

CHARTING SURGICAL RESULTS FOR HIGH GRADE PROSTATE CANCER

by: Gil Lederman, M. D.

Many have called radical prostatectomy - surgery to remove the malignant prostate - 'the gold standard of treatment.' Critical analyses of this surgery are available for physicians treating patients as well as patients considering treatment options. Facts are crucial to predict outcome and best select treatment.

Good news about prostate cancer is that more men are being screened and diagnosed while the cancer is localized. Localized prostate cancer is potentially curable but once spread, it is not.

A recent paper published in Cancer by Oefelein et al evaluated results of radical prostatectomy. Seventy-four men with poorly differentiated cancer were evaluated amongst a group totaling 238 men who underwent surgery at Northwestern University Medical School.

The radical prostatectomy using a retropubic approach with lymph node dissection was performed. The cancer was described as being either organ-confined (confined to the prostate) or with extracapsular extent (beyond the borders of the prostate).

After surgery, the patients were seen every three months for examination and blood tests. In the early years of the study, a PSA (Prostatic Specific Antigen) test was not performed.

Gleason, a pathologist, categorized prostate cancer prognosis by microscopic appearance. The Gleason scale runs from 2 to 10, with 2 being well differentiated cancers having the most favorable prognosis and 10 being poorly differentiated cancers having the worst prognosis.

It should be noted that of the 74 patients with high grade cancers (Gleason 7 or higher), 32 or nearly one-half received radiation therapy after surgery because of high risk features.

Of 74 high risk patient (Gleason's 7, 8, 9 or 10), only 19 patients (25%) had organ-confined disease. The remaining patients included 11 with extracapsular disease, 24 extracapsular extension with positive margins, 11 seminal vesicle involvement and 9 positive lymph nodes. Thus, only a small minority of men who were thought to be surgical candidates, in fact, had cancer confined to the prostate when a Gleason 7 or higher cancer was present.

In the group of men with Gleason 7 score only, 37 of 52 men (or 71%) had cancer that was not confined to the prostate.

Of those men with a Gleason's score of 8 or greater, only 4 of 22 or 18% had organ-confined cancer. The remainder - in fact, the vast majority (82%) had cancer that had spread beyond the prostate at the time of surgery despite the fact that all were felt to be surgical candidates.

Eight of 32 men who received adjuvant radiation had biopsy and cancer was present in all eight. Furthermore, 16 of these patients had bone scans and 5 (or about one-third) were positive for metastatic cancer. This would suggest that post-operative external beam radiation is not especially effective for high-risk patients. That is in distinction to our high-dose radiation seed program.

As the authors noted "Clearly, men with untreated poorly differentiated carcinoma of the prostate have a high risk of rapid progression and eventually death from malignancy." Unfortunately, so do men with high-grade cancer undergoing surgery.

The authors found that even the majority of patients with poorly differentiated carcinoma that was organ-confined had progression of their PSA meaning progressive disease at five years. They felt that post-operative radiation did reduce the rate of recurrence. A shorter interval between surgery and recurrence for higher grade prostate cancers was noted.

For organ-confined Gleason 7 cancer, the five year PSA progression-free survival was only 50% and was 38% if the cancer was confined but the Gleason range was 8, 9 or 10. Few patients fit in those latter categories

Non-confined cancer was most commonly found in the men whose Gleason score was 7, 8, 9 or 10. For patients with prostate cancer that was not confined to the gland itself, the likelihood of PSA progression-free five year survival was only 25% for Gleason 7 prostate carcinoma and 22% for Gleason 8, 9 and 10 cancer.

The story was slightly better for those with lower grade cancer. Forty-five percent of men with Gleason 5 and 6 prostate carcinoma had unconfined cancer. When cancer was not confined to the prostate gland even for Gleason 5 or 6 cancer, the five year PSA progression-free survival was 44%. - meaning 56% of patients had progressive disease despite surgery and their low Gleason score.

Prostate cancer, especially (but not exclusively) with high Gleason score represents a difficult disease. Radical prostatectomy is not very appealing for many reasons including those immediate and long-term. Loss of normal sexual function is nearly universal in this group and urinary incontinence is not uncommon after surgery. Prolonged convalescence is another surgical issue.

The rationale of alternative methods of treatment are great. If the vast majority of men with high grade prostate carcinoma are not cured or are left with undesired side effects, then more successful alternatives must be sought.

At Radiosurgery New York, one of our many approaches is transperineal radiation seed implantation. This is a procedure - usually performed under local or regional anesthesia - where radiation seeds that are placed directly into the prostate gland to produce high radiation doses. It has been highly successful when combined with a limited course of external beam radiation therapy. The rationale is that radioactive seeds are placed directly into the gland to give very high doses to the bulky cancer with lower doses being delivered by external beam to the prostate and surrounding areas to treat potential sites of spread. Thus, radiation can treat a greater area than surgery.

Current data shows prostate biopsy after treatment to be negative for cancer 90% of the time. This is in stark contrast to the recently reported paper using radical surgery.

A further appeal of the transperineal radiation seed implantation approach is that it avoids major surgery and allows a quick return to function. The majority of sexually active men remain so and incontinence of urine is seldom seen. It certainly warrants investigation for those with prostate cancer.

We have comparison data from many cancer centers across the country. Our data, by our physicians, is available to you both directly in information packages as well in monthly

seminars. We have a hot line for questions: 212-CHOICES and as well you can e-mail to gil.lederman@rsny.org.