ARIZONA
SARVER HEART CENTER
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Marnell Endowed Chair for Research in Cardiothoracic Surgery Aims to Expand Options for Transplant Patients

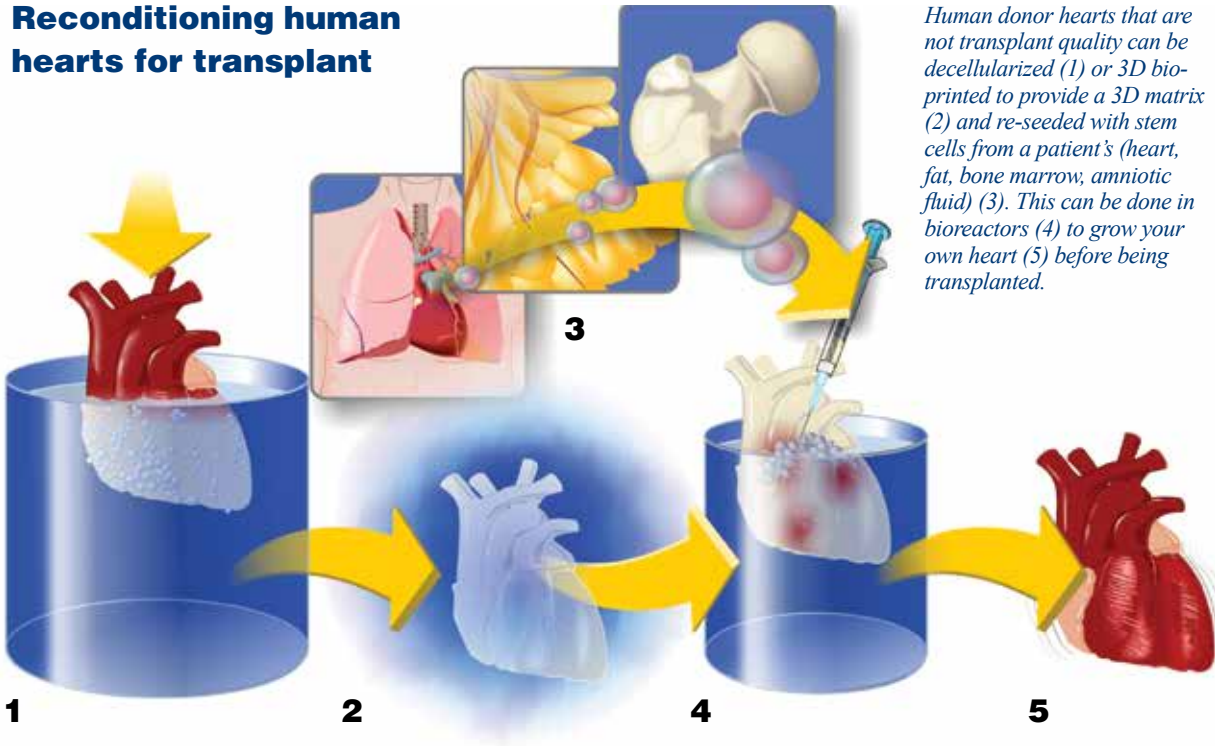
Zain Khalpey, MD, PhD, MRCS (Eng), associate professor of surgery at the University of Arizona College of Medicine – Tucson, has been named the *Tony A. Marnell, Sr. Endowed Chair for Research in Cardiothoracic Surgery* at the UA Sarver Heart Center. He also serves as surgical director of the Heart Transplant and Mechanical Circulatory Support Program at The University of Arizona Medical Center – University Campus.

"With surgical interests in adult and pediatric heart transplant; mechanical circulatory support, including ventricular-assist devices and total artificial heart; ex vivo lung perfusion; arrhythmia surgery and minimally invasive mitral valve surgery, Dr. Khalpey embodies the spirit of the Marnell chair," said Carol C. Gregorio, PhD, interim director of the UA Sarver Heart Center.

The Marnell Endowed Chair was established by an estate gift from Mr. Marnell, who understood the importance of medical research and the resources required

Continued on page 3

Reconditioning human hearts for transplant



Human donor hearts that are not transplant quality can be decellularized (1) or 3D bio-printed to provide a 3D matrix (2) and re-seeded with stem cells from a patient's (heart, fat, bone marrow, amniotic fluid) (3). This can be done in bioreactors (4) to grow your own heart (5) before being transplanted.

...from the Interim Director

As you receive this newsletter with a focus on heart failure and the numerous ways University of Arizona Sarver Heart members are working to improve patient care through research and education, it is an honor to let you know that the UA College of Medicine selected a new Sarver Heart Center director with expertise in heart failure.

This coming March we will welcome Nancy Sweitzer, MD, PhD, a board-certified advanced heart failure and transplant cardiologist and physiologist, as director of the UA Sarver Heart Center and chief of the Division of Cardiology in the UA College of Medicine – Tucson, Department of Medicine. Nationally recognized for her strong leadership and experience in clinical research, Dr. Sweitzer has a clinical research program focused on the interaction of the dysfunctional heart muscle in heart failure with the vasculature and kidneys to better understand how to improve symptoms and organ function in heart failure patients. She has done extensive work on the physiology of heart failure with preserved systolic function, a disease that disproportionately affects elderly women. She has led and collaborated on numerous studies sponsored by the National Institutes of Health as well as studies supported by industry and academic sponsors. She also has served on numerous NIH committees and currently serves as a member of its Clinical and Integrative Cardiovascular Science Study Section and the American Heart Association's Cardiac Biology and Regulation Committee.

