

# Kidney Training Model User Instructions

Using either fluoroscopy or ultrasound, The PCNL Kidney Training System can be used with most urological instrumentation for various procedures to include the removal of kidney stones. The internal kidney anatomy is hollow, containing 8 calyces with several embedded stones of assorted sizes and locations.

**BEFORE USING YOUR MODEL for Ultrasound**, you will need to displace the air inside the hollow kidney with approx. 70ml of fluid or contrast. FOLLOW THE STEPS BELOW:



- Remove the bone & skin cover as one piece. Place the housing on end with the ureter side facing up. Using a large syringe, slowly flow solution into the ureter tube to fill the kidney. Lightly squeeze the kidney to burp out air. During filling and with the ureter held high, tilt and rotate the housing slowly in all directions so that any remaining air bubbles can escape through the ureter. Continue filling the kidney until fluid is seen rising-up the rubber tubing. Close off the tube with the provided clamp.
- Moderate hydronephrosis can be produced by using a small needle and injecting water into the Renal Pelvis – **Caution:** Do not create too much pressure within the cavity. Needle drip occurs once the kidney is accessed.
- An IV Bag can be attached via the ureter.
- When using fluoroscopy, contrast can be introduced in the same manner.
- **Add a generous amount of US gel** between the skin and rib space for best results.

## REPLACING THE KIDNEY CARTRIDGE:

– Remove the clamp from the ureter. Next, slide your thumb between the box wall and skin flank and peel back the skin and bone assembly **as one-piece**. Grab the kidney cartridge and remove it from the cradle.



– Insert a new kidney cartridge (ureter toward pelvis) nesting it into the box cradle. Roll skin flank and bone assembly **AS ONE PIECE** into place, tucking the skin flank into the front lip of the box.



– The skin flank and bone assembly are self-mating. Make sure to tuck every part of the bone anatomy into the appropriate voids molded within the skin flank.



### **APPLICATIONS:**

The kidney trainer emulates realistic human kidney features and provides excellent simulation for the following procedures and access techniques:

**PCNL / Ureteroscopy / Fluoroscopy / Ultrasound / Percutaneous Access / ECIRS Procedure**

#### **Can you elaborate how your model can be used for guided puncture?**

The model acts much like human anatomy, mimicking renal access for common procedures in a urologic practice. The model can be used via ultrasonographic guidance, CT/MRI and robotic assisted percutaneous guidance and endoscopic guidance for drainage of an obstructed and hydronephrotic kidney and antegrade renal access prior to percutaneous renal surgeries such as percutaneous nephrolithotomy and percutaneous endopyelotomy.

The model is highly reusable given its self-healing materials, however reusability can be limited depending on the procedure(s) being performed. The model is designed to represent the utmost in realism and therefore has a limited lifespan.

### **CAUTIONS TO FOLLOW:**

- For puncturing, use only fine needles to ensure multiple uses and avoid using blunt objects.
- Do not subject the model to high heat or extreme cold.
- Encoris is not responsible for shipping damages due to improper packaging or misuse of any kind



*Thank you for purchasing a fine, quality product!*