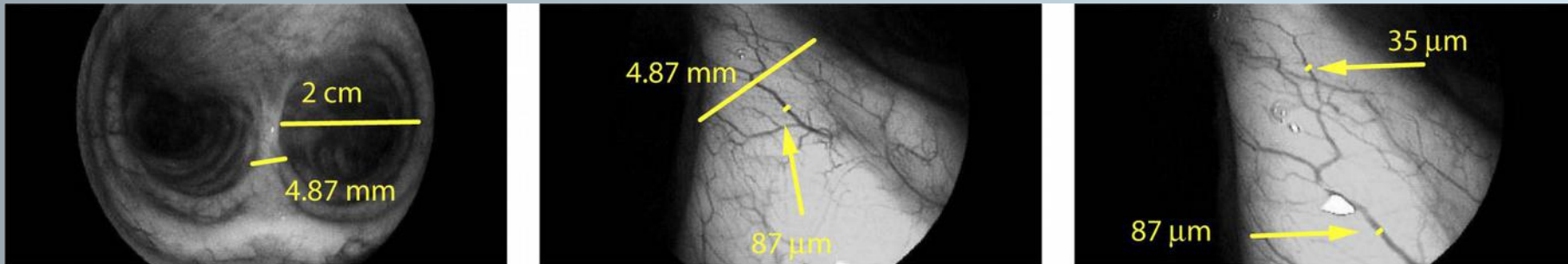


# Magnification bronchoscopy ( $550 \pm 25$ nm; fixed magnification)



The *in vivo* resolution is sufficient to visualize small (between 40 and 300  $\mu$ m) vessels and evaluate vascularization with the help of Shibuya's criteria.

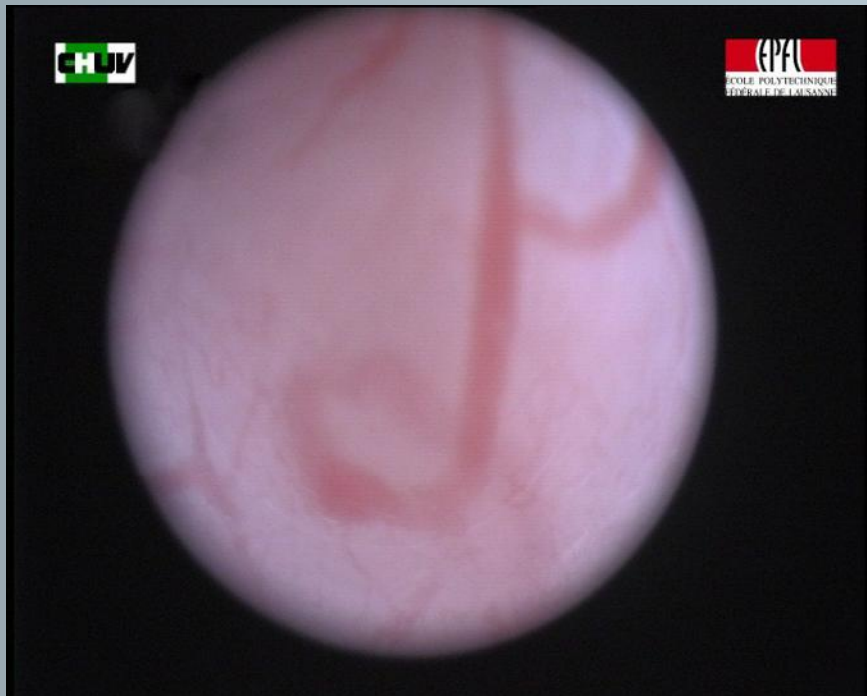
- Mean vessel diameter correlated with the histopathologic status.
- Morphology

	Squamous dysplasia	ASD	CIS	Micro-invasive	Invasive
Tortuous vessel networks	+	+	-	-	-
Dotted vessels	-	+	+	++	+++
Spiral and screw type vessel	-	-	+	++	+++

