

Script – Print – Finding lung cancer more efficiently

According to the American Cancer Society, lung cancer is the leading cause of cancer deaths in the U.S., accounting for about 1 in 5 of all cancer deaths. More than 74% of lung cancer patients are diagnosed at late stages, leading to a survival rate of just 5%. But when caught early and treated, the survival rate spikes to 92%. That's why early detection is so important.

OSF HealthCare Saint Anthony Medical Center in Rockford, Ill., recently performed its first ever electromagnetic navigation bronchoscopy (ENB), a minimally invasive procedure for patients. This allows doctors to find the smallest suspicious lung masses that require biopsy.

The technology used is called ILLUMISITE™ platform by Medtronic.

Mirza Ali, MD, is a pulmonologist at OSF Saint Anthony, and one of two physicians trained to perform the ENB.

"The easiest way to describe this procedure is that it's essentially like a GPS system for the lungs. You can't really biopsy things that you can't see with the camera inside someone's lungs," he says. "This system allows you to biopsy things that are way deeper inside the lung, than you would otherwise be able to do with other techniques from the inside, or even biopsy through the chest wall itself."

According to Dr. Ali, the procedure is not new, but recent technological enhancements have been integrated into the traditional bronchoscopy. This technology gives a pulmonologist a roadmap to the lungs in real time, he adds, providing quality lung tissue samples.

"In the past, we would use other technologies available to us, but there was really no way to guide where you wanted your biopsy tools to go without necessarily having a GPS system," says Dr. Ali. "You would have your regular CAT scan and you would use that to get a sense of where you needed to go and looking with a different form of ultrasound. You would have to switch tools in the middle of the procedure to be able to do the biopsy itself which comes with its own consequences."

Dr. Ali stresses that ENB is a benefit to both the patient and physician. "It's more effective in the sense that it may give you the diagnosis, but it really saves patients having to undergo more invasive biopsies where they would have to stick a needle through the outside of the chest inside the lung itself," he says.

ENB works like this. The patient is placed on a board that contains various sensors and is put to sleep under general anesthesia much like surgery. Several more sensors are placed on top of the patient, which allows for the software to create a three-dimensional map of the patient's lungs, which in combination with a CAT scan allows for the development of the roadmap that guides the physician.

The procedure is performed in an operating room and typically takes 30 to 60 minutes. There is also a pathologist in the room observing the biopsy samples in real time.

The real benefit to this procedure is that the sooner smaller nodules are biopsied, early-stage cancers are diagnosed sooner, which means a quicker path to treatment.

"It's a game changer in the sense that patients used to have to get more invasive biopsies," says Dr. Ali. "Now they don't have to have to undergo more invasive procedures and risk of complications like lung collapse or bleeding into the chest. It's a safe way to do this procedure. And we get a good diagnosis and good tissue that oncologists need to make cancer treatment decisions for patients."