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When and how do we get involved in prostate cancer prevention?

Ian M. Thompson, M.D.

Department of Urology, The University of Texas HSC at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78229, 210 567 5643, Fax 210 567 6868

Prostatic adenocarcinoma is a major public health menace, taking the lives of almost 30,000 men annually in the U.S. Generally asymptomatic until metastatic, at that point, median survival is 30–36 months, a sobering statistic that has changed little since the advent of hormonal therapy. The advent of PSA screening provided an opportunity to identify early disease and over half of U.S. men are screened annually; most men diagnosed are treated. Initial results of two phase 3 screening studies provide a sobering insight into this approach to disease control: in the U.S. study, no reduction in mortality was seen and in the European study, to prevent one prostate cancer death, 1410 men had to be screened and 48 treated. The American public has moved beyond organized medicine. Men and their spouses read about the smallest case-control nutritional epidemiologic study and act, buying nutraceuticals, supplements, vitamins, and affecting diet changes, expending resources and efforts in an attempt to reduce their risk of developing prostate cancer.

In the past 5 years, outcomes of three phase 3 studies provide evidence that the medical community can assist at-risk men in reducing their risk of prostate cancer. With regards to vitamins and supplements, the SELECT trial results should encourage physicians to help patients understand that epidemiologic studies or secondary analyses from other studies do not provide information that should guide behavior. Doing so risks three outcomes: (1) not avoiding the disease (in this case, prostate cancer), (2) wasting precious resources, and (3) possibly causing harm. These outcomes should also prompt a review of rules regarding what industry is allowed to state regarding such agents. At the present time, regulation is purposefully lax and serves the public poorly.

The second outcome of these studies is the clear-cut evidence that prevention of prostate cancer can be achieved in a significant number of men using five alpha reductase inhibitors. These agents appear to be useful in at least two settings – in healthy men with a current low risk of prostate cancer (the population of the PCPT, treated with finasteride) and, as reported at the 2009 AUA Annual Meeting, in men with elevated PSA values and a prior negative biopsy (the population of the REDUCE trial, treated with dutasteride). Both agents have a relatively small set of sexual side effects, probably most notably a reduction in ejaculate volume as well as a 1–2% risk of gynecomastia. In the case of finasteride (the data pending for dutasteride), in addition to the significant reduction in risk of cancer, the list of other benefits are long including reduced risk of BPH progression and interventions, improved performance of PSA, DRE, and prostate biopsy, and what appears to be a facilitated diagnosis of high grade disease if it is indeed present. With this very strong set of evidence, it will be up to physicians, especially urologists, to ensure that men who are undergoing PSA testing be made aware of this

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opportunity to reduce their risk of disease. Until now, our patients have taken this responsibility on themselves to research methods to reduce their risk of disease and have used the Internet and advertisements for over-the-counter supplements to achieve this goal. It is now the medical profession's responsibility to help our patients understand the results of these large clinical trials and how these agents can be used in a prevention setting.

How Urologists and other members of the Oncology community respond to this public health opportunity will determine where preventive oncology will find itself in the years to come. Other specialties opted to be 'late adopters' of technology and as a result, entire disease processes or organ sites moved to early adopting specialties. Almost certainly, due to their understanding of all aspects of prostate cancer as well as other functional issues related to the disease (e.g., sexual and urinary function), Urologists are best poised to counsel patients and put chemoprevention into practice. Our patients deserve a well-informed specialty with a broad approach to disease prevention and treatment.