



Cystoscopy, Ureteroscopic Laser Lithotripsy, with Stent (CULTS)

What is CULTS?

It is an operation that uses a laser passed through telescopic instruments, including a ureteroscope, to break up urinary tract stones (in the kidney or ureter). Urinary stones, especially those causing obstruction, can lead to pain, blood in the urinary tract, infection, and in some cases, kidney dysfunction.

This operation is performed in a hospital or surgery center under anesthesia, and most often the patient will go home the same day. Special instruments are passed into the urinary tract, and there are no external incisions.

Alternatives to this procedure include watchful waiting, medical therapies, as well as other stone surgeries, discussed in the office if relevant.

Anticipated benefits include eradication of the urinary tract stones, though sometimes, for a number of reasons, complete treatment of the stone is not always feasible, and may require additional surgery. Stones can sometimes be removed in their entirety using baskets, or be completely pulverized using the laser.

It is common to place a stent after ureteroscopic procedures in order to allow time for swelling in the ureter to subside, promote passage of residual small stone fragments, and ultimately protect the kidney in the immediate post-operative period. These stents are temporary and must be removed, typically in less than 2 weeks but sometimes longer. These must be removed in order to prevent stone encrustation, infection, or even kidney damage.

Sometimes it is determined at the time of surgery that the ureters are too small or the blockage is too severe to accommodate a ureteroscope and therefore the decision is made to simply place a stent. This will allow the ureter to dilate over time with the plan of then returning to the operating room on another day when the ureter is presumably enlarged and entry with the ureteroscope is possible. This assessment can only be made in the operating room at the time of surgery.

What are the risks and typical side effects?

Bleeding. As with any operation there will be some bleeding. This may persist to some degree, sometimes intermittently for up to a few weeks, or while a stent remains in place. It is often fairly minimal. You should hydrate aggressively if bleeding becomes heavy.

Infection. A preventative antibiotic is given prior to the surgery at the hospital, and infection rates are usually less than 5%.

Injury to the urinary tract. This is rare and may result from scope or laser damage to the inside surfaces of the urinary tract. In such cases, a stent or catheter may be required for longer than normal duration.

Urinary irritation. Urinary bother such as frequency, urgency, incontinence, bladder or flank discomfort with urination may last for several days following surgery, but can also persist while a stent remains in place.

Anesthetic and other risks. Significant events such as heart attack, stroke, even death may occur as a result of any anesthetic, though such risks are extraordinarily low, especially if properly evaluated by your primary physician before surgery if indicated. Should you develop any pain or swelling of your lower legs and ankles following surgery, notify your doctor's office immediately, as this may indicate a blood clot in your leg (deep vein thrombosis or "DVT"). If a blood clot moves to the lung this could be immediately life-threatening, and usually presents with shortness of breath and/or painful breathing.

What are preparations for surgery?

Please have nothing to eat or drink after midnight prior to your surgery. If you take blood thinners, your surgeon will discuss the possible cessation of this medication prior to your surgery.

What happens during the surgery?

You usually will have a general anesthesia. A telescopic instrument called a cystoscope is initially passed into your urethra (the tube through which you pass urine) into the bladder. From here, additional scopes are utilized to complete the operation, which typically lasts between 30-90 minutes, depending on the stone burden.

What happens after the surgery?

Most patients will go home the same day following surgery, and you will require someone to drive you from the hospital.

In the days following surgery, it is normal to feel some urinary bother as outlined above.

Resuming activities

You can go back to work when you feel able, usually within one to two days, though many patients don't feel like being very active if a stent is in place.

You may drive when you feel able and are not under the influence of any medications.

Follow-up

Your doctor will arrange a follow-up visit, sometimes for stent removal procedure, or to discuss stone prevention strategies. Sometimes, strings are left attached to the stent for easy removal in the office (and sometimes at home), and other times a small scope is passed into the bladder for its retrieval. Either way, stent removal procedure is usually very quick.

For any concerns related to excessive bleeding (such as blood clots preventing passage of urine), fever or possible infection, inability to urinate, or any other concern, do not hesitate to call our office for advice or instruction.