The Ocular Surface

# In Vivo Confocal Microscopy of Corneal Nerves in Health and Disease

Andrea Cruzat, MD, Yureeda Qazi, MD, Pedram Hamrah, MD

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AUTHORS: Andrea Cruzat, MD,[1,2] Yureeda Qazi, MD,[1] and Pedram Hamrah MD[3,4]

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FOOTNOTES

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From [1]Cornea & Refractive Surgery Service, Department of Ophthalmology, Massachusetts Eye & Ear Infirmary, Harvard Medical School, Boston, MA, USA, [2]Department of Ophthalmology, Pontificia Universidad Católica de Chile, Santiago, Chile, [3]Boston Image Reading Center and [4]Cornea Service, New England Eye Center, Department of Ophthalmology, Tufts Medical Center, Tufts University School of Medicine, Boston, MA.

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Corresponding author: Pedram Hamrah, M.D, Department of Ophthalmology, Tufts Medical Center, Boston, MA, 02111, USA. Tel: 617-636-5321. E-mail: phamrah@tuftsmedicalcenter.org OR p_hamrah@yahoo.com

**ABSTRACT** In vivo confocal microscopy (IVCM) is becoming an indispensable tool for studying corneal physiology and disease. Enabling the dissection of corneal architecture at a cellular level, this technique offers fast and noninvasive in vivo imaging of the cornea with images comparable to that of ex vivo histochemical techniques. Corneal nerves bear substantial relevance to clinicians and scientists alike, given their pivotal roles in regulation of corneal sensation, maintenance of epithelial integrity, and proliferation and promotion of wound healing. Thus, IVCM offers a unique method to study corneal nerve alterations in a myriad of conditions, such as ocular and systemic diseases and following corneal surgery, without altering the tissue microenvironment. Of particular interest has been the correlation of corneal subbasal nerves to their function, which has been studied in normal eyes, contact