IGOR FRANK I'm Dr. Igor Frank. I'm a staff urologist at the Mayo Clinic and I specialize in treatment of patients with prostate cancer. Today, I'm going to talk about surgical treatment options available to a patient with prostate cancer. Prostate cancer affects many lives in the United States. It is the most common malignancy in American men and it is the second most common cause of cancer related deaths in the United States.

Surgery is one treatment option that is available to patients with prostate cancer. It is the most aggressive treatment modality available and it is associated with the highest possible cancer control rates, especially long-term cancer control rates. However, not all patients benefit from surgery. Patients with less aggressive disease could benefit from other treatment modalities including active surveillance. However, patients with moderately aggressive disease, or more aggressive disease, are more likely to benefit from surgery as opposed to other treatment modalities.

Additionally, younger patients are more likely to benefit from surgery as opposed to older patients. And we typically require a minimum of 10 to 15 years of life expectancy to determine if a patient is a candidate for surgery. However, this requirement is not absolute and there are certainly patients with aggressive malignancies who are candidates for surgical therapy.

In general, there are four surgical techniques that are available to patients with prostate cancer. There is open retropubic technique, there is the laparoscopic technique, perineal technique, and robotic technique. Of those, laparoscopic prostatectomy and perineal prostatectomy are very rarely performed in the United States. In majority of prostate cancer surgeries are done via the open retropubic or the robotic approaches.

The robotic approach is currently the most common approach across the country and at the Mayo Clinic with approximately 80% of patients undergoing robotic surgery as opposed to open surgery. Regardless of the approach, prostate cancer surgery has side effects. And I divide those side effects into two groups, the reperioperative side effects that go along with having any surgery, including anesthetic-related complications, and they're longer term, quality of life side effects that can occur with surgery as well.

Among those are the risks of incontinence and impotence. The frequency of incontinence or impotence are a function of surgeon's experience, patient's age, and patient's baseline function among other factors. Again, surgical experience is critical, and the more experienced the surgeon is, the less common are those complications.

While open surgery has been around for many decades, robotic surgery was first FDA approved as a treatment option for patients for prostate cancer in 2001. There have been multiple studies comparing efficacy of robotic surgery as opposed to open surgery across the United States, as well as here at the Mayo Clinic. And what these studies show is that, in regards to what we call the big three, specifically cancer control, sexual function, and urinary control, robotic surgery can at least match what open surgery can do.

Some studies suggest that there is a possible advantage to robotic surgery in terms of post-operative outcome. However, while proving superiority requires further data, non-inferiority of robotic prostatectomy has been definitively proven in regards to cancer control, preservation of urinary control, and sexual function. Robotic surgery, however, does have some advantages in regards to recovery. Specifically, there is significantly less blood loss associated with robotic prostatectomy, fear of blood transfusions, shorter duration of hospitalization and catheterization, and in general, less pain.

Additionally, there are fewer infections and incisional complications associated with robotic surgery, as well as possibly fewer medical complications. Additionally, there are fewer infectious or incisional complications and possibly fewer medical complications associated with robotic surgery. It is important to remember that robotic surgery has evolved. While early on we employed the robotic prostatectomy primarily for patients with less aggressive malignancies, robotic surgery can now easily match what open surgery can do for patients with aggressive malignancies.

Specifically, the robotic surgery can now include extended lymph node dissection and other elements of aggressive surgical resection, which were previously only possible with open surgery. Regardless of the pros and cons of robotic technique versus open technique, the primary determinant in making a decision regarding robotic prostatectomy versus open prostatectomy is the surgeon's experience. Excellent results are achievable with both robotic and open surgical techniques in experienced hands.

Once again, I'm Dr. Igor Frank. I'm a staff urologist at the Mayo Clinic and we've been talking about surgical treatment options available to patients with prostate cancer. Thank you.