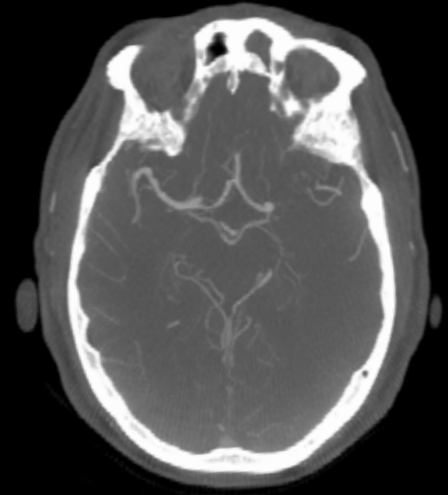


## Study Protocol

# Visualization of collateral vessels for stroke thrombectomy

Neuro Interventions



## Case Description

### Patient history

56-year-old patient with a wake-up stroke presenting with hemiparesis on the right side and dysarthria, NIHSS 11.

### Diagnosis

M1 occlusion on the left side on the basis of an underlying intracranial atherosclerotic stenosis.

### Treatment

Mechanical thrombectomy and stent implantation.

### Tips & Tricks:

*syngo* DynaCT Multiphase consists of 10 consecutive rotations and results in 10 volumes. Start injection with start of acquisition run. First two volumes required as mask run for potential reconstruction of perfusion maps.\* The other 8 volumes are fill runs.

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### Courtesy of

Prof. J. Gralla, MD, PD P. Mordasini, MD, Institute of Diagnostic and Interventional Neuroradiology University Hospital – Inselspital – Bern, Switzerland

### Supported by

*syngo* DynaCT Multiphase

### System & Software

ARTIS icono VE20  
*syngo* Application Software VE2

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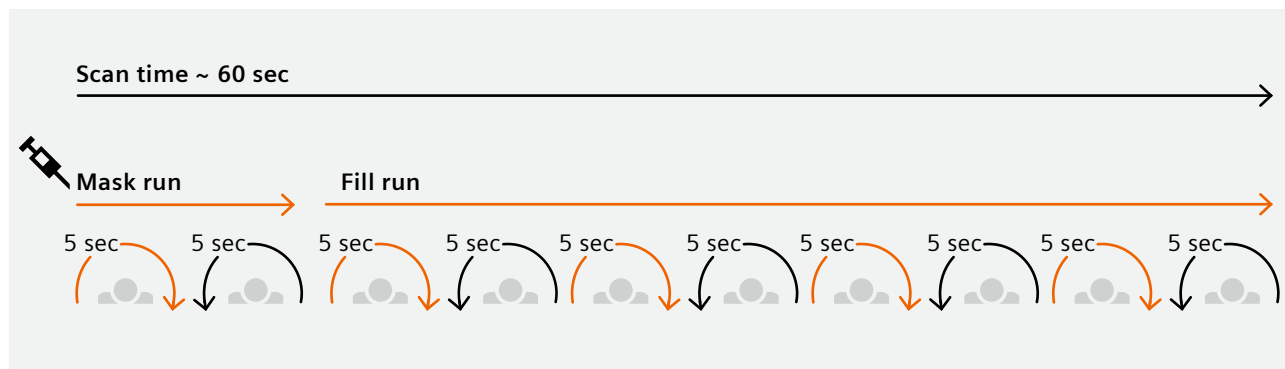
*\*Third party software required. Calculation of perfusion maps not commercially available yet.*

