

Employment After Therapy for Localized Prostate Cancer: Widening the Perspective

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From the traditional biological perspective, medical therapy is judged by its effects on survival or other indicators related to pathophysiology, such as growth or shrinkage of cancer masses. More recently, investigators have broadened their assessments of medical interventions (and conditions). So-called outcomes research explicitly recognizes that chronic diseases and their treatments may affect patients' lives in ways other than causing symptoms, organ dysfunction, and death. They may also impair patients' ability to perform activities of daily living, continue their usual social roles and interactions, and preserve their economic condition—each a plausible aspect of health-related quality of life.

A rapidly progressing cancer's ability to wreak havoc on virtually all aspects of patients' lives is widely appreciated. However, although measuring these consequences might influence public policy choices, the results would rarely affect clinical decisions. Patients with advanced, aggressive cancers have two basic choices: either pursue the treatment their oncologists identify as most likely to postpone death from cancer or—if deterred by brief anticipated survival, frail health, or the expected toxicity of treatment—submit to their cancer, focusing on symptom palliation. However, for cancer patients who can anticipate prolonged survival and have two or more treatment alternatives, neither of which is decisively more efficacious or less toxic, a fuller appreciation of the manifold consequences of each treatment may help them identify the better choice, given their own circumstances, goals, and preferences.

Clinically localized prostate cancer meets these conditions. Nearly all patients survive a decade or more; competing treatments do not differ demonstrably in efficacy but produce various combinations of permanent urinary, bowel, or sexual dysfunction in most men; and observation alone would not affect most men's life expectancy [although evidence that a small group of men live longer after active therapy is now appearing (1,2)] but would produce anxiety in many men and their families. Although we have at best a rough idea how men choose between alternatives with consequences that diverge in so many ways, a reasonable model is that they compare treatments by what matters most to them first, proceeding through progressively less important characteristics until they reach a crucial, "deal-breaker" difference (3). In the past decade, outcomes researchers have documented the physical effects of prostate cancer treatments on men's lives (4–8), but the study of Bradley et al. (9) in this issue of the Journal is, to my knowledge, the first to measure their effects on their livelihoods. It would not be surprising if some men found the likely impact on future employment decisive in choosing a treatment.

The diagnosis of cancer and the beginning of treatment, other than minor surgical excisions, interrupt most patients' employment at least partially. The duration and intensity of treatment affect the disability; most patients undergoing courses

of chemotherapy are completely disabled, for example. When therapy is complete, recovery from the effects of treatment and the remission of cancer-related symptoms determine when and how fully patients can resume work. For patients with early prostate cancer, which rarely causes specific symptoms, treatment effects determine the outcome.

To determine how treatment affects employment, Bradley et al. compared newly diagnosed prostate cancer patients aged 65 years or younger from the Metropolitan Detroit Cancer registry, part of the National Cancer Institute's Surveillance, Epidemiology and End Results (SEER) system, to all Detroit Metropolitan Area men aged 40–65 years taking part in the Current Population Survey (CPS), given monthly by the Bureau of Census to provide labor force information to the Bureau of Labor Statistics. The patient surveys, at baseline within 3–4 months of diagnosis and at 6 and 12 months after diagnosis, included CPS items and also assessed their recalled employment status 3 months before diagnosis, any change in work hours and the reasons for the changes, difficulties with work-related tasks, and whether retaining health insurance influenced their work or readiness to change jobs. The investigators recruited 75% of eligible prostate cancer patients, and 92% of enrolled patients completed the baseline (3–4 months after diagnosis) questionnaire and the follow-ups 6 and 12 months after diagnosis. The prostate cancer population differed from the control population in characteristics associated with the diagnosis, averaging 7 years older and about twice as often African American, and contained fewer participants with low incomes. To address these differences, the authors performed stratified analyses, comparing patients and control subjects with similar propensity scores, indicators of their likelihood of being diagnosed with prostate cancer that were based on demographic factors. However, residual differences in these variables may have influenced the comparisons.

At first glance, the results are reassuring. Prostate cancer patients were less likely to be employed (by 10%) at 6 months, but the difference was not detectable at 12 months, a pattern similar to the decline and recovery of health-related quality of life the first year after treatment (10,11). However, some observations suggest residual problems that might affect employment later. At 6 months, prostate cancer patients, who entered the study on average 7 years closer to retirement, were fourfold more likely to have retired than control subjects, increasing to ninefold at 12 months. Of those patients working fewer hours 6 months

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DOI: 10.1093/jnci/dji182

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after diagnosis than before, 43% reported that treatment-related symptoms made them unable to work at their former capacity, falling to 15% of a smaller group with decreased hours at 12 months. Of note, a few patients reported working more hours, motivated by the positive aspects of being a cancer survivor. Further, unemployment may have been suppressed by worries about health insurance: About two in five patients reported that they remained working or avoided changing jobs for fear of losing coverage. Although those rates seem high, the CPS did not have comparable questions to determine the frequency in control subjects.

The different employment histories by treatment are difficult to interpret. That patients recovering from surgery were less likely to be employed is unsurprising, but why patients taking androgen deprivation therapy (ADT) were more likely to be employed is not obvious. Perhaps men take anticipated effects of treatment on employment into account when they select treatment; men highly motivated to work may have selected ADT to avoid short-term disability from, for example, surgical convalescence. Another finding, however, provides a cold reminder of the workings of the job market: The burden of unemployment fell disproportionately on older, less educated men.

The present study and those to follow may help men diagnosed with prostate cancer choose the treatment most consistent with their goals, fears, and values. However, including employment outcomes may feed back on a debate that affects still more men. Although screening for prostate cancer with prostate-specific antigen (PSA) has not been shown to prolong men's lives, evidence that prostate cancer often occurs in men with levels lower than the usual biopsy threshold (12) has prompted some to call for more aggressive screening and biopsy policies. Surely, many more prostate cancers could be diagnosed; a blanket biopsy policy that was part of the Prostate Cancer Prevention Trial found it in a full one-fourth of control men within 7 years (13).

More than 25 years ago, a study at the Dominion Foundries and Steel Company of Canada found that men previously unaware of their hypertension nearly doubled their medically unexplained absenteeism the year after a screening program gave them the diagnosis (14), an effect that persisted for at least 4 years (15). Like men with hypertension, men with early prostate cancer do not have symptoms, although some may develop them years later. Currently, more than 90% of men with prostate cancer undergo a local treatment, experiencing an array of complications to which Bradley et al. (9) have added at least transient unemployment for some patients. Perhaps considering the demonstrated impact on employment of a benign diagnosis

like hypertension and the greater power of a cancer diagnosis might temper the enthusiasm of those urging more energetic efforts to diagnose prostate cancer, at least until PSA screening is proven beneficial.

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