



# Oral Cavity Rounds

October 09, 2019

Magno/Sarmiento/Guce/Yee



DEPARTMENT OF OTORHINOLARYNGOLOGY  
PHILIPPINE GENERAL HOSPITAL

# VISION

**The Department of Otorhinolaryngology shall be an internationally recognized center of excellence in the field of Otorhinolaryngology and Head and Neck surgery**

# MISSION

**The health needs of the Filipino shall be its prime consideration.**

**It shall provide excellence and leadership in the different aspects in otolaryngology – head and neck surgery by teaching, providing exemplary clinical practice and dynamically pursuing relevant researches beneficial to the community in an environment guided by moral, ethical and spiritual values.**

# General Data

- CD, 21/F
- Currently unemployed
- From Nueva Ecija

CC: Left mandibular mass



# History of Present Illness

## 2 years PTA:

- Patient underwent dental extraction of mandibular 1<sup>st</sup> to 3<sup>rd</sup> molars, because of misalignment, 2<sup>nd</sup> molar was growing obliquely. Patient tolerated the procedure well.

# History of Present Illness

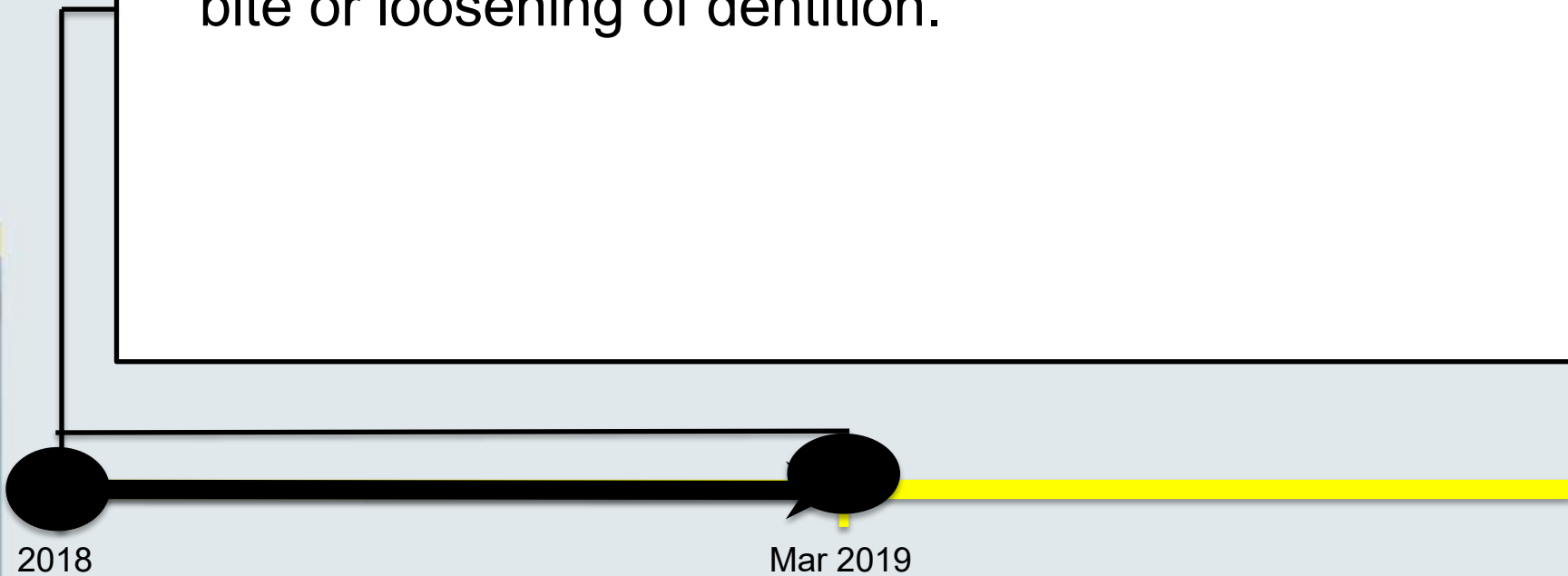
## 1 year PTA:

- Patient started to note mass on the left mandibular area, ~1x1 cm in size, around the previous incision site, at the area of the 2<sup>nd</sup> mandibular molar, associated with pain (VAS 8/10), described as “kumikirot”, with no aggravating factors and was with purulent discharge. She consulted at a dental clinic but was advised to seek medical advise the dentist deemed that the patient’s condition might need further evaluation.

