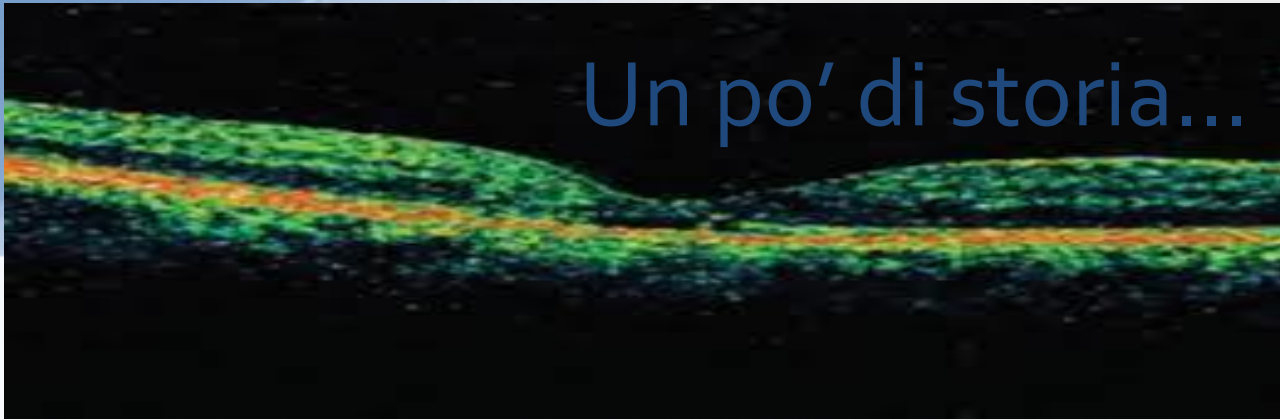


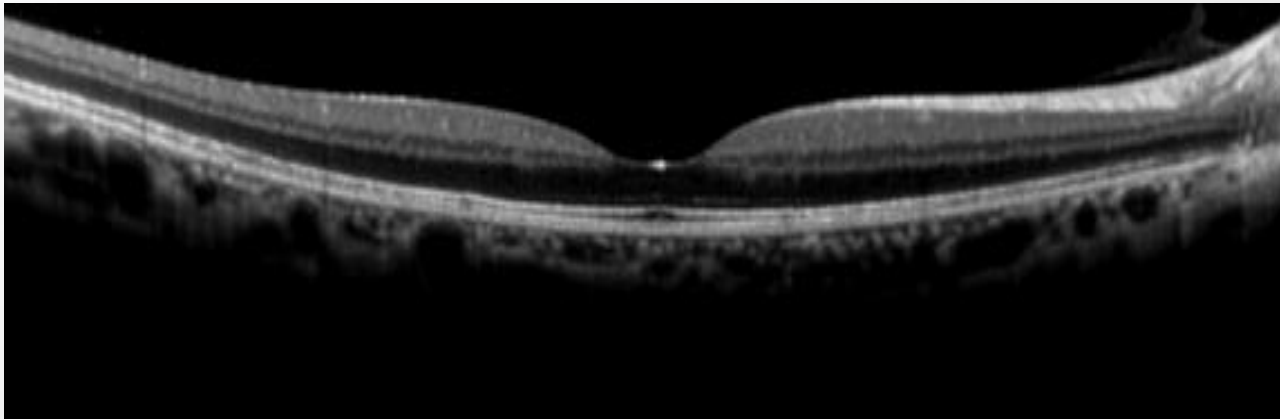
Nuove tecnologie OCT: swept source

ing. Marco Marocco
Topcon Italia

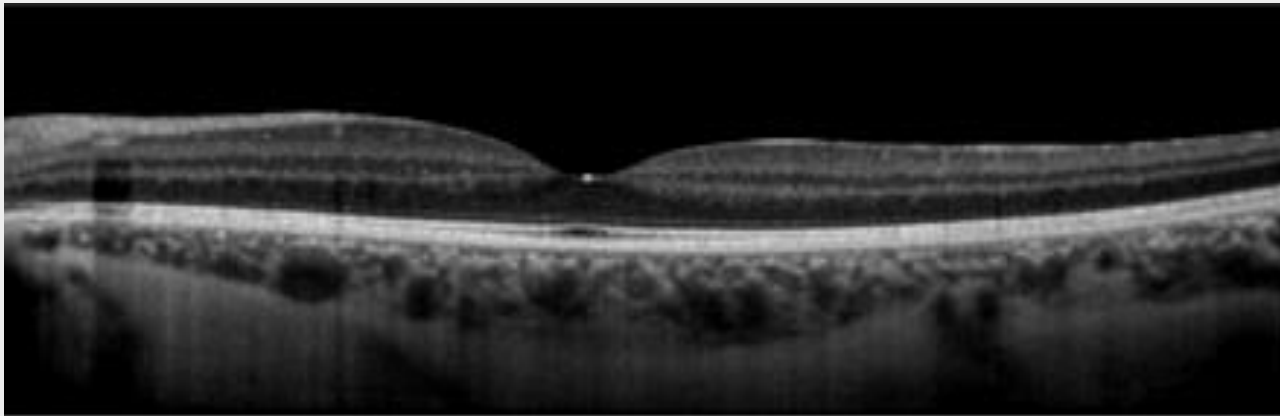
Un po' di storia...



Time domain



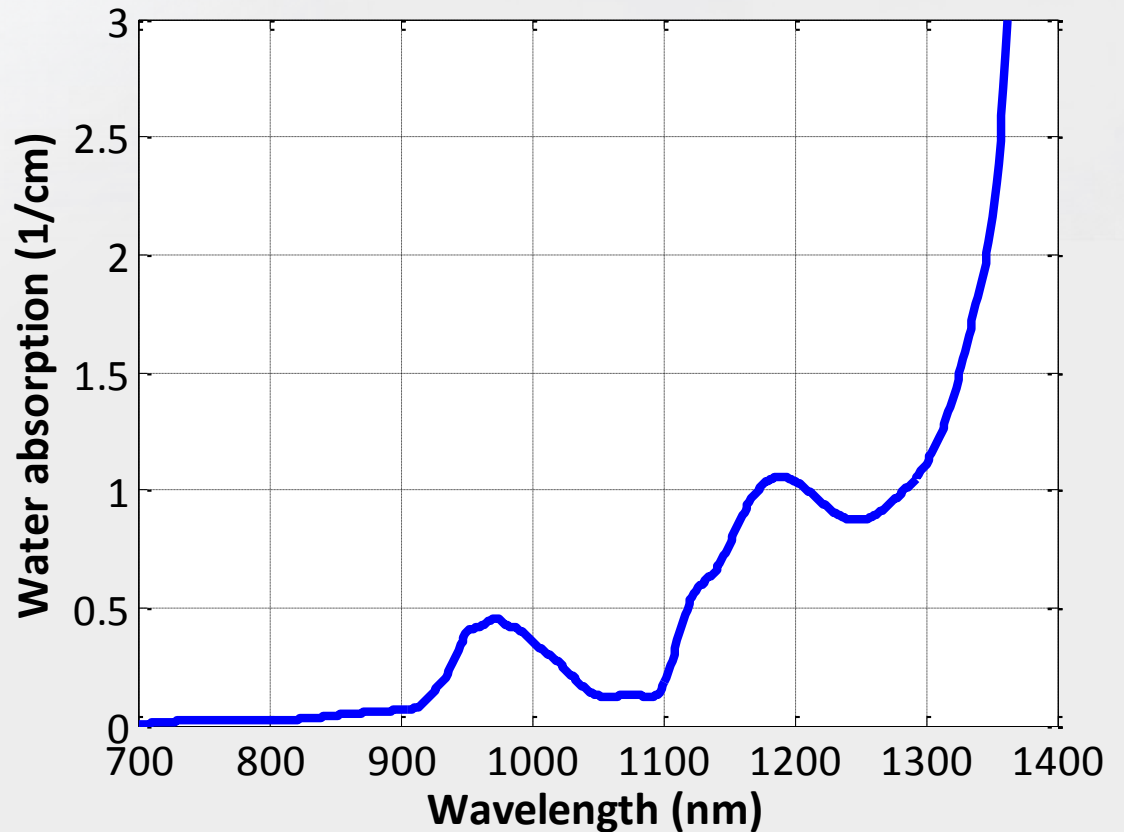
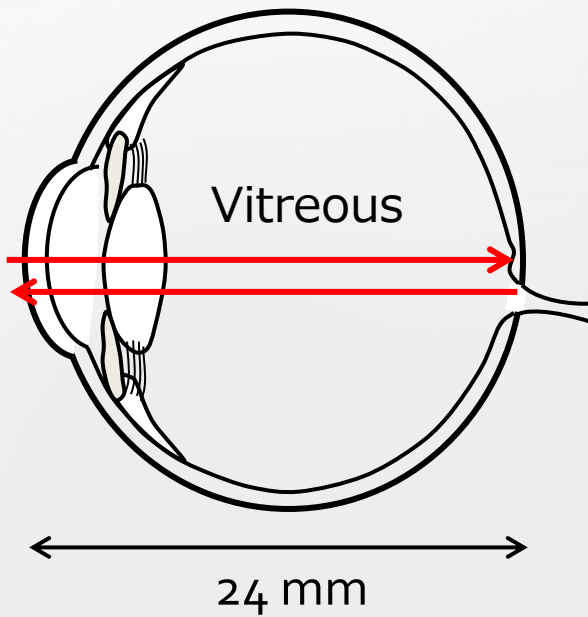
OCT Spectral
Vitreous mode



