



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 severe cases





Normal Follicular Space











Acute Suppurative Osteomyelitis





Acute Suppurative Osteomyelitis

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





Suppurative Osteomyelitis

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





Suppurative Osteomyelitis (R/F)

- 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

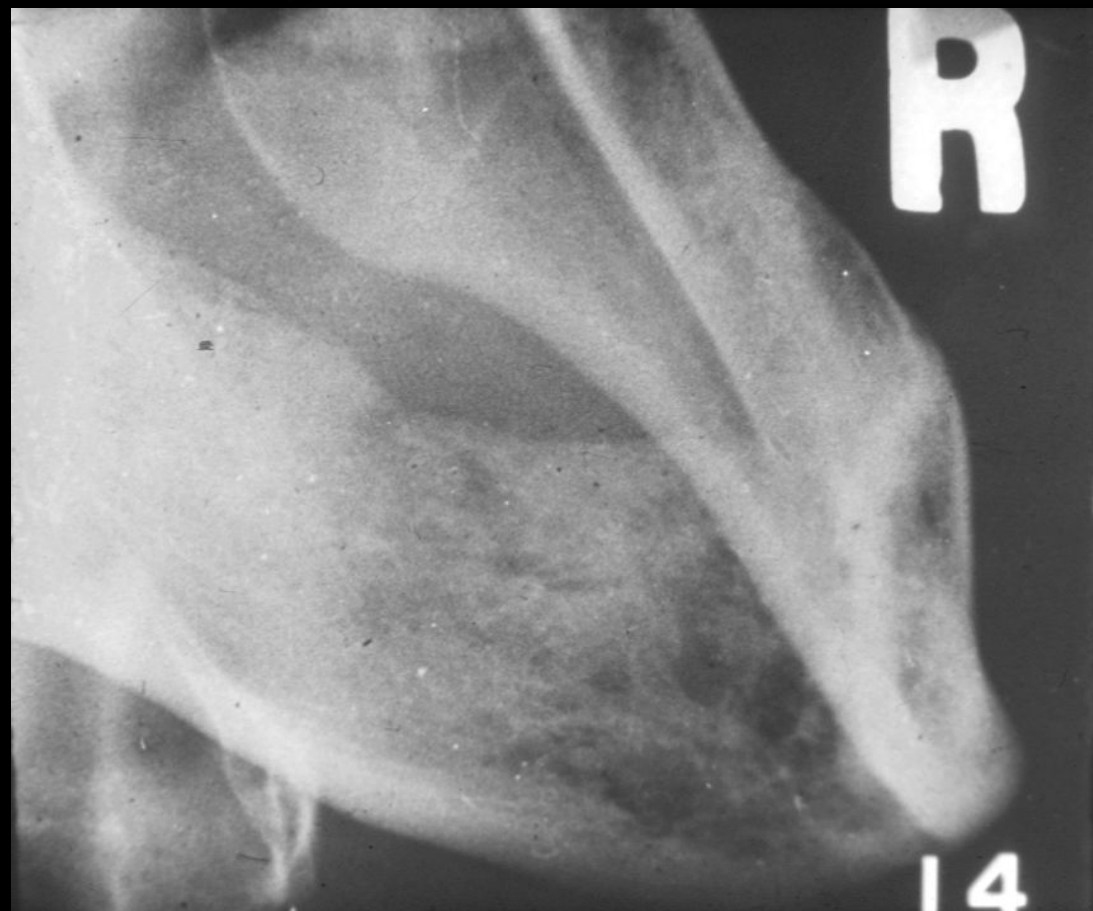


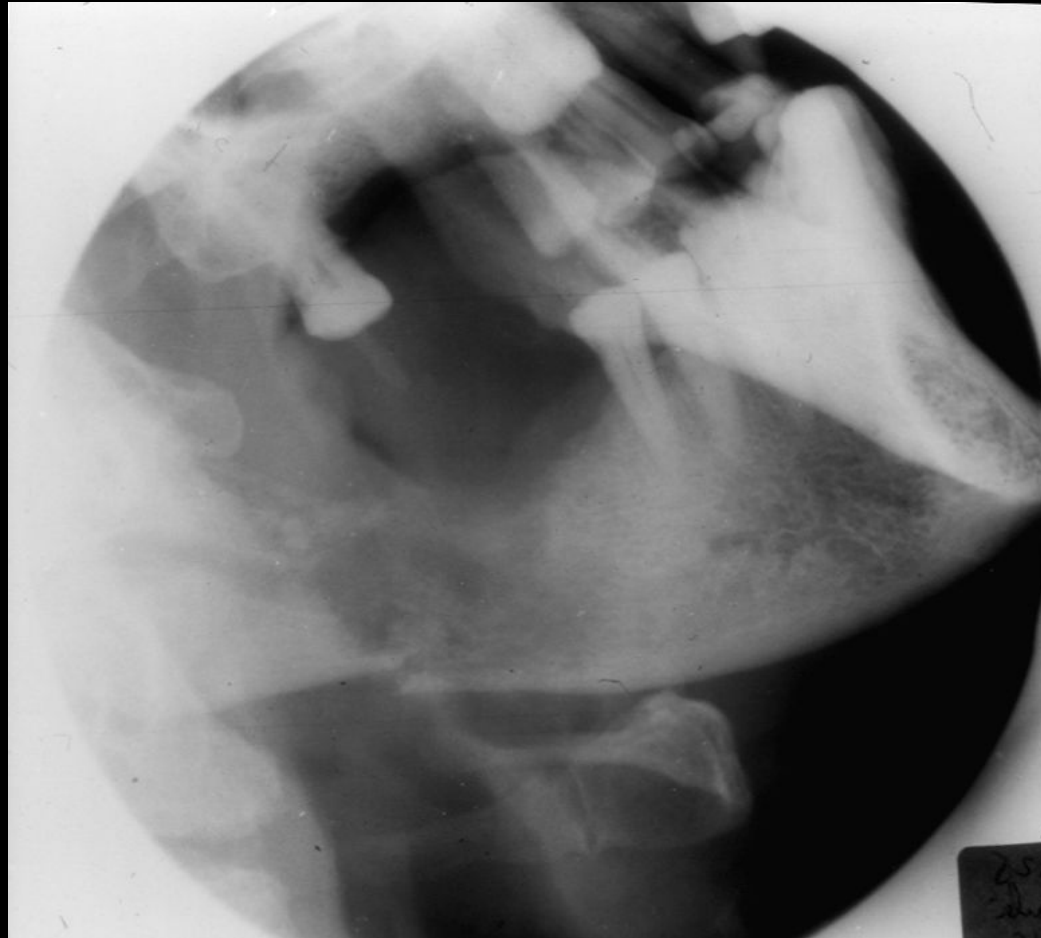


Suppurative Osteomyelitis (R/F)

