too.” Examples of other uses include stem cells for transplantation or the rapid isolation of activated inflammatory cells from blood or from the airway.”

In addition to Dr. Heimark, leading investigators on this seed grant are Yitshak Zohar, PhD, professor, UA Department of Aerospace and Mechanical Engineering, and the director of the UA’s Micro/Nano Fabrication Center; and Jim Baygents, PhD, associate professor, UA Department of Chemical and Environmental Engineering.

The microdevices being developed look like credit-card-sized circuit boards. A closer look reveals a multitude of tiny structures – rows of channels, each much thinner than a human hair, running parallel to each other and converging in places. “The idea here is to coat the channels with antibodies that selectively bind to proteins on the surfaces of the cells we want to isolate,” Dr. Zohar explains.

Similar to airplane passengers passing through airport security lanes, the cells in a sample pass through the channels on the microdevice. Cells that have the surface protein in question are detained, while all other cells leave the microdevice. Such a device could identify metastasizing cancer cells based on their surface molecules and capture them.
Chairman’s Message

It has been almost 18 months since my appointment as interim head of the UA Department of Surgery. I have been charged with expanding the clinical faculty, orchestrating the arrangements of services at University Physicians Hospital at Kino Campus, and ensuring that the educational mission of the residency program and surgical clerkship are a top priority. In addition, the Department should maintain a solid financial basis.

In this newsletter, we highlight several of the cutting-edge research areas of our faculty. The Medical Simulation Laboratory, under the leadership of Dr. Allan Hamilton, is now a reality, and we are planning a course on minimally invasive surgery that will be coordinated by Dr. Rifat Latifi. We hope to restart our liver transplantation program in the upcoming months. The Surgical Clerkship program is now under the leadership of Drs. Amy Waer and Jennifer Tittensor. We also are very proud of the education efforts of our surgical residents. Dr. Kent Stevens recently received the Dean’s List for Excellence in Teaching by a Houseofficer Award at the Faculty Teaching Awards Ceremony in November.

Several new faculty have been recruited in the areas of pediatric cardiac surgery, abdominal transplantation, endovascular surgery, minimally invasive urologic surgery, neurosurgery and trauma-critical care. Details follow later in the newsletter. We are actively recruiting ENT faculty and have extended three preliminary offers of employment to ENT surgeons. In addition, the Department is anticipating the placement of a new plastic surgeon in July 2006, and we are actively recruiting for additional faculty in neurosurgery, thoracic surgery and general surgery. We hope to start recruitment for an additional abdominal transplant surgeon in the near future.

Our Southern Arizona Level I Trauma Program continues to be managed successfully. The addition of Dr. Kimberly Peck, who is board-certified in critical care, and Dr. Stephen Lanzarotti, a board-certified general surgeon, has provided additional strength to the Section of Trauma and Critical Care. We have now completed our first year of expanded surgical services at University Physicians Hospital at Kino Campus. The spectacular success of our Section of General Surgery at UPH-Kino and the incorporation of the da Vinci® robot is a major accomplishment. Dr. Sanjay Ramakumar has been appointed the director of the Robotic Surgery Program at UPH. Minimally invasive robotic surgery is now routinely performed in the areas of prostate and pelvic lesions. Drs. Amy Waer and Jennifer Tittensor have provided quality and timely care in the area of general surgery. They now are performing more than 100 cases each month. The intensive care unit is a reality and currently has six available beds. The clinic renovation is complete, and new phone service has been implemented. In addition to our existing general surgery and urology services, a collaborative diabetic foot care clinic combining vascular surgery and community-based podiatry has just opened.

The Tuba City General Surgery residency rotation continues to be a success. Both the residents and the faculty at Tuba City are pleased with the experience. A weekly telemedicine conference has been started that greatly facilitates our exchange of ideas.

Surgery department head recruitment is still in progress with no news to report at this time.

We are looking forward to an exciting and challenging New Year. Slowly and surely we are achieving a critical faculty mass. Thank you for all your efforts and support.

Sincerely,

Hugo V. Villar, MD
Professor and Interim Head, Department of Surgery

Cutting-Edge Research

Teaming Up with TGen to Find a Cure for the Currently Incurable PANCREATIC CANCER

Pancreatic cancer has the worst survival rates of any cancer. This disease kills more than 95 percent of patients who contract it and most die within two years of diagnosis.

Identifying new therapies for a cancer that currently has no effective treatment is the focus of a five-year $15 million program project grant awarded by the National Cancer Institute (NCI) to investigators at The University of Arizona and the Translational Genomics Research Institute (TGen). The multi-center program project is the first of its kind to focus exclusively on pancreatic cancer.