840 nm
50.000 A-scan/sec

OCT Spectral
Choroid mode

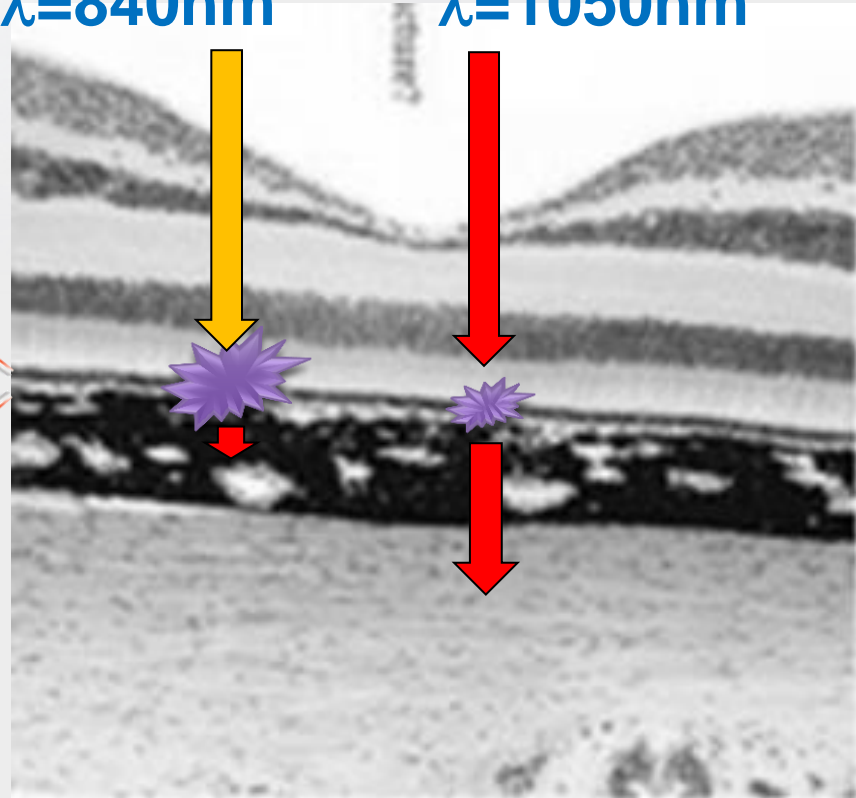
Lunghezza d'onda: 1050 nm



Lunghezza d'onda: 1050 nm

$\lambda=840\text{nm}$

$\lambda=1050\text{nm}$



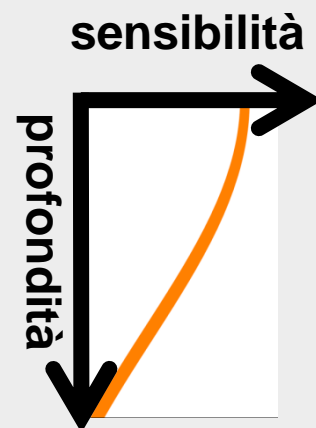
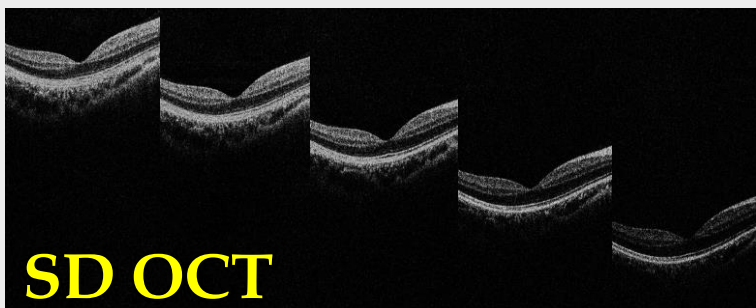
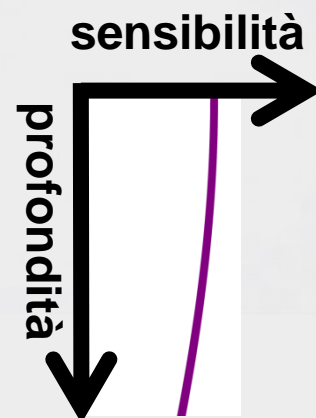
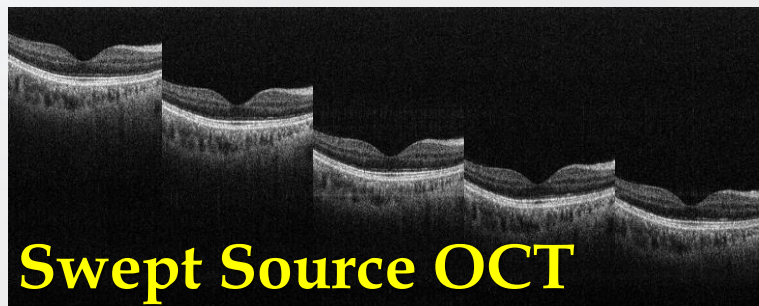
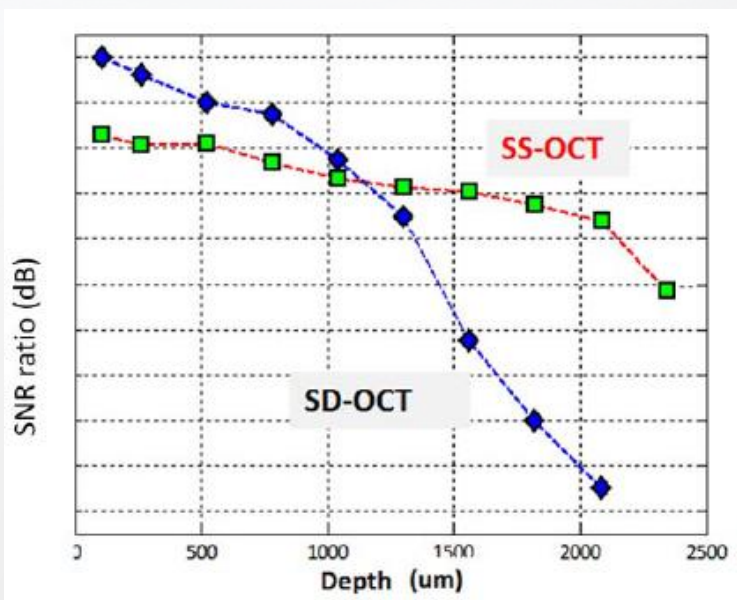
RPE

