Supplementary Figure 1

A

\[
\rho = 0.9 \quad p < 0.0001
\]

short spectral channel

\[
\rho = 0.93 \quad p < 0.0001
\]

long spectral channel

B

\[
\rho = 0.79 \quad p < 0.0001
\]

\[
\rho = 0.82 \quad p < 0.0001
\]

Tm (ps) second measurement

Tm (ps) first measurement

Tm (ps) diluted pupils

Tm (ps) nondilated pupils

C

\[
\rho = 0.82 \quad p < 0.0001
\]

\[
\rho = 0.89 \quad p < 0.0001
\]

Tm (ps) left eye

Tm (ps) right eye
Supplementary Figure 1: Spearman correlation of mean fluorescence lifetime values in the short (left side) and the long (right side) spectral channel (Tm= mean fluorescence lifetime, ps= picoseconds). Data shown for the center (●), the inner ring (Δ) and the outer ring (□) of the ETDRS grid (n=31).

A) First versus second measurement: Subjects were measured twice (>1 hour apart) with nondilated pupils. Reproducibility in the short spectral channel for the center (●ρ=0.8, p<0.0001), the inner ring (Δρ=0.8, p<0.0001) and the outer ring (□ρ=0.7, p<0.0001) of the ETDRS grid (total: ρ=0.9, p<0.0001). B) Reproducibility in the long spectral channel for the center (●ρ=0.9, p<0.0001), the inner ring (Δρ=0.86, p<0.0001) and the outer ring (□ρ=0.87, p<0.0001) of the ETDRS grid (total: ρ=0.93, p<0.0001).

B) Nondilated (first measurement) versus dilated pupils. Correlation in the short spectral channel for the center (●ρ=0.66, p<0.0001), the inner ring (Δρ=0.62, p=0.0002) and the outer ring (□ρ=0.5, p=0.0046) of the ETDRS grid (total: p=0.79, p<0.0001). Correlation in the long spectral channel for the center (●ρ=0.69, p<0.0001), the inner ring (Δρ=0.6, p=0.0003) and the outer ring (□ρ=0.65, p<0.0001) of the ETDRS grid (total: ρ=0.82, p<0.0001).

C) Right versus left eye (dilated pupils). Correlation in the short spectral channel for the center (●ρ=0.53, p=0.0024), the inner ring (Δρ=0.51, p=0.0032) and the outer ring (□ρ=0.43, p=0.015) of the ETDRS grid (total: ρ=0.82, p<0.0001). Correlation in the long spectral channel for the center (●ρ=0.68, p<0.0001), the inner ring (Δρ=0.66, p<0.0001) and the outer ring (□ρ=0.73, p<0.0001) of the ETDRS grid (total: ρ=0.89, p<0.0001).
Supplementary Figure 2: Correlation of mean fluorescence lifetime values with the retinal thickness and the number of photons per pixel using Spearman correlation (Tm= mean fluorescence lifetime, ps= picoseconds). A) Correlation of the retinal thickness as measured by OCT (in µm) with Tm in the short spectral channel (left side) for the central area and the inner ring (ETDRS area N1) (total: ρ=0.61, p<0.0001) and in the long spectral channel (total: ρ=0.63, p<0.0001). B) Correlation of the retinal thickness with the number of photons per pixel in the short spectral channel for the central area and the inner ring (total: ρ=0.41, p=0.0011) and in the long spectral channel (total: ρ=0.50, p<0.0001). (n=31)