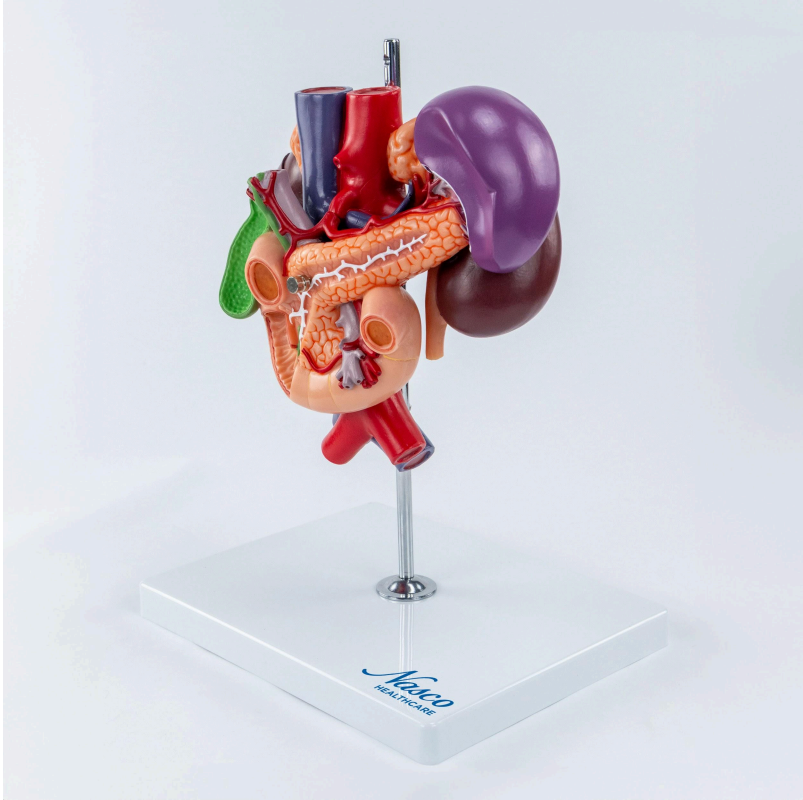




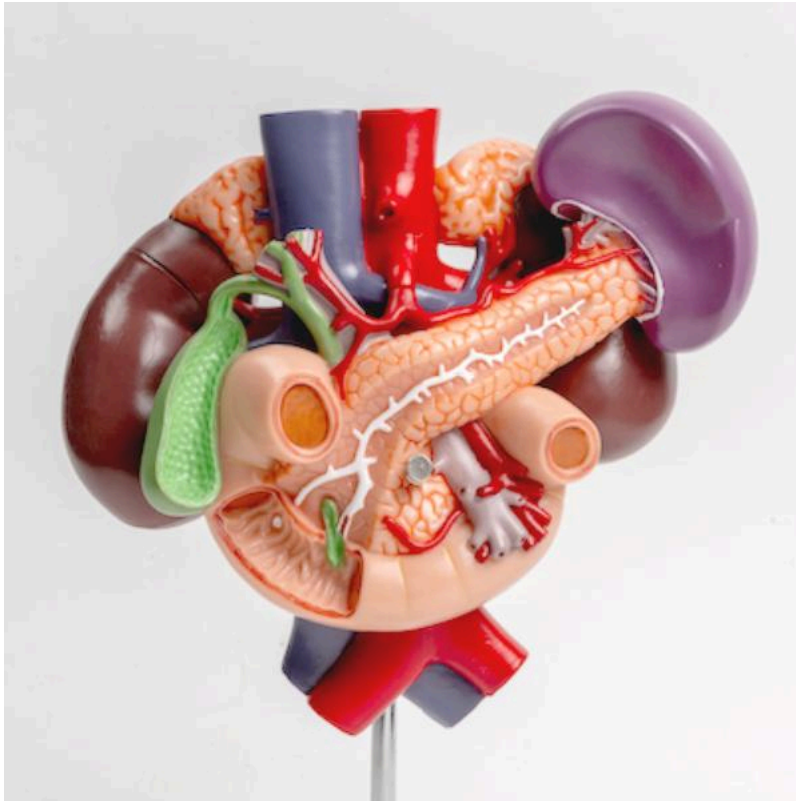
**MG40892 | HUMAN KIDNEYS WITH  
POSTERIOR ABDOMINAL ORGANS, 3 PARTS**



*Nasco*  
HEALTHCARE







This life-size anatomical model offers a detailed representation of the kidneys, including the adrenal glands, urethra, renal vessels, and adjacent major vessels. The anterior half of the right kidney is removable, allowing for an in-depth view of the renal pelvis, renal calyces, renal cortex, and renal medulla. Additionally, the model displays the duodenum (partially opened), gallbladder and bile ducts (opened), pancreas (with major outlets visible), spleen, and nearby vessels, offering a comprehensive study of the upper abdominal region.