Grande dispersione

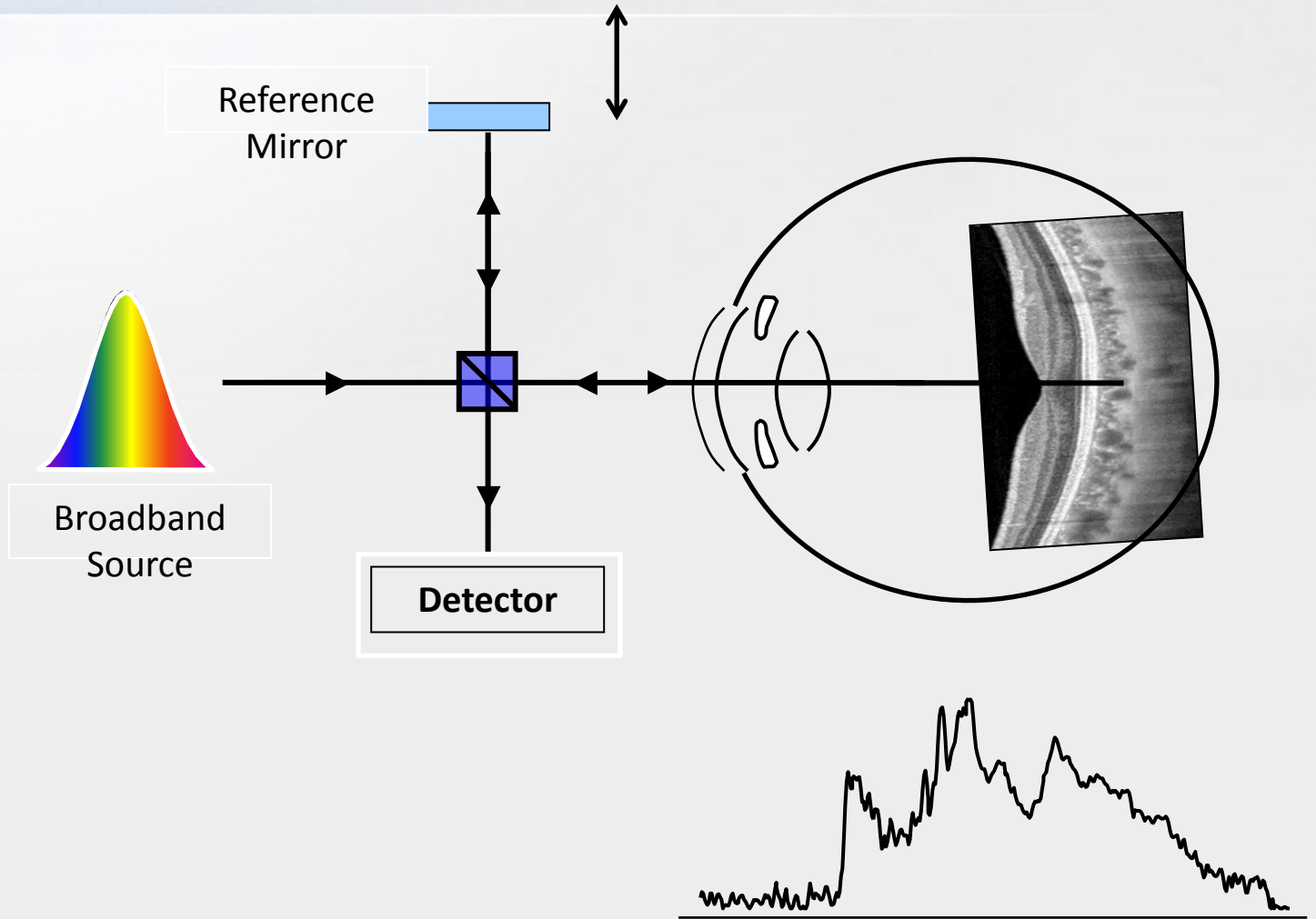
Assorbita da melanina

Dispersione \propto
lunghezza d'onda

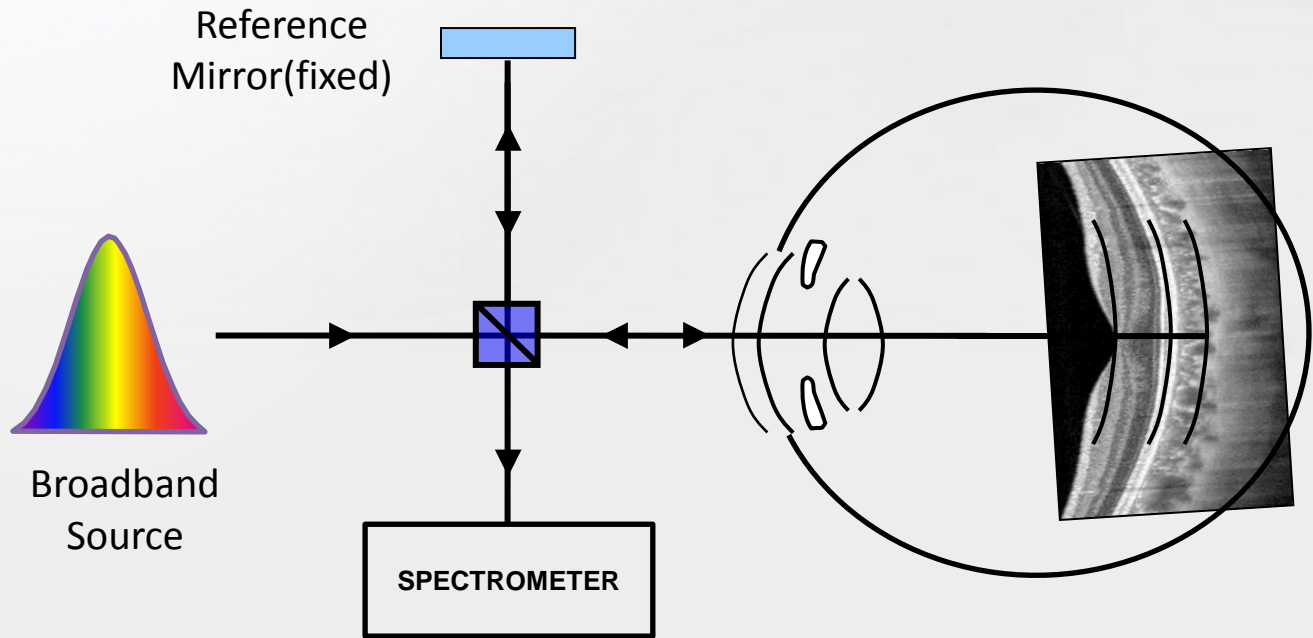
Rapporto segnale/rumore



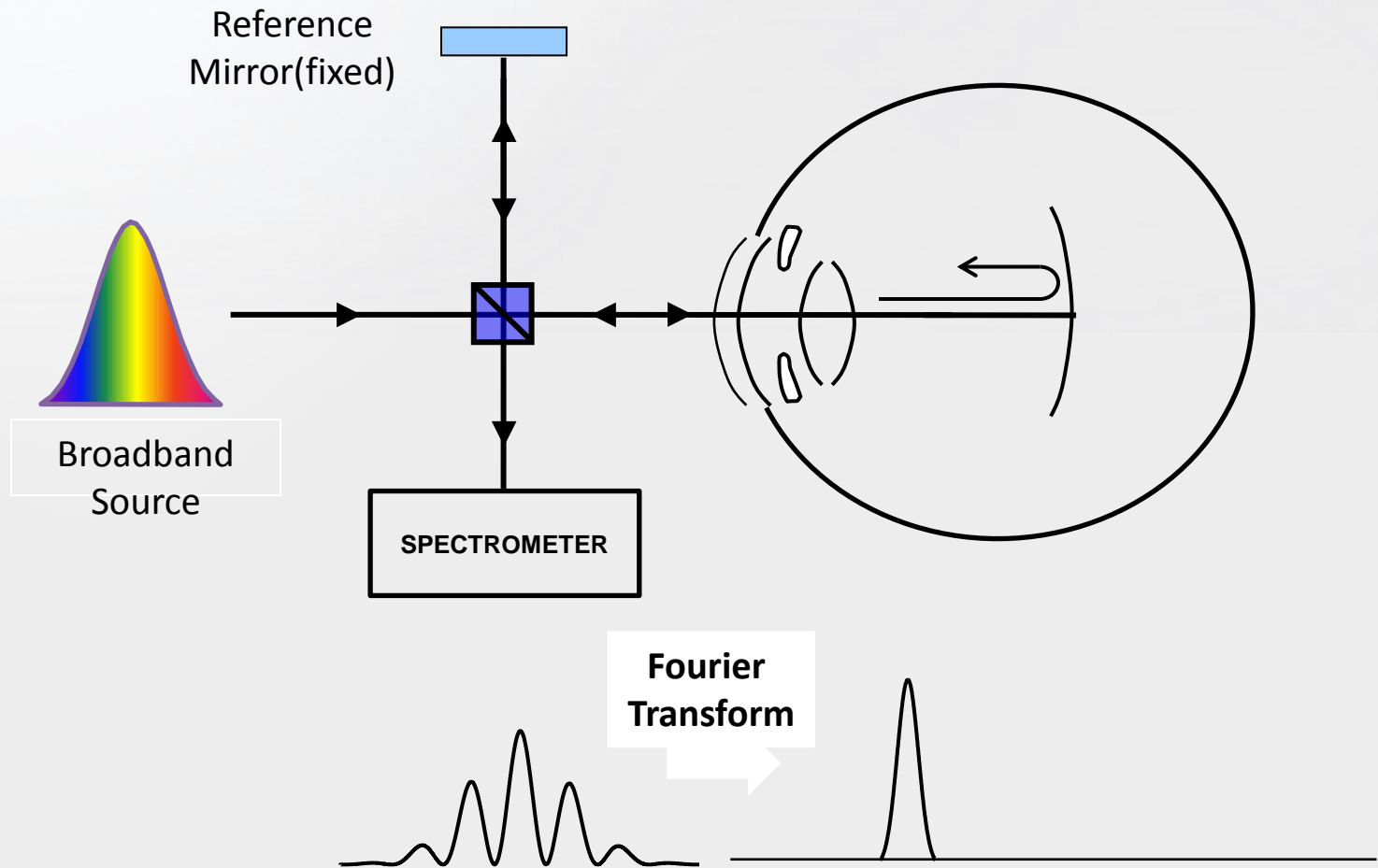
Time domain



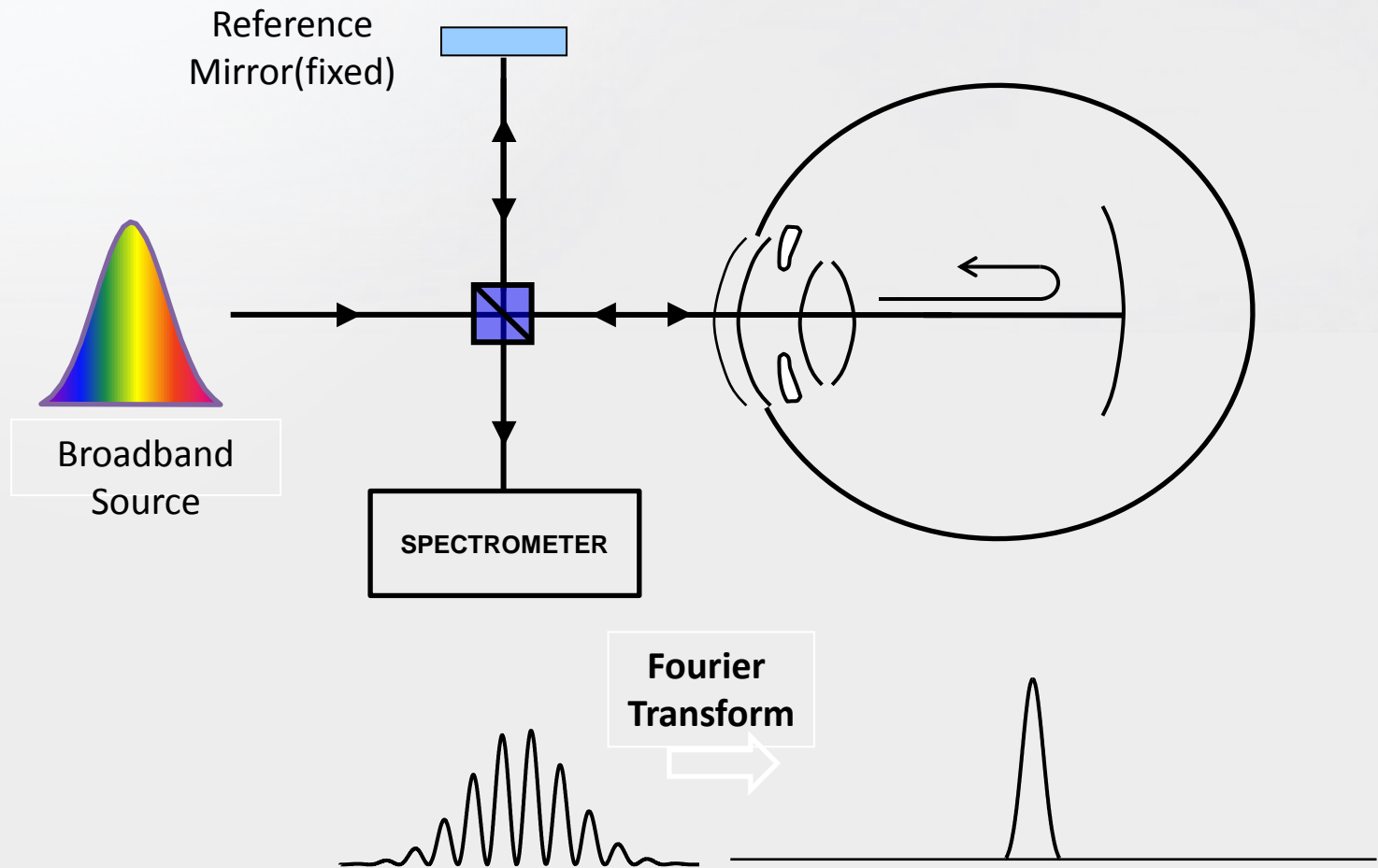
Spectral domain



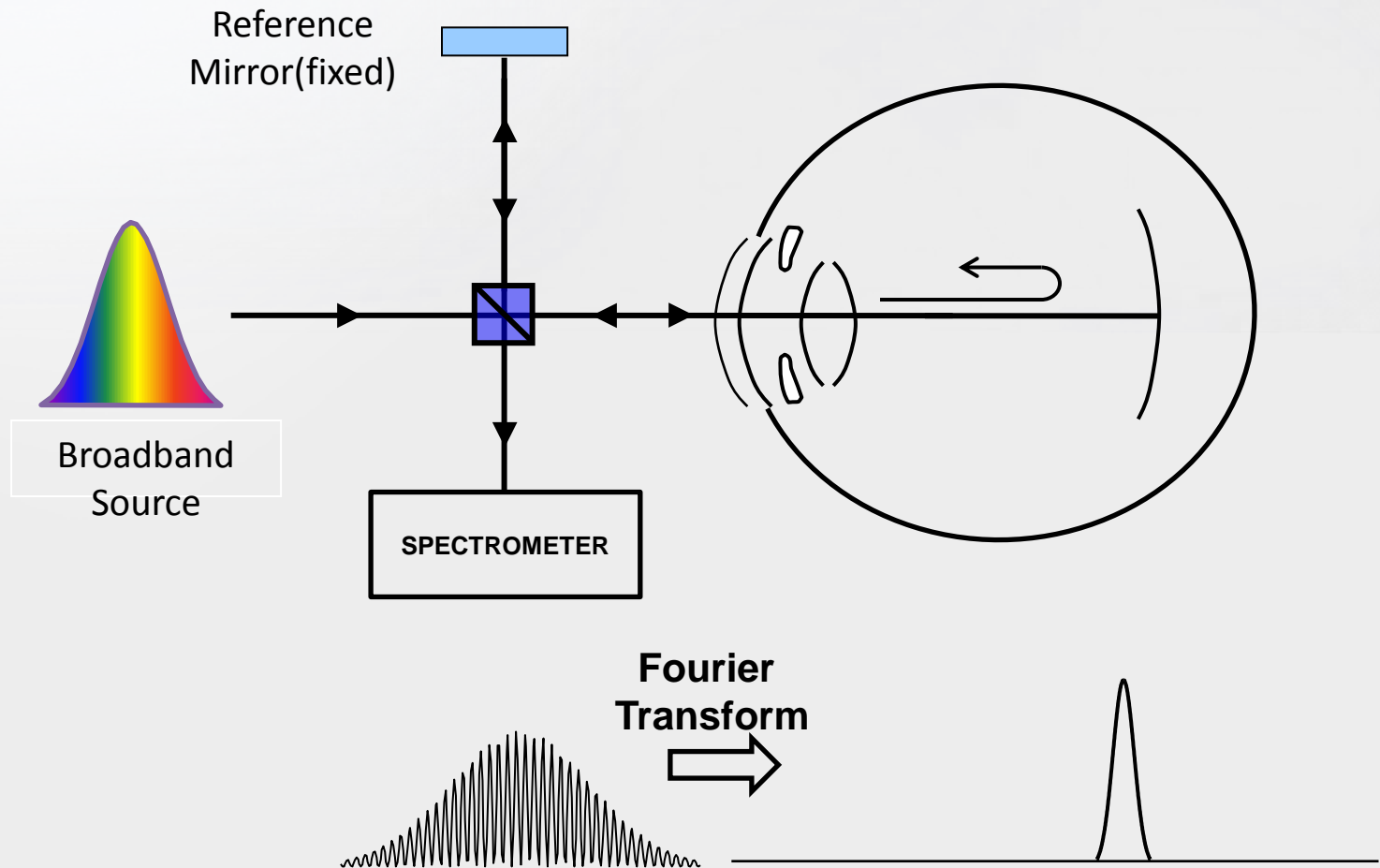
Spectral domain



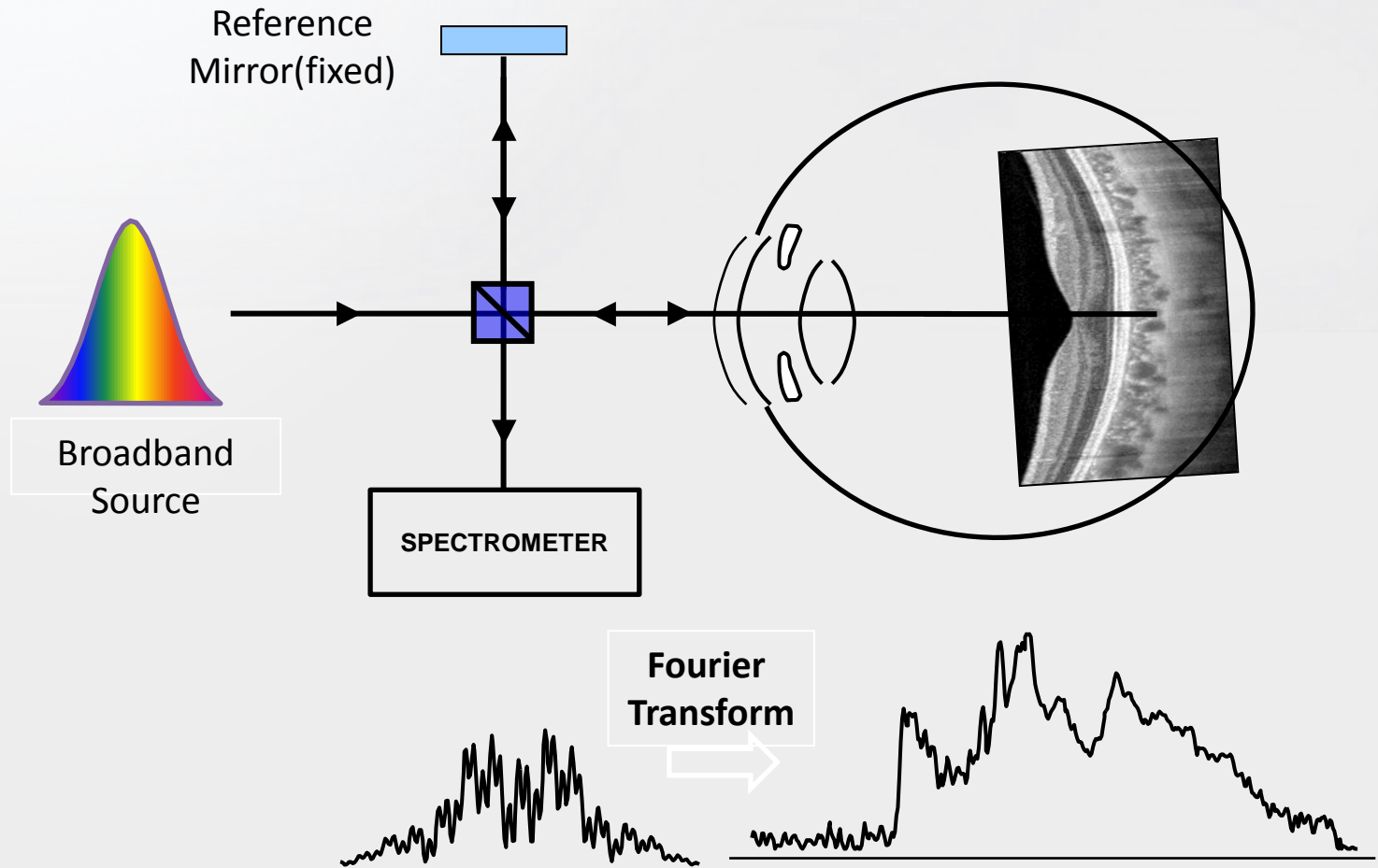
Spectral domain



