



Clinical analysis of
Nasopharyngeal Carcinoma (NPC)
patients in ORL Clinic, HSNZ:
A study of 23 patients
(2013 - 2015)

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INTRODUCTION

- » **Nasopharyngeal carcinoma (NPC) is a non lymphomatous, squamous cell carcinoma arising from epithelial lining of nasopharynx**
- » **Head and neck (H&N) malignancy is in 6th place in the world among other malignancies**
- » **NPC is the most common H&N carcinoma**
- » **Endemic in Southern China, South East Asia (SEA), North Africa and Arctic region.**
- » **Epidemiology:**
 - Incidence varies from area to area, ↑ in endemic areas
 - Affect male > female
 - Peak age: 50-60 years old
 - Race: Chinese, South East Asian, Northern African , Alaskan, Inuits ; very uncommon among European and American

ETIOLOGY

- » Strong association to **Epstein-Barr Virus (EBV)** – oncogenic role, found in preinvasive lesion
- » Other risk factors:
 - High level of nitrosamines in preserved food
 - Cigarette smoking
 - Occupational exposure to chemical fumes, smoke, formaldehyde

OUTLINES OF PROBLEM

- » This clinical analysis is the **first official study** of NPC patients in our ORL clinic, HSNZ.
- » This study is significant as NPC is the most common H&N carcinoma and endemic in our region
- » Therefore, we should take a step forward and proves to others that we can **provide data** from our region to contribute to world's knowledge regarding NPC.
- » Furthermore, Department of Otorhinolaryngology (ORL) in Hospital Sultanah Nur Zahirah (HSNZ) is **the only referral center** in Terengganu.

OBJECTIVES:

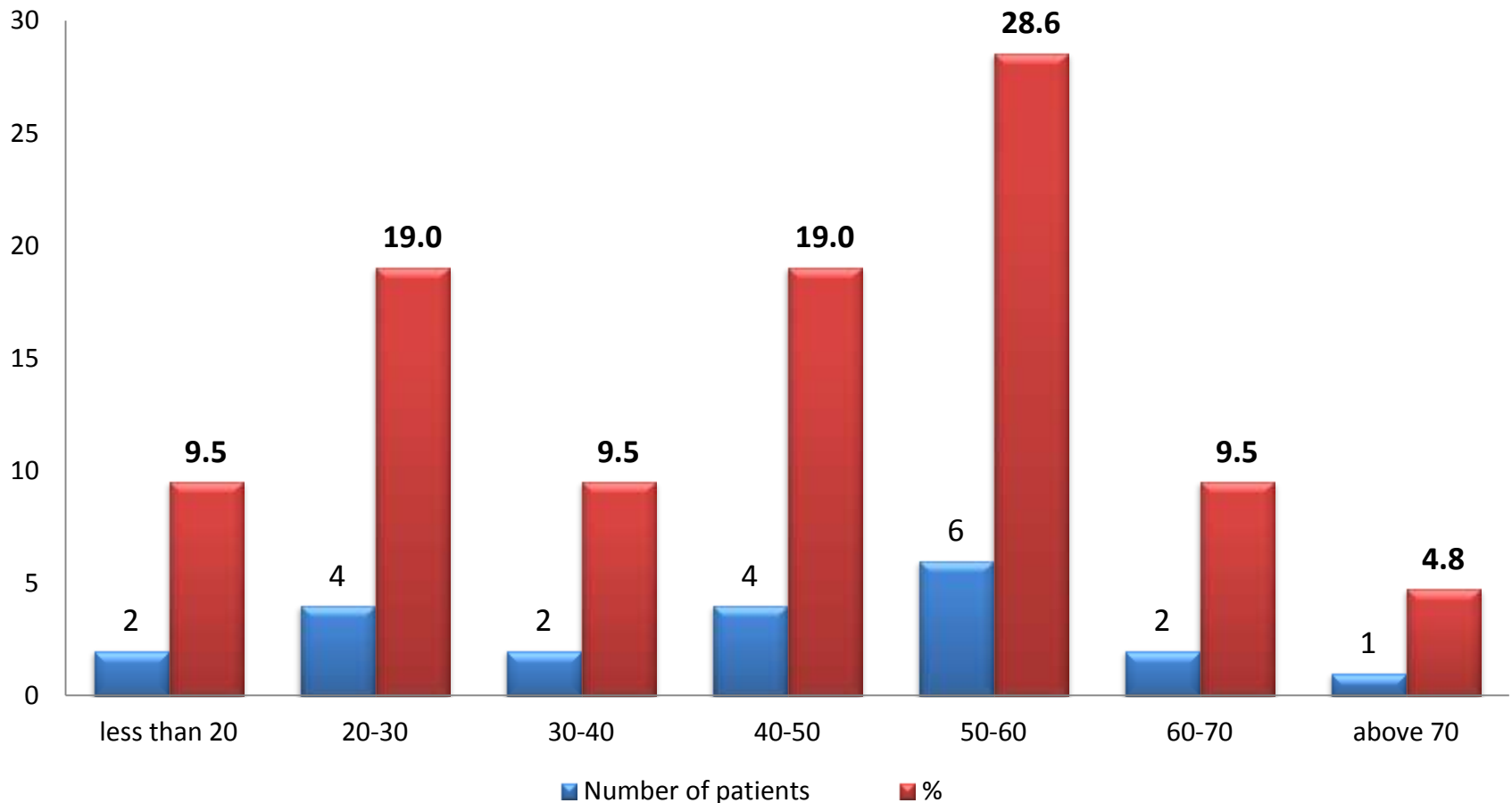
1. To compare our own NPC patient's demographic data to other studies
2. To identify and highlight most common presenting symptoms of NPC in ORL, HSNZ
3. To analyze common physical findings, histopathological classification and staging in our own NPC patients
4. To find out type of treatment received by patients and acknowledge causes of treatment and appointment discontinuation

