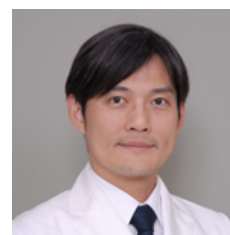


Surgery

A wide range of options are available based on the features of the transducers and their intended use.
Fujifilm's complete transducer lineup supports a wide variety of surgical procedures.

This issue introduces the transducers actually used in the surgery and the techniques under the supervision of Dr. Takamoto, Faculty of Medicine, The University of Tokyo/ National Cancer Center Hospital.



[Supervision]

Dr. Takeshi Takamoto

Lecturer, Hepato-biliary-Pancreatic Surgery Division
and Artificial Organ and Transplantation Division,
Faculty of Medicine, The University of Tokyo
Department of Hepatobiliary and Pancreatic Surgery,
National Cancer Center Hospital

Intraoperative Transducer C42T

This microconvex-type transducer, designed to fit between the index and middle fingers, facilitates scanning similar to the extracorporeal convex-type transducers. It enables deep scans, especially of the caudal-posterior liver area from the right subphrenic space. It is called Makuuchi's Probe, after its inventor.



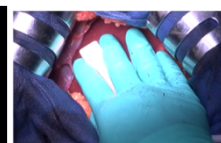
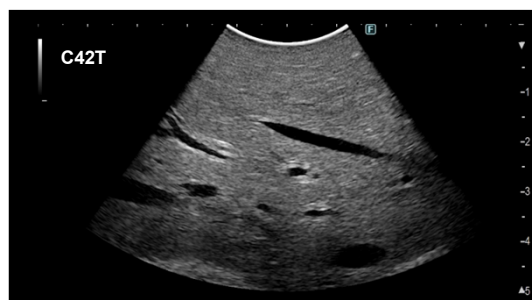
C42T Specifications

Frequency range	10-3MHz
Viewing angle	65deg.(20R)

Open Surgery: Liver Scan

The Pivotal Role of Intraoperative Ultrasound in Liver Surgery

S8 and S7 of the liver area are scanned from the right subphrenic space. The confluence of the right hepatic vein and the inferior vena cava is precisely and dynamically visualized.



Scanning & Clinical Video



Intraoperative Transducer L46K1/L44K

The wide field of view provided by this transducer facilitates obtaining the axial images similarly to familiar CT images.

Open Surgery: Pancreas and Liver Scan

The Wide Contact Surface of Transducer

The L46K1 allows direct placement on the pancreas for long-axis visualization of the main pancreatic duct, or on the left lobe of the liver for precise observation of structures in the hepatic hilum.



L46K1 Specifications

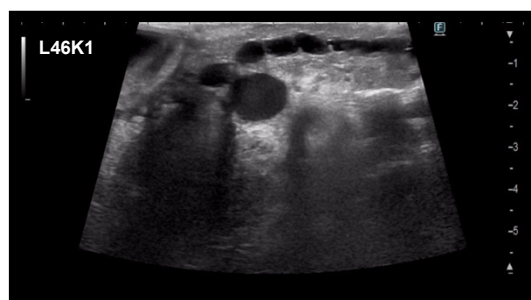
Frequency range	14-2MHz
Field of view	63mm



L44K Specifications

Frequency range	14-2MHz
Field of view	42mm

Pancreas Scan



Scanning & Clinical Video



Liver Scan



Scanning & Clinical Video

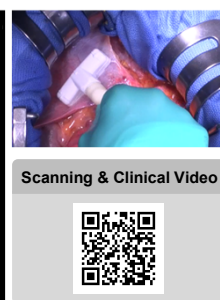


Surgery

Open Surgery: Liver Scan

A Favorable Balance of Transducer Size and Field of View

The L44K offers enhanced maneuverability within the abdominal cavity compared to its wider counterpart, the L46K1. Its flat and linear transducer contact surface facilitates intuitive scanning. This well-balanced transducer is versatile, meeting various needs in abdominal surgery, such as intrahepatic screening and arterial clamp test for blood flow evaluation.



Intraoperative Transducer L43K/L51K

This transducer is versatile for both laparoscopic and open procedures. With a size comparable to a fingertip, it enables precise scanning and observation of structures directly beneath the transducer.



L43K Specifications

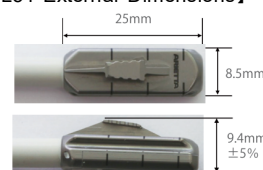
Frequency range	12-2MHz
Field of view	26mm



L51K Specifications

Frequency range	15-3MHz
Field of view	13mm

【L51 External Dimensions】

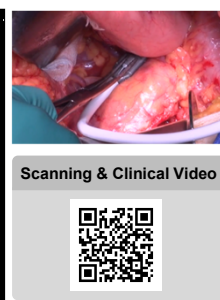


- Dimensions are within $\pm 10\%$ of stated values.
(Except dimensions whose dimensional tolerances are indicated in the picture.)

Open Surgery: Pancreas Scan

Can be Grasped by Forceps

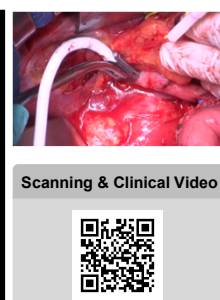
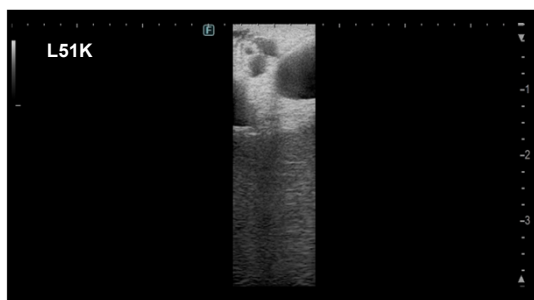
This fingertip-sized transducer allows for precise manipulation, facilitating insertion into organ crevices, and enhancing information retrieval. When scanning the caudal side of the pancreas, the bifurcation of the common hepatic artery and splenic artery from the celiac axis can be visualized, as well as the dorsal pancreatic artery and its bifurcation, which are usually obscured by lymph nodes and difficult to view directly in the surgical field.



Open Surgery: Liver Scan

Flat Contact Surface of Transducer

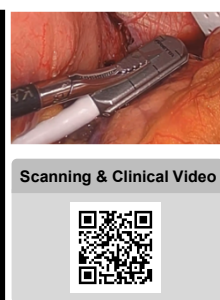
Users can recognize structures such as blood vessels and bile ducts directly under the transducer, as if palpating them with the fingertips, or even better. The right hepatic artery on the right side of the common hepatic duct and the dorsal side of the gallbladder has variations in its running course, and is at high risk for injury. This transducer enhances the identification with pinpoint accuracy.



Laparoscopic Surgery: Pancreas Scan

Ultra-small and Smooth Maneuverability in the Abdominal Cavity

This transducer can be inserted into the abdominal cavity through a 12 mm port and manipulated with forceps or other instruments inserted through another port, grasping the fins on the back side of transducer.



FUJIFILM

FUJIFILM Healthcare Corporation

9-7-3, Akasaka, Minato-ku, Tokyo, 107-0052, Japan

<https://www.fujifilm.com/fhc/en>

- FUJIFILM and FUJIFILM logo are registered trademarks or trademarks of FUJIFILM Corporation

Contact