New Bladder Cancer Test May Help With Early Detection

HONOLULU – A non-invasive bladder cancer detection test developed by Charles Rosser, director of the University of Hawai‘i Cancer Center's Translational and Clinical Research Program, and collaborators, had a strong overall performance when tested on participants in Japan. Researchers evaluated the urine-based test to see if it could benefit patients, and potentially benefit healthcare systems as well.

"The development of non-invasive tests that can accurately detect and monitor bladder cancer is clinically urgent," said Rosser. "Bladder cancer patients are under continual surveillance with routine examinations to monitor the disease's development. With the prolonged and invasive nature of follow-up and treatment strategies, bladder cancer is one of the most expensive malignancies to manage."

The study published in Journal of Translational Medicine evaluated the urine-based diagnostic test on 288 people in a Japanese cohort from two independent institutions. To date, Rosser and his team have tested the diagnostic test in more than 1,000 subjects with encouraging results.

Bladder cancer characteristics are similar in Japan as they are in the United States. The disease is often seen in elderly patients, which is becoming a major social issue in an aging Japanese society. In Japan, 2,000 patients are newly diagnosed and 5,000 patients die from the disease annually, according to the study.

The test confirmed the presence of bladder cancer when evaluating samples with the chosen panel of biomarkers. The results reinforce the potential use of the biomarkers for detection of the disease. The test achieved a strong overall diagnostic performance achieving 85 percent sensitivity and 81 percent specificity.

"The diagnostic test performance is encouraging, it can potentially be beneficial for many bladder cancer patients if the results can help with clinical decision making and patient management," said Randall Holcombe, UH Cancer Center director. "The Center is focused on cancer prevention and early detection efforts because it is essential to reducing cancer risk, incidence and mortality."

In Hawai‘i bladder cancer is the fifth most common cancer and the ninth most deadly cancer in men. There are 228 people who are diagnosed with bladder cancer in the state each year.

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The University of Hawai'i Cancer Center through its various activities, cancer trial patients and their guests, and other visitors adds more than $54 million to the O'ahu economy. This is equivalent to supporting 776 jobs. It is one of only 69 research institutions designated by the National Cancer Institute. Affiliated with the University of Hawai'i at Manoa, the center is dedicated to eliminating cancer through research, education, and improved patient care. Learn more at www.uhcancercenter.org. Like us on Facebook at www.facebook.com/UHCancerCenter. Follow us on Twitter @UHCancerCenter.