In order to make real progress against this devastating disease, a group of researchers at TGen, including Michael Demeure, MD, UA professor of surgery, is concentrating on translating genetic, molecular, and biochemical observations of tumor cells into practical and effective therapies for patients with pancreatic cancer.

Dr. Demeure is a fellowship-trained endocrine surgeon in the UA Department of Surgery and a senior investigator at TGen. As director of TGen’s Pancreatic Cancer Biospecimens Repository, one of Dr. Demeure’s roles is to enroll multiple institutions to submit tumor specimens for the study.

Collaborators on the NCI grant include the Arizona Cancer Center at The University of Arizona and the University of Texas M.D. Anderson Cancer Center.

“The goal is to identify the genes and pathways that control the growth, spread and survival of pancreatic cancer tumor cells. This is critical toward developing targeted therapies based on distinguishing characteristics of pancreatic cancer cells versus normal cells,” says Dr. Demeure.

“The approach we are taking, we hope, will lead to the development of new and better treatments for patients with pancreatic cancer,” he says.
ADRENOCORTICAL CARCINOMA

Dr. Demeure also is the lead scientist on a TGen project designed to combat adrenocortical carcinoma (ACC), a rare, but aggressive cancer. For this project, the TGen team is partnering with the C-Path Institute, a partnership between the University of Arizona and the U.S. Food and Drug Administration (FDA) to accelerate the development of new drugs.

ACC is a malignancy of the adrenal cortex that affects one to two people per million. The adrenal cortex is the outer layer of the adrenal glands, which are located above each kidney in the back of the upper abdomen. When cells in the adrenal cortex become cancerous, they may overproduce hormones, which can cause symptoms such as high blood pressure, hirsutism or diabetes.

At the present time, there is only one drug on the market approved for the disease, mitotane, which is only marginally effective and is associated with significant side-effects, says Dr. Demeure.

The research project is supported by the Advancing the Treatments for Adrenocortical Carcinoma (ATAC) Fund. Established by TGen with a gift from Scottsdale philanthropist Troy Richards, who was diagnosed with ACC six years ago, the fund supports research efforts toward finding a cure for ACC.

The study is the largest ACC research project to date and involves analyzing 100 ACC tumor samples and comparing their genetic signatures to 20 benign adrenal cortex samples. Dr. Demeure is working with oncologists and surgeons worldwide to obtain ACC tumor samples. Collaborating partners include the American Association of Endocrine Surgeons and Mayo Clinic of Rochester, Minn.

“Our team is using the latest molecular genetic technologies to identify mutations and design new diagnostic tools,” says Dr. Demeure. “Our plan is to take this information and work with C-Path and the orphan diseases program at the FDA to develop new treatments for ACC.”

Rewiring the Brain to Restore Movement in Stroke Survivors

Martin Weinand, MD, professor and chief of the Section of Neurosurgery, in collaboration with UA neurologists, is studying a potential new treatment that combines new technology – a pacemaker-like device that stimulates the brain – with rehabilitation that could restore hand and arm movement in stroke patients.

The treatment takes advantage of the brain’s “neuroplasticity,” the ability of one brain region to adapt and take over functions performed by other parts, explains Dr. Weinand. “Neuroplastic changes are like a rerouting of the brain’s circuitry. This allows uninjured areas of the motor cortex of the brain to assume some of the capabilities that were previously associated with the damaged areas.

“The idea is to see if sending mild electrical signals will stimulate these neuroplastic changes, and that, in combination with physical therapy, will help patients regain some arm and hand motion,” he says.

Electrical stimulation of the brain has been used successfully for Parkinson’s disease and epilepsy. However, the technique for stroke doesn’t involve deep-brain surgery, as in the case for Parkinson’s, making it much less invasive, Dr. Weinand says.

The University of Arizona is one of several centers selected for the Phase III study. The UA also participated in the two previous trials. The device has been approved by the Food and Drug Administration (FDA) for investigational use only.

“Previous feasibility trials indicate that those receiving the implant gained more hand movement than those who had rehab alone. This trial will be performed to see if the preliminary results can be replicated,” Dr. Weinand says.
Surgeons are operating with the assistance of the da Vinci® surgical robot at UPH Hospital at Kino Campus. The advanced minimally invasive surgical system is the first in Southern Arizona.

The da Vinci® system incorporates advancements in robotics and computer technology to give surgeons precise control of instruments and three-dimensional views with more detail than traditional open surgery. The instruments and 3-D cameras are introduced into the patient through small incisions, about the size of a keyhole. A special console gives the surgeon magnified 3-D views of the procedure. Precise computer-enhanced controls manipulate tiny surgical instruments that mimic the hands of the surgeon.

