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# Case Presentation

- An 76 yrs old male with a massive nasopharynx tumor

Present: Clerk 張博勛

Supervisor: VS 洪偉誠

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This patient came to our ENT OPD on 2023/09/21...

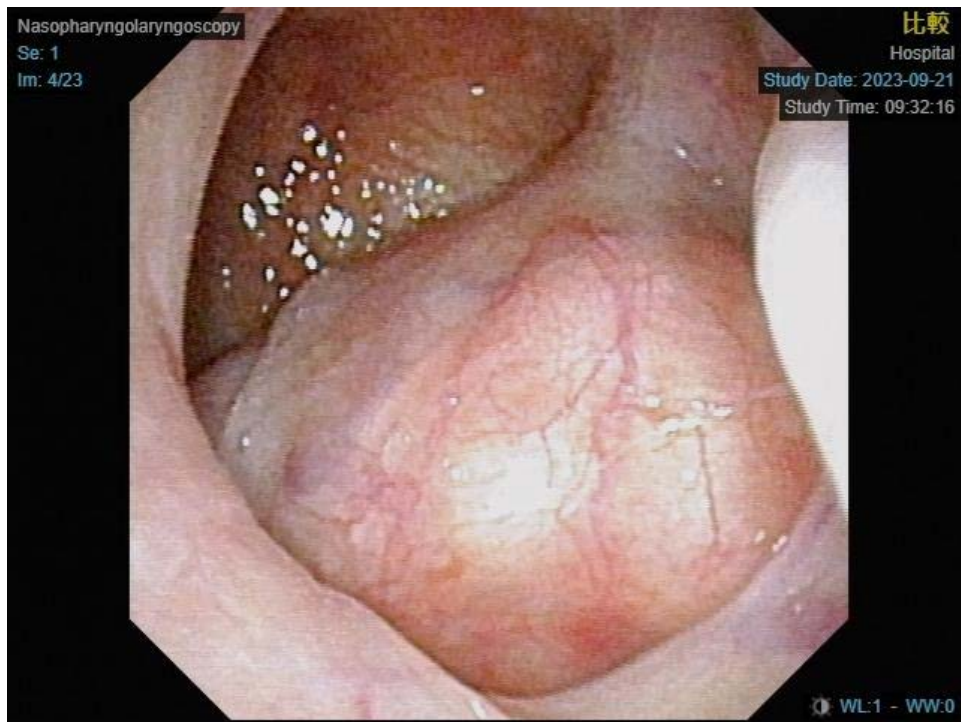
- Pt no: 1258341,
- Personal data: 76 yrs old male 黃XX
- Past history: Gastric ulcer, Dyslipidemia
- ABC: alcohol +, denied betel nut or cigarette

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This patient came to our ENT OPD on 2023/09/21...

- Chief complaint: Hoarseness for 4 years
- odynophagia (-), dysphagia (-)
- Fibroscopy was conducted:
  - vocal fold with atrophy, symmetrical VF movement
  - **incidental finding of a left NP huge capsulated mass**