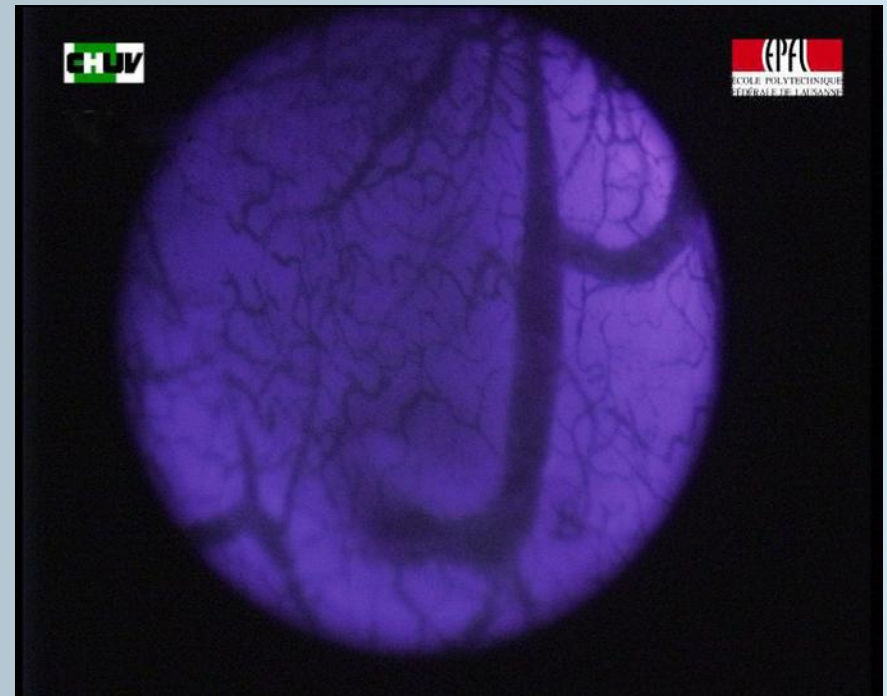
Adapted from Shibuya et al., Lung Cancer, 2010.

***OUTLOOK: Optimization of the spectral design to improve the contrast and the depth selection***

Diameter of the field of view: 300  $\mu\text{m}$

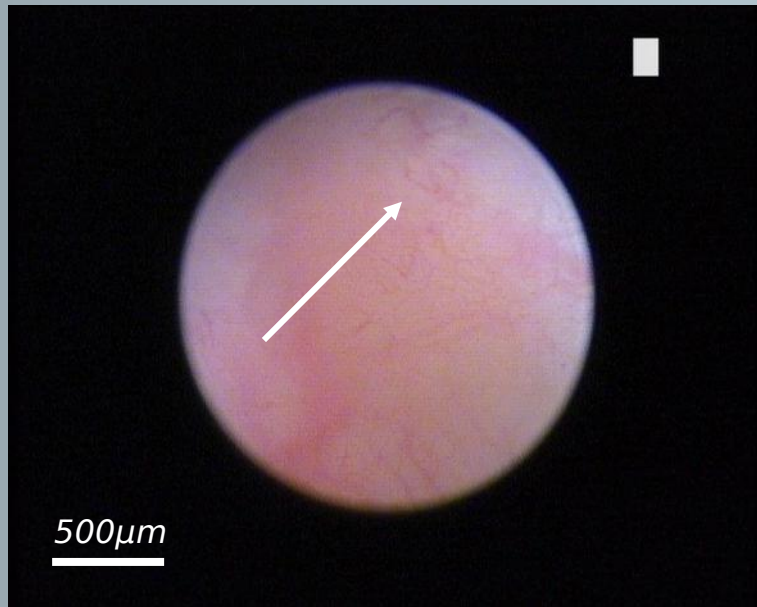


*Backscattered  
white light  
healthy mucosa*



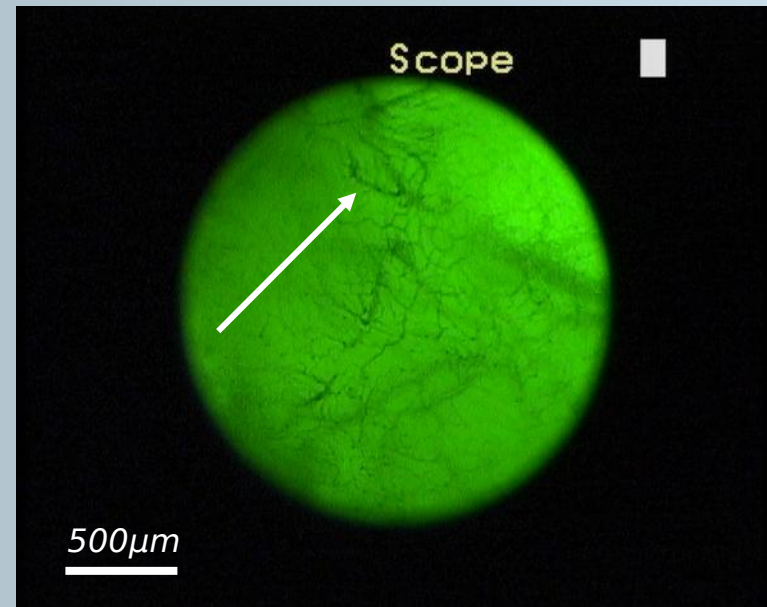
*Backscattered  
Violet ( $390 \text{ nm} < \lambda < 430 \text{ nm}$ ) light  
healthy mucosa*

## *White light vs. Green (550 ± 25nm) comparison*



*White light*

Magnification of **90x**



*Green backscattered light*

Magnification of **90x**