STUDY METHODOLOGY

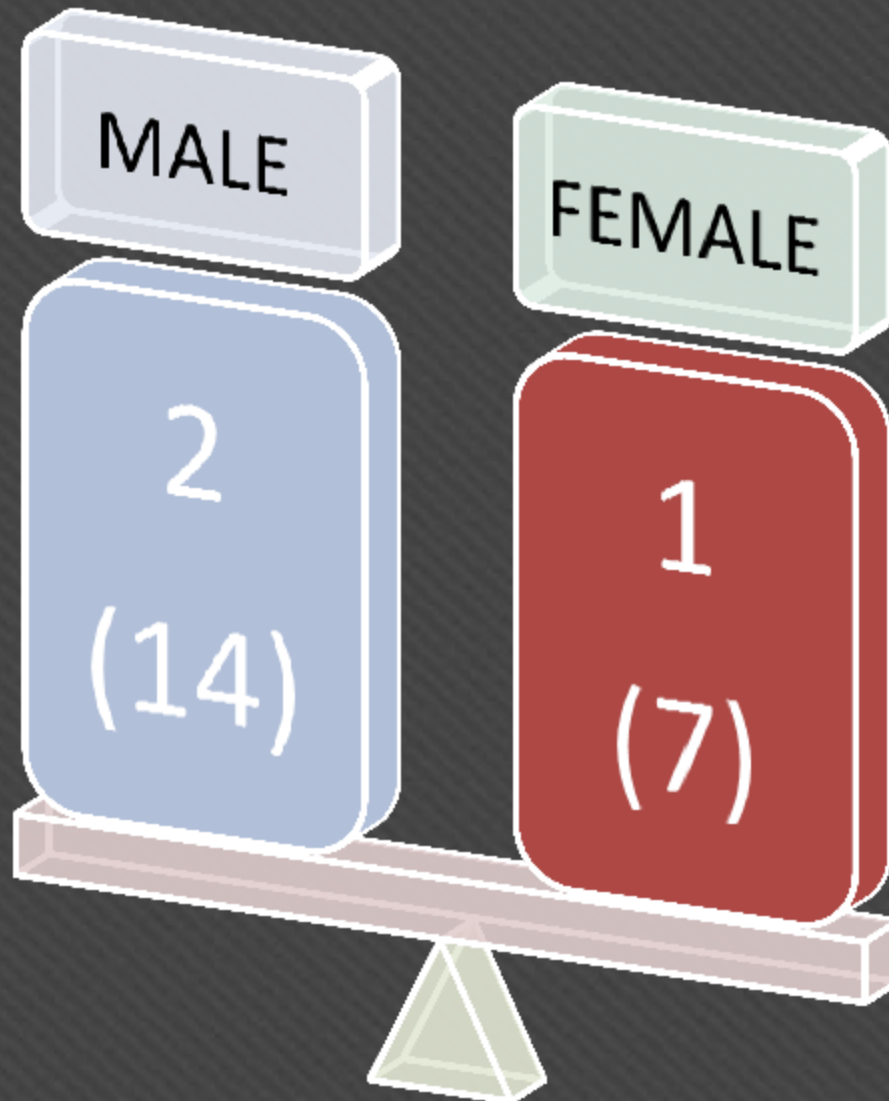
- » This study analysed NPC patients in HSNZ from 2013-2015, which account for **23 patients** in total
- » We **excluded 2 patients** that did not fit this study requirement:
 - 1 was diagnosed and treated at other hospital and referred to us for surveillance
 - 1 HPE was lymphoepithelial carcinoma with salivary gland origin but was treated as NPC
 - Therefore, this study includes **21 NPC patients**
- » All patients information used in this study was obtained from 2 sources:
 1. **National Cancer Registry**
 2. **Patient's medical record**
- » From here, we collected all the patient's necessary information → organized them into groups → analysed the compiled data → put together charts and graph for discussion.

ANALYSIS AND INTERPRETATION DEMOGRAPHIC DATA

Age group distribution of NPC patients in ORL clinic, HSNZ



GENDER DISTRIBUTION IN NPC PATIENTS



DEMOGRAPHIC: RACIAL DISTRIBUTION

RACE

Racial distribution among NPC patients in ORL clinic, HSNZ from 2013-2015 .

