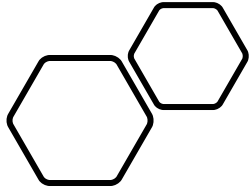


# Intraoral Radiograph Interpretation

Dr Dayea Oh  
OMF Radiologist



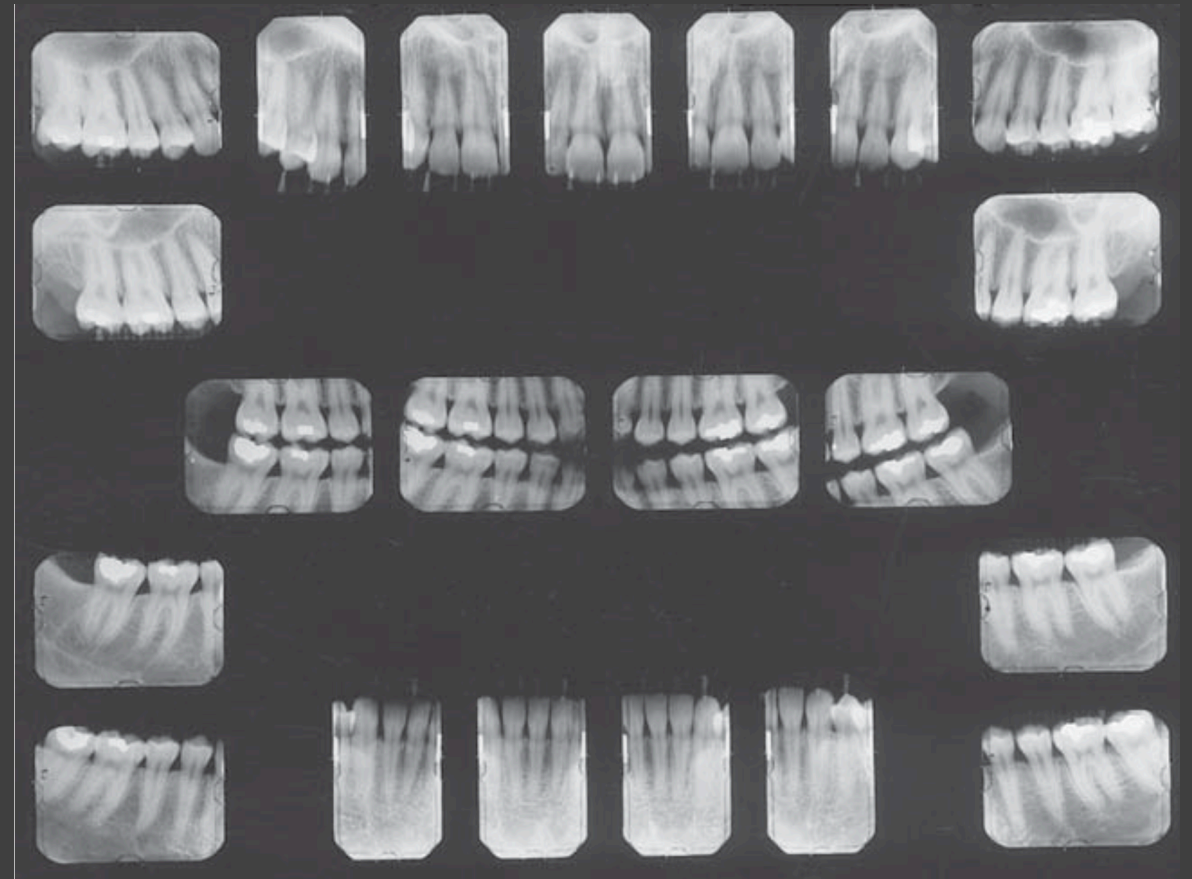


# Contents

- Normal vs Abnormal findings
- Systematic approach
- Assessment of:
  - Caries
  - Periodontal disease
  - Periapical lesions

# Checklist

- Reason for x-ray
- Previous x-rays
- Optimal Viewing Conditions
- Patient ID
- Orientation →
- Identify the type of x-ray
- Image Quality



# Normal vs Abnormal

- Normal
  - Anatomical
    - Review tooth morphology
    - Bilateral & symmetrical (extra-oral imaging)
- Abnormal
  - Pathological
  - Artefactual
    - Superimpositions

**Description!!!**



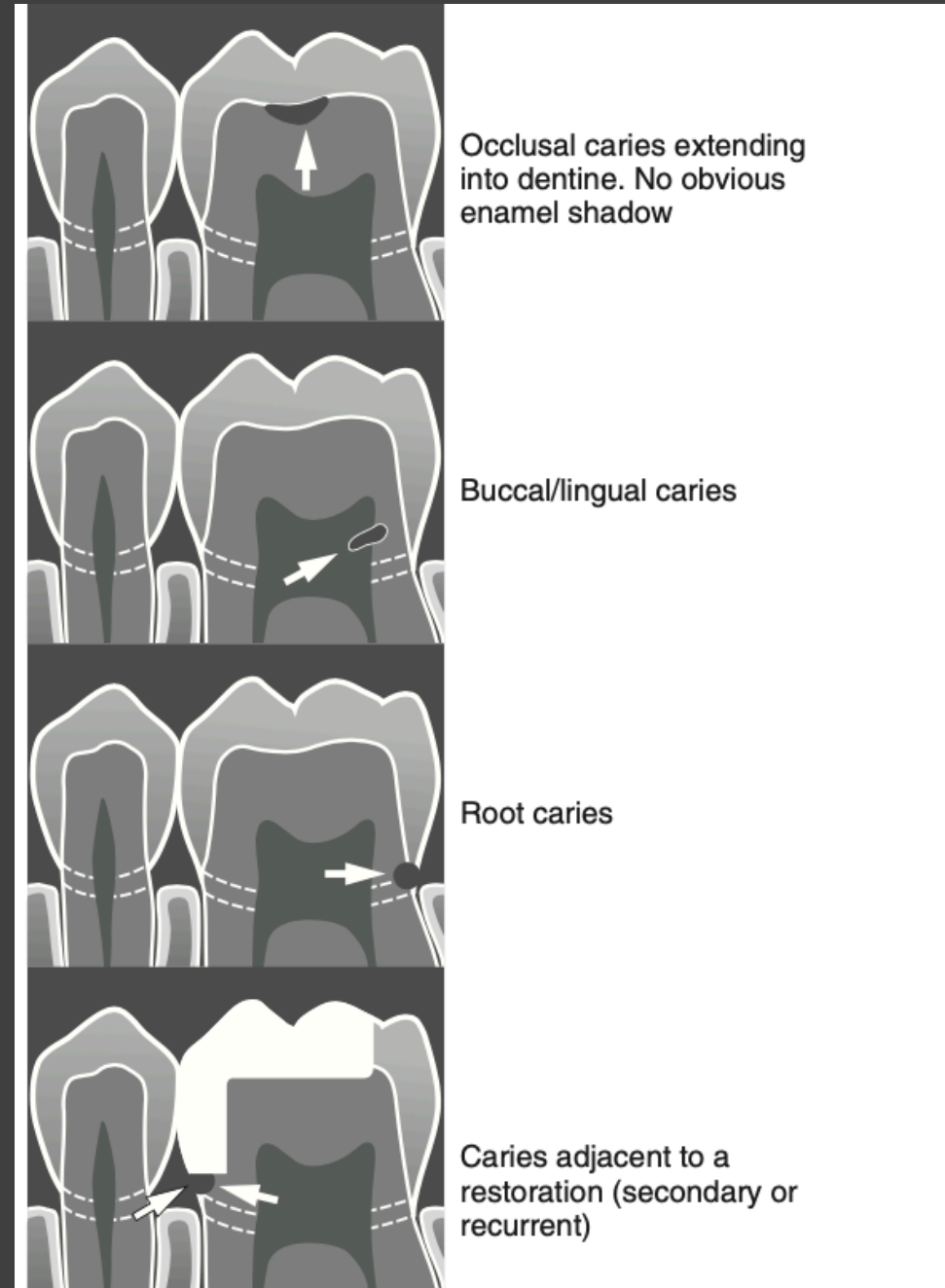
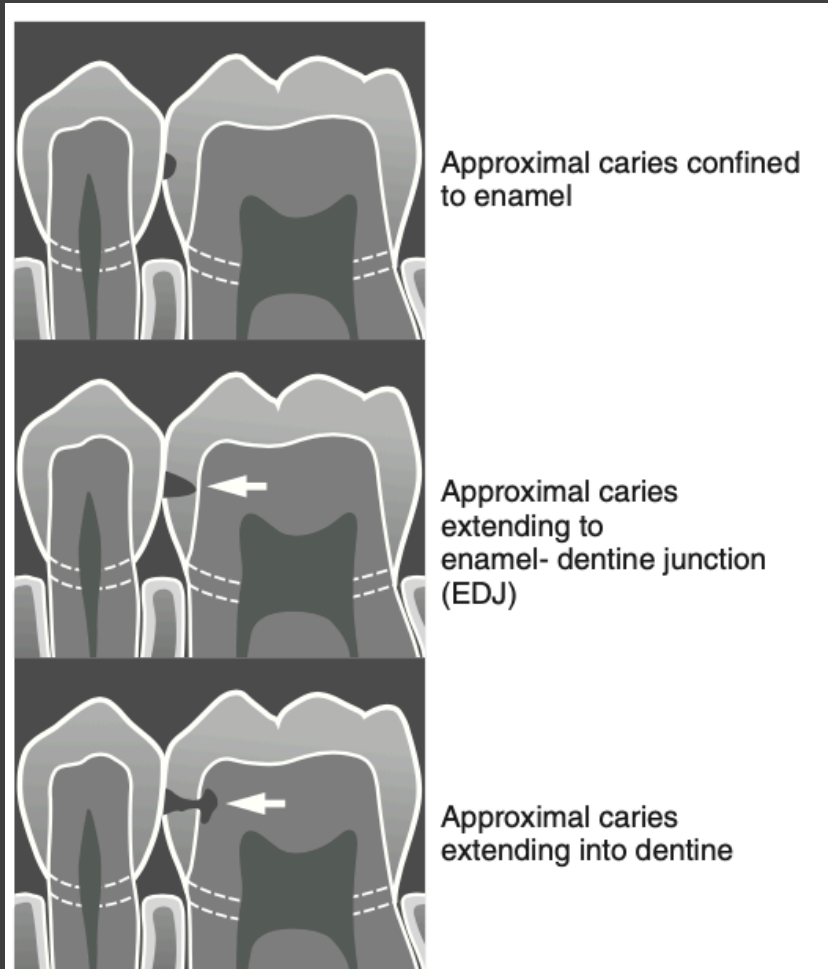
# Systematic Approach

