Active surveillance for prostate cancer: an update

Sam Merriel, GP and Clinical Senior Research Fellow, University of Exeter

An increasing number of men diagnosed with localised prostate cancer has been accompanied by more men being considered for active surveillance as a management option. Here the author provides an update on recent developments in active surveillance and changes to NICE guidance.

Active surveillance is a management strategy for men with prostate cancer that involves regular monitoring for signs of cancer progression in order to avoid, or delay, more radical treatments in patients whose prostate cancer does not progress rapidly.

Active surveillance is commonly offered as a treatment option to men with localised low-risk, and sometimes intermediate-risk, prostate cancer. Increasing numbers of men are being considered for active surveillance in the context of the rise in the number diagnosed with localised prostate cancer in recent years.

The issue of active surveillance was last addressed in Trends in Urology and Men’s Health in 2014, and this article seeks to update readers on developments in active surveillance in recent years and changes introduced by the latest NICE guidance for prostate cancer diagnosis and management.

Long-term outcomes for active surveillance

Two major randomised controlled trials with long-term follow up data comparing outcomes for men on watchful waiting/active monitoring, versus surgery/radiotherapy have recently published their results. The Prostate Testing for Cancer and Treatment (ProtecT) trial recruited men from the positive screening arm of a UK-wide PSA screening study, and randomly assigned them to active monitoring, radical prostatectomy and radiotherapy from 1999 to 2009. These men were then followed up for a median of 10 years. The ProtectT trial found no difference in cancer-related or all-cause mortality between the three study arms, although the mortality rate across the entire study population was low.

Men randomised to active monitoring had a higher risk of cancer progression compared with those receiving surgery or radiotherapy, but a lower risk of urinary incontinence or erectile dysfunction. These findings were consistent with the PIVOT study conducted in the USA.

The Swedish Prostate Cancer Group-4 (SPCG-4) study randomly assigned men with localised prostate cancer to radical prostatectomy or watchful waiting, recruited over 10 years from 1999 to 2009, and followed them for 29 years through to 2017. Men on watchful waiting in this study received no immediate treatment or active monitoring, except a transurethral resection of the prostate (TURP) if indicated, which is different from modern active surveillance protocols. The SPCG-4 study found men with localised prostate cancer and a longer life expectancy gained a mean 2.9 years of life from surgery compared with watchful waiting.

Assessing risk

Following a diagnosis of prostate cancer, risk stratification is performed to estimate whether a man is a low-, intermediate-, or high-risk of cancer progression and mortality. There are numerous factors that can be used to perform this risk stratification. Most guideline recommendations include prostate specific antigen (PSA), clinical stage from a digital rectal examination (DRE) and Gleason score as important factors. Table 1 shows current guidance from the UK and Europe.

Treatment discussions

Men diagnosed with low-risk prostate cancer, who are suitable for radical treatment, should be given the choice of active surveillance, radical prostatectomy or radical radiotherapy. This choice is not a straightforward one for patients, as they have to weigh up the risk of cancer progression.
Communicating risk to patients is an important skill for any clinician, and men faced with the decision about whether to commence active surveillance value clear information about all of their options.10 The updated NICE guidance employs numerical methods to try to translate population level risks to the individual patient. A new tool that produces personalised risk information for men with prostate cancer, called Predict Prostate, is freely available for patients and clinicians to use online (see Figure 1). Predict Prostate uses individual patient data to provide prognostic and treatment information, and presents it in six different modes to help tailor this information to meet a patient’s communication preferences. It has been developed as a collaboration between clinicians, scientists and communications experts, and has been shown to reduce variation in clinicians’ estimates of mortality risk.

**Active surveillance protocols**

Patients undergoing active surveillance for prostate cancer are regularly monitored by their treatment team for signs of cancer progression. Following an initial consultation, patients will have PSA testing, DRE, and imaging and/or biopsy at regular intervals. The timing and frequency of these monitoring tests, and which tests are done, varies significantly within the UK, and internationally.10 The recommended protocol from the recently update NICE guidance can be found in Table 3.

**Future of active surveillance**

The use of active surveillance for prostate cancer remains an evolving area of clinical practice, but many questions are still unanswered by the available evidence. For example, which
patients should be offered active surveillance? How can progression for localised prostate cancer be accurately predicted? What is the best protocol to use for men undergoing active surveillance? And what is the role of multiparametric MRI in follow up for patients on active surveillance? Further large trials of men with prostate cancer on active surveillance with long-term follow up are ongoing\(^1\),\(^2\) and will publish their results in the future that may continue the evolution of active surveillance as a treatment modality.

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**References**