# History of Present Illness

## In the interim:

- Patient reported gradual enlargement of the mass. No other associated symptoms such as change in bite or loosening of dentition.



# History of Present Illness

## 6 months PTA:

- Patient consulted at a local hospital at Nueva Ecija wherein a PNS CT Scan was done which revealed Ameloblastoma, Left. She was advised surgical management. Due to financial difficulties, patient was not able to comply right away and opted for second opinion.



2018

Mar 2019



# History of Present Illness

## PNS CT Scan Result:

(+) well-defined expansile cystic lesion in the left lower molar region, measuring 2.4x2.0x2.6cm, with a consideration of Ameloblastoma, Left

2018

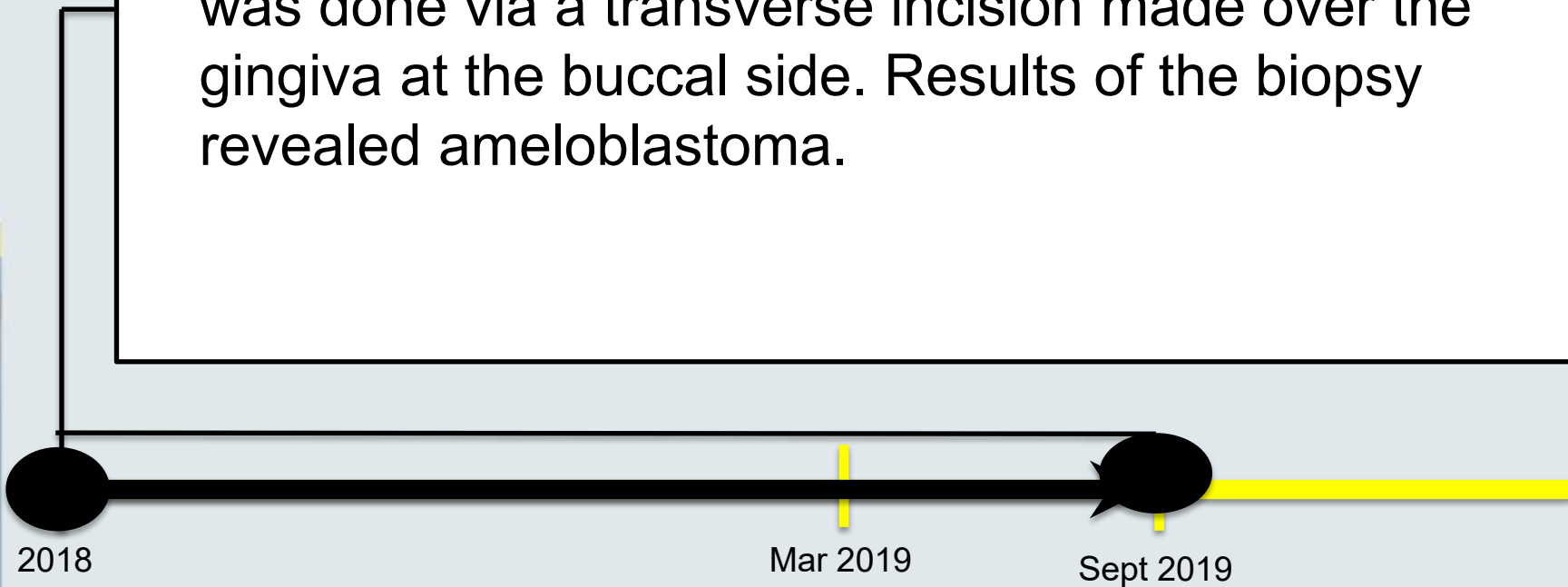
Mar 2019



# History of Present Illness

## 1 month PTC:

- Patient was seen at the ORL OPD wherein incision biopsy of the mass, now measuring around 3x2 cm, was done via a transverse incision made over the gingiva at the buccal side. Results of the biopsy revealed ameloblastoma.