- Step 1. Teeth & Surrounding Structures
  - Count teeth
  - Tooth morphology
    - Crown – enamel, dentine, pulp chamber, etc.
    - Roots – PDL space, lamina dura, # of roots, root morphology
  - Periodontal bone
  - Other
- Step 2. Identify existing restorative therapy, endodontic therapy & orthodontic therapy
  - Assess restorative margins – presence of overhangs? Insufficient margins?
  - Presence of voids?
- Step 3. Identify & describe abnormal radiolucencies & radiopacities
  - Location
  - Size & Extent
  - Morphology & Borders
  - Effects on surrounding structures
  - Internal architecture
- Step 4. Differential diagnosis

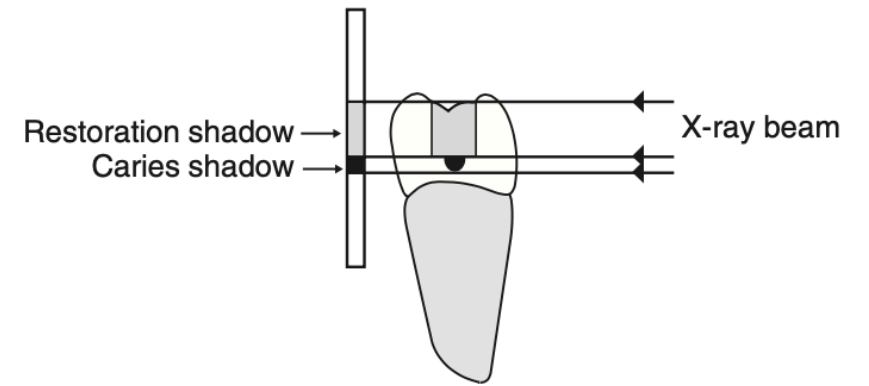
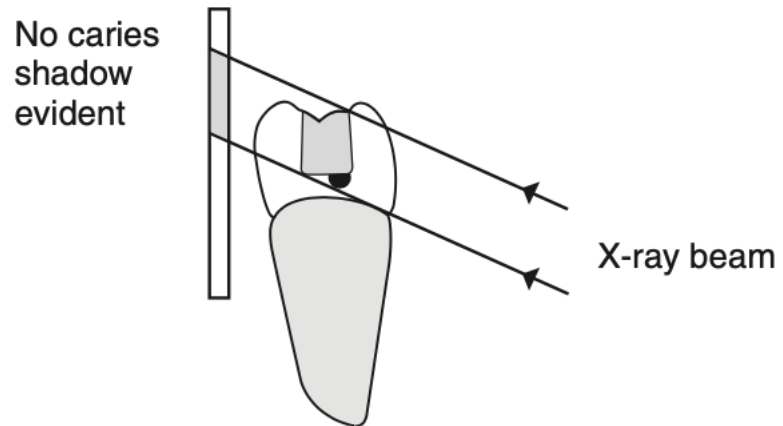
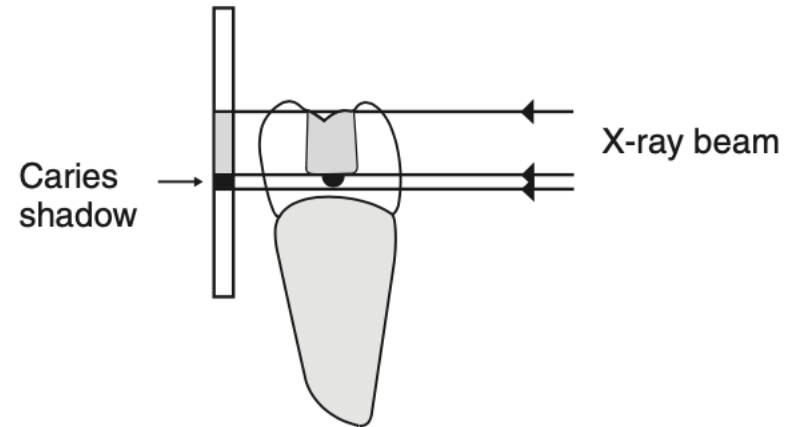
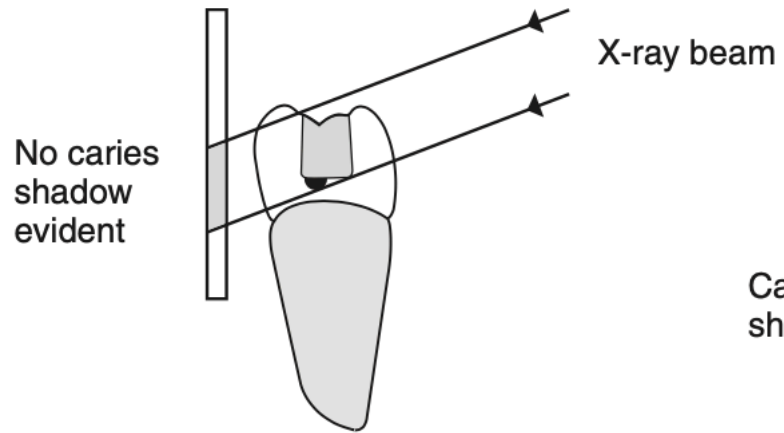
# Caries