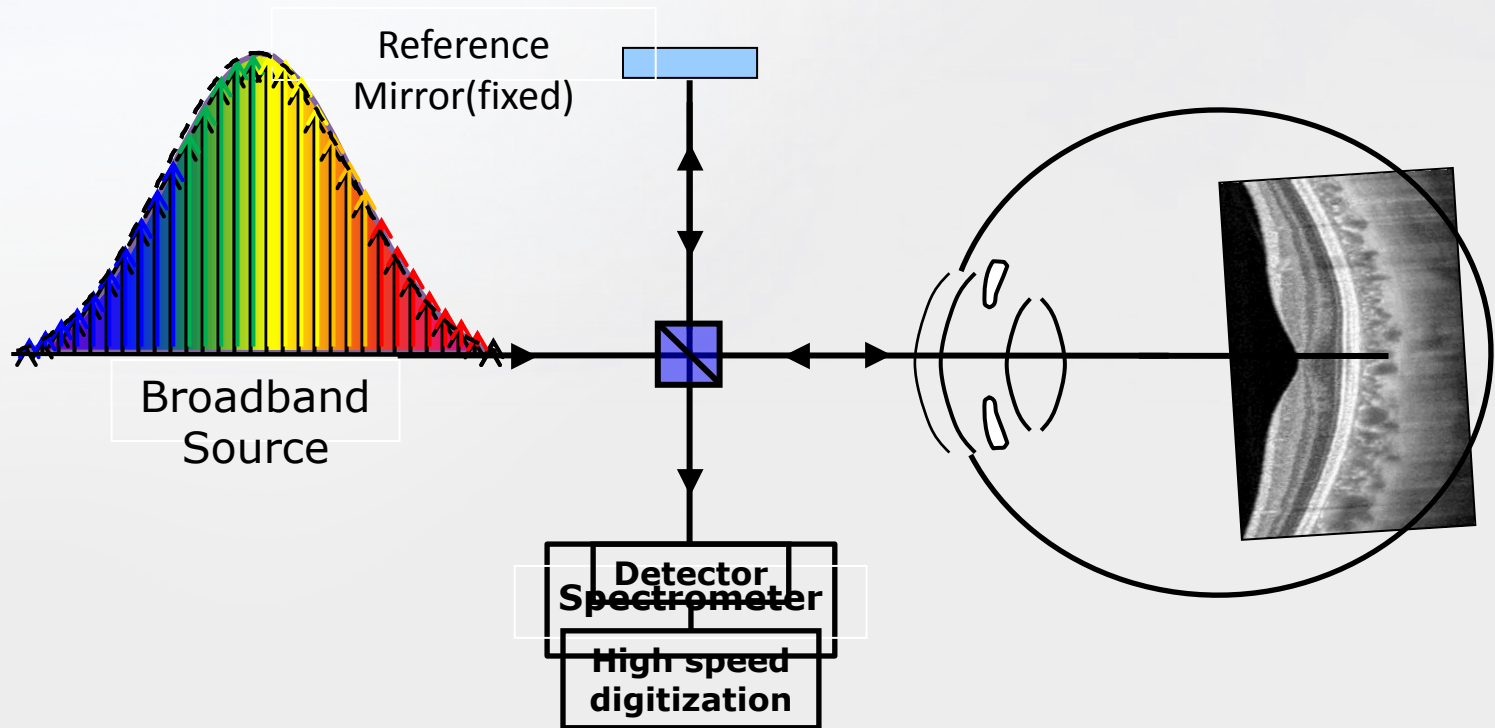
Spectral domain



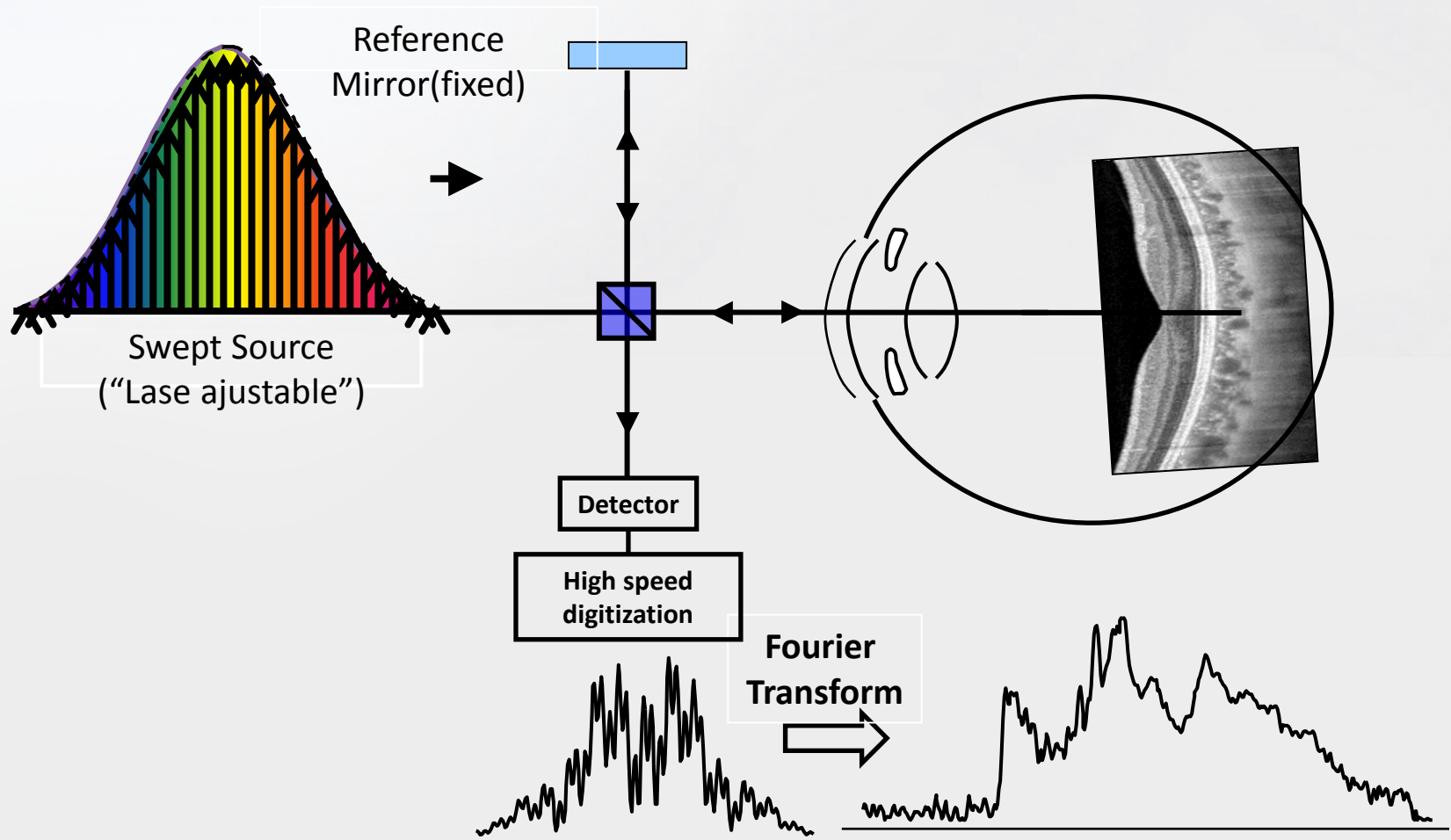
Spectral domain

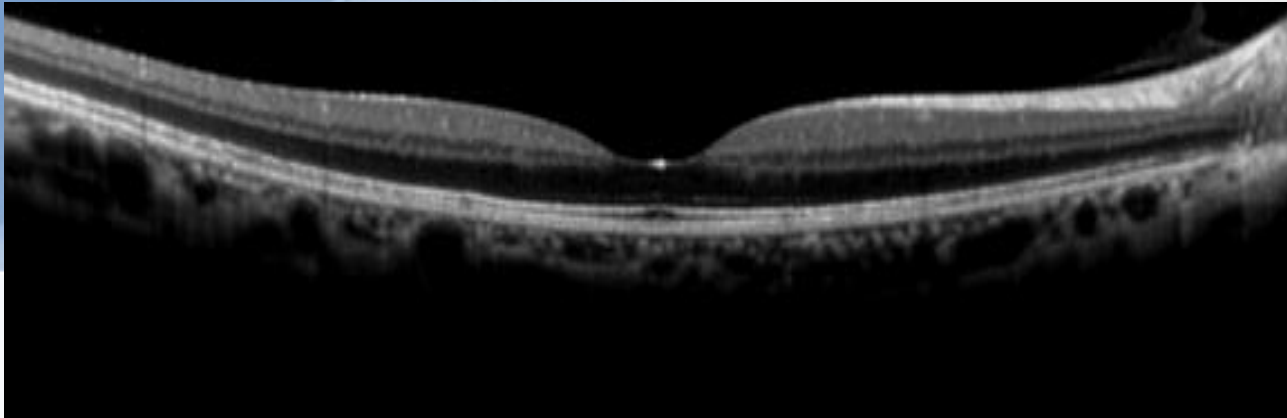


Swept source

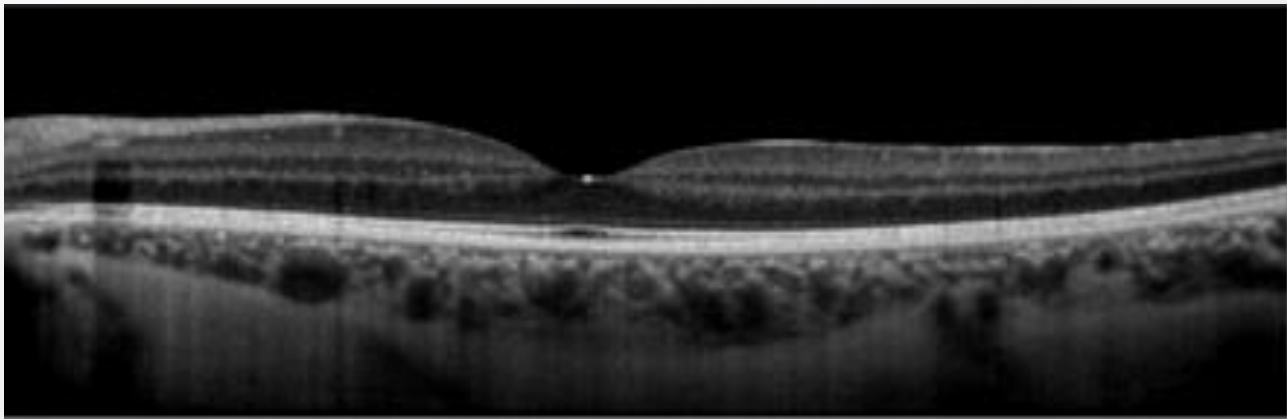


Swept source



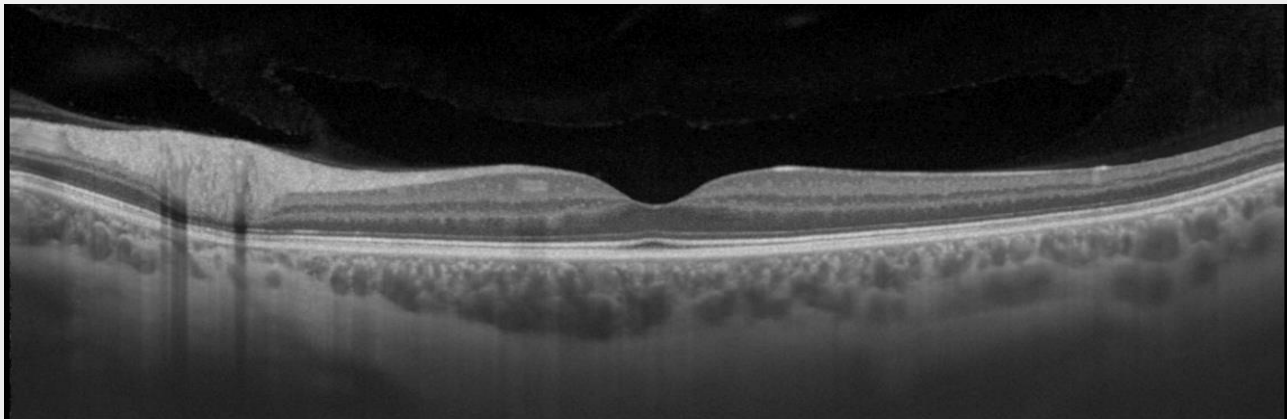


OCT Spectral
Vitreous mode



840nm
50.000 A-scan/sec

OCT Spectral
Choroid mode

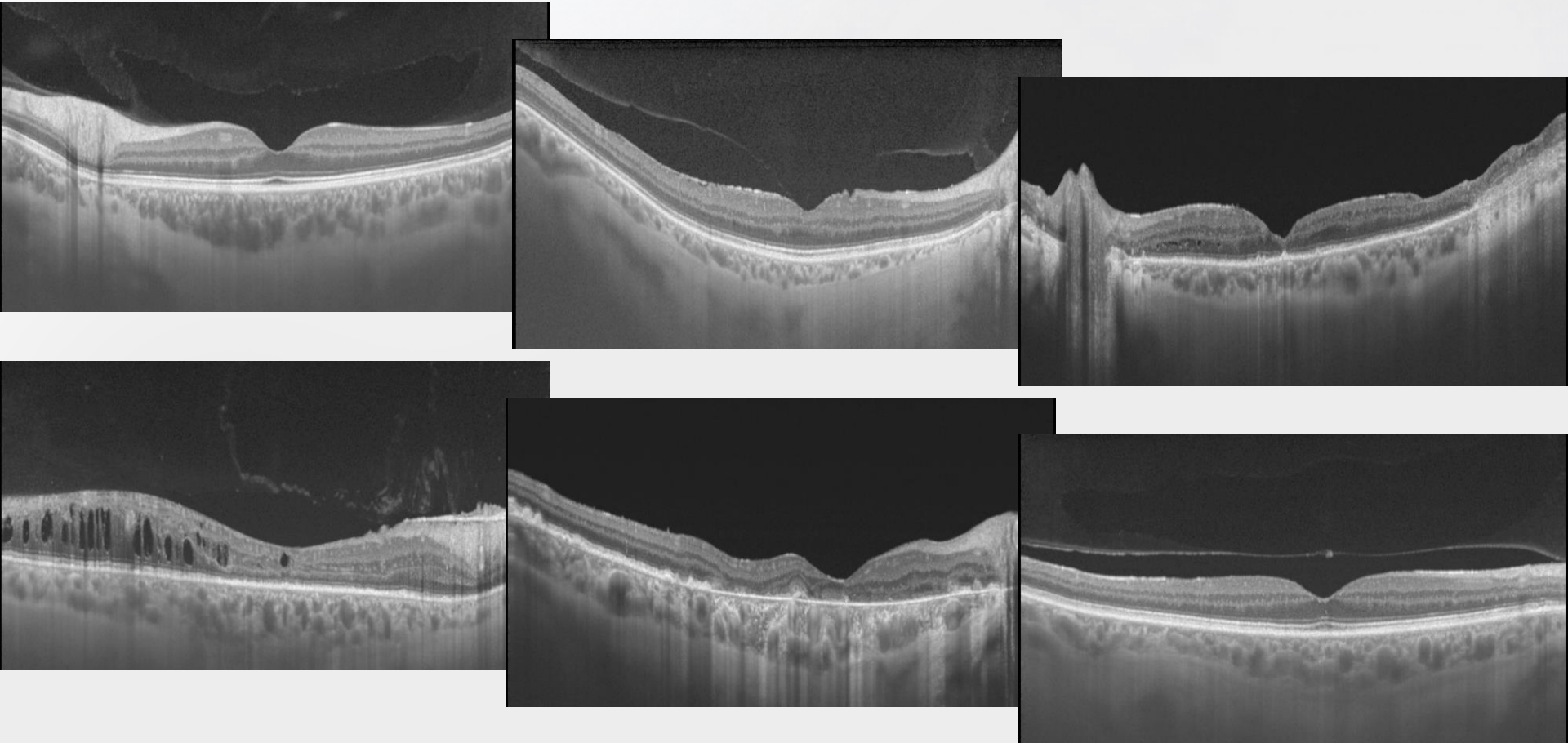


Swept Source OCT