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

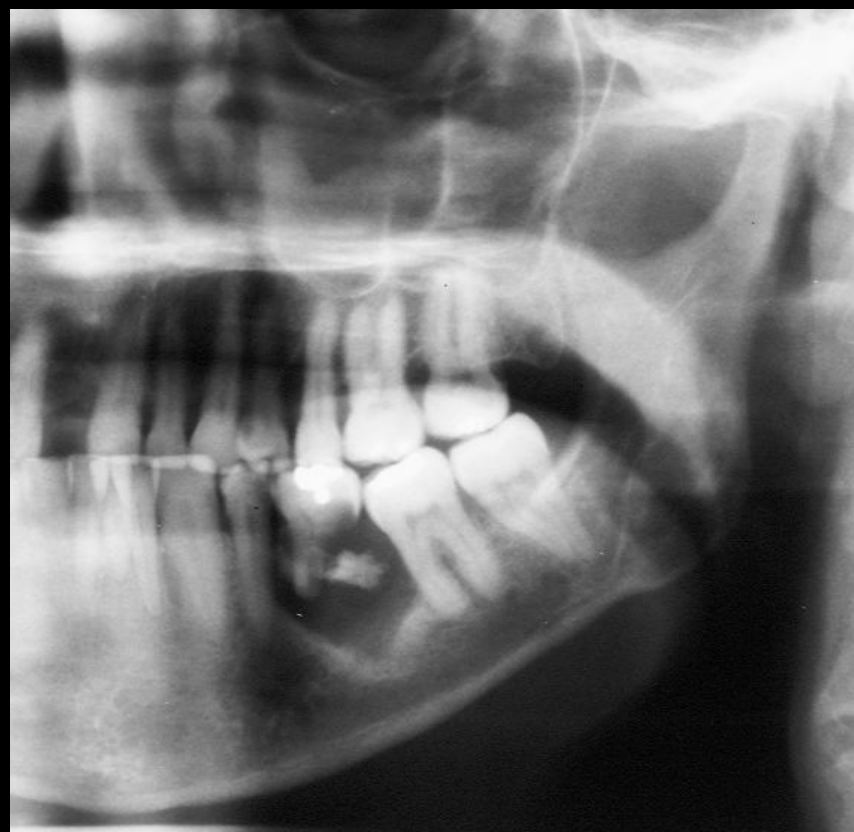


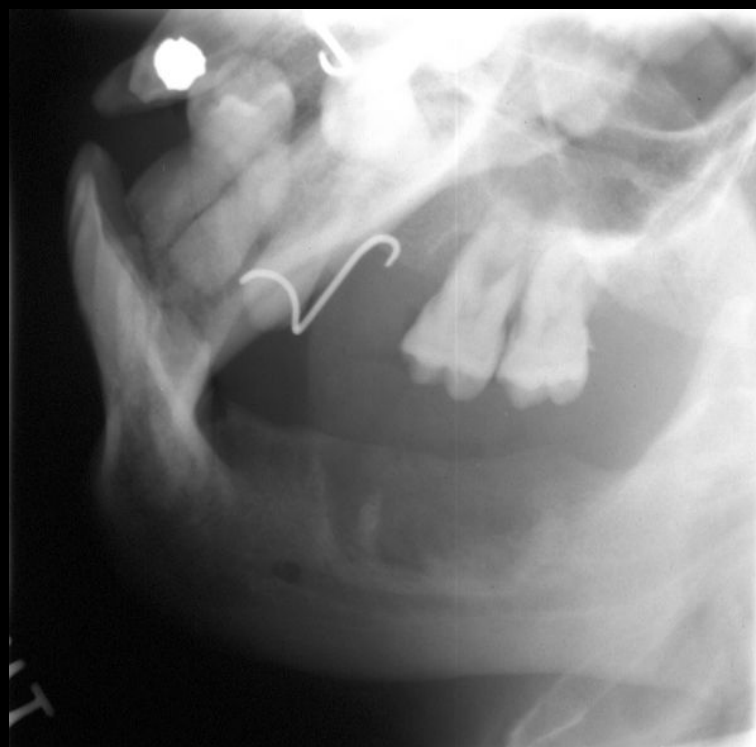


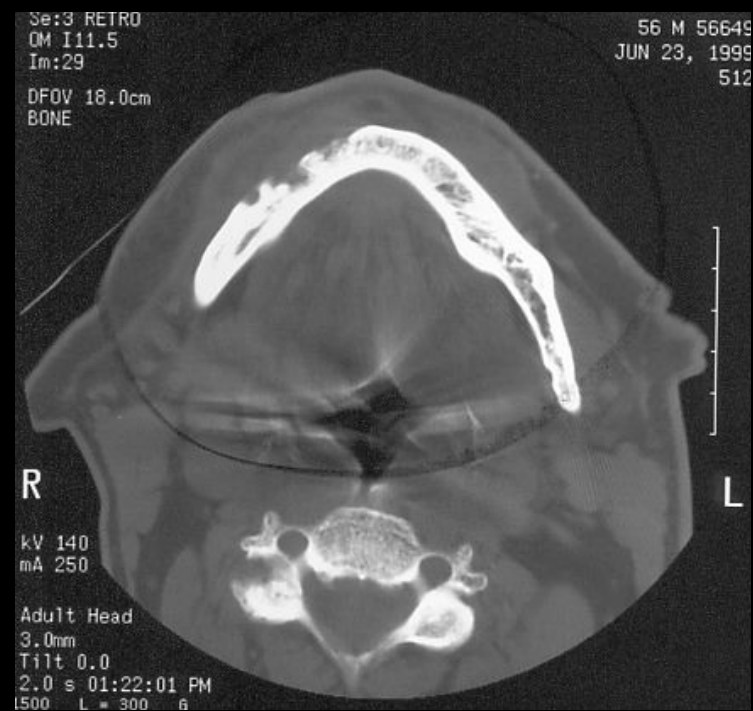