MALAY

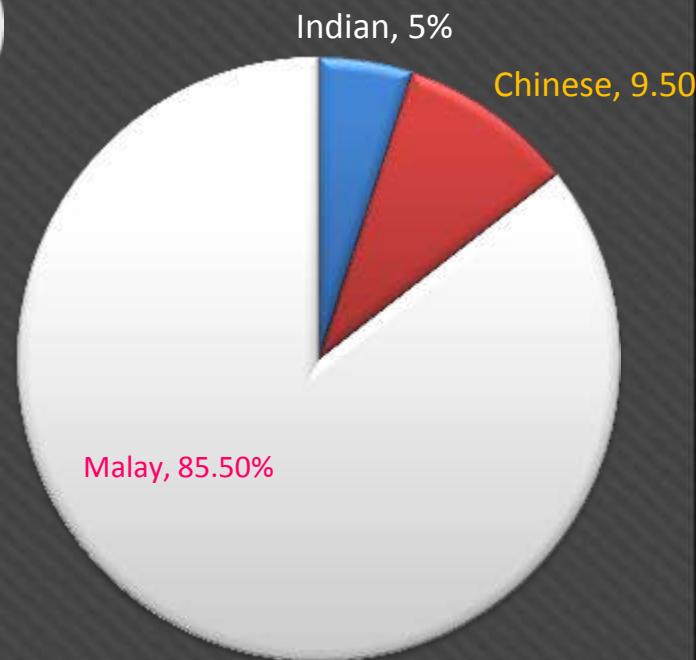
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CHINESE

2

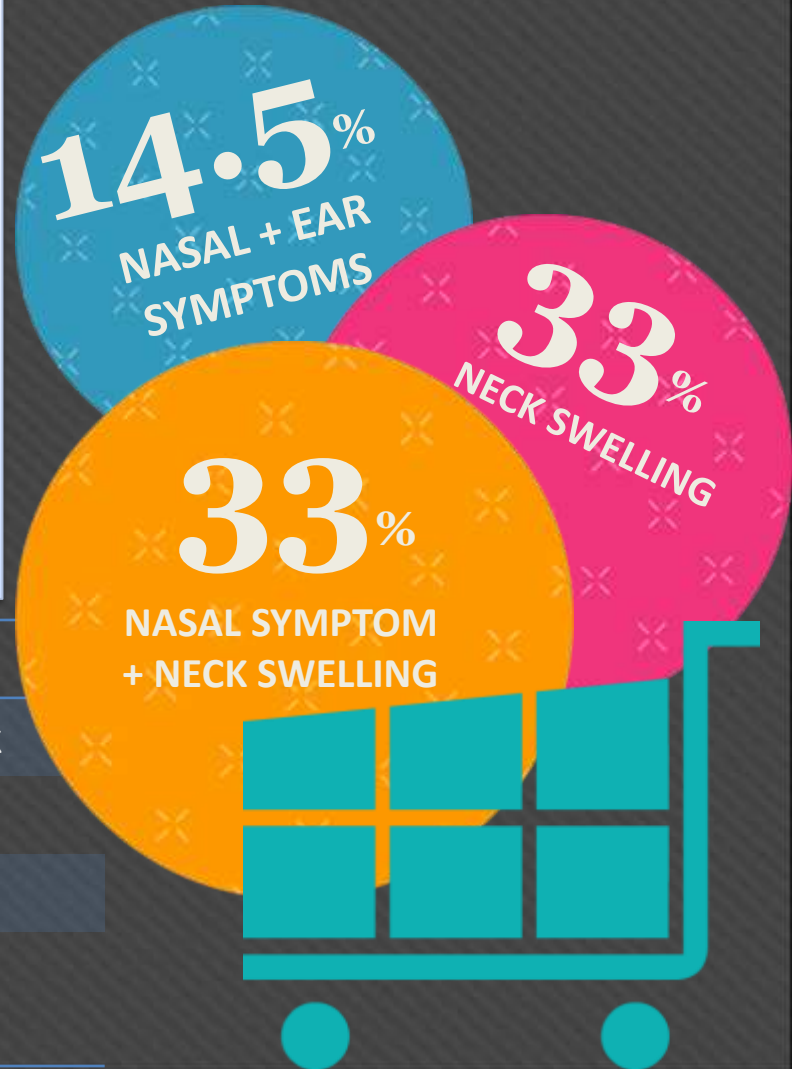
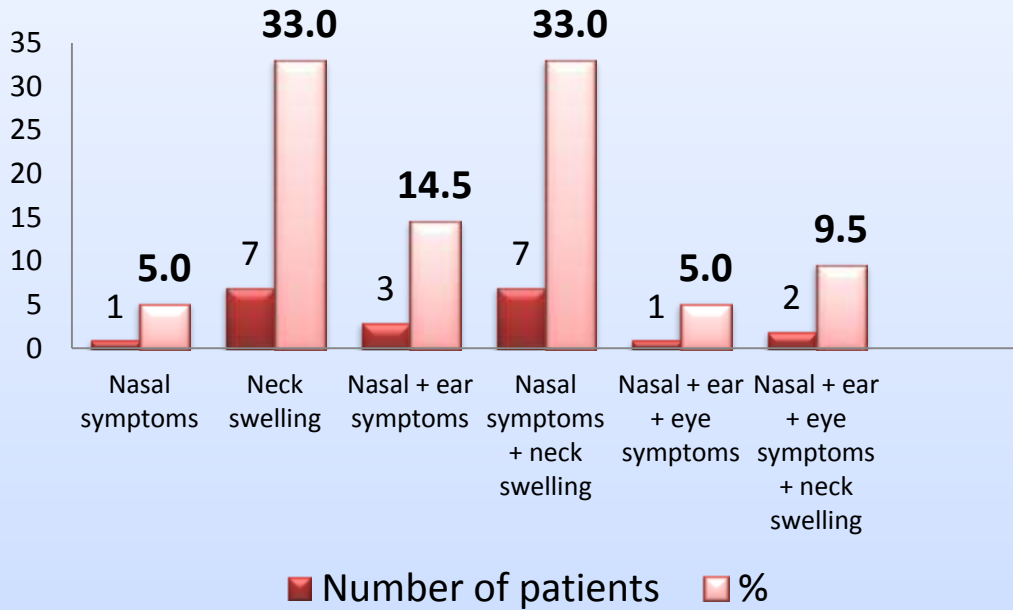
INDIAN