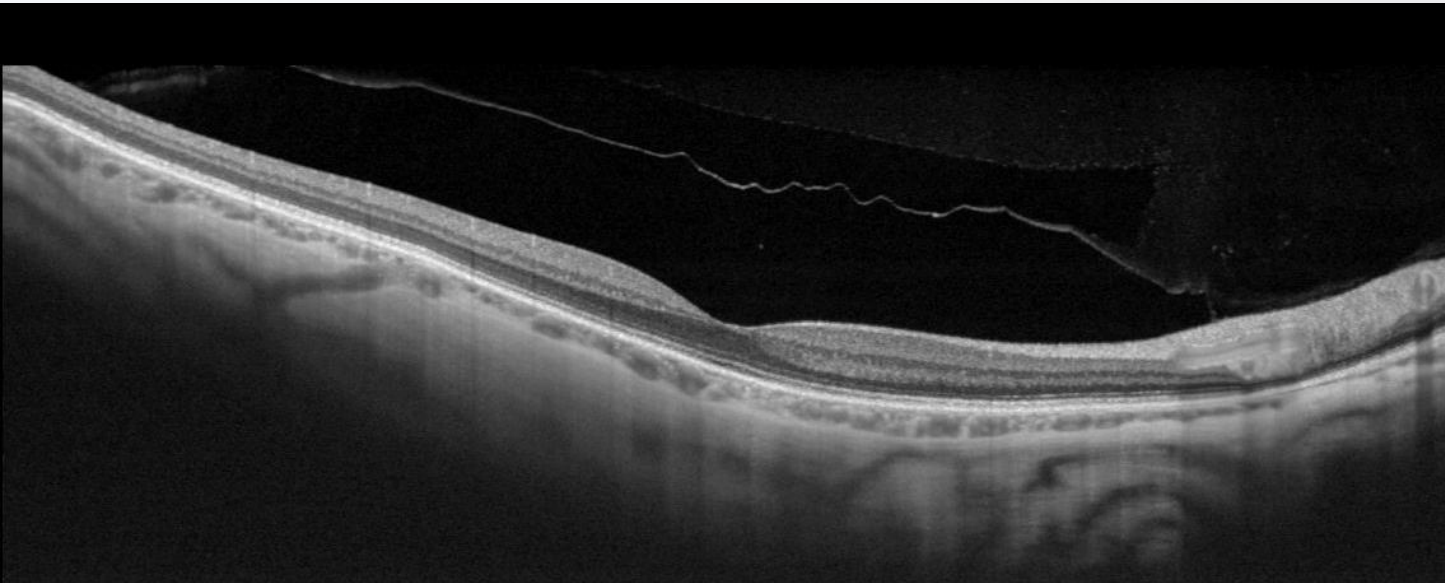
1050 nm
100.000 A-scan/sec

Vantaggi tecnologia swept source

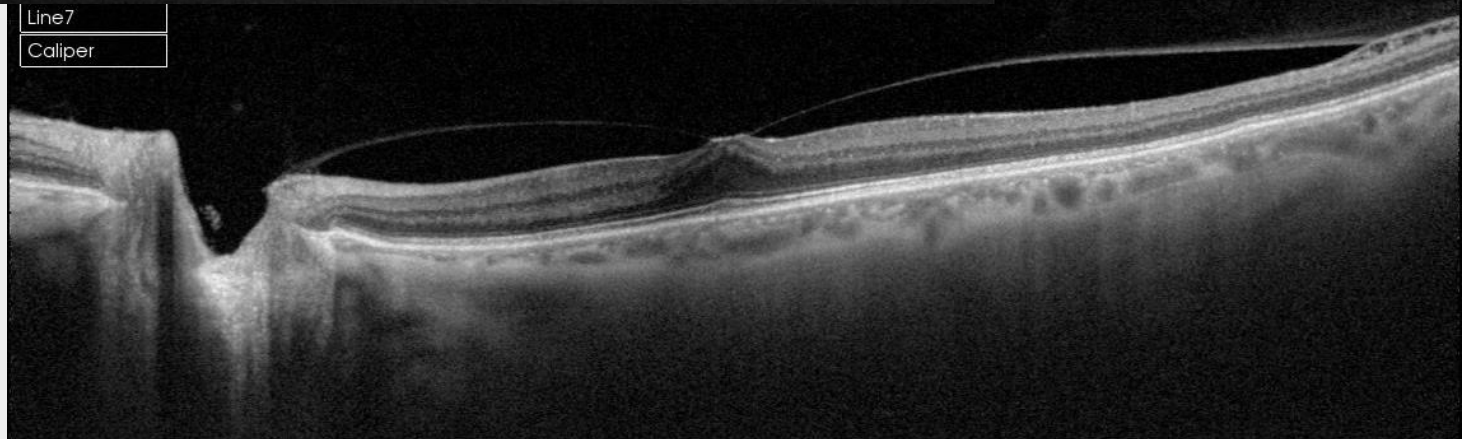
Sensibilità ottimizzata per la visualizzazione di vitreo e coroide



Vantaggi tecnologia swept source

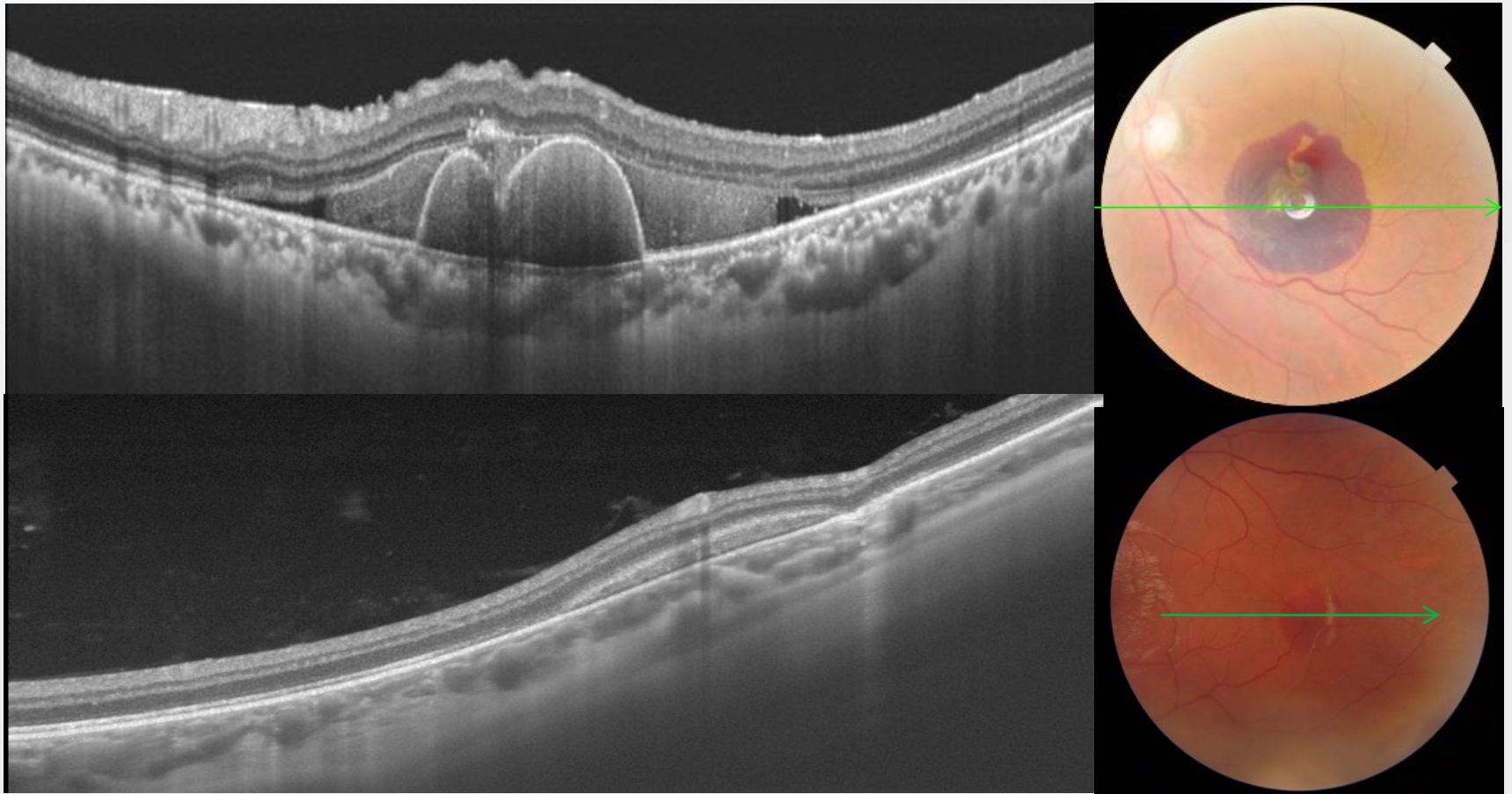


Line7
Caliper

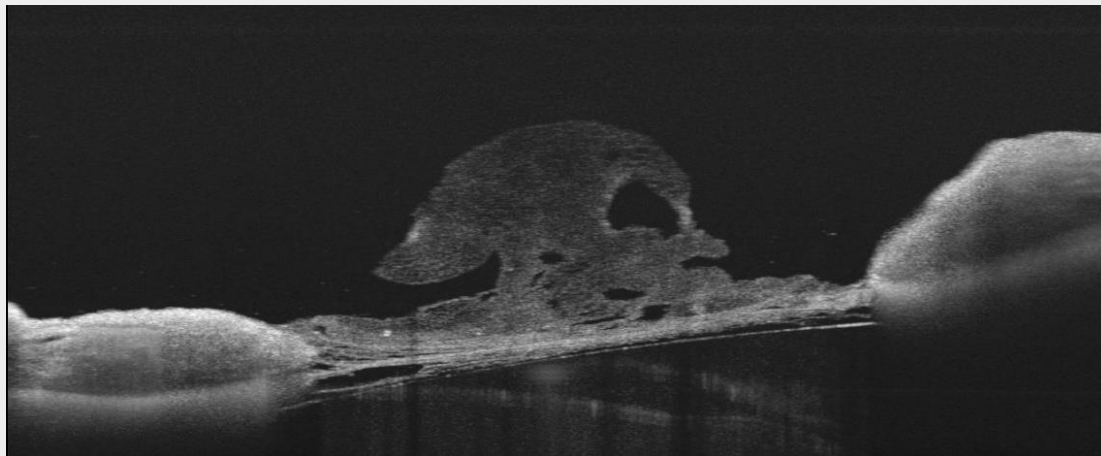
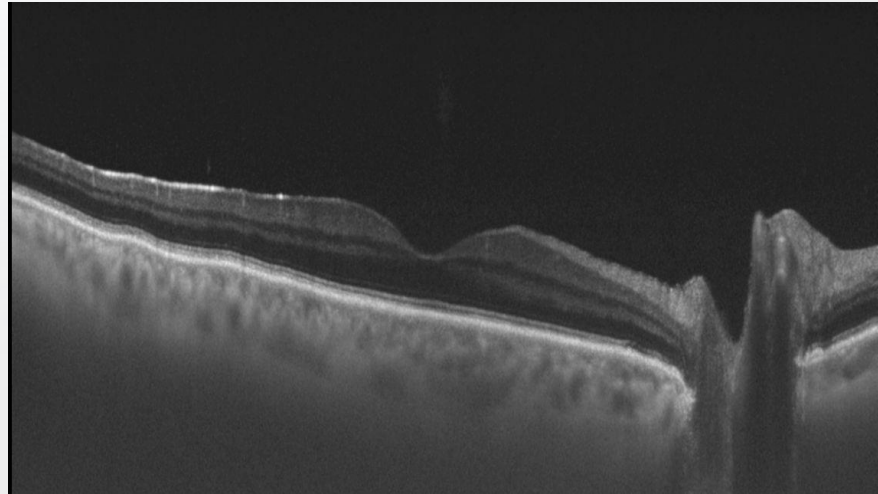
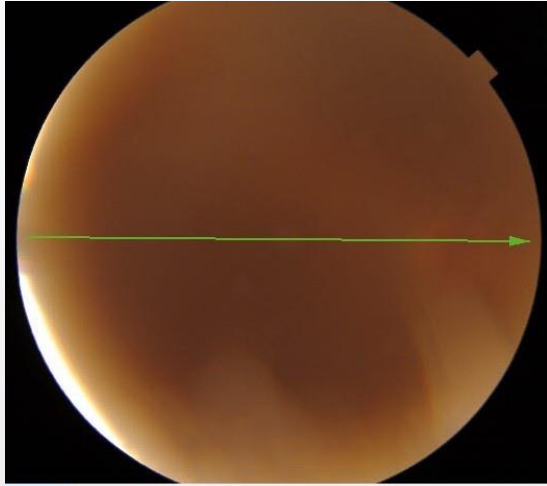