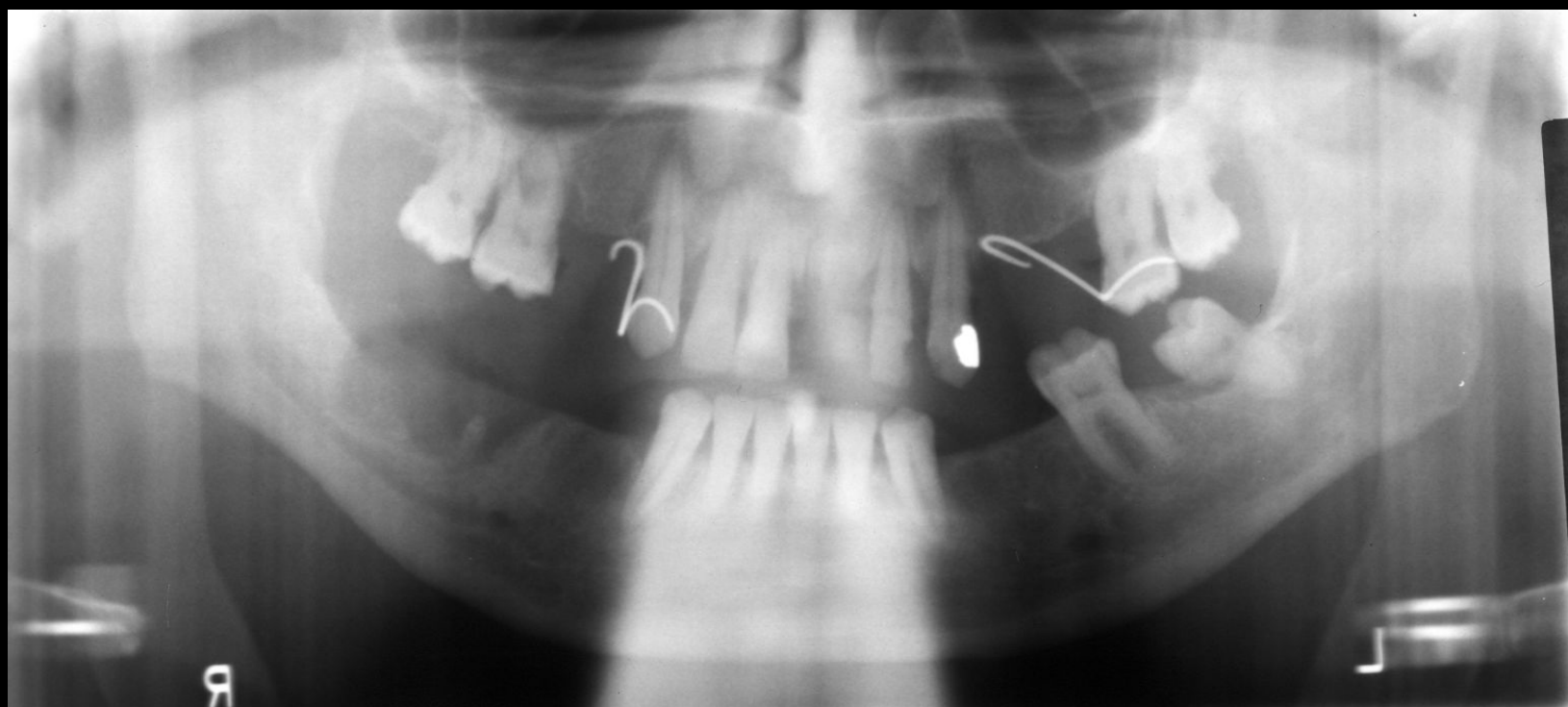
Sequestrum













In-class Exercise: Case 1





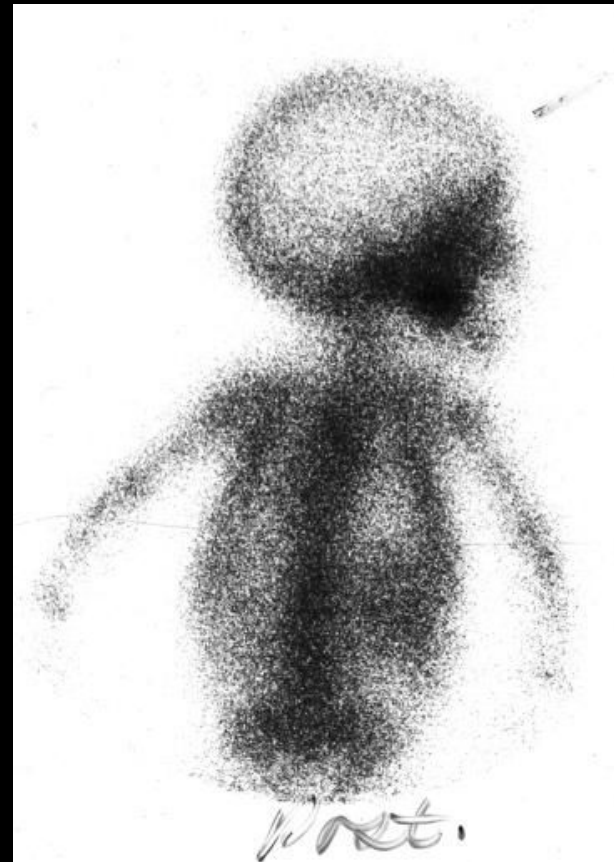
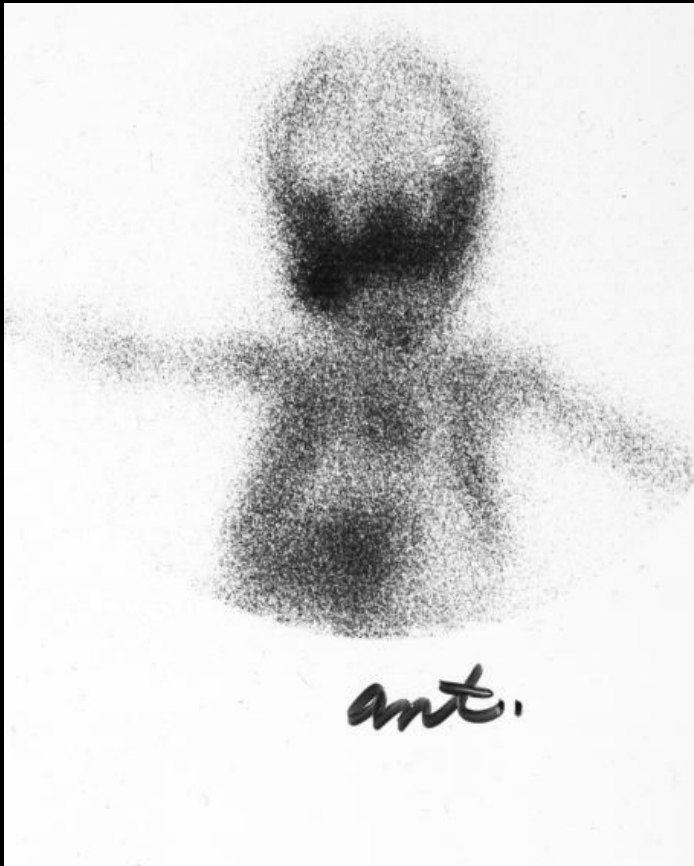
- 4 month old baby
- Meningitis





