

## Cryosurgery As Initial Treatment + Salvage Therapy

Many of you have heard Dr. Myers speak about Dr. Duke Bahn and the Color Doppler Ultrasound both in this newsletter and on the Ask Dr Myers blog (<http://askdrmyers.wordpress.com/>). But fewer of you are familiar with his work on cryotherapy. At the PCRI conference last month, we also had the opportunity to sit down with Dr. Bahn to discuss cryotherapy's usefulness as a treatment for the newly diagnosed as well as a salvage treatment for those with recurrent disease.

Cryosurgery is tissue freezing. Simply speaking, creating tissue destruction with low temperature. It is designed to treat all type of prostate cancer. Initially, we started with freezing the entire prostate. For about 10-12 years that was the procedure I used: freezing the entire prostate. Whether it was an early stage or locally advanced stage cancer. It is still a minimally invasive treatment, even with total freezing, compared to surgery or radiation. My published data shows equal or better outcome compared to surgery or radiation with less complications.

With total cryoablation, the only drawback is the higher rate of sexual dysfunction compared to radiation or surgery. That said, the urinary function preservation rate is highest than in surgery or radiation.

During the last ten years (PSA era), we've realized that there is evidence of over-detection and over-treatment of prostate cancer and that many men with a very low risk disease—small localized cancer—still end up with radical treatments. These treatments may be unnecessary and men suffer from the consequences.

I then developed the concept of the so-called male lumpectomy. In the past, every woman with breast cancer lost the breast. Today that is not always the case. There are more lumpectomies than mastectomies. My thought was why don't we adapt this concept to prostate cancer? Today, with PSA screening and careful Color Doppler Ultrasound evaluation, we're identifying more and more small volume cancers (low-risk cancers) that are no threat to the life. We can identify the exact location and the size of the tumor. And we can confidently rule out cancer in other sites. In these situations, active surveillance or if not, focal cryotherapy would be a reasonable solution. We freeze small area of the prostate that harbors the cancer only, as an outpatient procedure. In doing so, we found low complication rate: 0 % urinary incontinence rate and less than 10 % sexual dysfunction rate. These complication rates are much lower than radical surgery or radiation complication rates.

For someone who has intermediate risk disease and the cancer is confined to one lobe, he can choose focal cryotherapy. It's a relatively easy procedure to go through for the patient and usually go home the same day.

The candidates for focal cryotherapy are men with low to intermedicarte-risk disease or even men with high risk disease who have a significant co-morbidity.

Another group of men who make good candidates for focal cryotherapy are men who, while undergoing active surveillance, having a psychological burden of not doing anything definite. It is a very good compromise. It's that middle ground between doing nothing versus doing something radical. Because cryotherapy is indeed a minimally invasive option, they can have the procedure and proceed with normal life.

Cryosurgery is also a good option as a salvage therapy, especially after radiation treatment failure. After radiation, salvage radical prostatectomy can be done, but it is technically demanding and associated with a higher rate of side effects and complications. And the final outcome is not as good.

Some advocate seed implantation after the failed external beam radiation. Personally, I'm not quite

sure whether adding more radiation is beneficial. The cancer has already escaped radiation damage and became radiation-resistant tumor. So adding more radiation? Salvage cryotherapy can be a good option. We reported good results with salvage cryotherapy.

Again, I apply the concept of the mastectomy as a salvage treatment. If someone has a known cancer recurrence in only one lobe, then I carefully review the original biopsy report. If the original biopsy showed cancer in the same location and there's no cancer in the other half, he can have salvage focal cryotherapy. He already went through radiation. Minimally invasive cryotherapy would be a logical option to avoid any further collateral damage. So, cryotherapy can be used as a primary treatment, depending on the cancer location and stage, and also as a salvage treatment.