

# CARDIOVASCULAR CARE

## Mending Broken Hearts Without Surgery

*Sue Britton never knew about the hole in her heart until she decided to get to the bottom of a cough that wouldn't go away.*



The 67-year-old Plainsboro resident thought her allergies and asthma were causing the cough. Then Ms. Britton started having trouble breathing and tired easily. She also noticed that her heart was beating faster.

"I couldn't take walks or garden. When I went to the beach, walking in the sand was so tiring. I had to stop half way, rest a little, and continue," said Ms. Britton. Traveling was hard too, so she could not visit her grandchildren, three each in Georgia and California, as often as she wanted to.

After having an echocardiogram (an ultrasound of the heart) at Robert Wood Johnson University Hospital (RWJ), Ms. Britton finally found out what was wrong. She had been born with a hole in the wall between her heart's two upper chambers (atrial septal defect). Like many atrial septal defects, it had not caused problems for many years. "More than half are not detected until patients are over 40 years old," said Zoltan G. Turi, MD, Professor of Medicine at Rutgers Robert Wood Johnson Medical School and Director of the Structural Heart Program at RWJ.

Over the years, the right side of Ms. Britton's heart had grown bigger. Her heart was working too hard and pumped too much blood into her lungs, making the cough from her allergies and asthma much worse.

In March 2014, Dr. Turi closed the hole in Ms. Britton's heart without open-heart

surgery. He made a small needle puncture in the leg and threaded a catheter (thin plastic tube) into the heart. Then Dr. Turi advanced a device through the catheter to close the hole. RWJ is one of a few hospitals in New Jersey that offer this procedure — and other catheter-based procedures for diseases of the heart's valves and chambers (structural heart diseases).

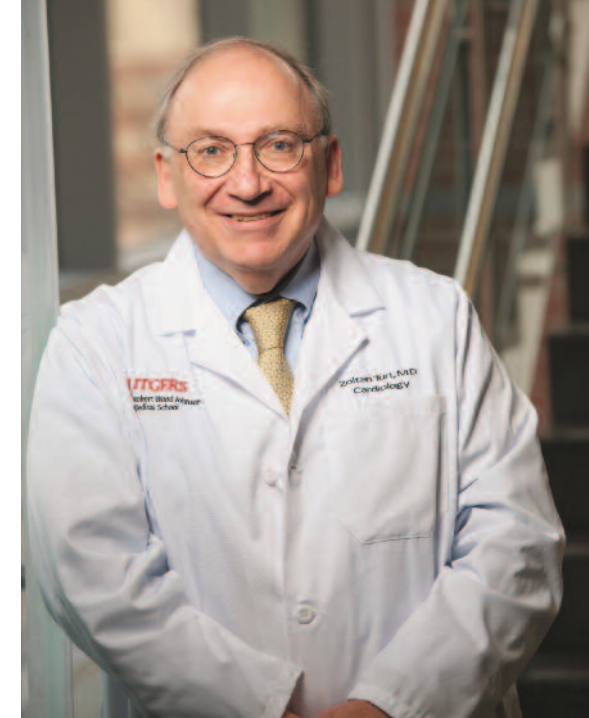
After one night in the hospital, Ms. Britton went home, where she began to get back to walking, gardening, and relaxing on the beach with her husband Jack. They planned trips to see their grandkids. "My energy came back and I had a normal heartbeat," she said. Her cough is much better too.

Most atrial septal defects can be closed with a catheter-based procedure. "About 95 percent of patients have an excellent result," said Dr. Turi. Other structural heart diseases treated with catheter-based procedures at RWJ include aortic and mitral valve obstruction (stenosis), and mitral valve leakage. In some procedures, such as transcatheter aortic valve replacement (TAVR) for aortic stenosis, a diseased heart valve is replaced without surgery. Dr. Turi led or took part in a number of original studies that led to the availability of these techniques, including TAVR.

In the past, open-heart surgery was the only way to treat these diseases and remains an important option for many patients. RWJ's state-of-the-art open-heart surgery program

offers a comprehensive range of complex procedures done by a nationally recognized, highly experienced team of heart surgeons. However, a number of procedures like Ms. Britton's can now be done routinely without surgery. In addition, many patients who are too high risk for surgery now have catheter-based options. "It's wonderful to be able to do some of these procedures without open-heart surgery. They have proven to be safe and they work," said Jennifer M. Joiner, MSN, RN, Clinical Coordinator for the Structural Heart Program. "Best of all, patients no longer have to go out of state to receive state-of-the-art care. We're right here, close to home." That was definitely an attraction for Ms. Britton. "I didn't want to go far away," she said.

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*Shown: Zoltan G. Turi, MD, Professor of Medicine at Rutgers Robert Wood Johnson Medical School and Director, Structural Heart Program at Robert Wood Johnson University Hospital.*