



TITLE: Devices and Methods for Removal of Kidney Stones

INVENTORS: Jeffrey Cadeddu

TECHNOLOGY: Medical Devices

UTSD: 2451

SUMMARY: During a percutaneous nephrolithotomy (PCNL) procedure, a telescope is passed directly into the kidney through a small incision in the flank to remove large kidney stones from the kidney. Often, large kidney stones need to be fragmented before they can be removed, and it is important to remove all resulting fragments in order to minimize the risk of stone recurrence. Small fragments of kidney stones, however, may migrate and drift into the renal calyces or down the ureter, requiring the surgeon to insert a flexible endoscope to search the entire kidney for residual fragments, which increases operative time and thus, cost of the procedure. Occasionally, despite inspection of the kidney, fragments are missed and are detected on Computer Tomography (CT) scan only after the surgery. Removal of these residual fragments requires a second procedure in the operating room. This device includes a substantially sealable pouch that can be inserted through an amplatz sheath simultaneously with a rigid nephroscope to entrap stones that are too large to be extracted through the sheath. The pouch is designed to permit the surgeon to insert the nephroscope and a fragmenting device into the pouch and fragment the stone inside the pouch under direct vision, thus reducing the likelihood of dispersing stone fragments during fragmentation of a large stone.

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