Prostate Cancer Treatment: What's Best for You?

Surgical Options

Ihor S. Sawczuk, MD

I. How Significant is Prostate Cancer?

In the USA, 234,460 men will be diagnosed with prostate cancer, and prostate cancer deaths are estimated at 27,350.

II. A Multidisciplinary and Individualized Approach

When a man is diagnosed with prostate cancer, it is decision time, and our approach to the treatment of prostate cancer is a multidisciplinary and individualized approach that may include surgery, robotic or open, cryosurgery, external beam radiation, watchful waiting and new technologies such as high intensity focused ultrasound. In the United States, the decision statistically is just about evenly spread out between radiation therapy and removal of the prostate with the remainder opting for watchful waiting, active surveillance, and other modalities.

1. Active Surveillance

It is important to look at the pathology slides, determine the Gleason score, look at the risk factors, and utilize the nomograms to determine a patient's risk factor and what the possibility is of having progression.

One of the main reasons that men don't undergo surgical treatment is fear of the loss of control of urination or loss of erectile function.

There are many molecular-based imaging, staging and analyses coming down the road that will help determine risk factors to help tell a man in terms of active surveillance what his risk is of progression of the disease.

2. Surgical Option

a. Robotic and Open

If you look at the number of men who underwent radical prostatectomy in 2008, 60% of men chose robotic prostatectomy, and in 2009, it is projected that 75% of men will have undergone robotic prostatectomy. That doesn't mean necessarily that the technique of robotic prostatectomy is better than an open prostatectomy, but it is another surgical option. The benefits of the robotics are improved visualization of the tissue, 75% better resolution, Endowrist technology, six degrees of freedom, tremor filtering and movement scaling.

3. Cryoablation

Cryoablation utilizes ultrasound for guidance, and ice balls are formed in the prostate. The ice freezes the area down to -20 to -40 degrees Centigrade and essentially causes frostbite injury. It kills the cancer and kills normal tissues. With new warming devices, the safety of cryoablation has improved, and there is a new focus on cryoablation, which is called focal ablation. If you knew that the prostate cancer was only in one part of the prostate, potentially just that portion of the prostate could be treated, which would avoid injury to the nerves that control erection and the sphincter muscles that control continence.

4. Novel Technology

High-intensity focused ultrasound is not approved in the United States, but it is approved in many countries in Europe and in Canada. It utilizes high-intensity focused ultrasound beams to heat the prostate and heat the areas of concern under computerized guidance to kill the tissue that is in its focal path.

III. TEAM Members Beyond Physicians

The decision of whether to treat does not just involve the patient. It is a team approach that includes family members, social workers, nurses, physicians and others helping the patient make a decision on what he would like to do. Ultimately, however, the patient is the boss.

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Questions

I. Robotic surgery is all over the media. How does a patient who is considering this technology go about choosing where to go?

Ihor Sawczuk, MD

Choosing a physician comes down to word of mouth and groups such as Prostate Net that have experience with physicians. There are outcomes that physicians have based on true data, and it comes down to picking an individual who has a good experience.

II. There is a lot of advertising regarding CyberKnife treatment. Could you explain what that means?

Andrew Salner, MD

CyberKnife is a stereotactic, very precise linear accelerator. The basis of the CyberKnife experience is that the treatment can be given in a small number of treatments. With conventional IMRT, we usually will treat the patient daily five days a week over eight weeks. CyberKnife gives prostate cancer treatment in five days. It has now been done for about three years, but there is no long-term data yet showing the efficacy or potential toxicity.

III. For the patient who has very advanced prostate cancer who now is not responding to hormone therapy, what are the options?

Daniel Petrylak, MD

You have to assess how quickly a patient is progressing, and what we have been finding is despite the fact that a patient may have a castration level of testosterone in their blood stream, if you take tissue from the prostate or the metastases, there are detectable testosterone levels in the tissue, which is the basis for this concept of androgen-independent or castration-resistant prostate cancer. They are resistant to their primary form of castration, and probably what we should say is failing primary hormone therapy. We can see patients who respond to going on flutamide or Casodex afterwards. Abiraterone has undergone a randomized trial after patients fail chemotherapy, and we are awaiting the results of that study. Another drug is called MDV3100, which actually antagonizes or prevents the testosterone androgen receptor complex from going into the nucleus, causing gene expression and causing cancer cells to grow. Interestingly, Taxotere chemotherapy will do the same thing. The decision to institute chemotherapy is complex. It absolutely should be done for somebody who has symptomatic disease. Giving it earlier is a little bit more controversial.

IV. HIFU is a hot topic right now. What do you think about it?

Daniel Petrylak, MD

We are part of the clinical trial of HIFU at Hackensack University Medical Center, and we do have a HIFU unit but only as part of a clinical trial. It is a new technology that should be available in the United States for use in localized prostate cancer in selected patients. It is like radiation therapy in that very intense ultrasound waves generate heat, and it kills the cells by heat transmission.

V. How do you manage someone who is young whose pathology is such that they have had a radical prostatectomy, have a Gleason's 9, and a positive lymph node. The PSA right after three months was 1.5 or 2.

Daniel Petrylak, MD

The issue is what do we have evidence for, and what can we accomplish in the long-term with these particular patients? The question is when should you institute androgen blockade, and since he has positive lymph nodes we generally will do it right off the bat. There is data that clearly show that earlier androgen blockade in the adjuvant setting after the prostate is out is better than waiting until the patient develops a clinical relapse. The flip side of that is the median PSA at which patients started hormone therapy was 14. There is no evidence at this point that immediate versus waiting until the first PSA rise is any better or worse. In fact, the other complicating issue is should we give hormone therapy intermittently or continuously, and there will be data coming out from a randomized trial next year looking at that issue. Right now the standard answer is to go with immediate androgen blockade based on lymph nodes. The other more interesting question should be when do you institute hormone therapy for a rising PSA? There is no answer for that. We are also identifying more and more that hormone therapy has serious complications, the most published of which is osteoporosis. You have to use clinical judgment.

VI. What patient is a candidate for radiation after radical prostatectomy with rising PSA?

Andrew Salner, MD

Patients who don't have a rising PSA but who have stage 3 disease we might contemplate for adjuvant therapy depending on the pathology findings, and those patients with a rising PSA where we think the disease is highly likely to be just local, we would consider for radiation therapy.

Participant

What is the recurrence rate after primary therapy?

Andrew Salner, MD

It very much depends on the stage of the disease, the Gleason grade and all of the other pathology factors. There is no single answer.