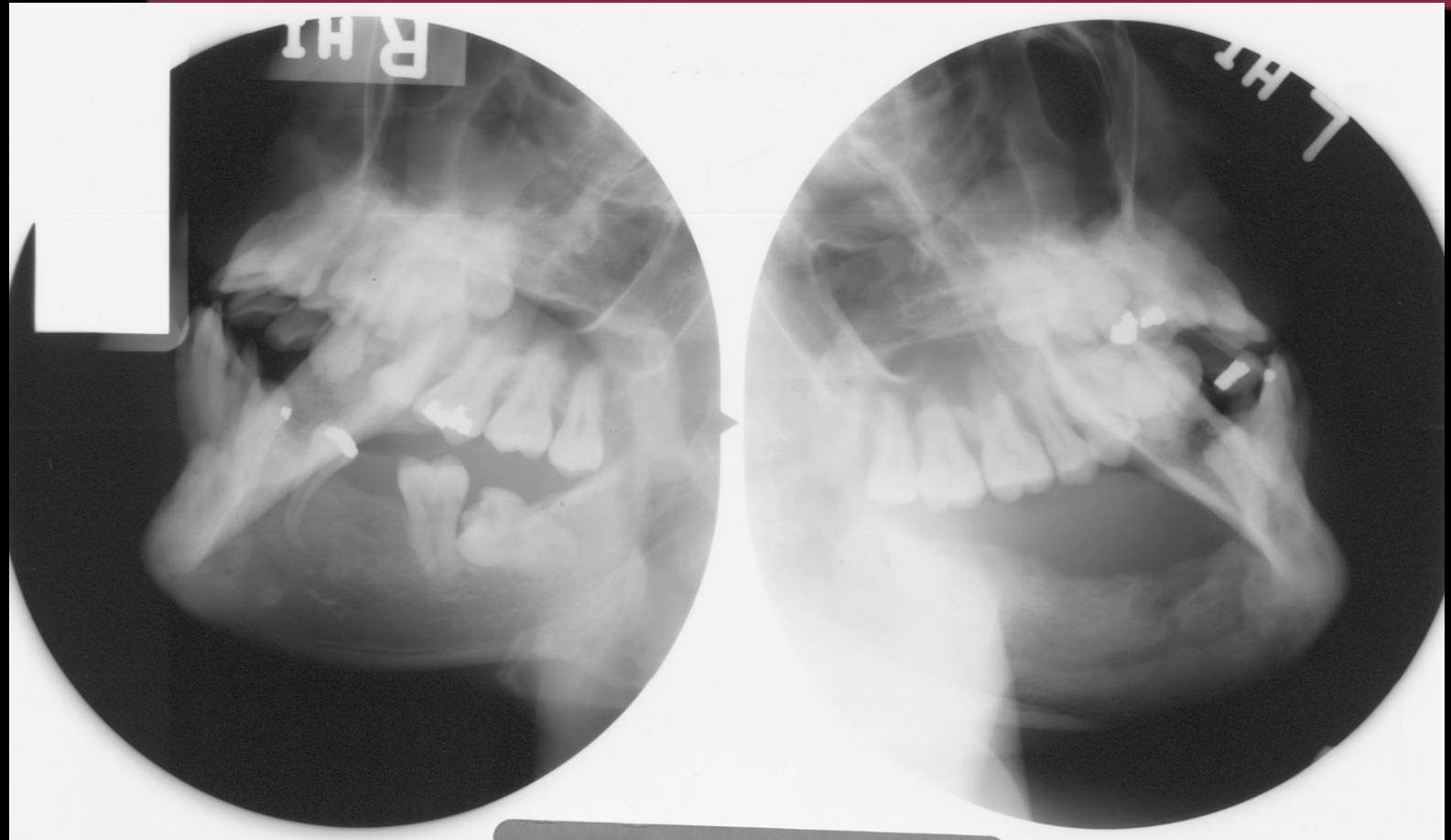


Nuclear Medicine Study



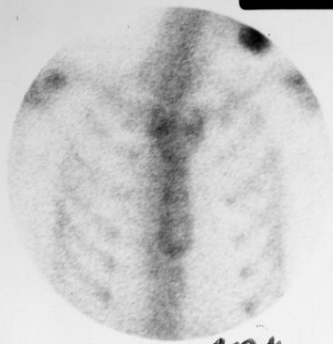








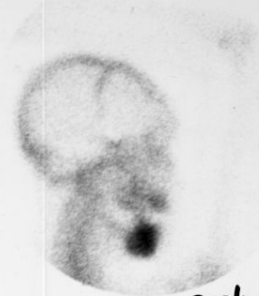




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Right Lat



Left Lat



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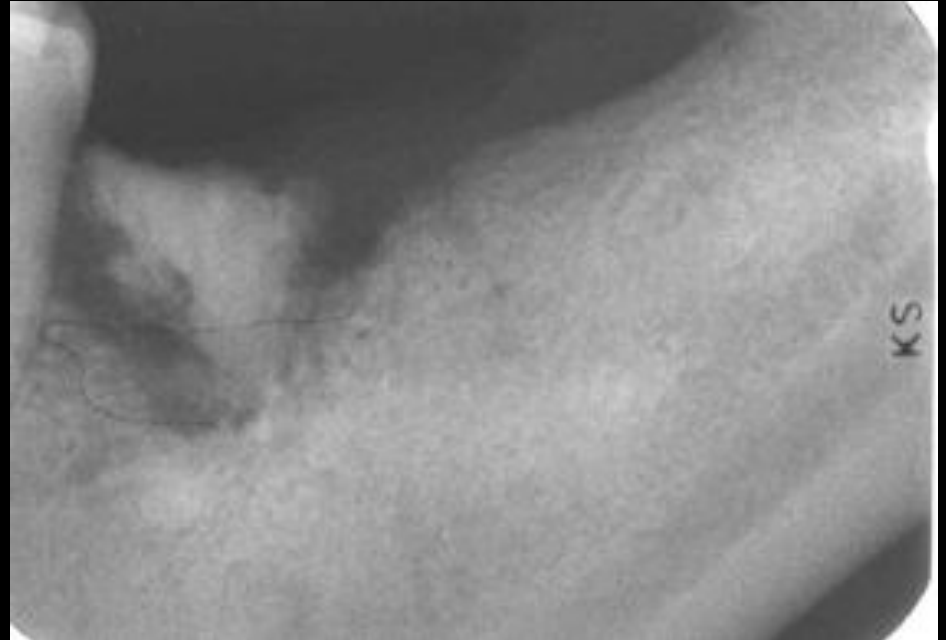


