The last three decades have witnessed a progressive improvement in our understanding of the natural history of newly diagnosed, clinically localized prostate cancer. Yet we still cannot determine which patients will have a clinically insignificant cancer and thus be managed just by observation and which patients will have a cancer that will require intervention.

Better diagnostic tools are currently available, including more precise use of the serum prostate-specific antigen (PSA), incorporation of the total-to-free PSA ratio, improved ultrasound technology and prostate biopsy techniques. Yet African American men, who have twice the incidence of cancer than white men, still benefit the least from screening and early detection efforts and present with more advanced disease at diagnosis.

Treatments for localized prostate cancer (surgery, external-beam radiation therapy, brachytherapy, cryosurgery) continue to improve as technology and techniques are refined. These improvements have favorably affected the quality of life of patients with early prostate cancer. They now have several treatment choices available to them that provide minimal morbidity and negligible mortality. Yet the best treatment recommendation for the average 65-year-old man with newly diagnosed clinically confined prostate cancer continues to be subject to great controversy. In this issue of Cancer Control, the first of a two-part series on localized prostate cancer, some of these paradoxes are addressed.

Michael S. Cookson, MD, presents the controversies regarding screening. Mortality from prostate cancer is steadily declining. This decrease in mortality is attributed in part to the use of the PSA since the early 1990s and early screening efforts using this test.

Better ultrasound technology and prostate biopsy techniques are currently available to assess men who present with abnormal PSA values. Jeffrey C. Applewhite, MD, Brian R. Matlaga, MD, MPH, David L. McCullough, MD, and M. Craig Hall, MD, discuss the impact of these technologies and techniques in the early diagnosis of prostate cancer and their value in patient risk stratification.

One of the most controversial issues is the role of observation (watchful waiting) in the management of early prostate cancer. Commonly applied in Scandinavia, observation has been widely criticized in the United States. Bryan Hoff, MD, and I discuss the current literature on observation and present efforts to better define the subset of men who might benefit most from this approach.

Julie A. Kish, MD, discusses the controversies surrounding the use of hormonal therapy in the neoadjuvant setting. While the value of hormonal therapy in conjunction with surgery has not been demonstrated, its use in conjunction with radiation therapy might provide benefit to a select subset of patients with clinically localized prostate cancer.

Finally, brachytherapy is rapidly becoming a preferred choice by patients for the management of their localized cancer. David C. Beyer, MD, provides a state-of-the-art report on this treatment modality.

These reports bear a common message: the urgent need to enroll patients in prospective clinical trials that address some of the previously mentioned controversies.

What are patients to do in the meantime when confronted with their newly diagnosed prostate cancer? Become informed! A myriad of educational resources are now available. However, patients should be cautioned about the variability in the quality and reliability of this information, particularly when searching the Internet. Armed with good information, the patient will be relieved to learn that most of the prostate cancer cases diagnosed today are detected at an early stage, that prostate cancer has a long natural history, that they might need not to be treated, and that if treatment is needed, multiple options are available. Thus, outcomes in terms of control of the cancer and the quality of life of the patient continue to improve.

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