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PCNL Nephroscopy simulator

Order code: 4135.7098500



Information about product price on demand

Parameters

Quantitative unit ks

PCNL Nephroscopy Simulator is an advanced training device designed to simulate Percutaneous Nephrolithotomy (PCNL) and nephrostomy procedures. It provides a realistic training environment for urologists and surgeons to practice minimally invasive kidney stone removal techniques. With its lifelike anatomical design and compatibility with real medical instruments, this simulator allows hands-on training in a safe and controlled setting, making it ideal for both beginners and experienced practitioners looking to refine their skills in PCNL and nephroscopy.

Key Features:

- Realistic Anatomical Design: The simulator includes a kidney model with large kidney stones and a stag horn stone, offering a lifelike representation of renal anatomy. It also features a skin layer imitation to simulate the percutaneous access point.
- Modular Components: The simulator consists of a simulation body that holds the kidney and skin layer, along with an irrigation set for flushing the upper urinary system. A drip tray is included for fluid management during the procedure.
- Compatibility with Real Instruments: Designed to work with real medical-grade instruments, the simulator allows trainees to practice using nephroscopes, guidewires, and stone retrieval devices.
- Transport and Storage: The simulator comes with a transport and storage box (dimensions: 80 x 60 x 33 cm), ensuring convenient and safe handling.







Kidney stone

Anatomical skin layer

Anatomical skin layer

Training Capabilities:

- Diagnostic Training:
 - o Kidney Stone Identification: Practice locating and identifying kidney stones within the simulated kidney.
 - Anatomical Navigation: Explore the renal anatomy, including the renal pelvis and calyces.
- Procedural Training:
 - o Percutaneous Access: Practice creating a percutaneous access point to the kidney, simulating the first step of PCNL.
 - Stone Fragmentation and Removal: Use lithotripsy devices (ultrasonic or laser) to fragment and remove kidney stones.
 - o Nephrostomy Tube Placement: Practice placing a nephrostomy tube for drainage after the procedure.
- Hand-Eye Coordination and Instrument Handling:
 - o Scope Navigation: Maneuver the nephroscope through the kidney to locate and remove stones.
 - o Instrument Control: Develop proficiency in using urological instruments, such as graspers, baskets, and lithotripters.
- Realistic Fluid Management:
 - o Irrigation and Drainage: Practice fluid management using the included irrigation set during the procedure.

Optional Training Scenarios:

- Complex Stone Cases: Train for challenging cases, such as large or multiple stones.
- Emergency Scenarios: Practice managing complications, such as bleeding or perforation, during PCNL.