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Handheld Reflectance Confocal Microscopy for the Diagnosis of Conjunctival Tumors.

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ABSTRACT

PURPOSE: To evaluate whether the handheld in vivo reflectance confocal microscopy that has been recently developed for the study of skin tumors is suitable for the diagnosis of conjunctival tumors.

DESIGN: Prospective study, observational case series.

METHODS: We prospectively evaluated the reflectance confocal microscopy features of 53 conjunctival lesions clinically suspicious for tumors of 46 patients referred to the University Hospital of Saint-Etienne (France) by using the handheld device. Twenty-three lesions were excised (3 nevi, 10 melanomas, 5 squamous cell carcinoma, 2 lymphomas, and 3 pinguecula/pterygium) while the other 30, presenting no reflectance confocal microscopy malignant features, were under follow-up for at least 1 year. Clinical reflectance confocal microscopy and histologic diagnosis were compared.

RESULTS: In vivo reflectance confocal microscopy diagnosis was in agreement with the histologic diagnosis in all cases and none of the lesions that were not excised show any clinical progression under follow-up. **CONCLUSION:** In vivo reflectance confocal microscopy with a handheld dermatology-dedicated microscope can play a role in the noninvasive diagnosis of conjunctival lesions. Further studies should be performed to better define the diagnostic ability of this technique.