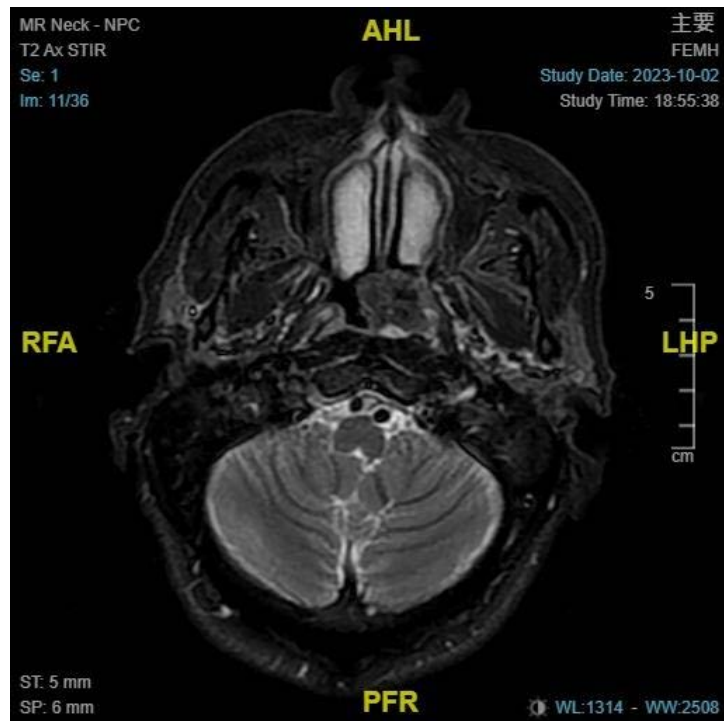
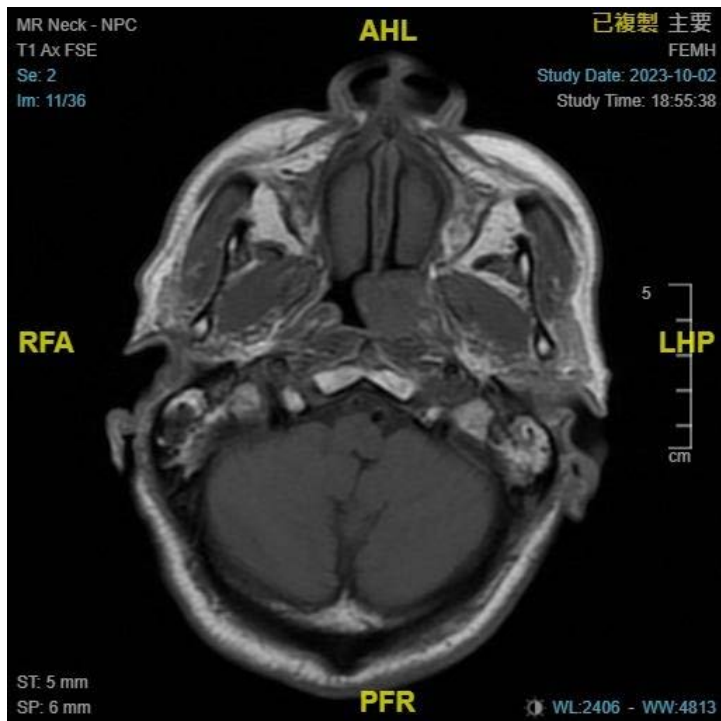
# Fibroscopy



