MedicalXpress

Controversial prostate cancer screening can be improved by repeating abnormal tests

December 10 2015

For more than 20 years, the prostate-specific antigen (PSA) test has been used to help screen for prostate cancer, but in recent years, some task forces have called for this blood test to be abandoned because it leads to many unnecessary biopsies. Now, a new study from The Ottawa Hospital and the University of Ottawa shows that simply repeating abnormal PSA tests dramatically reduces unnecessary biopsies.

The study is the first to examine the impact of prompt repeat PSA testing in a broad range of men being screened for prostate cancer. It was led by Drs. Rodney Breau and Luke Lavallée and colleagues, and published in the *Mayo Clinic Proceedings* on Dec. 10, 2015.

"A high PSA level is associated with a greater risk of prostate cancer, and PSA screening can help detect cancer at an earlier, more treatable stage," explained Dr. Breau, a prostate cancer surgeon and associate scientist in epidemiology at The Ottawa Hospital and the University of Ottawa. "However, PSA levels can also fluctuate because of infections, physical activity and laboratory error. Because of this variation, we implemented a protocol to always repeat an abnormal test before referring a patient for a biopsy. We had a hunch that this would reduce unnecessary biopsies and our study shows that our suspicion was correct."

The research team reviewed the medical records of 1,268 men who had an abnormal (high) PSA test result and were evaluated at the Ottawa Regional Cancer Assessment Centre between 2008 and 2013. In 25

percent of these men, the second PSA test came back normal. Only 28 percent of men with conflicting test results underwent a biopsy compared to 62 percent of men who had two abnormal test results, representing a 55 percent reduction in biopsies.

In addition, only three percent of men with conflicting test results who had a biopsy were diagnosed with cancer within the year, compared to 19 percent of men who had two abnormal tests, suggesting that the second normal test is important.

"It is clear to me that any man with an abnormal PSA test should have this test repeated before a decision to biopsy," concluded Dr. Breau. "Some doctors and patients may be worried about missing a significant cancer diagnosis if they forgo a biopsy after conflicting test results, but our study shows this is very unlikely. It is also important to remember that the PSA test is just one factor we evaluate when deciding to do a biopsy, and these decisions are always made together with the patient, and can be revisited if risk factors change."

"Our study has important implications for patients and the health-care system," said Dr. Lavallée, a prostate cancer surgeon and researcher at The Ottawa Hospital and the University of Ottawa. "Prostate biopsies can be uncomfortable and inconvenient for patients, and in rare cases, they can lead to infections, so we only want to do these if they are really necessary. Prostate biopsies are also expensive for the health-care system."

According to the Canadian Cancer Society, approximately 24,000 Canadians will be diagnosed with prostate cancer each year and the five-year survival rate is 96 percent. A PSA test costs approximately $30, while a prostate biopsy costs approximately $880.

More information: 'Reducing the Harm of Prostate Cancer Screening

by Repeating an Abnormal Prostate-Specific Antigen Test'. *Mayo Clinic Proceedings*. Luke T. Lavallée; Andrew Binette; Kelsey Witiuk; Sonya Cnossen; Ranjeeta Mallick; Dean Fergusson; Franco Momoli; Chris Morash; Ilias Cagiannos; and Rodney H. Breau. Dec. 10, 2015.

Provided by Ottawa Hospital Research Institute