In addition to radical prostatectomies, surgeons at UPH Hospital at Kino Campus are using the robot for general surgery and gynecological procedures. The minimally invasive technique provides a number of benefits to the patient, including decreased blood loss, less postoperative pain, reduced scarring and a faster recovery. “With the compelling patient benefits associated with this state-of-the-art minimally invasive surgery, we expect to see rapid growth for the UPH Robotic Surgery Center,” says Sanjay Ramakumar, MD, assistant professor, Section of Urology, and medical director of UPH Robotics.

Additional information regarding the da Vinci® surgical system is available at www.uphkino.org or by calling (520) 694-7670.

Patients are getting a younger look by undergoing a process that can be done during their lunch hour. Minimally invasive “filler” plastic surgery is rapidly becoming the preferred choice of patients who want to look younger without having to go through a long and painful surgical process like a face-lift, says Kian Samimi, MD, assistant professor and chief, Section of Plastic Surgery.

Wrinkles result from the loss of three crucial skin components – collagen, elastin and hyaluronic acid. “Filler” plastic surgery can replace two of these components – collagen and hyaluronic acid.

Collagen has been used as an injectable skin filler since the 1970s, but has had its drawbacks, such as allergic reactions and short-lived results, explains Dr. Samimi. Recently approved by the FDA as a skin filler, hyaluronic acid is a naturally-occurring component of the skin that functions by holding together collagen and elastin, providing a framework for the skin. When injected into the skin in gel form, hyaluronic acid binds to water and provides volume to easily fill in larger folds of skin around the mouth and cheeks. Patients notice an immediate plumping of the skin in the treated areas.

One of the main advantages of hyaluronic acid gel is that it does not pose an allergy risk for patients. Since a skin check for allergies is not required with hyaluronic acid gel, patients can be treated on their first visit. The results of hyaluronic acid last approximately four to six months.

“Patients are requesting this procedure for areas such as the frown line between the brows, the marionette lines at the edges of the mouth downward, and the smile lines from the nose to the corners of the mouth,” says Dr. Samimi.

According to American Society of Plastic Surgeons, the total number of cosmetic minimally invasive “filler” procedures using hyaluronic acid increased 927 percent last year, from 44,925 in 2003 to 461,397 in 2004.

Many different products are FDA approved, such as: Captique™, Restylane® and Hylaform®. Other products also are becoming available, such as Sculptra, a substance originally used in treating facial wasting in patients with HIV.

Dr. Samimi says cosmetic minimally invasive procedures are a good fit for patients who are not ready for, or do not need, extensive surgery.
Doctors in training are making their first diagnoses—and their first mistakes—on plastic wires and computer circuits rather than on flesh and blood in the Medical Simulation Laboratory. Part of the Arizona Simulation Technology and Education Center (ASTEC), the lab opened in June and, during its first quarter of operation, has trained more than 300 medical students, residents, and attending physicians in laparoscopic surgery, trauma and critical care, and team building.

Just as airline pilots spend years training in flight simulators before flying a plane packed with passengers, medical simulators allow doctors to practice complicated procedures before they are used on real people, explains Allan J. Hamilton, MD, professor of surgery and ASTEC executive director.

“The federal government estimates medical errors cost Americans billions of dollars each year and thousands of lives. Research shows that skills learned in the virtual-reality environment lead to more efficient and effective learning and have the potential to reduce errors,” Dr. Hamilton says.

The new medical training lab, the first of its kind in Arizona, features a computer-controlled mannequin that can be programmed to simulate a wide range of symptoms and respond to treatment. The system teaches students to manage the scenarios and work as a team to provide appropriate medical care. Students learn not only medical procedures, but also how to assess, diagnose and make critical decisions. The lab also has a simulated state-of-the-art operating room, virtual reality laparoscopic surgical trainers and telecommunications capabilities.

Besides its commitment to improve patient safety and advance medical education, the lab has begun research projects on developing new educational uses for simulators and other training technology.

“The lab gives us the opportunity to be at the forefront in the integration of technology into medical education and allows us to take better care of our patients,” Dr. Hamilton says.

Minimally invasive surgery requires only small “keyhole” incisions, and offers less pain and faster recovery time. However, most surgeons encounter steep learning curves for using laparoscopic instrumentation. In a simulated operating room environment, medical students as well as residents and faculty perform beginning and advanced laparoscopic procedures, including using the equipment, surgical dissection and suturing.
Graduating Residents

General Surgery

The UA Department of Surgery ended another academic year with five graduating general surgery chief residents: Stephen Lanzarotti, MD, has joined UA Department of Surgery Section of General Surgery/Trauma; Michele Ley, MD, has been accepted to a one-year breast fellowship at the University of California San Francisco; Cheri Ong, MD, is completing a plastic surgery fellowship at Vanderbilt University in Nashville; Eva Proctor, MD, is a fellow in cardiothoracic surgery in Memphis; and Roland Snure, MD, entered private general surgery practice in Silver City, New Mexico.

