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# Radiographic Interpretation of Infections of Jaws





# Pericoronitis





# Pericoronitis

- Erupting or partially impacted third molars
- Inflamed gingiva
- Trismus
- Cellulitis





# Pericoronitis (R/F)

- In early stages, minimal radiographic changes
- Radiolucency adjacent to the crown
- Ill-defined periphery
- Sclerotic border in late stage
- Osteomyelitis, in sever cases



# Normal Follicular Space













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# Acute Suppurative Osteomyelitis





# Acute Suppurative Osteomyelitis

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- Dental infection – most common cause
- Other causes: fracture, wound, hematogenous spread
- Common organisms: *Staph. aureus*, *Staph. albus*, tuberculosis, actinomycosis, syphilis, mixed organisms





# Suppurative Osteomyelitis

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- May involve either jaw
- Localized in maxilla, diffuse in mandible
- Severe pain
- ↑ temperature, WBC count





# Suppurative Osteomyelitis (R/F)

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- Early stages: no radiographic changes
- Ill-defined periphery
- Decrease in the density of bone
- Followed by increased radiolucency
- Sclerosis at later stages
- Sequestra: nonvital bone





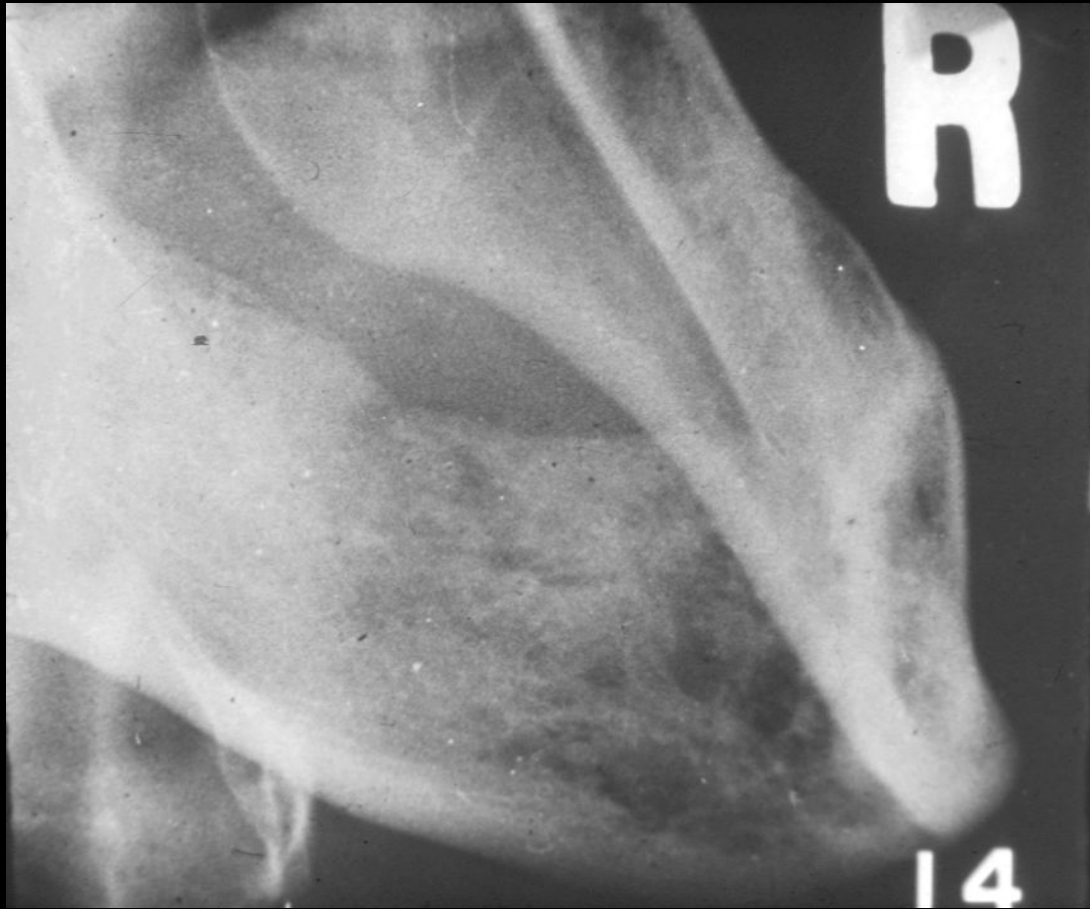
# Suppurative Osteomyelitis (R/F)

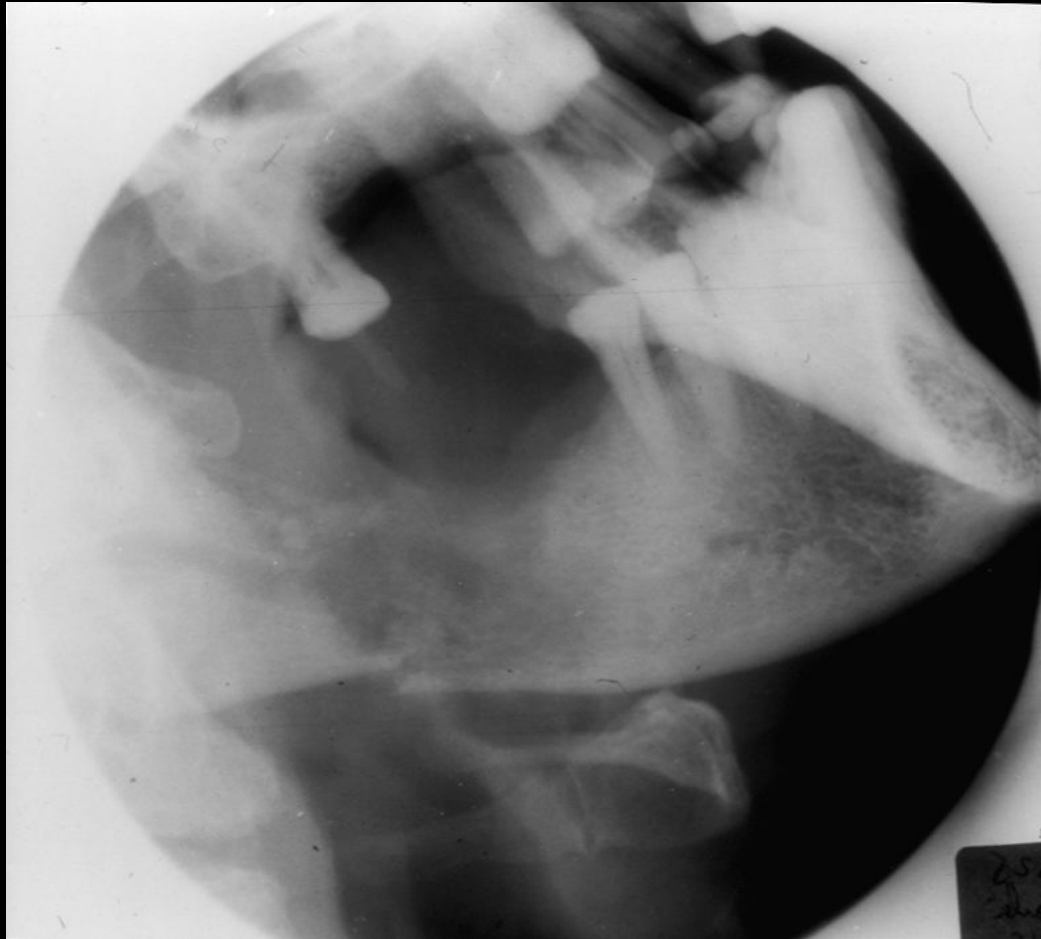
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- Resorption
- Periosteal new bone formation
- Proliferative periostitis
- Fistula formation
- Radiographic features similar to malignant lesions



