

AMSER Case of the Month

September 2023

29-year-old female with swelling and pain in right mandible

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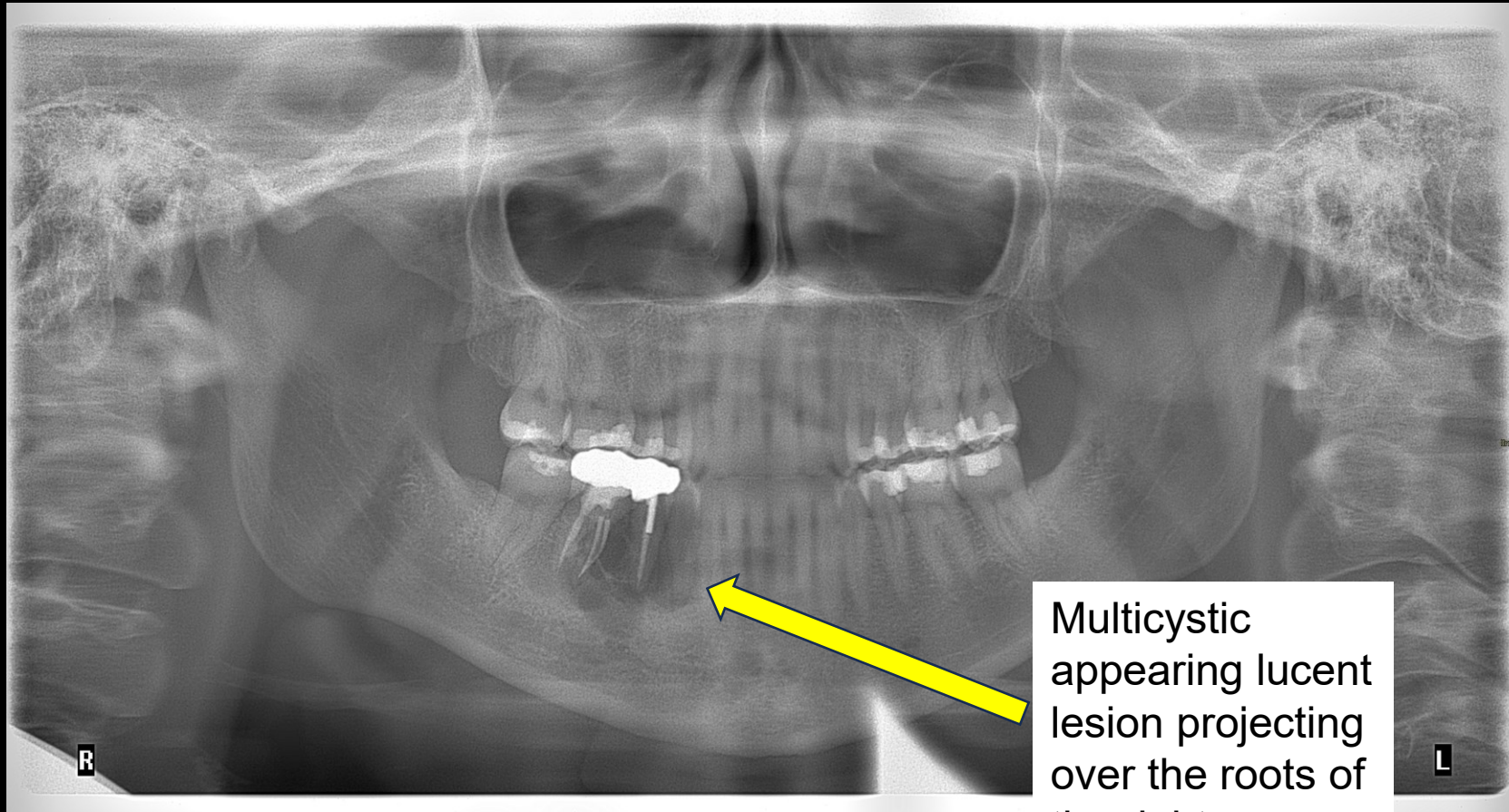
Patient Presentation

- **HPI:** 29 y/o female who is 36 weeks pregnant presents to the emergency department due to swelling and pain in the jaw. A radiolucent lesion was incidentally discovered during a dental visit, patient did not follow up after learning she was pregnant.
- **PMH:** Amenorrhea, Gestational diabetes mellitus
- **Vitals:** BP 113/70, Temp 97.8 F, RR 16
- **ROS:** Dental pain, otherwise negative
- **Physical exam:** Tenderness and 3 x 2 cm hyper vascular mass with purulence over molar 29

Pertinent Labs

- **CBC:** Within normal limits

Previous Imaging



Multicystic
appearing lucent
lesion projecting
over the roots of
the right
mandibular
molar

What Imaging Should We Order?

