Men’s Preferences for Treatment of Early Stage Prostate Cancer: Results from a Discrete Choice Experiment

Abstract:

Background: Prostate cancer is the most common cancer in men in Australia. There are a number of treatment options for early stage prostate cancer (ESPC); radical prostatectomy, external beam radiotherapy, brachytherapy, hormonal therapy and combined therapy. Treatment can cause serious side effects, including severe sexual and urinary dysfunction, bowel symptoms and fatigue. There is no definitive evidence yet about the survival benefits of these treatments relative to active surveillance. While patient preferences should be important determinants in the type of treatment offered, little is known about patients’ views of the relative tolerability of side effects and of the survival gains needed to justify these.

Methods: A discrete choice experiment (DCE) was conducted in a sample of 357 men who had been treated for ESPC (stratified by treatment) and 65 age-matched controls. The DCE included seven side effects and survival. An orthogonal fractional set of 108 scenarios from the full factorial was used to generate three versions of the questionnaire, with 18 scenarios per respondent. Mixed logit models were estimated. The value of changes in quality of life (associated with each level of each side effect) was expressed in terms of survival time by adapting the concept of compensating variation from welfare economics.

Results: Urinary dysfunction and bowel symptoms were considered the least tolerable side effects. Fatigue and hormonal symptoms came next in order of preference, and sexual dysfunction was considered to be relatively benign. Survival benefits required to make persistent side effects worthwhile ranged from 4 months for the most benign side effects to 3.5 years for the least tolerable side effects.

Conclusion: This study demonstrates how DCEs can be used to determine the relative tolerability of side effects and provide estimates of the survival benefits needed to make persistent side effects worthwhile. The results provide useful insights for clinicians who manage patients with ESPC.