

Novel test following prostate surgery could detect cancer recurrence earlier

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A new test could reliably detect early increases in prostate specific antigen (PSA) levels — a biomarker commonly used to measure the recurrence of prostate cancer — in men who have undergone prostate cancer-treating surgery. Earlier detection of these rising levels would allow men with cancer recurrence to undergo earlier, more effective treatment for potentially better outcomes.

Data measuring the efficacy of this new test were presented at the Fourth AACR International Conference on Molecular Diagnostics in Cancer Therapeutic Development.

"AccuPSA is a simple blood test that can tell a physician important information about prostate specific antigen levels after radical prostatectomy," said David Wilson, Ph.D., senior director of product development at Quanterix Corporation, the manufacturer of the test. "AccuPSA has the potential to eliminate unnecessary treatments and enable earlier detection of recurrence, which may lead to earlier treatment, better outcomes and have a positive impact on health care costs."

After undergoing radical prostatectomy, many men remain at a significant risk for cancer recurrence. Because of this, patients are monitored very closely for rapid increases in PSA, which may signal cancer recurrence.

Standard PSA tests are primarily used to screen asymptomatic men for

[prostate cancer](#). However, once the prostate is surgically removed, PSA levels are usually undetectable using standard tests, according to Wilson. AccuPSA, which uses Quanterix's proprietary Single Molecule Array (SiMoA) technology, is able to detect PSA with unprecedented sensitivity, and at much lower levels than standard PSA tests because it can selectively capture and measure individual PSA molecules.

To determine the accuracy of the novel blood test, PSA levels were measured in blood taken from 60 men who had undergone radical prostatectomy. These specimens had all been categorized as being below the detection limit of standard PSA tests. However, using AccuPSA, researchers were able to measure PSA in all of the samples.

"After radical prostatectomy, many important questions remain for the physician and the patient," Wilson said. "AccuPSA is designed to help the physician and patients to become better informed by measuring PSA after radical prostatectomy and establishing if the cancer is gone or has metastasized or recurred."

The next step in this research is to conduct a large retrospective clinical study to formally establish the utility of this test.

"We hope to be able to establish with our clinical study that nadir values — the lowest value of PSA that occurs post-surgery — are predictive of prostate [cancer recurrence](#)," he said. "What this might mean for a post-radical [prostatectomy](#) patient is that a nadir PSA level below an established threshold could indicate if the patient is effectively considered 'cured.'"

Provided by American Association for Cancer Research

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