

# AMSER Case of the Month: November 2025

22-year-old female presenting with left lower jaw pain  
and swelling



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# Patient Presentation

- **HPI:** 22 yo female presenting to the ED with worsening left lower jaw pain and swelling for the past few months. Pain is 9/10 in intensity and associated with muffled voice for the past 2 days. She presented to the dentist yesterday and was given clindamycin for suspected jaw abscess. Denies fever, chills, numbness, or purulence.
- **Past Medical and Surgical History:** none
- **Medications:** clindamycin, acetaminophen
- **Physical Exam:** Temp 36.2 C, BP 116/70, HR 91, RR 16, SpO2 99%.  
Left lower jaw and cheek with nonfluctuant edema that is firm and tender. Trismus observed. Left lower molar appears non-purulent. Oropharynx with no erythema or exudates. No submandibular tenderness or erythema.

# Pertinent Labs

- CBC with differential is unremarkable.
- ESR elevated at 43 mm/hr. CRP is normal.

What Imaging Should We Order?

# Select the applicable ACR Appropriateness Criteria

**Variant 2:**

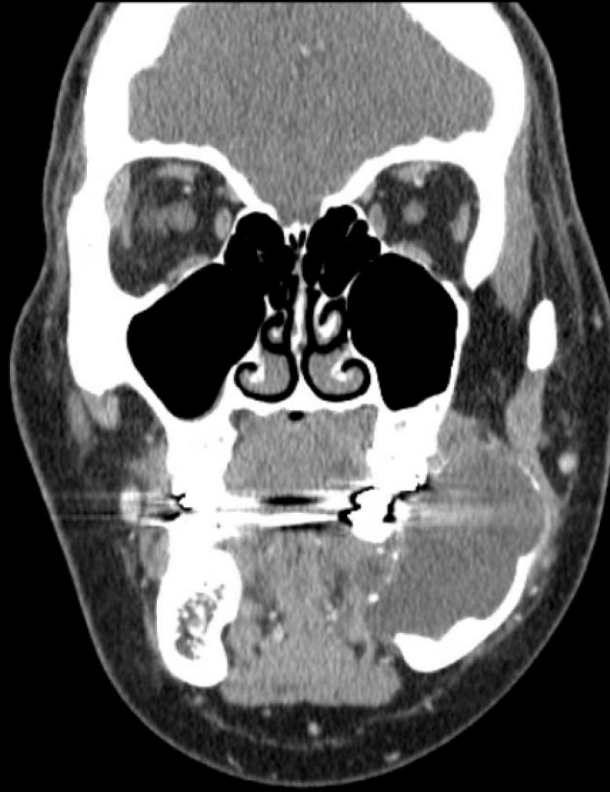
**Suspected septic arthritis or soft tissue infection. Initial radiographs normal or with findings suggestive of joint effusion or soft tissue swelling. Next imaging study.**

Procedure	Appropriateness Category	Relative Radiation Level
US area of interest	Usually Appropriate	○
Image-guided aspiration area of interest	Usually Appropriate	Varies
MRI area of interest without and with IV contrast	Usually Appropriate	○
MRI area of interest without IV contrast	Usually Appropriate	○
CT area of interest with IV contrast	Usually Appropriate	Varies
CT area of interest without IV contrast	May Be Appropriate	Varies
3-phase bone scan area of interest	Usually Not Appropriate	☢☢☢
CT area of interest without and with IV contrast	Usually Not Appropriate	Varies

