Conjunctival UV Autofluorescence in Eye Care Practitioners

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Purpose
Autofluorescence of UltraViolet (UV) light from the conjunctiva highlights early damage not always seen in white light, occurring in localised areas, and can be present from a young age which map to active cellular changes due to UV and environmental exposure.

Methods
• 307 eyecare practitioners (ECPs) from Czech Republic, Germany, Greece, Kuwait, Netherlands, Sweden, Switzerland, UAE & UK attending education events in 2012-3
• Age 38.5 years ± 12.3 (range 19-68), 40% male
• Right eyes imaged nasally & temporally using a Nikon D100 camera and dual flash units through UV filters, as described by Coroneo (Ooi et al., 2006)
• UV autofluorescence outlined using Image J software
• Demographics & lifestyle recorded via questionnaire with drop down menu

Results
• 62% had some conjunctival damage indicated by UV autofluorescence
• Larger area (p = 0.005) nasally (2.95±4.52 mm²) than temporally (2.19±4.17 mm²)

Conclusion
• UV conjunctival damage common even in Europe and Middle East amongst ECPs - hence importance of recommending comprehensive UV protection of wide brimmed hat, sunglasses and UV blocking CLs
• Greater damage nasally explained by peripheral light focusing effect

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Reference:

*Johnson & Johnson Vision Care is part of Johnson & Johnson Medical Ltd.