For Healthcare Professionals

ENT

NBI Global Atlas

Conventional White Light Imaging versus Narrow Band Imaging

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https://www.olympusprofed.com/jp/32564/

上記QRコードリンクより本資材の内容と症例動画をご覧いただくことができます。

Kenji Okami. MD PhD
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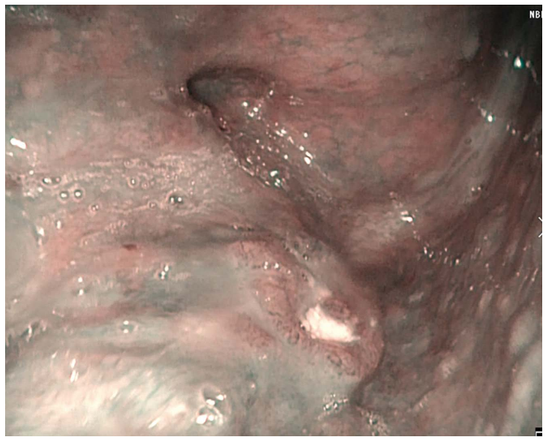
Superficial squamous cell carcinoma in the left pyriform sinus

Endoscopic Finding;

White light image demonstrate a small mucosal nodule in the left pyriform sinus. This is not the specific findings of malignancy. However, NBI image exhibited a well-demarcated brownish area with irregularly scattered vascular proliferation pattern on and around the nodule, which is the specific sign of the superficial cancer of the hypopharynx

white light

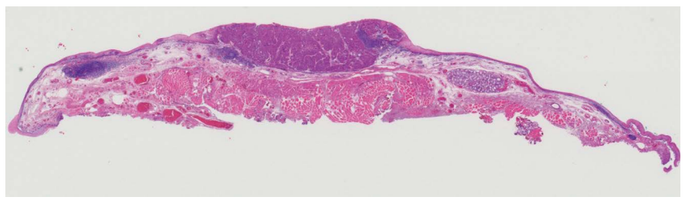


NBI

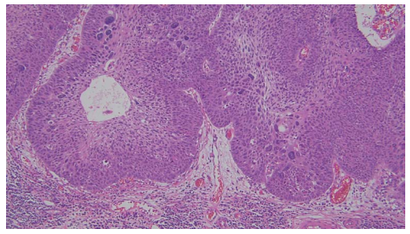
Equipment: OTV-S190, CLV-S190, ENF-VH

Pathological Finding;

Superficial squamous cell carcinoma with focally invading into the subepithelial layer. There was no muscular invasion.
Tumor size was 12 mm in the greatest dimension and 2 mm in the thickness.
Both horizontal margin and vertical margin were negative.



Pathological image (macro)



Pathological image (micro)

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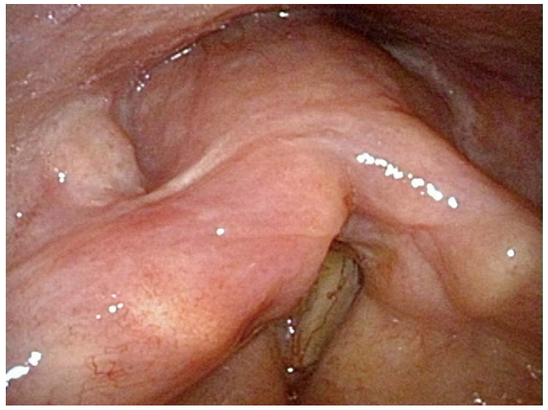
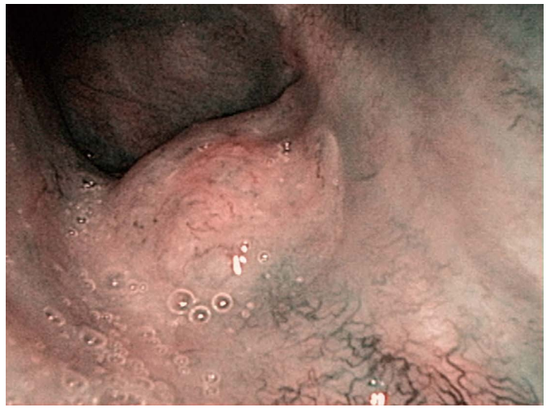
Recurrent superficial cancer in the right piriform sinus after chemoradiotherapy

