

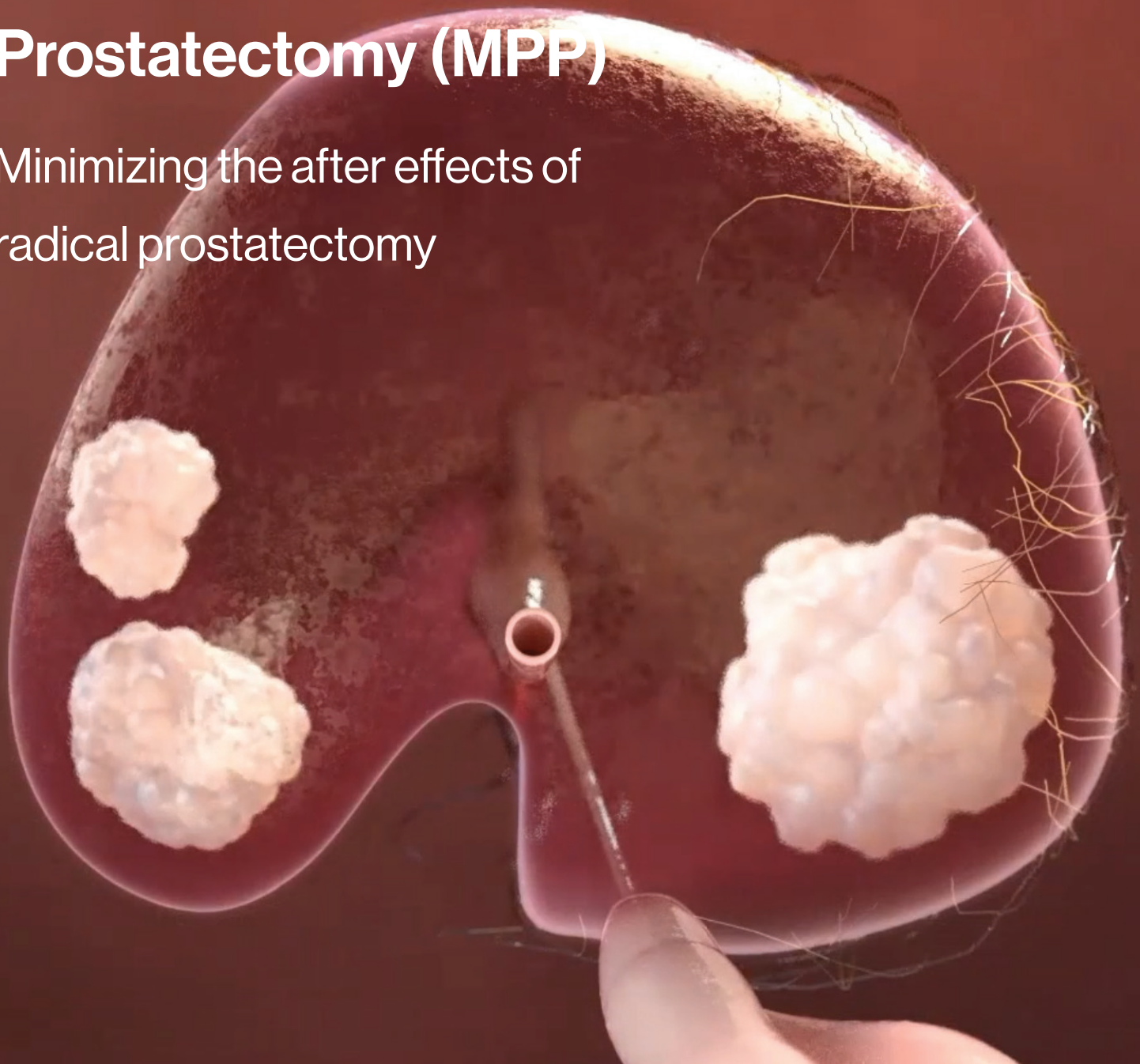
FALL 2021

Department of **Urology**



Menon Precision Prostatectomy (MPP)

Minimizing the after effects of
radical prostatectomy





About Dr. Menon

Mani Menon, MD, is a pioneering cancer surgeon whose body of work has helped to lay the foundation for modern robotic surgery. Dr. Menon has personally performed more than 6,000 robotic prostatectomy surgeries and is considered to be one of the foremost surgical innovators in the world.

What is Menon Precision Prostatectomy?

