Population-Based Assessment of Determining Treatments for Prostate Cancer

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Given the variable nature of prostate cancer and the multiple treatment options suggested by the National Comprehensive Cancer Network guidelines for low-, intermediate-, and high-risk prostate cancer, discerning what factors influence treatment choice is essential for understanding how to optimize the appropriate use of treatments and cancer outcomes. In the early 1990s, the pendulum had swung following the introduction of widespread prostate-specific antigen (PSA) screening and the annual number of radical prostatectomy procedures doubled, while “watchful waiting” became an approach for caring for older patients and men with comorbid illnesses. A comprehensive update on patterns of care for older men (>65 years) in the mid 2000s, where attitudes toward overtreatment and undertreatment of prostate cancer are prominent, is welcome and needed.

Chamie et al2 provide such an update. They highlight 3 prominent patterns of care when evaluating data for more than 37 000 older men with prostate cancer diagnosed between

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2004 and 2007, based on information found in the Surveillance, Epidemiology, and End Results-Medicare database. The most common type of care was radiation therapy, occurring in 58% of the patients, with the choice of therapy being most associated with regional variations in care and referral patterns. The second most common therapy was radical prostatectomy, occurring among 15% of the patients, with age and comorbidity being the most important predictors of care—a finding first noted in the pre-PSA era. The least common treatment approach, “active surveillance” or “watchful waiting,” was used as a treatment approach for less than 10% of the sample, and no specific factors predicting this treatment option were identified.

There are some limitations to this study. First, active surveillance and watchful waiting were categorized together, although they represent potentially different approaches to disease management and future consideration of definitive therapy. Second, the most significant contributors to patient decision-making were unexplained patient and clinician factors, with measurable components accounting for less than 30% of the variance observed. Other studies may aid in understanding what factors may be part of the 70% of variance unmeasured in this analysis. The National Prostate Cancer Audit reported that access to high-dose-rate brachytherapy and use of multidisciplinary treatment teams may have influenced provision of prostate cancer services in England and Wales. Cooperberg et al reported on patterns of care primarily from the more distant past and identified overuse of treatments for low-risk disease and underuse of treatments for high-risk disease, with practice location as the most significant driver of treatment variability. In contrast, Womble et al report that in Michigan, there has been a recent and dramatic increase in utilization of active surveillance in a contemporary cohort to almost 50%, with location being the primary determinant of this treatment. Whereas clinician-level factors focused on the urologist in this study, Quek et al found that radiation oncologist characteristics (unexamined in this analysis) account for almost 40% of the variation in the use of radiation therapies in men with low-risk prostate cancer.

We welcome additional reports regarding patterns of care in the recent era, where there likely remain significant patterns of underutilization of some treatments and overutilization of other treatments. Moreover, continued identification of predictors for treatment decision by clinicians and patients is critical, particularly when optimizing efficacy, safety, and value. Recent studies have identified nonclinical factors, including self-referral by urologists to investor-owned facilities that provide intensity-modified radiation therapy, and concerns that these treatments may represent overutilization of expensive treatments and may also adversely affect patient safety when administered to patients who do not need these treatments. Comparative effectiveness studies are essential, as the patterns of care studies often leave us with more questions than answers.