

New staging technique might save bladders in some bladder cancer patients

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Pathologists today reported encouraging results from a new technique to increase the accuracy of staging bladder cancer tumors that could reduce the need to remove bladders from some patients.

The technique is performed by pathologists before surgery. It can confirm that in certain cases, tumors are at an early enough stage so that the cancer can be treated without removing the bladder.

In a study of 70 [bladder cancer](#) specimens, the technique was 95.2 percent accurate, Dr. Gladell Paner of Loyola University Health System reported at a meeting of the United States and Canadian Academy of Pathology annual meeting in Boston.

The American Cancer Society estimates there were about 69,000 new cases of bladder cancer in the United States last year, and about 14,000 people died of the disease.

There are five stages of bladder cancer, ranging from Stage 0 (earliest) to Stage 4 (most advanced). Stage 0 and Stage 1 cancers generally do not require removal of the bladder. Stage 2 and above typically require removal of part of or the entire bladder.

In Stage 0 and Stage 1, the tumor is confined to the surface of the bladder, or just below the surface. In Stage 2, the tumor has penetrated down to a [deep muscle layer](#). But in some cases, Stage 2 cancer can look like Stage 1. The reason is that a layer of muscle near the surface can

look like the deep muscle layer. Such a mistake can result in the bladder being needlessly removed. In as many as 4 percent of biopsies, it is extremely difficult to distinguish between Stage 1 and Stage 2 cancer, Paner said.

In the new technique, developed by Paner, the specimen is exposed to an antibody called smoothelin. Smoothelin reacts strongly with deep muscle, and this reaction shows up as a stain when seen under the microscope. By contrast, smoothelin does not react or leave stains on muscle near the surface.

"The goal is to avoid the potential mistake of calling a [tumor Stage 2](#) when it actually is Stage 1," Paner said. Paner is an assistant professor in the Department of Pathology at Loyola University Chicago Stritch School of Medicine.

In Paner's study, the technique correctly identified 97.9 percent of the specimens that had deep muscle and 95.2 percent of the specimens that did not have deep muscle.

"These results are very encouraging," Paner said. "However, we still need to be cautious. The technique needs to be studied further."

At the USCAP meeting, Paner and other Loyola researchers are lead authors of 16 study abstracts and co-authors of another nine abstracts.

The USCAP meeting is the world's largest gathering of physician-pathologists. Researchers from more than 430 medical schools and universities around the world will present nearly 2,800 study abstracts. Loyola is among the top 20 centers in the number of first-authored abstracts. All abstracts undergo a blind, peer-reviewed process.

"Your institution has worked hard to support and generate these

important studies which will help advance the specialty of pathology as well as medicine in general," USCAP Executive Vice President Dr. Fred Silva wrote in a letter to Dr. Eva Wojcik, chair of the Department of Pathology, Loyola University Chicago Stritch School of Medicine.

Source: Loyola University Health System

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