Menon precision prostatectomy (MPP) is a novel surgical approach developed by Mani Menon, MD, and his team that preserves nerve function after prostatectomy, allowing earlier return of urinary control and erectile function.

Background

Studies show that the most successful prostate cancer treatment is surgical removal of the prostate, or radical prostatectomy. In conventional radical prostatectomy (RP), the entire prostate and seminal vesicles are removed. While the spread of cancer is best controlled with RP, many men will suffer temporary nerve damage, resulting in urinary leakage and/or erectile dysfunction.

There is a complicated network of nerves surrounding a membrane called the capsule surrounding the prostate and seminal vesicles. In conventional radical prostatectomy the capsule is removed. There may be temporary or permanent injury to these nerves, causing erectile dysfunction (ED).

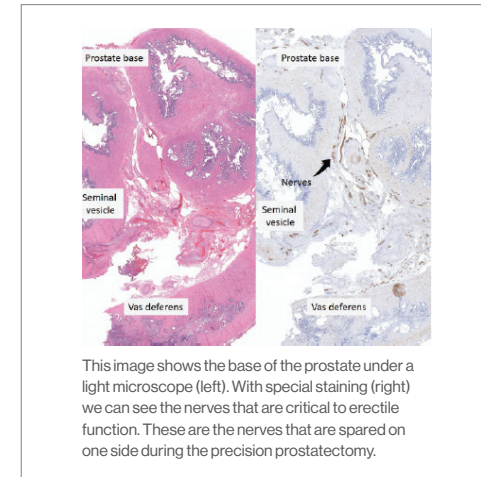
Around 80 percent of men have some degree of ED after radical prostatectomy or radiation therapy. ED is much less common after simple prostatectomy or radical cystoprostatectomy where the capsule of the prostate is preserved.

What is focal therapy?

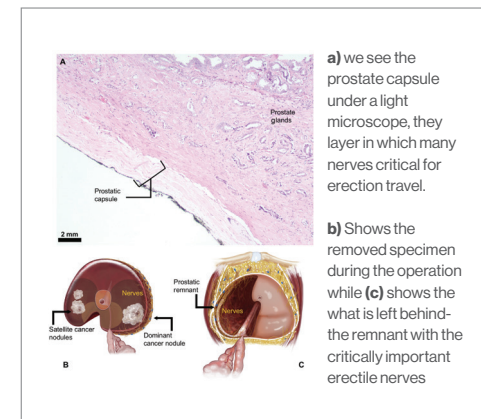
Quality of life is an important consideration in cancer treatment. For instance, in breast cancer, often the goal is to preserve the organ while removing the cancer. This treatment, called a “lumpectomy” or skin sparing mastectomy, has a high success rate in curing cancer while maintaining femininity.

A similar approach for some men with low-risk prostate cancer can also yield good results. Some of techniques used to treat the cancer, but leave the rest of the prostate intact, might include:

- High energy focused ultrasound
- Freezing (cryotherapy)
- Tissue lasers and electrical energy (nanoknife)



Focal therapy for prostate cancer is relatively new. Prostate cancer is often multifocal: that is, there are usually multiple areas within the prostate that have individual, small cancers. However, these smaller cancers are often so small that they don't show up on imaging studies. A cancer has to be at least 0.5 to 1 cm in diameter before it can be seen on imaging studies. Focal therapy concentrates on only treating the larger cancers, with the goal of improving functional outcomes and a better quality of life.



What is the reason to try this approach?

This approach lessens the chance of nerve damage, allowing earlier return of urinary and erectile function. Over 90 percent of the prostate is removed, but the remaining tissue provides an added layer of protection to the network of nerves involved in the maintenance of erectile function.

