Prostate cancer screening: a question of common sense

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First results of randomised clinical screening trials are traditionally met with a barrage of comments by opinionated observers, and the back-to-back publication in the March 26 issue of the *New England Journal of Medicine* on the mortality results of two major PSA screening trials – one European, one American – was no exception. Not only did it reignite the existing controversy but it brought utter confusion to the professional and public media.

In the case of the European Randomized Study of Screening for Prostate Cancer (ERSPC), the investigators had felt obliged to publish mortality results after the monitoring committee confirmed a clear 20% reduction in prostate cancer mortality in 162,000 participants. Whether by chance or design, the board of the US Prostate, Lung, Colorectal and Ovarian (PLCO) Cancer Screening Trial then decided to publish their results, on the grounds that they were concerned about the lack of mortality benefit and emerging evidence of net harm.

No wonder many people felt confused. Careful reading of the two reports, however, shows they are not as contradictory as they might seem, and both point to a common sense approach.

The European study was always likely to show any mortality benefit at an earlier time point, because it is a much larger study, and therefore has greater statistical power. Furthermore, high levels of prostate screening in the general US population means that many in the screening arm will already have been screened before joining the trial, while many in the control arm will have undergone screening during the trial, thus reducing the difference between the two arms. In contrast, the European study shows all the conditions of a successful screening trial: many more cancers are diagnosed in the screening arm with the lower grade and stage needed to show mortality benefit.

The two data sets offer complementary insights into the possible harm resulting from participation in PSA screening trials, with both studies pointing to overdiagnosis and overtreatment as the most important adverse effect. No precise figures are shown, but the European study has been reporting on the problem for six years. Many centres are now collaborating in an initiative using 'active surveillance' as a way to avoid early invasive treatment (see www.prias-project.org).

Before health authorities can make informed policy on population PSA screening, longer follow-up is needed to provide information on the expected increase in mortality benefit as well as on quality-of-life considerations and cost-effectiveness.

In the meantime, doctors and their patients should make intelligent use of what we already know, as the basis to reach shared decisions.

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