New Interns

The General Surgery Residency Program welcomed the following 13 new interns:

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<tr>
<td>Rebecca Klein</td>
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<td>Bryan Armijo</td>
<td>The University of Arizona</td>
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<tr>
<td>LeAnn Chavez</td>
<td>University of New Mexico</td>
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<tr>
<td>Norma Walks</td>
<td>University of Minnesota-Minneapolis</td>
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<tr>
<td>Benjamin Serxner</td>
<td>University of California-Irvine</td>
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<td>Sarah Popek</td>
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<th>Preliminary</th>
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<td>David Morales</td>
<td>The University of Arizona</td>
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<td>Nazhone Yazzie</td>
<td>The University of Arizona</td>
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<tr>
<td>Namath Hussain</td>
<td>The Johns Hopkins University</td>
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<th>Orthopedic</th>
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<td>Jolene Clark</td>
<td>The University of Arizona</td>
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<td>Eileen Woo</td>
<td>University of Texas-Galveston</td>
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<td>Jason Wild</td>
<td>Georgetown University</td>
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<th>Urology</th>
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<tr>
<td>Lipika “Lipi” McCauley</td>
<td>Eastern Virginia Medical School</td>
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Cardiovascular and Thoracic Surgery

Cristina Smith, MD, graduated from the UA Department of Surgery Section of Cardiovascular and Thoracic Surgery Residency Program and has accepted a position in the section as assistant professor of clinical surgery. Joining the CT Residency Program is Quang Vo, MD, who completed his general surgery residency at New York Hospital of Queens.

Urology

Also graduated in 2005 was urology resident Nathan Ullrich, MD, who is in private practice in Pullman, Wash.

Alumni Spotlight

Greetings from Northern Arizona

By Rob Berger, MD
Class ’01

I recently have returned to the great state of Arizona and wish to reconnect with alumni and friends from the UA Department of Surgery residency program. I contacted Dr. Villar, who was gracious enough to allow me to give an update in the newsletter. Hopefully, this may inspire some of the other “lost” alumni out there to do the same.

My travels since residency took me to the University of Illinois – Chicago, where I did a one-year fellowship in minimally invasive surgery. I stayed on staff as an assistant professor for two more years, honing my newly learned skills. During that time, Alice, who as Dr. Villar correctly says “… is the best part of Bob,” delivered Jack (now age 4) and Dan (age 2). By the way, number three is on the way and due in late December. We knew we wanted to return to Arizona to be closer to both our families as we raise our kids. During my job search, we started investigating the town of Flagstaff. Fortunately for me, our fellow colleague, Andy Aldridge (Class ’02), was already well established here.

Just to let you know, Andy came straight to Flagstaff after finishing residency and joined Flagstaff Surgical Associates, a single specialty group established 26 years ago. Andy’s insight into the group and location came from former medical school classmate, Kim Lundstrom, whose

We Need Your Support

Surgery research aims to develop new treatments and find new cures. Surgical education strives to improve patient care. Gifts play a crucial role in funding these programs in the UA Department of Surgery. Grateful patients, family members and alumni can donate money on behalf of the outstanding surgical care or training they have received at The University of Arizona. Every gift, no matter the size, is valued and used for the program designated by the donor. Your support will help us reach our goals and advance the field of surgery.

Programs you can support (naming opportunities available):

Research
- Advances in Urologic Surgery
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Education
- Grand Round Visiting Professor Lectures
- Resident Fellowships
- Student Scholarships

If you are interested in making a donation, you can contact:
Jo Marie Gellerman
Community Affairs
UA Department of Surgery
(520) 626-7219
jgellerm@email.arizona.edu
New Faculty

Ernesto Molmenti, MD, PhD, MBA, joins the UA Department of Surgery in May as professor of surgery and chief of the Section of Abdominal Transplantation. Prior to his appointment, Dr. Molmenti was associate professor of surgery at The Johns Hopkins University School of Medicine. He received his medical degree from Boston University and completed his general surgery residency and research fellowship at Washington University School of Medicine in St. Louis. Dr. Molmenti also completed a two-year transplantation fellowship at the University of Pittsburgh and a master’s degree in business administration at The Johns Hopkins University School of Medicine and School of Professional Studies in Business and Education.

Dr. Molmenti’s clinical interests include adult and pediatric transplantation of liver, pancreas, kidney and small bowel and research on liver transplantation, kidney transplantation, pancreas transplantation, hepatobiliary surgery, multivisceral abdominal transplantation and proteomic analysis. Dr. Molmenti has published more than 100 articles and book chapters, almost 200 presentations and abstracts and has written Atlas of Liver Transplantation, published in 2002 by W.B. Saunders. He is on the editorial board of Transplantation and serves as an ad hoc reviewer for several additional journals. He is a fellow of the American College of Surgeons and a member of 20 professional organizations.