<b>Acquisition protocol</b>	60sDCT Multiphase
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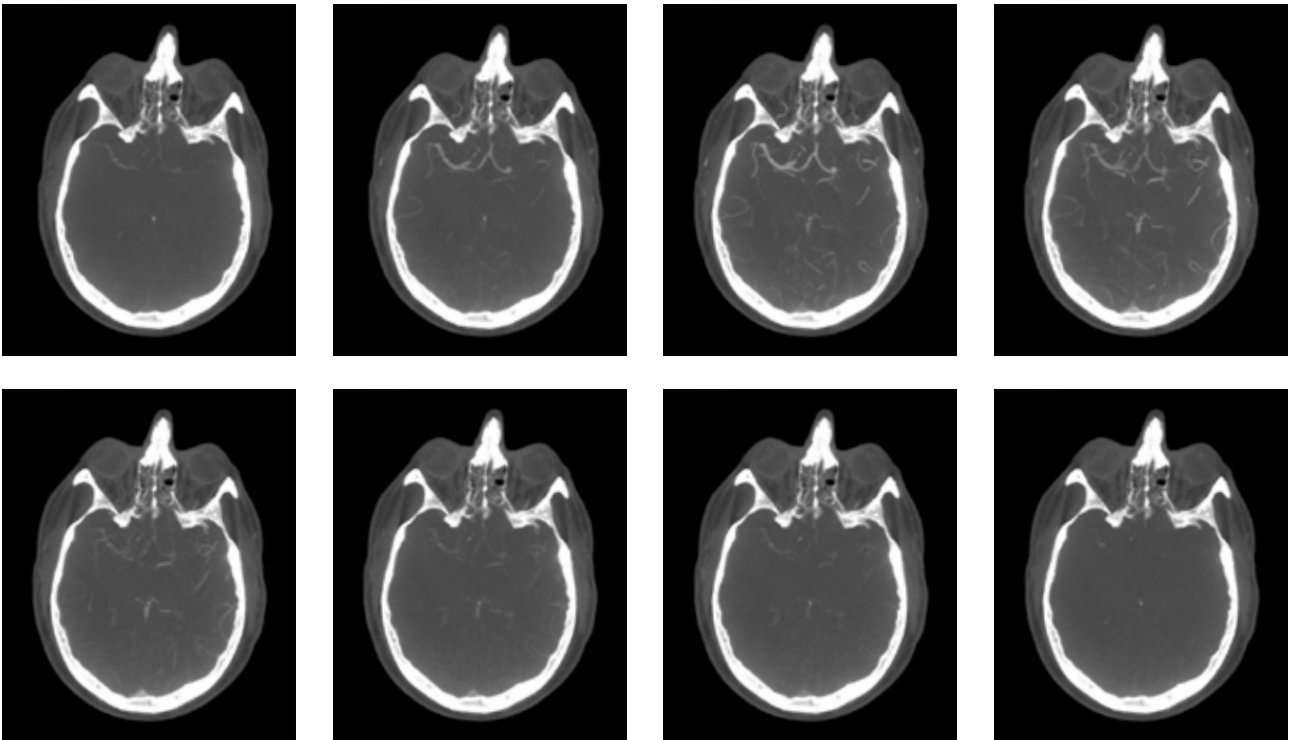
<b>Injection protocol</b>	
Catheter position	antecubital 18G venous line
Contrast medium	300 mg/mL iodine
Dilution	none
Injection volume	50 mL contrast media followed by 40 mL saline chaser
Injection rate	5 mL/s CM and saline
Duration of injection	18 s
X-ray delay	none
Power injector used	Yes

<b>Reconstructions</b>	<b>For both mask and fill run</b>
Name	Neuro Perfusion Full HU Auto
VOI size	Full
Slice matrix	512x512
Kernel type	HU
Image characteristics	Auto
Reconstruction mode	Nat Fill
Viewing preset	DynaCT Head

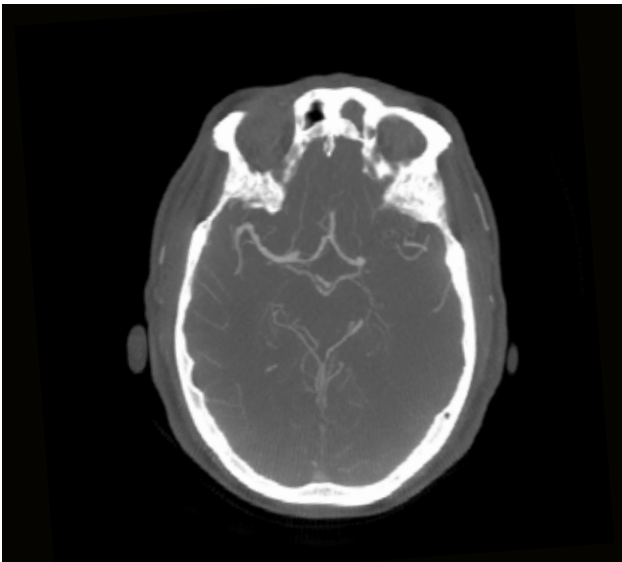
Graphical representation shows workflow including two mask runs



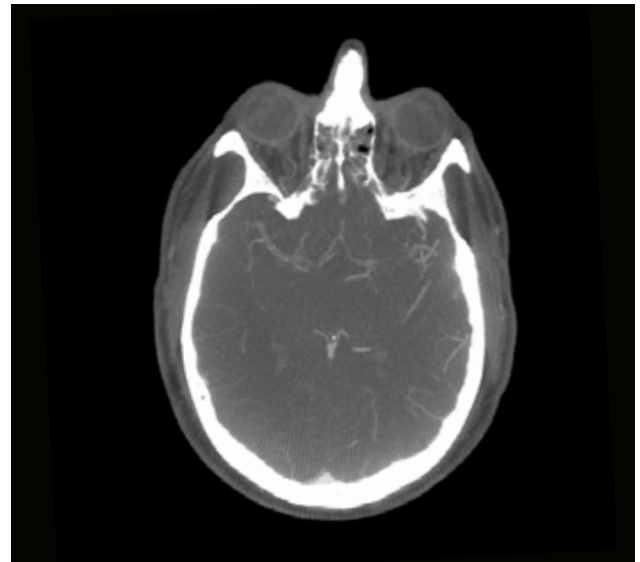
## Initial *syngo* DynaCT Multiphase run before thrombectomy