# Pertinent Diagnostics

PGH FORM NO. P-360004



**PHILIPPINE GENERAL HOSPITAL**  
 The National University Hospital  
 University of the Philippines Manila  
**DEPARTMENT OF LABORATORIES**  
 Surgical Pathology Section  
 TAFT AVENUE, MANILA  
 PHIC- Accredited Health Care Provider  
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**SURGICAL  
 PATHOLOGY  
 REPORT**

<b>LAST NAME</b> DELA CRUZ	<b>FIRST NAME</b> CAMILLE	<b>MI</b> ALFONSO	<b>AGE</b> 21	<b>SEX</b> F	<b>SP NUMBER</b> 19 OPD 4059
<b>ATTENDING PHYSICIAN</b> DR. SACAYAN	<b>SERVICE</b> ORL-HNS	<b>WARD/ROOM</b> OPD		<b>CASE NUMBER</b> 4687870	
<b>SPECIMEN</b> MANDIBULAR MASS, LEFT		<b>DATE RECEIVED</b> 08/27/2019		<b>DATE COMPLETED</b> 08/29/2019	

**FINAL HISTOPATHOLOGIC DIAGNOSIS**

(MANDIBLE), INCISION BIOPSY:

AMELOBLASTOMA.

**GROSS/MICROSCOPIC DESCRIPTIONS**

Specimen labelled "L mandible mass" consists of a cream to tan rubbery tissue fragments with an aggregate diameter 1.3 cm. Block all (1).

SANDY C. MAGANITO, M.D.

**REPORTED BY**

KAREN CYBELLE J. SOTALBO, M.D.

