Study Protocol

# Pipeline flow diverting stent follow-up

Neuro Interventions

## Case Description

**Patient history**
67-year-old female patient.

**Diagnosis**
Ophthalmic aneurysms on right and left side treated with pipeline embolization devices (PEDs)

**Treatment**
Longitudinal follow-up of implanted pipeline embolization devices (PEDs) using 3D-DSA acquisition and *syngo* DualVolume visualization on ARTIS icono biplane system. Diagnostic angiogram to follow up right ophthalmic aneurysm treated with three PEDs and left ophthalmic aneurysm treated with a single PED. Volumetric imaging acquired on right ophthalmic aneurysm using ARTIS icono. The study shows residual contrast inflow into the right ophthalmic aneurysm and opacification within the extruding vessel, as well as good vessel wall apposition of the three PEDs. Downstream vasculature is well-opacified and no in-stent stenosis is observed.

**General Comments:**
For the volumetric imaging, we used a 4 s *syngo* Dyna3D run in Twin Spin mode. For the first time, ARTIS icono gives us the ability to perform the 3D run without the need to park the lateral plane.

**Courtesy of**
David Niemann, MD, University of Wisconsin Hospitals and Clinics, USA

**Supported by**
*syngo* Dyna3D
*syngo* DualVolume

**System & Software**
ARTIS icono biplane VE2 with *syngo* Application Software VE2

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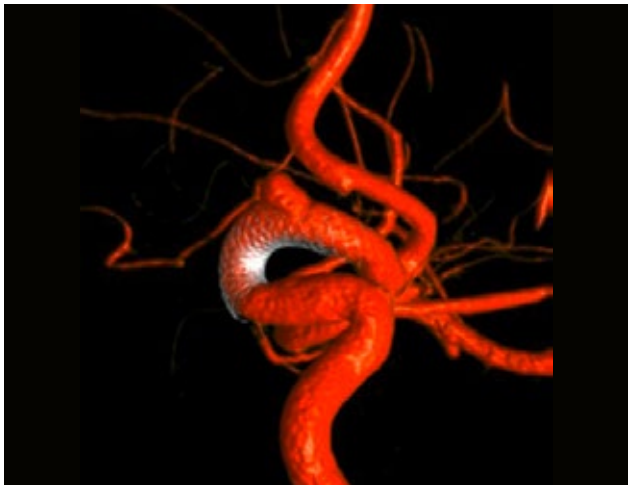
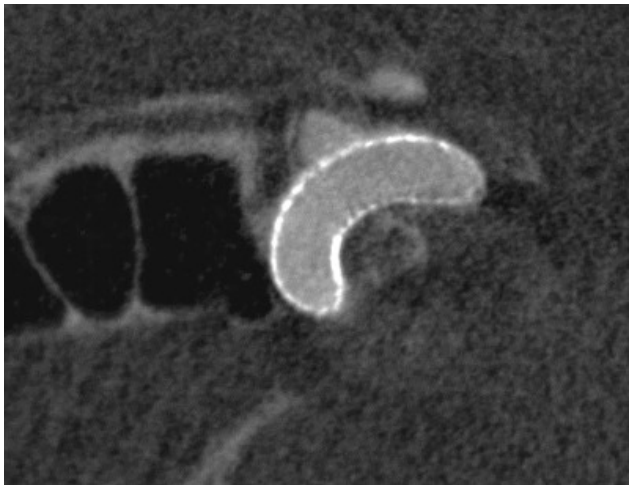
| **Acquisition protocol** | 4sDSA Head |
|---|---|

| **Injection protocol** | |
|---|---|
| Catheter position | Internal carotid artery |
| Contrast medium | 300 mg/mL |
| Dilution | No |
| Injection volume | 15 mL |
| Injection rate | 3 mL/s |
| Duration of injection | 5 s |
| X-ray delay | 2 s |
| Power injector used | Yes |

| **Reconstructions** | |
|---|---|
| Name | Dyna3D DSA Dual |
| VOI size | Medium |
| Slice matrix | 512 x 512 |
| Kernel type | EE |
| Image characteristics | Normal |
| Reconstruction mode | Dual |
| Viewing preset | 3D Dual Volume |



Residual aneurysm well visible in VRT, as well as good understanding of stent wall apposition.



In-stent stenosis can be excluded by the MPR image.

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