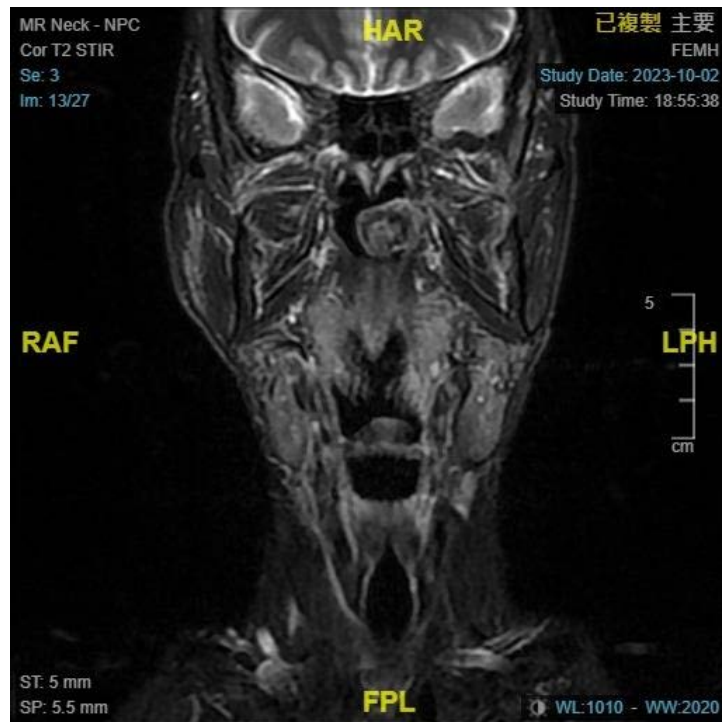
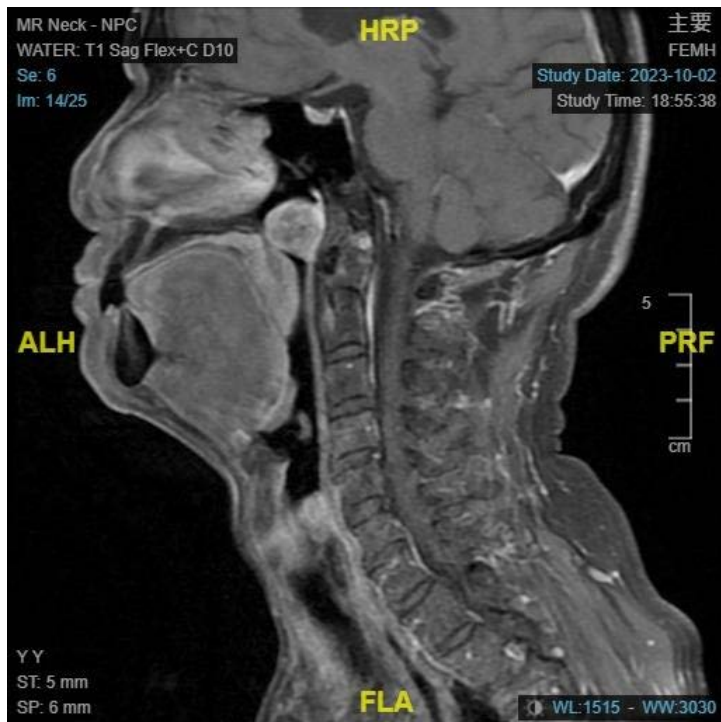
# Outpatient management

- biopsy was done
  - patho: seromucinous glands/minor salivary gland-like tissue in the lymphocyte-depleted stroma. Scattered CK-positive atypical cells are seen. Nuclear atypia is discernible. Some tiny cell aggregates are present in channel-like spaces.
- MRI was conducted

# MRI



# MRI





# Outpatient management

- MRI report
  - Left nasopharyngeal exophytic tumor. DDx: nasopharyngeal papillary adenocarcinoma, adenoid cystic carcinoma, NPC



# Excision surgery was arranged

- Pt underwent excision of NP tumor via endoscopic approach on 2023/11/07
- Patho:
  - intracapsular carcinoma ex pleomorphic adenoma
  - margin involved

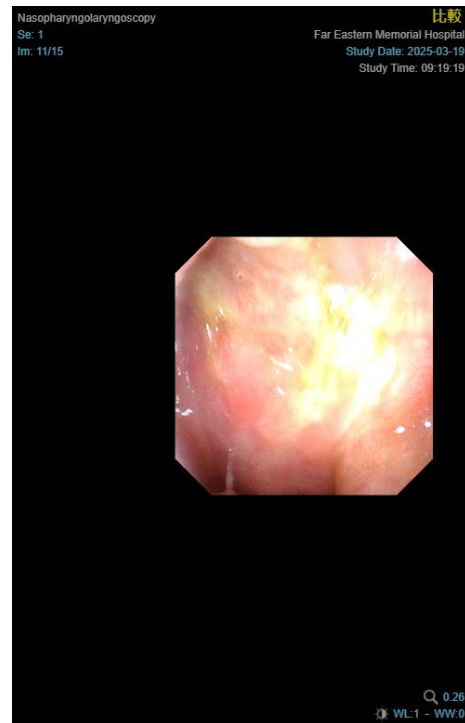


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## Postoperative management

- Adjuvant RT: 70 Gy/35
- post operative MRI and CT: NED
- RT adverse effect:
  - anorexia, weight loss, fatigue
  - Dermatitis, mucositis
- Regularly follow up

# Postoperative management



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## Discussion

- Salivary gland tumor in nasopharynx?
  - Pleomorphic adenoma is known to be found in parotid gland (75%) and submandibular gland (15%)
  - no major salivary gland in nasopharynx was told back in school