Vantaggi tecnologia swept source

Migliore penetrazione attraverso opacità, cataratte, emorragie

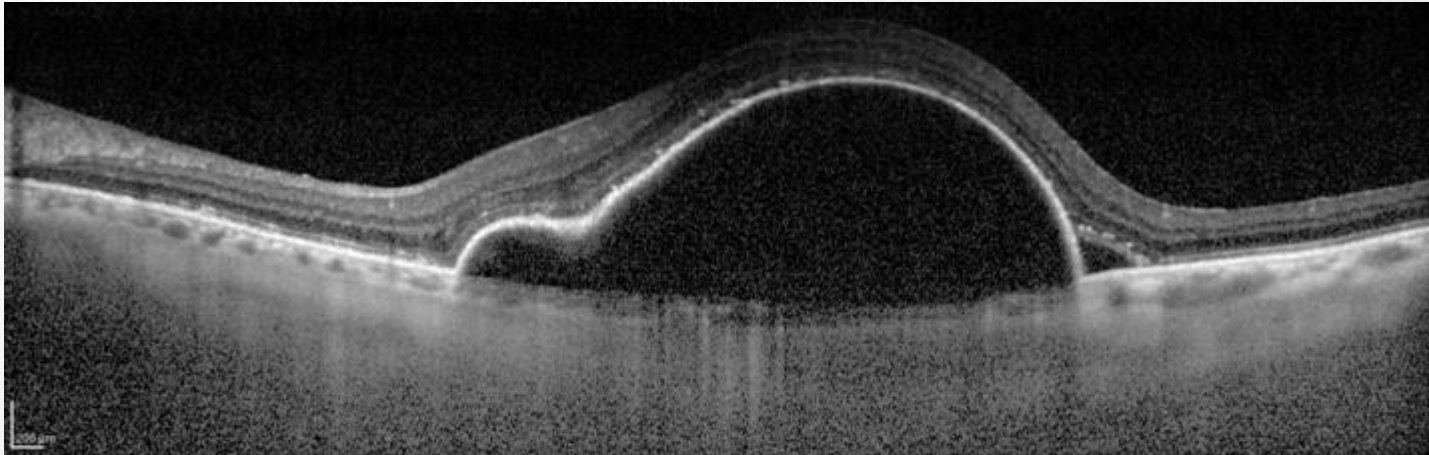


Vantaggi tecnologia swept source

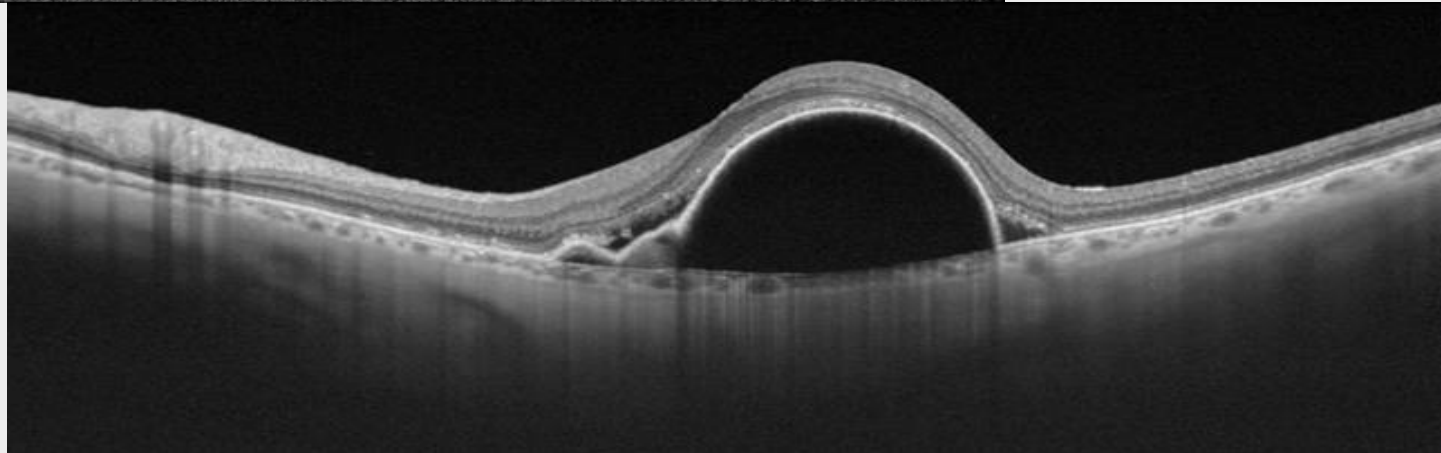


Vantaggi tecnologia swept source

Confronto OCT spectral domain – swept source



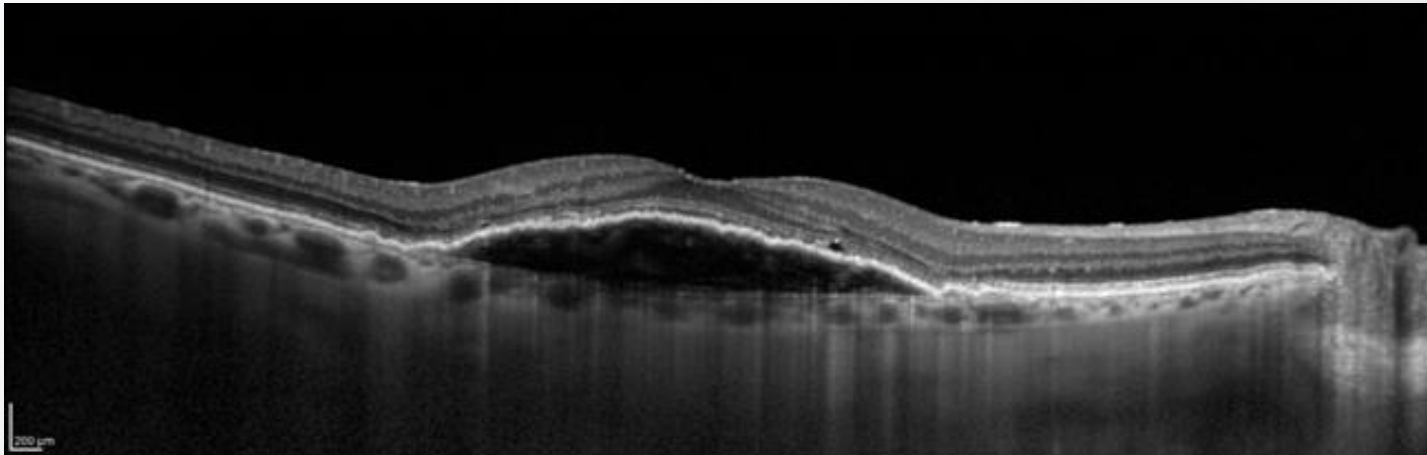
SD OCT



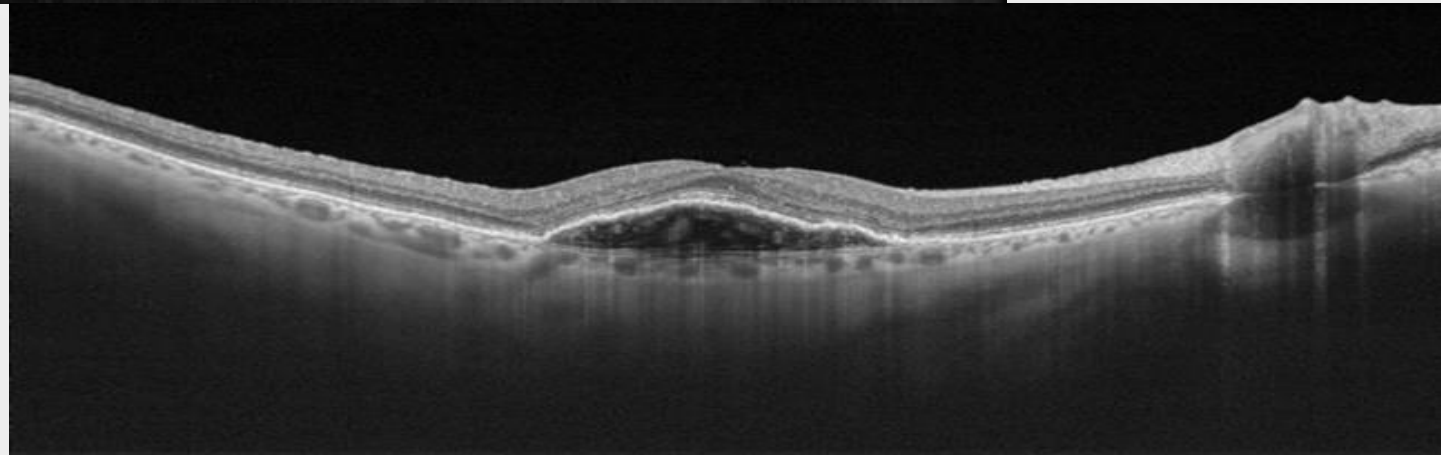
SS OCT

Vantaggi tecnologia swept source

Confronto OCT spectral domain – swept source

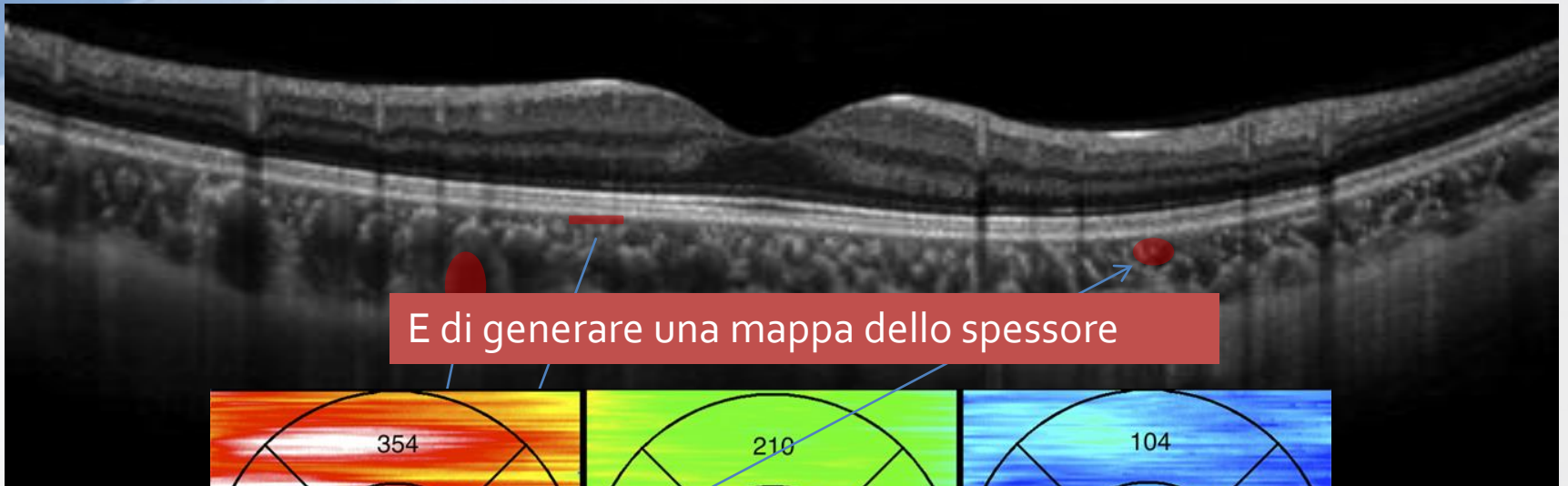


SD OCT

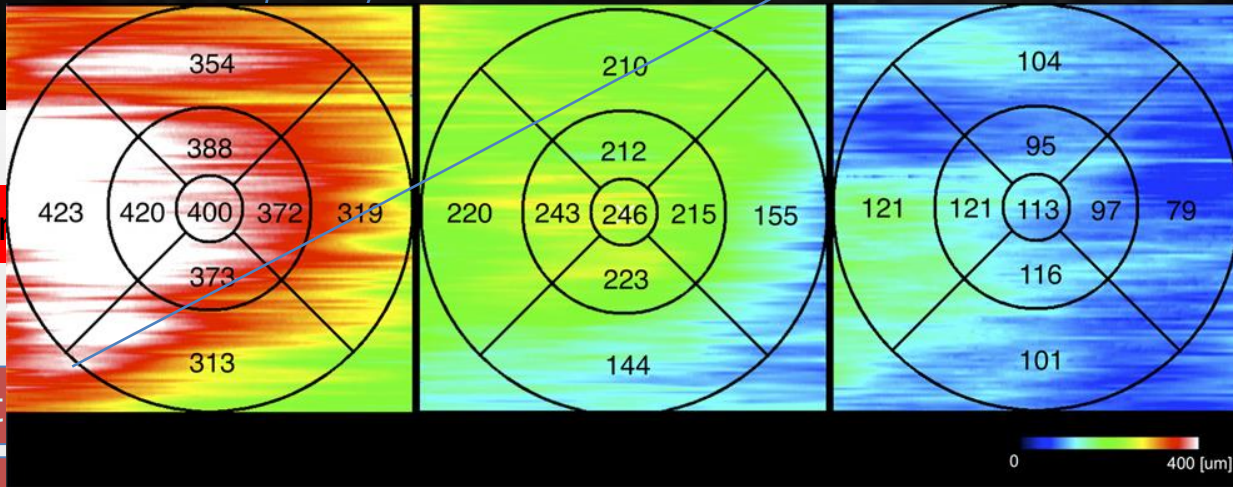


SS OCT

Gli OCT Swept source hanno la possibilità di valutare la coroide ad alta risoluzione