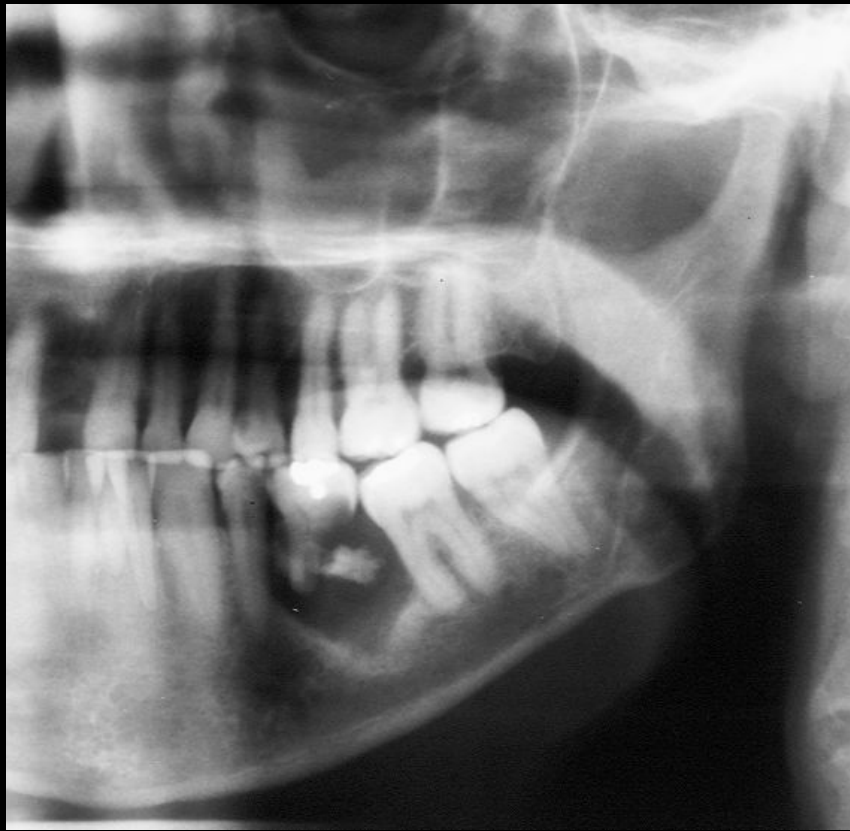


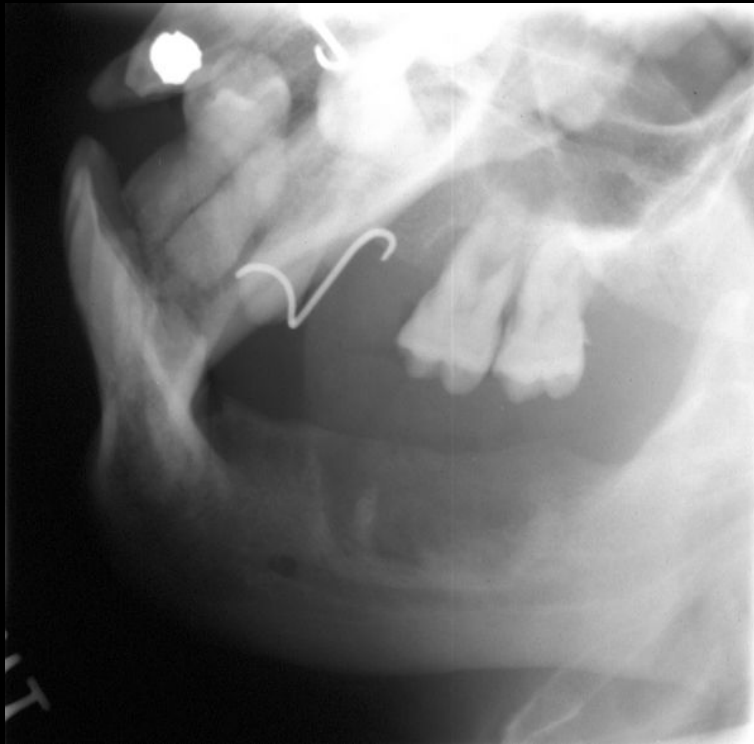


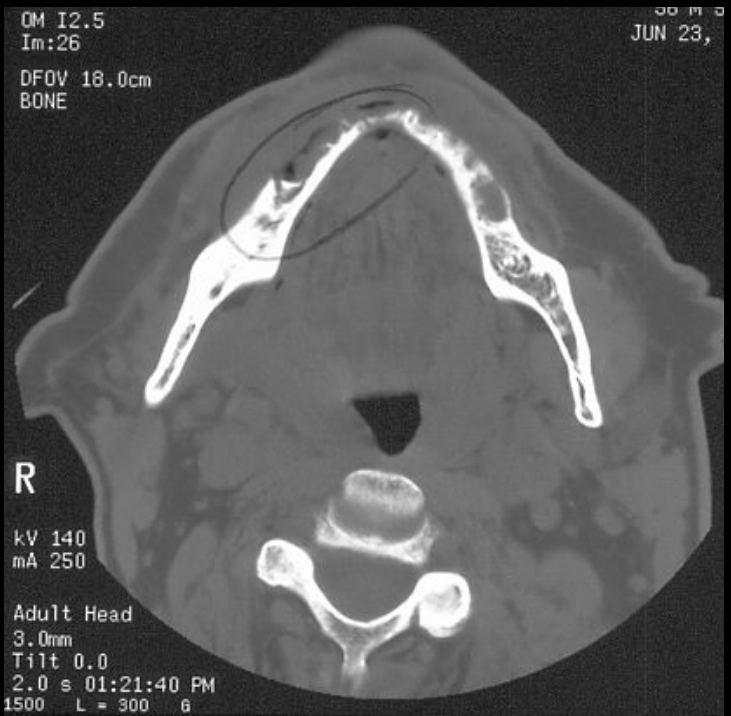
# Sequestrum

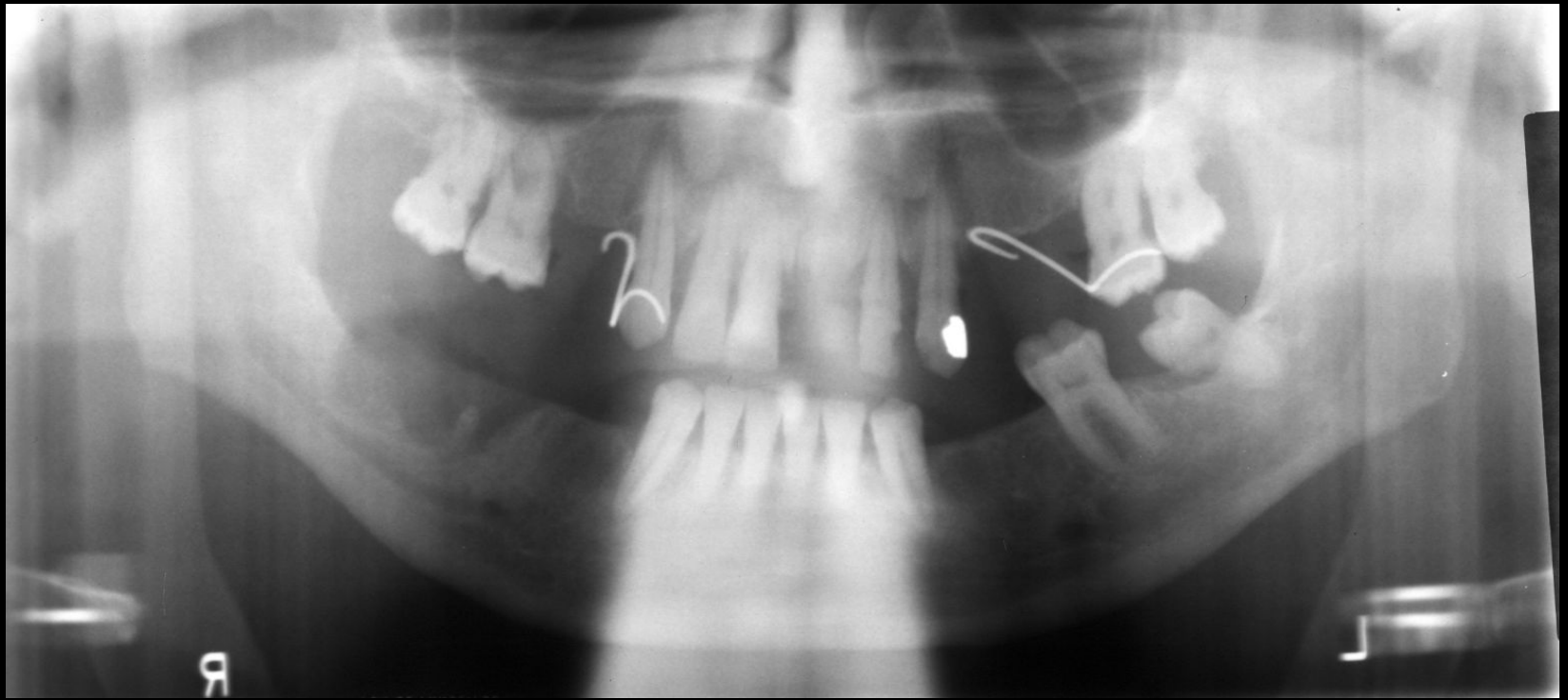














