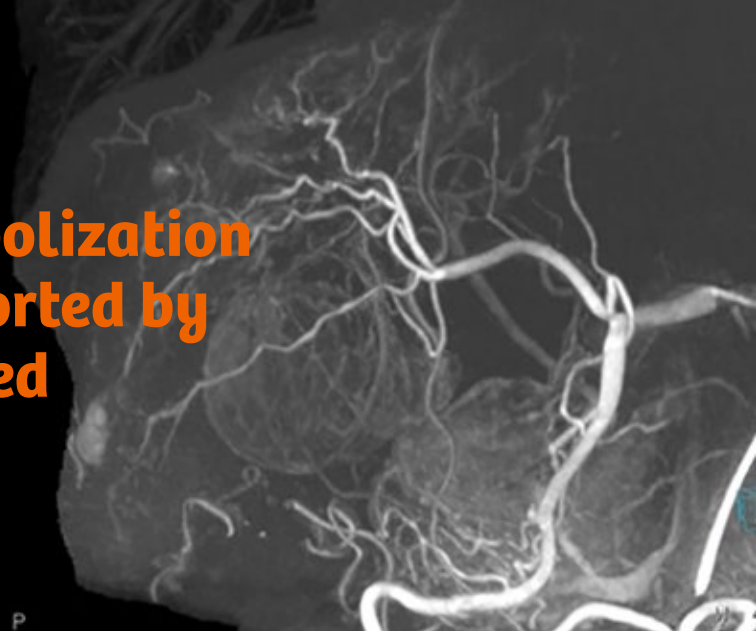


Transarterial chemoembolization of a hepatic lesion supported by *syngo* DynaCT High Speed

Oncology



Case description

Patient history

- 70-year-old male
- Hepatitis B virus
- Three prior sessions of transarterial chemoembolization (TACE) 2 years, 3 years, and 10 years ago, due to hepatocellular carcinoma (HCC)
- Child-Pugh class A6

Diagnosis

A triphasic CT scan of the abdomen revealed a 1 cm recurrent tumor in segment VI, subcapsular area.

Treatment

TACE is commonly performed in unresectable HCC, and ultrasensitive chemoembolization can minimize liver injury associated with treatment.

The 5-second *syngo* DynaCT acquisition was degraded by motion artifacts, resulting in ambiguous

visualization of the pathway to the tumor. *syngo* DynaCT High Speed demonstrated the tumor-feeding pathway clearly, facilitating selective catheterization of the tumor-feeding subsegmental artery with a 1.7 Fr microcatheter. Lipiodol emulsion and gelatin sponge particles were then successfully delivered via the feeding artery.

General comments

In patients with inadequate breath-holding, motion artifacts can limit the ability to clearly depict the tumor-feeding branch when a 5-second DynaCT run is used.

syngo DynaCT High Speed requires only 2.5 seconds of breath-holding to obtain cone-beam CT images with less motion.

Courtesy of

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Seoul National University Hospital,
Republic of Korea

Applications

syngo DynaCT High Speed

System & Software

- ARTIS icono biplane VE40B
 - *syngo* Application Software
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Protocol

Acquisition protocol	5s DCT Body
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Injection protocol

Contrast medium	300 mg iodine/mL
Dilution	No
Injection volume	19.5 mL
Power injector used	Yes
Injection rate	1.5 mL/s
Duration of injection	13 s
X-ray delay	8 s
Catheter position	Common hepatic artery

Reconstruction	Primary
Name	DCT Body
VOI size	Full
Slice matrix	512 × 512
Kernel type	HU
Image characteristics	Normal
Reconstruction mode	Nat Fill
Viewing preset	DynaCT Body

Protocol

Acquisition protocol	2.5 s DCT High Speed
Injection protocol	
Contrast medium	300 mg iodine/mL
Dilution	No
Injection volume	19 mL
Power injector used	Yes
Injection rate	1.5 mL/s
Duration of injection	12.5 s
X-ray delay	10 s
Catheter position	Common hepatic artery
Reconstruction	
Name	DCT Body
VOI size	Full
Slice matrix	512 × 512
Kernel type	HU
Image characteristics	Normal
Reconstruction mode	Nat Fill
Viewing preset	DynaCT Body

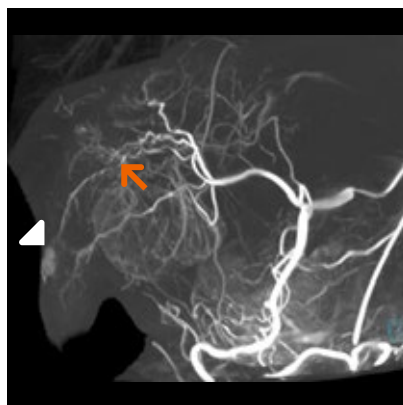
Clinical Images

CT



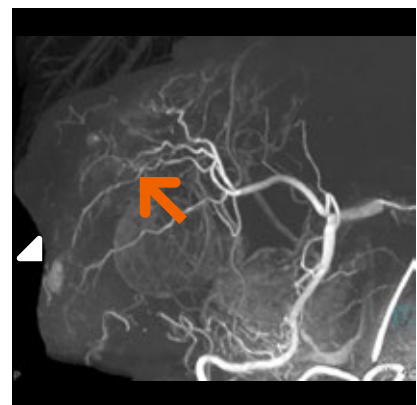
Abdomen CT scan of the hepatic arterial phase shows a 1 cm nodule (arrowhead).

5-second DynaCT



Five-second DynaCT shows tumor blush (arrowhead) supplied by the tumor-feeding branch (arrow). Because of motion artifact, the pathway to the tumor is unclear.

DynaCT High Speed



DynaCT High Speed shows tumor blush (arrowhead) supplied by the tumor-feeding branch (arrow), which can be clearly traced on MIP image.

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

The information presented in the case report is for illustration only and is not intended to be relied upon by the reader for instruction as to the practice of medicine. Any health care practitioner reading this information is reminded that they must use their own learning, training and expertise in dealing with their individual patients.

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