E di generare una mappa dello spessore



Ipermetrope

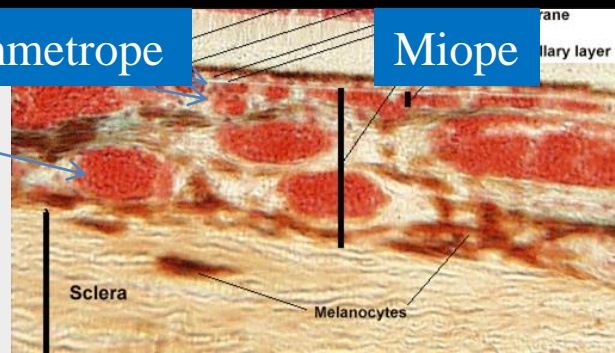
Emmetrope

Miope

Ipermetrope

Emmetrope

Miope

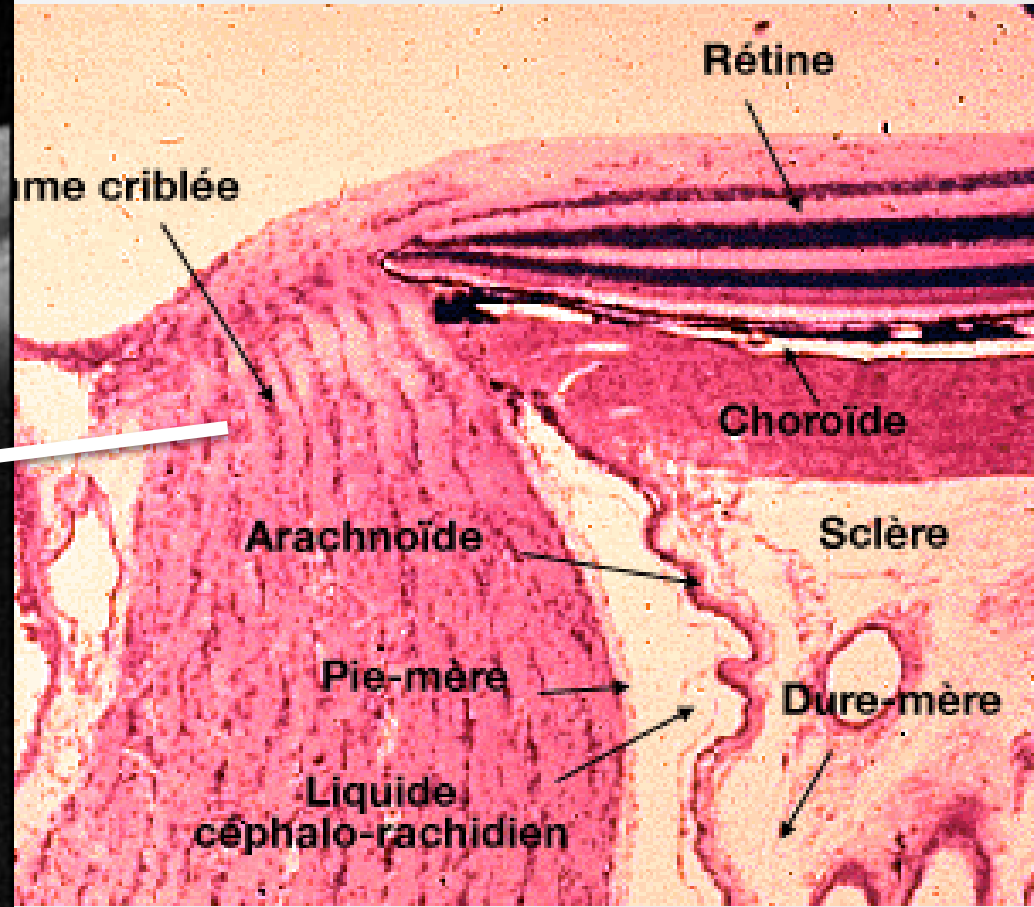
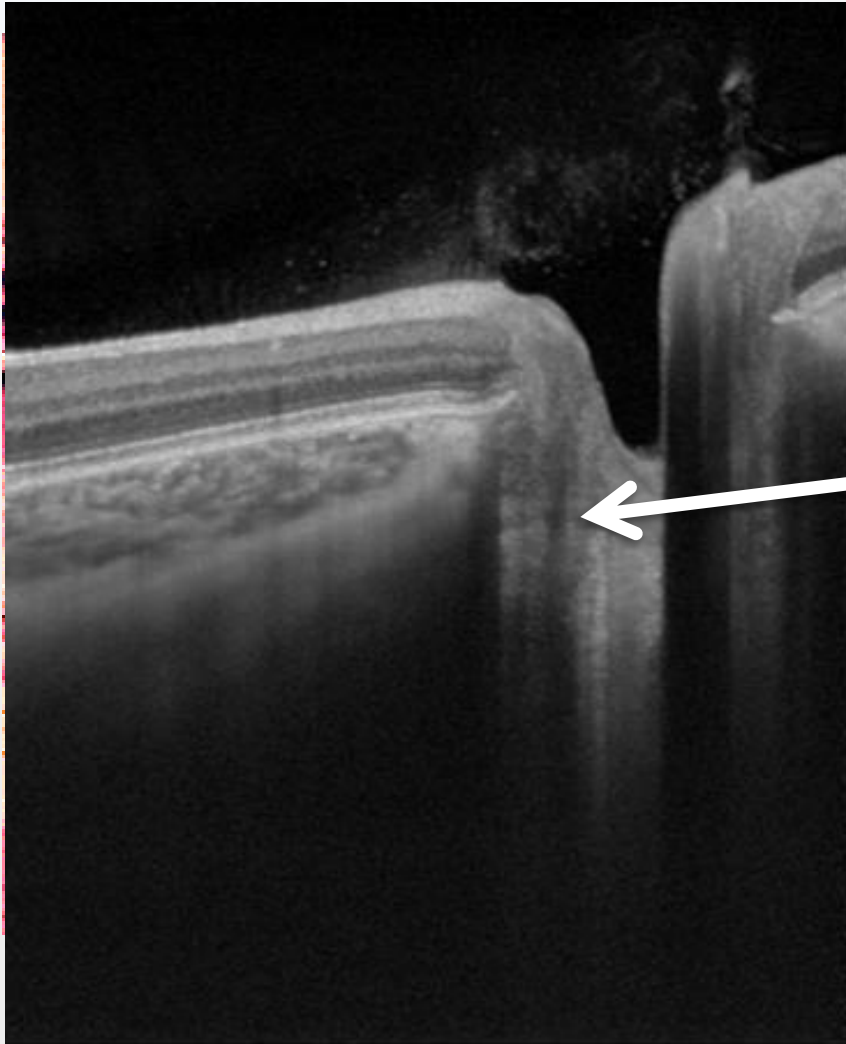


Vantaggi tecnologia swept source

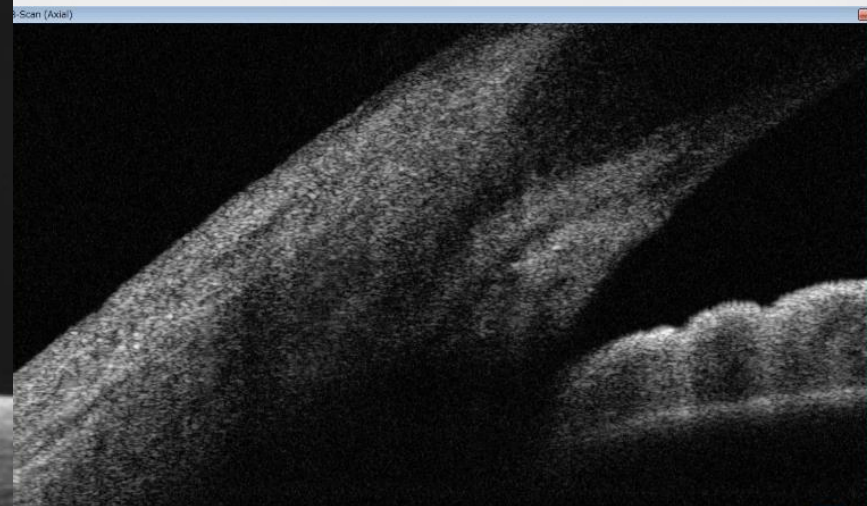
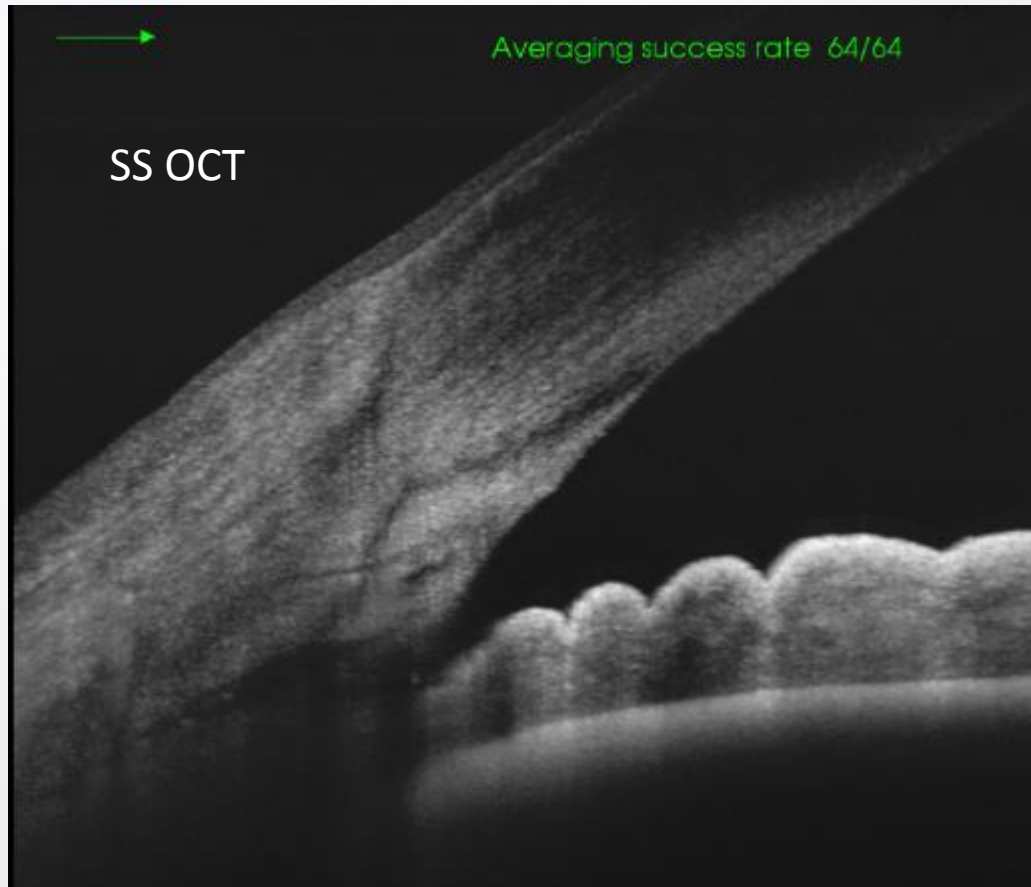


Miopi elevati

Lamina cribrosa

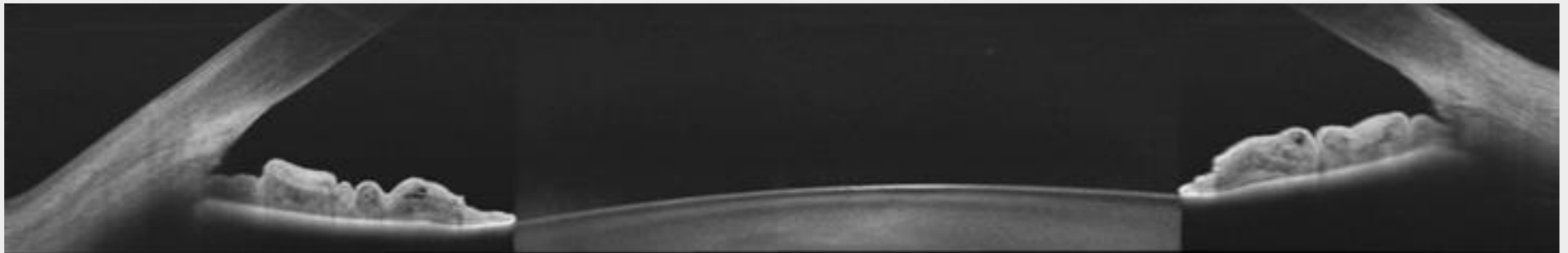
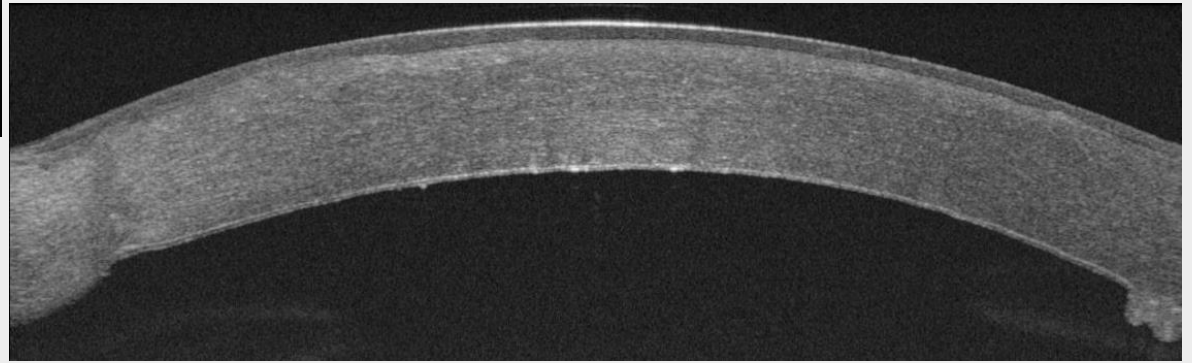
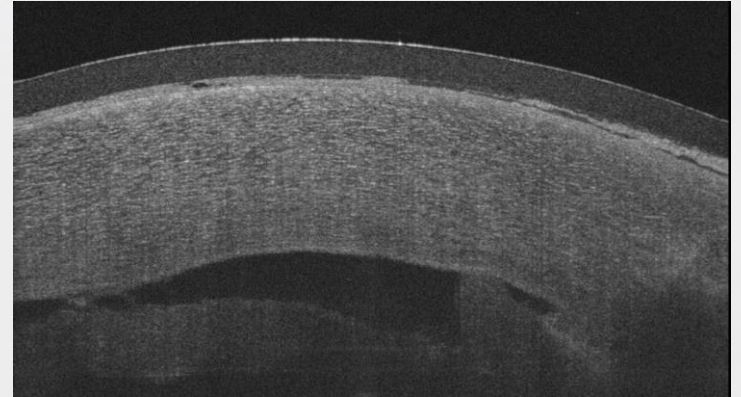
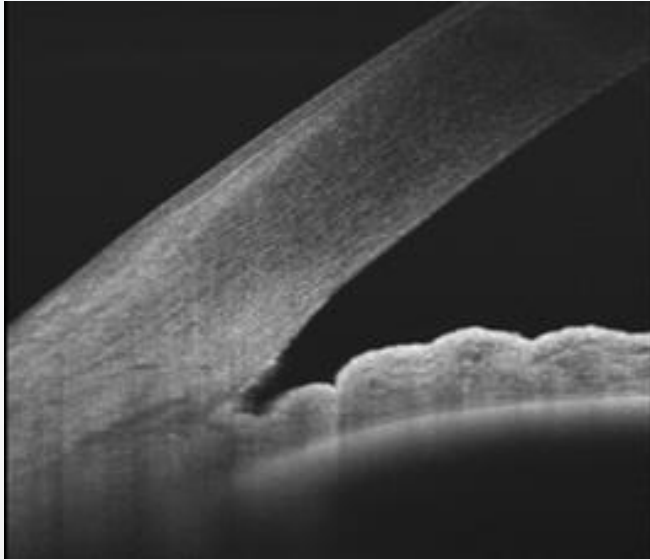


