New technology used in lungs

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LAFAYETTE — Donald Richard was hospitalized last fall at Lafayette General Medical Center with pneumonia and then faced uncertainty when scans showed a small lesion in his upper right lung.

More scans didn't rule out that the lesion was cancerous, and its location proved precarious for traditional biopsy methods.
"It would have been difficult to get to," said Richard, 71, of Rayne.

Months earlier, if biopsy attempts were unsuccessful, alternatives included surgical removal without certainty that it was necessary or to watch and wait — giving time for the tumor to spread if it were cancer.

Instead, Richard was Lafayette General's first patient treated with a new navigational scope technology, the inReach System.

The technology enables doctors to steer a scope and biopsy forceps into the periphery of the lung.

“Without being able to steer, I never would have gotten near the lesion,” said Dr. Gary Guidry, Richard’s pulmonologist at Lafayette General.

The biopsy showed that Richard’s lesion was benign.

“It was scar tissue,” said Richard, who quit smoking a year and a half ago and struggles with emphysema and COPD.

“My breathing capacity is about 45 percent,” he said. “I’m feeling as good as I’m going to get.”

The technology, developed by superDimension, is designed to help doctors reach lesions in the periphery of the lungs that before were unreachable with a traditional bronchoscope.

In the past, using traditional bronchoscopy, doctors would guide a scope using an active X-ray of the area. In some cases, the area could not be reached and alternative procedures, like a needle aspiration would follow.

The inReach system increases the chances of a diagnosis on the first attempt and is expected to prevent unnecessary surgeries, Guidry said.

“Now with this system, our ability to make a diagnosis has gone from 30 percent to 74 percent. It’s not perfect but a lot better,” Guidry said.

The technology uses software that provides a map to doctors. The inReach software creates a 3-D image of the patient’s CAT scan and allows the doctor to do a virtual bronchoscopy leaving virtual markers or registration points along the route to the tumor or lesion.

During the actual procedure, when these virtual markers are “touched” by the scope, the software matches the “live” image with the 3-D map.

“Basically it was guess work to get into the periphery. This drives us. The tools help steer us,” Guidry said.

Prior to the technology, a traditional bronchoscopy was guided with an active X-ray. An active X-ray is still used, but the inReach system offers a doctor an image inside the lungs.

The technology can also be used to tattoo lesions in the lungs for surgery and to place fiducials — or markers — inside the lungs for radiosurgical procedures at Lafayette General’s CyberKnife Center of Louisiana.

Since early fall, 18 procedures have been performed at the hospital with the system.

In Louisiana, the inReach technology is in use in hospitals in the Greater New Orleans area and at Opelousas General Health System.