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CLINICAL PRESENTATION OF NPC PATIENTS

Presenting symptoms of NPC patients in ORL clinic HSNZ



- EYE** Diplopia, ptosis
- NOSE** Epistaxis, bloody nasal discharge, nose block
- EAR** Reduced hearing, ear fullness, tinnitus
- NECK** Unilateral/ bilateral neck swelling
- OTHERS** Headache, hoarseness, facial numbness, constitutional symptoms

PHYSICAL EXAMINATIONS

→ Taken from patient's examination during first visit to ORL clinic, HSNZ.



o'NE

1. Obvious mass at nasopharynx/ Fossa of Rosenmuller (FOR)
2. Fullness at FOR
3. Clear FOR



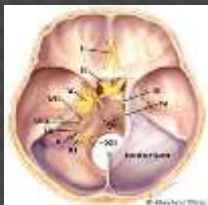
NECK

1. Unilateral/ bilateral neck swelling, less than 6cm
2. LN > 6cm, to supraclavicular fossa
3. No neck swelling



OTOSCOPY

1. Normal
2. Abnormal otoscopy findings

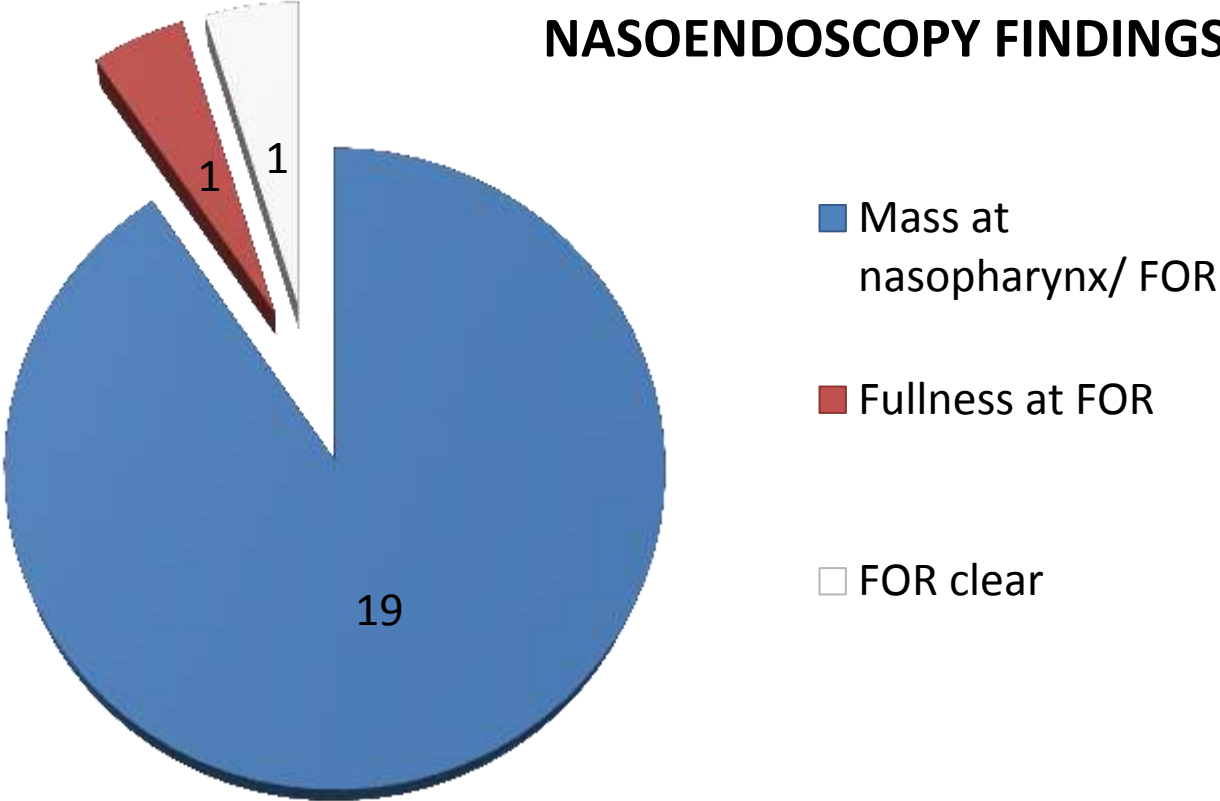


CN

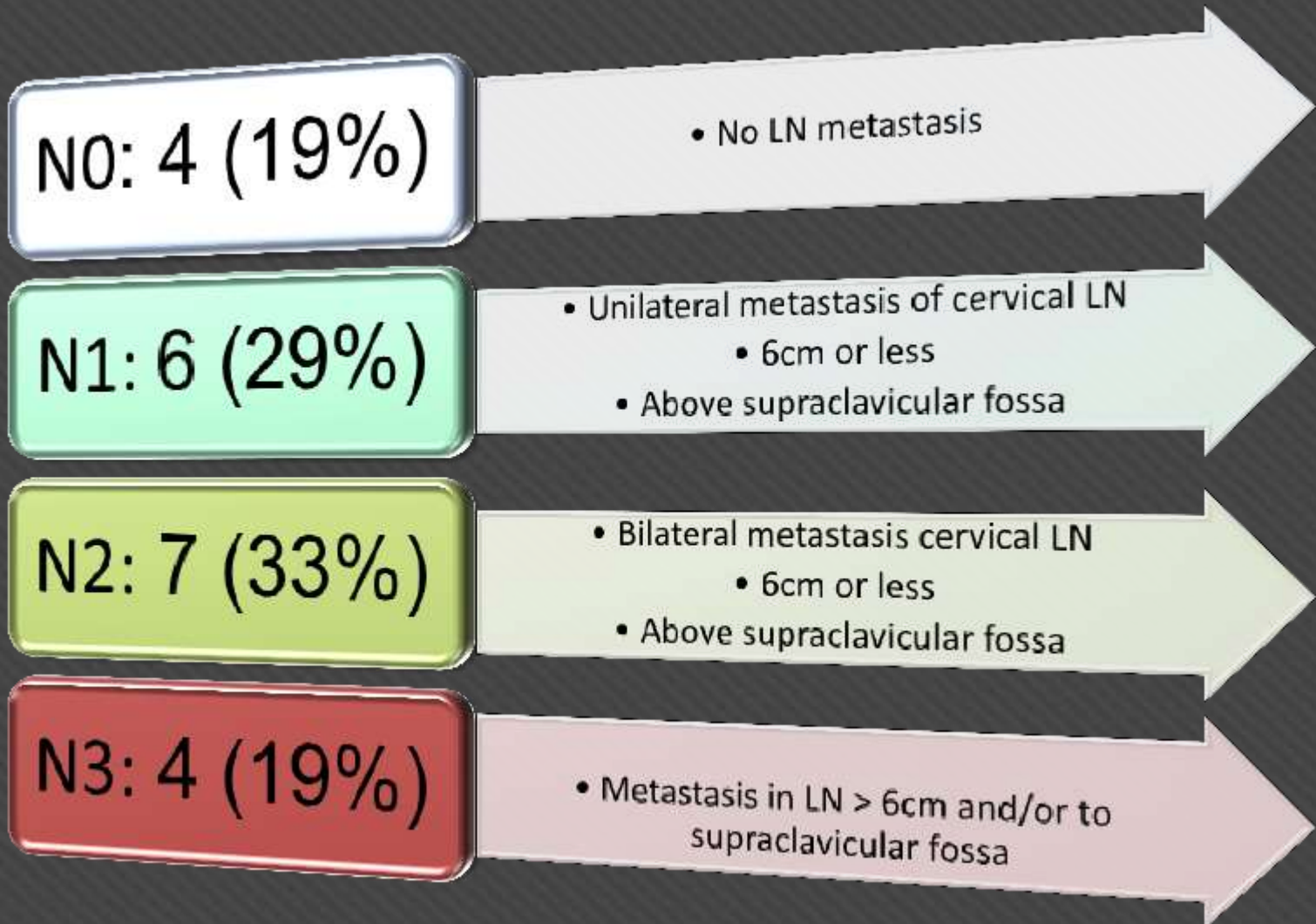
Cranial nerves involvement:

1. YES
2. NO

NASOENDOSCOPY FINDINGS



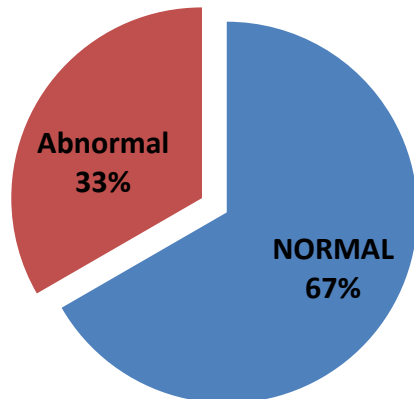
NECK EXAMINATION (According to TNM staging)



OTOSCOPYY & CRANIAL NERVES

OTOSCOPYY FINDINGS:

Normal	14
Abnormal:	7
• Retracted TM	
• Otitis media effusion (OME)	

