Understanding the Prostate Literature: The Need for a Multi-Disciplined Approach

Oncologists take great pride in basing practice on the evidence that comes from well-designed trials. Critical appraisal of clinical data requires a firm grounding in the precepts of sound investigational methodology and a basic understanding of the underlying statistical analyses that lead to the conclusions drawn from a study. This knowledge base is further refined at professional meetings that facilitate critical commentaries. Clinical practice guidelines with texts that explain why a particular study did or did not change practice recommendations are another valuable means of developing analytic skills.

This issue works to further sharpen these analytic skills, for example with the assessment from Rosenbaum et al. of the complex data surrounding the management of a post-therapeutic rising PSA and Ryan and Small's discussion of the multiple issues surrounding the use of hormonal therapy, including monotherapy or combined blockade, continuous or intermittent schedules, and the timing and duration of therapy.

Moving on to some of the other articles, additional analytic skills are also necessary:

– A solid understanding of the tools of clinical epidemiology are called into play in the article by Naya and Okihara on complexed PSA. Although the average oncologist may be comfortable with the definitions of sensitivity and specificity, the full implications of the positive predictive value of a test may be less clear, and the significance of a receiver operator curve (ROC) may be even more nebulous.

– The Prostate Guideline is one of the first NCCN pathways to use a predictive nomogram in determining algorithm pathways. The guideline also notes that the Partin Tables predict pathologic findings, which are only a surrogate for clinical outcomes and point to the future in the discussion of the use of more sophisticated nomograms. As these models become more prominent in the oncology literature and their use for other tumors emerges, the reader will need to become conversant with the strengths and weaknesses of these tools.

– The traditional outcomes used as end-points in oncology trials are survival and time-to-progression. Certainly, in prostate cancer, quality of life, especially as impacted by therapeutic intervention, must be factored into treatment decisions. The interpretation of HQOL-related data will require new analytic skills as issues of reliability and validity move to the fore.

– The Prostate Cancer Early Detection Guidelines and the Prostate Cancer Guidelines are marked by major areas in which physician-patient communication is of paramount importance: whether to undergo PSA testing and whether to undergo surgery, RT, or watchful waiting for early stage disease. Evaluation of studies relating to the shared decision-making process will require familiarity with the parameters of social science and communication science data. The burden of knowledgeably evaluating new articles will become increasingly more complex as oncology practice extends into many related fields of scientific interest. We hope that the literature presented by our contributors will clearly define these new horizons and enhance the already well-developed analytic capabilities of our readership.
References