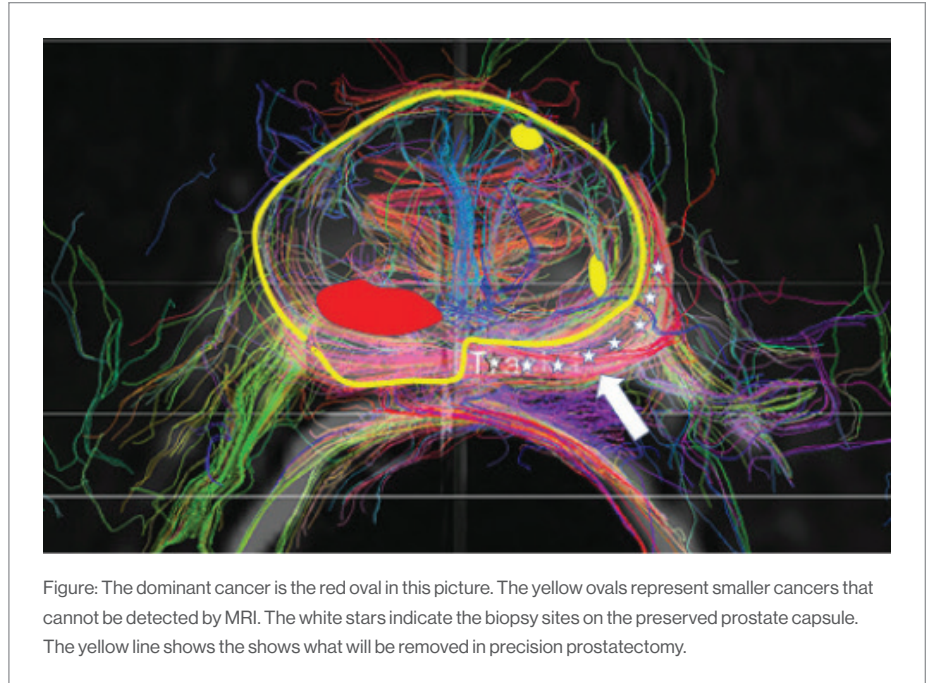
Men who are interested in preserving erectile function can benefit from this operation. However, if maintaining erectile function is not important to you, this operation may not be right for you.

Who can have this procedure?

Men who have a dominant lesion in one lobe of the prostate, as determined by biopsy or MRI, are appropriate for MPP. Men with extensive bilateral cancers with a Gleason score greater than 7 detected through MRI or biopsy are not candidates for MPP and neither are men with low volume Gleason 6 cancer, who do not need immediate treatment. (The Gleason score refers to how abnormal your prostate cells look and how likely they are to spread.)

How do you perform precision prostatectomy? Are you removing all the cancer?

MPP is a two-step operation. The first step is to do a biopsy of the



capsule that we plan to preserve (shown with white stars in the illustration). You will be under conscious sedation, which means that you will not feel anything, but you will be awake. We use ultrasound and sophisticated 3D technology to perform mapping biopsies of the outermost rim of the prostate. These biopsies will be reviewed by an expert pathologist, who will look for the presence of cancerous or atypical cells. Wherever possible, all negative biopsies will also be subjected to additional molecular testing, which can predict if tissues can turn cancerous within five to ten years.

The second step of MPP is the actual surgery, performed 6-12 weeks after the biopsy. We will perform a traditional radical removal of the side of the prostate containing the dominant lesion, staying outside the capsule and the seminal vesicles. On the opposite side, which has the smaller cancers, we will remove 90 percent of the prostate, leaving the seminal vesicle and capsule intact.

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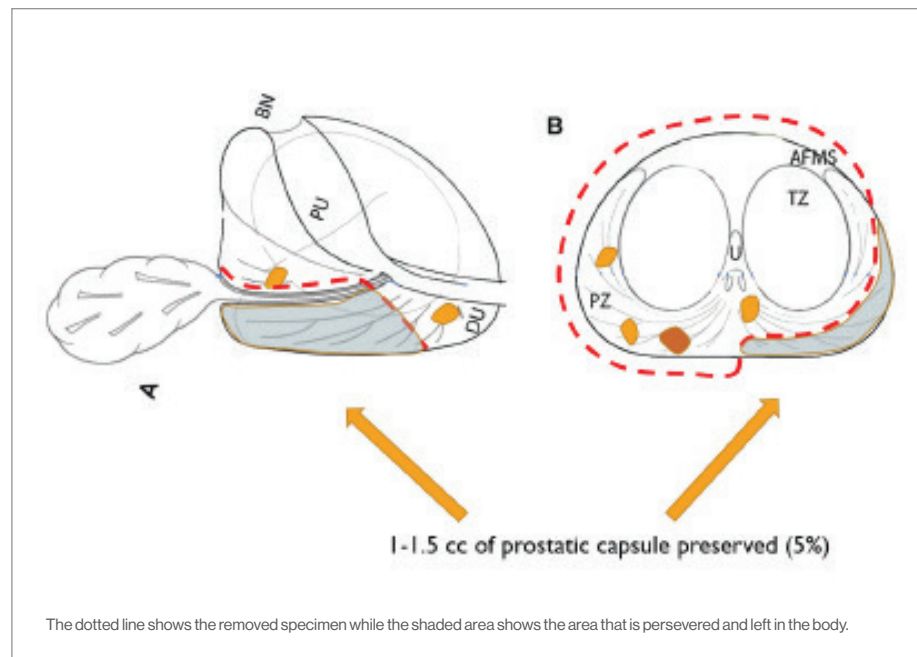
How does MPP compare to other focal therapies?