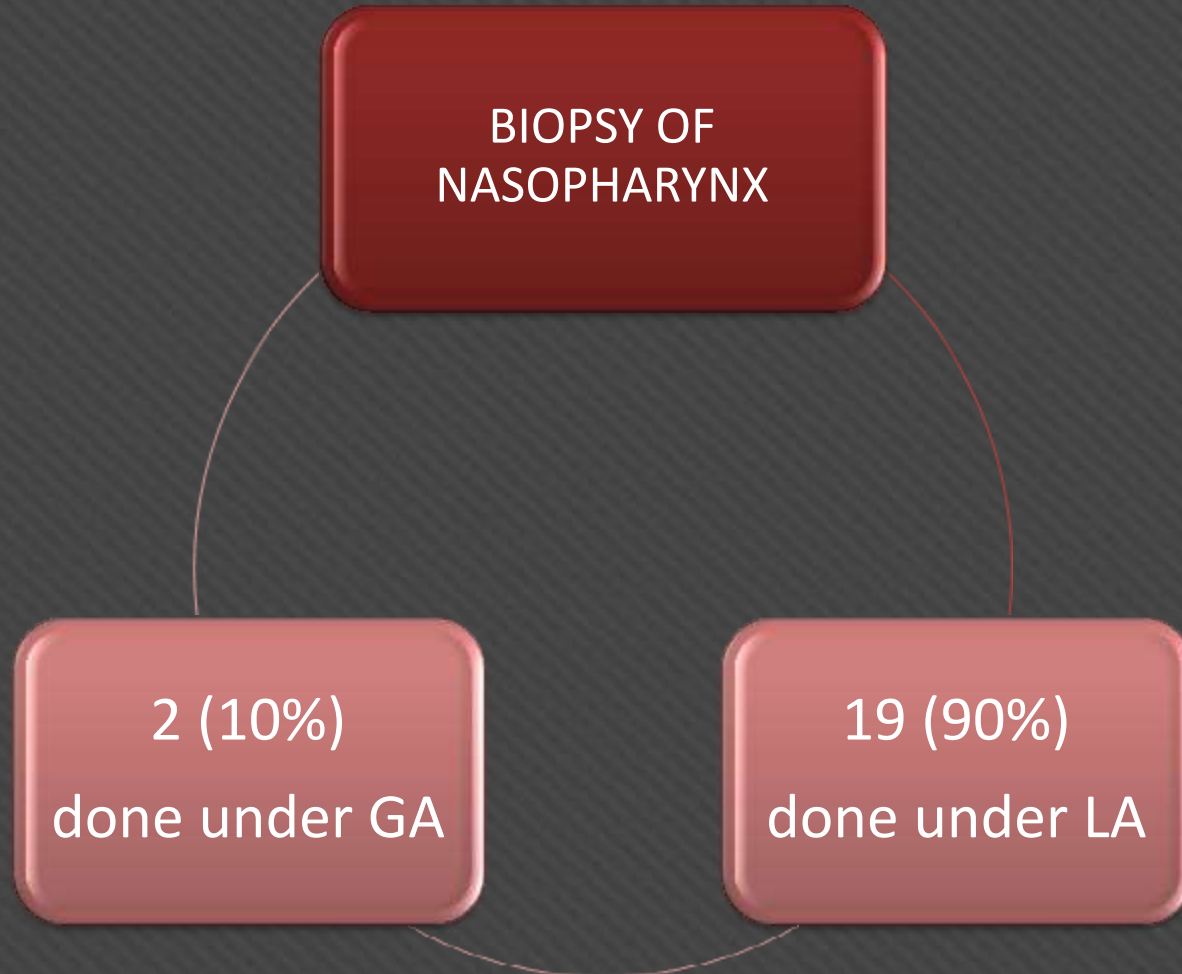


CRANIAL NERVES INVOLVEMENT:

NO:	15
YES:	6
• CN III: Oculomotor	
• CN VI: Abducens	
• CN X: Vagus, Rec LN	

LABORATORY

Biopsy of nasopharynx/Fossa of Rosenmuller (FOR)



LABORATORY

Fine needle aspiration cytology (FNAC) of cervical LN:

FNAC

NOT DONE

10

DONE WITH RESULT OF:

11

- Metastatic carcinoma
- Atypical cells
- Lymphadenopathy
- Unsatisfactory sample

