Genetic testing rates for ovarian cancer low across Ontario

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In a recent study, Dr. Jacob McGee, a professor in the Schulich School of Medicine & Dentistry and a gynecology oncologist at London Health Sciences Centre, found that, on average, less than seven per cent of Ontario women with the most common type of ovarian cancer were seen for genetics consultation within two years of diagnosis. McGee and his colleagues were able to demonstrate that, by changing the way women are referred for ovarian cancer genetic consultation, it is possible to increase genetic testing rates from less than 20 per cent to almost 80 per cent, potentially increasing diagnostic and treatment

outcomes. Credit: Crystal Mackay//Special to Western News

Nearly 3,000 Canadian women will be diagnosed with ovarian cancer this year. Often undetected, until it progresses to late stages, the disease is the fifth most common – and the most serious – cancer in women.

Symptoms of ovarian cancer generally appear after it has already spread within the pelvis and abdomen and, once it has spread, the cancer is difficult to treat. In these later stages, it is often fatal. Early-stage ovarian cancer, in which the disease is confined to the ovary, is more likely to respond to treatment – an indication early detection and intervention could be key in increasing treatment and survival rates.

Genetic consultation in ovarian cancer testing – which has shown promising potential for life-saving benefits – isn't as common as it should be, according to Western researchers.

In a recent study, published in the March issue of the *International Journal of Gynecological Cancer*, Dr. Jacob McGee, a professor in the Schulich School of Medicine & Dentistry and a gynecology oncologist at London Health Sciences Centre (LHSC), found that, on average, less than seven per cent of Ontario women with the most common type of ovarian cancer were seen for genetics consultation within two years of diagnosis.

Women at the highest risk of developing high-grade serous ovarian cancer (HGSC) are those with a mutation in their BRCA (tumour suppression) genes, which can be identified through genetics consultation.

Given the results of the study, McGee and his colleagues were able to

demonstrate that by changing the way women are referred for ovarian cancer genetic consultation, it is possible to increase genetic testing rates from less than 20 per cent to almost 80 per cent, potentially increasing diagnostic and treatment outcomes.

The identification of the BRCA mutation can mean the difference between life and death for family members of the affected individual. For women with the BRCA mutation, there is a 50 per cent chance they will pass that mutation on to their children and grandchildren. If the hereditary gene can be found in the affected individual, and then identified in their family members, it can be followed by life-saving interventions including surgically removing the ovaries and fallopian tubes, before there is a diagnosis of cancer. This preventative procedure has been shown to drastically reduce mortality rates, McGee explained.

Identification of the gene also allows for consideration of treatment with a PARP (poly-ADP-ribose polymerase) inhibitor, a new class of medication found to be beneficial only for women with this mutation.

McGee and his research team cite an intervention at LHSC's London Regional Cancer Centre (LRCP), which has increased the rate of consultation in London to well above the provincial average.

In London, the genetics referral process for patients with HGSC was altered from an 'opt-in' to an 'opt-out' process. This involves automatically forwarding the list of new HGSC ovarian cancer patients to the cancer genetics clinic through an advance directive. Seeing a genetic counsellor or geneticist becomes the default, with patients stepping outside of the referral process only if their physician cancels the consultation with genetics. In the first year of implementation, 77 per cent of patients at LRCP diagnosed with HGSC completed genetics consultation, well above the provincial average identified in McGee's study.

"This process has been surprisingly easy to implement, and we think it could be a good fit for other centres across the province," said McGee, a Lawson Health Research Institute scientist.

Despite the province's expanding genetic counselling eligibility in 2001 to all women with HGSC ovarian cancer, consultation rates in Ontario remained low during the study period, between 1997 and 2011. The rates did rise, peaking at 13.3 per cent in 2011, however, the numbers remained well below where McGee believes they should be.

"These numbers show no matter what centre you are in, there have to be better interventions to help patients see a genetic counsellor," he said. "This is something absolutely worth doing because of the impact it has for both the patient's current treatment and in preventing ovarian cancer cases down the road."

More information: Genetics Consultation Rates Following a Diagnosis of High-Grade Serous Ovarian Carcinoma in the Canadian Province of Ontario. *International Journal of Gynecological Cancer*. DOI: 10.1097/IGC.0000000000000907

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