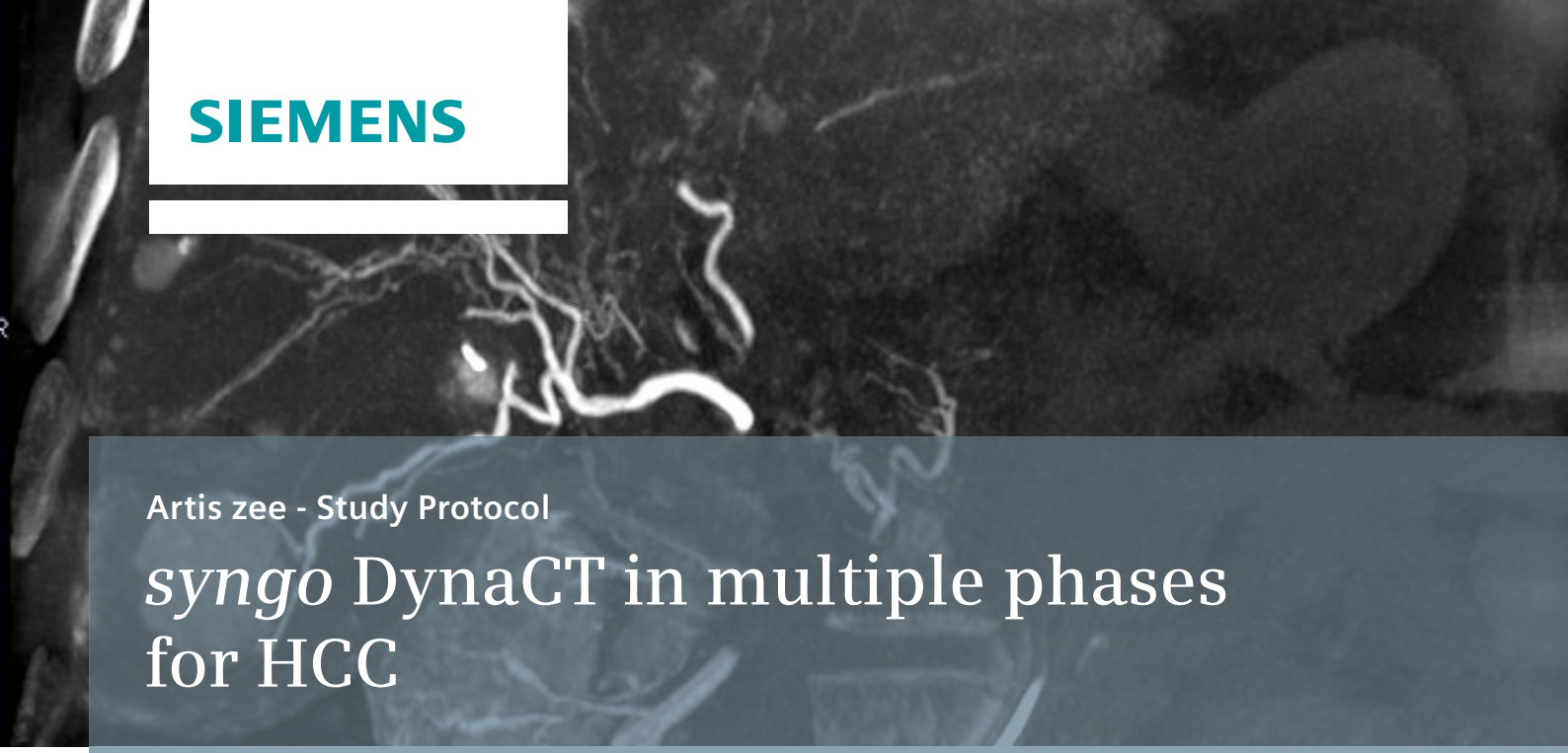


SIEMENS

Artis zee - Study Protocol

syngo DynaCT in multiple phases for HCC

Interventional Oncology

Supported by*
- *syngo* InSpace 3D
- *syngo* DynaCT
- *syngo* DynaCT 360
- *syngo* InSpace 3D/3D Fusion
- *syngo* iPilot enhanced
- *syngo* iGuide Toolbox
- *syngo* iGuide
- *syngo* Neuro PBV IR
- *syngo* DynaPBV Body
- *syngo* Embolization Guidance
- *syngo* iFlow
- *syngo* Advanced Roadmap
- *syngo* iDentify

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

System & Software
Artis zee VC21
syngo X Workplace VB21

**This list of applications is not complete. Not all applications available for all software versions.*

Case Description

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

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.

Patient History
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 Lipiodol-emulsion and Gelpart.

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

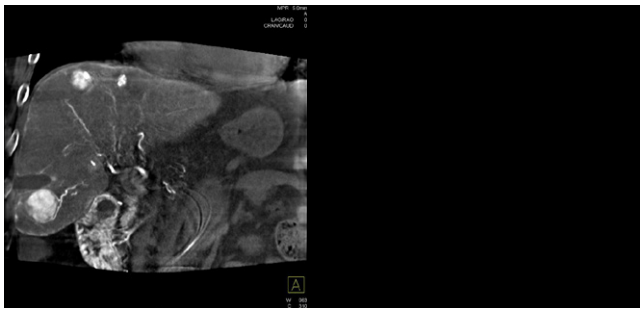
syngo DynaCT in multiple phases for HCC

Acquisition Protocol	**6sDSA DCT (manual mode)**
Injection Protocol	
Contrast Media (CM):	300 mg Iodine/ml
Dilution (CM/Saline):	50%/50%
Injection Volume:	32 ml
Power Injector Used:	Yes
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.
Catheter Position:	Common Hepatic Artery

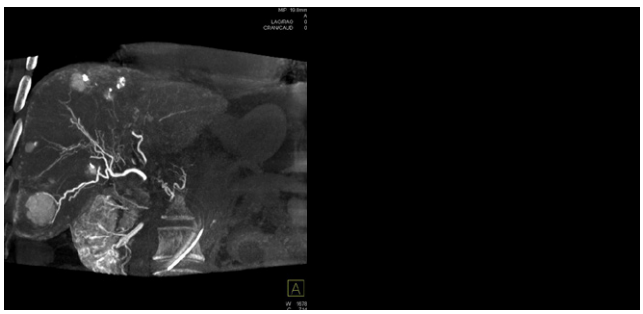
Reconstruction Protocol	**DynaCT Body NatMask HU Auto**
VOI Size:	Full
Slice Matrix:	512x512
Kernel Type:	HU
Image Characteristics:	Normal
Reconstruction Mode:	NatMask
Viewing Preset:	DynaCT Body
Secondary Recon	**DynaCT Body NatFill HU Auto**
Reconstruction Mode:	NatFill
Other parameters see reconstruction 1st phase	

1st phase of *syngo* DynaCT run

Axial MPR 3 mm



Coronal MPR 3 mm



Coronal MIP 20 mm

2nd phase of *syngo* DynaCT run

Axial MPR 3 mm

Coronal MPR 3 mm

The statements by Siemens' customers presented here are based on results that were achieved in the customer's unique setting. Since there is no "typical" hospital and many variables exist (e.g., hospital size, case mix, level of IT adoption), there can be no guarantee that other customers will achieve the same results.

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