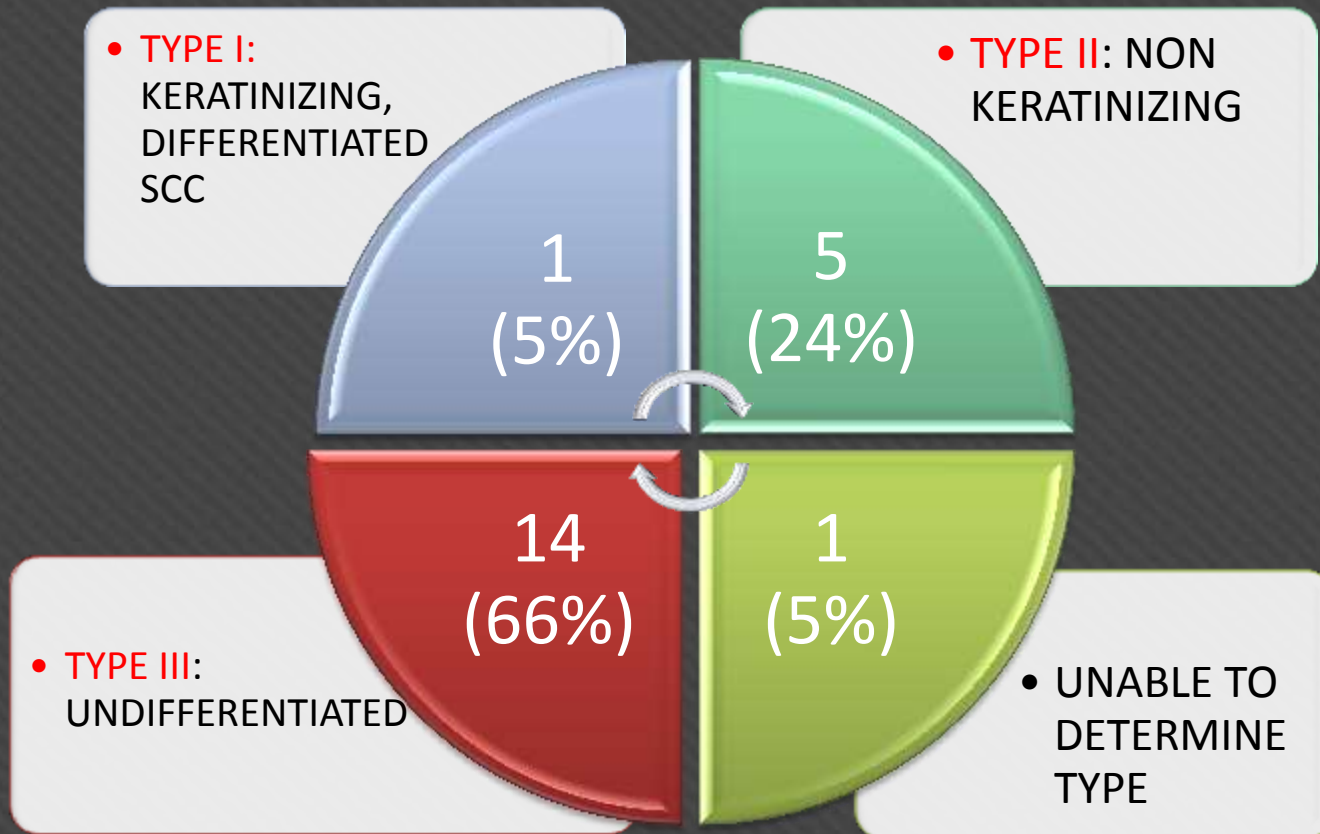
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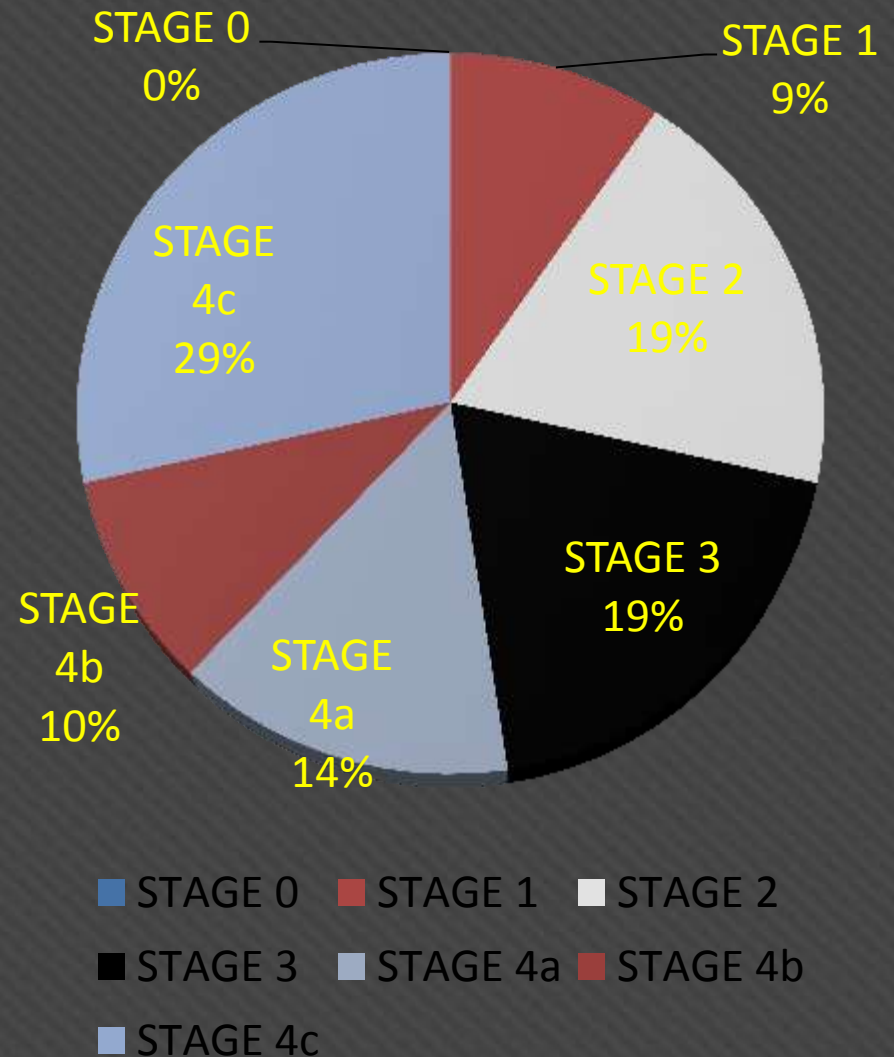
Histopathological classification of NPC according WHO classification in ORL clinic, HSNZ



TNM STAGING FOR NPC

STAGING OF NPC PATIENT IN ORL CLINIC, HSNZ (ACCORDING TNM CLASSIFICATION)

STAGE 0	Tis	N0	M0	-
STAGE 1	T1	N0	M0	2
STAGE 2	T1	N1	M0	4
	T2	N0	M0	-
	"	N1	"	-
STAGE 3	T1	N2	M0	3
	T2	N2	M0	-
	T3	N0	M0	1
	"	N1	"	-
	"	N2	"	-
STAGE 4a	T4	N0-3	M0	3
STAGE 4b	Any T	N3	M0	2
STAGE 4c	Any T	Any N	M1	6