Endoscopic Finding;

White light image only demonstrates the small and thin protruding whitish lesion in the right piriform sinus. However, NBI image demonstrates branched and slightly dilated vessels on the surface of the tumor after the endoscope is brought close to the lesion. This finding suggests that the cancer invades into the subepithelial layer. Furthermore NBI finding shows the cancer horizontal margin clearly showing the disappearance of the arborescent vascular network at the borderline of the normal part and cancer lesion.



white light

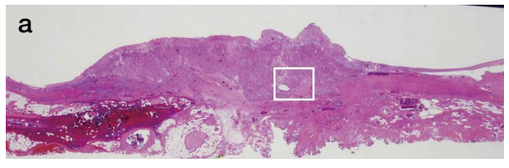


NBI

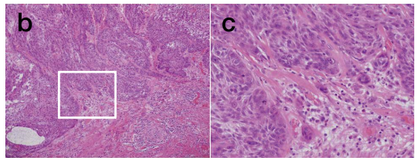
Equipment: OTV-S190, CLV-S190, ENF-VH

Pathological Finding;

Figure b is the enlarged view of white quadrangle in figure a and figure c is the enlarged view of white quadrangle in figure b.
There was the squamous cell carcinoma making cancer nest and invading into the subepithelial layer.
Tumor size was 10mm x 7mm and tumor thickness was 2mm.
Both horizontal margin and vertical margin were negative.
No lymphatic, no venous and no perineural invasion existed.



Pathological image (macro)



Pathological image (micro)

Acknowledgment
Hiroshi Kawachi, Head, Department of Pathology, The Cancer Institute Hospital of JFCR and Yusuke Kiyokawa,
Director, Department of Otolaryngology, Japanese Red Cross Musashino Hospital, contributed to this atlas.

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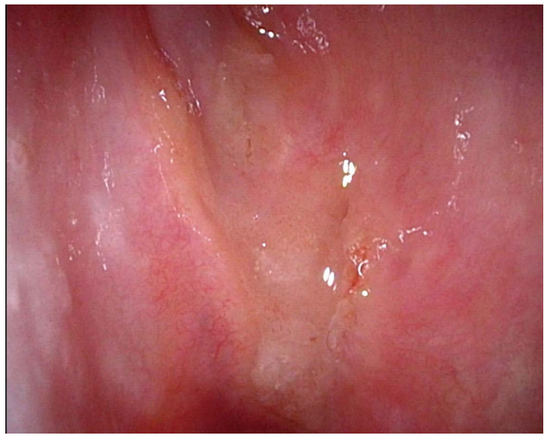
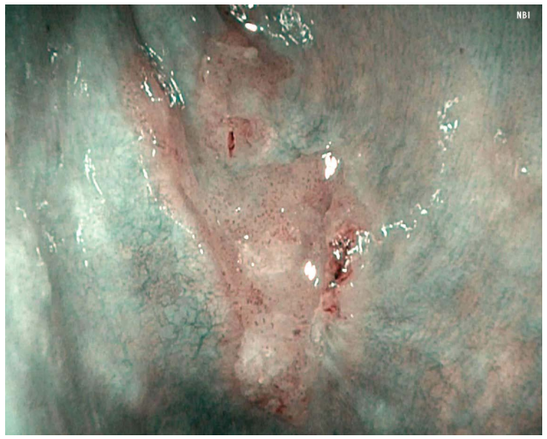
Superficial cancer in the right piriform sinus

Endoscopic Finding;

NBI image demonstrates a well-demarcated brownish area with irregularly scattered brown dots in the right piriform sinus, which is hardly detectable on the white light image. The lesion is entirely flat in the most region and is slightly depressed in the lower part of the image. These findings suggest a superficial hypopharyngeal cancer in the right piriform sinus.



