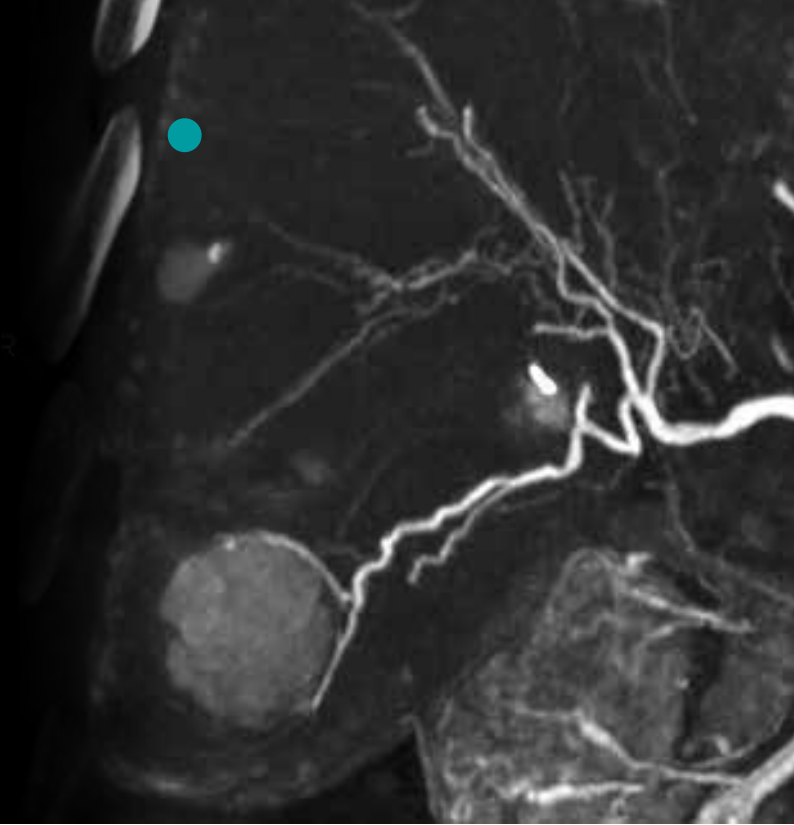## Study Protocol

syngo DynaCT in multiple phases for HCC

Interventional Oncology

syngo DynaCT scanned in two phases would improve the diagnostic performance for HCC and has an advantage in the preoperative diagnosis.

Courtesy of
Norifumi Nishida,
Yoshinori Takao, Osaka City
University Hospital, Japan

Supported by
syngo DynaCT

System & Software
Artis zee VC21
syngo X Workplace VB21

Case Description

Patient history
A 69-year-old male with HCC (hepatocellular carcinoma) and HCV (Hepatitis C virus)-positive hepatic cirrhosis.

The HCC was treated by resection of the caudate lobe 9 years ago, segmentectomy of S6 2 years ago, and several RFA series. HCC recurrence was found by ultrasonography and dynamic contrast-enhanced CT scan during regular follow-up. Because of this recurrence, the patient was hospitalized for TACE treatment.

Diagnosis
Perfusion defect was found in both lobes of the liver using *syngo* DynaCT scanned in two phases. These sites also showed early enhancement and corona enhancement in the second phase using the *syngo* DynaCT scanned in two phases.

The patient was diagnosed with HCC multiple recurrence based on these evaluations.

Treatment
A microcatheter was selectively inserted into left and right hepatic arteries, and then TACE was performed using Lipiodolemulsion and Gelpart.

Customer comment
CT scan during hepatic arteriography for HCC shows both tumor stain in first phase and the corona enhancement in second phase (Radiology 1998 206:161-166. CVIR 2011 34:81–86). Thus this CT scan enables differentiation from an AP shunt which is also densely-stained in the first phase. *syngo* DynaCT scanned in two phases has an advantage in improvement of diagnostic performance for HCC because of its high spatial resolution and precise visualization of corona enhancement in second phase.

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syngo DynaCT in multiple phases for HCC

Acquisition protocol	6sDSA DCT (manual mode)

Injection protocol

Catheter position	Common hepatic artery
Contrast medium (CM)	300 mg iodine/mL
Dilution (CM/Saline):	50 %
Injection volume	32 mL
Injection rate	2 mL/s
Duration of injection	16 s
X-ray delay	6s DSA DCT run with manual triggering 1st Phase: 10 s X-ray delay time 2nd Phase: 25 s delay time after the 1st run
Power injector used	Yes

Reconstructions	Primary	Secondary
Name	DynaCT Body NatMask HU Auto	DynaCT Body NatFill HU Auto
VOI size	Full	Full
Slice matrix	512 × 512	512 × 512
Kernel type	HU	HU
Image characteristics	Normal	Normal
Reconstruction mode	NatMask	NatFill
Viewing preset	DynaCT Body	DynaCT Body

