

## Preface

On 21 May 2012, the US Preventive Services Task Force announced its final recommendation for PSA screening: “Level D,” “moderate or high certainty that the service has no benefit or that the harms outweigh the benefits.” This sent shock waves through the prostate cancer community. The main concern driving this recommendation was the risk of overdiagnosis and overtreatment of clinically insignificant prostate cancer.

Many prostate cancer experts believed that this recommendation was inappropriate, in large part because adoption of active surveillance for favorable risk patients addressed the overtreatment problem effectively.

The recommendation, and the response to it, was, in a sense, a vindication of a 15-year saga of a growing movement to shift the “Zeitgeist” of management of prostate cancer from radical therapy for all to a more selective approach characterized by conservative management of low-risk disease and aggressive treatment of intermediate- and high-risk cancer.

The genesis of the active surveillance approach occurred at a lunch meeting of a small multidisciplinary genitourinary oncology group at Sunnybrook Health Sciences Centre in 1995. The meeting was attended by Richard Choo and Cyril Danjoux, both radiation oncologists, and myself. PSA had been introduced about 5 years earlier in Canada, and at that time, we were in the midst of the dramatic increase in prostate cancer incidence which accompanied the introduction of PSA-based prostate cancer detection. We were seeing a large increase in the number of patients with small-volume low-grade disease. “Watchful waiting,” meaning conservative management until symptomatic metastatic disease occurred, had been described for many years. We were uncomfortable with this approach because it denied patients who needed it the opportunity for cure. However, patients diagnosed with T1a prostate cancer after TURP had been managed conservatively for years with little controversy. At that time, it was unclear what the significance of PSA kinetics was. We knew, however, that most patients with advanced disease had a high PSA. Thus, seeking a way out of the Hobson’s choice of overtreatment for many (if all were treated) or undertreatment for some (“watchful waiting”), it seemed reasonable to propose a strategy of initial conservative management, with selective therapy for those with a rapid rise in PSA over time. We called this “active surveillance.”

We proposed this approach as a prospective clinical trial to our local research ethics board and were awarded a small grant from the Prostate Cancer Research Foundation of Canada to embark on this study. Patients signed an informed consent. It was considered experimental and daring by many of our colleagues.

Somewhat to our surprise, patients embraced this approach. The study accrued rapidly, and within a few years, we had 300 patients managed in this way. We found that patients' initial anxiety turned to ebullience after a few years without progression, as they avoided the side effects of therapy without any apparent consequences. PSA doubling time identified a subset with clearly more aggressive disease that was offered definitive therapy. In most cases, this was effective.

We have learned a great deal over the years. These lessons can be summarized as follows:

1. About 25% of low-risk patients harbor intermediate- or high-risk disease.
2. Repeat biopsy is critical to identify these patients in a timely fashion.
3. PSA kinetics frequently gives a false trigger for intervention.
4. The concept of active surveillance is not difficult to communicate to patients, regardless of their scientific literacy, socioeconomic status, or language barriers.
5. Anxiety about "untreated cancer" is prevalent but can be managed with close monitoring and accurate information.
6. Managed appropriately, patients on active surveillance have an extremely low risk of prostate cancer mortality.
7. Development of better tools to identify the higher risk patients early on is a major research priority. MRI and biomarkers will likely play an important role going forward.

This book is an overview of every aspect of surveillance as it is practiced in 2012 and has contributions from clinicians and scientists at the top of the field. These authors have made outstanding contributions. We believe it will be useful to physicians who manage patients on active surveillance and to scientifically literate patients and their families and friends who are interested in a conservative approach to early prostate cancer.

The book is dedicated to my wife Ursula and children Alex and Betsy.

It is also dedicated to my mentor, Willet Whitmore, who memorably questioned the limitations of prostate cancer management and the primary role of tumor biology in determining patient outcome, long before this was fashionable. His famous dictum, 'Treatment is often insufficient when it is necessary and sufficient when it is unnecessary' was prescient.

Indeed, exploring when treatment is necessary and sufficient, and when unnecessary, is the focus of this book.

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