Day 2,754 — Researching Salvage Radiation Therapy, Again

May 26, 2018 By Daniel Zeller

It's 7:30 p.m. on the Saturday of a three-day holiday weekend in the United States, and I'm reading articles on salvage radiation therapy. Who said prostate cancer wasn't fun?!?

I did come across this informative article from the Journal of Clinical Oncology published in May 2007: Predicting the Outcome of Salvage Radiation Therapy for Recurrent Prostate Cancer After Radical Prostatectomy.

The authors set out to create a nomogram that predicted the "probability of cancer control at 6 years after SRT for PSA-defined recurrence," and they speak at length about the variables used in their nomogram, as well as its limitations.

I plugged my stats into their nomogram and came up with a 70 percent probability that I won't see any progression at six years. That's right in line with what the radiation oncologist told me. (The nomogram is a little clunky to use, as it's a graphical scale that you have to draw lines through to determine your score. I'd much rather have fields to enter on an online form that calculates it more precisely.)

There was one paragraph that talked about side effects of SRT that really caught my attention:

> The potential for morbidity resulting from radiation therapy argues against its indiscriminate use in the salvage setting. Mild to moderate acute rectal and genitourinary toxicity is seen in the majority of patients, but the reported incidence of acute grade 3 to 4 complications is less than 4%.[4,6,9,14,21,36] Late grade 1 to 2

rectal and genitourinary toxicity are reported in 5% to 20% of patients, and late grade 3 toxicity is less than 4%.[3,4,6,8,11,21] Although rare, pelvic radiation therapy for prostate cancer is associated with an increased risk of secondary pelvic malignancies.[40] Postprostatectomy radiotherapy does not appear to significantly increase the risk of urinary incontinence,[3,4,6,14,21,41] but we must presume that it has some adverse effect on erectile function on the basis of the data from primary radiation therapy series. The nomogram can be used to restrict SRT to those patients most likely to benefit and avoid treatment-related morbidity in those predicted to have a low probability of a long-term benefit.

That 5 percent to 20 percent range for late grade 1 to 2 rectal and genitourinary toxicities made me go, “Hmmm…” Not quite the “single digits” probabilities that my radiation oncologist said.

After reading a number of the articles in the footnotes and listed on the “We recommend” column of the website, it’s apparent from most of them that starting SRT early is the way to go. It’s also apparent that the probability of being progression free at six years varies considerably from the 30 percent range to the 77 percent range depending on your PSA doubling time, PSA level, Gleason score, time to recurrence, and post-surgery pathology. But we already knew that.

This also caught my eye:

A rising PSA alone is not justification for initiating

salvage therapy because patients with PSA recurrence are as likely to die as a result of competing causes as they are of prostate cancer.[1] To determine the need for salvage therapy, we suggest using one of several existing tools to estimate the probability of developing metastatic disease or cancer-specific mortality.[2,22,23] Patients at high risk of progression to these clinically significant events and/or a long life expectancy should be assessed for SRT using our nomogram.

Digging into the three footnotes listed, two are studies that I've already referred to in earlier posts—Pound and Freedland—and both suggest that it could take a very long time for the cancer to metastasize. The third study referenced, Predictors of Prostate Cancer–Specific Mortality After Radical Prostatectomy or Radiation Therapy, also reinforces that notion.

We're right back where we started from: Zap early with an average 50-50 shot of it being effective (with the 4 percent to 20 percent chance of long-term side effects) or do nothing but monitor.

I may send some of these links to my radiation oncologist on Tuesday and ask, "Which of these studies do you put the most stock in, and why?" and see what he says. Could be interesting.

Well that's enough fun with cancer on a Saturday night. I'll keep you posted on any new research findings or developments with the doctor.

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