Salvage Radiation Therapy Nomograms

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February 21, 2022 By Daniel Zeller

I've been playing around with two nomograms that offer predictions on the outcome of salvage radiation therapy (SRT). One if from the Memorial Sloan Kettering Cancer Center (MSKCC) and the other is from the Cleveland Clinic (CC). They are similar in design, but the MSKCC nomogram requires more detailed information to be input by the patient, but the CC nomogram provides a more information at the output.

Summary

Both nomograms gave results that are in the same ballpark, with the CC nomogram being a bit more conservative.

MSKCC said that I would have a 64% chance of being progression-free after 6 years after SRT; CC said that I have a 59% chance of being progression-free after 5 years, and 45% chance of being progression-free at 10 years.

The CC nomogram takes it one step further and estimates a 6% cumulative chance of metastasis at 5 years, and a 12% cumulative chance of metastasis at 10 years.

MSKCC Nomogram

MSKCC Salvage Radiation Therapy Nomogram link:
https://www.mskcc.org/nomograms/prostate/salvage_radiation_therapy

In order to use the MSKCC SRT nomogram, you will first need to calculate your PSA Doubling Time, and they specify that you should use the PSA values obtained in the last twelve months.

MSKCC PSA Doubling Time Calculator link:
https://www.mskcc.org/nomograms/prostate/psa_doubling_time

The MSKCC SRT nomogram requires you to provide:

- Pre-surgery PSA value.
- Most recent PSA value.

- PSA Doubling Time.
- How many months have passed before your PSA reached 2.0 ng/mL or higher. [Interesting note: The field only accepts values between 0 and 72 months and, for me, it took 125 months to cross the 0.2 ng/mL threshold. I'm guessing that may mean that my result will be a bit conservative because I had to plug in 72 months instead of 125.]
- Your Gleason score.
- Information about your:
  - Surgical margins.
  - Extracapsular extension.
  - Seminal vesicles.
  - Pelvic lymph nodes.
- Whether your PSA remained elevated post-surgery.
- The planned radiation dose. (I left this set at their default value of 65 Gy because I had no idea.)
- Whether you will be undergoing hormone therapy before or along with radiation. (I checked "No" as there has been no discussion of that so far.)

After plugging all of that information in, here are my results:

Salvage Radiation Therapy InformationCourtesy of Dann Wosner/Memorial Sloan Kettering

Cleveland Clinic Nomogram

Cleveland Clinic Salvage Radiation Therapy nomogram link:
https://riskcalc.org/ProstateCancerAfterRadicalProstatectomyNew/

The CC nomogram asks you to provide:

- Whether you will be receiving SRT alone or with concurrent Androgen Deprivation Therapy.

- Surgical Gleason score.
- Extracapsular extension.
- Surgical margin status.
- Seminal vesicle invasion.
- Pre-SRT PSA level.
- Prostate Bed Radiation Dose. [It was interesting to note that CC defaulted this to a dose greater than or equal to 6600 Gy, but it does give you the option to select “<6600”. To be able to compare the CC nomogram results with the MSKCC results, I changed that to be <6600 Gy so the doses would be similar.]

My results are below:

Dann Wosner’s PSA/PSADT resultsCourtesy of Dann Wosner

Interestingly, if I bump up the radiation dose to >=6600 Gy, then my percentages change to 65% free at 5 years and 53% free at 10 years. That makes sense, but do higher radiation doses translate into higher risk of side effects? I’m guessing so. Something to ask the radiation oncologist on Thursday.

Conclusion

Certainly, those are average to good probabilities, but are they good enough to risk impact to quality of life? I don’t know. Of course, the next step is to dig deeper into the risks of real impact

on quality of life after salvage radiation.

I’m thankful to everyone who provided information about their own experiences, either here in comments on my previous posts or in other forums. They’ve been very insightful and give me an understanding of the range of possibilities to expect. But each case is unique, and I have to remember that, should I choose this, my case will be different from everyone else’s.

More to come.

This post originally appeared on Dan’s Journey Through Prostate Cancer on February 14, 2022. It is republished with permission.
