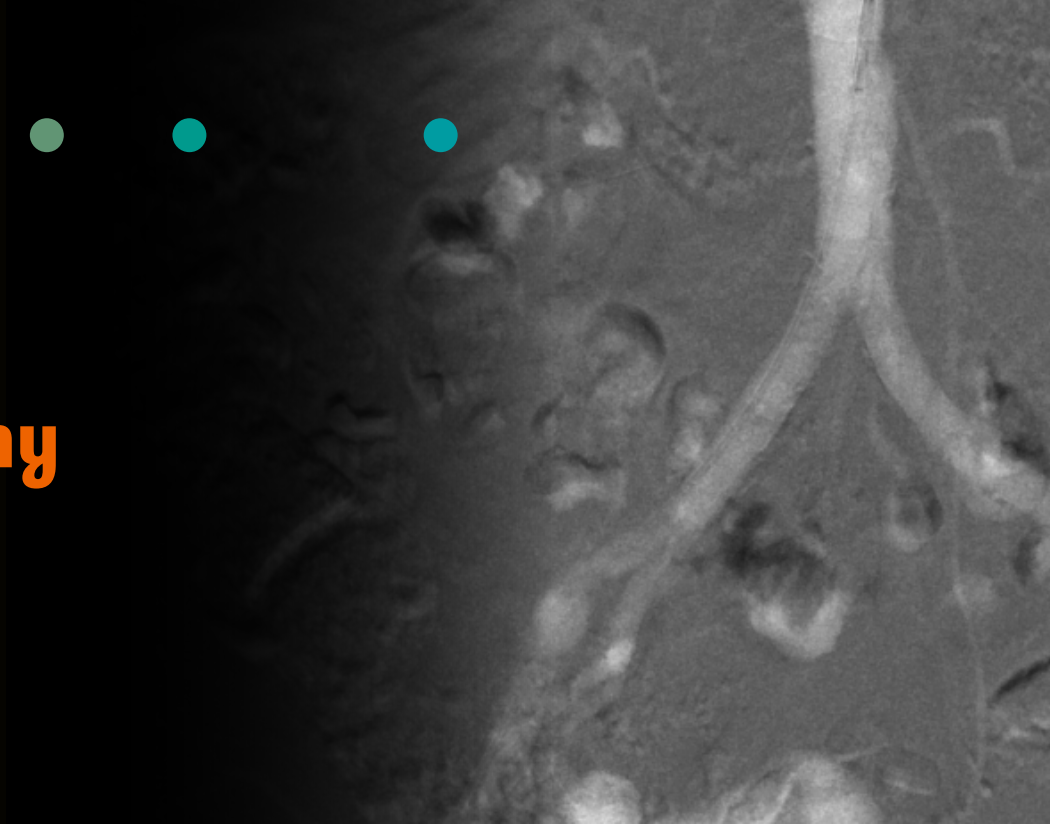

Study Protocol

Peripheral angiography using CO_2

Interventional Radiology

Artis zeego with variable isocenter is very helpful in CO2 cases as it travels easily along the tilted table.

Courtesy of
Ulf Teichgräber, MD,
Renè Aschenbach, MD,
Department of Diagnostic and Interventional Radiology,
Jena University Hospital,
Germany

System & Software
Artis zeego with Q technology VD10
syngo X Workplace VC10

Case Description

Patient history
74-year-old female patient. Occlusive peripheral artery disease. Patient did not want bypass surgery. Renal insufficiency Grade III (severely limiting the use of contrast media).

Diagnosis
Fontaine IIb. Left superficial femoral artery is occluded in the proximal third and there is distal filling via collaterals.

Treatment
Laser atherectomy followed by PTA with drug-eluting balloon. VIABAHN stent graft placed.

General comments
CO2 evenflow acquisition technique provides high image quality. High k-factor creates more homogeneous, bubble-free visualization of vessels.

SIEMENS Healthineers

Peripheral angiography using CO_2

Acquisition protocol	DSA CO2 Evenflow
Frame rate	7.5 f/s (higher frame rate, low dose/f, high k-factor)
Length of sequence	20 s max

Injection protocol	
Catheter position	Distal abdominal artery
Contrast medium (CM)	CO_2 1.3 bar
Dilution (CM/Saline):	No
Injection volume	80 mL for each angiography step/for intervention 20 mL CO_2
Injection rate	Manual
Duration of injection	Manual
X-ray delay	Injection starts right after mask selection (~4th frame)
Power injector used	Optimed CO_2 system

