



Echo-Pixel True 3D Technology

DEBORAH[®] HOSPITAL FOUNDATION INNOVATION GUIDE

VOLUME II

WELCOME TO OUR NEWEST INNOVATION GUIDE.

For nearly 100 years, Deborah has never put a price on life. It's been our guiding philosophy to provide the best medical care by one of the world's most experienced clinical staffs.

At Deborah, we never want a patient or their family making medical decisions based on personal finances. We remove that burden by never issuing a bill to a patient. Deborah Hospital Foundation has received Charity Navigator's highest distinction, a 4-STAR rating, further distinguishing us as a first-class, trustworthy non-profit Foundation.

It's a story you help write with generous contributions to Deborah Hospital Foundation. There's no exaggeration in saying that when you give, people live. We call this inspiring generosity The Cycle of Goodness: Gratitude turned to action.

As you'll see in the Deborah Innovation Guide, your support is making a difference for so many families. Visit DeborahFoundation.org to learn how your donation can keep more hearts beating for many years to come.

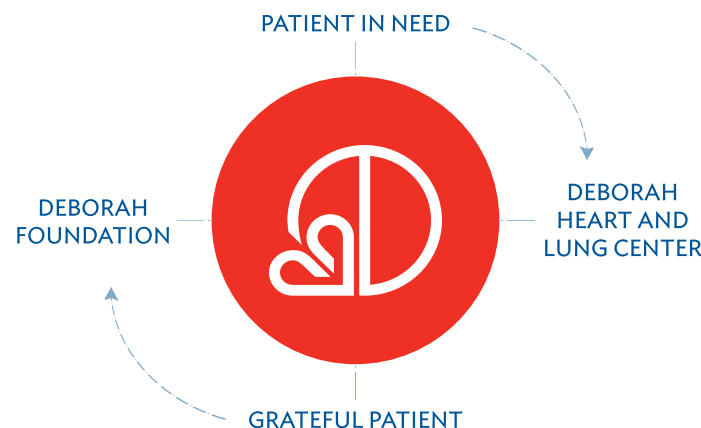
From Grateful Hearts,



Steve Toal
Deborah Hospital Foundation
Chief Development Officer



CYCLE OF GOODNESS





CARDIOMEMS™ AT-HOME MONITORING SYSTEM



Heart failure patients can reduce the likelihood of repeat heart-failure admissions with a new remote sensing device—CardioMEMS. This dime-sized miniaturized implantable device offers daily peace of mind by continually monitoring a patient's pulmonary artery pressure, which can be an early indicator of worsening heart failure. The recorded information is transmitted once a day during a five-minute computerized measurement that is recorded while the patient reclines near a special sensor in the comfort of their own home.

The wireless CardioMEMS monitoring sensor is implanted by Deborah specialists with a simple venous puncture into a branch of the pulmonary artery supplying blood to the lower left lung of the patient. The Hospital's heart failure team monitors the daily data it receives and makes any necessary adjustments as needed.



“Many times heart failure patients don’t know their condition is worsening until they end up in the hospital. The remote CardioMEMS monitoring gives us an early warning sign of potential problems. Using remote at-home technology, patients receive peace of mind, while at the same time we are able to proactively treat any worsening heart conditions.”

Raffaele Corbisiero, MD, Division Director, Electrophysiology and Pacing

ECHO-PIXEL TRUE 3D

Deborah's new Echo-Pixel True 3D imaging system compliments the Hospital's current high-tech CT and Echo 3D capabilities. The Echo-Pixel technology, however, takes this one step further: With the use of a special virtual reality HP display—along with sophisticated True 3D interactive Virtual Reality software—Deborah's Interventional and EPS Teams have the capability of manipulating a 3D image of the patient's heart in virtual space. This allows the physicians

to obtain very precise measurements for case planning and device choice prior to the actual procedure. Complex spatial relationships of structures within the heart can also be better understood, which is of great benefit in multi-faceted procedural planning. This type of imaging may also be very useful for other procedures, and cases such as adult congenital heart disease, mitral valvular disease, and endovascular repair of abdominal aortic aneurysms.





