

Digital rectal exam remains important part of prostate screening

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(Medical Xpress)—The digital rectal exam is an important screening test that can discover prostate cancer that a prostate-specific antigen or PSA test may not, despite the higher sensitivity of the PSA test, according to Penn State College of Medicine researchers.

The digital rectal examination is a procedure where a physician feels the surface of the prostate with a gloved finger. The doctor is able to feel any lumps or hard areas on the prostate.

A [PSA test](#) checks for levels of prostate-specific antigen in the blood, with higher levels signaling potential cancer. As men age, the acceptable PSA level increases.

"Prostate cancer is the most common cancer in men, accounting for over 28,000 deaths yearly," said Jay Raman, M.D., associate professor of surgery. "Improvements in screening methodology and refinements in [cancer care](#) have contributed, in part, to a reduction in recent [mortality rates](#)."

An elevated PSA level or an abnormality found on the prostate during the [digital rectal exam](#) typically leads to the recommendation of prostate needle biopsy, the most accurate [diagnostic technique](#). Elevated [PSA levels](#) have been shown to more accurately predict a positive cancer biopsy result than the rectal exam. The digital rectal exam has been considered less precise because of the variability in of who is administering the test and the experience of that person, and the

incorrect positives associated with noncancerous abnormalities.

Other studies have shown the PSA test to be more sensitive and specific than the digital rectal exam, especially at low PSA levels. However, no study to the researchers' knowledge has looked at the effectiveness of the digital rectal exam when compared to age-adjusted PSA levels.

Penn State Hershey researchers studied 806 men from September 2001 to December 2008 to see how the initial testing lined up with the results of their biopsies.

In the group of men studied, half had elevated PSA levels and 36 percent had an abnormal digital rectal exam (with or without an elevated PSA). The [biopsy](#) diagnosed 306 of the men as having prostate cancer. Of that number, 136 of the men had an abnormal digital rectal exam finding.

Most importantly, 43 of the 136 men who had an abnormal digital rectal exam showed a normal PSA level for their age. While 14 percent of all patients with prostate cancer had an abnormal digital rectal exam, 31 percent of these men had normal PSA levels for their age.

"It is important to acknowledge that age-specific PSA cutoffs contribute some limitations in prostate cancer screening," Raman said. "In particular, while age-specific thresholds increase the sensitivity in younger men, these same cutoff values lower the sensitivity in older men."

Because the acceptable PSA level is increased for older men, it is possible that [prostate cancer](#) is being missed if only the PSA test is used.

"Our study confirms that the digital rectal exam remains an important part of screening such patients because 31 percent of cancers in our study would have been missed by using age-specific PSA cutoffs alone,"

Raman said.

Researchers published their findings in *The Canadian Journal of Urology*.

Provided by Pennsylvania State University

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