OCT Angiography for Swept Source OCT

**Angio patient case:** Myopic CNV

**Physician:** Carl Glittenberg MD, Karl Landsteiner Institute for Retinal Research and Imaging, Vienna, Austria

**Patient history:**
- **Gender:** Female
- **Age:** 72
- **Diagnosis:** Myopic CNV on the left eye
- **Treatment:** 5 intravitreal injections of anti-VEGF on the left eye

**Examination techniques and results:**
A high-definition swept source OCT B scan, a full color fundus photograph, a fluorescein angiography, and a swept source OCT angiography (SS OCT Angio™) were performed. The examinations were collected on a Topcon DRI OCT Triton™ Plus swept source OCT system. The fundus photograph shows a highly myopic fundus with peripapillary atrophy and an older myopic neovascular lesion with a fresh component on the inferior margin. The B scan shows a myopic fundus, retinoschisis, and intraretinal fluid over the fresh part of the lesion. The fluorescein angiography (top left image) shows leakage in the fresh inferior component. The SS OCT Angio™ (middle and bottom left images) clearly shows vascular proliferation in the area of leakage. OCT Angio images were post-processed by Carl Glittenberg MD.

**Clinical relevance:**
The ability to perform SS OCT Angio™ on highly myopic patients is of great importance for early detection of myopic CNV.
OCT Angiography using Swept Source OCT
superior imaging through a powerful combination of technologies

Topcon’s SS OCT Angio™ is the only system that combines high-quality OCT angiography with a Swept Source OCT. Built on the clinically proven DRI OCT Triton platform, it is powered by OCTARA™, a proprietary image processing algorithm that provides highly sensitive angiographic detection. The exceptional visualization provides clear images of vascular structures, even in the choroid and deeper retinal layers.

**High-sensitivity imaging and deeper intravascular flow visualization**
Swept Source technology and OCTARA™ allow the deeper structures to be visualized with less depth-dependent signal roll-off, detecting even low microvascular flow with high-sensitivity. Additionally, the 1 μm wavelength makes OCT imaging possible for patients with media opacities.

**Rapid scanning, real time eye tracking**
At 100,000 A scans per second, coupled with invisible scanning lines and the SMARTtrack eye tracking system, the SS OCT Triton Swept Source OCT angiography system provides a real-time image of the retinal microvascular flow network.

**Enhanced diagnostic efficiency & workflow integration**
Multimodal platform provides easy, yet comprehensive comparison of microvascular impairment with FA, FA-F, OCT and color fundus images in a single device.

**OCTARA™ difference**
OCTARA™ is the image processing technology which extracts the signal changes derived from vascular flow using multiple OCT B scans acquired at the same position. It demonstrates high-sensitivity for the detection of low blood flow in microvasculature. It is anticipated that OCTARA™ will be useful for detecting microaneurysms or capillary abnormalities.

**Accurate tracking system**
SMARTtrack™, incorporated in the DRI OCT Triton, has been further developed for OCT Angiography. It now detects eye movements and its instantaneously modifies the scan position to ensure complete scanning of all areas.

**The OCTARA™ difference**
OCTARA™ is the image processing technology which extracts the signal changes derived from vascular flow using multiple OCT B scans acquired at the same position. It demonstrates high-sensitivity for the detection of low blood flow in microvasculature. It is anticipated that OCTARA™ will be useful for detecting microaneurysms or capillary abnormalities.

**Accurate tracking system**
SMARTtrack™, incorporated in the DRI OCT Triton, has been further developed for OCT Angiography. It now detects eye movements and its instantaneously modifies the scan position to ensure complete scanning of all areas.

**BRVO**
**Physician:** Carl Glittenberg MD, Karl Landsteiner Institute for Retinal Research and Imaging, Vienna, Austria
**Patient history:**
**Gender:** Male
**Age:** 64
**Diagnosis:** Branch retinal vein occlusion on the right eye
**Treatment:** Multiple intravitreal injections of anti-VEGF and laser treatment on the right eye.

**Examination techniques and results:**
A high-definition swept source OCT B scan, a full color fundus photograph, and a swept source OCT angiography (SS OCT Angio™) were performed.

**Clinical relevance:**
The ability to have a quick and non-invasive method of screening patients for retinal ischaemia after retinal vein occlusion will make the treatment of these patients significantly more efficient.