triangular

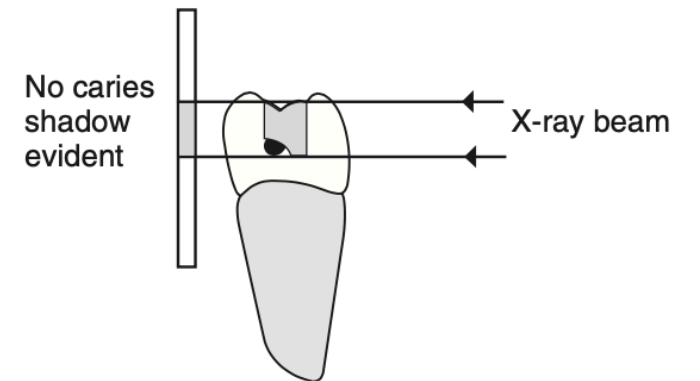
Dentinal caries is larger



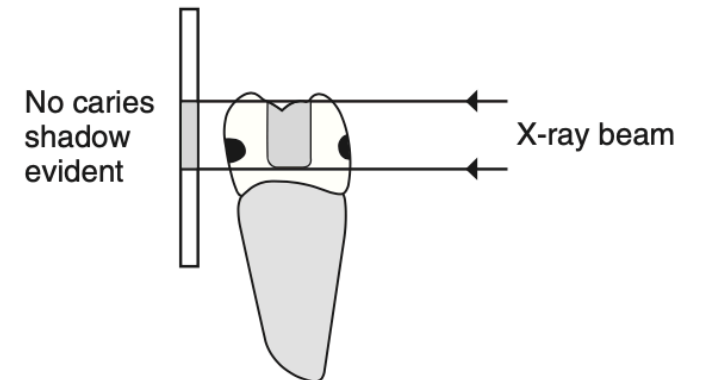
# Recurrent Caries



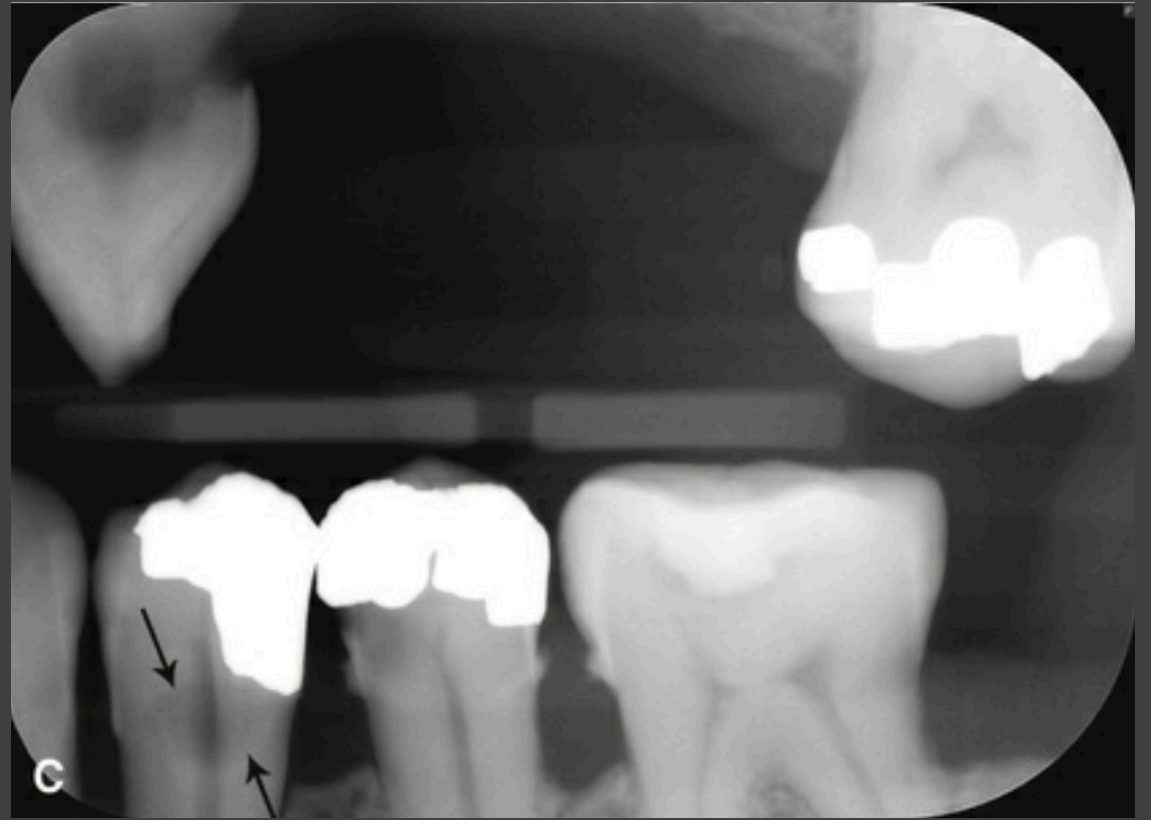
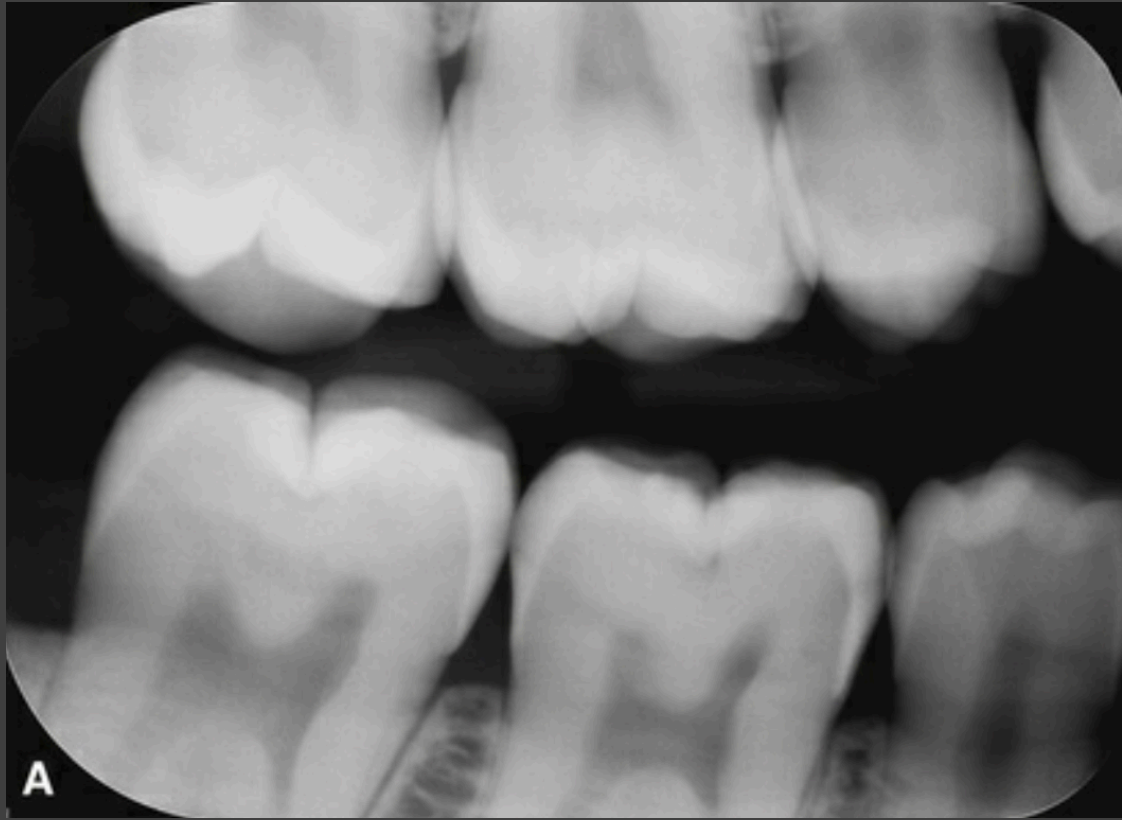
**A (i)** Lesion beneath the restoration