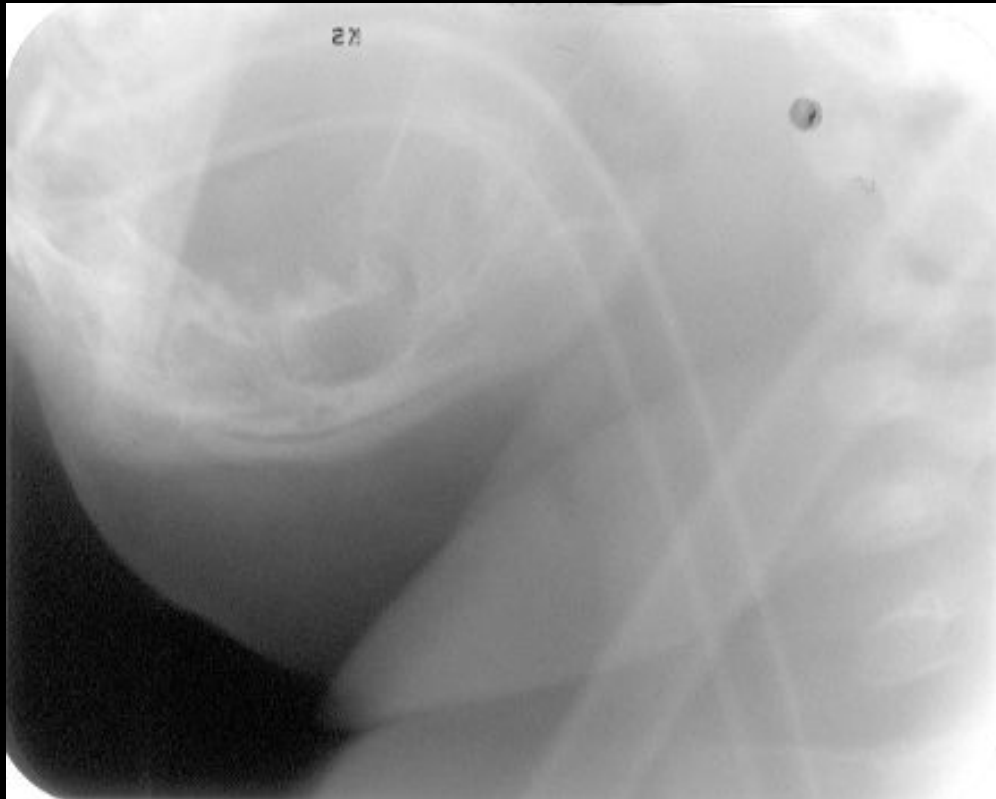
# In-class Exercise: Case 1



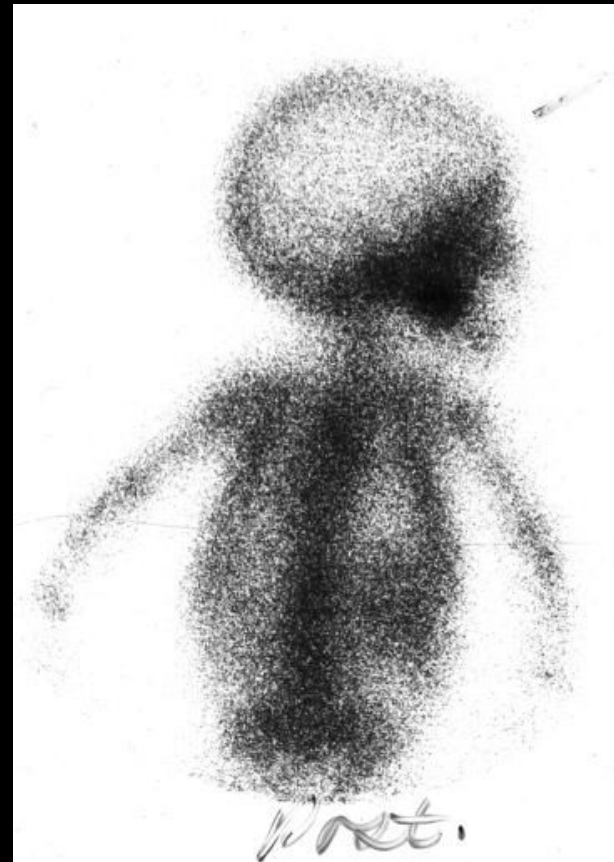
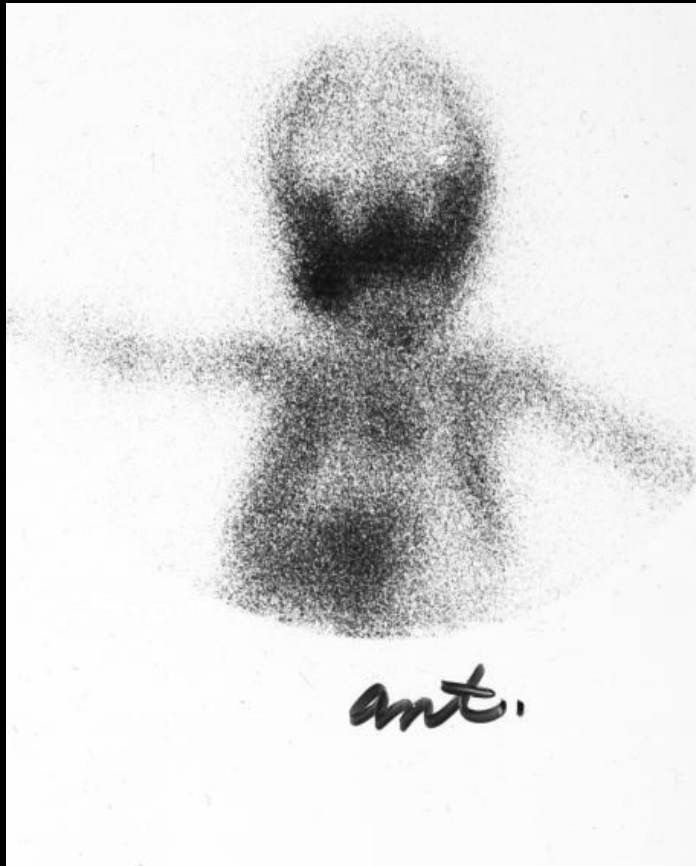


