Abdominal Intraoperative & Laparoscopic Ultrasound Phantom

**IOUSFAN**

Japanese Patent No. 3650096

Production supervision:
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Inanimate tool for training of a novice to demonstration by an expert.

Detailed hepatobiliary, pancreatic and other abdominal anatomy meeting requirement for excellent training: open intraoperative scanning of the liver, biliary tract, pancreas; laparoscopic examination of the biliary system for screening of stones and evaluation of hepatic and pancreatic lesions, etc.

Soft phantom materials allowing realistic probe manipulation.

Various simulated lesions including biliary stones and cysts, solid tumors (hypoechoic, hyperechoic and target-appearance) in the liver, pancreas, spleen and kidneys.

Detachable stomach and duodenum allowing various scanning methods of the bile duct and pancreas.

Container allowing water-immersion scanning for both contact and stand-off techniques, simulating real abdominal intraoperative and laparoscopic scanning. (No ultrasound gel required)

Near real-size organs, structures and abnormal lesions.

Container with phantom fits in the laparoscopic trainer box so that laparoscopic ultrasound of organs is possible under direct laparoscopic view.

Durable long-life phantom materials.
The phantom includes:

the liver (segmental anatomy, portal and hepatic venous systems, ligamentum teres and ligamentum venosum),
biliary tract (gallbladder, cystic duct, intrahepatic and extrahepatic bile ducts),
pancreas (pancreatic duct),
spleen,
kidneys,
detailed vascular structures (aorta, vena cava, celiac artery and its branches, portal vein and its branches, superior mesenteric vessels, renal vessels, etc)

**Pathology includes:**

hepatic lesions (cystic and solid), gallbladder and bile duct stones, pancreatic tumors (one invading the portal vein), splenic lesions, both kidney lesions, and left adrenal tumor.

<table>
<thead>
<tr>
<th>Simulated lesions in liver, pancreas, kidney, spleen, gallbladder</th>
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<tbody>
<tr>
<td>Simulated cysts 10mm</td>
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<td>Hypoechoic 10mm</td>
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<tr>
<td>Simulated tumors 10mm</td>
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<td>Simulated tumors with double edge 20mm</td>
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**Abdominal Intraoperative & Laparoscopic Ultrasound Phantom**

**IOUSFAN US-3**

**Set includes:**

1. Upper abdomen ultrasound phantom
2. Phantom container

Specifications are subject to change.