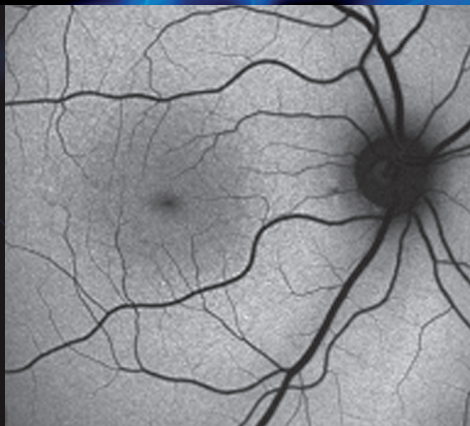


# SPECTRALIS® BluePeak Module

## blue laser autofluorescence



Blue laser autofluorescence in healthy subject

BluePeak – blue laser autofluorescence is a non-invasive diagnostic imaging modality that takes advantage of the natural autofluorescence property of the retina.

Lipofuscin is a naturally occurring metabolic indicator found in healthy RPE cells. Mapping this compound can provide critical insight to the health of the retina.

Confocal laser scanning with a pure blue laser provides clear, high-contrast images of metabolic activity without the scattered light and the low sensitivity inherent to flash photography.

This powerful combination of blue laser light and confocal scanning is BluePeak autofluorescence.

### Prognostic value of BluePeak in wet AMD

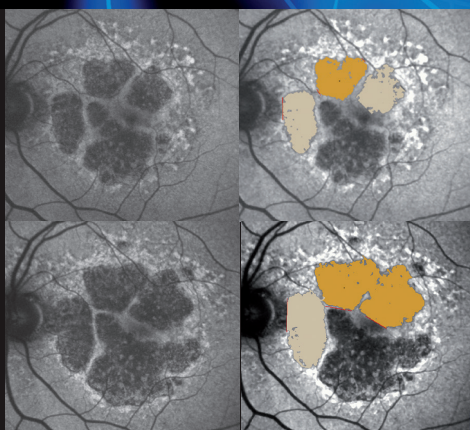


Blue laser autofluorescence patterns reflect areas of preserved normal metabolic activity in wet AMD<sup>1</sup>

"The analysis of the initial foveal fundus autofluorescence (FAF) in patients with CNV in exudative AMD appears to be an important prognostic factor for distinguishing patients in whom visual function may improve after therapy from those patients in whom retinal damage has already progressed, which limits a positive functional outcome."<sup>\*\*</sup>

Britta Heimes, MD – Daniel Pauleikhoff, MD – Alan C. Bird, MD

### BluePeak supports monitoring of progression in Geographic Atrophy



Blue laser autofluorescence images show atrophic areas as uniform darkened regions with reduced signal<sup>2</sup>

"The high-contrast difference between atrophic and non-atrophic retina allows delineating the area of atrophy more precisely and accurately as compared to conventional fundus photographs.

An even more striking finding of autofluorescence imaging in GA patients is the frequent visualization of high intensity levels surrounding the atrophic patches. The enlargement of existing or the development of new atrophy is spatially confined to retinal areas with previously increased levels of autofluorescence.

These distinct autofluorescence abnormalities do not show up on funduscopy or any other imaging method."

Steffen Schmitz-Valckenberg, MD

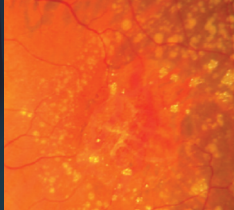
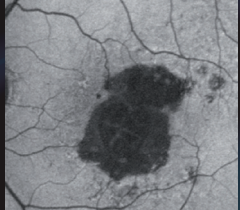
<sup>\*\*</sup>Heimes et al. Graefes Arch Clin Exp Ophthalmol 2008; 246:1229-1234

# SPECTRALIS® BluePeak Module

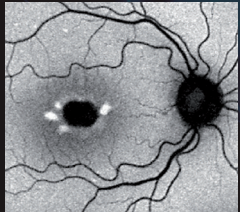
## BluePeak maps metabolic activity in various kinds of retinal disease

BluePeak™

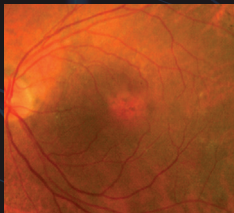
Color Photography



Geographic atrophy<sup>3</sup>



Cone-rod dystrophy<sup>4</sup>



Cystoid macular edema<sup>5</sup>

Various hereditary and complex retinal diseases including AMD manifest themselves with changes in metabolic activity of the RPE/Photoreceptor complex. BluePeak – blue laser autofluorescence can be used to map changes in metabolic activity related to various kinds of disease.

### Age-related diseases

- Early AMD (Drusen)
- Dry AMD (Geographic atrophy)
- Wet AMD (CNV)

### Macular and retinal dystrophies (hereditary diseases)

- Best's disease
- Stargardt's disease
- Vitelliform macular dystrophy
- Cone dystrophy
- Cone-rod dystrophy
- Retinitis Pigmentosa

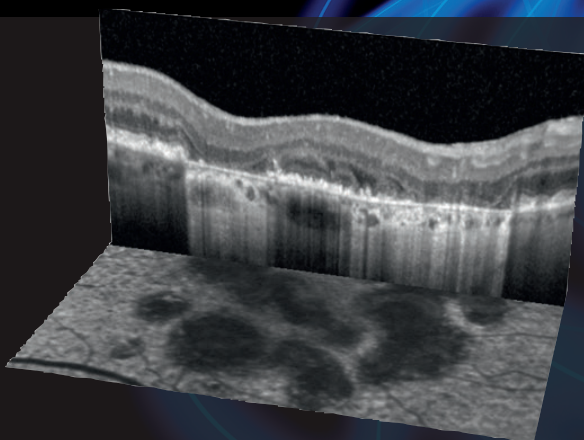
Cystoid Macular Edema  
Ideopathic Macular Telangiectasia  
Central Serous Chorioretinopathy  
Uveitis  
Macular holes  
Intraocular tumors

## Multimodal imaging BluePeak and SD-OCT

Multimodal imaging with BluePeak and Spectral-Domain OCT offers a new perspective of the structure-function relationship within the retina.

„SPECTRALIS offers unique perspectives and insights to retinal disease. The key to understanding the morphologic change lies in in vivo depiction of retinal layers by spectral OCT technology in combination with other imaging modalities such as FAF“

Ute EK Wolf-Schnurrbusch, MD



Simultaneous blue laser autofluorescence  
and SD-OCT

Image Courtesy of <sup>1</sup>Sandra Liakopoulos MD (University of Cologne, Germany),  
<sup>2,3,6</sup>Steffen Schmitz-Valckenberg MD (University of Bonn, Germany),  
<sup>4</sup>Michael P. Kelly CPT (Duke Eye Center, Durham, NC, USA),  
<sup>5</sup>Vikki McBain MD and Noemi Lois MD PhD (University of Aberdeen, Scotland)