Integrated photoacoustic microscopy and optical coherence tomography for in vivo imaging of choroidal neovascularization

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CONCLUSIONS

1. We developed an integrated dual-modality system for choroidal imaging in rabbits including PAM and OCT.
2. The system has excellent performance and could achieve label-free vascular imaging at single-vessel resolution.
3. The PAM could noninvasively resolve retinal and choroidal blood vessels using a laser exposure dose (<150 mJ) below the ANSI safety limit (150 mJ) at 570 nm; and the OCT could distinguish different retinal layers, the choroid and the sclera.
4. The work may have a major impact on clinical translation of photoacoustic microcopy of the eye.

REFERENCES


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