

Study identifies when and how much various prostate cancer treatments will impact urinary and sexual functioning

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Men with prostate cancer may one day be able to predict when and how much various treatments will impact their urinary and sexual functioning, thanks in part to new findings that researchers at Fox Chase Cancer Center presented at the American Society for Radiation Oncology's 56th Annual Meeting on Tuesday, September 16.

Looking over data gathered from more than 17,000 surveys completed by [men](#) diagnosed with [prostate cancer](#), Fox Chase researchers tracked when patients' urinary and sexual symptoms changed following each type of treatment, and by how much. "The ultimate goal," says study author Matthew Johnson, MD, Resident Physician in the Department of Radiation Oncology at Fox Chase, "is to develop a predictive tool that lets patients decide which treatment is right for them based on the symptoms they have beforehand, and their tolerance for any change – even temporary – in those symptoms."

After a diagnosis of prostate cancer, men have multiple treatment options, including surgery to remove the prostate and several types of [radiation therapy](#). They can receive [external beam radiation](#) directed towards their prostate, known as intensity modulated radiation therapy (IMRT), or undergo a procedure that implants radioactive seeds in their prostate called low dose rate brachytherapy (LDR).

Each procedure carries risks, particularly to men's urinary and [sexual](#)

[functioning](#). These symptoms are also common in men, even without treatment, so Dr. Johnson and his team asked men to report their symptoms both before and after treatment in order to track how prostate cancer therapy impacted urinary and sexual functioning.

A total of 3,515 men completed 14,523 surveys about their problems with urination—feeling, for instance, that they have to use the bathroom frequently, but can never fully empty their bladders.

In all, men's functioning at the time of treatment – their "baseline" – had a big influence on how their symptoms changed during treatment, says Dr. Johnson.

Looking at the results in more detail, the researchers noted that, after half of the men were followed for at least 28 months, LDR was associated with a temporary increase in problems, particularly within the first three months; this fell over time, and eventually returned to its baseline levels. By 34 months, men given LDR were no more likely to report more problems than those who received IMRT.

To measure how [sexual problems](#) such as erectile dysfunction are affected by treatment, the researchers reviewed 2,624 surveys collected from 857 men. Even though radiation is associated with a slow worsening of erectile function over time (perhaps by affecting blood flow to the area), no form of radiation appeared to cause any more problems than another. Men noted the largest increase in early sexual problems following surgery to remove their prostate and other tissue, peaking 3-7 months following surgery, likely the result of nerve damage at the time of surgery; by 22 months, however, they were no more likely to be experiencing additional issues than men who had undergone IMRT. Interestingly, in the rare case where men emerged from surgery with good sexual functioning and required post-operative radiation, these men tended to maintain sexual functioning even with the addition of

radiation, says Dr. Johnson. "This was a surprise, since radiation is known to cause sexual problems in men who don't undergo surgery," he notes.

Since patients had the option of not completing the surveys, and these are sensitive topics (many men abstained from reporting their sexual issues), it's possible these data don't capture some problems that arise before and after treatment, admits Dr. Johnson. Still, using patient surveys has many advantages, he adds, since patients will report their symptoms more reliably and accurately than a doctor can.

The next step, says Dr. Johnson, is to take these data – gathered from thousands of men – and organize them in a way that makes it easy for doctors to predict when and how much a patient's functioning will change following different treatments. "Based on this information, patients can select the [treatment](#) that they are most comfortable with."

Provided by Fox Chase Cancer Center

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