Select the applicable ACR Appropriateness Criteria

Variant 2: Suspect primary bone tumor. Radiographs negative or do not explain symptoms. Next imaging study.

Procedure	Appropriateness Category	Relative Radiation Level
MRI area of interest without and with IV contrast	Usually Appropriate	0
MRI area of interest without IV contrast	Usually Appropriate	0
CT area of interest without IV contrast	May Be Appropriate	Varies
CT area of interest without and with IV contrast	May Be Appropriate	Varies
CT area of interest with IV contrast	Usually Not Appropriate	Varies
FDG-PET/CT whole body	Usually Not Appropriate	⊕⊕⊕⊕
Bone scan whole body	Usually Not Appropriate	⊕⊕⊕
US area of interest	Usually Not Appropriate	0

This imaging modality was ordered by the physician



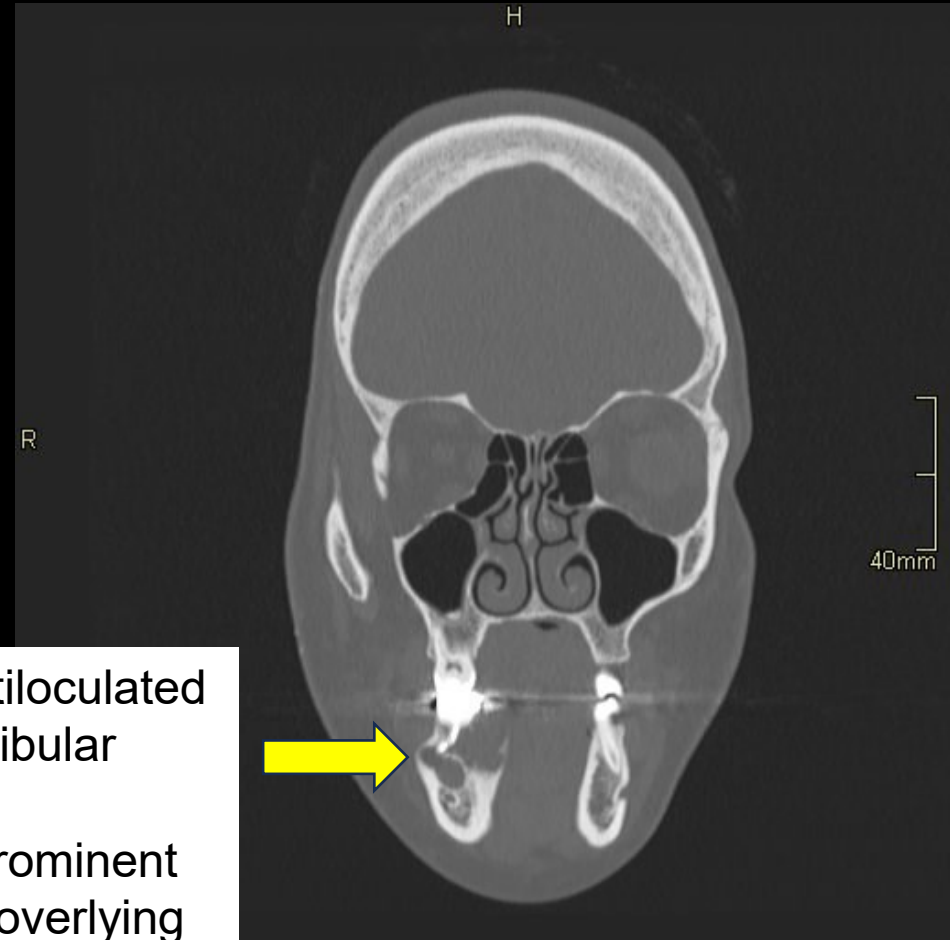
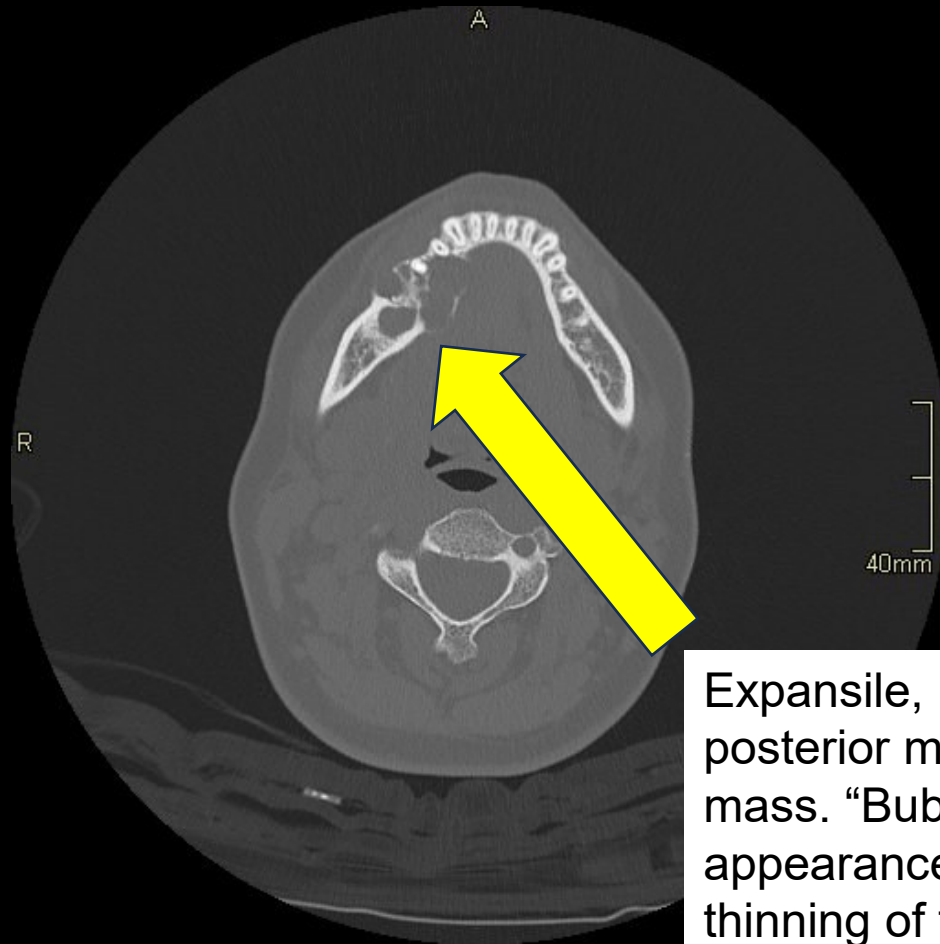
Findings (unlabeled)