Adrianus (Jos) G.W. Domen, PhD, joins the Section of Cardiovascular and Thoracic Surgery as research assistant professor. Dr. Domen comes to the UA after serving as an assistant research professor in the Department of Immunology at Duke University Medical Center. He received his PhD from the University of Amsterdam and completed his postdoctoral fellowship at Stanford University. Dr. Domen was an assistant professor at Duke University in the Department of Medicine, Division of Cellular Therapy, and the Department of Immunology. He also held a position as a staff scientist at Cellerant Therapeutics in California. Dr. Domen has published more than 60 articles. His areas of research interest include hematopoietic stem cell choices, hematopoietic stem cell and myeloid progenitor biology, and cell culture model systems/embryonic stem cell differentiation.

Kimberly Gandy, MD, PhD, holds appointments as assistant professor in the UA Department of Surgery Section of Cardiovascular and Thoracic Surgery and the UA Department of Pediatrics. In addition, Dr. Gandy holds a research appointment at the Steele Children’s Research Center. Dr. Gandy is trained in pediatric cardiac surgery and transplantation and brings a wealth of experience in taking care of children with heart defects. She completed her medical degree at Northwestern University and her doctorate at Stanford University. Her cardiothoracic surgery training was completed at Duke University. Dr. Gandy did an additional two years of sub-speciality training in pediatric cardiac surgery at Stanford University. Her research on heart muscle cell development is funded by the American Heart Association. Dr. Gandy also has written more than 50 manuscripts and selected abstracts on her fields of study, which include myocardial rescue with hematopoietic cells and the use of allogeneic stem cell transplantation for tolerance induction for organ transplantation. She serves as an ad hoc reviewer in the Journal of Thoracic and Cardiovascular Surgery and the Annals of Thoracic Surgery. Dr. Gandy is the first specialty-trained pediatric cardiac surgeon in southern Arizona.
Matthew Gretzer, MD, is assistant professor of clinical surgery in the Section of Urology. Dr. Gretzer came to Tucson from Baltimore, where he completed his urologic surgical training at The Johns Hopkins Hospital/James Buchanan Brady Urologic Institute. He earned his medical degree at the University of Texas Health Science Center, San Antonio, and completed his urology and general surgery residencies at The Johns Hopkins School of Medicine.

Dr. Gretzer is a member of the American Association of Clinical Urologists and American Urological Association, where he was awarded the Gerald P. Murphy Scholar in Prostate Cancer in 2002 and 2004. He specializes in urologic reconstruction, robot prostatectomy and nerve-sparing prostatectomy and is currently involved in research focusing on urologic oncology, prostate cancer tumor markers and male incontinence.

Daniel Ihnat, MD, former UA vascular surgery fellow (1999), returns to The University of Arizona as assistant professor of clinical surgery, Section of Vascular Surgery. Dr. Ihnat received his medical degree from Washington University School of Medicine in St. Louis, Missouri, and continued on to a general surgery residency at Wilford Hall Medical Center at Lackland Air Force Base in Texas.

Dr. Ihnat was chief of vascular surgery at Travis Air Force Base David Grant Medical Center in California and, more recently, assistant clinical professor of surgery at the University of California Davis Medical Center. Dr. Ihnat’s research focuses on carotid artery disease, limb bypass surgery and hemodialysis access surgery. He is a fellow of the American College of Surgeons and a member of the Western Vascular Society, Society of Clinical Vascular Surgeons and Society of Air Force Clinical Surgeons. Dr. Ihnat has authored and coauthored more than 20 book chapters and publications.

Stephen Lanzarotti, MD, has been appointed by the Section of General Surgery and Trauma as clinical assistant professor of surgery. He received his medical degree from the University of Texas in San Antonio and just completed the UA Department of Surgery General Surgery Residency Program, where he received an award for Chief Resident of the Year.

Dr. Lanzarotti will practice at University Medical Center and the Southern Arizona VA Health Care System. He has been published in the American Surgeon and is an associate fellow candidate for the American College of Surgeons.

Marco Marsella, MD, joins the Section of Neurosurgery as assistant professor of clinical surgery. Dr. Marsella received his medical degree from the Universita’ di Firenze Facolta’ di Medicina e Chirurgia in Italy and went on to complete his residency at the University of Padua School of Neurosurgery in Italy. He also completed a fellowship in neurosurgery at University Hospital Cincinnati in Ohio.