- 4 month old baby
- Meningitis





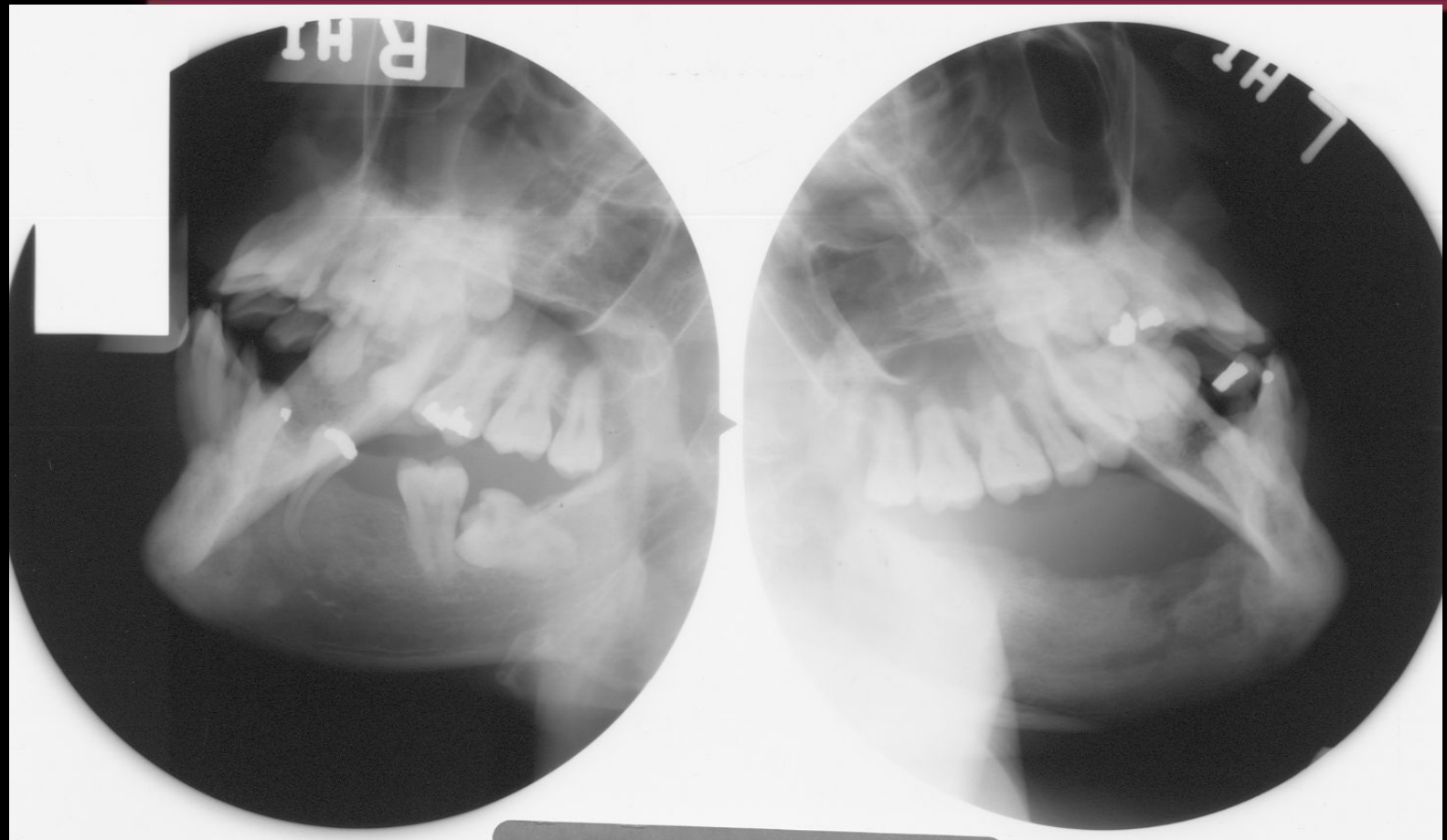
# Nuclear Medicine Study



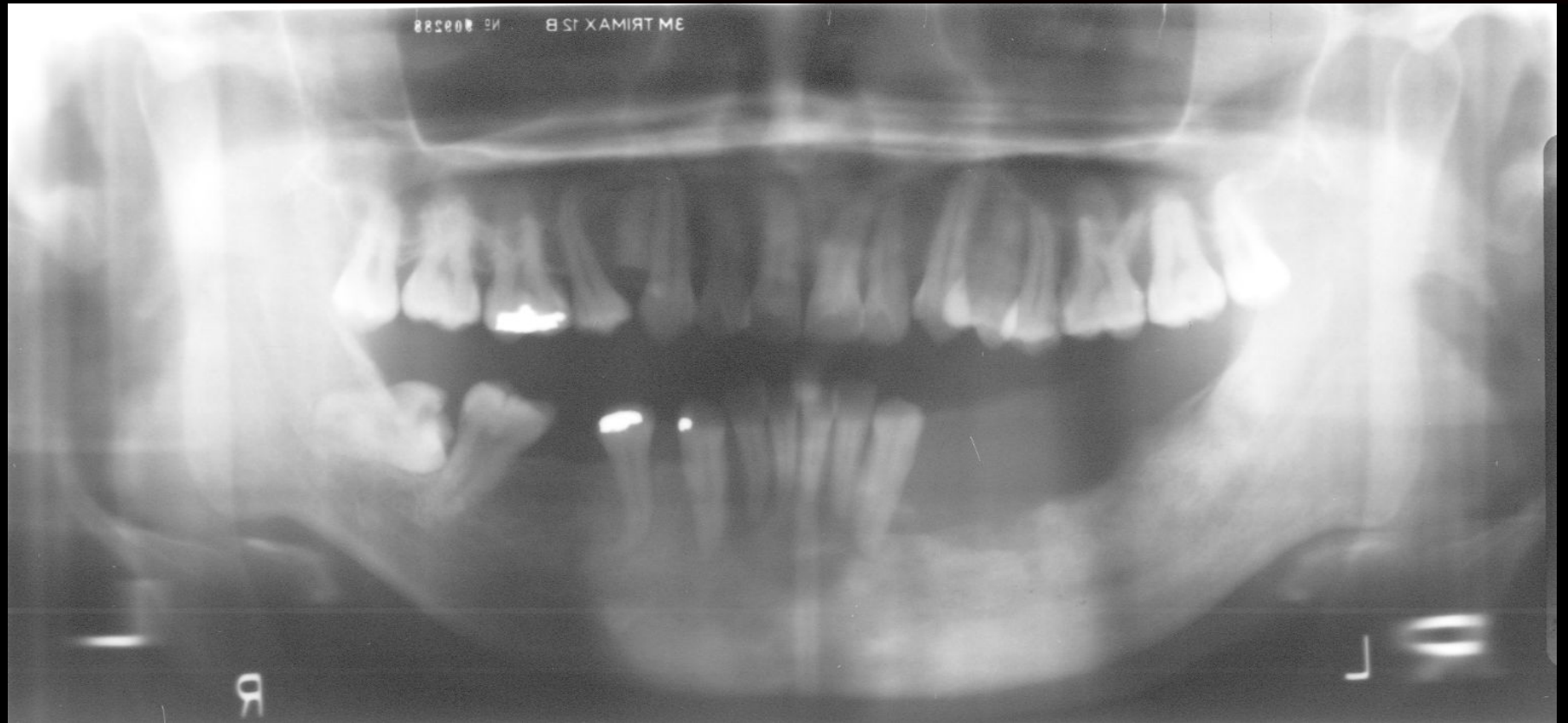


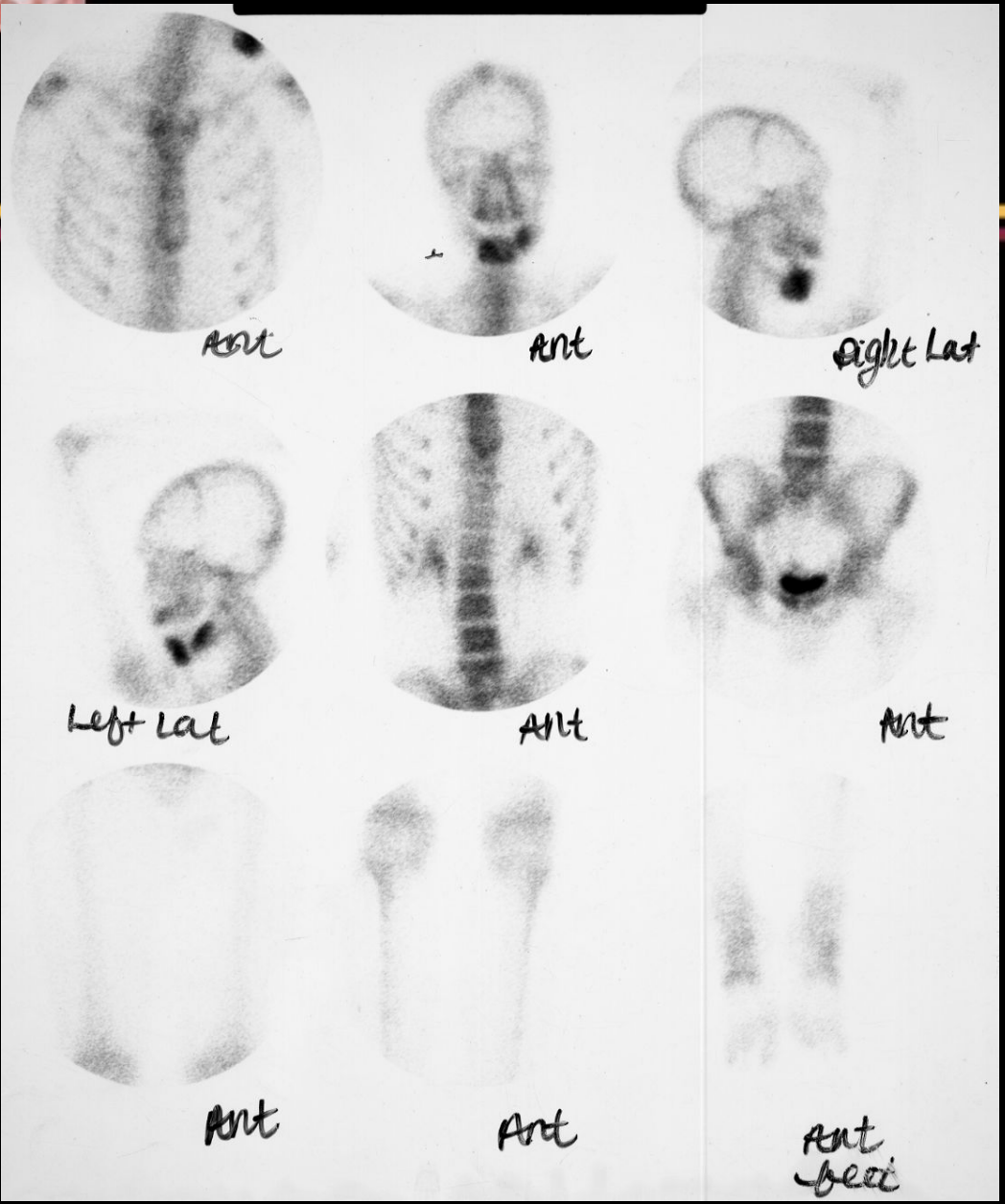




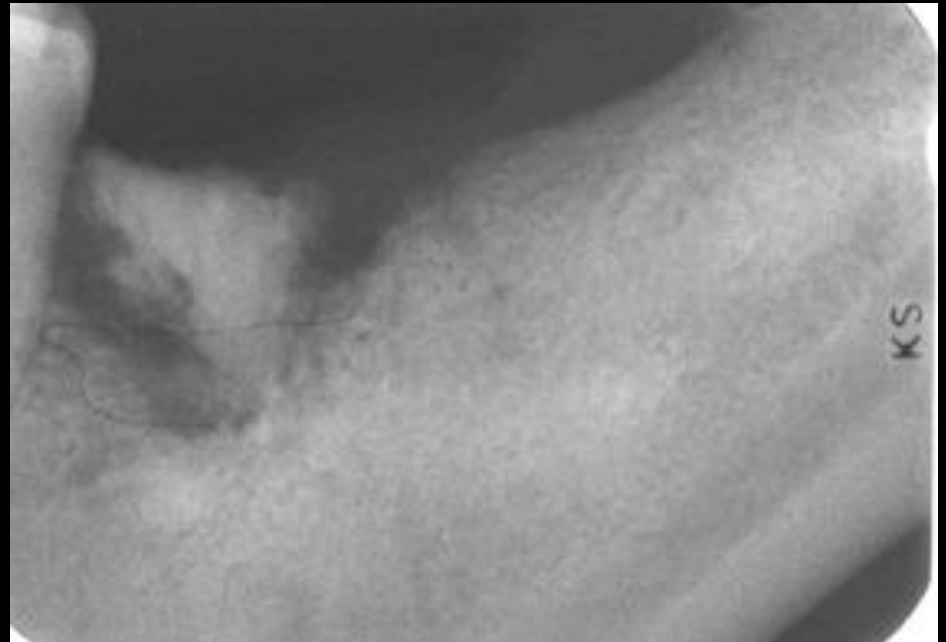








# In-class Quiz : Case 2





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# Chronic Focal Sclerosing Osteomyelitis







# Chr. Focal Sclerosing Osteomyelitis

- Sclerosing or condensing osteitis
- Younger, < 20 yrs
- Mostly mandibular first molar
- Large carious lesion





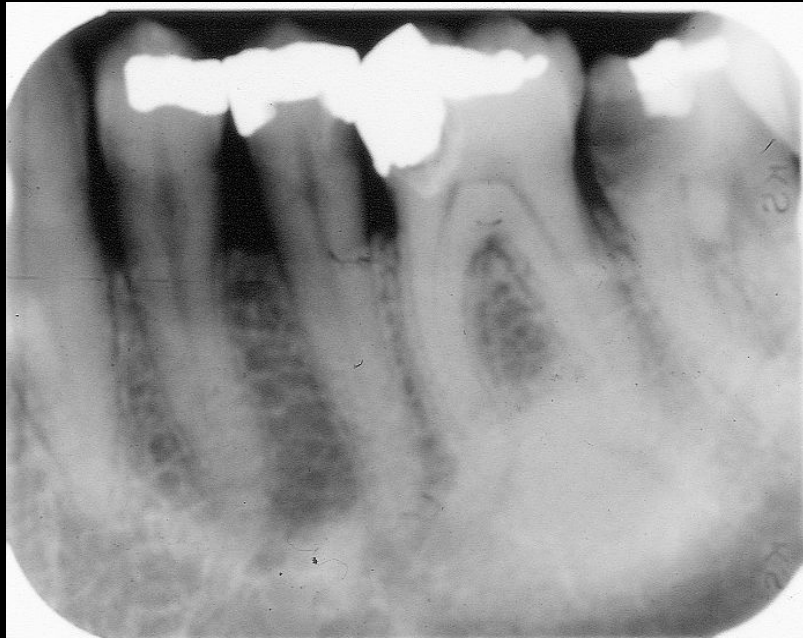
# Focal Sclerosing Osteomyelitis (R/F)

- Initial stage – no radiographic signs
- Rarefying osteitis – radiolucent area
- Sclerosing osteitis – dense sclerotic bone, trabeculation difficult to identify
- Difference with idiopathic osteosclerosis













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# Chronic Diffuse Sclerosing Osteomyelitis





# Chr. Diffuse Sclerosing Osteomyelitis

- May not be associated with carious teeth
- Intermittent, recurrent episodes of swelling, pain, fever
- Any age, mostly elderly patients
- Prevalence in African American
- Chronic low grade infection
- Pain, if present, is often mild
- Acute exacerbation









# Chronic Osteomyelitis With Proliferative Periostitis

## Garre's Periostitis





# Chronic Osteomyelitis With Proliferative Periostitis

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- Garre's Periostitis (1893)
- Younger, <25 yrs
- Mostly mandible