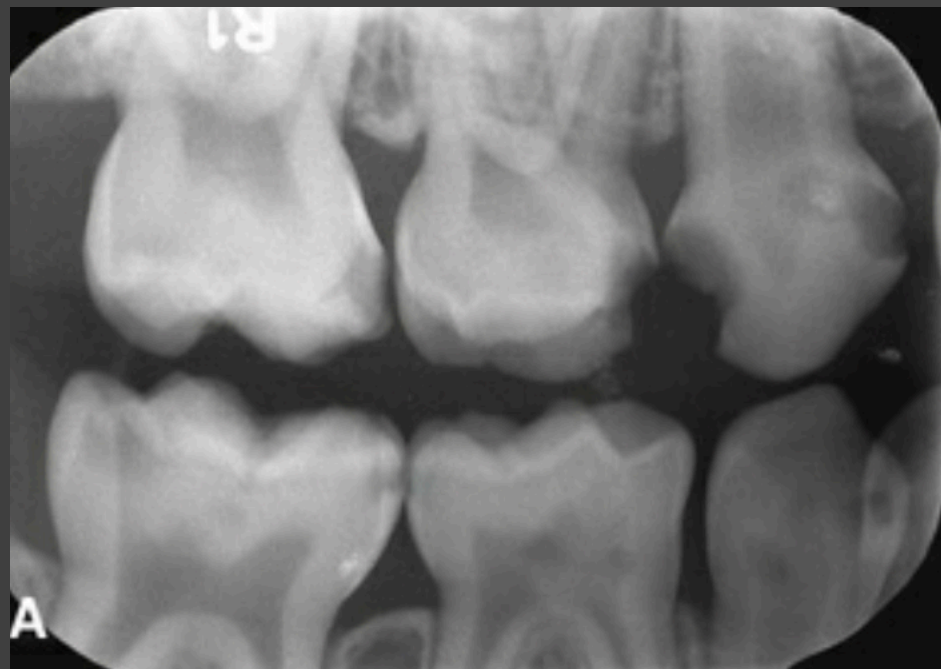


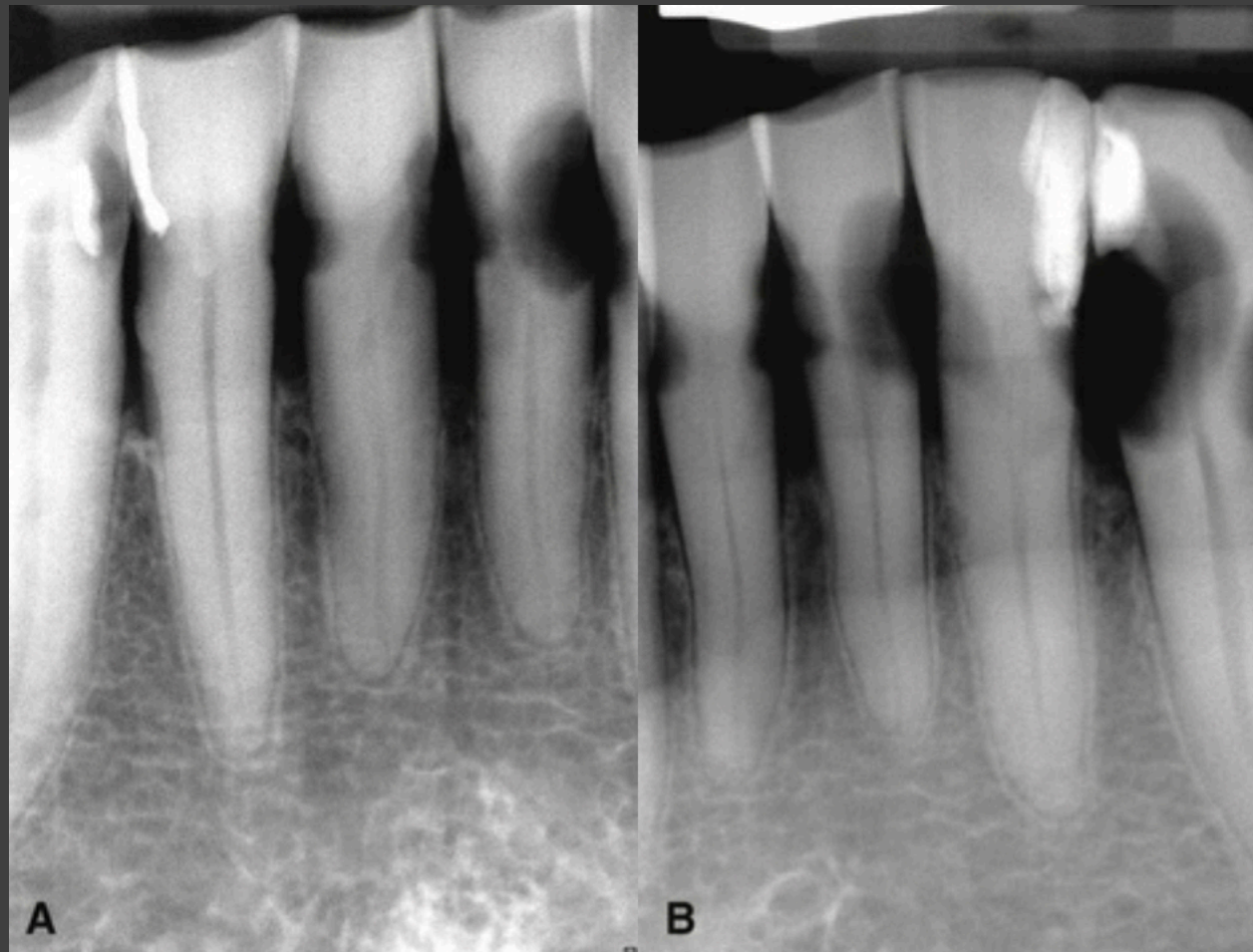
**A (ii)** Lesion hidden by the restoration

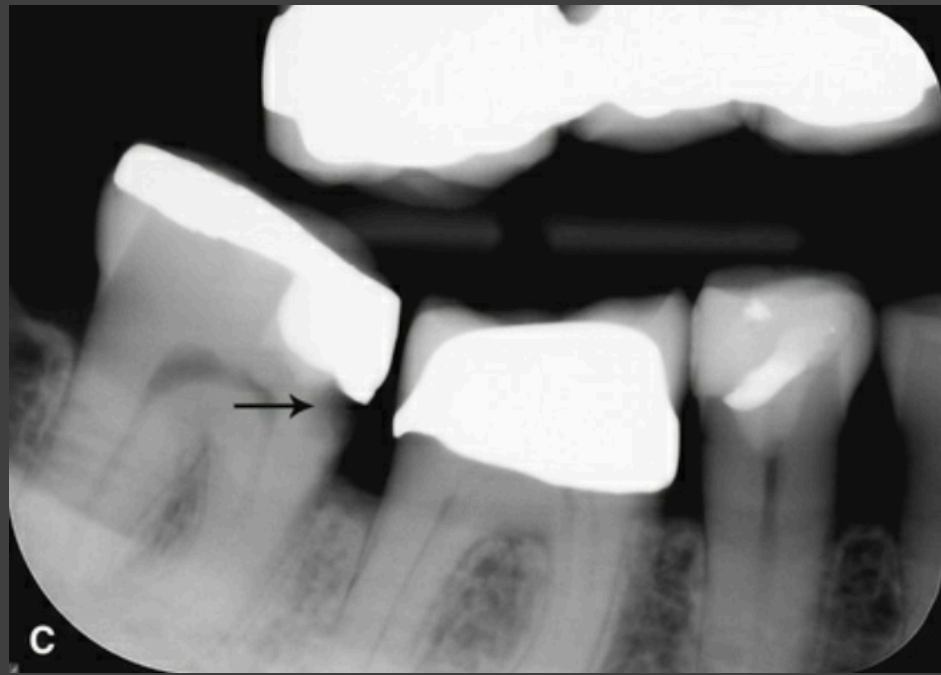
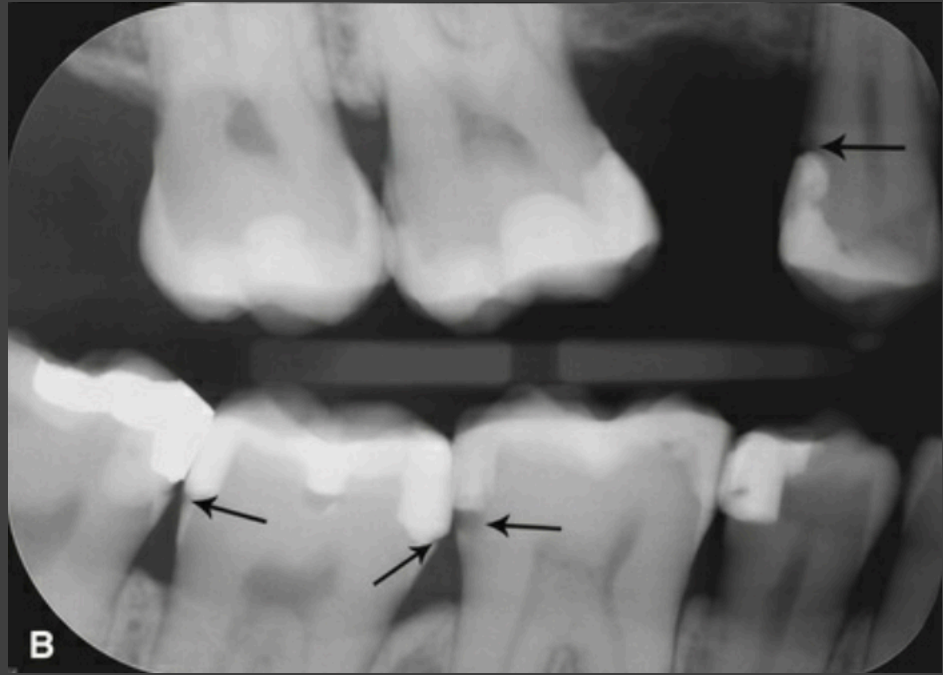