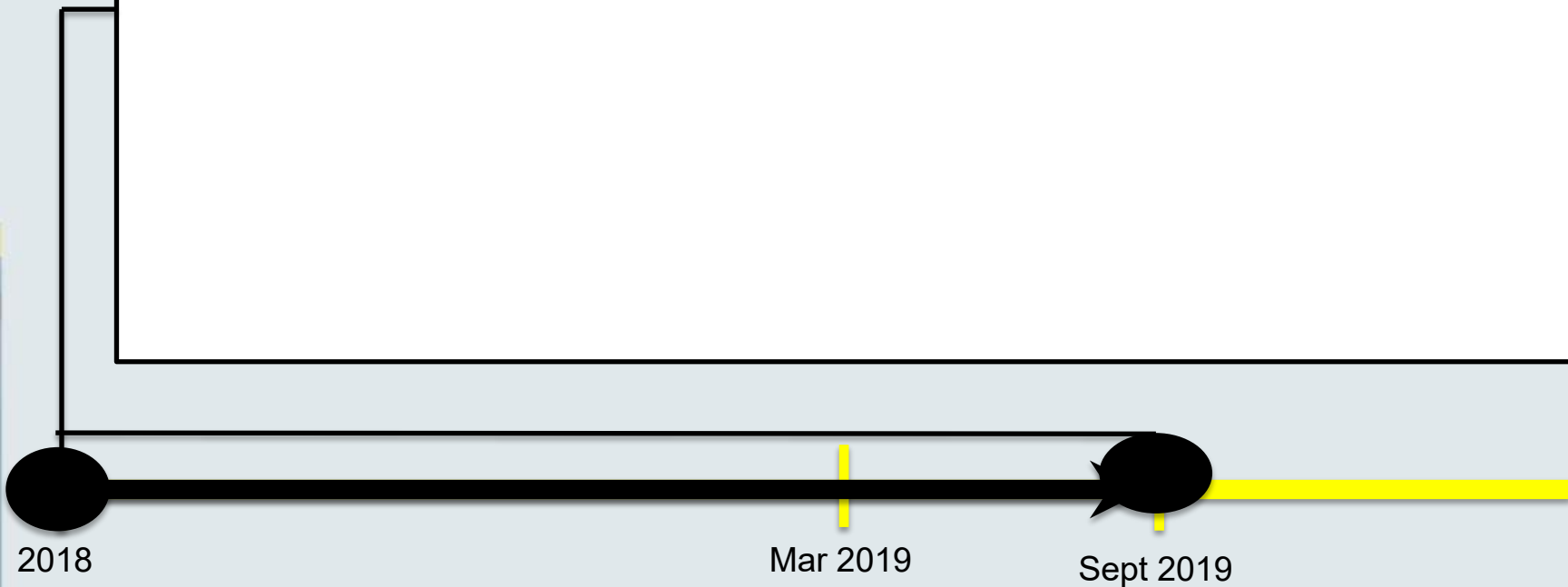
**PATHOLOGIST**



# History of Present Illness

## 1 month PTC:

- After the results of the biopsy, patient was advised surgical management, hence this admission



# Review of Systems

- (-) fever, weakness, loss of appetite
- (-) Difficulty of breathing
- (-) cough
- (-) dysphagia
- (-) changes in bite
- (-) nausea, headaches, vomiting
- (-) constipation, diarrhea
- (-) rashes

# Past Medical History

- (+) claimed having recurrent “luga” during childhood
- (-) hypertension
- (-) diabetes
- (-) allergies
- (-) PTB

# Family Medical History

(+) HPN (maternal side)

(-) DM

(-) stroke

(-) asthma (-) TB, CA,

(-) allergies

# Personal and Social History

- Previously worked as a massage therapist, currently unemployed
- Roman Catholic
- Denies smoking, alcoholic beverage intake, illicit drug use



# Physical Exam

## Vital Signs

Temp: 36.8 C

HR: 83

BP: 120/70

RR: 18

The patient is conscious, coherent, ambulatory, conversant and not in respiratory distress.

# Physical Exam

## Cardiopulmonary

- Clear breath sounds, (-) retractions
- Adynamic precordium, normal rate, regular rhythm, no murmurs

## GI

- Soft, flabby, non-tender abdomen
- Bowel sounds: normoactive
- (-) abdominal bruits

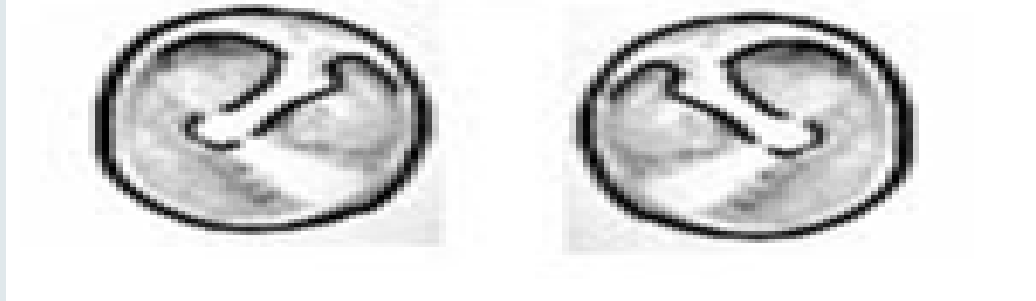
## Extremities

- Pink nailbeds, full and equal pulses in all extremities
- (-) cyanosis, edema
- DTRs are 2+ for all muscle groups

# Physical Exam

## Ear

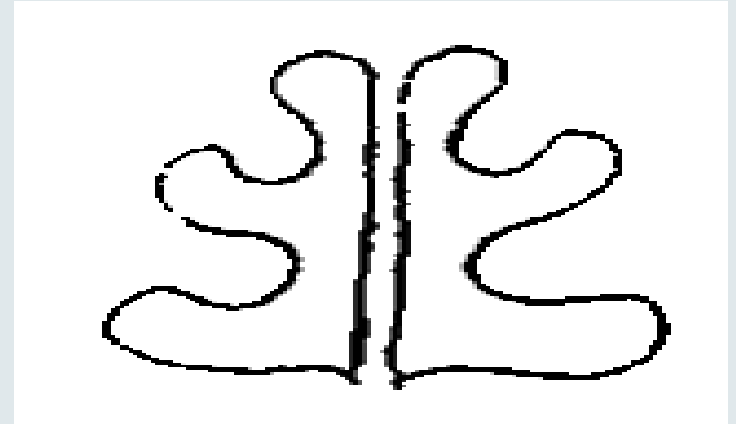
- (-) gross deformities
- EAC patent, both ears
- Intact TM, both ears



