

Prostate Cancer: Do We Always have to Treat for Cure?

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The treatment of prostate cancer remains controversial. The old medical dogma stated that men do not die of prostate cancer, but with it. This was based on post-mortem observations that many men who have died from other causes harboured evidence of undiagnosed cancer in their prostate gland [1]. It was thought that prostate cancer occurs naturally as men age, and does not impact on their longevity. Consequently, no treatment of prostate cancer was felt to be necessary.

In the past 50 years, safer and better tolerated treatments for prostate cancer have emerged. Also, new data from epidemiologic studies show that prostate cancer can shorten the lifespan in certain groups of men [2]. Although contentious, a recent randomised study contends that screening to detect prostate cancer saves lives [3]. As well, the publicised deaths of several prominent politicians and celebrities from prostate cancer helped to push the pendulum towards the early detection and treatment of prostate cancer.

This has resulted in an increase in the variety and complexity of treatments for prostate cancer. Surgical techniques have been refined to minimise complications and incorporate robotic devices to improve the removal of the prostate with minimally invasive procedures. Radiation therapy has included novel techniques of implanting minute radioactive isotopes directly into the prostate gland to sterilise the cancer. External beam therapy has evolved to include enhanced precision 3-D shaping, intensity modulation (to assign differential doses to the target), and dose escalation in conjunction with image guidance during radiation delivery to achieve higher kill ratios. Improved medications to deprive prostate cancer of testosterone can be used in combination with the above procedures or as stand alone treatment. New classes of drugs and vaccines are now available to target cancer cells that have become immune to standard hormonal therapy.

This abundance of therapeutic modalities has encouraged clinicians to incorporate ever increasingly potent strategies to eradicate prostate cancer. The downsides to this approach are treatment induced side-effects, and the spiralling costs of health care.

A close examination of the natural history of prostate cancer can help achieve a balance in the treatment of this disease as patients actively desire to both eradicate the cancer as well as to limit unpleasant medical consequences [4]. Clearly, treatment is unnecessary for those in whom other health concerns will shorten life before prostate cancer becomes significant. Active surveillance is now increasingly offered to patients with early, slowly progressing cancers who have limited life expectancy, usually less than 5 years [5].

The Prostate Specific Antigen (PSA) is a tumour marker that is widely employed in treatment decisions as it reflects tumour burden and progression. Latterly, it has been used as a surrogate measure of success as it predicts for failure approximately 3 years before the disease is detected by palpation or imaging [6]. While useful, this has given rise to exhaustive efforts to render the PSA undetectable by intensifying treatment. Combined modality therapy, and dose escalation have been proven to eliminate or delay PSA rise after treatment, but with attendant increased morbidity and financial cost.

One of the pertinent questions to be debated is whether or not it is necessary to achieve a lifetime of undetectable PSA after the treatment of prostate cancer.

The PSA is not a poison, and does not shorten life per se. However,

a PSA value greater than 20 µg/L places the patient at risk of developing bone metastases [7,8]. Androgen deprivation therapy is very effective for prostate cancer and may prove to be sufficient therapy for patients with a life expectancy of less than 10 years, as intermittent androgen deprivation therapy can be successful at controlling the PSA for a median of 4 years before development of castrate resistant disease [9]. With loss of PSA control, patients can be offered radiation or other therapies if life expectancy remains in excess of 5 years [10].

In younger patients with aggressive (high risk) prostate cancer, intensive therapy can be tailored to the patient's circumstance. Attention can be paid to his ability and willingness to tolerate the different side-effects of each treatment modality. The most intensive treatment may not be the best. It may be acceptable to offer tolerable local therapy that leads to a rising PSA after 10 years, as the median time to metastases is 8 years from the time of PSA level elevation [11]. The median survival after starting intermittent androgen deprivation therapy for biochemical failure is 9 years [12]. At 72 years, the median age of diagnosis for prostate cancer, a patient may prefer this approach instead of more aggressive therapy. It bears remembering that the goal of any therapy should consider the patient ahead of his disease or marker.

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