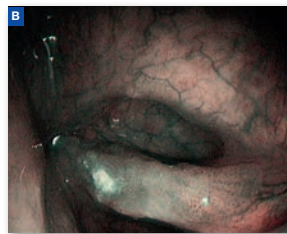


## CONFIDENCE IN EARLY LARYNGEAL CANCER DETECTION



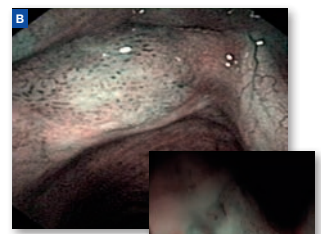
“ The benefit of NBI truly is highly valuable for the diagnosis and staging of laryngeal cancer. I strongly recommend the fast adoption of this revolutionary technology. Hospitals that seek to strengthen their ENT competence should not do without it. ”

*Prof. Giorgio Peretti, Brescia University Medical School*



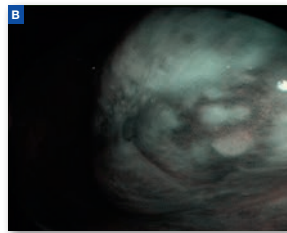
**Fig. 1:**

**A.** Intraoperative endoscopy by WL-HDTV 70° telescope shows a leuko/erythroplakia of the anterior and middle thirds of the right vocal cord. **B.** Intraoperative endoscopy by NBI-HDTV 70° telescope shows the typical neoangiogenic pattern (brownish spotted areas) on the posterior third of the vocal cord then confirmed at histopathologic examination to be carcinoma in situ.



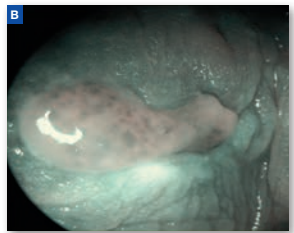
**Fig. 2:**

**A.** Flexible preoperative video endoscopy (above) and intraoperative view by 120° rigid telescope (below) by WL-HDTV of erythroplakia involving the left vocal cord. **B.** The same view by NBI-HDTV shows better definition of the lesion's margins and the typical vascular pattern. The histological examination confirmed the lesion to be carcinoma in situ.



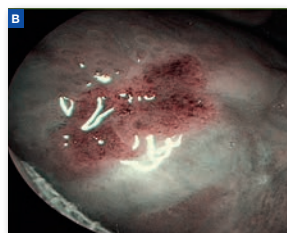
**Fig. 3:**

**A.** Rigid preoperative endoscopy shows a leuko/erythroplakia of the right margin of the mobile tongue in a patient with oral cavity lichen planus. **B.** The same view by NBI-HDTV shows better definition of the lesion's margins and the typical vascular pattern surrounding the entire leukoplakia. The histological examination confirmed the lesion to be a moderate dysplasia.



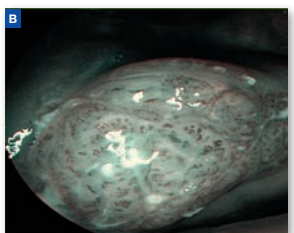
**Fig. 4:**

**A.** Rigid intraoperative endoscopy shows a lesion suspicious for granuloma of the left margin of the mobile tongue after multiple resection for oral cavity squamous cell carcinoma. **B.** The same view by NBI-HDTV with evidence of the typical vascular pattern suspicious for recurrent disease confirmed by histology as microinvasive carcinoma.



**Fig. 5:**

**A.** Rigid intraoperative endoscopy by WL-HDTV shows an erythroplakia of the left margin of the mobile tongue previously biopsied and defined as chronic inflammatory lesion. **B.** The same view by NBI-HDTV shows better definition of the lesion's margins and the typical vascular pattern. The histology revealed it to be adenosquamous carcinoma.



**Fig. 6:**

**A.** Rigid intraoperative endoscopy by WL-HDTV shows an exophytic erythroplakia of the inferior alveolar crest in a patient previously treated for oral cavity squamous cell carcinoma. **B.** The same view by NBI-HDTV shows better definition of the lesion's margins and the typical vascular pattern. The histology revealed it to be a recurrence of invasive carcinoma.

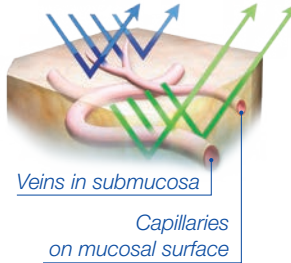
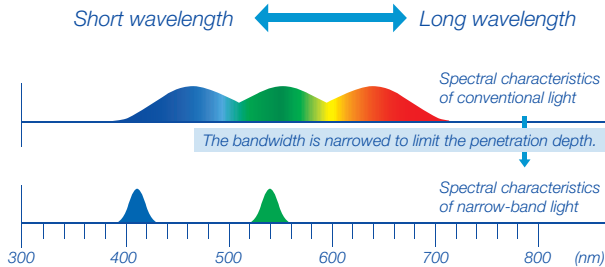
# CONFIDENCE IN EARLY LARYNGEAL CANCER DETECTION

## What Is Narrow Band Imaging (NBI)?

NBI is an optical image enhancement technology that improves the visibility of vessels and other tissues on the mucosal surface. Narrow-band illumination, which is strongly absorbed by hemoglobin and penetrates only the surface of tissues, is ideal for enhancing the contrast between the two. As a result, under narrow-band illumination, capillaries on the mucosal surface are displayed in brown on the monitor and veins in the submucosa are displayed in cyan.



### Penetration Depth of Light according to Wavelength



### NBI Image on the Monitor

Capillaries on the mucosal surface are displayed in brown, and veins in the submucosa are displayed in cyan.

## Prospective Study Proves Advantages of NBI

Especially the combination of HDTV and NBI significantly improves positive and negative predictive rates.

NBI provides better definition of tumor staging and surgical margins in pre- and intraoperative settings. NBI is also valuable in postoperative settings due to its ability in early detection of persistent, recurrent, and metachronous tumors.

### Narrow band imaging and high definition television in the assessment of laryngeal cancer: a prospective study on 279 patients

**Authors:** Cesare Piazza, Daniela Cocco, Luigi De Benetto, Francesca Del Bon, Piero Nicolai, Giorgio Peretti

**Journal:** Eur Arch Otorhinolaryngol, DOI 10.1007/s00405-009-1121-6

## Recommended NBI Set

### ENF-VH – Details in High Definition

- The Chip-on-the-tip HD technology delivers clear and bright images
- No fibers
- No black dots
- No wear-out
- Supports Narrow Band Imaging
- Exceptional luminosity
- Wide field of view



### HD Laryngoscope – High Definition and High Durability

- No refocussing required during procedures
- Reduced distance between optics and distal end
- Autoclavable plus automated cleaning and disinfection
- Long lifetime



### EVIS EXERA III Video Platform

- Unprecedented image quality
- Crystal-clear images with HDTV
- Expanded compatibility
- Refined ergonomics



### 3CCD HD Camera Head

- Full HD 3CCD
- Enhanced resolution and control
- Autoclavable – cost-effective reprocessing
- Convenient remote control



Specifications, design, and accessories are subject to change without any notice or obligation on the part of the manufacturer.

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