**B** Buccal and lingual lesions hidden by the restoration





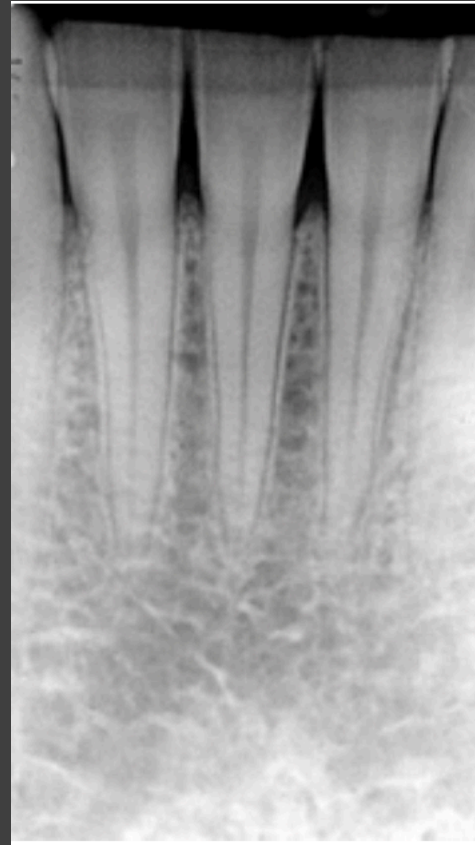
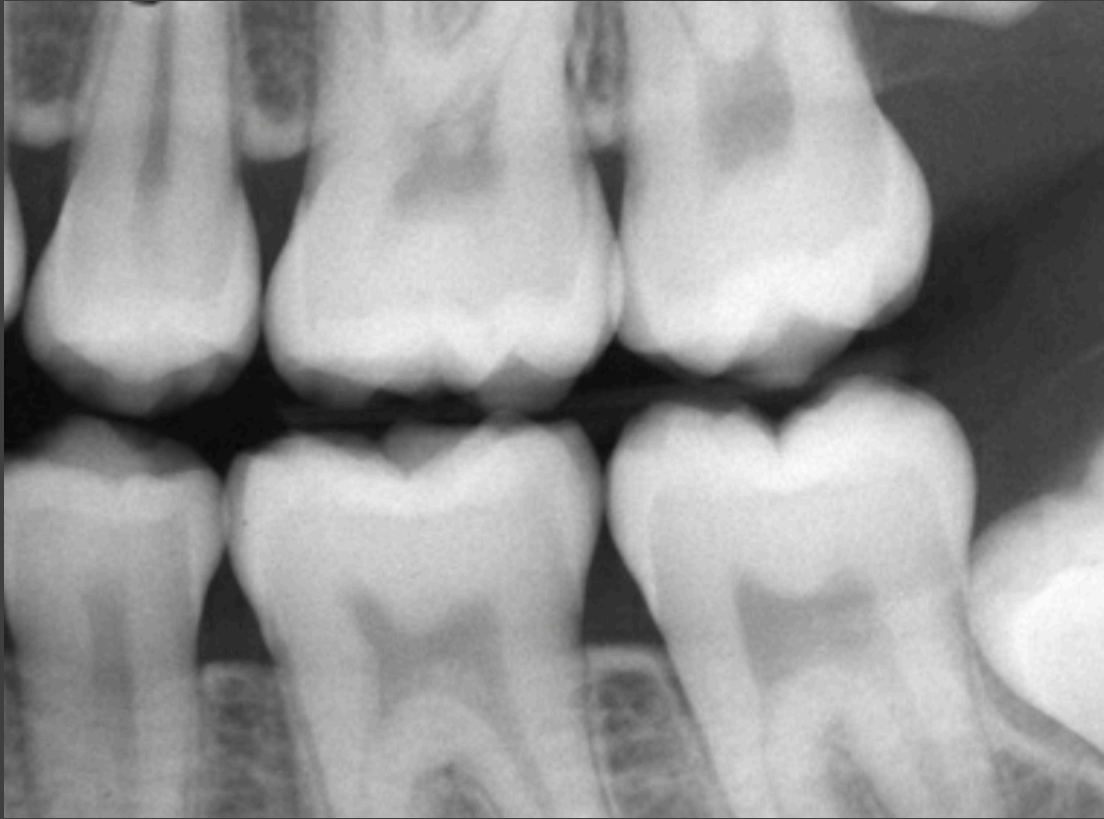


