Urologists perform percutaneous nephrolithotomy or nephrolithotomy (PCNL) to remove kidney stones.

This approach is an alternative to a ureteroscopy. With a PCNL procedure, the urologist makes a one-centimeter incision in the back or side of the abdomen. A nephroscope is passed through the incision to the stone location.

With this scope, small stones can be manually extracted. If, however, the stones are large, they may need to be broken up with ultrasonic, electro hydraulic or laser-tipped probes before they can be extracted (known as PCNL with laser lithotripsy). A tube may be inserted into the kidney for drainage.

Occasionally another tube called D-J stent may also be inserted into the kidney through bladder. This stent should be removed after 2-12 weeks, depending on the Doctor advice. Failure to remove the stent or forgetting the stent for long time can damage the kidneys as well as removal of the forgotten stent involves a lot of surgical and complications.

Success rate for stone removal is about 90-98%. Ancillary procedures may be needed.

Complications:
- Hemorrhage 5-12%
- Perforation and Extravasations 5-26%
- Adjacent organ damage including colon 1%
- Ureteric obstruction 1-5%
- Infection and urosepsuis 3%
- Risk of death from complications is possible but, very rare.