Fill run 1–8, 10 mm MIP slices

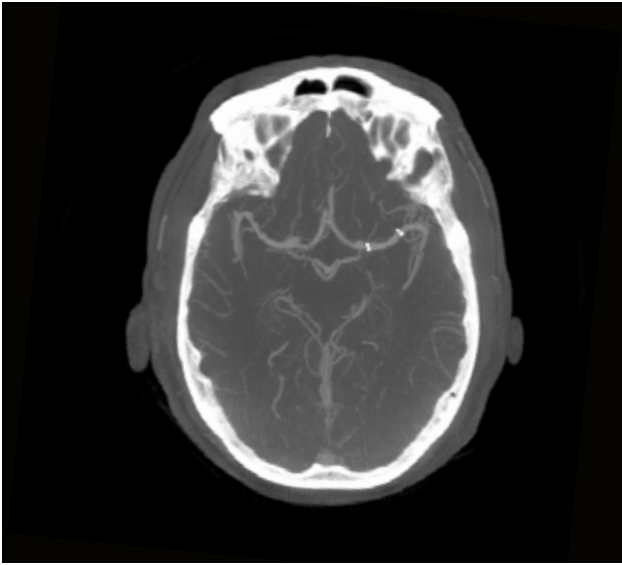


Visualization of M1 occlusion. Fill run 4, MIP 10 mm

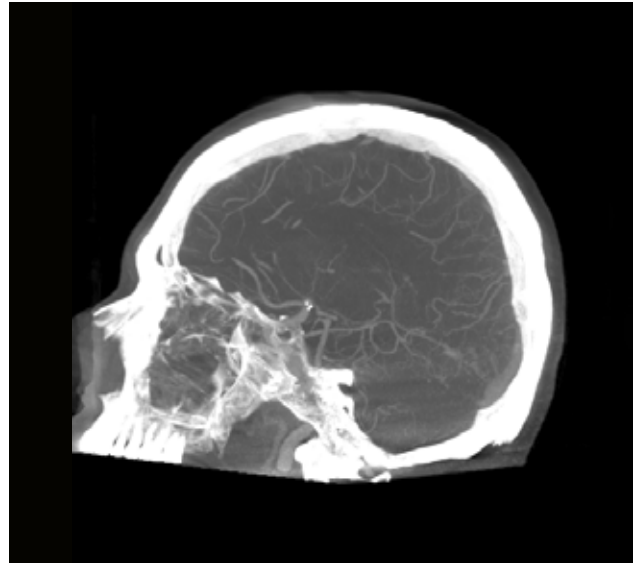


Visualization of potential collaterals in later phase.  
Fill run 6, MIP 10 mm

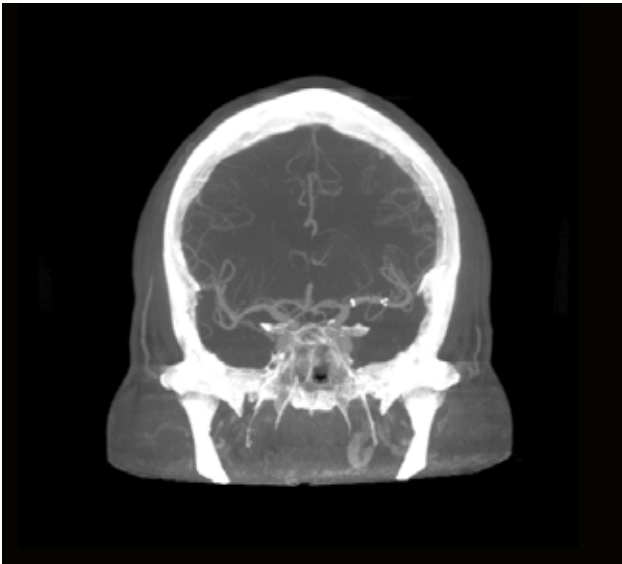
## Post-thrombectomy and stent placement



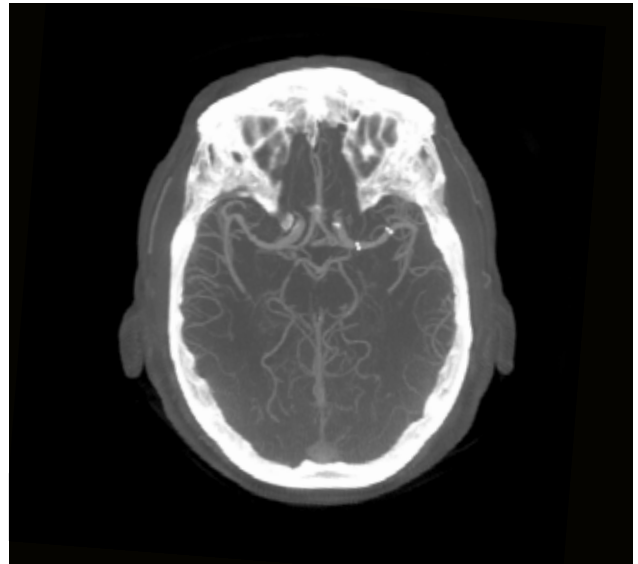
MIP 10 mm transversal



MIP 25 mm sagittal



MIP 25 mm coronal



MIP 25 mm transversal

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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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