Segmento anteriore

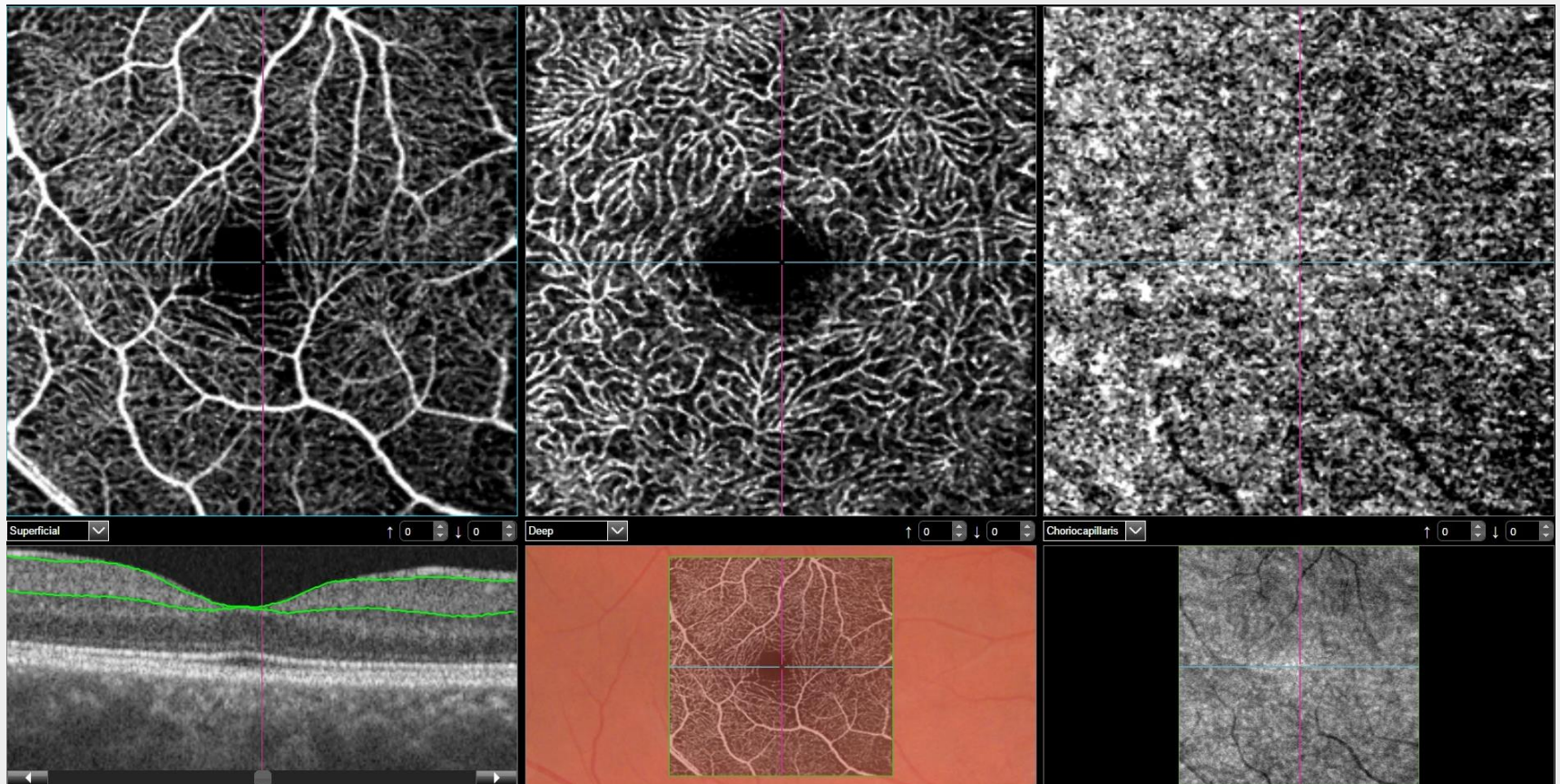


SD OCT

Segmento anteriore

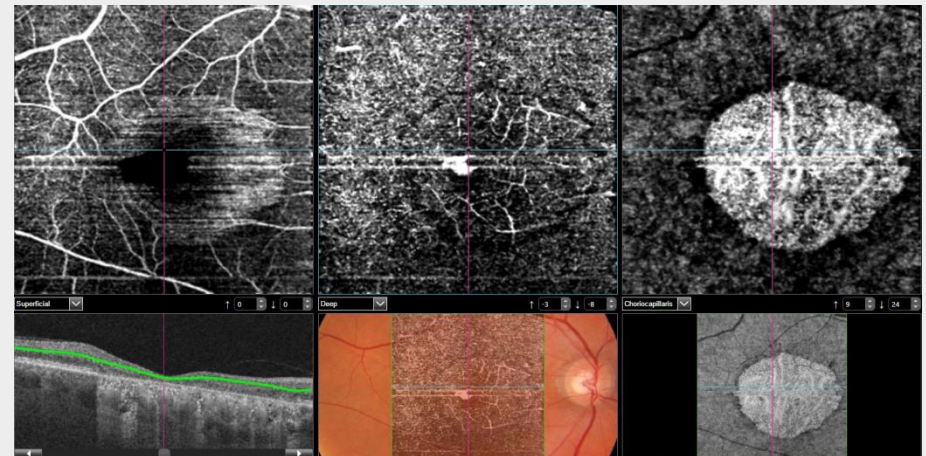
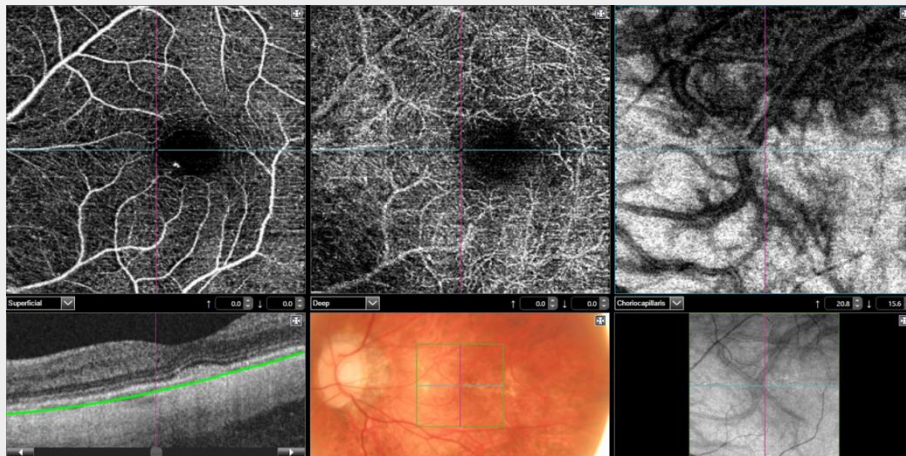
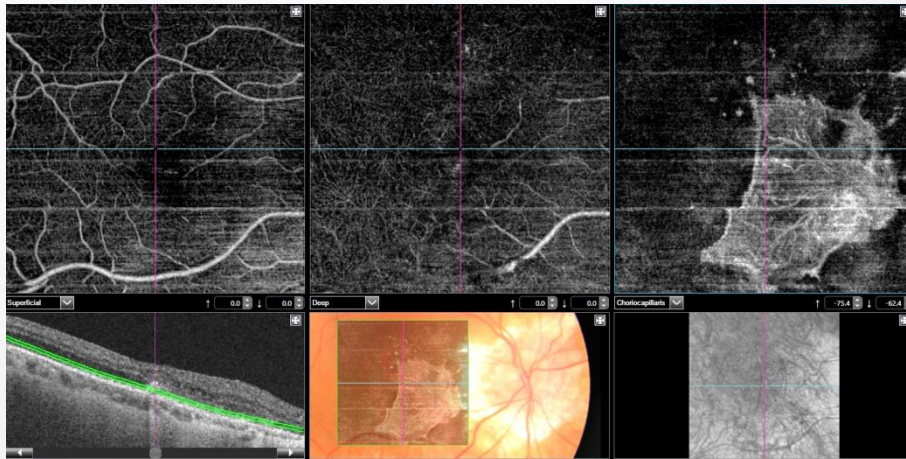


Angiografia OCT



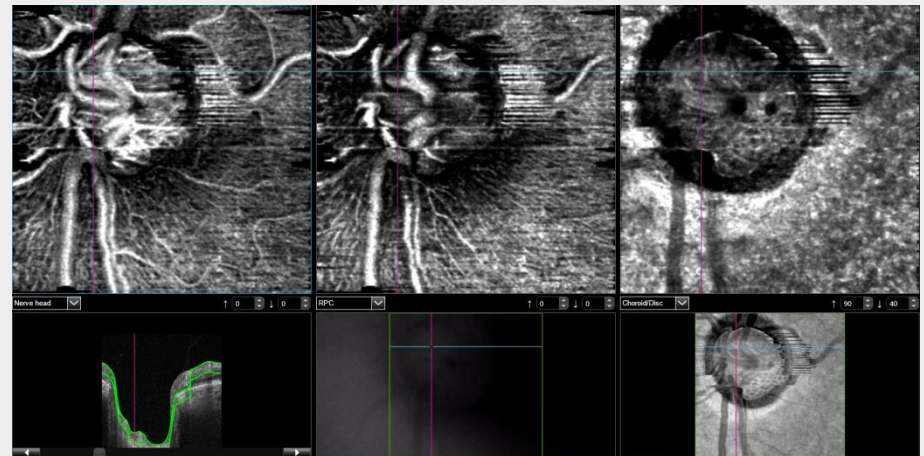
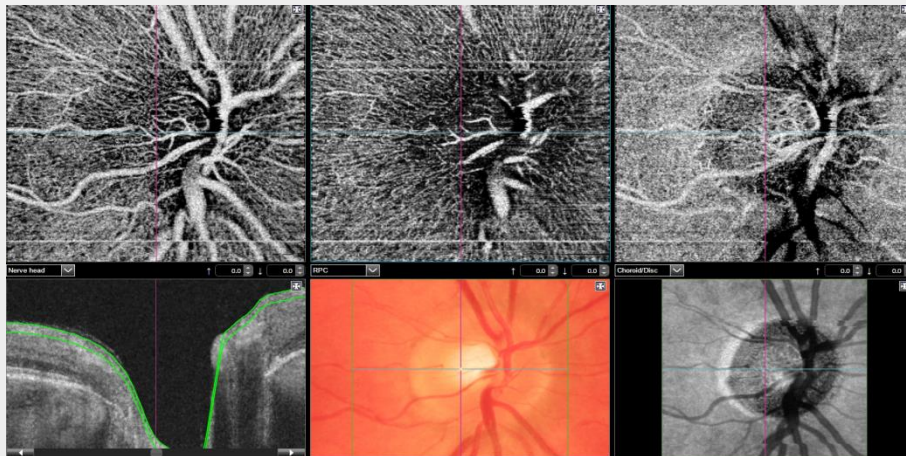
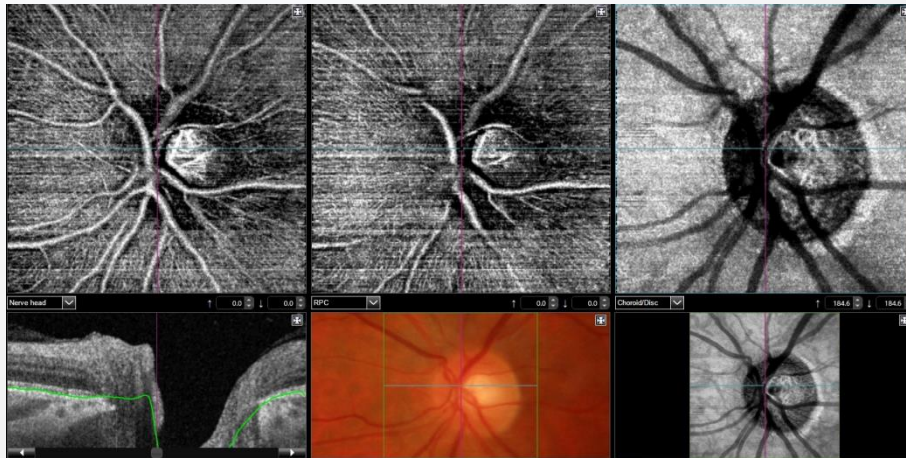
Angiografia OCT

Macula



Angiografia OCT

Papilla



Grazie per l'attenzione