Nancy Sweitzer, MD, PhD

In the meantime, she will wrap up her work at the University of Wisconsin Cardiovascular Medicine Division in Madison, where she is an associate professor of medicine and director of numerous programs, including clinical research, quality, heart failure and cardiac transplant programs. She also directs the Cardiovascular Medicine and Heart Failure and Cardiac Transplant Fellowship programs.

As chair of the search committee, I can say that we were thrilled with the quality of applicants and believe that Dr. Sweitzer's expertise will have a huge impact on the future advances that come from the Sarver Heart Center and immediately enhance the entire cardiology clinical practice. She also brings strong experience as a translational researcher and will be a valuable bridge between Sarver Heart Center members who have a strong basic science focus on cardiovascular diseases and those who understand the clinical advances that are within our grasp. We are grateful for the support we received from both the UA College of Medicine and The University of Arizona Health Network for making this recruitment possible. Additional information on Dr. Sweitzer will be provided in the next newsletter issue.

In this newsletter, you have the opportunity to read about the translational research of Zain Khalpey, MD, PhD, a cardiothoracic surgeon who recently was appointed to the UA Sarver Heart Center's *Tony A. Marnell, Sr. Endowed Chair for Research in Cardiothoracic Surgery*. One of the last resorts for heart failure patients is transplantation, yet the shortage of organs means few people can turn to this option. Dr. Khalpey's research is focused on expanding the options available to patients awaiting organ transplants.

We also cover some of the new minimally invasive procedures done in the catheterization lab and advances in imaging from the cardiology division that are giving patients new options for early detection and treatment of structural problems to prevent heart failure.

Much has been happening at the UA Sarver Heart Center and we are looking forward as we continue to make advances toward our vision of a future free of heart disease and stroke.

Carol C. Gregorio, PhD

The UA Sarver Heart Center Newsletter is published three times a year - in spring, fall and winter. News reporters are welcome to quote from newsletter articles and are asked to provide credit. Correspondence or inquiries should be addressed to: UA Sarver Heart Center, Public Affairs, PO Box 245046, Tucson, AZ, 85724-5046.
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Marnell Endowed Chair
continued from page 1

to advance medical science. The endowment was established at the UA Sarver Heart Center in gratitude to Jack G. Copeland, MD, who performed Mr. Marnell's heart transplant procedure in 1989, giving him 12 more years of an active, happy life.

"I am humbled by the honor of this appointment and hope to memorialize the Marnell family's wishes through my work," said Dr. Khalpey.

"The novel thinking of Dr. Khalpey will help direct the future of cardiac surgery," said Michael Teodori, MD, interim chief, Division of Cardiothoracic Surgery. "He has tremendous promise as a surgeon who successfully will bridge the gap between the theories of basic science research and practical innovation in clinical medicine and surgery."

About Dr. Khalpey's research

Dr. Khalpey directs the Ex Vivo Lung Program, Clinical and Translational Cardiothoracic Research and the Cardiopulmonary Stem Cell Bank. The Ex Vivo Lung Program offers a method to improve the quality of lungs removed from donor cadavers, making more lungs suitable for transplantation. His laboratory focuses on basic and translational research involving organogenesis (the formation and development of organs), organ preservation and tissue regeneration.

One goal is to recondition human hearts and lungs unsuitable for transplantation by chemically stripping unusable cadaveric lungs of their cells, leaving a functional lung "bioscaffold." This structure then can be "re-seeded" with autologous (a patient's own) stem cells to rebuild the organ. Using a patient's own stem cells may eliminate the need for expensive immunosuppressant medication that must be taken post transplant for life and subjects patients to various health risks.

One tool may be the use of a 3D bioprinter to aid in his organogenesis and tissue regeneration goals. His team currently is working on a 3D bioprinter that can print using "bioink" containing a patient's own stem cells.

With limited hearts available for transplantation, Dr. Khalpey is initiating "bridge-to-regeneration" trials in which autologous stem cells are injected into a patient's failing heart to offer hope for increased regeneration and recovery.

Dr. Khalpey, who came to the UA from Harvard Medical School (Brigham and Women's Hospital) and Columbia University in New York City, has published more than 100 manuscripts, abstracts and book chapters on heart and lung transplantation involving basic science and clinical outcome studies. He is an American Heart Association reviewer, Early Career Reviewer for the National Institutes of Health (NIH) and a member of the UA Institutional Review Board (IRB).

More information on Dr. Khalpey's research is available on UA Sarver Heart Center's website: heart.arizona.edu. Click on "Latest News" and "In the News."

Patient Breakthroughs

John Hulslander, 67, (pictured with his wife, Ellen) was losing his battle with ischemic cardiomyopathy and needed a ventricular-assist device implanted in his chest to pump blood for his dying heart while he waited for a heart transplant. However, his case was complicated: he had no sternum. A serious infection following quadruple bypass in 1997 resulted in its removal. So, Dr. Zain Khalpey and Dr. Robert Poston became the first surgeons to implant a left ventricular assist device using a surgical robot.

Graciela Uribe's heart was dying. The 63-year-old grandmother from San Luis, Ariz., (pictured on page 4 with her daughter Ana Apodaca) had trouble breathing

and walking. Her body filled with fluid and she suffered multiple heart attacks and failed bypass surgeries. Without a new heart, she faced certain death. Because of her small stature, a conventional ventricular assist device was too large. She became the first patient in Southern Arizona to receive a HeartWare® HVAD Pump, a new-generation, smaller ventricular-assist device used as a bridge to transplant. The tiny device pumps blood for her heart as she awaits a heart transplant.