# Discussion (cont.)

Radiotherapy and Oncology 154 (2021) 292–298



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Radiotherapy and Oncology

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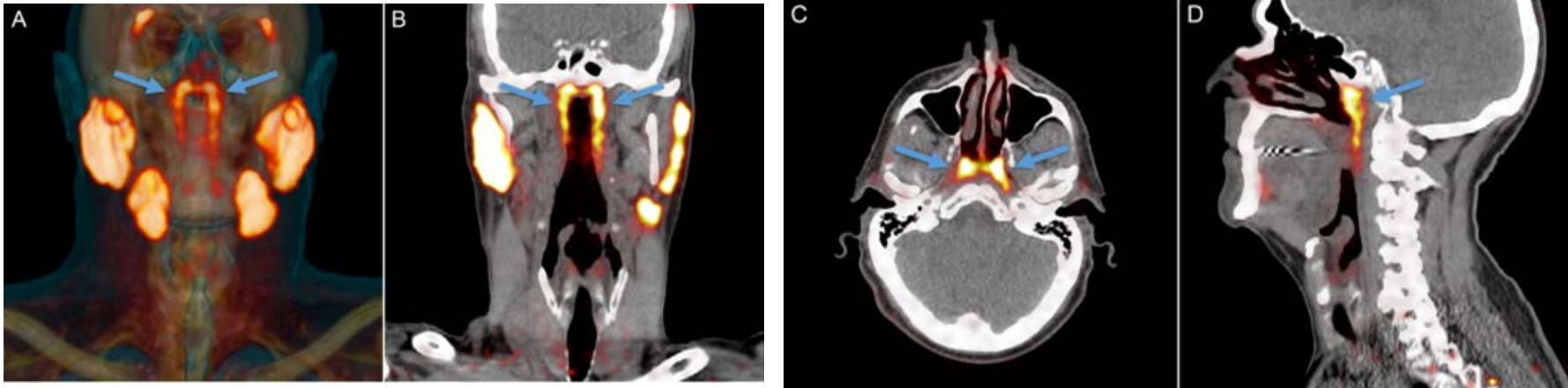
Original Article

The tubarial salivary glands: A potential new organ at risk for radiotherapy

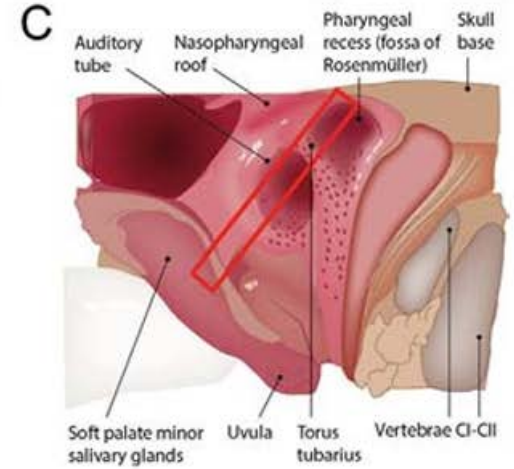
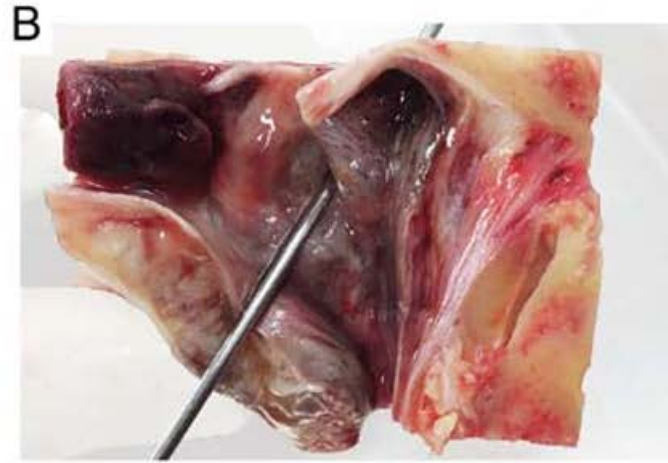
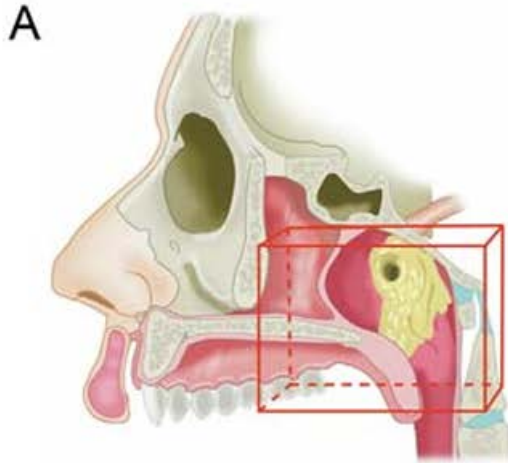


