

Evidence Update for Clinicians:

Current Treatments for Localized Prostate Cancer and Symptom-Related Quality of Life

Given the evidence of high 5- and 10-year survivorship rates for localized prostate cancer, the effect of treatment on symptom-related quality of life is an important consideration for men choosing among available treatment options. Two PCORI-funded studies published in the March 21, 2017 issue of JAMA compare the impact of current treatments on symptom-related quality of life for men with localized prostate cancer. Quality of life scores refer to symptoms, how much men were bothered by symptoms, or a combination of the two. The studies looked at observed outcomes from a combined total of 3,600 men for periods of two and three years following treatment. This evidence offers information that can help patients make treatment decisions.

Summary of the Evidence:

Sexual, urinary, and (to a lesser extent) bowel function were significantly reduced at six months and at one year for men receiving surgery or radiation compared with men in active surveillance. These symptoms tend to improve over 2 to 3 years, but differences may remain.

Surgery

(open or robotic assisted laparoscopy) was more likely to cause sexual dysfunction and urinary incontinence than radiotherapy or active surveillance.

- Sexual dysfunction was worse during the six months following surgery.
- While men who had full sexual function at study entry saw some improvement after one year, they continued to report sexual dysfunction at two and three years after surgery. In adjusted models at three years, men who had had surgery were more likely to report moderate or big problems with sexual function (44%) than those who had had radiotherapy (35%) or active surveillance (28%).
- Following initial declines, urinary function was more likely to improve after prostatectomy than sexual function, especially for men who had reduced urinary function at the time of treatment. For those men (who represent the majority), urinary incontinence symptoms initially got worse but improved by 12 months to baseline levels.
- Urinary irritation and obstruction scores were improved in patients who had a radical prostatectomy compared to those in active surveillance.

Radiotherapy

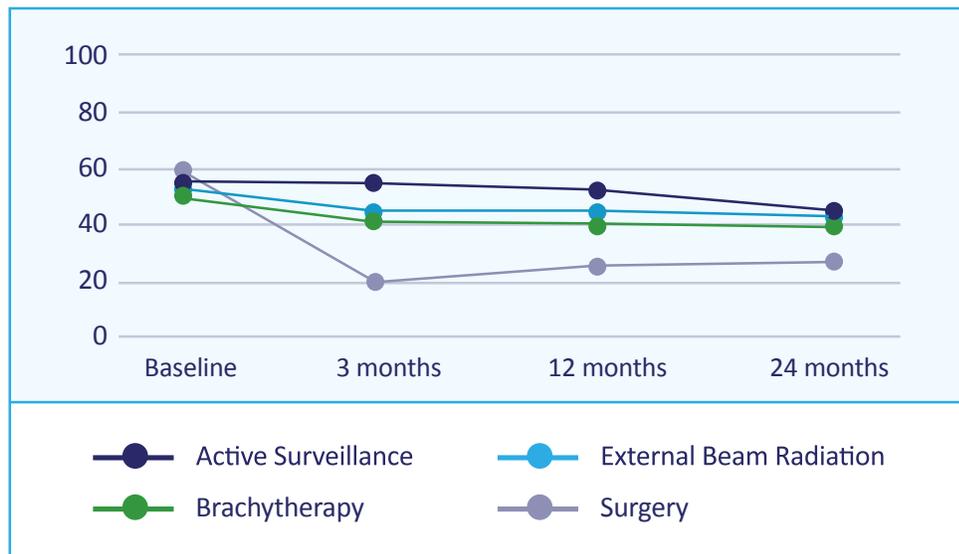
(external beam radiation or brachytherapy) is more likely to cause urinary obstruction, urinary irritation, and bowel problems than surgery or active surveillance.

- About 5 to 10 percent of men who received radiation reported moderate or big problems with sexual function compared to baseline, but the timing of the decline tended to be later than the immediate decline that occurred for men who had surgery.
- Radiotherapy was more likely to produce bowel problems than surgery. About 6 percent of men who received radiotherapy reported moderate or big problems with bowel function, compared with 3 percent of those who had prostatectomy.
- Brachytherapy only: Patients experienced increased urinary obstruction and irritation symptoms at 3 months after treatment, which gradually improved over time. At 2 years, urinary symptoms were similar between brachytherapy and active surveillance patients.

The American Urological Association (AUA), American Society for Radiation Oncology (ASTRO), and the Society of Urologic Oncology (SUO) have issued joint guidelines on shared decision making with patients who have localized prostate cancer. These guidelines include:

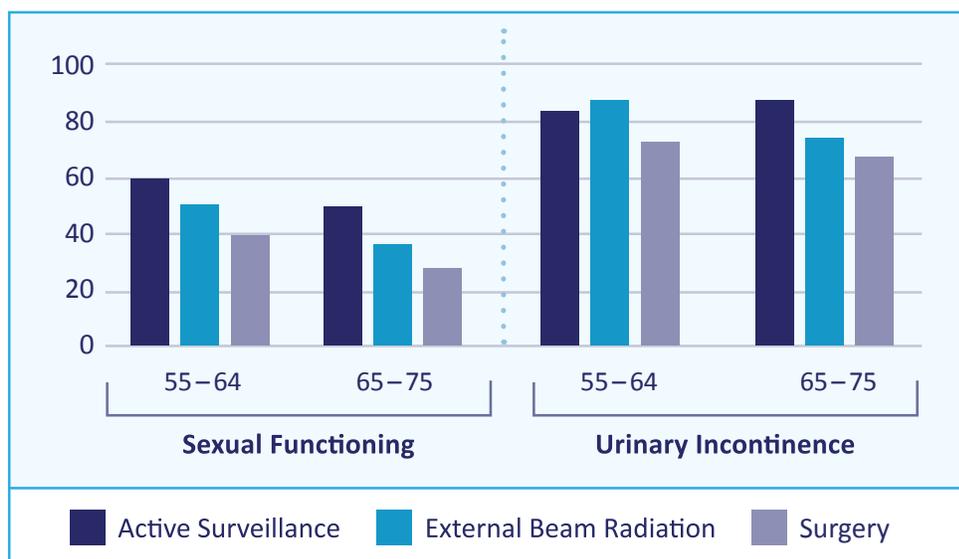
- **Providing** patients with information about the benefits and harms of prostate cancer treatment, including active surveillance, and the effects on quality of life
- **Asking** the patient about his values, preferences, and priorities regarding effects on his quality of life, and incorporating this information in discussions about each option
- **Helping** the patient determine the trade-offs for each treatment option
- **Informing** the patient that he can take time to make his decision, and encouraging him to use recommended resources and discuss options and trade-offs with his partner, friends, and family

Sexual Functioning Quality of Life Scores by treatment type



Higher score represents better function

Raw Quality of Life Scores at Three Years by age and treatment type



Higher score represents better function

CME/CE on these studies is available – To learn more, access PCORI’s CME/CE module, available at www.pcori.org/cme-ce.

An information sheet for patients on this evidence is available – Access it at www.pcori.org/new-evidence. The patient information is intended to support patients in discussions with their clinicians about treatment options.

Barocas DA, Alvarez J, Resnick MJ, *et al.* Association Between Radiation Therapy, Surgery, or Observation for Localized Prostate Cancer and Patient-Reported Outcomes After 3 Years. *JAMA*. 2017;317(11):1126–1140.

Chen RC, Basak R, Meyer A, *et al.* Association Between Choice of Radical Prostatectomy, External Beam Radiotherapy, Brachytherapy, or Active Surveillance and Patient-Reported Quality of Life Among Men With Localized Prostate Cancer. *JAMA*. 2017;317(11):1141–1150.

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