Following quadruple bypass surgery in August 2012, the sutures holding the lower third of the sternum broke on Merrill Stromer, MD. "Each day, I felt intense pain as well as rapid-fire vibration in my sternum. I was relatively certain that only sternal reconstruction would resolve my pain," says Dr. Stromer. His research into the procedure led him to Dr. Khalpey who reconstructed Dr. Stromer's sternum using an auto-graft stem cell infusion, titanium plates and left pectoral flap. "Three months after my reconstruction, I have occasional muscular pains as I continue to heal. My sternum, which was freely moving around with multiple fractures before surgery, is now rock solid."♥

Avoid Heart Failure: Don't Pass Stage A

Mark J. Freidman, MD

About 5 million people in the United States have heart failure and about 550,000 are diagnosed for the first time each year. Increasing awareness and preventing heart failure could go a long way toward lowering health care costs since it is the primary reason for 12 to 15 million office visits and 6.5 million hospital days each year.

"Identifying and aggressively treating risks, such as high blood pressure and diabetes, before any structural abnormalities develop in the heart is necessary to prevent progression toward heart failure," says Mark J. Friedman, MD, professor of medicine in the UA College of Medicine – Tucson, Division of Cardiology and the UA Sarver Heart Center's *Thomas and Sabina Sullivan, Sr. Endowed Chair for the Prevention and Treatment of Heart Failure*.

Cardiologists use the following classification system approved by the American College of Cardiology to determine the best course of treatment for people who are at risk of progressing from heart disease toward heart failure. "The goal is to avoid progressing because you can never go back to an earlier stage," says Dr. Friedman.

Stage A: You don't have heart failure, but you are at high risk because of high blood pressure, diabetes, obesity or coronary artery disease. "At this stage, many people are treated by their primary care doctors, but people should be evaluated by a cardiologist to make sure they are being treated as aggressively as possible," recommends Dr. Friedman. "I advise my patients to monitor their weight and blood pressure regularly, eat a heart-healthy Mediterranean diet, participate in aerobic exercise, take their prescribed medications as instructed and get regular follow-up care with their physician," he adds.

Stage B: Because of these risks, your heart has been damaged, possibly by a heart attack or blockages in the coronary artery that reduce blood flow. Heart failure symptoms have not developed yet. "The good news is that improved technology now allows many heart conditions to be treated with catheter techniques, such as implant of a coronary artery stent or aortic valve replacement with a balloon expandable prosthetic aortic valve. In the past, these conditions required cardiothoracic surgery," explains Dr. Friedman.

Stage C: Your heart is damaged and you are experiencing heart failure symptoms, such as chest pain, shortness of breath, fainting, unable to lie flat, rapid heart rate, rapid weight gain, pain or swelling in the abdomen, legs or ankles, fatigue and chronic coughing. "Many of the medications are the same as for high blood pressure – ace inhibitors, diuretics, Beta blockers – but the goals are different. With heart failure, the goal is to improve function and increase the chance for survival," says Dr. Friedman. He also recommends a no-salt-added diet and checking weight everyday to watch for aggressive fluid build up.

Many people benefit from cardiac rehab three times a week where the patient receives supervised exercise, education about their condition, nutrition and lifestyle changes, such as smoking cessation.

Stage D: You have severe heart failure that requires specialized care. These patients need to be seen and followed by a cardiologist who is specially trained in management of advanced heart failure and cardiac transplant.

Patient Receives Trans Aortic Valve Replacement in an Already-Replaced Heart Valve at Age 96

Robert Lawrence had his first valve replacement in 2000 when he was a "mere" 84 years old and that lasted 13 years until just recently when this 96-year-old Bisbee man was told by his Sierra Vista cardiologist that he didn't like the sound of his heart valve.

He was referred to Kapil Lotun, MD, at The University of Arizona Medical Center – University Campus, a cardiology specialist in transcatheter aortic valve replacement (TAVR). After undergoing required testing, he underwent placement of a new valve into his already-replaced valve through a tiny groin incision. "This is the first time a TAVR inside a replaced valve was done in Southern Arizona," says Dr. Lotun, an associate professor of medicine and director of the Structural Heart Disease Program and Vascular Medicine in Cardiology at the UA College of Medicine – Tucson.

Born in 1916, Mr. Lawrence had a long career as a process chemical engineer with Northrup Aircraft until he first retired in 1973. However, he continues to enjoy decades of activity and enrichment. "Shortly after I retired, my employer asked me to work as a troubleshooter on special projects. I traveled all over the United States and Taiwan, essentially working with people to help them correct issues with manufacturing their products because they weren't following the proper processes," says Mr. Lawrence. He retired again around 1986, ending his career in Switzerland where he and his wife spent an extra month traveling before settling in California.

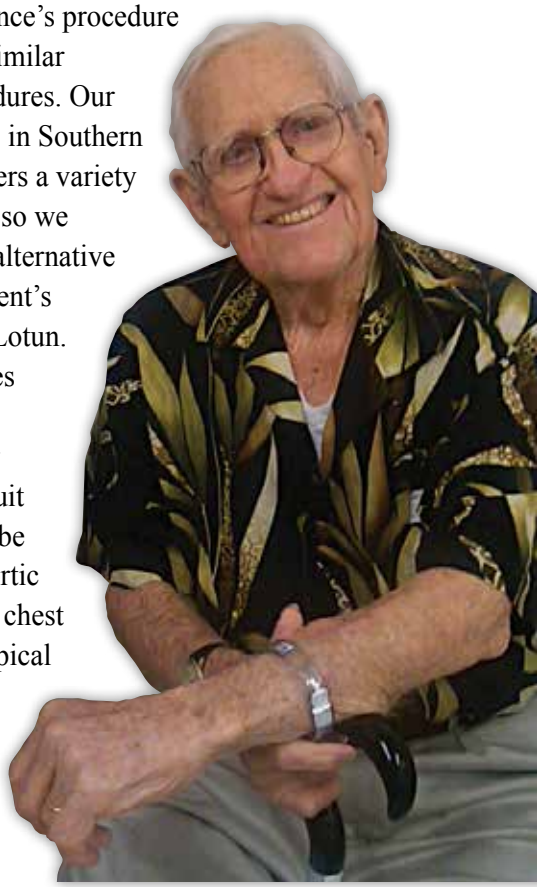
Unfortunately, 2000 was a difficult year for Mr. Lawrence. After receiving his first heart valve, "all went fine until five hours later when my aorta ruptured," recalls Mr. Lawrence. The physicians in California were able to patch the aorta and "although there was much stress on my heart, I recovered," he adds. Life sent another turn when he lost his wife three weeks after his heart procedures. "After all of this, my property started to get to be too much to manage, so my niece and nephew, who are in real estate, encouraged me to move to Bisbee. They found a wonderful renovated house built in 1906. I listed it with the National Registry of Historic Houses," says Mr. Lawrence.