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In-class Quiz : Case 2





Chronic Focal Sclerosing Osteomyelitis





Chr. Focal Sclerosing Osteomyelitis

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





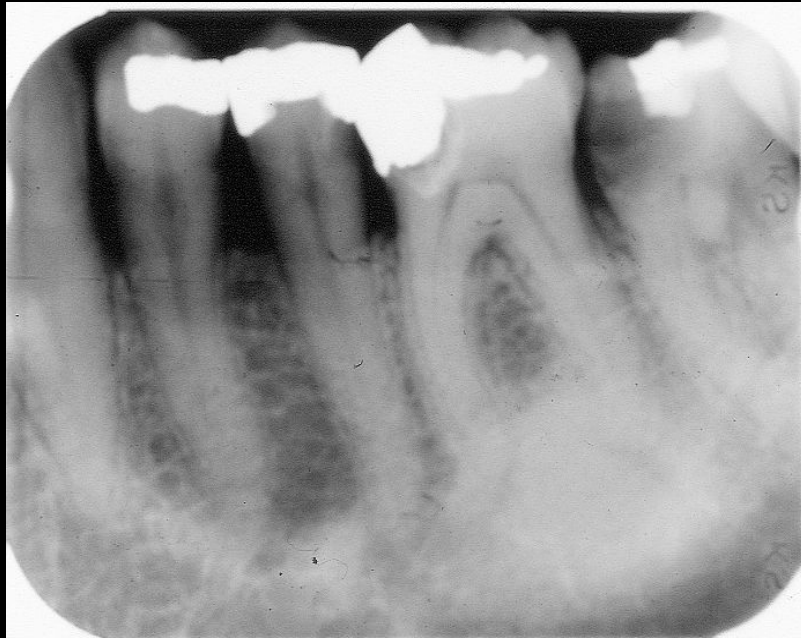
Focal Sclerosing Osteomyelitis (R/F)

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













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

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



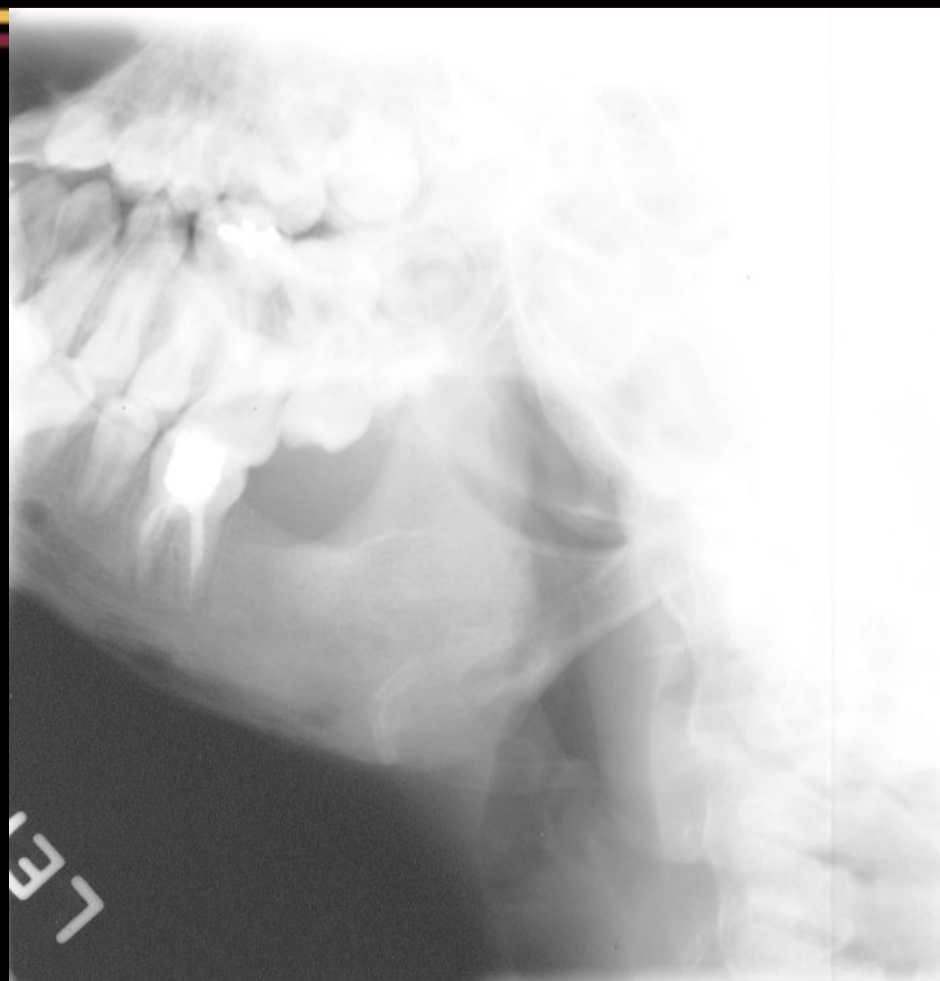


Garre's Periostitis (R/F)