# Tubarial Salivary Gland in Nasopharynx

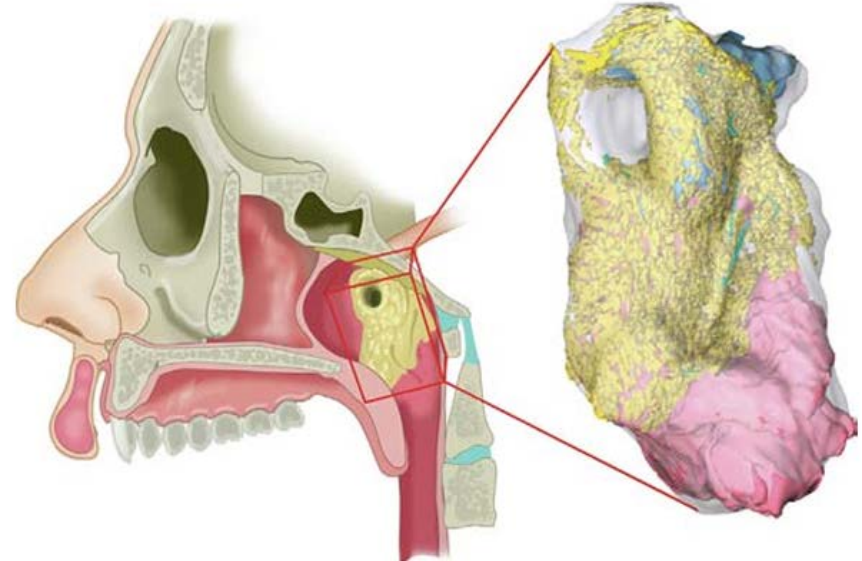
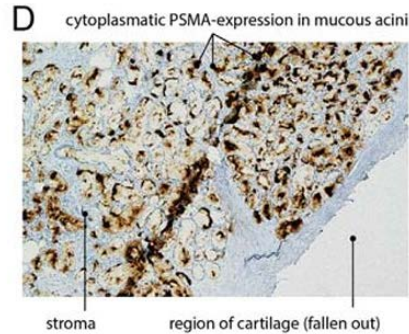
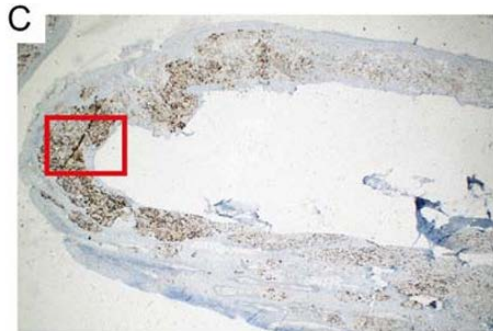
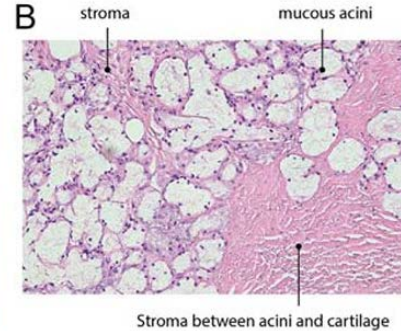
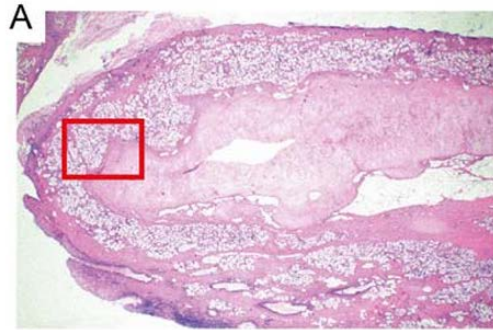
- Observed that radio-labelled PSMA PET/CT were depicted in unknown bilateral structure posterior in the nasopharynx
- Salivary gland proximal to the torus tubarius