Kimberly Peck, MD, is assistant professor of clinical surgery in the Section of General Surgery and Trauma. Dr. Peck completed her medical degree from the University of Nebraska and a general surgery residency at the UA, where she received the Exceptional Resident Teaching Award. She returns to the Department of Surgery after completing a one-year critical care fellowship at the University of Maryland R. Adams Cowley Shock Trauma Center in Baltimore. Dr. Peck is a member of the American Medical Association and a candidate fellow for the American College of Surgeons.

Cristina Smith, MD, assistant professor of clinical surgery, Section of Cardiovascular and Thoracic Surgery, recently finished a two-year residency program in cardiothoracic surgery at The University of Arizona. Prior to her CT residency, Dr. Smith received her medical degree and completed a general surgery residency at Eastern Virginia Medical School in Norfolk, Virginia.

Dr. Smith is a member of the American Medical Association, American College of Surgeons and the Society of Thoracic Surgeons. She has been published in Contemporary Surgery and has been appointed director of Intensive Care Services for Cardiothoracic Surgery.

Heart Surgery, Neurosurgery and ENT Ranked Best in U.S. News and World Report
The surgical specialties of Heart Surgery, Neurosurgery and Ear, Nose and Throat at University Medical Center were ranked among the nation’s best, according to U.S. News and World Report’s annual guide to “America’s Best Hospitals.”
Teeing Off for Trauma

The inaugural Chuck and Carrie Cecil Golden Hour Golf Classic to benefit the Trauma Program at University Medical Center was held June 3 at The Gallery Golf Club at Dove Mountain. One hundred golfers helped to raise more than $30,000 for the program. Tournament proceeds have been earmarked for an electronic monitoring system to gauge heart, blood and intracranial pressures, temperature, and carbon dioxide levels in the blood; a special surgical lighting system; a rapid fluid infuser and blood warmer; a trauma resuscitation stretcher; multiple special procedure carts and an intravenous fluid-warming cabinet. Proceeds also benefit the Southern Arizona Trauma Network (SATNET).

The event raises funds and awareness for the UMC Trauma Program. In July 2003, UMC became Southern Arizona’s sole Level 1 Trauma Center. The hospital expects to treat more than 4,500 trauma patients a year, making it the state’s busiest trauma center. The “Golden Hour” in the tournament’s title refers to the first 60 minutes following traumatic injury, when the chance of survival triples if appropriate medical resources are available. The next Golden Hour Golf Classic will be held Saturday, May 20, 2006.

2005 Tournament VIP Sponsors:
- SCF of Arizona
- Tim Garigan
- CBIZ: Gordon, Zucarelli and Handley
- Lloyd Construction Co.
- HealthSouth
- Southwest Ambulance
- Wells Fargo
- Aramark
- Viacom Outdoor
- Clear Channel Outdoor

Connecting Paramedics and Doctors Virtually through New ER-Link

Rifat Latifi, MD, professor of surgery, Section of Trauma and Critical Care, is developing with the City of Tucson a system that will enable emergency medical service providers to send video from ambulances to local hospitals. The city’s ER-Link EMS Telemedicine Program is designed to help hospitals better assess patients’ conditions before they arrive at the emergency department. The project is the first operational EMS telemedicine system in the country.

The program will be funded by a $1.6 million grant awarded to the City of Tucson Department of Transportation by the U.S. Department of Transportation and by matching city funds. The project will include monitoring technology that can send video via a mesh communication system based on Wi-Fi technology. The technology includes access points that will be installed on light poles and street lights across the city.

Over the network, still and video images, physiologic monitoring information, ultrasound scans and other data will be transmitted from moving ambulances to remote workstations installed inside various hospitals’ emergency departments.

The ER-Link system is initially planned to provide EMS telemedicine for all trauma patients between Tucson Fire Department ambulances and University Medical Center. It is expected to expand later to other area hospitals and paramedic vehicles. Work on the project will begin in January and is expected to be completed by summer 2006.

Best Doctors

Six UA Department of Surgery faculty members are listed as 2005 Best Doctors in America:

- Surgery
  - Michael J. Demeure, MD
  - Joseph L. Mills, MD
- Thoracic Surgery
  - Jack G. Copeland, MD
- Neurological Surgery
  - Allan J. Hamilton, MD
- Surgical Oncology
  - Hugo Villar, MD
- Urology
  - Sanjay Ramakumar, MD

Michael Demeure, MD, professor, Section of General Surgery, was honored by AcademicKeys Who’s Who in Medical Sciences Education, the most comprehensive and authoritative online source of information available on leading and influential experts and scientists in the field of medical sciences in the institutes of higher education.

