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	Oral or Poster			
	Poster		English	
General presentation categories 一般演題分類	Cardiovascular 心血管	Surface 体表	Basics 基礎	Abdominal 腹部
Title	(English) REAL TIME THREE-DIMENTIONAL ULTRASOUND AND CONTRAST FOUR-DIMENTIONAL ULTRASOUND			
	(Japanese) リアルタイム 3 次元造影超音波 (4D-US) と造影 4D-US			
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OBJECTIVE : In three-dimensional ultrasonography (3D-US), three-dimensional images are constructed by two-dimensional images, and diagnosis is made after the actual examination. Now it is possible to display 3D-images in real time, but further real-time 3D-US (4D-US), on its applications in the field of gastroenterology is necessary research. We report on the current state of mechanical 4D-US in this time.

METHODS: We employed Aplio (Toshiba, Japan) on a ultrasonic diagnostic device with 5 MHz mechanical 4D probe to study the three-dimensional structures of liver tumors and surrounding organs using 4D-US multiplanar reconstruction (MPR), diagnostic capability of low-MI contrast harmonic 4D-US, and 4D-US guided radiofrequency ablation (RFA) using a phantom.

RESULTS: Because 4D-US can display the B-mode MPR in real time, it enabled immediate understanding of the three-dimensional structure of the tumor and the liver. In addition, contrast-enhanced 4D-US showed the staining of the tumors and the blood flow of surrounding organs three-dimensionally. Moreover, a three-dimensional grasp of needle placement for RFA was obtained.

CONCLUSIONS: Four-dimensional US appeared to be useful for the diagnosis and the treatment of the liver tumors.

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