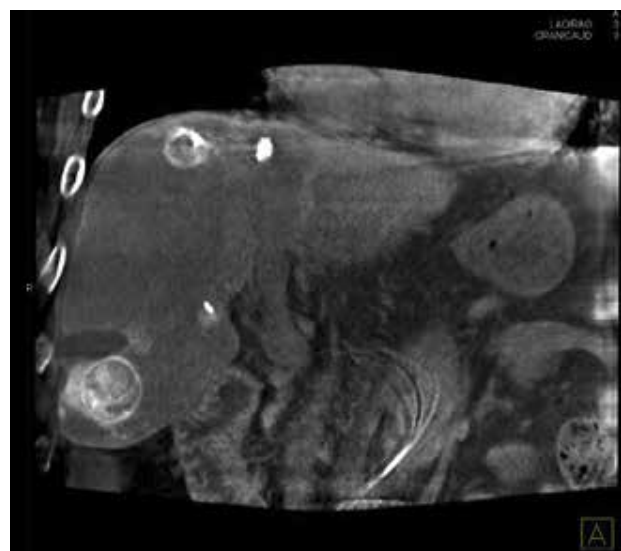## Clinical Images

Figure 1: Axial MPR 3 mm
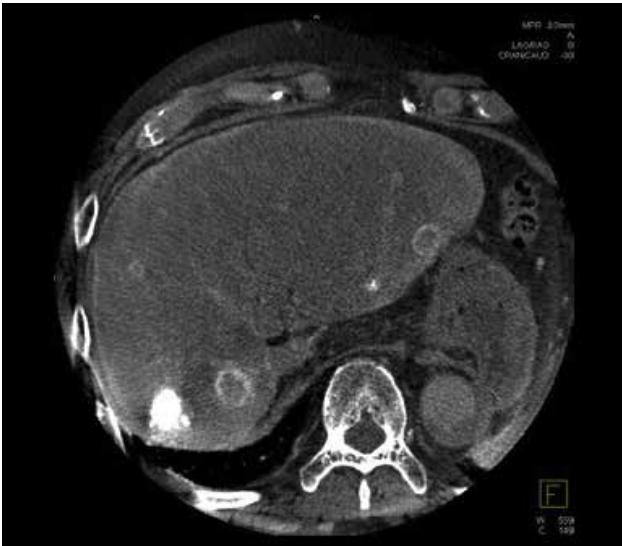

Figure 2: Coronal MPR 3 mm
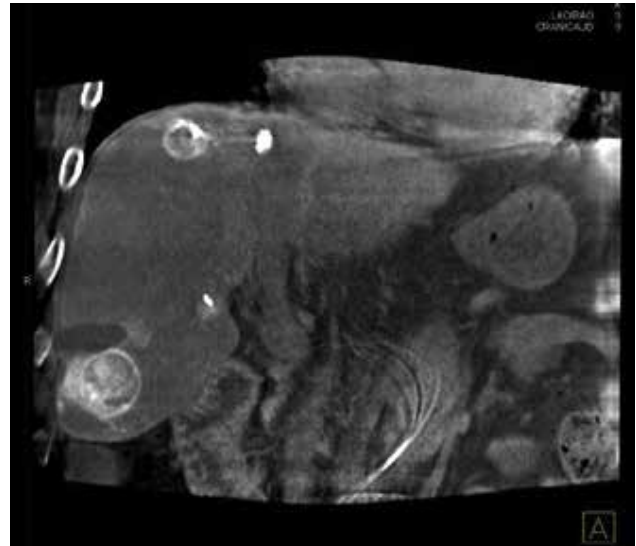
Clinical Images

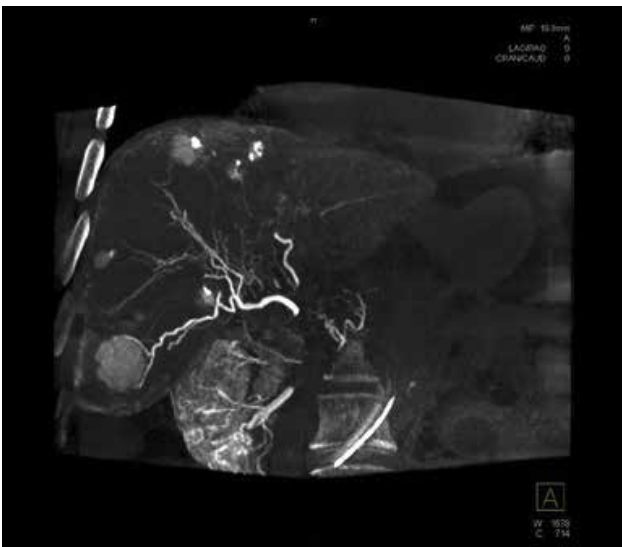Figure 4: Axial MPR 3 mm

Figure 5: Coronal MPR 3 mm

Figure 3: Coronal MIP 20 mm