

CANADIAN TOOL BETTER PREDICTS EACH MAN'S PROSTATE CANCER RISK

Toronto, ON (June 29, 2011) – In the first study to compare prostate cancer risk calculators most widely used in North America, the [Sunnybrook Prostate Cancer Risk calculator](#) showed greater accuracy in predicting individual risk for any and aggressive prostate cancer.

Prostate cancer risk calculators use more than PSA (prostate specific antigen) level and the result from a DRE (digital rectal exam conducted by a physician), to assess a man's risk for prostate cancer. Other risk factors are input into these online tools in consultation with the individual's physician and risk is calculated within minutes.

The study published this month in the *Journal of Clinical Oncology*, involved 2,130 men participating from multiple cancer centres, and prospectively compared the two most widely used prostate cancer risk calculators in North America: [the calculator developed by the Prostate Cancer Prevention Trial group](#) based in the United States, and the Sunnybrook-developed calculator. The Sunnybrook or Canadian-developed Prostate Cancer Risk calculator was shown to perform better.

"The goal is to continually build support for patients and physicians through greater sensitivity and specificity in risk assessment and prostate cancer screening," says Dr. Robert Nam, lead investigator and head of the Genitourinary Cancer Care team at Sunnybrook's Odette Cancer Centre. "We hope the calculator we have developed further supports the patient-physician dialogue – whether the assessment facilitates a conversation about prevention through diet and lifestyle changes, ongoing surveillance for high-risk patients and immediate and repeat biopsies, or the pros and cons of prostate biopsy relevant to men with low overall risk."

Colin Graham at age 70 years had a normal PSA level (less than or equal to four nanograms per milliliter of blood). When the Sunnybrook Prostate Cancer Risk calculator 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 surgical treatment. "I credit my family doctor, Dr. Robert Tommasini and Dr. Nam for having moved me along, because with a low PSA I wasn't concerned. If things get caught in time, and the cancer is encapsulated in the prostate and you can snip it out, you're lucky. Timeliness is a huge factor."

"In Colin's case, though his PSA was normal, a biopsy was justified based on the Sunnybrook Prostate Cancer Risk Calculator. On the other hand, in the case of an older patient with a high PSA level, if the calculator predicts a low chance of having aggressive prostate cancer, then it would be reasonable to strongly consider foregoing a biopsy," says Dr. Nam.

Study findings indicate the Sunnybrook Prostate Cancer Risk calculator had higher accuracy in predicting any prostate cancer and high-grade, aggressive prostate cancer. The range is from .5 (no discrimination) to 1.0 (perfect discrimination). The Sunnybrook Prostate Cancer Risk calculator scored .67 in discrimination in predicting any prostate cancer, and .72 in predicting aggressive disease, compared to the Prostate Cancer Prevention Trial group calculator, which scored .61 in discrimination ability to predict any prostate cancer and .67 for aggressive disease.

The Sunnybrook Prostate Cancer Risk Calculator uses all seven known risk factors and tumour markers for prostate cancer including free:total PSA ratio. PSA can freely circulate in the blood or be bound to another protein. A man has a lower risk of prostate cancer when a higher percentage

of the PSA is in the blood circulating. The Sunnybrook Prostate Cancer Risk Calculator has been previously developed with over 3,000 men at Sunnybrook.

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