“It is unbelievably exciting to be able to use this new technology. With virtual manipulation we can more accurately choose a device type and size before the procedure. This type of very precise case planning should also help to reduce the incidence of any ‘anatomical anomalies’ during the cases, as well as help to improve procedural and long-term outcomes.”

*Richard Kovach, MD, Division Director,
Interventional Cardiology*



PANTHERIS™

A breakthrough device—the Pantheris lumivascular atherectomy system—for the first time allows Deborah's interventional specialists the ability to actually see inside a patient's arteries and precisely remove plaque, to effectively treat Peripheral Arterial Disease (PAD).

This new device incorporates real-time Optical Coherence Tomography (OCT) imaging on the tip of a therapeutic catheter designed to shave plaque from the wall of the artery. This combination is proving superior to standard imaging which uses x-rays and a sense of touch.



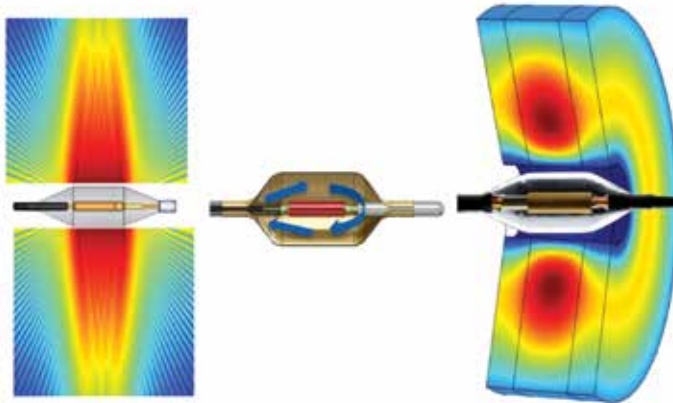


“This is a major step forward in treating PAD. The ability to actually see the plaque enables us to more accurately remove it, which is much safer for our patients and leads to better outcomes.”

Vincent Varghese, DO, Attending Cardiac Interventionalist



THE RADIANCE-HTN STUDY



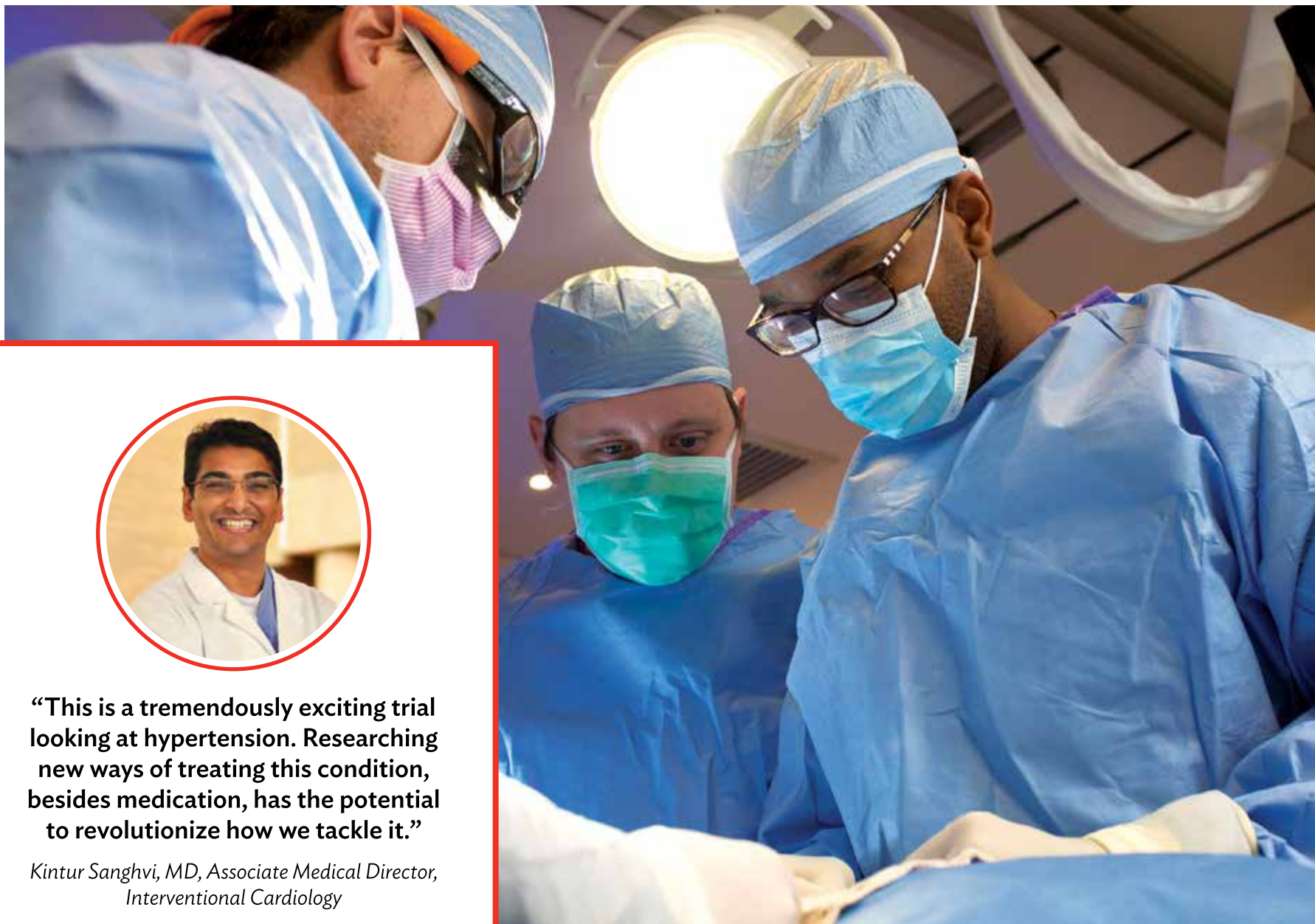
Deborah Heart and Lung Center's Clinical Research Program staff is screening patients with hypertension for participation in a study to evaluate blood pressure-lowering effects of renal denervation using ultrasound energy. The RADIANCE-HTN Clinical Study is a randomized, controlled study testing the Paradise® Renal Denervation System for