# Physical Exam

## ENT

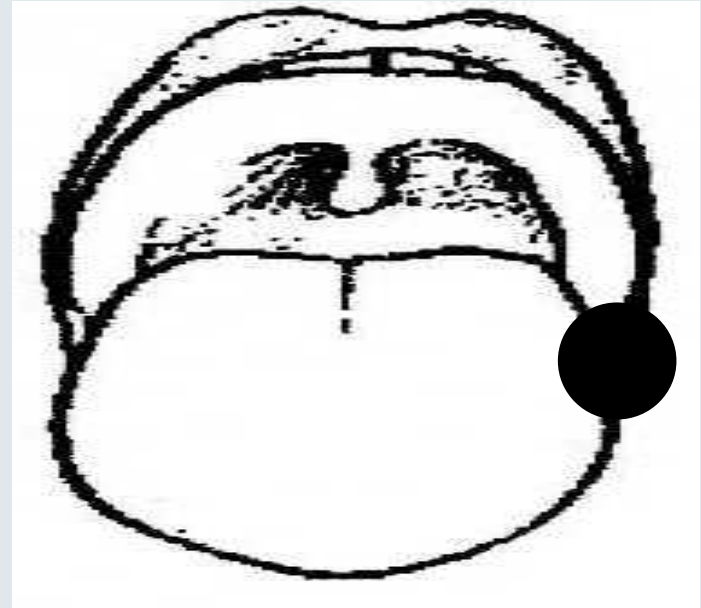
- *Nose*
  - Septum in midline
  - (-) masses
  - (-) discharges



# Physical Exam

## Oral cavity

- (+) 3x2 cm, firm, fixed mass, spanning the left mandibular 2<sup>nd</sup>-3<sup>rd</sup> molars
- No other lesions noted
- Moist mucosa



# Physical Exam



# Physical Exam



# Physical Exam





# Physical Exam



# Physical Exam



# Physical Exam



# Physical Exam – Head and Neck



(+) 3x2 cm, hard, fixed mass, on the left mandibular area

# Case Summary

- 21/F from Nueva Ecija
- CC: Left mandibular mass
- 1 year history of gradually enlarging left mandibular mass
- Workup done revealed Ameloblastoma



# Primary Working Impression

- Ameloblastoma

# Ameloblastoma

- Ameloblastoma arises from the enamel-forming cells of the odontogenic epithelium that have failed to regress during embryonic development. The tumor most commonly occurs in the posterior mandible, typically in the third molar region, with associated follicular cysts or impacted teeth.

# Ameloblastoma

- Most common in patients 30-50 years of age
- Typically asymptomatic but can become very large and disfiguring
- Usually benign, but can be life-threatening when large



