

# Pamela Youde Nethersole Eastern Hospital

## Department of Ear, Nose and Throat

Prospective study of using narrow-band imaging (NBI) technique to detect post-radiotherapy mucosal residual nasopharyngeal carcinoma (NPC)

### Introduction:

NBI technique is a new endoscopy examination system. It has an advantage of easy detection of vessel growth when compared to traditional white light endoscopy. White light is composed of an equal mixture of wavelengths. The shorter wavelengths only penetrate the top layer of the mucosa, while the longer wavelengths penetrate deep into the mucosa. NBI light is composed of just two specific wavelengths that are strongly absorbed by haemoglobin: blue light (415 nm) and green light (540 nm). This wavelength allows a better understanding of the vasculature of suspect lesions. NBI system was firstly used in detecting digestive system cancer, and it was subsequently proven to have benefit in detecting early oral cancer, laryngeal cancer, oropharyngeal cancer and nasopharyngeal carcinoma. However, the effectiveness of using NBI system to detect post-radiotherapy mucosal residual NPC is not well established.

### Objective:

This is a prospective study including 50-70 subjects which aims to analyze the endoscopic features of post-radiotherapy mucosal residual NPC using NBI system, and to establish the positive predicted value, negative predicted value, sensitivity and specificity of using both normal white light endoscopy and NBI system for detecting mucosal residual NPC.

### Workflow:

All newly confirmed NPC patients will undergo endoscopic examination (both white light and NBI) with images captured. At 8th week after completion of radiotherapy, those patients will undergo endoscopic examination again (both white light and NBI), with images captured and biopsy of the nasopharynx taken. All nasopharynx biopsy negative result cases will be treated as no post-radiotherapy mucosal residual NPC.

### Risk:

This is a non-invasive, painless procedure. The NBI wavelength is no harm to human. There is no major risk during the NBI endoscopy examination, but it may cause mild discomfort due to the slightly prolonged endoscopy examination time.

It is a voluntary study, for those patients who are participating in can withdraw from this study at any time without providing any reasons. It will not affect the current and subsequent follow up and treatment. If you have any enquiry, please feel free to contact our department Dr. Fergus Wong (25956111). For subject rights enquiries, please feel free to contact HKEC Ethics Committee (25956111)

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Patient's signature

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Patient's name

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Doctor's signature and name

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Date