

June 17, 2011

## **GOC SUMMARY STATEMENT ON CURRENT STATUS OF OVARIAN CANCER SCREENING WITH CA125 AND TRANSVAGINAL ULTRASOUND IN WOMEN AGED 55-74**

Ovarian cancer affects 2500 women each year in Canada and approximately 60% (1500) of them will die from it. This high fatality rate makes it the 5<sup>th</sup> leading cause of cancer death for women.

Most women (70%) are diagnosed with a form of ovarian cancer that becomes detectable after it has spread, and is either stage 3 or 4. Survival from this group of advanced ovarian cancers is only 15-20%. Other types of ovarian cancer can be detected earlier, as stage 1 or 2 with much higher survival rates, 90% for stage 1 and 66-69% for stage 2. There is mounting evidence that the vast majority of the cancers diagnosed at an early stage are different on a molecular level than the ones diagnosed at more advanced stages and hence have a different natural history. The implication of this new evidence is that the aggressive high grade cancers evolve quickly allowing insufficient lag time to facilitate screening with the intent of detection of disease before it becomes widespread. This challenges the value of screening and of attempts at early detection. Several studies over the past 20 years have been published evaluating the potential benefit of screening with the Ca125 (and other) blood test and transvaginal/pelvic ultrasound (TVUS). Until the ASCO conference on June 4, 2011, none of the previously published studies evaluated the impact of screening and early detection on the crucial end point of interest, namely survival from ovarian cancer.

At this conference, the PLCO (Prostate, Lung, Colon, Ovarian) study group presented the results from its randomized controlled trial which was initiated in 1993. This trial evaluated annual screening in the general population with both Ca125 and transvaginal ultrasound in women aged 55-74. Its primary aim was to determine effectiveness of this screening strategy in reducing mortality from ovarian cancer.

In a previous publication (Obstet & Gynecol 113:775 2009), this group reported demographic details, number of women undergoing annual screening, number of positive tests, number of cancers detected, and the number of surgeries needed in order to detect cancer.

In their most recent presentation they report on the key issue, namely whether screening has any effect on mortality from ovarian cancer. 78,216 women participated in this study with 39,105 randomised to screening with Ca125 & TVUS and 39,111, the control arm, to routine care.

A total of 212 women in the screened group were found to have ovarian cancer compared to 176 in the control arm. After 13 years of follow-up, the screened group had 118 deaths compared to 100 in the control arm (mortality ratio of 1.18, 95%CI 0.91-1.54) and this difference was not statistically significant.

In the screening group, 3,285 women underwent surgery for what turned out to be false positive testing (ie. benign conditions diagnosed at surgery), and of these, 166 (5%) had at least one serious complication. In their paper published in 2009, the authors had shown that 19 women underwent surgery for each cancer case detected.

Overall, this study indicates that screening with Ca125 and TVUS does not reduce ovarian cancer mortality in the general population, and has the potential to induce harm from diagnostic interventions such as surgery following false positive testing.

The study has been published and is available online (JAMA 305 (22) 2295-2303). The Society of Gynecologic Oncology of Canada endorses the conclusions from this well-conducted study – asymptomatic women at average ovarian cancer risk should not undergo screening with Ca125 and TVUS. Data from another large international study on ovarian cancer screening, the United Kingdom Collaborative Trial of Ovarian Cancer Screening (UKCTOCS), is accumulating and this subject will have to be revisited in light of those data when they become available.

([www.instituteforwomenshealth.ucl.ac.uk/academic\\_research/gynaecologicalcancer/gcrc/ukctocs](http://www.instituteforwomenshealth.ucl.ac.uk/academic_research/gynaecologicalcancer/gcrc/ukctocs))

On behalf of The Society of Gynecologic Oncology of Canada,

A handwritten signature in blue ink, appearing to read "M. Fung-Kee-Fung". The signature is written in a cursive, flowing style.

Michael Fung-Kee-Fung, M.B., BS, FRCS(C), MBA  
President