

# Innovative Robotic-Assisted Surgery Technique Shows Promise for Treating Prostate Cancer

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## Introduction

Prostate cancer is one of the most common types of cancer that affects men. It occurs when the cells in the prostate gland grow uncontrollably and form a tumor. The treatment of prostate cancer typically involves surgery, radiation therapy, and/or chemotherapy. While surgery can be effective in removing the tumor, it can also lead to complications such as impotence and urinary incontinence. However, a new surgical technique that utilizes robotic assistance is showing promise in treating prostate cancer while minimizing the risk of complications.

Robotic-assisted surgery is a type of minimally invasive surgery that uses a robotic system to perform the surgery. The robotic system consists of a console where the surgeon sits and controls the robotic arms, which are attached to surgical instruments that are inserted into the patient's body through small incisions. The robotic system provides the surgeon with a magnified, 3D view of the surgical site and allows for precise movements of the surgical instruments. In the case of prostate cancer surgery, the robotic system is used to perform a radical prostatectomy, which involves the removal of the entire prostate gland. The robotic system allows for a more precise removal of the prostate gland while minimizing damage to the surrounding tissue and nerves. This can reduce the risk of complications incontinence.

A recent study published in the journal such as impotence and urinary of urology evaluated the effectiveness of robotic-assisted radical prostatectomy compared to traditional open surgery in treating prostate cancer. Of these patients, 619 underwent robotic-assisted surgery while 522 underwent traditional open surgery. The study found that patients who underwent robotic-assisted surgery had a lower risk of complications compared to those who underwent traditional open surgery. Specifically, the rate of urinary incontinence was 2.7% in the robotic-assisted surgery group compared to 4.9% in the open surgery group. Similarly, the rate of impotence was 12.2% in the robotic-assisted surgery group compared to 19.2% in the open surgery group.

## Description

The study also found that patients who underwent robotic-assisted surgery had a shorter hospital stay and a quicker recovery time compared to those who underwent traditional open surgery. The median hospital stay was 1 day shorter in the robotic-assisted surgery group (2 days) compared to the open surgery group (3 days). Additionally, patients who underwent robotic-assisted surgery had a shorter time to return to normal activities, with a median of 14 days compared to 21 days in the open surgery group. While the study provides promising results for the use of robotic-assisted surgery in treating prostate cancer, it is important to note that the technique is not suitable for all patients. Patients who have a large prostate or have had previous prostate surgery may not be candidates for robotic-assisted surgery. Additionally, robotic-assisted surgery requires specialized training for the surgeon and the surgical team, which may not be available at all medical centers. The use of robotic-assisted surgery in treating prostate cancer is showing promise in reducing the risk of complications and improving recovery time compared to traditional open surgery. However, the technique is not suitable for all patients and requires specialized training for the surgical team. As technology continues to advance, it is likely that robotic-assisted surgery will become more widely available and may even become the standard of care for prostate cancer surgery.

One of the key advantages of robotic-assisted surgery is its precision. The robotic system provides the surgeon with a magnified, 3D view of the surgical site, allowing for more precise movements of the surgical instruments. This precision can help reduce damage to surrounding tissues and organs, resulting in fewer complications and faster recovery times. Another advantage of robotic-assisted surgery is its minimally invasive nature. Traditional open surgery requires a large incision in the abdomen, which can lead to more pain, scarring, and a longer recovery time. In contrast, robotic-assisted surgery only requires a few small incisions, reducing the amount of pain and scarring, and enabling a quicker recovery.

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In addition to treating prostate cancer, robotic-assisted surgery is also used to treat other types of cancer, such as colorectal cancer, lung cancer, and gynecologic cancers. It is also used in other surgical procedures, such as hysterectomies and hernia repairs. Despite its advantages, there are some potential drawbacks to robotic-assisted surgery. One potential disadvantage is the cost. The robotic system is expensive, and the procedure may cost more than traditional surgery. Additionally, the robotic system requires specialized training for the surgical team, which may be costly and time-consuming. Another potential drawback is the lack of tactile feedback. Because the surgeon controls the robotic arms from a console, they do not have direct contact with the surgical site. This lack of tactile feedback may make it more difficult to detect and respond to unexpected events during the surgery.

## Conclusion

Robotic-assisted surgery is a promising technique for treating prostate cancer and other types of cancer. It offers several advantages over traditional open surgery, including reduced risk of complications and faster recovery times. However, it is important to note that the technique is not suitable for all patients and may be more costly than traditional surgery. As technology continues to advance, it is likely that robotic-assisted surgery will become more widely available and may even become the standard of care for certain surgical procedures.

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