A lover of classical music, Mr. Lawrence, who is legally blind because of macular degeneration, is hoping to find a way to once again read music and resume playing the organ. He and his nephew hold season tickets for the Arizona Opera Company's performances in Tucson. You may find them sitting on the veranda in Bisbee sipping Scotch while listening to classical music or opera. "The key to a long life is a good wife and good Scotch," says Mr. Lawrence. With the help of a magnification machine, he reads a lot, especially financial news to stay up to date on his market activity. He also enjoys cooking when his niece and nephew aren't around to cook his meals and makes bread with his nephew.

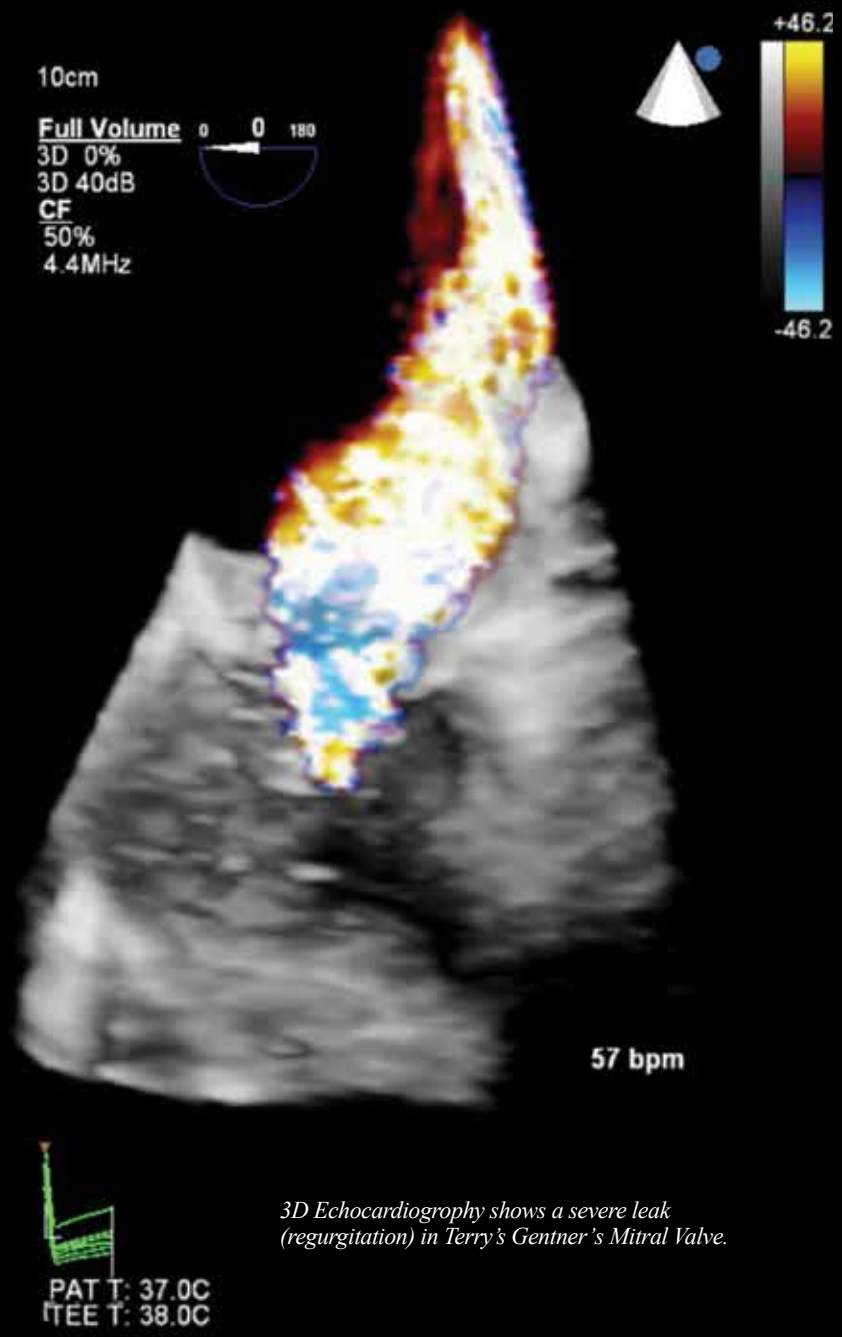
"I still catch the bus outside my house to get my mail in downtown Bisbee and usually have lunch during the outing. I walk around, but I am slowing down. I'm not sure that my heart limits my activity, but it may be my age," he adds.

Mr. Lawrence is one of numerous patient success stories since the UAMC TAVR program began in August 2012. "We are exceeding national goals across all major metrics, including mortality rates, stroke and average length of stay in the hospital," says Dr. Lotun. "The credit goes to our TAVR team, including administrative, cardiac catheterization lab and operating room staffs, nurse practitioners, perfusionists and other physicians."