Robert Krouse, MD, associate professor, Section of Surgical Oncology, Southern Arizona VA Health Care System, is a consultant on Project IV for a five-year $19 million Program Project Grant on the “Chemoprevention of Skin Cancer” awarded by the National Cancer Institute. Along with colleagues from the Arizona Cancer Center and UA College of Medicine, Dr. Krouse will study genetic alterations and biomarkers associated with transformation into skin cancer, as well as genetic, histological and clinical changes related to aggressive skin cancers.

Rifat Latifi, MD, Section of Trauma and Critical Care, has been promoted to professor of clinical surgery. Dr. Latifi co-authored “Opportunities and Challenges of eHealth and Telemedicine via Satellite” in the March issue of the European Journal of Medical Research.

Sanjay Ramakumar, MD, assistant professor, Section of Urology, received a $250,000 grant from the Arizona Biomedical
Commission for the research project “Gene Delivery Using Photosensitive Nanogels for Renal Regeneration and Prevention of Ischemia Induced Injury.” Dr. Ramakumar was named Teacher of the Year by the 2005 UA Urology Residency Program.

Ron Heimark, PhD, professor and chief, Section of Surgical Research, has been promoted to professor of surgery.

Marlys Witte, MD, professor of surgery, and Michael Bernas, associate scientific investigator, were named Honorary Lifetime Members of the Sociedade Brasileira de Linfologia, in Salvador, Brazil, in October.

Presentations

Jack Copeland, MD, professor and chief, Section of Cardiovascular and Thoracic Surgery, presented “Replacement of the Heart” in June to more than 1,000 members of the French Society of Thoracic Surgery.

Anne Herbst, MD, General Surgery resident, presented “ACTH secreting tumor of the pancreas: a clinical case report and review of the literature” and “Does cPET have a role in the diagnostic algorithm of colorectal cancer?” at the Southwest Surgical Conference meeting in San Antonio.

Robert Krouse, MD, associate professor, Section of Surgical Oncology, Southern Arizona VA Health Care System, presented “Common Problems in Palliative Care: How I do it,” as part of The Johns Hopkins Continuing Medical Education Program, in May in Baltimore. Dr. Krouse also presented “Squamous Cell Cancer of the Skin and Merkel’s Cell Cancer: Opportunities for Sentinel Node Research” and “Common Physical Symptoms” at the American College of Surgeons 91st Clinical Congress, in San Francisco.

Rifat Latifi, MD, presented Grand Rounds in Chennai, India, in March on “Trauma in the 21st Century: Challenges in the Next Decade” (televised to four sites in India). He was invited at the International Telemedicine Conference, Bangalore, India, in March, organized by the Astronautical Society of India and Indian Space Research, where he was a guest of honor and gave the inaugural address and two keynote speeches: “International Virtual e-Hospital: Building Bridges and Improving the Quality of Healthcare in Developing Countries” and “Tele-trauma and Tele-presence Resuscitation.” Dr. Latifi also participated as a moderator in a parallel session on Technology & Applications of Telemedicine in March. Dr. Latifi was the invited presenter at the Med-e-Tel Conference, International Society for Telemedicine (Isft) in April in Luxembourg, where he participated on the panel organized by the WHO on the session, Space-Based Technology Applications to e-Health. In addition, he presented a paper on “Tele-trauma and Tele-presence Resuscitation in Rural America: Southern Arizona Experience,” coauthored by Mike Holcomb, Dr. Mark Williams and Dr. John Porter.

Michele Ley, MD, Denise Frank, PhD, John Davis, MD, Jan Degan, RN, Jane Lacovara, RN, Christina Kim, MD, “Initial experience with breast endoscopy in the evaluation of individuals at high risk for breast cancer,” was presented by former resident Dr. Ley at the 28th Annual San Antonio Breast Cancer Symposium, in San Antonio, Texas.

Joseph L. Mills, MD, professor and chief, Section of Vascular Surgery, spoke on “Diabetes mellitus and limb-threatening ischemia: The emerging role of endovascular therapy” at a forum on the “Modern Management of the Neuro-ischemic Diabetic Foot: A Multidisciplinary Approach” at the Annual Meeting of the Society for Vascular Surgery in Chicago in June. Also in June, Dr. Mills proctored a hands-on training session for practicing vascular surgeons as part of the Endovascular Symposium Course on carotid stenting using the Simbionix carotid simulator. In November, Dr. Mills was the invited visiting professor at the 23rd annual meeting of the Pacific Northwest Vascular Society in Vancouver, British Columbia. He presented two talks: “Identification and Treatment of Vein Graft Stenosis” and “Vascular Surgery: Dogma, Fanaticism, and Evolution.” He recently moderated two sessions at the 32nd Annual Vascular, Endovascular Issues, Techniques and Horizons (Veith) Meeting in New York City: “Update on Endovascular Aneurysm Repair (EVAR) for AAA’s” and “New Techniques and Concepts in Endovascular Surgery.”