Image Postprocessing	
Pixel Shift	Automatic
Min OPAC	Yes

Clinical Images

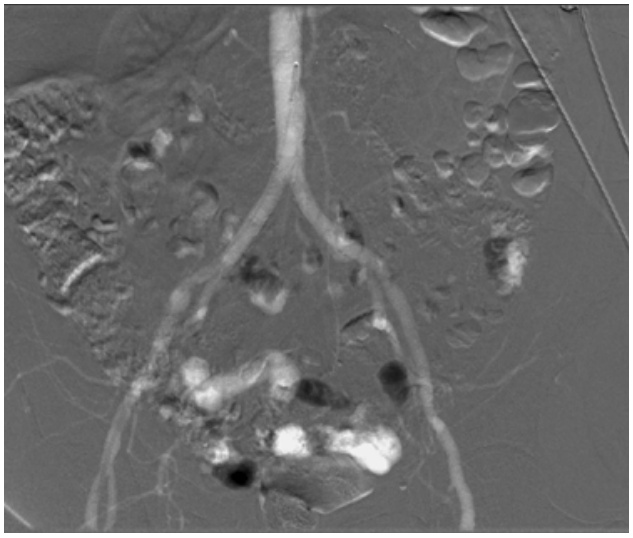

Figure 1: Min OPAC – Iliac arteries

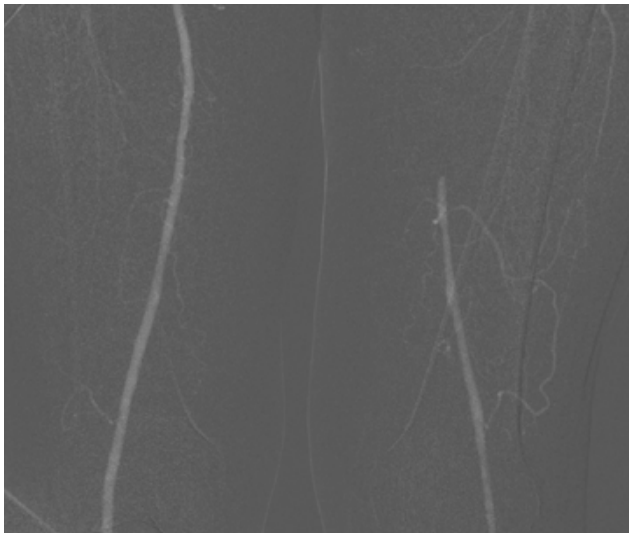

Figure 2: Min OPAC – Vessels below occlusion show collateral filling

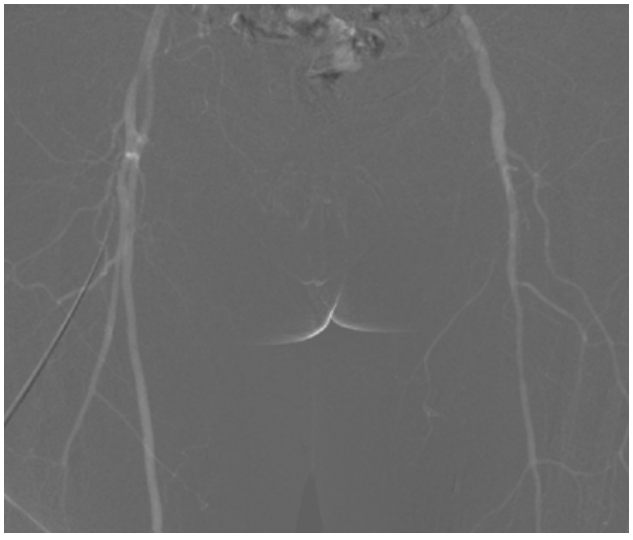

Figure 3: Axial MPR – primary reconstruction

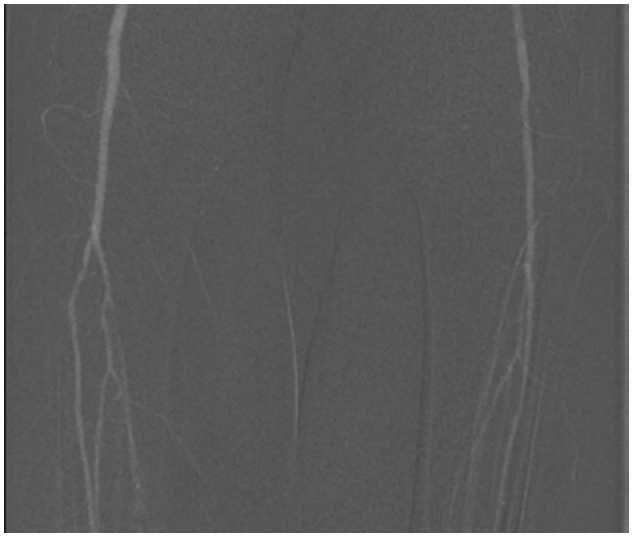

Figure 4: Axial MPR – secondary reconstruction

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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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