"Since Mr. Lawrence's procedure we have performed similar valve-in-valve procedures. Our center is the only one in Southern Arizona that now offers a variety of TAVR approaches so we can provide the best alternative for an individual patient's condition," says Dr. Lotun. The TAVR approaches include transfemoral (incision in the upper leg/groin area), conduit (temporary bypass tube in the artery), transaortic (small incision in the chest and aorta) and transapical (incision in the chest between the ribs). ♥



At age 96, Robert Lawrence had a valve implant into his already-replaced valve.



3D Echocardiography shows a severe leak (regurgitation) in Terry's Gentner's Mitral Valve.

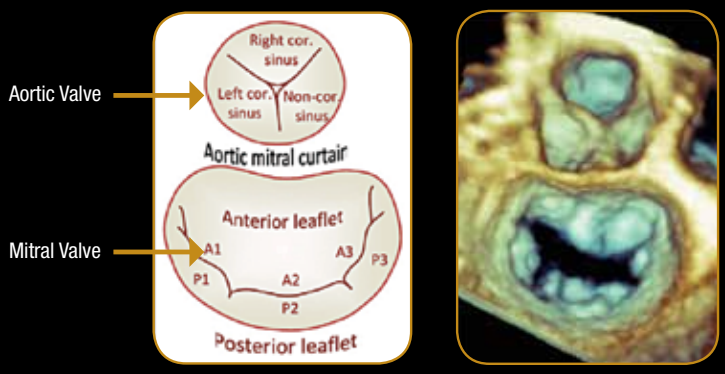
Advanced 3D Imaging Aids Early Detection and Guides Mitral Valve Repairs

Before heart disease set in, Terry Gentner led an active life working for the U.S. Navy as a contracted submarine acoustic equipment maintenance manager with the Royal Saudi Navy for 13 years during the Gulf War. "You would think that if I was going to have heart events, they should have occurred during the Scud attacks in Al Jubail," says Terry.

During that time, he traveled out of the country four to five times a month from his home base in San Diego. His daughter, Jenna Gentner, a registered nurse at The University of Arizona Medical Center – University Campus, recalled how her father was active in family outings, including sailing, camping, hunting, fishing, playing in the snow in the mountains and leading Cub Scouts.

In 2007, Terry, who now lives in Ajo, Ariz., was diagnosed in Phoenix with atrial fibrillation. "Slowly all of his activities were taken away from him. By the time we realized how much his health had deteriorated, all of this was snatched from him," says Jenna.

"Surgeon's view" of a normal mitral valve on 3D-TEE



"I got to the point where I couldn't walk across a room or lie down to sleep; I needed a lounge chair for sleep; and my legs were occasionally swelling," says Terry, age 75. During his recent bout with congestive heart failure, Terry was admitted to UAMC – University Campus, out of breath and with his chest full of fluid. A routine two-dimensional echocardiogram suggested a possible leaking valve, but the exact mechanism and severity of the leak was unclear.

"With advanced three-dimensional transesophageal echocardiography (3D-TEE), I was able to clearly see that Terry had a significant mitral valve leak where one of the valve leaflets was being pulled by a weak area in the heart muscle. With 3D-TEE imaging, the surgeon was given all the necessary information to guide a successful repair. Based on these images prior to surgery, I informed Terry that the surgeon would be able to repair and preserve his own valve and not replace it with an artificial valve," says Raj Janardhanan, MD, associate professor of medicine and medical imaging in the UA College of Medicine – Tucson, Division of Cardiology and an expert at detecting and evaluating valve disorders.

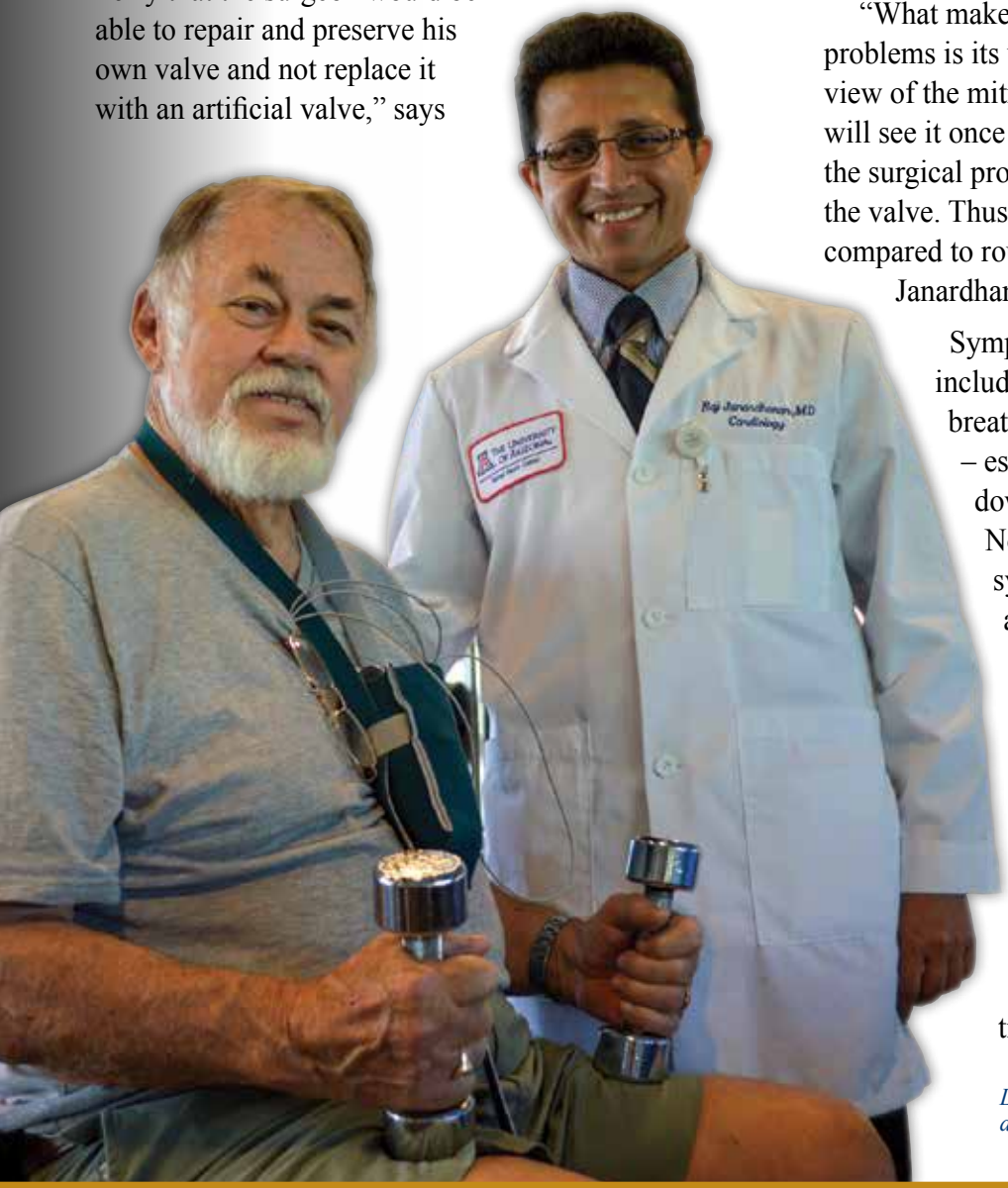
"These tools just aren't available in the Ajo clinic where my dad typically is seen," says Jenna.