# Garre's Periostitis (R/F)

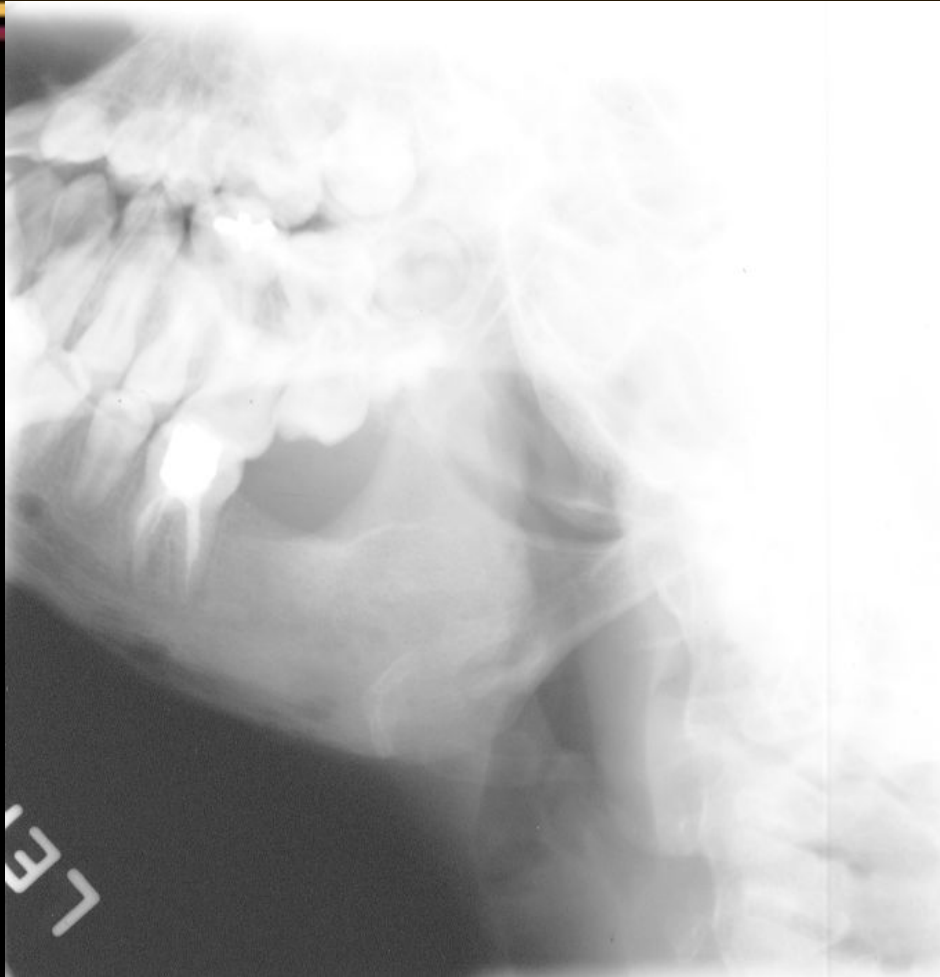
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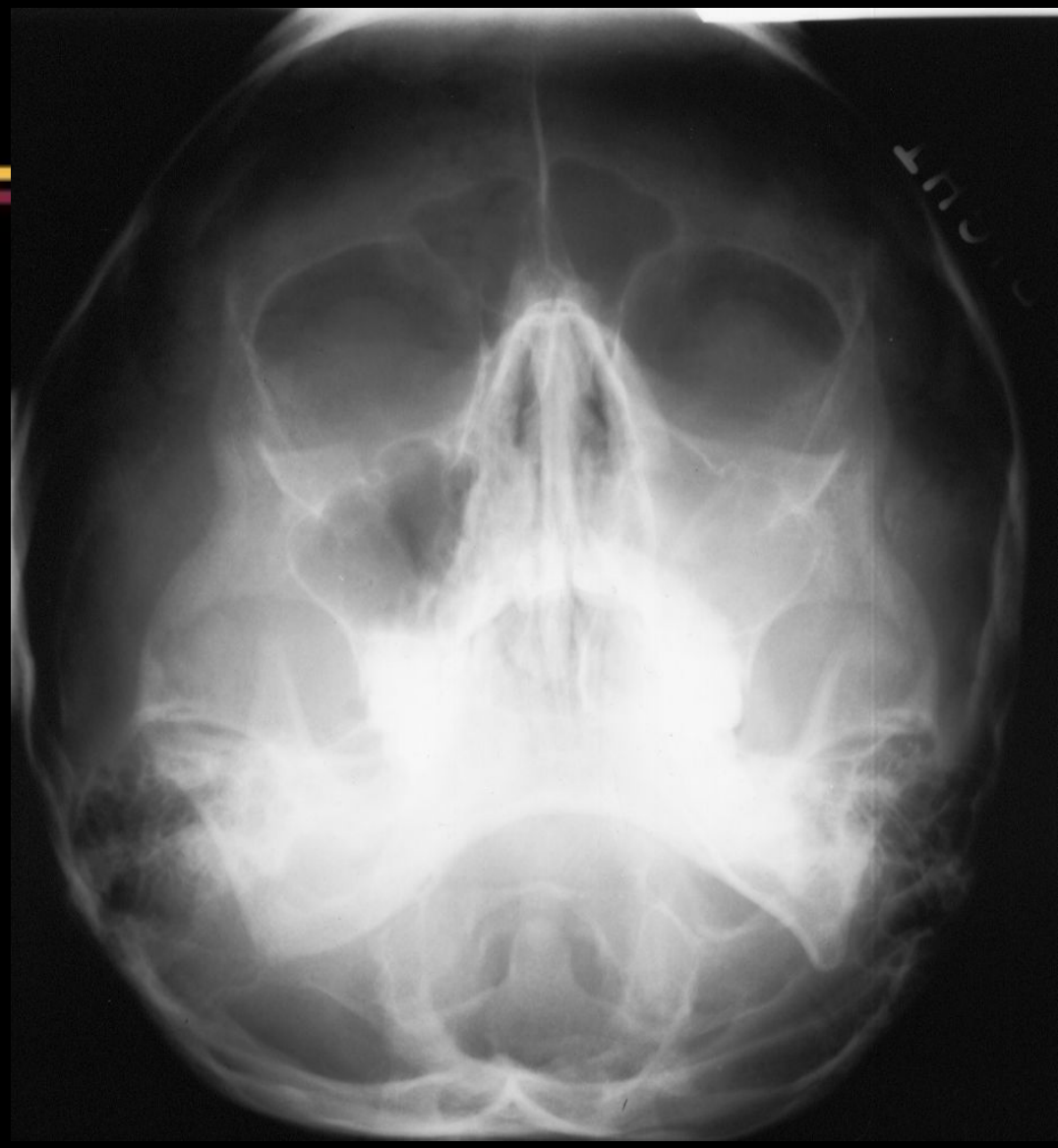
- Often associated with a carious tooth
- Mottled, predominantly lucent
- Focal overgrowth of bone
- “Onion-skin” appearance : layering of cortical bone

