Findings (unlabeled)



Findings (labeled)



Expansile, multiloculated posterior mandibular mass. "Bubbly" appearance. Prominent thinning of the overlying mandibular cortex.

Findings: (labeled)

Soft tissue mass of the posterior body of the right mandible involving roots of the first premolar to the first molar tooth



Final Dx:

Ameloblastoma

Ameloblastoma

- **Definition:** Benign locally invasive odontogenic neoplasm, commonly occurring in the jaw near the molars, and is prone to recurrence.
- **Epidemiology:** Most common in adults between the ages of 30-50
- **Clinical features:** Patients with Ameloblastoma may present with a hard painless mandibular mass. Other symptoms may include loose teeth, painless swelling, bleeding, and poorly healing wound extraction

Ameloblastoma

- **Diagnosis:** Commonly initially discovered on dental X-rays, final diagnosis is made with a combination of CT scan and biopsy
- **Classification:** As of 2017 WHO has 4 classifications for Ameloblastomas. These classifications are Conventional Ameloblastoma, Unicystic Ameloblastoma, Extrasosseous/Peripheral Ameloblastoma, and Metastasizing Ameloblastoma. These categories were established based on the behavior of the lesion and the required treatment. The mural variant of the unicystic ameloblastoma requires aggressive surgical treatment.

Ameloblastoma

- **Radiographic features:** Ameloblastomas typically have an expansile “Bubbly” multiloculated radiolucent appearance on CT. On MRI cystic elements will show T2 hyperintensity. Lesions are often located in the mandible centered on the 3rd molar and may be associated with an unerupted tooth.
- **Differential diagnoses:** Periapical cyst, Dentigerous cyst, Keratocystic Odontogenic Tumor
- **Treatment:** If the lesion is small complete surgical excision is appropriate. If the lesion is large the patient should receive en block removal with wide bone margin followed by reconstruction

References:

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