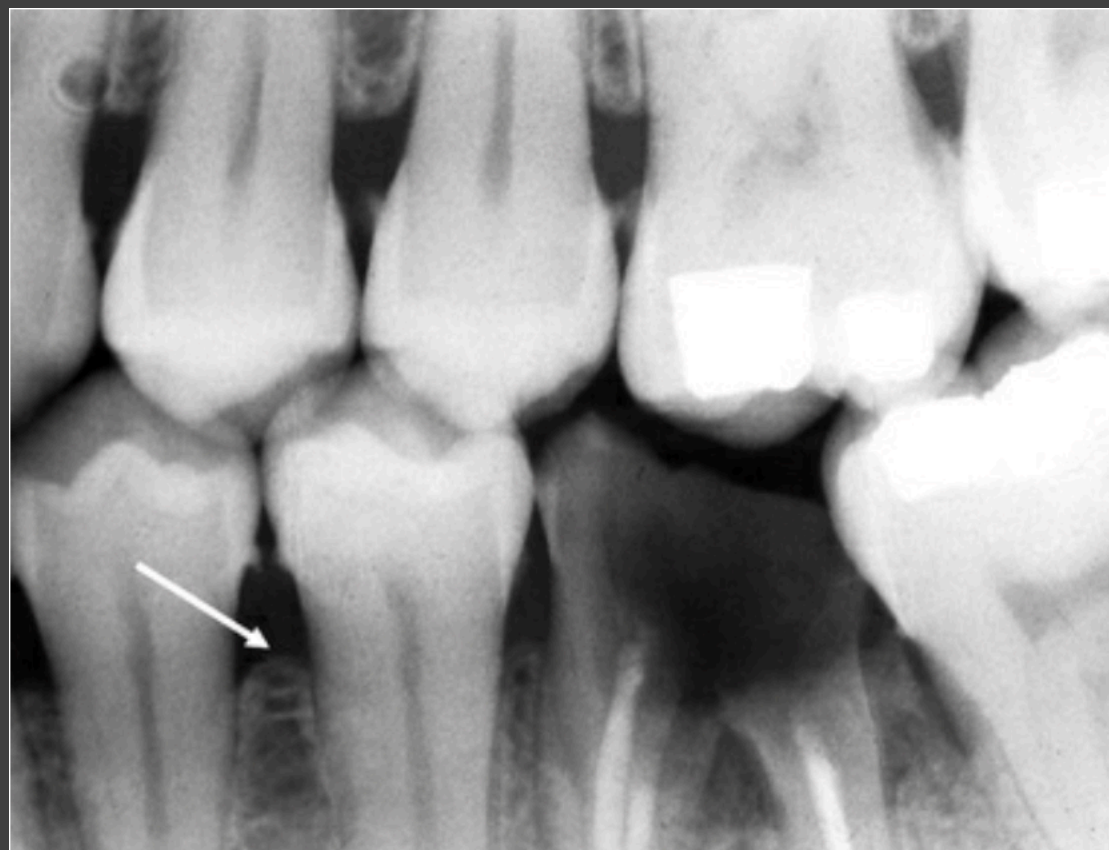


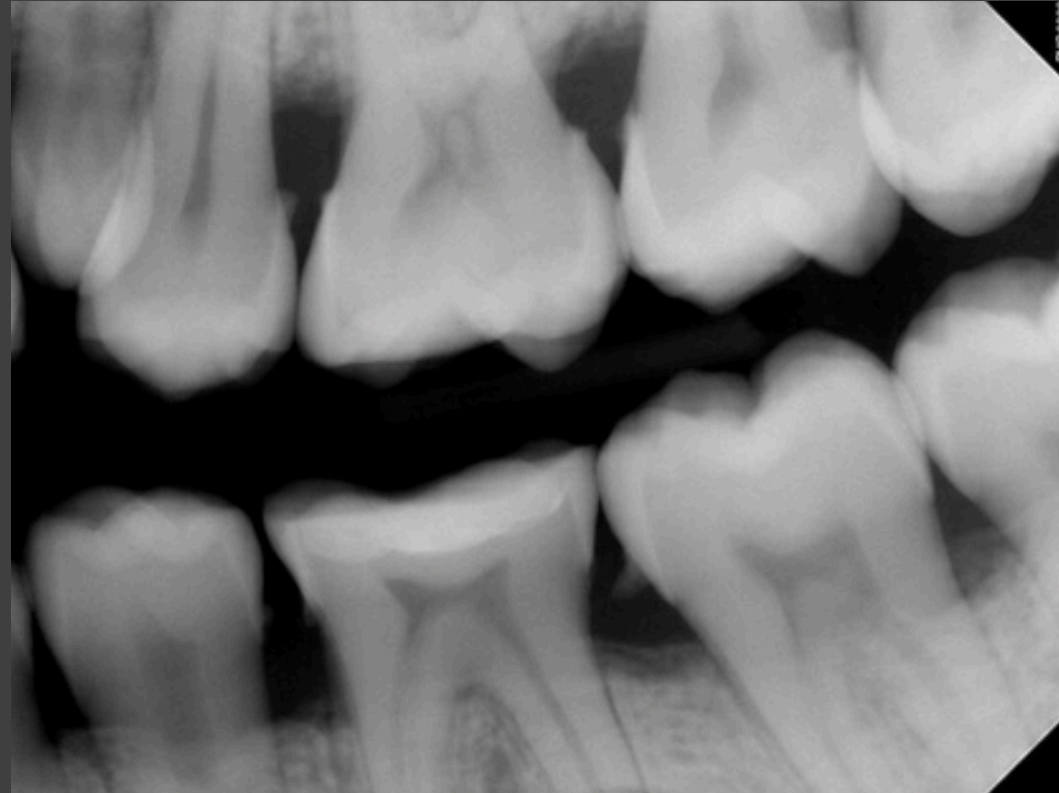
# Periodontal Disease

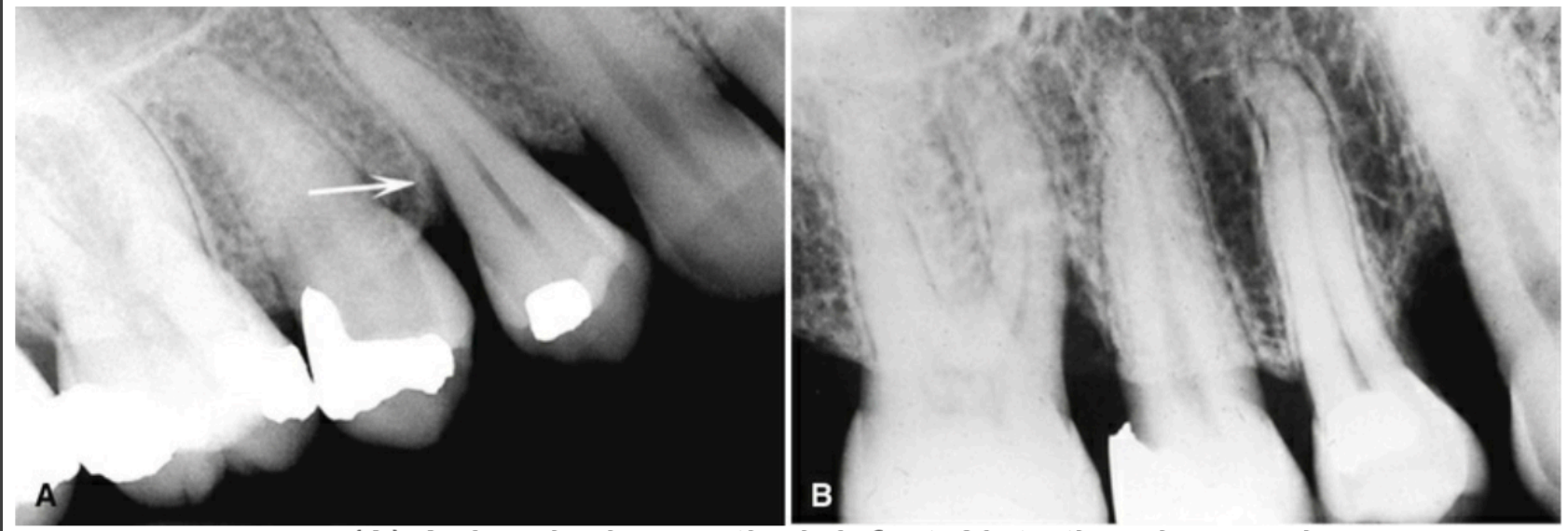
- Periodontal bone loss
  - Horizontal
  - Vertical / angular bone defect
  - Furcation involvement
  - Alveolar crest → cortical?
- Calculus
- Periodontal ligament space widening
- Anatomic considerations
  - Enamel pearl



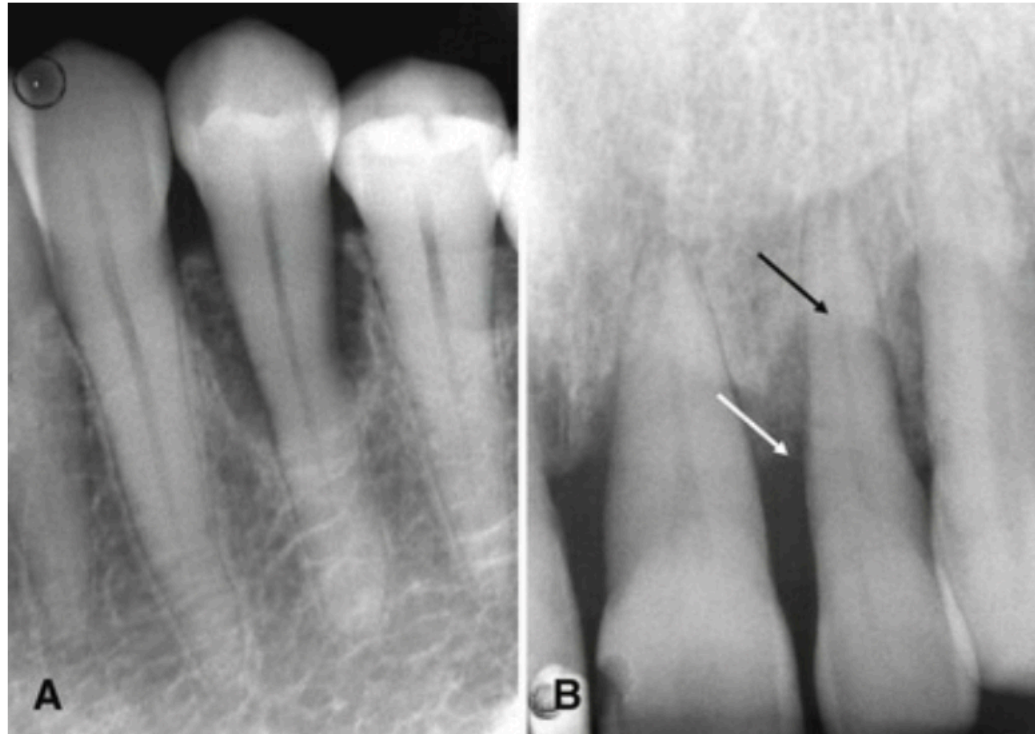






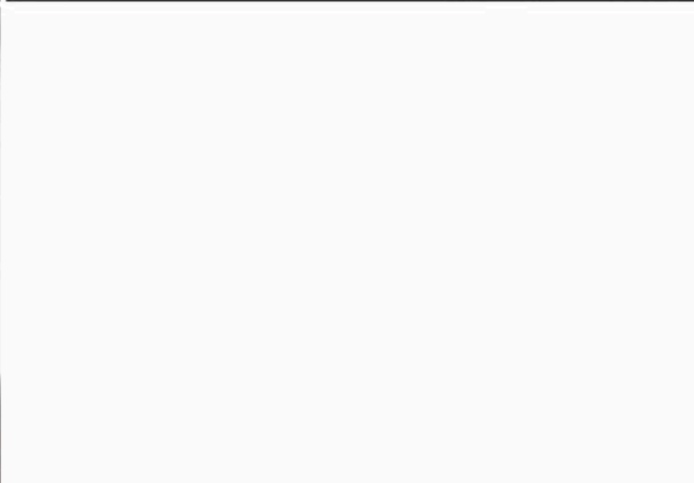
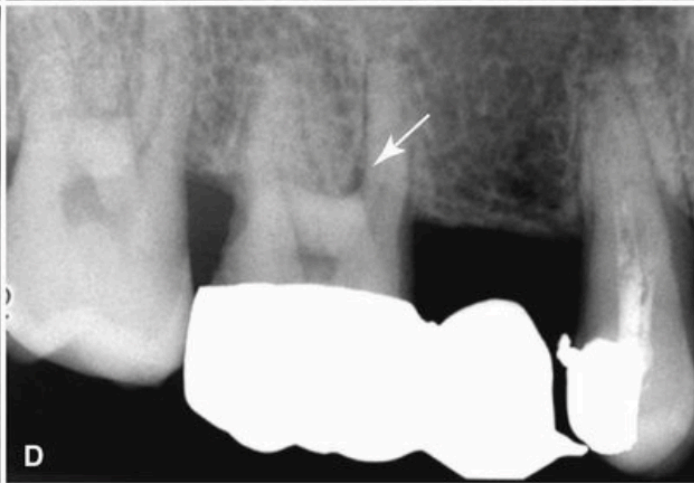
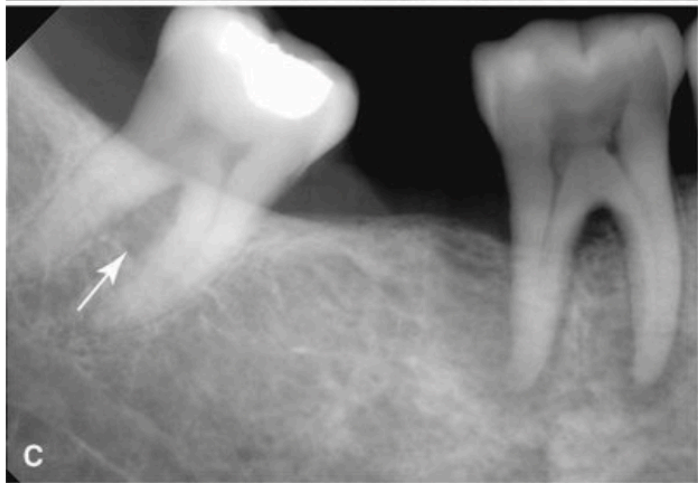
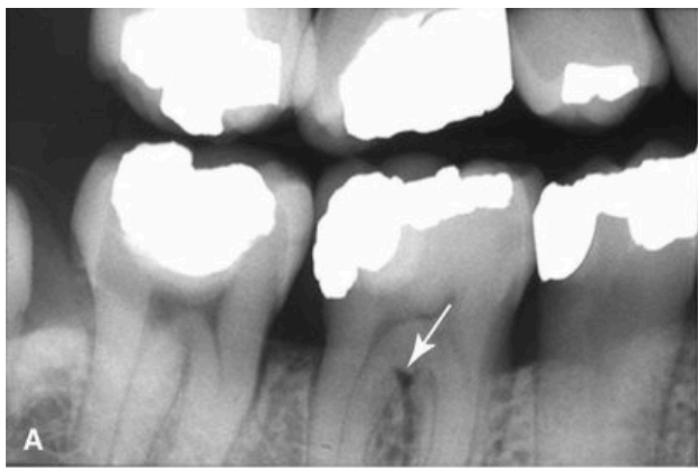


