Facing Surgery
for a Urinary Tract Condition?

Learn about minimally invasive *da Vinci*® Surgery

The Condition:

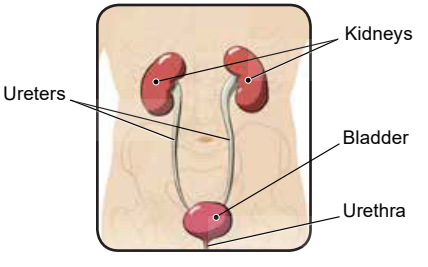
Urinary Tract Obstruction

Your urinary system consists of two kidneys, two ureters and the bladder. Your urinary system produces, stores, and eliminates urine. As a result, toxic by-products and excess fluids are removed from your body. This process helps to maintain a critical balance of salt, potassium and acid.

A blockage or obstruction of the ureters (tubes that carry urine from the kidneys to the bladder) can affect your urinary system. Two commonly diagnosed urinary blockages are ureteropelvic junction (UPJ) obstruction and vesicoureteral reflux (VUR). If left untreated, the blockage can damage your kidney over time.

Blockages in the urinary system are more common in children than adults, particularly in newborn boys. A urinary tract obstruction may be present at birth, but can also result from illness or injury. UPJ obstruction is estimated to occur in 1 in every 1,000-2,000 newborns.

If symptoms are present, they may include: bloody urine, back or side pain, a lump in the abdomen, kidney or urinary tract infections, poor growth in infants and vomiting.



The Surgery:
Urinary Tract Surgery (Pyeloplasty)

Treatment and surgical options will depend on the exact cause of the urinary condition. Your doctor may recommend medicine to ease symptoms. Other options may include: using a catheter (small tube) to drain urine, a stent (hollow tube) to keep the ureter open, or a tube inserted through the lower back to drain urine directly from the kidney.

Depending on the type of urinary condition, procedures known as pyeloplasty, ureteral reimplantation and ureteroureterostomy may be used to correct urinary obstructions in adults and children. The goal of surgery is to clear the obstruction and restore a normal flow of urine through the urinary tract.

Pyeloplasty can be performed using open surgery, meaning doctors make a large abdominal incision.

The incision must be large enough for the surgeon to fit his or her hands and instruments inside the body. Open surgery allows doctors to touch organs as they operate. Pyeloplasty may also be done using minimally invasive surgery (laparoscopy). With manual laparoscopy, surgery is done through a few small incisions using a tiny camera and long, thin surgical instruments. The camera sends images to a video monitor in the operating room to guide doctors as they operate.

There is another minimally invasive surgical option - *da Vinci* Surgery.

Open Surgery Incision | Laparoscopy Incisions | *da Vinci* Surgery Incisions

da Vinci Surgery :

A Minimally Invasive Surgical Option

Using the *da Vinci* System, surgeons make a few small incisions - similar to traditional laparoscopy. The *da Vinci* System features a magnified 3D high-definition vision system and tiny wristed instruments that bend and rotate far greater than the human wrist. These features enable surgeons to operate with enhanced vision, precision and control.

As a result of da Vinci technology, *da Vinci* Pyeloplasty offers patients the following potential benefits compared to traditional open surgery:

- Shorter hospital stay
- Less need for narcotic pain medicine

da Vinci Pyeloplasty offers the following potential benefits compared to traditional laparoscopy:

- Less blood loss
- Shorter total operating time
- Shorter hospital stay
- Faster return to normal activities

Risks & Considerations Related to Pyeloplasty (surgery for a urinary blockage): Infection of the kidney, leaking of urine, narrowing of the urethra, bowel injury, kidney stones, narrowing or movement of the stent, blood in the urine, prolonged leaking of urine.