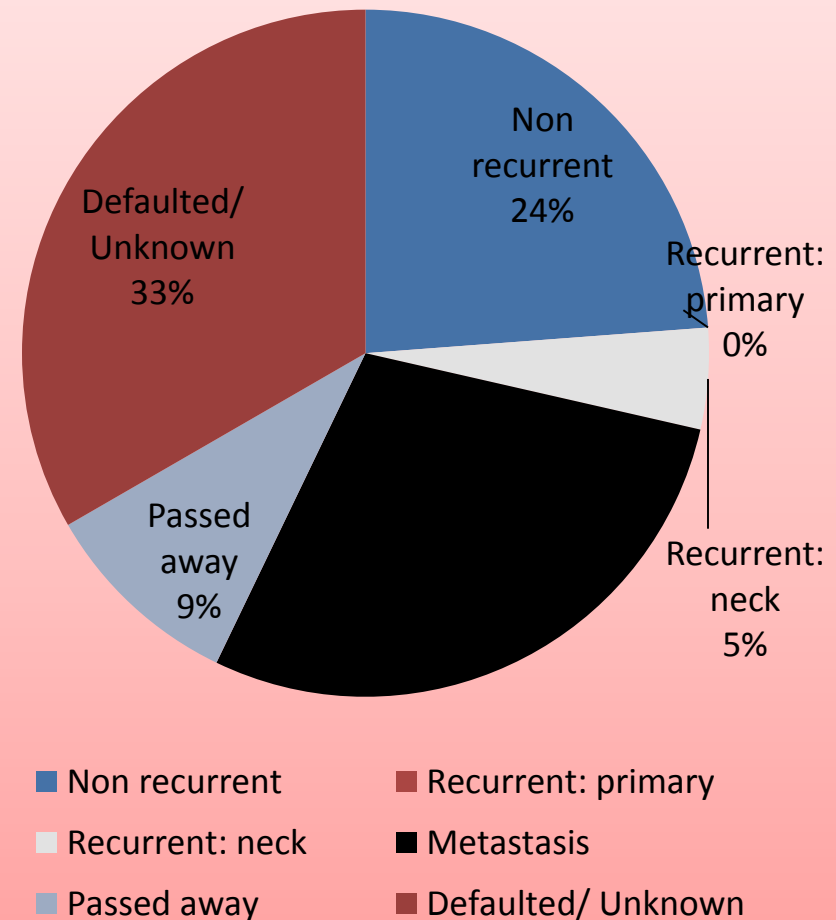


TREATMENT & OUTCOME

Treatment for NPC patients in ORL clinic, HSNZ

RADIOTHERAPY	1
CHEMOTHERAPY	-
CONCURRENT CHEMORADIOTHERAPY (CCRT)	12
DEFAULTED/ REFUSED TREATMENT	8
TOTAL	21
ADDITIONAL PROCEDURES DONE:	
• Myringotomy	4
• Myringotomy + grommet insertion	
• Neck dissection	

OUTCOME OF NPC PT



CONCLUSION & DISCUSSION

- » This clinical analysis shows that NPC patients in HSNZ has almost similar demographic data to other endemic region except for:
 - Race: Malay > than other races in Terengganu (predominant Malay population)
- » The common presenting symptoms are nasal symptoms and neck swelling
 - We encourage primary care to ↑ suspicion of NPC when encounter identical combination of symptoms; and do not hesitate to seek counsel or refer to ORL team early
- » From examination, we can conclude that NPC patient in HSNZ:
 - 19 out of 21 patients has obvious mass in nasopharynx or FOR
 - 16 out of 21 have neck swelling
 - 14 out of 21 patients has normal otoscopy findings*
 - 15 out of 21 did not has cranial nerves involvement
- » 90 % of biopsy can be done in clinic settings which reduced resources in ward admission, anaesthesia and operation theatre time
- » FNAC was done for >50% patients with result of metastatic carcinoma

CONCLUSION



HPE classification

- » 14 out of 21 NPC patients are undifferentiated type of NPC
- » Undifferentiated (Type III) is more sensitive to radiotherapy and chemotherapy; but frequent hematogenous and lymphatic metastasis spread.



STAGING of NPC

- » Staging is an important prognostic indicator
- » Cross section imaging is used for staging ie: CT scan or MRI.
- » CT – limited sensitivity to detect base of skull erosion
- » MRI – better to visualize soft tissues invasion outside nasopharynx



TREATMENT

- » Radiotherapy for early disease
- » Concomitant radio-chemotherapy (CCRT) for more advance diseases (12 out of 21%)
- » However, 8 out of 21 patients defaulted or refused treatment



OUTCOME

- » 6 out of 21 patients developed distant metastasis
- » 7 out of 21 patients DEFAULTED treatment – WHY?
- » **Problem:**
 1. HSNZ is not the treatment center of NPC – no oncologist, no radiotherapy equipment and limited chemotherapy available
 2. Frequent referral centers include: HUSM, HKL, IKN which located far from here. Due to logistic and financial reasons – most patient defaulted their treatment.

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THANK
YOU
for
YOUR

ATTENTION!!!