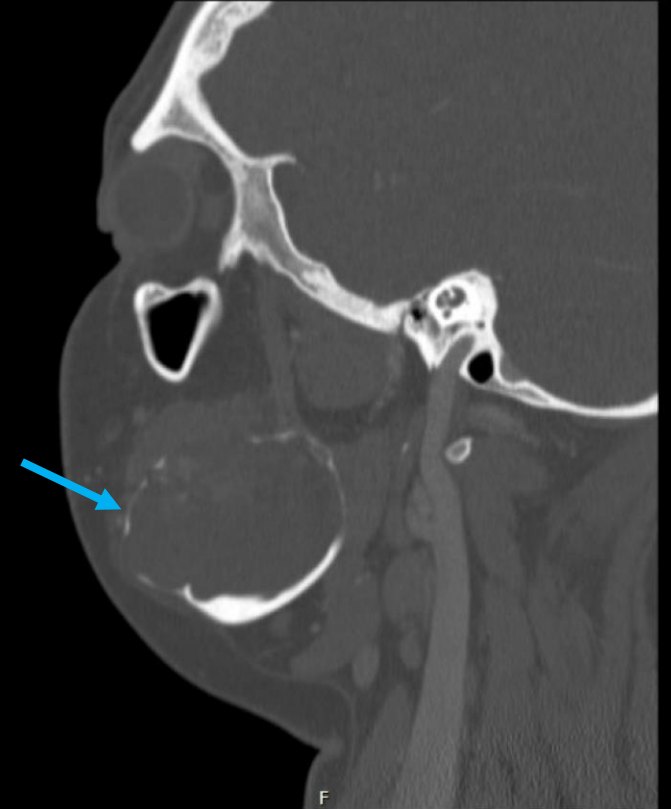
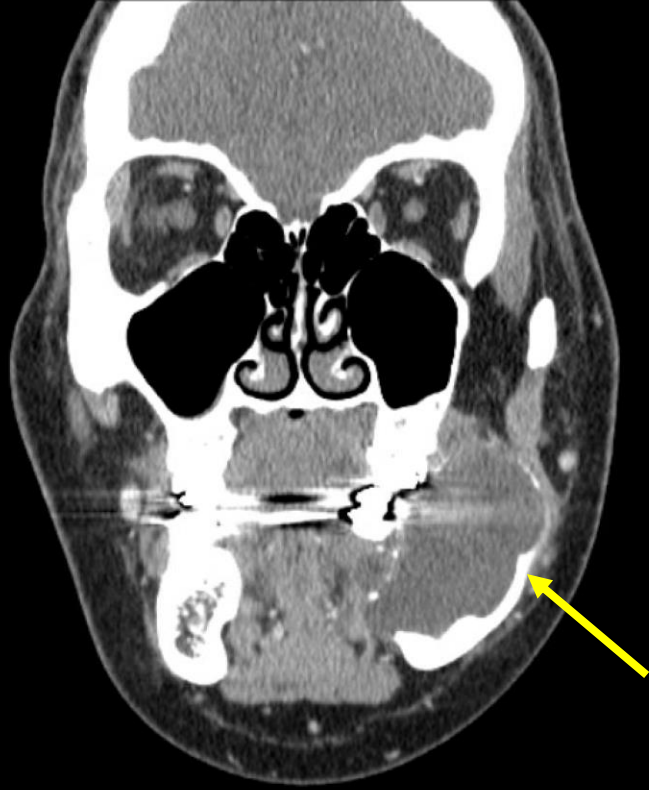
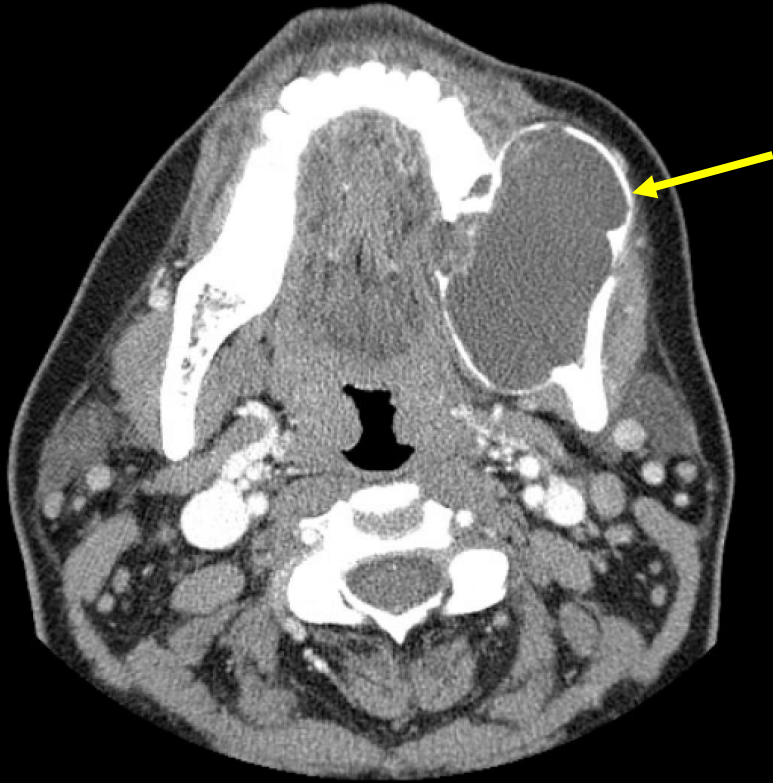


