TAVR
Deborah’s Structural Heart Program

Deborah’s innovative Structural Heart Program manages advanced and complex valvular and structural heart disease. Procedures are performed in the Hospital’s state-of-the-art Hybrid Operating Room which offers a sophisticated setting for combining the talents of surgeons, interventionalists, electrophysiologists and noninvasive imaging specialists to perform minimally invasive catheter-based treatment options.

Deborah has a well-established track record for Transcatheter Aortic Valve Replacement (TAVR). With high volumes and excellent outcomes, the TAVR team combines the expertise of surgeons Paul Burns, MD, and Ronald Ross, MD; interventionalists Richard Kovach, MD, Daniel Ice, MD, and Kintur Sanghvi, MD; and imaging specialists Allen Mogtader, MD, and Justin Szawlewicz, MD. This team has made Deborah the region’s leader in minimally invasive catheter-based treatment for replacing stenotic aortic valves, without traditional open-heart surgery -- and often solely with monitored moderate anesthesia. The FDA’s newly inclusive criteria -- approving TAVR for those determined to be at intermediate risk for open-heart surgery -- has greatly expanded Deborah’s already robust program.

In addition, the Structural Heart Program is also a leader in the Delaware Valley with the WATCHMAN™ implant. This left atrial appendage closure (LAAC) device offers patients with non-valvular atrial fibrillation a breakthrough treatment in preventing dangerous blood clots from entering the bloodstream and potentially causing a stroke. The WATCHMAN device is an alternative to long-term anticoagulation therapy with warfarin or other oral agents. The specialized skilled interventionalists Richard Kovach, MD, and Daniel Ice, MD; along with electrophysiologists Raffaele Corbisiero, MD, and Pedram Kazemian, MD, are combined with the Structural Heart Program’s surgery and imaging teams, providing seamless integrated care with superior outcomes.

Deborah Implants World’s Smallest Leadless Pacemaker

Deborah’s Electrophysiology Team recently implanted its first Micra® Transcatheter Pacing System (TPS).

Unlike traditional pacemakers, the Micra® Transcatheter Pacing System (TPS) is a miniaturized, fully self-contained pacemaker that delivers the most advanced pacing technology available to patients via a minimally-invasive approach. It weighs only 2 grams—comparable in size to a large vitamin pill—and is less than one-tenth the size of traditional pacemakers (~1cc). It is attached to the heart via small tines and does not require cardiac wires (leads) or a surgical “pocket” under the skin, thus avoiding the risk of pocket or lead infection, as well as potential long-term risks associated with lead fracture. It has an estimated average 10-12-year battery life and is fully MRI safe.

Deborah Cardiac Electrophysiologist Pedram Kazemian, MD, led the team which implanted the first TPS in 80-year-old Ronald Palmer of Barnegat. Mr. Palmer, who has had bradycardia and permanent atrial fibrillation, received the new small, sleek pacemaker, offering him an alternative to a traditional pacemaker, which he had previously and that had been extracted due to infection of the pacemaker pocket. The new device was implanted through a groin catheter during a relatively short procedure. Once implanted, nothing was visible from the outside of Mr. Palmer’s chest.
Teamwork Solves a Difficult Case

Unusual -- and sometimes rare -- cases can crop up in even the most routine medical situations.

Deborah patient “AR” had bypass surgery 15 years ago. In May 2016, he began experiencing chest discomfort and angina. A blockage was discovered inside his venous bypass graft to the right coronary artery (Fig. 1) and he was treated with a stent (Fig. 2). After initial recovery, “AR” presented with unstable angina, and within three weeks was found to have in-stent restenosis in the same vein graft, which Deborah interventionist Kintur Sanghvi, MD, discovered (Fig. 3) and immediately treated with a new stent (Fig. 4). At this point it was suspected that a stent compression/fracture from the sternal wire that was used to repair the sternum at the time of bypass surgery was the cause for this premature in-stent restenosis.

Within one month the patient presented with a similar complaint and unstable angina at Southern Ocean Community Hospital. Deborah’s clinical cardiologist Alan Ghaly, DO -- on staff at the time -- immediately recognized the situation and a CT angiography was performed. Dr. Sanghvi -- in tandem with Dr. Ghaly, and Deborah cardiothoracic surgeon Paul Burns, MD -- concluded that during specific movements by “AR,” the sternal wire was compressing the stent.

“This was a very unusual situation,” Dr. Sanghvi emphasizes. “We suspected that the sternal wire from his previous bypass surgery was the culprit from some of the extreme angulated angiographic views.”

“AR” went to the OR. “Using local anesthesia, the sternal wire was removed (Fig. 5). He then went back to the cath lab (Fig. 5) where the bypass graft on the right coronary artery was opened again (Fig. 6).”

“This was an extremely rare case and as far as I can tell, never reported in literature before. Normally veins are flexible and do not get compressed by the sternal wire, but the stiffness of the stent inside the vein graft against the pressure of the sternal wire caused the stent to fracture repeatedly. It is only because of the teamwork at Deborah -- and multiple imaging modalities -- that we were able to understand and solve this problem.”

“AR” continues his care with Dr. Ghaly, who reports: “Even though he’s in his eighties, he feels so good; he’s looking for a new job!”

World’s Smallest Pacemaker, continued...

“We are excited that we are bringing this new technology to the residents of the Delaware Valley. I am so proud of our team for accomplishing this brand-new implant, which is likely to revolutionize the implanting of pacemakers.” –Pedram Kazemian, MD

Any patient requiring a single-lead pacemaker is eligible for the new device, and it is of particular benefit to older patients who have had a prior infection or difficulty with vascular access.

For more information about the device, contact Deborah’s EPS team at 609-893-1200 ext. 5100.
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New Sleep Medicine Specialist at Deborah

Deborah welcomes Marcella M. Frank, DO, as a new Attending Pulmonologist and Sleep Medicine Specialist. Dr. Frank joins Deborah from Capital Health System, where she held various medical leadership positions, including Director of the Sleep Disorders Center; Director of the Department of Medicine; Co-Director of Cardio Pulmonary Rehabilitation; Associate Director of Internal Medicine Residency; and Co-Director of Nutritional Support Services.

After receiving her Medical Degree from the Philadelphia College of Osteopathic Medicine, Dr. Frank completed her Internal Medicine Residency at the University of Medicine and Dentistry of New Jersey, followed by a Pulmonary and Critical Care Fellowship at UMDNJ/Robert Wood Johnson University Hospital.

Dr. Frank brings a wide range of experience working with patients through various affiliated private practices, and she has sat on numerous academic and administrative committees, including serving as Clinical Assistant Professor in the Department of Medicine at UMDNJ/Robert Wood Johnson; Adjunct Clinical Assistant Professor at the New York College of Osteopathic Medicine; Medical Director and Advisory Committee at Thomas Edison State University; and varied clinical teaching positions at Helene Fuld Medical Center.

"It is exciting to join the sleep medicine program here at Deborah,” she states, “especially since it will now be housed in a brand-new, state-of-the-art building with the latest technologies.”

Frank notes that Deborah is adding a home sleep study program here at Deborah, “especially since it will now be housed in a brand-new, state-of-the-art building with the latest technologies.”

For more information about Deborah’s sleep program, call 609-893-1200 ext. 4392.