



University Medical Center, Tucson, Arizona

For Referrals

Cardiac Arrhythmia Program
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University Medical Center
www.umcarizona.org

UA Sarver Heart Center
www.heart.arizona.edu

For Physicians Only

For emergency consultation

Physicians' Resource Service
(800) 777-7552 or (520) 694-5868



Sarver Heart Center



Cardiac Arrhythmia PROGRAM



University Medical Center TUCSON, ARIZONA

Cardiac Arrhythmia Program At A Glance

- Evaluation of adult and pediatric patients with arrhythmias such as atrial fibrillation, atrial flutter, supraventricular tachycardia (SVT), premature ventricular complexes (PVCs), ventricular tachycardia, patients with bradycardia and heart failure patients at risk for cardiac arrest
- Therapy of patients with arrhythmias may include catheter ablation therapy, implantable pacemaker, implantable cardioverter-defibrillator therapy and cardiac resynchronization therapy (*biventricular pacing*), using state of the art technology, including robotic navigation
- Robotic technology allows for precise maneuvering of catheters inside the heart chambers
- Experienced and dedicated pacemaker and ICD device clinic – staffed by our own specially trained EP nurses and technicians and supervised by Drs. Ott, Indik, Samson and Valdes

Mission

The Cardiac Arrhythmia Program at UMC offers expertise and experience in the treatment of complex arrhythmias and a complete portfolio of state-of-the-art technology.

Advanced Technology and Comprehensive Care

Comprehensive evaluation of patients with undiagnosed symptoms, including the use of implantable loop recorders, invasive electrophysiologic study and evaluation of the autonomic nervous system.

The Cardiac Arrhythmia Program is a well respected referral program, and a regional leader providing highly advanced and complex procedures to treat patients with cardiac arrhythmias. The Cardiac Arrhythmia Program uses cutting edge technology in diagnosis and therapy of complex cardiac arrhythmias. These include:

- Radiofrequency energy and cryo-ablation energy for arrhythmia catheter ablation
- Three-dimensional intra-cardiac mapping utilizing the Endocardial Solution multi-electrode balloon catheter and NavX systems
- Intra-cardiac echocardiography for anatomic guidance and catheter mapping
- Sensei™ robotic guided catheter steering for precise catheter manipulation for the therapy of complex arrhythmias, including atrial fibrillation
- Laser technology aided extraction of infected or malfunctioning pacing leads
- Echocardiographic guided optimization of defibrillator programming
- Both clinic-based and web based monitoring of pacemakers and defibrillators

University Medical Center

UMC is a private, not-for-profit, 365-bed hospital affiliated with The University of Arizona (UA). Established in 1971, UMC is Arizona's only academic medical center with UA Centers of Excellence including:

- UA Sarver Heart Center
- Arizona Cancer Center
- Steele Children's Research Center
- Arizona Respiratory Center
- Arizona Arthritis Center

UMC Cardiovascular Services

- consistently recognized as one of the nation's best hospitals, by *U.S. News & World Report* for heart and heart surgery
- our physicians listed among the Best Doctors in America, year after year
- home of the first FDA approved artificial heart device
- American Nurses Credentialing Center designated UMC as the first Magnet hospital in southern Arizona



Peter Ott, MD, FACC

Dr. Ott is an Associate Professor of Clinical Medicine at The University of Arizona. He is board certified in Internal Medicine, Cardiovascular Diseases and Clinical Cardiac Electrophysiology.

He holds the Peter Ott, MD Endowed Chair for Excellence in Electrophysiology. Dr. Ott received his medical degree from the University of Heidelberg, Germany, completed a medical residency at The University of Arizona and fellowship training in cardiology at the University of Colorado and electrophysiology at the University of Utah.

Julia H. Indik, MD, PhD, FACC

Dr. Indik is an Associate Professor of Medicine at The University of Arizona. She is board certified in Internal Medicine, Cardiovascular Disease and Clinical Cardiac Electrophysiology, and she holds the Flinn Foundation and American Heart Association Endowed Chair in Electrophysiology. Dr. Indik received her



Ricardo Samson, MD

Dr. Samson is a Professor of Pediatrics specializing in pediatrics and pediatric cardiology. He is also the Section Chief of Pediatric Cardiology. Dr. Samson is board certified by the American Board of Pediatrics Subboard of Pediatric Cardiology. He attended the University of Michigan Medical School and completed his residency in pediatrics at The University of Arizona. He completed a fellowship in pediatric cardiology from the University of Iowa Hospitals

medical degree from The University of Arizona, and completed fellowship training at The University of Arizona. Her research, funded through the American Heart Association, focuses on cardiopulmonary resuscitation for the treatment of cardiac arrest.

& Clinics and a fellowship in pediatric electrophysiology from Children's Memorial Hospital. His research interests include ventricular fibrillation and defibrillation in children.



Santiago Valdes, MD

Dr. Valdes is an Assistant Professor of Pediatrics at The University of Arizona in Tucson. He is board certified in pediatrics and board certified

in pediatric cardiology. After receiving a medical degree from The University of Texas Medical School at Houston in 1999, he completed a pediatric residency and chief residency at The University of Arizona in 2003. Dr. Valdes completed pediatric cardiology and electrophysiology fellowships at Baylor College of Medicine and Texas Children's Hospital in Houston in 2007. His research interests include the management of arrhythmias and pacemaker and device therapy in the pediatric population.

Glossary

Atrial fibrillation: the most common arrhythmia. Medical therapy focuses on stroke prevention, restoration/maintenance of sinus rhythm (*antiarrhythmic drugs and electrical cardioversion*) or heart rate control (*AV blocking drugs with or without pacemaker*). Patients

that are symptomatic despite medical therapy may be candidates for left atrial catheter ablation to treat atrial fibrillation, or AV node ablation with a pacemaker

Atrial flutter: a macro-reentry rhythm, typically in the right atrium. Most patients

can be cured with catheter ablation in the IVC/tricuspid annulus isthmus.

SVT: Re-entry rhythm using accessory pathways (often concealed) or AV node re-entry. Catheter ablation is highly successful in curing these arrhythmias

Sudden (cardiac) death (SCD): mostly due to ventricular fibrillation (VF). Studies have shown that patients with reduced LV ejection fraction are at risk for VF/SCD and ICD therapy can reduce mortality risk by 25-35%. In the pediatric population there are genetic

conditions as well as congenital heart defects that predispose patients to sudden death and would benefit from ICD therapy.

Cardiac resynchronization therapy (CRT): Patients with severe heart failure, reduced LV ejection fraction (< 35%) and a wide QRS complex

(> 120 ms) are considered to have dys-synchronous ventricular contraction, contributing to their heart failure.

Bi-ventricular pacing (*right ventricular + trans-coronary sinus left ventricular lead*) resynchronizes the heart and reduces heart failure, heart size and prolongs life.