# Ameloblastoma

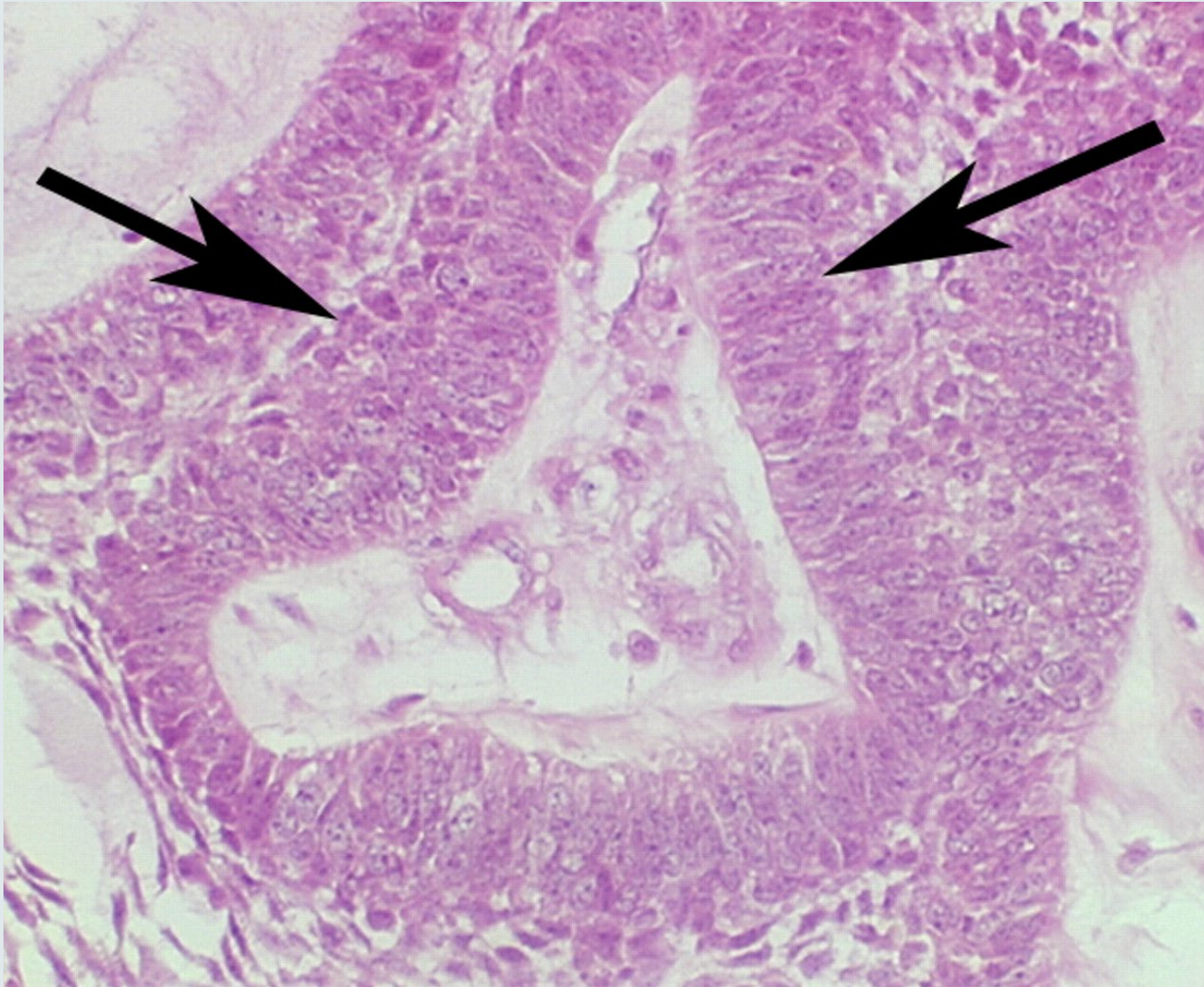
- Tumor usually arises in the mandible in 80-90% of cases and 70% in the molar-ramus area
- ~20% occur in the maxilla
- 10-15% are associated with unerupted tooth

# Ameloblastoma

- Histopathology:
  - Odontogenic epithelial islands composed of:
    - Peripheral palisading columnar cells at basal layer, hyperchromatic
    - Cells show reverse polarization away from basement membrane (Vickers-Gorlin change)
    - Stellate reticulum-like cells, suprabasal cells composed of loosely arranged angular cells
    - No dentin or enamel formation

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# PLAN



# Treatment Options for Ameloblastoma

**CONSERVATIVE**

Enucleation and  
curettage of bony  
cavity

**VS**

Wide excision (1-2cm  
bony margins) with  
corresponding  
reconstruction

**RADICAL**

# WHO classification of ameloblastoma

## Unicystic (6%)

- most benign features, lowest recurrence rate
- **Intraluminal variant does not exhibit invasion of surrounding connective tissue**
- Amenable to conservative approaches