Gerlinde Tynan-Cuisinier, MD, General Surgery resident, presented the paper “The influence of hyperlipidemia and statin therapy on the development of vein graft stenosis” at the Research Forum of the Society for Vascular Surgery in June. Co-authors of the manuscript, which will be submitted to the Journal of Vascular Surgery, are Joseph Mills, MD, John Hughes, MD, and Kaoru Goshima, MD.


Valdivia Valdivia JM, Weinand M, “Temporal Lobectomy for Medically Intractable Epilepsy: Outcomes of 133 consecutive patients,” and “Operative Nuances in Temporal Lobectomy for
Publications


Rifat Latifi, MD, coauthored “Opportunities and Challenges of eHealth and Telemedicine via Satellite” in the March issue of the *European Journal of Medical Research*.


Intractable Epilepsy,” were presented at the AANS Meeting-Functional and Stereotacic Section, New Orleans, 2005.

Valdivia Valdivia JM, Herbst A, Goetz R, Gonzales-Portillo G, “Radiation Induced Aneurysms,” was presented at the AANS Meeting-Cerebrovascular Section, Boston, 2005.

Hugo Villar, MD, interim department head, professor and chief, Section of Surgical Oncology, served as Latin American coordinator for Hispanic Day at the American College of Surgeons’ 91st Annual Clinical Congress in San Francisco, in October. Dr. Villar also served as vice chairman of the International Relations Committee and moderator for a session on “The Education of the Latin American Surgeon” with surgeons from Argentina, Brazil, Colombia, Chile, Mexico and Uruguay.

Marlys Witte, MD, professor of surgery, gave keynote lectures and moderated sessions at the 1st International Congress on Lymphatic Microcirculation and Neoplastic Metastasis in Parma, Italy, and at the XXXI Congress of the Group of European Lymphology, Rome, Italy, in June. She presented “Landmarks in Translational Lymphology” and organized the opening session on “Structure-Function Relationship in the Lymphatic System” at

the UCSF 1st International Symposium on Cancer Metastasis and the Lymphovascular System: Basis for Rational Therapy, organized by former surgery faculty member, UCSF Professor Stanley Leong, in April.

In Melbourne, Australia, at the 12th International Conference on Thinking, in July, she gave an invited featured lecture, “The Medical Ignorance Collaboratory: A Multimedia Tool to Promote Science/Health Literacy,” at a gathering of thousands of educators, scientists and philosophers from around the world. She also organized a mini-course with Department of Surgery Associate Scientific Investigator Michael Bernas on “Genetics for Lymphologists,” and presented on Lymphoscintigraphy and Medical Ignorance, and TeleLymphology at the 20th International Congress of Lymphology, Salvador, Brazil.

Her laboratory presented five papers in molecular/clinical lymphology featuring medical student Gideon Richards; MCB graduate student Mike Dellinger; undergraduate student Angela Noon; former UA medical student, now oncology resident at University of Utah, Kim Northup Jones, MD; and research scientist Bob Hunter. All won ISL Presidential prizes for their work, and Hunter also won the 1st Charles Witte prize for the best basic science presentation at the five-day Congress.

Following the Salvador Congress, in October, she presented the opening lecture, “Rubens C. Mayall, Translational Lymphology, and Lymphovascular Genomics,” at the Rubens Carlos Mayall Memorial Workshop on Lymphology, honoring this pioneer in Brazilian Angiology at the International Union of Phlebology, 15th World Congress, Rio de Janeiro, Brazil.

Valdivia Valdivia JM, Gonzales-Portillo G: “Radiation Induced Aneurysms.” Accepted for publication in *Surgical Neurology Journal*.

Valdivia Valdivia JM, Weinand M, Maloney C: “Surgical Treatment of Peripheral Entrapment Neuropathy of the Lower Extremities. Outcomes from 158 consecutive surgical cases.” Accepted for publication in the *Journal of the American Podiatric Medical Association*.


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**Mark Your Calendar!**

**VISITING PROFESSOR SERIES**

1501 N. Campbell Avenue, Room 5403

**February 22, 2006 • 8:00 a.m.**

Clifford Ko, MD

Associate Professor of Surgery

UCLA Medical Center

“Measuring the Quality of Care in Surgery”

**UMC TRAUMA PROGRAM**

**PRE-GOLF FUNDRAISER**

Friday, May 19, 2006

Ventana Canyon Golf Club

**2ND ANNUAL CECIL FAMILY GOLDEN HOUR GOLF CLASSIC**

Saturday, May 20, 2006

Ventana Canyon Golf Club

Proceeds from the pre-golf event and the Golden Hour Golf Classic benefit the UMC Level One Trauma Program and the Southern Arizona Trauma Network (SATNET).

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