

The Women's Health Research Program

Health Bulletin
August 2011

This Health Bulletin updates the information provided in the April 2011 edition on ovarian cancer screening and comments on the findings of a trial that were published in the Journal of the American Medical Association in June this year.

Screening for ovarian cancer – An update

In the April edition of the newsletter from the Women's Health Research Program at Monash University, we introduced the topic of screening for ovarian cancer, pointing out that there is not yet a method of screening for ovarian cancer which has been shown to be effective. We also stressed that there is a potential problem of false positive results with any screening test but in the case of ovarian cancer this is particularly concerning because positive screening test results frequently lead to invasive surgery, which has its own risks. We discussed some large studies that were underway evaluating methods of screening for ovarian cancer.

The findings of one of those large studies (the PLCO trial) were published in JAMA in June 2011. PLCO stands for 'Prostate, Lung Colorectal and Ovarian' and this trial is evaluating screening for all these different forms of cancer. The report from JAMA in June is limited to the results relating to ovarian cancer.

In the PLCO trial there were over 78,000 women randomly allocated to either a screened group or a group receiving usual care (approximately 39,000 women in each group). The screened group received annual assessment with blood CA-125 (for six years) and trans-vaginal ultrasound (for four years). Participants were followed up for between 10 and 13 years. There was a high level of what is called 'compliance' in the study which means that a high proportion of women allocated to the screening group actually were screened. There was also a low level of what is called 'contamination' which means that there was little use of screening in either group except the screening in the screened group specified by the trial protocol. Overall this means that the trial results do represent a valid assessment of this screening protocol.

- There were 212 ovarian cancers diagnosed in the screened group and 176 in the usual care group, so it appeared that there were more tumours detected in the screened group although the difference did not quite reach statistical significance.



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- There were 118 deaths from ovarian cancer in the screened group and 100 deaths from ovarian cancer in the usual care group, again a difference which was not different statistically.
- An important finding was that of the more than 3000 women with falsely positive screening results, about one out of three underwent surgery and 163 or about 15 per cent of those experienced a serious complication (such as infection).

Another important finding was that the proportion of late stage tumours diagnosed in the two groups (screening and usual care) were similar (just over three quarters of tumours in both groups were advanced), a finding which suggests that aggressive cancers grow quickly so the screening methods did not detect them.

That mortality from ovarian cancer was not different in the screened and the usual care groups despite more ovarian cancers being diagnosed in the screened (212) than the usual care group (176) suggests that the extra cancers in the screened group were 'over-diagnosed'. In other words the extra tumours were such that if they had been left undetected, they would not have been the cause of death.

Overall the results of this study suggest that screening for ovarian cancer presently does not reduce death from ovarian cancer and may result in the unnecessary treatment of some women for a cancer which if left undetected would not affect their lives.

It also showed that some women with a falsely positive screening test suffered serious complications from the surgery they had to establish that they did not have ovarian cancer.

It is possible that effective screening for ovarian cancer may be developed in the future however, this protocol has been shown not only to be ineffective in reducing death from ovarian cancer but also likely to increase the likelihood of complications in women who are screened.

References

1. Buys S, Partridge E, Black A, et al. Effect of Screening on Ovarian Cancer Mortality: The Prostate, Lung, Colorectal and Ovarian (PLCO) Cancer Screening Randomized Controlled Trial *JAMA*. 2011;305(22):2295-2303.

Information provided might not be relevant to a particular person's circumstances and should always be discussed with that person's own healthcare provider.

Get involved in Research

Are you worried about your waistline?

Would you like to join a study looking at the effects of a commonly used oral medication in reducing your weight and your waistline? This is a six month study for overweight postmenopausal women aged between 35–65 years.

If you would like more information, regarding this and other studies please visit our website <http://womenshealth.med.monash.edu.au>

or

contact the Women's Health Research Program on 03 9903 0820 or by email on womens.health@monash.edu