## Tubarial Salivary Gland in Nasopharynx (cont.)



# Tubarial Salivary Gland in Nasopharynx (cont.)





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## Discussion

- Epidemiology of salivary gland cancer in nasopharynx
  - Is our pt's condition rare?
  - general prognosis of nasopharyngeal salivary gland cancer

# Epidemiology of nasopharyngeal cancer

- Global nasopharyngeal cancer  $\approx$  1 per 100,000 person-year
  - 25 per 100,000 in southern China
  - Primary salivary gland neoplasms of the nasopharynx: 0.48% of all nasopharyngeal carcinoma
- Risk factors:
  - EBV infection
  - occupational exposure to wood dust and formaldehyde
  - Smoked foods
  - smoking and alcohol

# Demographics and clinicopathologic traits of salivary gland nasopharyngeal cancer

**Table 1.** Demographics for Salivary Gland Nasopharyngeal Cancer.

	n	%
Total <sup>a</sup>	383	
Age groups, y		
0-19	8	2.1
20-39	52	13.6
40-59	135	35.2
60-79	149	38.9
≥80	39	10.2
Sex		
Male	169	44.1
Female	214	55.9
Race		
White	275	71.8
Black	44	11.5
Asian or Pacific Islander	58	15.1
American Indian/Alaska Native	3	0.8
Unknown	3	0.8

<sup>a</sup>Median age of diagnosis, 59 years.

**Table 2.** Clinicopathologic Traits of Salivary Gland Nasopharyngeal Cancer.<sup>a</sup>

	n	%
Grade		
I: Well differentiated	31	16.8
II: Moderately differentiated	66	35.7
III: Poorly differentiated	69	37.3
IV: Undifferentiated; anaplastic	19	10.3
Unknown	198	—
Histology		
Adenoid cystic carcinoma	165	43.1
Adenocarcinoma	121	31.6
Mucoepidermoid carcinoma	51	13.3
Papillary adenocarcinoma	25	6.5
Epithelial-myoepithelial carcinoma	8	2.1
Polymorphous adenocarcinoma	7	1.8
Malignant myoepithelioma	4	1.0
Acinar cell carcinoma	2	0.5

<sup>a</sup>AJCC

AJCC stage		
I	36	24.3
II	22	14.9
III	30	20.3
IV	60	40.5
Unknown	235	—
T stage		
T1	50	31.6
T2	26	16.5
T3	38	24.1
T4	44	27.8
TX	20	—
N stage		
N0	114	77.0
N1	20	13.5
N2	10	6.8
N3	4	2.7
NX	31	—
M stage		
M0	141	88.1
M1	19	11.9
MX	19	—

Abbreviation: AJCC, American Joint Committee on Cancer.