**Applications:**

Ideal for the study of human anatomy, especially the urinary system and adjacent organs of the upper abdomen. Used in medical, nursing, and other healthcare courses, as well as for patient education.

**Technical Differentiators:**

- \* Detailed representation of anatomical structures.
- \* Sectioned right kidney for internal visualization.
- \* Removable upper abdominal organs for individualized study.

**3D Technology and Augmented Reality:**

Our anatomical models offer an innovative visual complement through informative cards that activate 3D models viewable in augmented reality (AR). This exclusive interactive platform stimulates learning, allowing for comparative analysis of anatomical structures and offering



opportunities for continuing education in anatomy, physiology, and pathophysiology.

**Technical Specifications:**

\* Scale: Life-size

**Main Structures:**

**Kidneys:** The kidneys are paired bean-shaped organs located in the posterior region of the abdomen. They are responsible for filtering blood, removing waste and excess fluids, which are excreted in the form of urine. In addition, they play a crucial role in regulating blood pressure and hormone production.

**Kidney:** Each kidney contains approximately one million nephrons, the functional units responsible for filtration and reabsorption of substances. The kidney is divided into the renal cortex (outer layer) and the renal medulla (inner layer), which contain specialized structures for urine production.

**Renal pelvis:** The renal pelvis is a funnel-shaped structure that collects urine produced by the renal calyces and directs it to the ureter. It acts as a convergence point for urine before being transported to the urinary bladder.

**Renal medulla:** The renal medulla is the inner part of the kidney, composed of the renal pyramids. These pyramids contain the collecting tubules, which transport urine to the renal calyces.

**Renal cortex:** The renal cortex is the outer layer of the kidney, rich in glomeruli and renal tubules. It is where most of the blood filtration and reabsorption of essential nutrients occur.

**Ureter:** The ureters are two muscular tubes that connect the kidneys to the urinary bladder. They transport urine from the kidneys to the bladder through peristaltic contractions.

**Adrenal Gland:** Located above each kidney, the adrenal glands produce essential hormones such as cortisol, aldosterone, and adrenaline. These hormones play a vital role in stress response, blood pressure regulation, and metabolism.

**Arteries:** The renal arteries are blood vessels that carry oxygen-rich blood from the kidneys to the abdominal aorta. They branch into smaller arterioles, which irrigate the nephrons in the kidneys.

**Abdominal aorta:** The abdominal aorta is the largest artery in the body, responsible for supplying oxygenated blood to the abdominal organs and lower limbs. It extends from the chest to the abdomen, where it divides into common iliac arteries.



**Veins:** The renal veins are blood vessels that transport filtered blood from the kidneys back to the inferior vena cava. They drain blood from the nephrons after filtration and reabsorption.

Other structures can be verified directly on the physical piece or in the interactive 3D model.

**About the Anatomical Models:**

They are developed with resin replication technology, addressing the scarcity of natural anatomical pieces for teaching and research. They present all the essential morphological characteristics with excellent cost-benefit, resistance, manual painting, and numbering for precise identification of structures.

**List of all visible structures:**

**Kidneys**

- Kidney
- Renal pelvis
- Renal medulla
- Renal cortex

**Ureter**

**Suprarenal gland**

**Arteries**

- Abdominal aorta
- Renal artery
- Superior mesenteric artery
- Splenic artery
- Celiac trunk
- Common hepatic artery
- Gastroduodenal artery
- Proper hepatic artery
- Inferior pancreaticoduodenal artery

**Veins**

- Inferior vena cava
- Renal vein
- Superior mesenteric vein
- Splenic vein
- Inferior mesenteric vein



### **Pancreas**

- Pancreas
- Pancreatic duct
- WIRSUNG duct

### **Small Intestine**

- Duodenum
- Minor duodenal papilla
- Major duodenal papilla

### **Liver and Biliary Ducts**

- Gallbladder
- Common bile duct
- Cystic duct

### **Spleen**