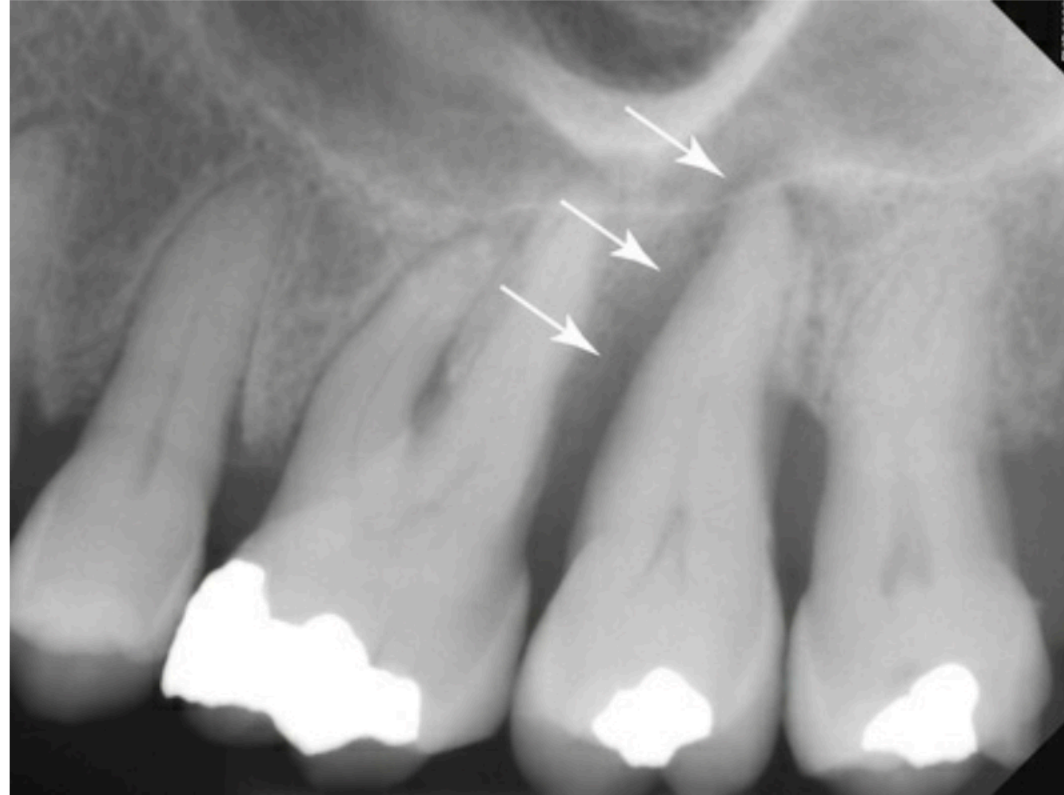




**FIG. 20.14** (A) Loss of the lingual alveolar crest adjacent to this mandibular first premolar without associated interproximal bone loss. (B) Loss of the buccal cortical bone adjacent to the maxillary central and lateral incisors. The *black arrow* indicates the level of the buccal alveolar crest, which demonstrates more profound loss relative to the lingual alveolar crest (*white arrow*).





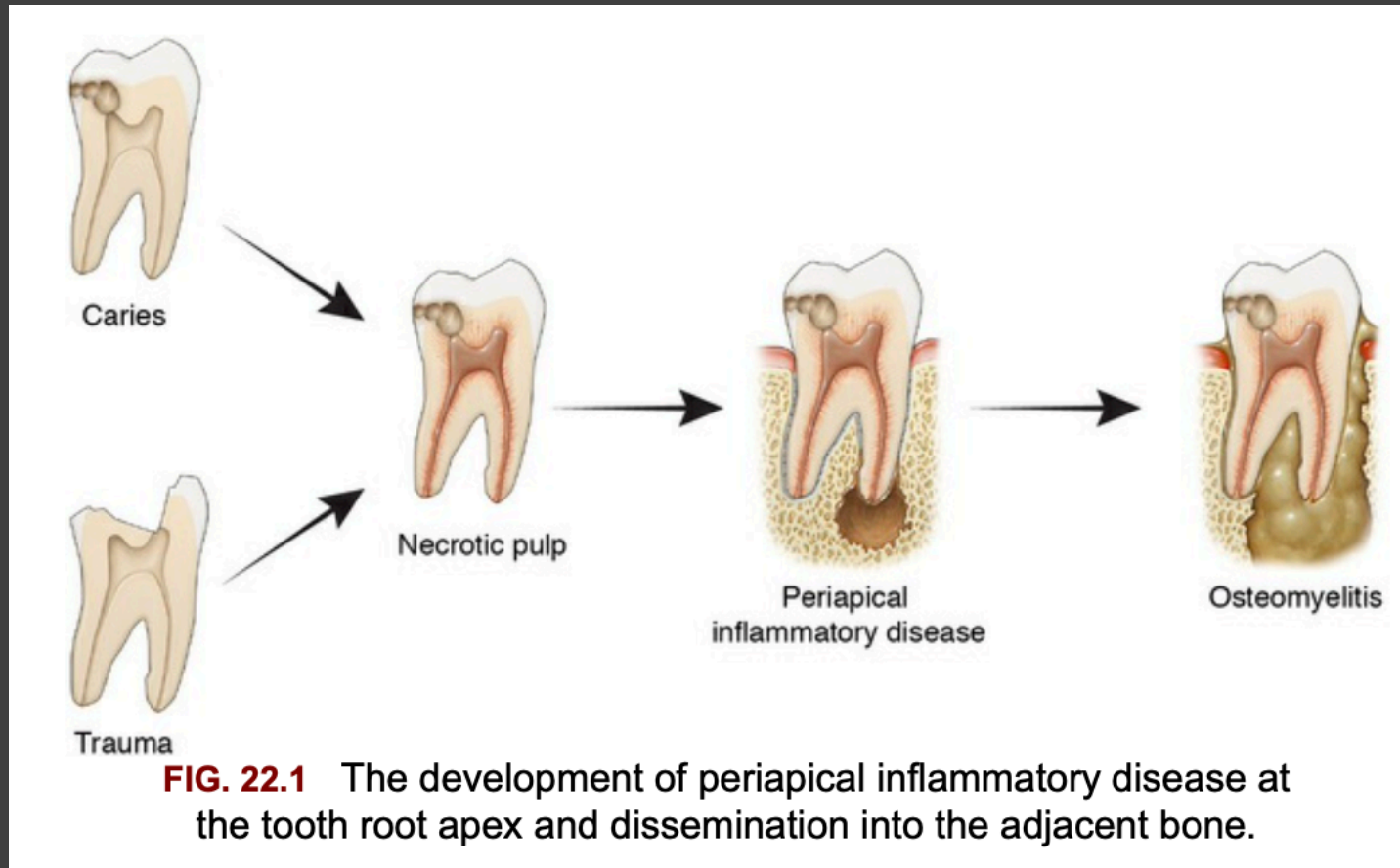


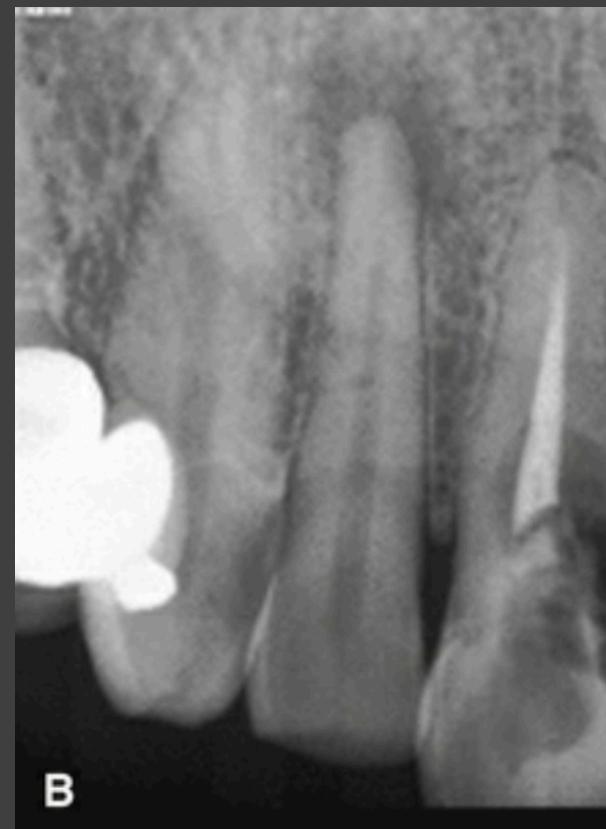
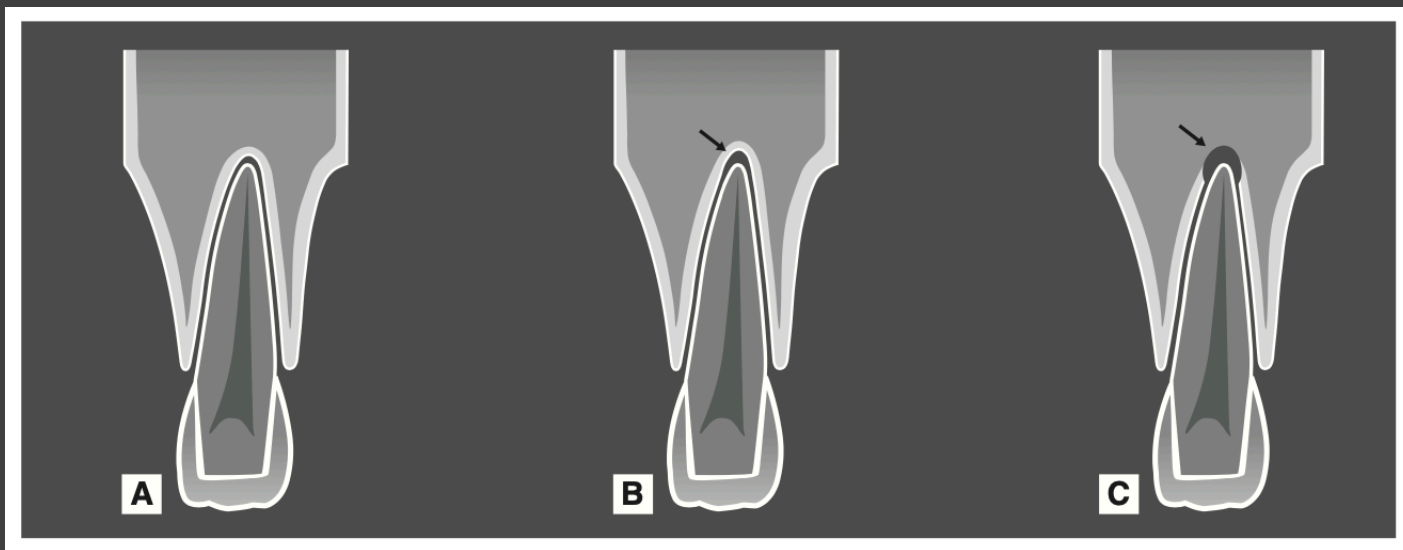
**FIG. 20.19** Combined Endodontic-Periodontic Lesion. There is an angular bone defect extending the whole length of the mesial surface of the second molar, from the crest to the apex (*arrows*).