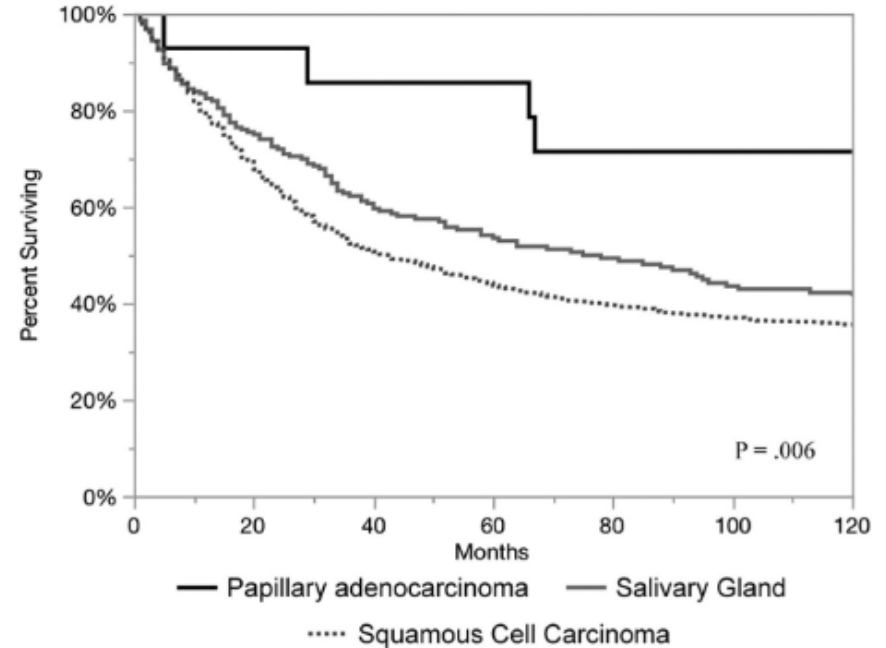
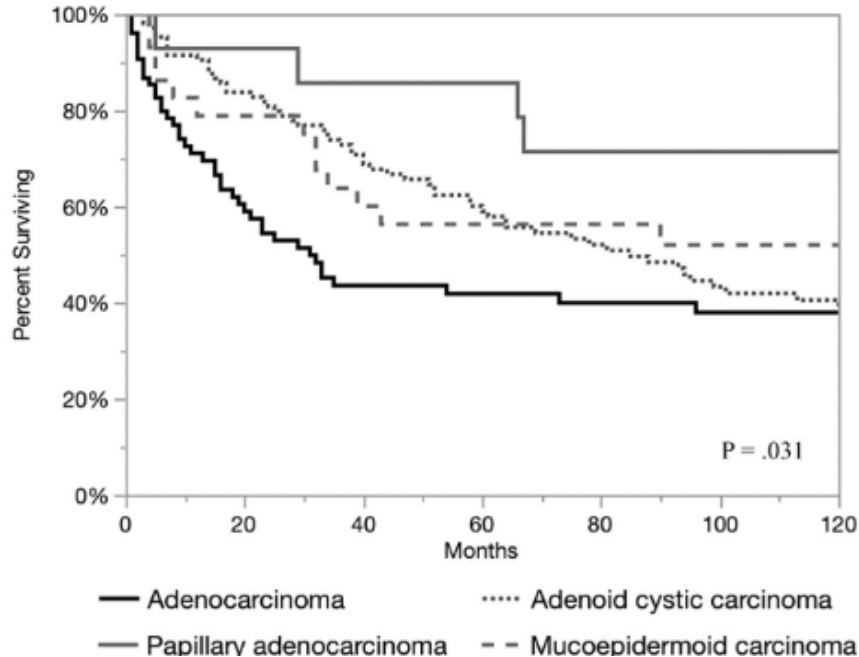
<sup>a</sup>Median tumor size, 3.3 cm.

# Disease Specific Survival Rate of salivary gland nasopharyngeal caner

**Table 4.** Disease-Specific Survival Rates.<sup>a</sup>

	1 y			5 y			10 y		
	n	%	P Value	n	%	P Value	n	%	P Value
Histology			<b>.009</b>			<b>.017</b>			<b>.031</b>
Adenoid cystic carcinoma	126	91.9		115	61.7		108	39.0	
Adenocarcinoma	89	75.5		85	48.8		76	38.0	
Mucoepidermoid carcinoma	39	84.4		36	65.3		29	52.0	
Papillary adenocarcinoma	19	94.4		15	85.7		15	71.4	
Epithelial-myoepithelial carcinoma	6	100.0		3	100.0		2	100.0	
Polymorphous adenocarcinoma	4	100.0		1	100.0		—	—	
WHO classification			<b>.582</b>			<b>.055</b>			<b>.006</b>
Salivary gland tumors	264	85.7		240	58.4		215	40.8	
Papillary adenocarcinoma	19	94.4		15	85.7		15	71.4	
Squamous cell carcinoma	1910	85.9		1540	54.3		1267	35.5	