## Solid/Multicystic (91%)

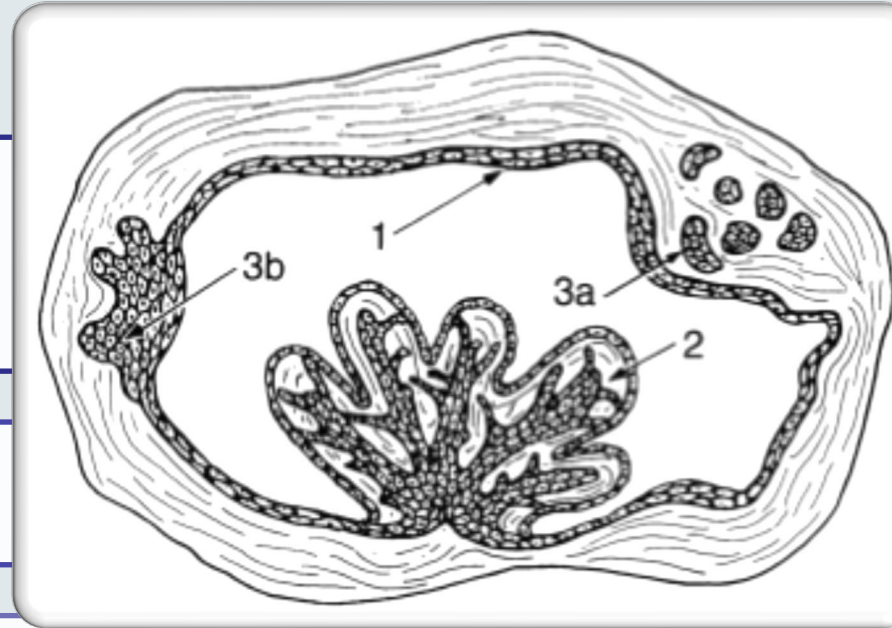
- most common; classic “soap bubble appearance”
- Up to 90% recurrence rate with conservative management

## Desmoplastic (1%)

- often in the anterior mandible
- proliferation of extensive stromal collagenization

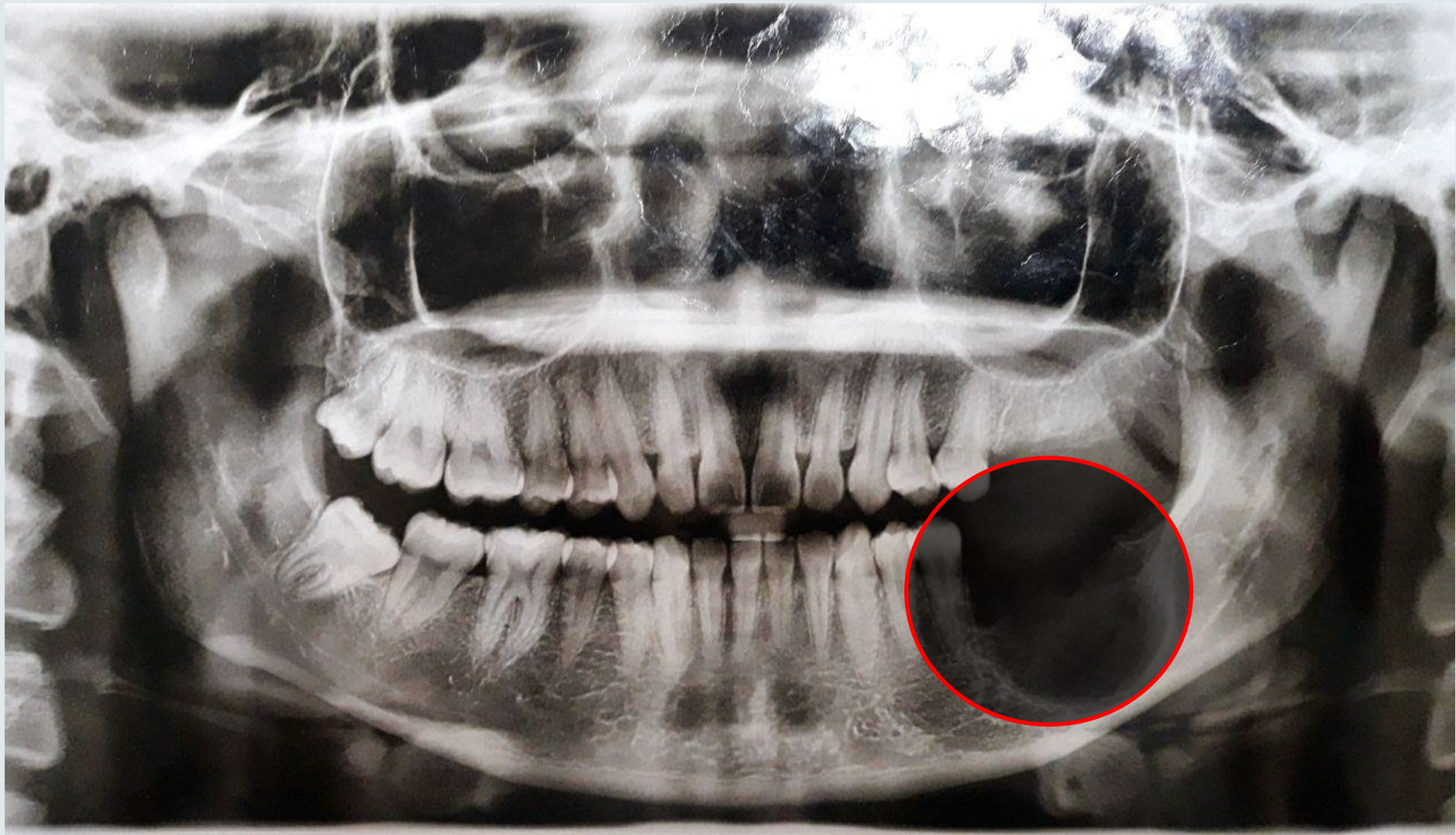
## Extra-osseous/peripheral (2%)

