Model Confirms Active Surveillance as Viable Option for Men With Low-risk Prostate Cancer

AACR

- Model predicts immediate treatment confers only modest extension of life.
- Surveillance affords patients years of treatment-free life.
- Data support continued adoption of surveillance approach.

PHILADELPHIA — A new research model has estimated that the difference in prostate cancer mortality among men with low-risk disease who choose active surveillance versus those who choose immediate treatment with radical prostatectomy is likely to be very modest, possibly as little as two to three months.

The model, developed by biostatistician Ruth Etzioni, Ph.D., and colleagues of the Public Health Sciences Division at Fred Hutchinson Cancer Research Center in Seattle, Wash., is among the first to use specific data from published studies to project the likelihood of prostate cancer mortality among men with low-risk disease who choose active surveillance. The study was published in *Clinical Cancer Research*, a journal of the American Association for Cancer Research.

“We are now diagnosing many more men with low-risk prostate cancer, a large fraction of whom would never have known they had disease in the absence of screening,” Etzioni said. “These men have cancers that may not have caused them harm if they had not been detected through screening, and we are faced with the dilemma that not all of these men will benefit from treatment.”

The alternative to treatment, known as watchful waiting or active surveillance, was backed by the National Institutes of Health as a viable option during a State-of-the-Science Consensus in December 2011. However, the approach is supported by little data due to the length of time required to measure its effect on prostate cancer mortality.

In this study, Etzioni and colleagues developed a simulation model to estimate prostate cancer mortality in men who would undergo active surveillance and compared that with the mortality of men treated with immediate radical prostatectomy. Using data from separate patient groups, they populated their model with time from diagnosis to treatment for men undergoing active surveillance, time from surgery to recurrence for men undergoing radical prostatectomy and time from recurrence after prostatectomy to death.

The model projected that 2.8 percent of men who undergo active surveillance would die from their disease within 20 years of their diagnosis compared with 1.6 percent of men who undergo immediate prostatectomy. The reduced risk for prostate

cancer mortality by undergoing immediate radical prostatectomy amounted to an average of 1.8 months of additional life per patient. In comparison, those men who chose active surveillance would have an average of 6.4 years of life free from treatment and its side effects.

“Although this is not a new result, it is confirmation of what we expected and it substantiates data from previous studies looking at watchful waiting,” Etzioni said. “Very few men with low-risk disease die from prostate cancer regardless, and the difference between treatments appears to be very modest.”

It will be important to begin to measure quality of life between these two groups. Although immediate treatment is associated with both short-term and long-term side effects, including impotence and incontinence, active surveillance might also have an effect on a patient’s quality of life.

“That six-year treatment-free interval means that men who choose active surveillance will not have to endure treatment side effects during that time, but whether that is replaced by a negative impact on quality of life because of anxiety or repeat biopsies is not well known,” Etzioni said.