

# **Advanced State Disease Management**

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## **I. Introduction**

### **1. High-Risk**

Early diagnosis of prostate cancer is the name of the game. Prostate cancer when diagnosed later can spread from the seminal vesicles, to the bladder, to the rectum, to the lymph nodes and then into the bones. High-risk prostate cancer is T3 or T4 disease, meaning disease that has gone beyond the prostate, or a PSA greater than 20, or a Gleason of 8 to 10. The treatment is high-dose external radiation plus hormone therapy, which is the present standard of care. Hormone therapy is extremely effective in prostate cancer, and the effect can last for years. The synergy between hormones and radiation is very profound and should never be overlooked. Long-term therapy does have side effects, and a study was done to see if six months of treatment in higher-risk patients would be just as good as long-term hormone therapy. What they found was that even at five years the mortality rate was higher in the short-term arm. A study was also done by a Scandinavian group that looked at whether one could treat effectively with hormone alone. Why should we irradiate? At ten years, we found that the addition of radiation therapy to hormone therapy resulted in a significant improvement.

### **2. Early-Stage**

We treat a lot of cancers, and I tell patients that a diagnosis of early-stage prostate cancer is not the end of the world. The good news is there are a lot of treatment options, and the bad news is there are a lot of treatment options. Any treatment for prostate cancer should address the risks and complications associated with trying to get rid of a cancer in this gland while yet maintaining the functional integrity of the organs around it.

One of the down sides of radiation therapy is it is a closed procedure. We have to rely on criteria such as clinical staging, PSAs, and pathology reports to stratify and classify patients and to quantify or estimate risks. With TNM staging we are trying to assign numbers to the tumor and nodal and metastatic sites if they are present.

I am going to talk about consensus guidelines for assigning the risk of disease according to the tumor stage, the PSA and the Gleason score. To have a low-risk cancer you have to have either no tumor palpable or a very small tumor, a PSA of less than ten and a Gleason score of less than or equal to six. If you have T2b-T2c, PSA 10-20 or Gleason score of 7, you become intermediate risk.

## **II. Radiation Therapy Options**

For low-risk prostate cancer, radiation therapy treatments are given once a day, five days a week for about eight to nine weeks. The other option is brachytherapy, and that is given in a single session.

For intermediate risk cancer, the treatments are again external radiation therapy but at a higher dose, or external radiation with short-term hormone therapy. If you want to use brachytherapy in intermediate-risk patients, you use it in combination with external radiation because there may be certain areas that are underdosed by brachytherapy and the external radiation makes up for that. We reduce the dose of both, and we put them together to give us a better outcome.

As far as technological advances, image-guided radiation therapy should be the only way one gets treated today, and the reason for that is it allows us to focus the high doses on the cancer while minimizing the toxicity. The goal is to put the radiation where the tumor is. When image guidance is used, we can shrink the size of the radiation field, which then decreases the toxicity.

If you ask me which of the many options is the cheapest and an excellent way of treating prostate cancer, I would say it is brachytherapy. You are putting the radiation into the cancer. You are giving a very high dose to the tumors, and it is an excellent option.

## **III. Results**

Whether it is low or intermediate risk, there is about 90+% chance of controlling the cancer 10, 15, or even 20 years out. With external beam radiation, we have come to know that as the technology improves with image guidance and as we get better with IMRT, we are able to deliver higher doses of radiation, which deliver better outcomes.

## **IV. Side Effects**

Patients will have urinary irritation and rectal irritation from radiation therapy. Less likely complications include rectal bleeding and chronic bowel symptoms. Rare but serious side effects are rectal and bladder injury requiring colostomy. Those at highest risk are those with colitis, those who are on Coumadin, and those who have had prior TURP and high-dose radiation. You have to treat one patient at a time. You have to look at each patient and see that each one has his own unique presentation. You then look at what option may be the best. It is very unlikely for radiation therapy to cause urinary incontinence, but there's a whole host of side effects with hormone therapy.

## **V. Conclusion**

Ultimately, I tell every patient that it is one thing for us to say that this is good or that is good. That is probably true, but patients have to decide what is good for them. We have the best technologies, and we offer those as an alternative. The patient, however, must make the decision.