This imaging modality was ordered by the ER physician

# Findings (unlabeled)



## Findings (labeled)



5.1 cm x 4.5 cm x 3.5 cm expansile cystic mass in the body of the left mandible. There are areas of significant thinning/erosion of the expanded cortical bone with internal scalloping surrounding this mass.

Final Dx:

Unicystic Ameloblastoma

# Ameloblastoma

- **Definition:** rare, benign but locally aggressive odontogenic neoplasm of the mandibular or maxillary epithelium
- **Etiology:** arises from the ameloblasts (innermost epithelial cells of the enamel)
  - Associated with mutations in the mitogen-activated protein kinase (MAP-K) pathway (BRAF, KRAS, FGFR2, NRAS, HRAS)
- **Clinical Features:** slow-growing, painless swelling of the mandible (80% of cases) or the maxilla
  - Pain is uncommon but can occur with hemorrhage inside or adjacent to the tumor
  - Other symptoms: malocclusion, facial deformity, soft tissue invasion, loosening of teeth

# Ameloblastoma

- **Imaging Findings:** uni- (20% of cases) or multilocular (80%) mixed cystic-solid mass located in the posterior mandible or maxilla with bony expansion and thinning of cortical bone
  - **CT:** well-demarcated radiolucent expansile lesion with scalloped borders
    - Multilocular (most common) has a “soap bubble” appearance
    - Root blunting and resorption of adjacent teeth common. May be associated with an unerupted molar tooth
    - Larger lesions with extraosseous extension show soft tissue enhancement
  - **MRI:**
    - T1: typically low signal intensity in cystic regions
      - Contrast enhancement: enhancement of a mural nodule, septations, and solid regions. Cystic regions show no enhancement.
    - T2: mixed signal intensity

# Ameloblastoma

- **Differential Diagnoses:** dentigerous cyst, odontogenic keratocyst, odontogenic myxoma, aneurysmal bone cyst, fibrous dysplasia
- **Treatment:** radical surgical resection with 1-1.5 cm margins
  - Chemotherapy has been used in metastatic disease
  - Radiotherapy can be utilized with post-surgical residual disease, poor surgical candidates, or those with disease not amenable to re-resection
- **Prognosis:** slow-growing benign neoplasm, usually symptomatic after years of growth but if untreated, large size can cause facial deformity and block the airway
  - Recurrence rate about 19.3%, with reported rates up to 70%, usually due to inadequate resection
  - Malignant transformation to ameloblastic carcinoma is rare (1%)

# References:

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- Kreppel M, Zöller J. Ameloblastoma-Clinical, radiological, and therapeutic findings. *Oral Dis.* 2018;24(1-2):63-66. doi:10.1111/odi.12702
- Smit C, Robinson L, Ker-Fox J, Fonseca FP, van Heerden WFP, Uys A. Clinicoradiologic features of ameloblastomas: A single-centre study of 155 cases. *J Oral Pathol Med.* 2024;53(2):133-141. doi:10.1111/jop.13510