



## A Family Save

**Radiology Partners (RP) comprises more than 80 practices spanning the country, connecting a vast network of radiologists and subspecialty expertise. Shara Zook, practice director for [Greensboro Radiology](#), is thankful for the span of RP's reach.**

Shara's parents, Kathy and Tom Mizelle of Greensboro, North Carolina, were breaking in their new RV on a cross-country trip in March 2021. While stopped overnight in a suburb of Phoenix, Kathy began experiencing symptoms of a stroke. "I realized she was probably having a stroke because of her facial expression," Tom explained. He called 911, and first responders rushed her to the emergency department.

Immediately, Shara coordinated her travel to Phoenix while simultaneously discussing her mom's case with RP colleagues. She spoke briefly with Dr. Chris Mattern, then practice president of Greensboro Radiology and associate chief medical officer (ACMO) for radiologist experience, who let her know that Dr. James Lyons, ACMO for clinical operations for the west area, was at the same

hospital as Kathy. Before Shara even boarded her plane, Dr. Lyons reached out to Shara to check on her and assure her that he was reviewing her mom's information.

"Dr. Lyons was there, and he was part of the RP family." – Shara Zook

Kathy recovered quickly and continued her trip. After the Mizelles arrived home in July, Tom noticed Kathy was experiencing memory issues. At the emergency department in Greensboro, doctors confirmed Kathy had suffered another stroke, and a transesophageal echocardiogram detected a large clot in Kathy's heart. On July 23, doctors performed a removal of a left atrial clot and performed a pericardial patch closure of an atrial septal defect, and after, Kathy was able to return home.

One month after her procedure, Kathy was struggling with breathing and was admitted to the hospital with a large pericardial effusion. The next day, she underwent a subxiphoid pericardial window procedure. The day after, doctors discovered fluid collected in her right subpectoral region and placed a right chest tube. A week later, they performed video-assisted thoracoscopic decortication of a persistent loculated right pleural effusion. By the end of September, Kathy remained hospitalized with four chest tubes, outputting 700-900 milliliters of chylous fluid every day.

"My dad reached out and said they were discussing a procedure that needed to be done by interventional radiologists," Shara said. "I perked up a little and I said, 'Now I can help here.'"

Shara's colleagues at Greensboro Radiology were able to review Kathy's case and confirmed a lymphangiogram and thoracic duct embolization could help her tremendously. They scheduled the procedure with Dr. Heath McCullough, interventional radiologist at Greensboro Radiology, within a few days.

"Thoracic duct embolization is one of the more challenging procedures that we perform in the hospital setting," Dr. McCullough explained. There are three stages to the procedure. The first stage is to successfully perform the lymphangiogram, which is typically done by ultrasound-guided puncture of the lymph nodes and a slow installation of iodinated poppy seed oil known as Lipiodol. "Once that Lipiodol gets up to where it coalesces in the thoracic duct, you must try to do a percutaneous puncture of the thoracic duct," he explained. "It's very small, usually between 3-5 mm." The third stage is following the thoracic duct all the way up into the chest where it empties into the subclavian vein on the left. "Coil and glue embolize it to stop the antegrade flow of lymph fluid through the chest and block off the leak."

The day after the procedure, the leak of chylous fluid had decreased from between 700-900 mL to 250. By day two, the fluid was down to 50 mL, and by day four, the fluid had reduced to less than 10 mL, and Kathy's care team successfully removed her chest tube.

“We were very, very privileged to be a part of her care that helped to get her to that point.” – Dr. Heath McCullough

“I don’t know that anybody had any idea this procedure was going to be so profound,” Kathy said. “I know I didn’t. It was like a whole different person woke up the next day.”

After additional time in the hospital to recover from the number of procedures she had faced in such a short amount of time, Kathy was able to go to rehab and eventually home.

Tom continued, “I want to make sure we express our gratitude for the care that Kathy received. We just appreciate the professionalism and the care and the genuine concern for not only Kathy but for me as well.”

“It completely changed my perspective and how I think about what we’re doing,” Shara said. “I will be eternally grateful for Dr. McCullough and the success he had with that procedure.”

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