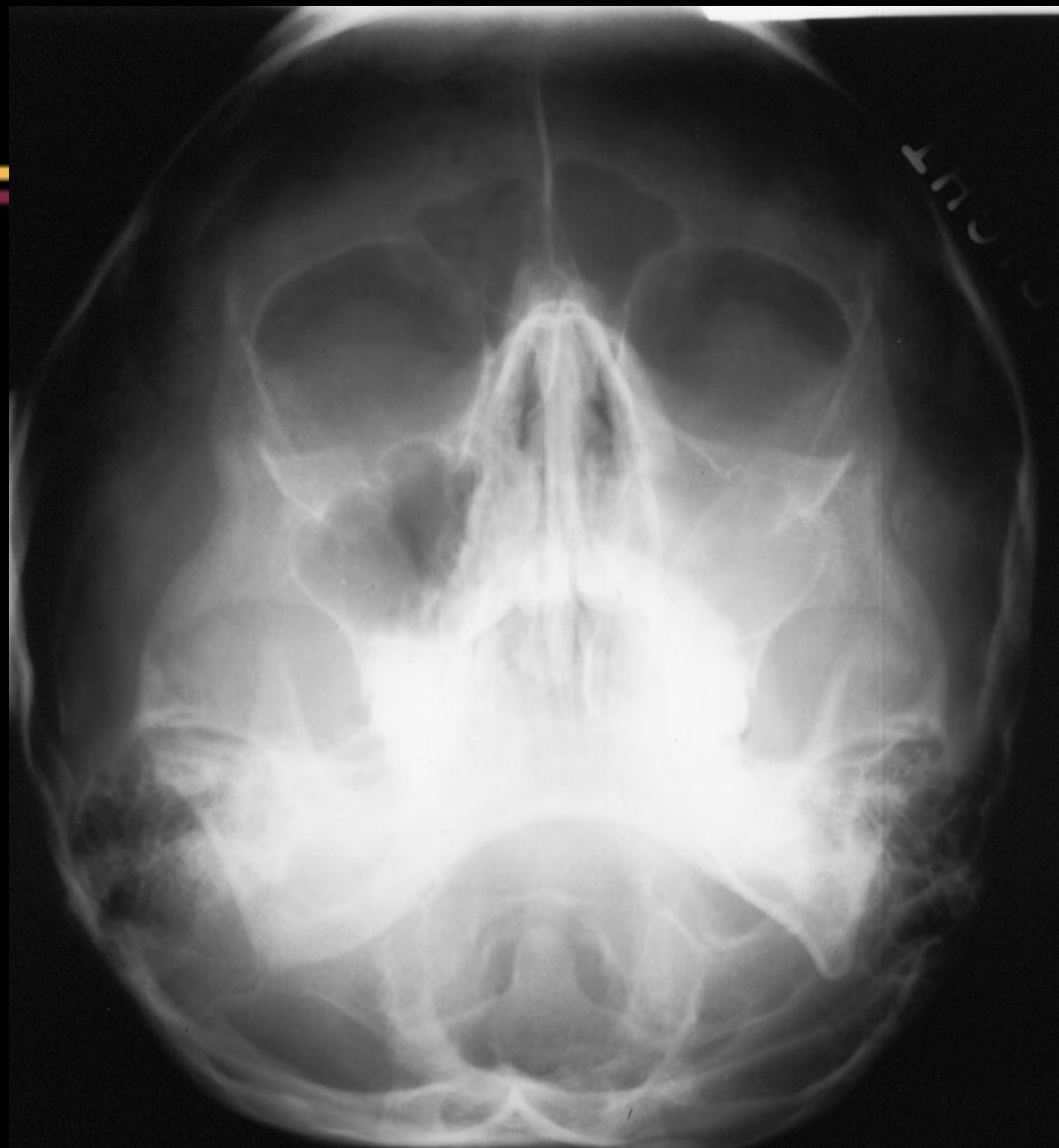
- Often associated with a carious tooth
- Mottled, predominantly lucent
- Focal overgrowth of bone
- “Onion-skin” appearance : layering of cortical bone