Compared to focal ablation, in which only the dominant lesion is treated, and hemiablation, where 50 percent of the prostate is ablated, 90 to 95 percent of the prostate is surgically removed with MPP. The difference between conventional radical prostatectomy and MPP is that the entire prostate and seminal vesicles are removed with conventional surgery, whereas the capsule and one seminal vesicle on the opposite side of the dominant lesion are preserved with MPP.

What have the results been like?

Our results show that with men who no history of erectile dysfunction, around 70 percent achieved erections sufficient for intercourse within four weeks after surgery. About 80, 90 and 100 percent of men regained urinary control within 1, 4 and 8 months, respectively. At 12 months, 95 percent of men are sexually active with or without the use of oral medications such as Viagra or Cialis.

In contrast, when the entire prostate, including the capsule is removed, after four months, 15 percent had natural erections, another 43 percent had erections sufficient for intercourse with injections and/or mechanical assistance. Our experience shows that MPP results in a statistically superior return of erectile function at one to four months, compared to



conventional nerve-sparing radical prostatectomy.

It is important to note that these results were achieved in men who had no preexisting erectile dysfunction. It is unlikely that identical results will be achieved in men with pre-existing ED, particularly in men who are already on medicines for erectile dysfunction.

What are the risks of this procedure?

After conventional radical prostatectomy, most men have an undetectable PSA. Because we are leaving the prostate capsule and a thin layer of attached prostate cells within in the body, we will be leaving behind cells that will

continue to make small amounts of PSA. At one month to a year after MPP, the median PSA value was below 0.6 in the first 50 patients who have undergone precision prostatectomy, and in 40 percent the PSA was undetectable.

What is the follow-up treatment for patients who have MPP?

Any man who has had a complete prostatectomy has regular PSA testing as a follow-up. We recommend the same follow-up for men who have MPP. If the PSA levels are falling or are stable, no additional treatment will be recommended. However, if the values start to rise, we may recommend further investigations and treatment.

We will see you at one month, four months, and once a year for five years. If you have not attained erections satisfactory for intercourse by the one-month visit, we will start pharmacological bridging therapy. This will include oral medications or penile injections as needed. You will be required to get PSA tests every three months for the first year, every six months until five years, and annually after that.

If the PSA rises on two consecutive occasions, we recommend that you get an image-guided biopsy of the prostatic bed. This follow-up is identical to our protocol for men undergoing total radical prostatectomy. This serves as a baseline for further follow-up.

What is the risk of leaving behind cancer in the prostate capsule?

First, we will only do this operation if the confirmatory biopsies show

that there is no clinically significant cancer in the prostate capsule. Follow-up biopsies in the first 100 men have shown that around 10 percent of men had a few cancer cells remaining in the capsule. In half of these, no further treatment is required, and they remain on active surveillance. But in 5 percent of the men, a second surgical procedure, also done robotically, was used to remove the capsule and seminal vesicle.

Is precision prostatectomy technically more challenging than complete removal of the prostate? Can I have it done locally?

MPP is a very specialized procedure, and at this time, Dr. Menon's team is the only one performing this operation anywhere in the world. We have a team of surgeons, assistants, nurses and a pathologist who are specifically trained for this operation.

What if the cancer comes back?

If you have cancer that is clinically insignificant (Gleason 6), we would recommend active surveillance. However, if there is clinically significant cancer (any Gleason 7, more than 2 cores of Gleason 6 or any core more than 3 mm), we recommend additional treatment. This could involve removal of the residual tissues, radiation or tissue ablation. Such treatment will probably result in loss of erectile function in 50 percent of men.

What if I have more questions?

Dr. Menon and his team are glad to answer any questions you might have. We want you to make an informed decision—one that is right for you.

The difference between conventional radical prostatectomy and MPP is that the entire prostate and seminal vesicles are removed with conventional surgery, whereas the capsule and one seminal vesicle on the opposite side of the dominant lesion are preserved with MPP.





**Mount
Sinai**

**Menon Precision
Prostatectomy (MPP)**

**For more information, please contact
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