

Study finds prostate size may help predict cancer severity

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(Medical Xpress) -- The size of a man's prostate gland may help predict the severity of cancer, with a smaller prostate being more likely to harbor serious disease. This finding by a group of Vanderbilt-Ingram Cancer Center researchers was published in the December issue of the *Journal of Urology*. Fourth-year medical resident Judson Davies, M.D., was first author on the paper.

The VICC cancer investigators reviewed 1,251 cases of prostate cancer among men who had their prostates surgically removed between January 2000 and June 2008. The patients were considered to have low-risk disease because their prostates were producing low levels of prostate specific antigen (PSA) and they had a Gleason score of six or less. The Gleason score is a measure of the grade or severity of cancer found during initial biopsies.

The researchers looked at cases of only low-risk patients who might be candidates for less aggressive treatment, including observation - sometimes called "active surveillance." These options are considered safe for some patients because prostate cancer often grows so slowly that it may never pose a threat to the patient's life.

The VICC investigators found that in 31 percent of the cases, when pathologists examined tissue removed after surgery, the severity of the cancer was upgraded from the pre-surgery analysis and men with smaller prostates were more likely to have their cancer upgraded after surgery.

"Our field suffers from this great confusion because in half of men you can find prostate cancer in microscopic amounts that may not be clinically significant and yet it's the second leading cause of cancer death among men," explained Daniel Barocas, M.D., MPH, assistant professor of Urologic Surgery and senior author on the study. "The more you look for it, the more you find it but that doesn't help us figure out who needs treatment and who doesn't."

Cancer investigators are trying to ascertain additional clues that will help physicians counsel patients about whether it is safe to choose less aggressive treatment instead of removing the prostate gland or treating it with radiation. In earlier research, Barocas and his colleagues found hints that prostate size might provide additional prognostic information.

"There's nothing about size that would necessarily predict a bad outcome. What it's really about is the ratio of PSA to size, or PSA density, meaning that a small prostate that is making a lot of PSA is likely to be due to a bad tumor, whereas a large prostate making a lot of PSA is likely to be due to benign enlargement of the prostate (BPH)," said Barocas.

Barocas said the new findings provide one more piece of evidence for physicians to consider when talking with their patients. Based on these new findings, in a low-risk patient he would be more likely to recommend aggressive treatment if the prostate is very small because there may be a greater chance of high-grade disease.

But prostate size still isn't a definitive clue and more precise tests are needed.

"The imaging for prostate cancer is relatively weak because the disease tends to be diffuse, rather than growing in what we think of as a tumor - a spherical nodule. Prostate [cancer](#) tends to grow along the glands in a

sort of flat pattern, so it's a little harder to detect. A better test, which we don't yet have, would reliably image or identify where in the [prostate](#) the tumor lies," said Barocas.

What will be necessary is larger scale investment in prospective research to identify better biomarkers and imaging techniques to determine which cancers are truly threatening to patients.

More information: www.jurology.com/

Provided by Vanderbilt Medical Center

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