Laser may reduce prostate surgery's sexual side effects

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One of the challenges of prostate cancer surgery is removing the cancer-affected gland without side effects. The procedure is estimated to cause long-term sexual dysfunction in half of men.

Now, new published research by urologic surgeons at NewYork-Presbyterian Hospital/Columbia University Medical Center presents evidence that a new laser technology used with robotic prostate cancer surgery may reduce the risk of damaging the crucial nerves necessary for erections and urinary continence.

Published in the July online issue of the *Journal of Endourology*, the pilot study is the first to evaluate the CO_2 laser for prostate cancer. The research was also presented recently at the American Urological Association annual meeting in San Francisco.

"The precision of movement available through robotic surgery is already helping reduce the risk of sexual side effects, and the early evidence is that CO_2 lasers will help us be even more accurate -- especially when preserving the sensitive nerve areas necessary for sexual function and urinary continence," says Dr. Ketan Badani, director of robotic urologic surgery at NewYork-Presbyterian Hospital/Columbia University Medical Center and assistant professor of urology at Columbia University College of Physicians and Surgeons.

CO_2 lasers are widely used to treat cancer in the head and neck. A new, flexible, fiber-based delivery system is now making the treatment

approach possible with robotic prostate cancer surgery.

In the procedure, Dr. Badani uses the robotic instrumentation to remove the patient's prostate. This process is aided by the laser, which is used to dissect the plane between the nerves and the prostate, freeing the nerves and preserving them.

"Traditionally, we cut, clip or cauterize the tissue around the prostate nerves. However, these techniques can cause irreversible damage due to traction or heat injury," explains Dr. Badani. "The CO_2 laser may reduce this risk because it is low-heat and doesn't require much manipulation of the nerves."

The new study describes the use of the laser in 10 cases. It reports that the technology is easy to manipulate and very accurate. Patients experienced a return of urinary continence better than the norm, something the researchers found "extremely encouraging." Future research will determine if the technology can improve outcomes with regard to the ability of men to sustain an erection, and its long-term ability to prevent cancer recurrence.

The laser technology, known as BeamPath, was provided by OmniGuide of Cambridge, Mass. OmniGuide BeamPath CO_2 laser fibers are cleared for use by the FDA across a variety of open, endoscopic and laparoscopic soft-tissue cutting applications, including urology.

Provided by New York- Presbyterian Hospital