treatment of high blood pressure.

This study evaluates patients suffering from either resistant hypertension (uncontrolled blood pressure on three or more blood pressure medications) or essential hypertension (taking two or fewer blood pressure medications to manage their blood pressure). Half the patients in the study will randomly receive treatment

with renal denervation and the other half will receive an inactive test procedure (solely renal artery angiography).

The Paradise Renal Denervation System is used in a minimally invasive procedure to tone down overactive nerves leading to the kidney. The treatment involves an arterial access in the groin; a small flexible catheter is then inserted, and placed in the artery supplying the kidney. Ultrasound energy (sound waves) is delivered to the tissue surrounding the artery for seven seconds. The ultrasound energy generates heat to disable the over-activity of the sym-pathetic nerves leading to the kidney.

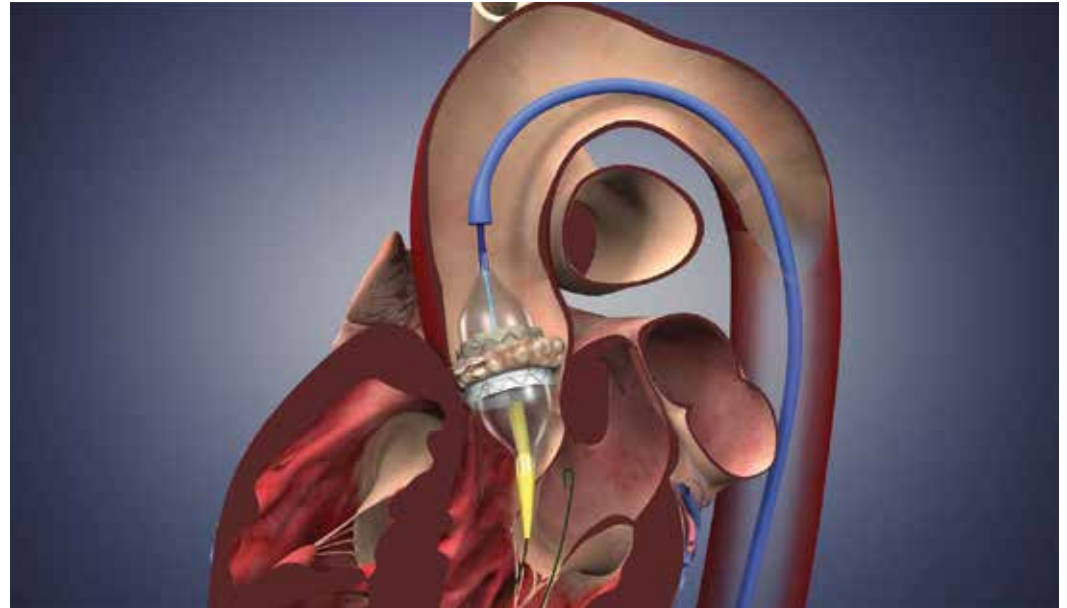


“This is a tremendously exciting trial looking at hypertension. Researching new ways of treating this condition, besides medication, has the potential to revolutionize how we tackle it.”

*Kintur Sanghvi, MD, Associate Medical Director,
Interventional Cardiology*

EXPANDING TAVR PROCEDURES

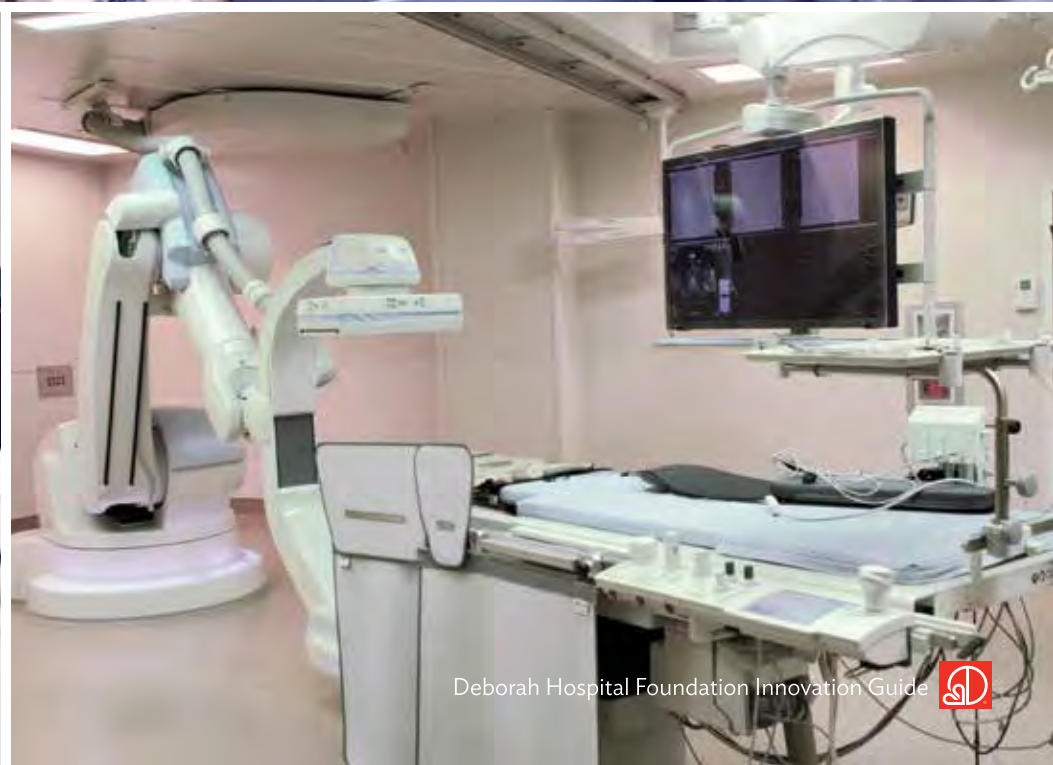
Since 2014 Deborah has built a well-established Transcatheter Aortic Valve Replacement (TAVR) program. The procedure—performed in the Hospital’s state-of-the-art Hybrid Operating Room—offers a sophisticated, minimally-invasive catheter-based treatment option for replacing stenotic aortic valves without traditional open-heart surgery, and often with just local anesthesia. Previously reserved only for patients considered too high risk for an open-heart procedure, the FDA has approved an expanded use of the SAPIEN 3 transcatheter heart valve for those determined to be at intermediate risk for open-heart surgery.