A normally functioning mitral valve in the heart ensures blood flows forward from the left atrium to the left ventricle. If the mitral valve becomes narrow and calcified (hardened), blood does not move forward with ease. This is called mitral stenosis. On the other hand, as in Terry's case, if the valve does not close properly (leaks), blood may flow backward causing shortness of breath and heart failure. This is mitral regurgitation. Detecting these conditions now is easier with advanced 3D imaging techniques.

"What makes 3D-TEE critical in mitral valve problems is its unique ability to provide the surgeon a view of the mitral valve in the same orientation as he will see it once the chest is open. This helps in planning the surgical procedure. We can create 3D models of the valve. Thus, 3D imaging offers an improvement compared to routine 2D echocardiography," says Dr. Janardhanan.

Symptoms of mitral valve problems typically include chronic cough, exhaustion, rapid breathing, rapid heart beat, shortness of breath – especially with activity and when lying down – and excessive urination at night. Not all patients with valve disorders have symptoms. However, a doctor may detect a murmur, a galloping heart sound or crackles in the lungs.

As Terry was nearing the end of his cardiac rehab program, his physical condition improved to the point that he traded his walker for a cane and is able to walk further, lift weights and cycle. He plans to continue his exercise program at the fitness center in Ajo. His next goal is to go on a cross-country car trip with his wife next spring. ♥



Dr. Raj Janardhanan visits Terry Gentner during a cardiac rehab session.

Sarver Heart Center Welcomes New Cardiology Staff

Ranjith Shetty, MD, assistant professor of medicine in cardiology, joined the University of Arizona College of Medicine – Tucson, Division of Cardiology from the Virginia Commonwealth University Health System in Richmond where he was an assistant professor in interventional cardiology. His cardiology training includes a structural heart and peripheral vascular interventions fellowship at Swedish Medical Center – Cherry Hill Campus in Seattle, interventional cardiology and cardiovascular disease fellowships at Virginia Commonwealth University Health System, and a venous thromboembolism fellowship at Brigham and Women's Hospital, Harvard Medical School in Boston.

Prakash Suryanarayana, MD, assistant professor, clinical medicine, joined The University of Arizona Medical Center – South Campus cardiology team this past summer after graduating from the UA Sarver Heart Center Cardiovascular Medicine Fellowship Program. During his training, he received an honorable mention from the American College of Cardiology in Chicago in the Young Investigators Competition for research on cardiac transplantation in African Americans, under the mentorship of Mark Friedman, MD. He graduated from the Kasturba Medical College in India and completed his residency at PGIMER Chandigarh, India, and Maimonides Medical Center in Brooklyn, N.Y.

Kat Sisterman, RN, NP, joined the division and provides general cardiology care at University Campus' sixth foor clinic. She also works closely with interventional cardiologists Kapil Lotun, MD, and Ranjith Shetty, MD, to provide pre- and postoperative care for transcatheter aortic valve replacement (TAVR) and other structural heart disease patients. A certified family nurse practitioner since 2007 and a registered nurse since 2004, Sisterman received her bachelor's degree in nursing from the University of Michigan, Ann Arbor, and her master's in science from the University of California San Francisco. She currently is studying for her acute care and geriatric nurse pracititioner certfication from the University of Arizona. Sisterman previously provided primary care with the UA Department of Family and Community Medicine. Before that, she enjoyed emergency nursing in San Francisco, rural medicine in Tahoe National Forest, and serving the underserved with Doctors Without Borders in Haiti and the Central African Republic.

Native American Cardiology's Dr. Eric Brody Receives the IHS Award

The Native American Cardiology Team includes Phyllis Sanderson, program director and cultural liaison, Carol Locust, PhD, traditional practitioner, Eric Brody, MD, medical director, and Betsy Painter, NP, nurse practitioner.

The Indian Health Service, a federal health program for American Indians and Alaskan Natives, is formally recognizing the excellence of The University of Arizona Medical Center's Native American Cardiology and Medical Service Program (NAC-MSP).