# Disease Specific Survival Rate of salivary gland nasopharyngeal cancer



# 5 year survival prognostic factor for NP carcinomas

**Table 5.** Cox Proportional Hazard Analysis of 5-Year Survival.<sup>a</sup>

	Salivary Gland Tumors			Squamous Cell Carcinomas		
	Hazard Ratio	95% CI	P Value	Hazard Ratio	95% CI	P Value
Sex						
Male	Ref			Ref		
Female	0.456	0.14-1.36	.160	0.9	0.67-1.1	.425
Race						
Asian or Pacific Islander	Ref			Ref		
White	11.15	1.5-340	<b>.013</b>	1.31	1-1.7	<b>.043</b>
Black	23.88	2.4-845	<b>.005</b>	1.35	0.89-1.9	.151
Age, y						
0-19	—	—	—	0.288	0.04-2	.123
20-39	—	—	—	0.82	0.52-1.2	.378
40-59	Ref			Ref		
60-79	1.51	0.55-4.6	.427	1.43	1.1-1.8	<b>.008</b>
≥80	25.2	0.84-774	.050	3.07	1.92-4.9	<b>&lt;.001</b>
AJCC stage						
I	Ref			Ref		
II	2.96	0.22-69	.395	0.89	0.47-1.8	.755
III	9.85	1.39-197	<b>.020</b>	1.61	0.9-3.1	.118
IV	31.16	5.63-590	<b>&lt;.001</b>	3.31	1.9-6.3	<b>&lt;.001</b>

# Carcinoma ex Pleomorphic adenoma (CXPA)

- Definition: carcinoma arising from a primary or recurrent benign pleomorphic adenoma
- Epidemiology:
  - 3.6 % of all salivary gland neoplasm
  - incidence rate: 0.17 per 1 million persons year
  - found predominantly in the sixth to eighth decades of life

## Carcinoma ex Pleomorphic adenoma (CXPA) cont.

- Anatomical distributions:
  - 75 % Parotid gland
  - 15 % submandibular gland
  - 10 % minimal salivary gland
- Clinical Presentation: (in parotid gland)
  - firm parotid mass
  - rapid growth
  - facial nerve palsy
  - lymphadenopathy



## Carcinoma ex Pleomorphic adenoma (CXPA) cont.

- Pathology
  - Macroscopic: PA-dominant or Carinoma-dominant
  - Microscopic:
    - non-invasive (intra-capsular)
    - minimally invasive ( $< 1.5$  mm extracapsular)
    - Invasive ( $> 1.5$  mm invasion)
- Treatment:
  - Surgery
  - Radiotherapy

## Back to our Pt

- 76 yr old male with nasal CxPA
  - most CxPA occurred in 60-80s
  - in nasal pharynx, not parotid gland
- Pre-Operation: Biopsy, MRI
- Adjuvant RT: mucositis



# Thank You

## Reference:

Tokarz, E. L., Ong, A. A., & Burke, M. S. (2021). Nasopharyngeal Carcinoma Ex Pleomorphic Adenoma: Case Report and Comprehensive Literature Review. *Case reports in otolaryngology*, 2021, 8892280. <https://doi.org/10.1155/2021/8892280>

Joyce Antony • Vinod Gopalan • Robert A. Smith • Alfred K. Y. Lam (2012) Carcinoma ex Pleomorphic Adenoma: A Comprehensive Review of Clinical, Pathological and Molecular Data *Head and Neck Pathol* (2012) 6:1–9 DOI 10.1007/s12105-011-0281-z

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