- does not involve underlying bone; seen as a pedunculated lesion on the gingival mucosa



Less than 25%  
recurrence

Philipsen, H. ., & Reichart, P. . (1998). *Unicystic ameloblastoma. A review of 193 cases from the literature. Oral Oncology, 34(5), 317–325.* doi:10.1016/s1368-8375(98)00012-8



# FINAL PLAN

- Enucleation, peripheral ostectomy
- Post-operative application of 5-fluorouracil
- Possible IDW-IMMF



# Topical 5-Fluorouracil is a Novel Targeted Therapy for the Keratocystic Odontogenic Tumor.

Ledderhof NJ<sup>1</sup>, Caminiti MF<sup>2</sup>, Bradley G<sup>3</sup>, Lam DK<sup>4</sup>.

## Author information

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## Abstract

**PURPOSE:** The antimetabolite drug, 5-fluorouracil (5-FU), is used in the treatment of various cancers, including basal cell carcinomas (BCCs). The authors hypothesized that keratocystic odontogenic tumors (KOTs) would respond to 5-FU treatment because of their similarities to BCCs in molecular etiopathogenesis.

**MATERIALS AND METHODS:** An ambispective cohort study of the treatment efficacy of topical 5-FU on KOTs was conducted. Independent variables included the topical application of 5% 5-FU or modified Carnoy's solution (MC) after enucleation and peripheral ostectomy at the University of Toronto from 2006 through 2014. Outcome variables included time to recurrence and peripheral nerve injury. KOT specimens in these patients were immunostained with p53, Ki-67, thymidylate synthetase (TS), thymidylate phosphorylase (TP), and dihydropyrimidine dehydrogenase (DPD) antibodies. Semiquantitative staining scores were calculated for all immunohistochemistry sections examined. Descriptive statistics were computed using Fisher exact test and Kaplan-Meier analysis as appropriate with the P value set at .05.

**RESULTS:** Thirty-two patients with 32 KOTs were reviewed (41% in women and 59% in men). There were no KOT recurrences in the 5-FU group (n = 11), whereas there were 4 recurrences in the MC group (n = 21; P = .190). There was a significantly lower incidence of inferior alveolar nerve paresthesia with 5-FU treatment (P = .039). Immunohistochemical staining showed upregulation of TP (P < .0001) and DPD (P < .0001) and no change in TS (P > .05) in inflamed KOTs.

**CONCLUSIONS:** 5-FU effectively treats KOTs with less postoperative morbidity than conventional treatment with MC. Low TS and upregulated TP expressions in inflamed KOTs suggest increased 5-FU efficacy in inflamed KOTs. Topical 5-FU is a novel therapy for KOTs and provides a targeted molecular approach to treatment.

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