

Online tool supports more dialogue on prostate cancer risk

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A comprehensive, clinical nomogram tool, the Sunnybrook Prostate Cancer Risk Calculator – the first to use all known risk factors for prostate cancer – is available online to help men determine individual prostate cancer risk in consultation with their primary care physician. A nomogram is a statistical model to determine risk for disease based on risk factors using a table and chart format.

"This tool facilitates proactive dialogue between patients and their primary care physicians about prostate cancer risk, and management and treatment options," says Dr. Robert Nam, lead investigator and urologic oncologist, Odette Cancer Centre, Sunnybrook. "In addition to helping men avoid unnecessary biopsies this nomogram better detects prostate cancer at an earlier more curable stage and helps identify high risk patients who may need to make immediate dietary and lifestyle changes and need repeat biopsies."

Sunnybrook researchers developed and validated the nomogram with 3,108 Canadian men including a subset of 408 volunteers with normal PSA (prostate specific antigen) levels who underwent a prostate biopsy. Of the 3,108 men, 42 per cent were diagnosed with prostate cancer. The nomogram was shown to perform better than conventional screening with PSA and DRE (digital rectal exam) alone, especially for patients with a known normal PSA level. Among the 408 men with a normal PSA, 24 per cent were diagnosed with prostate cancer. Further evaluation of the nomogram is underway with a multi-institutional, cross-Canada study group of another 5,000 men.

At age 70, Colin Graham's PSA level was considered normal (less than or equal to 4.0 ng/mL). When the nomogram was used to assess all his risk factors, Dr. Nam recommended a prostate biopsy. The biopsy diagnosed aggressive prostate cancer and Colin underwent immediate and successful treatment through surgery. "I can't express enough the relief I felt, knowing things were caught in time," says Graham, "and though this cancer was removed successfully, because I know my risk, I'm also aware I still need to be monitored."

"In Colin's case, though his PSA was normal, a biopsy was justified based on the nomogram. On the other hand, in the case of an older patient with a high PSA level, if the nomogram predicts a low chance of having aggressive prostate cancer, then it would be reasonable to forego a biopsy," says Dr. Nam, assistant professor, department of surgery, University of Toronto.

Unlike current prostate cancer nomograms, this nomogram evaluates the risk of having prostate cancer in patients undergoing PSA screening. Known risk factors and tumour markers used are age, family, history of prostate cancer, ethnicity, urinary symptoms, PSA, free:total PSA ratio, and DRE (performed by the primary care physician). The Sunnybrook Prostate Cancer Risk Calculator is best used in collaboration with an individual's primary care physician. If a patient determines he is at risk for aggressive prostate cancer, he can discuss management and treatment options in consultation with his primary care physician.

The Sunnybrook Prostate Cancer Risk Calculator is available online at www.sunnybrook.ca/programs/occ...rostaterisk/nomogram

Source: Sunnybrook Health Sciences Centre

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