Risk of Overdiagnosis/Overtreatment of Low Risk Prostate Cancer –Fact or Fear?

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According to ERSPC, PSA-based screening reduced the rate of death from prostate cancer by 20%. However, they also concluded that 1410 men would need to be screened and 48 additional cases would need to be treated in order to prevent one death from prostate cancer. Recently, Welch et al. also reported that additional 1.3 million men were diagnosed with prostate cancer, 1 million of whom were definitively treated since PSA screening was introduced in 1986. They estimated that only 56500 prostate cancer deaths have been averted among this population, which means that approximately 20 men had to be diagnosed and treated for prostate cancer to save one man of prostate cancer death (J Natl Cancer Inst 2009; 101: 1325 – 1329).

I assume that most of the urologists will hesitate to agree above estimation. Such estimation seems to be a little bit out of keeping with the daily clinical settings. Although cancer death should definitely be primary endpoint of treatment for cancer, other important factors including many symptoms associated with prostate cancer progression and QOL were ignored in this discussion.

However, we have to face the fact that certain rate of low risk prostate cancer patients who do not require any treatment exist. This conclusion is supported by several phenomena; (1) Overall survival rate of patients who showed PSA recurrence after operation or radiotherapy is fairly good due to additional therapy. (2) Certain rate of patients who undergo PSA active surveillance do not progress for long time. (3) 20-30% of men over 80 years old have indolent prostate cancer.

Considering these things, to avoid overtreatment for low risk prostate cancer seems to be urgent problem which now confronts urologists. The improvement of PSA active surveillance is probably the answer. Since there are a number of unsolved problems concerning the criteria, PSA kinetics, follow up protocols in current PSA active surveillance, intensive studies must be needed.

At this point, overtreatment is serious problem. However, overdiagnosis seems to be less important matter as far as overtreatment is appropriately avoided. Considering that more than 50000 men were saved from prostate cancer death and prostate cancer mortality rate is decreasing by PSA screening, what urologists should do is not denying benefit of PSA screening, but study the natural history of prostate cancer to avert overtreatment.