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SOCT “Copernicus:” A New Diagnostic Tool in Retinology

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PURPOSE
To demonstrate new, recently commercially available SOCT examination of the retina in comparison to standard OCT.

METHODS
SOCT uses spectral / Fourier domain detection instead of time domain system used in standard OCT. This technique allows achieving images with 6 µm axial and 10 µm transverse resolution in tissue which consists up to 6366 axial and 1024 transverse pixels. Patients with different retinal pathology were examined with both methods. Special attention is paid to vitreoretinal interface disorders.

RESULTS
SOCT allowed achieving retina images with better resolution as compared to standard OCT. This allows differentiating the layers of retina. 3D OCT examination was possible and allowed to examine the surface of retina and its different layers. This could be compared with other topographical retina examinations. In cases of lamellar macular holes the diagnosis was complete with SOCT while conventional OCT presented a picture of full thickness macular hole. In cases of vitreoretinal interface pathology better resolution had influence on diagnosis and treatment. Intraretinal pathology was found after retina reattachment surgery.

CONCLUSION
SOCT by increasing quality of retina scans may be a factor of improvement of our knowledge about retinal pathology. Additional 3D OCT images may reduce the possibility of missing focal pathologies.