Led by Eric "Rick" Brody, MD, medical director, their group received the IHS Directors Award for 2013 for their collaboration and excellent care. The IHS acknowledged the NAC-MSP for nearly two decades of providing primary and tertiary cardiology care to Native American patients and their families. The IHS cited the team's efforts to offer care not only in Tucson but at tribal and IHS facilities throughout Arizona. They created a curriculum to advance the cultural competency of UAMC staff, undergraduates and medical students. The program also expanded accessibility by using the Arizona Telemedicine Program. IHS noted the program's collaboration to assist with housing, transportation, meal costs and other essentials.

"It means all the more when we are essentially outside the IHS system, but recognized for doing something so good for native people. UAMC deserves credit for its vision and for their support of our mission. Our team members really deserve to be recognized: Phyllis Sanderson, program director and cultural liaison; Betsy Painter, NP; and Carol Locust, PhD, traditional practitioner," said Dr. Brody.

The IHS director's award ceremony was presented in the Smithsonian National Museum of the American Indian, in Washington, D.C.

arver Heart Center Members

Dr. Scott Klewer Appointed to ACHA National Board


Scott Klewer, MD

Scott Klewer, MD, professor of pediatrics in the UA College of Medicine – Tucson, Sarver Heart Center's *Peggy M. Barrett Endowed Chair for Congenital Heart Disease in Adults*, and member of the UA Steele Children's Research Center, was invited to join the national medical advisory board for the Adult Congenital Heart Association (ACHA). ACHA connects college health professionals to promote healthy communities and individuals. "This is a tremendous opportunity to collaborate with others around the country who are working to improve care for adults with congenital heart disease and incorporating care for these patients into the education programs for cardiologists who work with adults," says Dr. Klewer.

A generation ago, few children born with congenital heart disease lived to adult age, so adult cardiologists had little need to study congenital heart conditions. Today, the population of adults living with congenital heart disease is expanding. Dr. Klewer's goals are to provide quality care for patients as they transition from pediatrics to adult care, and increase education and training about moderate to complex congenital heart problems to cardiologists.

Sarver Heart Center Members Awarded NIH Grants


Frank I. Marcus, MD and Julia H. Indik, MD, PhD

Frank I. Marcus, MD, professor emeritus in the Division of Cardiology at the UA College of Medicine – Tucson, is a principal investigator on RO1 National Institutes of Health (NIH) grant number HL116906 for a multicenter four-year study, "Mechanisms, Genotypes and Clinical Phenotypes of Arrhythmogenic Cardiomyopathy." He received $1.2 million and is collaborating with **Julia H. Indik, MD, PhD**, associate professor and the Sarver Heart Center's *Flinn Foundation and American Heart Association Endowed Chair in Electrophysiology,* who is directing a diagnostic core.


Jil C. Tardiff, MD, PhD

Jil C. Tardiff, MD, PhD, professor of medicine and cellular and molecular medicine and the Sarver Heart Center's *Steven M. Gootter Endowed Chair for the Prevention of Sudden Cardiac Death*, was awarded $1.4 million (NIH grant number HL075619) to continue her lab's study of "Integrative Approach to Divergent Remodeling in Thin Filament Cardiomyopathies." Hypertrophic Cardiomyopathy is an often devastating and common cardiac genetic disease. The goal of this research is to improve the understanding of how independent mutations cause this complex disorder and discover better therapeutic options, especially in young people.


Aiden Abidov, MD, PhD, FACC, FAHA, FASE

UAHN Gains Echocardiography Accreditation

The University of Arizona Health Network (UAHN) has been granted a three-year accreditation in adult transthoracic, adult stress and transesophageal (TEE) echocardiography by the Intersocietal Accreditation Commission (IAC). The IAC grants accreditation only to facilities found to provide quality patient care, in compliance with national standards through a comprehensive application process including detailed case study review. IAC accreditation is a seal of approval that patients can rely on as an indication that the facility has been carefully critiqued on all aspects of its operations considered relevant by medical experts in the field of echocardiography.

"This is a huge achievement for the UAHN Cardiovascular Imaging, which covers the University Campus, South Campus and all our satellites. The accreditation is a result of two years of vigorous groundwork and daily efforts to maintain the highest possible standard in our clinical protocols. I would like to thank the entire team for helping us to achieve this important target," said Aiden Abidov, MD, PhD, FACC, FAHA, FASE, medical director, UAMC cardiovascular imaging.

8th Annual

The Heart of the Matter

An Educational Luncheon on Heart Disease in Women

Highlights from the 2013 luncheon held, Oct.12.

1. *Guests had an opportunity to learn about locally grown produce in the Westward Look Chef's Garden.*
2. *Panelists Cheralyn Schmidt, Lori Mackstaller, MD, and Nancy Edling-Brown, RN, discuss questions submitted by the audience.*
3. *Enjoying the reception: Dee Carmichael-Watson, Mary Anne Fay, Jennifer Camano, Pam Wigginton-Fee and Lynne Severe.*
4. *Women's Heart Health Education Committee members Rosemary DeCook, Diane Wolsk and Wanda Moore. The same day, Wanda received the Harriet Tubman Vanguard Award for Community Health Volunteer from the Coalition for African American Health & Wellness.*
5. *Cheralyn Schmidt of the UA Cooperative Extension's Garden Kitchen explains how freshly grown herbs are combined to spice up Chai tea.*
6. *Congratulations to Lori Mackstaller, MD (second from left), clinical associate professor at the UA College of Medicine, for receiving the Mary Anne Fay Heart Health Advocate of the Year Award at the 2013 Heart of the Matter Luncheon. The award was established to honor the advocacy and leadership of Mary Anne Fay (second from right), a UA Sarver Heart Center Advisory Board member and chair of the Women's Heart Health Education Committee. Earlier this year, Dr. Mackstaller also received the Crystal Heart Award from Tu Nidito for her significant contributions to the Tucson community. Also pictured: Gordon A. Ewy, MD, director emeritus of the Sarver Heart Center (far left), and Carol C. Gregorio, PhD, interim director of the Sarver Heart Center (far right).*
7. *Gathering for lunch: Betty Anne Sarver, Carol C. Gregorio, PhD, and Dyann Roller.*
8. *University of Arizona Emergency Medical Services volunteers Taran Santiago and Zack Saxman demonstrate the UA Sarver Heart Center Resuscitation Research Group's chest-compression-only CPR.*

Special thanks to Desert Toyota of Tucson for underwriting part of the luncheon. Also, thanks to Jill Bullock for her photography.