white light

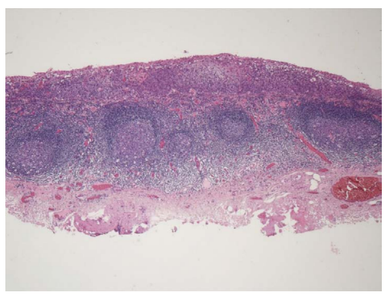


NBI

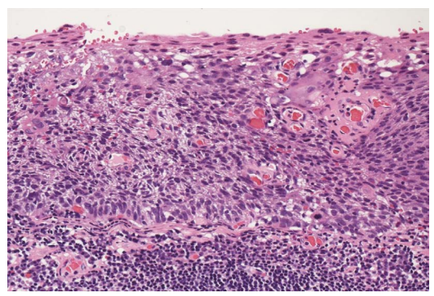
Equipment: OTV-S190, CLV-S190, ENF-VH

Pathological Finding;

Squamous cell carcinoma in situ with no apparent subepithelial invasion. Tumor size was 1.7cm in the greatest dimension and is 0.3cm in its thickness. Both horizontal margin (3mm) and vertical margin (0.9mm) was negative.



Pathological image (macro)



Pathological image (micro)

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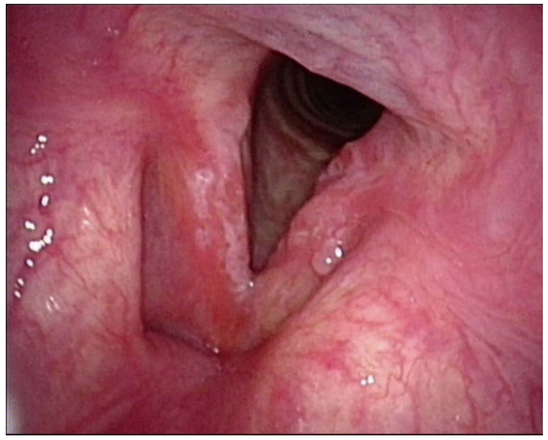
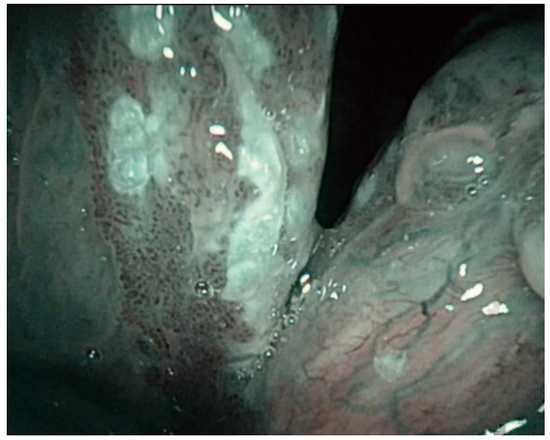
Squamous cell carcinoma in right vocal fold

Endoscopic Finding;

Flexible video endoscopy with NBI- lesions visible on both vocal folds. Rough surface and reddening visible in white light image. Clearly visible margins of the lesion and pathological vascularization in NBI image.



white light

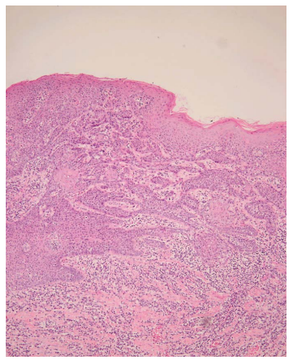


NBI

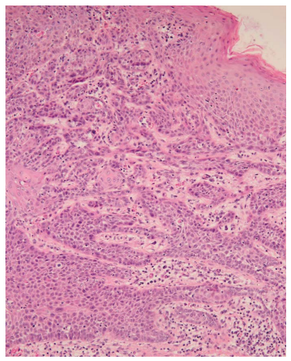
Equipment: OTV-S190, CLV-S190, ENF-VH

Pathological Finding;

Right vocal fold: severe dysplasia in the margins of the lesion with well-differentiated spinocellular cancer in the centre of the lesion.
Left vocal fold: severe dysplasia



Pathological image (macro)



Pathological image (micro)

