IL6：招請講演6

SCREENING FOR PROSTATE CANCER
—FINDINGS OBTAINED IN RANDOMIZED STUDIES

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At present uncertainty exists weather screening for prostate cancer improves cancer specific survival and contributes to the quality of life of men who decide to be screened.

Randomized screening studies are ongoing in Europe and in The United States and will eventually give an answer to these most relevant questions. In the meantime available screening technology is widely applied to men who decide to be screened. Worldwide agreement however exists that complete information about the risks and benefits of the available screening tests is a direct responsibility of the urologists and physicians who use prostate specific antigen (PSA) based testing.

The European randomized study of screening for prostate cancer (ERSPC) and the American prostate, lung and ovary (PLCO screening study), conducted by the National Cancer Institute have recruited all together more than 250,000 men randomized between screening and control, who are now being followed to obtain the necessary power for answering the mortality question.

In the meantime, both studies make unique contributions and produce findings that can only be obtained in the setting of a randomized screening study. This presentation today will concentrate on such issues.

Stage distribution. Down staging or stage migration is a consequence of effective screening. Randomized studies however, allow a direct comparison between stage distribution in screening and control arms. While the findings confirm observational data from demonstration projects, the direct comparison allows a glimpse at the potential outcome of the study.

Lead-time and interval cancers. Effective screening produces lead-time by advancing the time of diagnoses by the duration of the pre-clinical detectable phase. Lead-time is of great importance for judgement on screening intervals, study sensitivity and outcome. Various estimated of lead-time are available from retrospective observations from databases and serum repositories. ERSPC allows a direct measurement of lead-time. In ERSPC Rotterdam a remarkable age dependent period of more than 10 year results. —Interval cancers again are a phenomenon that allows judgement on the sensitivity of a study procedure. If no interval cancers are seen the study interval is probably too short. This seems to be the case for the commonly used one year re-screening. Careful observation of interval cancers has been carried out within the centres of ERSPC. The observations seem to confirm a 2—4 years screening interval as appropriate. In the future, lead-time will need to be considered separately for cases according to difference in prognostic factors.

Overdiagnosis. Overdiagnosis can be defined as the proportion of cases that would never be diagnosed during a life time or as the proportion of those cases, that would never die of prostate cancer. Both definitions have been applied, again, randomized studies offer unique opportunity for more proper evaluation. The results of various studies on this issue will be presented.

Screening tests. Another unique observation relates to the positive predictive value of PSA in the first and subsequent rounds of screening. It turns out, that in second, third and fourth round screening, the association of a rising PPV observed with increasing PSA ranges is lost.

Details will obviously be elaborated during the presentation. Also, a summary will be given of present knowledge with respect to evidence supporting effectiveness of screening in terms of mortality reduction.

With all ongoing discussions urologists should not forget that early detection and aggressive treatment represents the only means of cure for prostate cancer. Preconditions however, is that screening will have to be more selective for those cases that deserve aggressive treatment because of their risk pattern before screening becomes acceptable as a health care policy.