Life & Times
PSA testing:
a personal view

INTRODUCTION

I first had my prostate-specific antigen (PSA) blood test checked when I was 50. It was 2.2 ng/mL, has slowly been increasing over the last 16 years, and is currently 5.5 ng/mL. I have little in the way of urological symptoms and the only people who have examined my prostate over the years were two colorectal surgical colleagues before my colonoscopies.

More than one of my urological colleagues thought I had sold my soul to the devil by even getting my PSA checked in the first place, but I was quite keen to know that it was not very high. Having thought long and hard about when I will have magnetic resonance imaging (MRI) of my prostate, let alone a prostatic biopsy, I have decided that I will review the situation if and when my level reaches 10 ng/mL depending on my age at that time. I'm keen to avoid the complications of radical surgery or radiotherapy.

MONITORING AND INTERVENTION

Professor Freddie Hamdy published the results of the ProtecT study in the *New England Journal of Medicine* in 2016 with two landmark papers.[1,2] They investigated the 10-year median follow-up outcomes after monitoring, surgery, or radiotherapy for localised prostate cancer, with over 500 randomised to each group. The starting PSAs ranged between 3 and 19.9 ng/mL, and all three groups showed the same 99% 10-year disease-specific survival.

Although the number of people with metastatic and progressing disease was slightly higher in the active monitoring group, the authors state that:

'These differences show the effectiveness of immediate radical therapy over active monitoring, but they have not translated into significant differences, nor have they ruled out equivalence in disease-specific or all-cause mortality; thus, longer-term follow-up is necessary.'

The second paper, 'Patient-reported outcomes after monitoring, surgery, or radiotherapy for prostate cancer', demonstrated the initial negative effects of radical treatment on urinary continence and sexual function, although there was some improvement over time.

It would appear that it is the diagnosis of prostate cancer that has the greatest impact on quality of life. Thus, if that diagnosis can be delayed with minimal or no danger to the outcome, that would be a beneficial outcome.

OVERDETECTION AND OVERTREATMENT

The recent paper in the *Journal of the American Medical Association*[3] on the back of the ProtecT study in over 400 000 men compared a single PSA screening intervention versus standard practice without screening. There was no significant difference in prostate cancer mortality after a median follow-up of 10 years but the detection of low-risk prostate cancer cases increased. The findings do not support single PSA testing for population-based screening. Prostate cancer screening remains controversial because potential mortality or quality-of-life benefits may be outweighed by harms from overdetection and overtreatment.

It is unclear to me as to why an age-related level of 3–5 ng/mL is generally accepted as the normal limit for PSA. A lower level would certainly pick up more cancers but many would argue that this would not be a good thing. The question is whether a higher level of 10 ng/mL in men over 60 would exclude those suitable for radical treatment and lead to an increased mortality. I would personally doubt it.

Of course there will always be the exceptions. It has been reported that if someone has a PSA below 1 ng/mL at the age of 60 years they probably do not need their PSA to be measured again. However, like all things, there are exceptions and a few years ago one well-known urological surgeon was very public about his disease in which the PSA rose from 1 ng/mL to 90 ng/mL within a year.

Sir William Osler, who ended his career as the Regius Professor of Medicine in Oxford, and died in 1919, is reputed to have said that *'diseases which harm require treatments that harm less'*.[4]

Hopefully new and better treatments will minimise the side effects of radical treatment of prostate cancer and in due course, with greater research and understanding of the genetics of prostate cancer, the right people will be treated for the right reason.

"Prostate cancer screening remains controversial because potential mortality or quality-of-life benefits may be outweighed by harms from overdetection and overtreatment."

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