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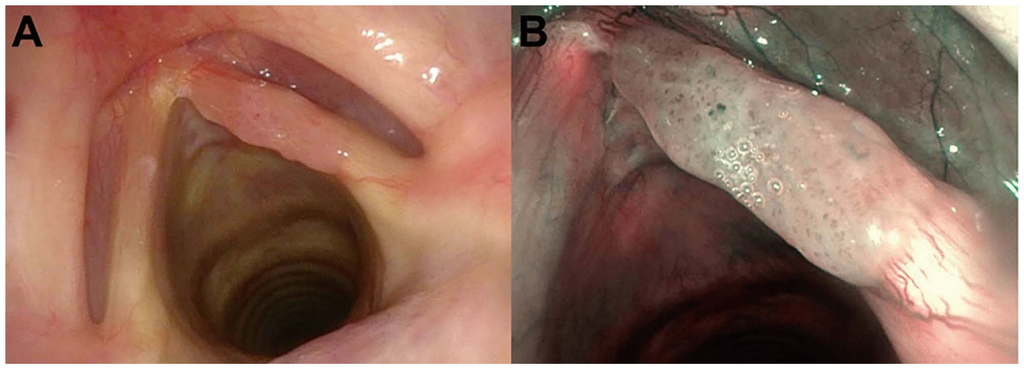
Glottic squamous cell carcinoma

Endoscopic Finding;

The examination of the glottis in white light (A) revealed an erythroplakia involving the right vocal cord. In NBI observation (B), some atypical perpendicular vascular abnormalities in terms of “dark spots”, clearly observed inside the lesion, raised the suspect of hiding at least a dysplastic transformation. The superficial margins of the lesion were better defined with the use of NBI, not involving the commissures, the ventricle and the subglottis. Vocal cords were mobile, and at the laryngostroboscopy a reduced amplitude of the mucosal wave on the right side was present.
The clinical staging is: cT1a glottic lesion of the right vocal cord.

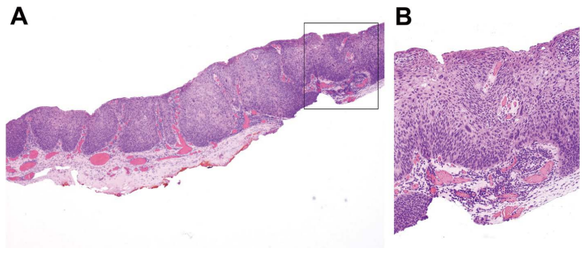


white light NBI

Equipment: OTV-S190, CLV-S190, ENF-VH

Pathological Finding;

H&E view of the specimen (magnification 4x, A and 10x, B), obtained by an excisional biopsy, in term of subligamental cordectomy, by transoral CO2 laser microsurgery. The pathologic diagnosis is a well-moderate differentiated invasive squamous cell carcinoma; the depth of infiltration is 0.22 mm and all margins are clear of neoplasia. No risk factors, as perineural invasion or lymphovascular invasion, are observed.
The final pathological staging is confirmed to be a glottic SCC pT1a R0.



Pathological image (4x) Pathological image (10x)

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& Super specialty Hospital, Lucknow

Anterior Commissure growth- Squamous cell carcinoma

Endoscopic Finding;

NBI demonstrate proliferative growth near anterior commissure and supracommissural area with well defined brownish dots indicative of squamous cell carcinoma. Advanced meandering and dilated end capillaries, few dot like vessel loops.

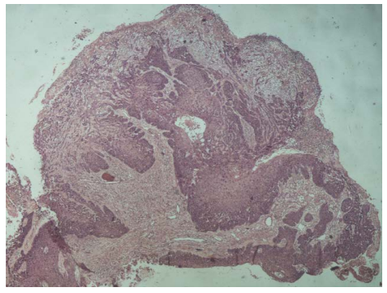
white light

NBI

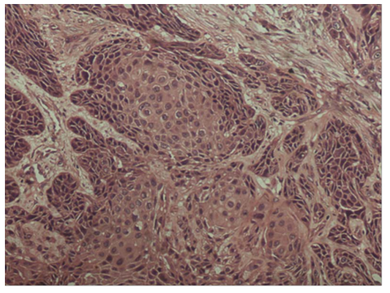
Equipment: CV-170, ENF-VH

Pathological Finding;

Histopathology shows stratified squamous cells displaying pseudo-epitheliomatous hyperplasia in large part with significant dyskeratosis and anisonucleosis with hyperchromsia. Subepithelial zone infiltrated by irregular nest and cord and sheets of atypically proliferated squamous cells. The cells show anisonucleosis with loss in nuclear orientation.
Conclusion- Anterior Commissure growth- Squamous cell carcinoma.



Pathological image (macro)



Pathological images (micro)

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