

# Narrow Band Imaging reveals field cancerisation undetected by conventional White Light: optical diagnosis versus histopathology

Jeroen Westra<sup>1</sup>, Manon Zwakenberg<sup>1</sup>, Gyorgy Halmos<sup>1</sup>, Bernard van der Laan<sup>1</sup>, Bert van der Vegt<sup>2</sup>, and Boudewijn Plaat<sup>1</sup>

<sup>1</sup>Universiteit Groningen Department of Otorhinolaryngology

<sup>2</sup>Universitair Medisch Centrum Groningen Pathologie en Medische Biologie

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## Abstract

**Objective** To assess whether narrow band imaging (NBI) detects fields of cancerisation around suspicious lesions in the upper aerodigestive tract, which were undetected by white light imaging (WLI). **Method** In 96 patients with laryngeal and pharyngeal lesions suspicious for malignancy, 206 biopsies were taken during laryngoscopy: 96 biopsies of suspicious lesions detected by both WLI and NBI (WLI+/NBI+), 60 biopsies adjacent mucosa only suspicious with NBI (WLI-/NBI+), and 46 biopsies of NBI and WLI unsuspected mucosa (WLI-/NBI-) as negative controls. Optical diagnosis according to the Ni-classification was compared with histopathology. **Results** Signs of (pre)-malignancy were found in 88% of WLI+/NBI+ biopsies, 32% of WLI-/NBI+ biopsies, and 0% in WLI-/NBI- ( $p < .001$ ). In 58% of the WLI-/NBI+ mucosa any form of dysplasia or carcinoma was detected. **Conclusion** The use of additional NBI led to the detection of (pre)-malignancy in 32% of the cases, that would have otherwise remained undetected with WLI alone. This highlights the potential of NBI as a valuable adjunct to WLI in the identification of suspicious lesions in the upper aerodigestive tract.

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