In-class exercise: Case 3





Osteoradionecrosis





Osteoradionecrosis

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

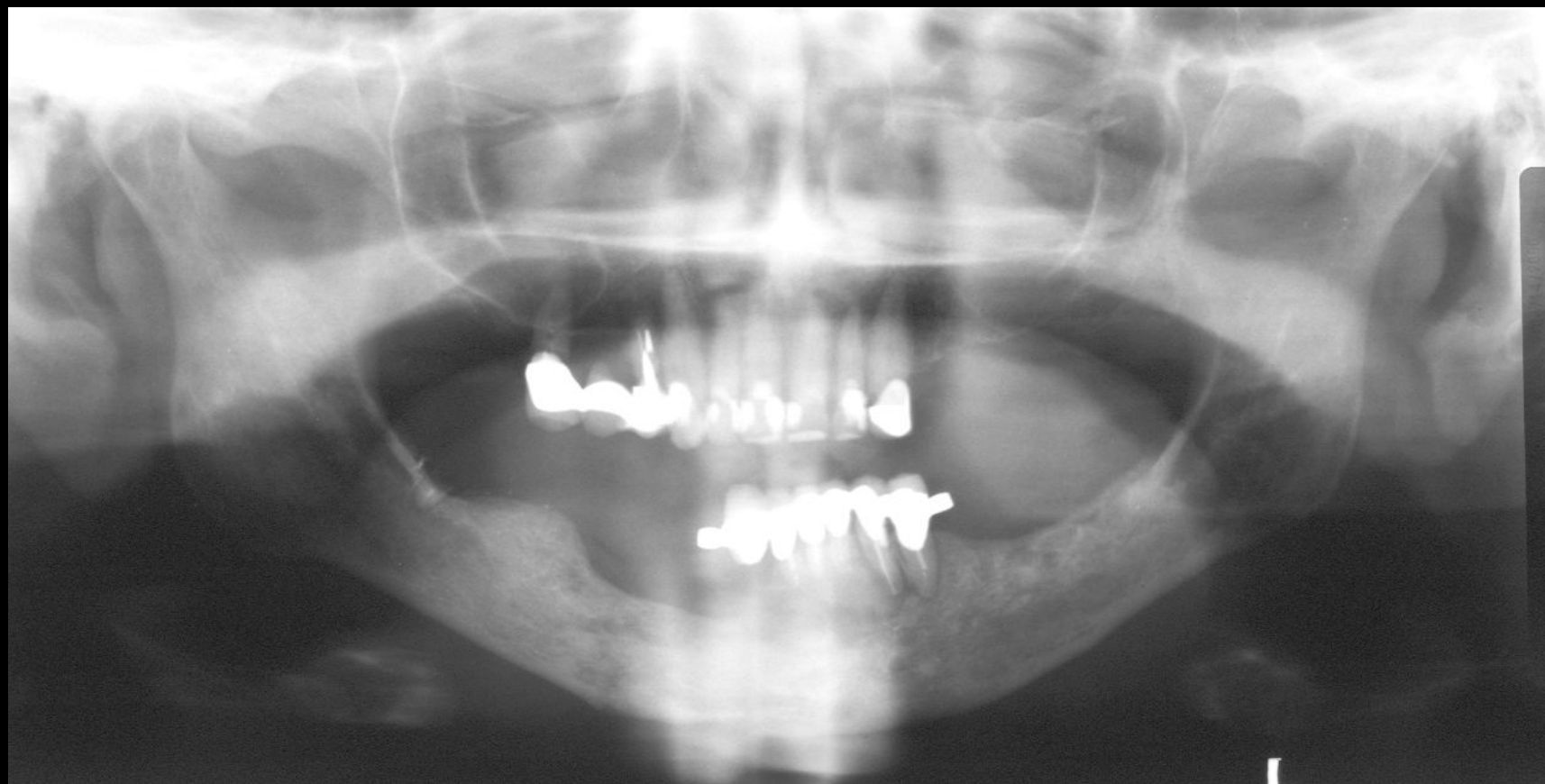




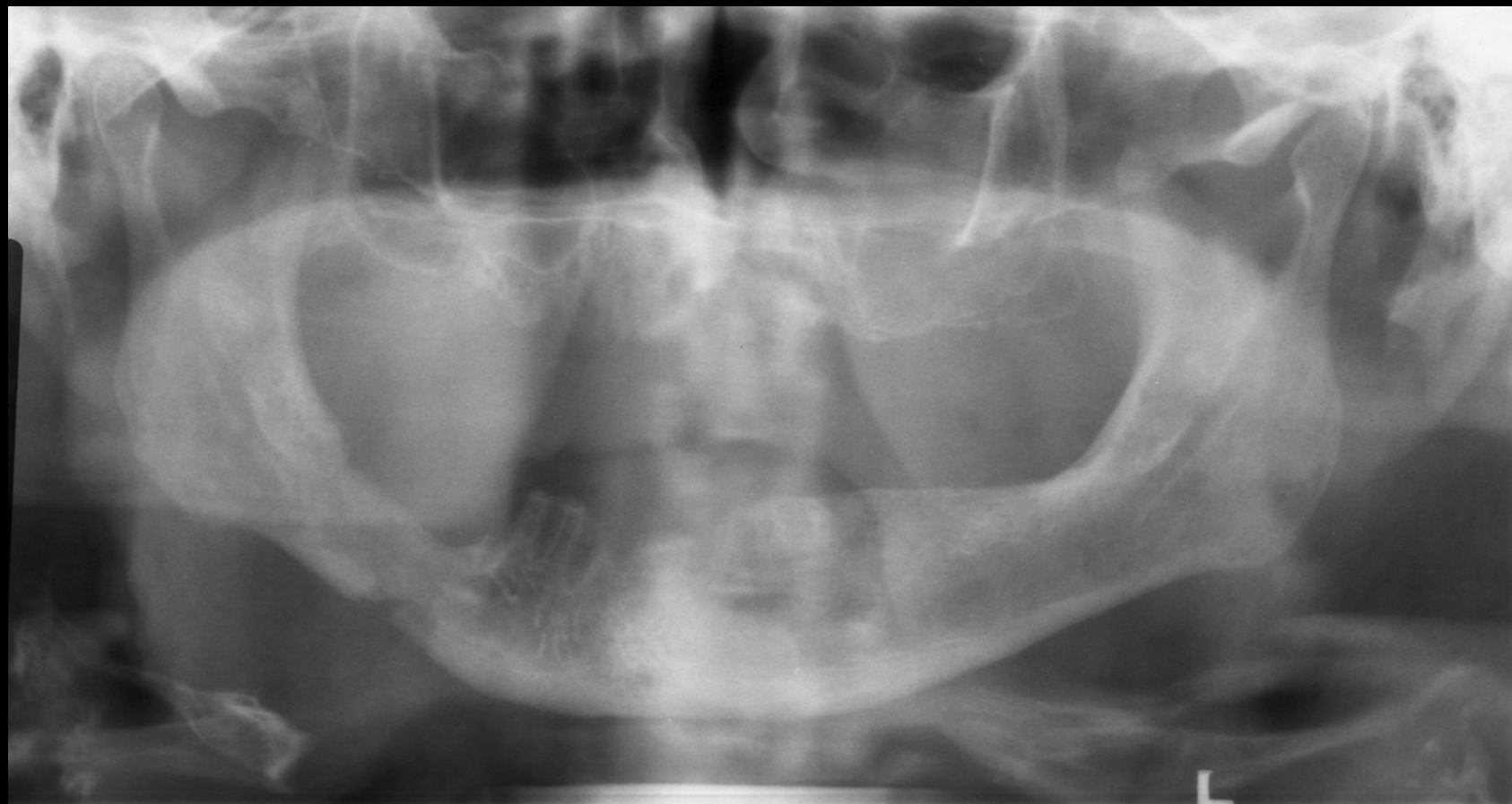
Osteoradionecrosis (R/F)

- Similar to osteomyelitis
- Diagnosis established by history











Florid Cemento-osseous Dysplasia





Florid Cemento-osseous Dysplasia

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





Florid Cemento-osseous Dysplasia

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

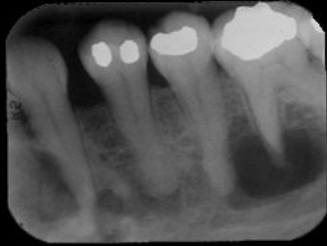




Florid C-O Dysplasia (R/F)

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









Maxillary Sinusitis (will discuss in Unit 12)