# In-class exercise: Case 3





# Osteoradionecrosis





# Osteoradionecrosis

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- Radiotherapy (40 to 80 Gy)
- Decreased vascularity
- Low defense
- High susceptibility to extraction, perio, pulpal disease, denture sore





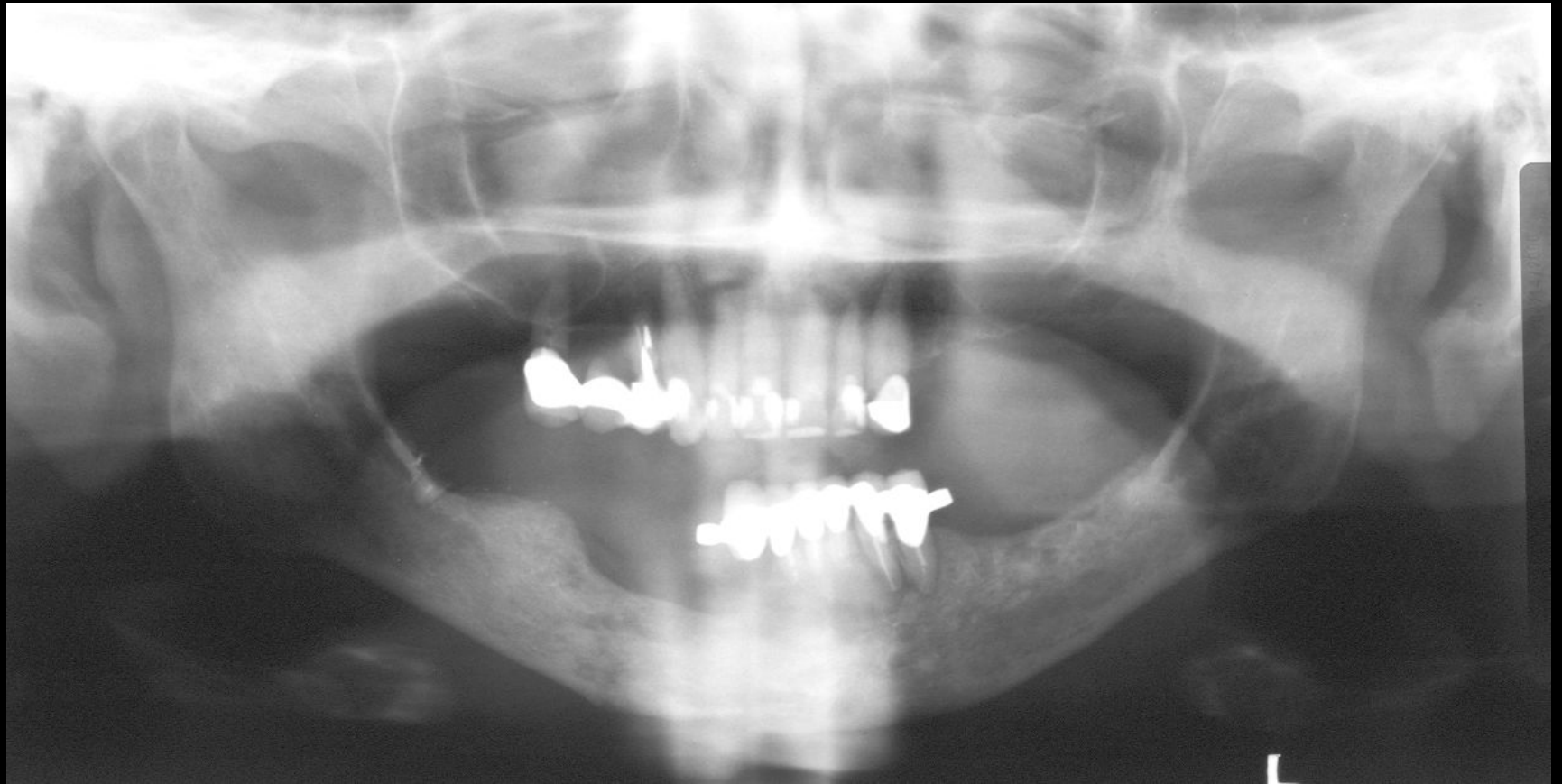
# Osteoradionecrosis (R/F)