Best Wishes

for a Warm and Joyous Holiday Season and a Prosperous New Year!

All of us at the University of Arizona Sarver Heart Center are deeply thankful for your support.

Your gifts directly help our community through programs such as our women's educational luncheon, the Heart of the Matter, stroke support groups, numerous community lectures by our physicians and scientists, as well as life-saving chest-compression-only CPR training. This year, we educated more than 21,000 people throughout Tucson, Green Valley, Sahuarita, Sierra Vista, Phoenix and Yuma.

Please consider a gift to the UA Sarver Heart Center and a future free of heart disease and stroke in your year-end giving. We treasure your company on the journey toward a healthier and happier future!

Creative Ways to Give

Charitable Gift Annuity

Through a simple contract, you make a donation of cash, stocks or other assets to the UA Sarver Heart Center through the University of Arizona Foundation. In return, the UA Foundation agrees to pay you (and someone else, if you choose) a fixed amount each year for the rest of your life.

Age	Rate
65	4.7%
68	4.9%
70	5.1%
72	5.4%
74	5.7%
76	6.0%
78	6.4%
80	6.8%
82	7.2%
84	7.6%
86	8.0%
88	8.4%
90+	9.0%

Appreciated Stock

If you use appreciated stocks to make a gift, you can usually eliminate capital gains tax on a portion of the gift and spread the rest of the gain over your life expectancy.

Tax-Free Giving from Your IRA

Until December 31, 2013, if you are 70½ or older, you can gift your required IRA distribution, as much as $100,000, to the UA Sarver Heart Center without paying taxes on the distribution.

If you would like more information about a tax-free gift from your IRA to the UA Sarver Heart Center, please call us at 520-626-4164.

Amazon Shopping

The University of Arizona Sarver Heart Center has become an Amazon affiliate! Make your holiday (or any) purchase throughout the year by going to heart.arizona.edu and clicking on the Amazon logo. A percentage of your purchase will support the Sarver Heart Center's mission for a future free of heart disease and stroke. Thank you for supporting your University of Arizona Sarver Heart Center.

In Memory of Isabelle Preiss

For 31 years, patients and visitors to the University of Arizona Sarver Heart Center were greeted by the warm smile and calm wisdom of Isabelle Preiss, who passed away peacefully this past summer in Virginia where she and her husband, Jerry, were staying. Isabelle is survived by four children – Anne, Jon, Scott and Risa; nine grandchildren – Shana, Sam, Rachel, Steven, Tali, Julia, Benjamin, Adam and Austin; and seven great grandchildren.

"Isabelle was much more than an administrative assistant. After so many years of hearing how cardiologists cared for patients, she operated almost as a physician assistant," recalls Gordon A. Ewy, MD, director emeritus of the UA Sarver Heart Center. "When she came to tell me that she thought a patient needed to be seen right away, I always listened to her."

Isabelle's daughter, Ann, said the Sarver Heart Center was her mom's passion and requested that donations be made in Isabelle's name to the UA Sarver Heart Center, Development Office, P.O. Box 245046, Tucson AZ 85724.

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Sarver Heart Center Advisory Board Member Video Addresses Minority CPR Disparities

Sudden cardiac arrest, outside of hospital settings, is a leading cause of death in the United States, killing about 300,000 people annually. Cardiac arrest victims in low-income, predominately African-American neighborhoods, are 51 percent less likely to receive CPR.

Certain barriers prevent individuals from getting involved with CPR, such as the cost for training, time for training or fear of hurting the person. Wanda F. Moore, chair of the UA Sarver Heart Center Women's Heart Health Education Committee's Minority Outreach Program, addresses minority concerns about responding in cases of sudden cardiac arrest in a brief video. The Minority Outreach Program provides free chest-compression-only CPR education and hands-on training in Tucson and surrounding communities to alleviate concerns and fears. Watch the video to learn the three Cs of being a lifesaver – Check, Call, Compress and find more resources at heart.arizona.edu/learn-cpr.

Green Valley Lecture Series. .... 2013 – 2014

In Collaboration with Green Valley Recreation, Inc.

Join us for another year of heart health lectures in Green Valley! Free and open to the public. Presentations are held Thursdays at 10 a.m. at Canoa Hills Social Center, 3660 S. Camino del Sol, Green Valley.

No reservation required. Refreshments provided.


Zain Khalpey, MD, PhD

Dec. 19, 2013
Heart Transplantation:
The Future and the Present
Zain Khalpey, MD, PhD


Lorri Mackstaller, MD

Jan. 16, 2014
Sorting Out Heart News
You Can Really Use
Lorri Mackstaller, MD


Karl B. Kern, MD

Feb. 20, 2014
How Paramedics and Hospitals Work to Preserve the Brain during Sudden Cardiac Arrest
Karl B. Kern, MD

March 20, 2014 To Be Announced

For more information, please visit our website: heart.arizona.edu; email us at heart@email.arizona.edu; or call 520-626-4146. Do you want to receive health talk reminders via email? Please email your address to us.