“I expect the rapid pace of innovation in the Hybrid OR to continue accelerating, as cardiac interventionalists, surgeons, and their teams keep pushing the boundaries of what can be done. I anticipate that the future horizon of what we consider to be ‘heart surgery’ will look vastly different for the next generation.”

Paul G. Burns, MD, Chair, Cardiothoracic Surgery





TREATING COMPLEX ARRHYTHMIAS

Deborah's Electrophysiology Lab – one of the Top 10 in the country – offers safe and effective ablations for patients with heart rhythm disorders, using the Stereotaxis Remote Navigation System. Long renowned for using robotic ablations to treat A-Fib (atrial fibrillation), Deborah's Electrophysiologists are now using Stereotaxis technology for treating other complex arrhythmias such as ventricular tachycardia (VT). With many VT patients already having an implantable cardiac defibrillator (ICD), a successful ablation to treat the VT greatly reduces occurrences of uncomfortable ICD shocks as well as allowing for a gradual reduction in medications.

The Stereotaxis System used by Deborah's highly-skilled specialists also allows them to perform epicardial ablations, an extremely complex procedure targeting radiofrequency energy to both the inside of the heart, but also the outside.





“Deborah is one of only four centers in New Jersey with this life-saving technology... This is another opportunity for us to cure heart rhythms which have severely comprised the quality of our patients’ lives.”

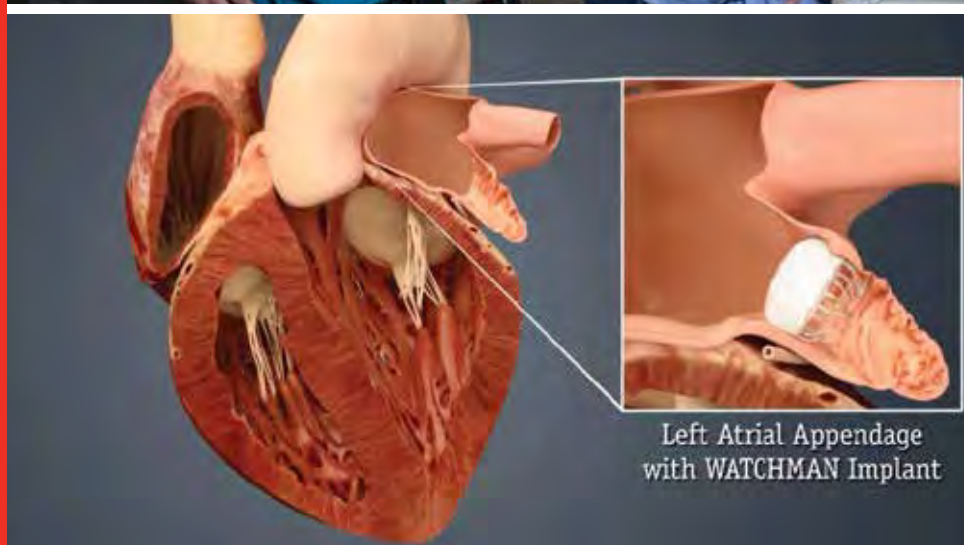
Pedram Kazemian, MD, Attending Cardiac Electrophysiologist





WATCHMAN™

Deborah is excited to offer patients the new WATCHMAN implant, which is a left atrial appendage closure device. By closing the left atrial appendage in the heart, patients with non-valvular atrial fibrillation (AF) now have an alternative to long-term warfarin medication therapy. The WATCHMAN Left Atrial Appendage Closure (LAAC) Implant is a breakthrough for AF patients by closing off the left atrial appendage to keep dangerous blood clots from entering the bloodstream and potentially causing a stroke. This one-time procedure paves the way for AF patients to stop taking warfarin and other similar blood thinners.





Online version available at *DeborahFoundation.org*.



He Who Serves Humanity Serves God,
He Who Serves Deborah Serves Both.

YOU GIVE. PEOPLE LIVE.

Complete the Cycle of Goodness.
Donate at *DeborahFoundation.org*.



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