

PSA Toolkit: Supplement to PSA Toolkit Summary of Evidence document

This document provides an update from the results of longer-term follow-up for the Prostate, Lung, Colorectal and Ovarian Screening trial (PLCO) and the European Randomized Screening Trial of Prostate Cancer (ERSPC), published March 2012. This is a supplement to the PSA Toolkit: PSA Screening and Testing for Prostate Cancer, published online in July 2009. It provides information that can be used by provincial cancer agencies to put the trial results into context.

The PSA Toolkit: PSA Screening and Testing for Prostate Cancer (2009) was published and distributed to provide background information regarding PSA screening and PSA testing (opportunistic screening, case-finding or ad-hoc testing), and summarize the long awaited results of two major trials on prostate cancer screening. In that publication the expert panel issued the following summary conclusion:

“The expert panel’s synthesis of the evidence is that expansion of PSA screening practices beyond the current ad hoc situation is not justified, and indeed may produce net harm”.

Results

The most recent mortality results from both trials, published in January and March 2012 are shown in Table 1: Summary of results of the ERSPC and PLCO randomized trials.

Table 1: Summary of results of the ERSPC^{1,2} and PLCO³ randomized trials

Feature	ERSPC (European Randomized Screening Trials of Prostate Cancer)	PLCO (Prostate, Lung, Colorectal and Ovarian Screening Trial)
Age group reported on	55 - 69 years	55 - 74 years
Deaths from prostate cancer (2009 publications)	After a median of 9 years follow-up: Screening arm: 214 Control: 326 Rate ratio: 0.80 (95% CI = 0.67-0.91)	After a follow-up period of 10 years: Screening arm: 50 Control: 44 *Rate ratio: 1.11 (95% CI = 0.83-1.50)
Deaths from prostate cancer (2012 publications)	After a median of 11 years follow-up: Screening arm: 299 Control: 462 Rate ratio: 0.79 (95% CI = 0.68-0.91)	After a follow-up period of 13 years: Screening arm: 158 Control: 145 *Rate ratio: 1.09 (95% CI = 0.87-1.36)

* Rate ratio was non-statistically significant

There was no difference in overall survival in either trial. The unlikelihood of ‘overdiagnosis’ from early prostate cancer to cause death remains a major concern. Furthermore, 25% of prostate cancer deaths in the screen arm in ERSPC were from interval cancers. The trial authors concluded that a better test is needed.

Summary Statement of the Panel

The additional follow-up period of 2-3 years in the two trials has produced mortality outcome results that are very similar to the results published in 2009. Thus, the summary conclusion of the Expert Panel remains relevant.

The Expert Panel will continue to monitor and review trial evidence as it becomes available.

References

¹ Schröder FH, Hugosson J, Roobol MJ, et al. Prostate-Cancer Mortality at 11 Years of Follow-up. *N. Engl J Med.* 2012;366(11):981-90.

² Miller, AB. New Data on Prostate-Cancer Mortality after PSA Screening. *N Engl J Med.* 2012;366:1047-48.

³ Andriole GL, Crawford ED, Grubb III RL, et al. Prostate Cancer Screening in the Randomized Prostate, Lung, Colorectal, and Ovarian Cancer Screening Trial: Mortality Results after 13 Years of Follow-up. *JNCI.* 2012;104(2):125-32.

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