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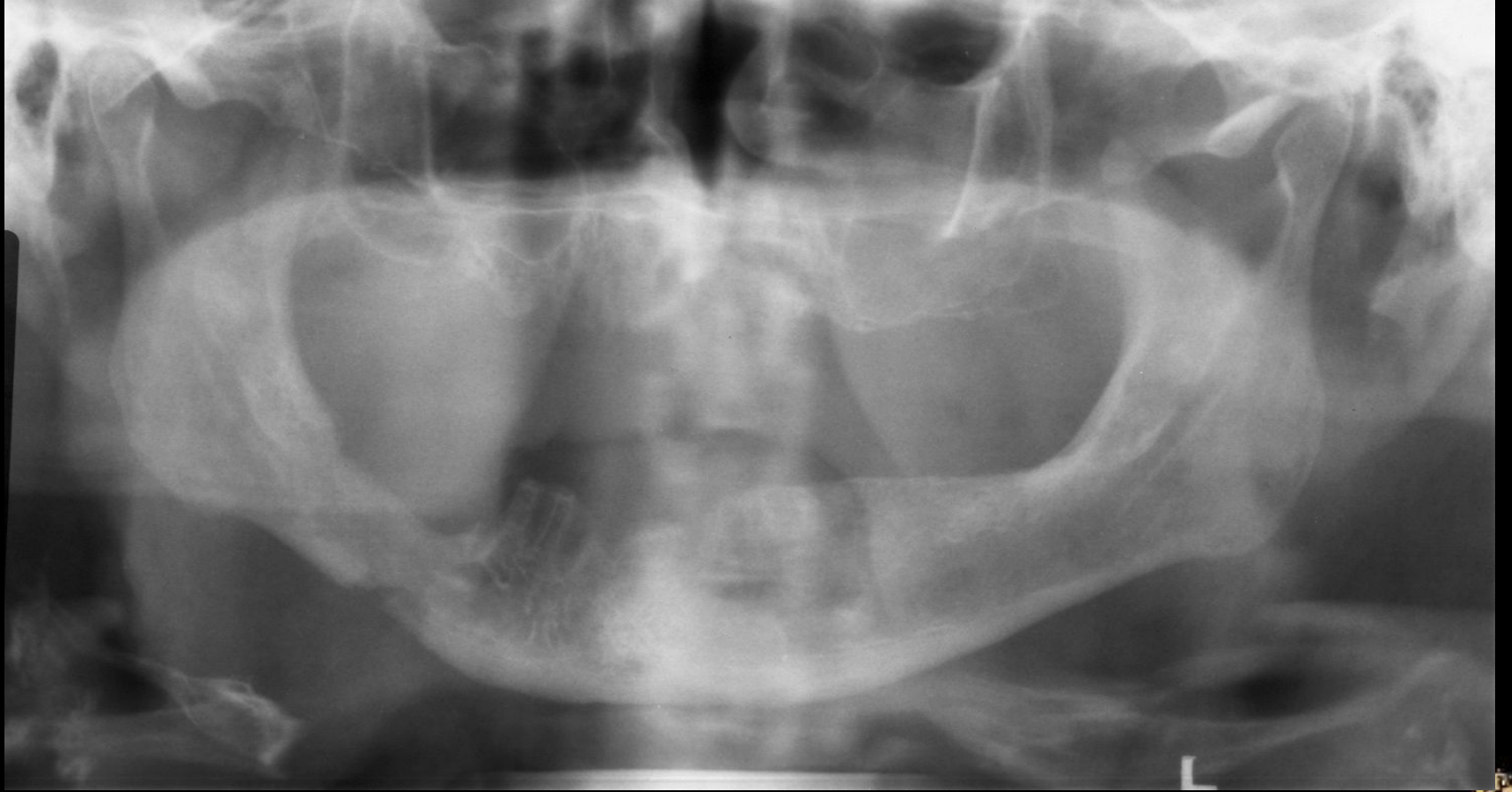
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- Similar to osteomyelitis
- Diagnosis established by history













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# Florid Cemento-osseous Dysplasia





# Florid Cemento-osseous Dysplasia

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- Wide-spread form of periapical cemental dysplasia
- Mostly female, middle-aged, African, Asian
- May not be symptomatic





# Florid Cemento-osseous Dysplasia

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- Poor vascular supply – prone to infection
- Osteomyelitis, if infected
- Preventive management





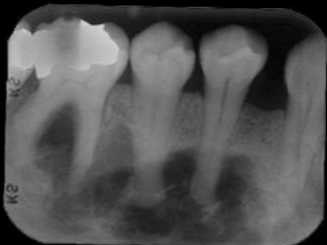
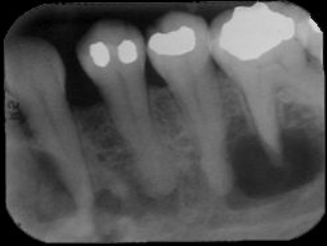
# Florid C-O Dysplasia (R/F)

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- Usually bilateral, both jaws
- Well-defined sclerotic border
- Internal content of mixed density
- Large irregular masses
- Hypercementosis









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# Maxillary Sinusitis (will discuss in Unit 12)