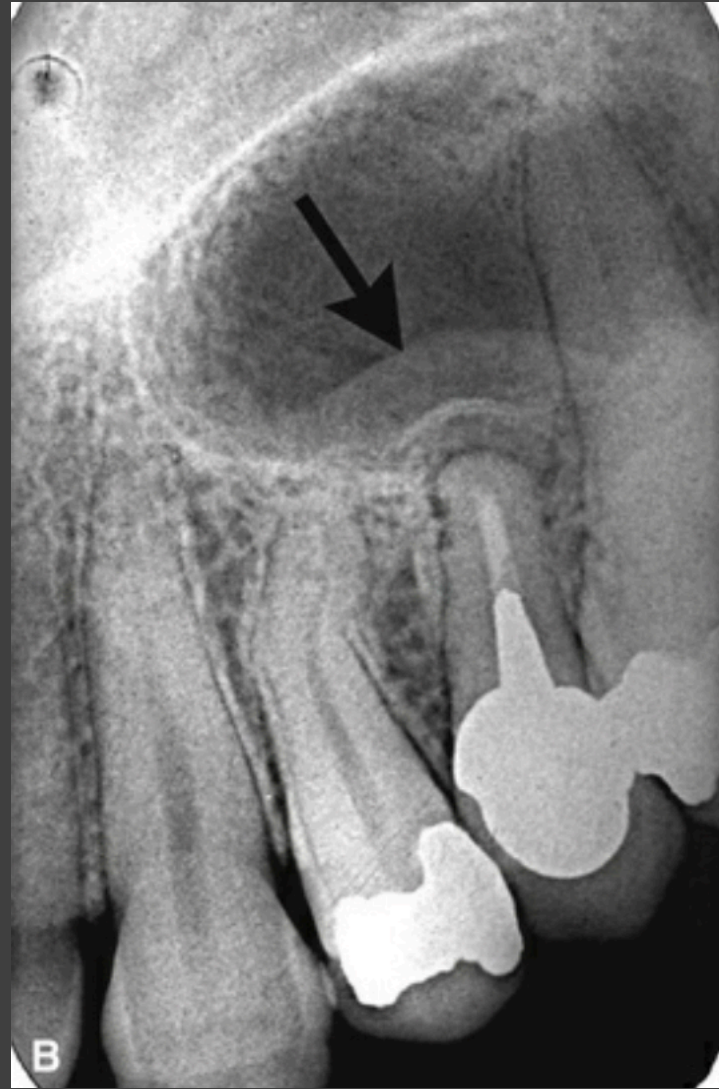
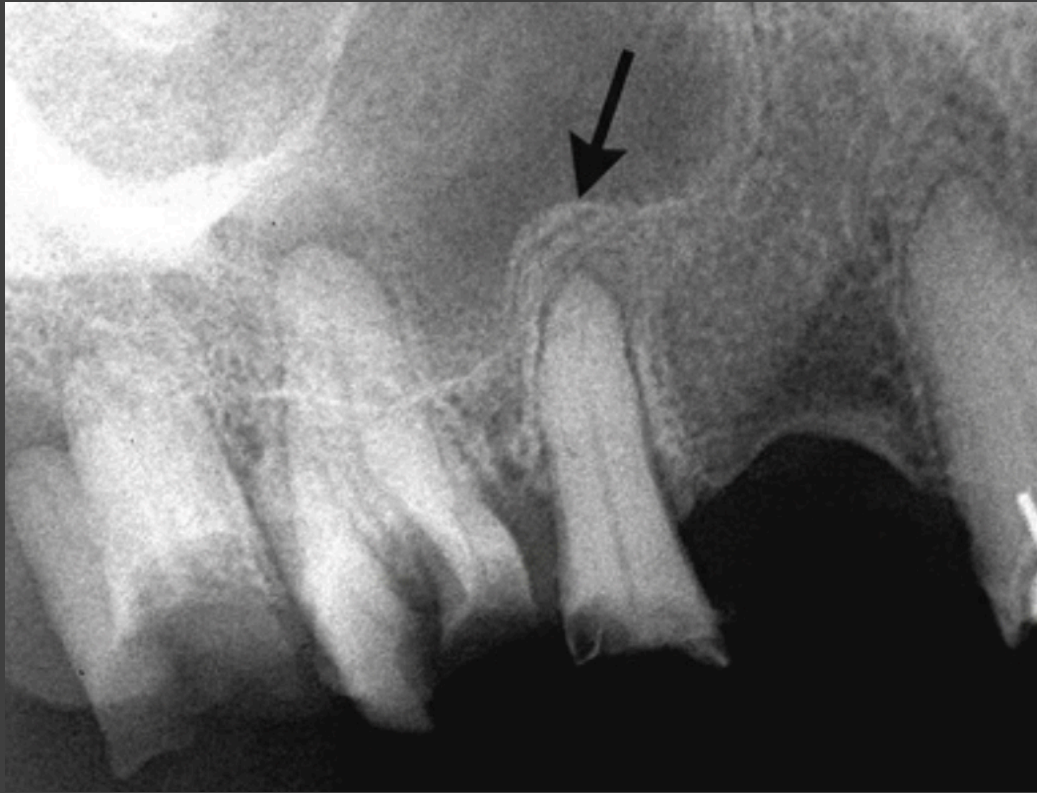


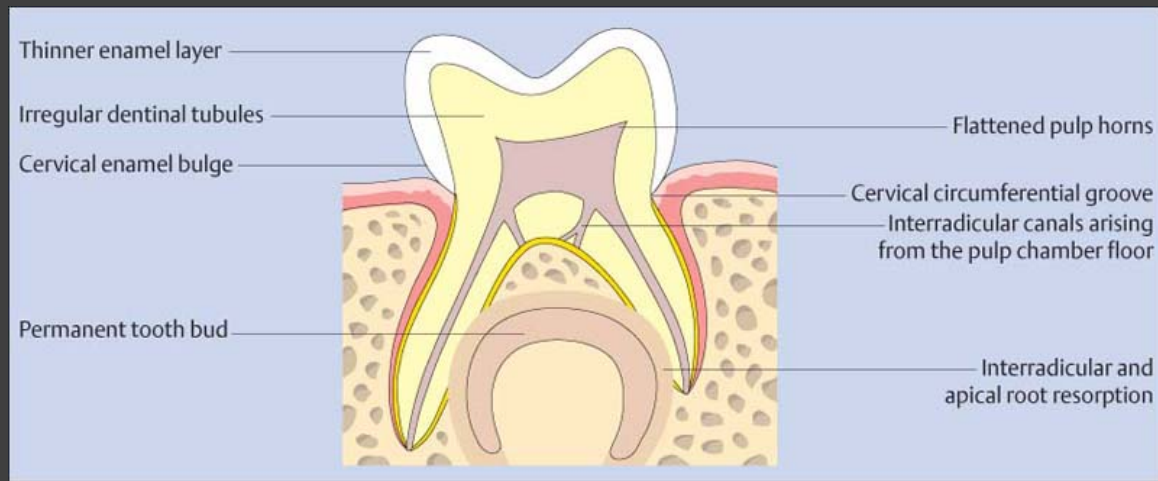
# Periapical Inflammatory Lesions

Abscess  
Granuloma  
Cyst

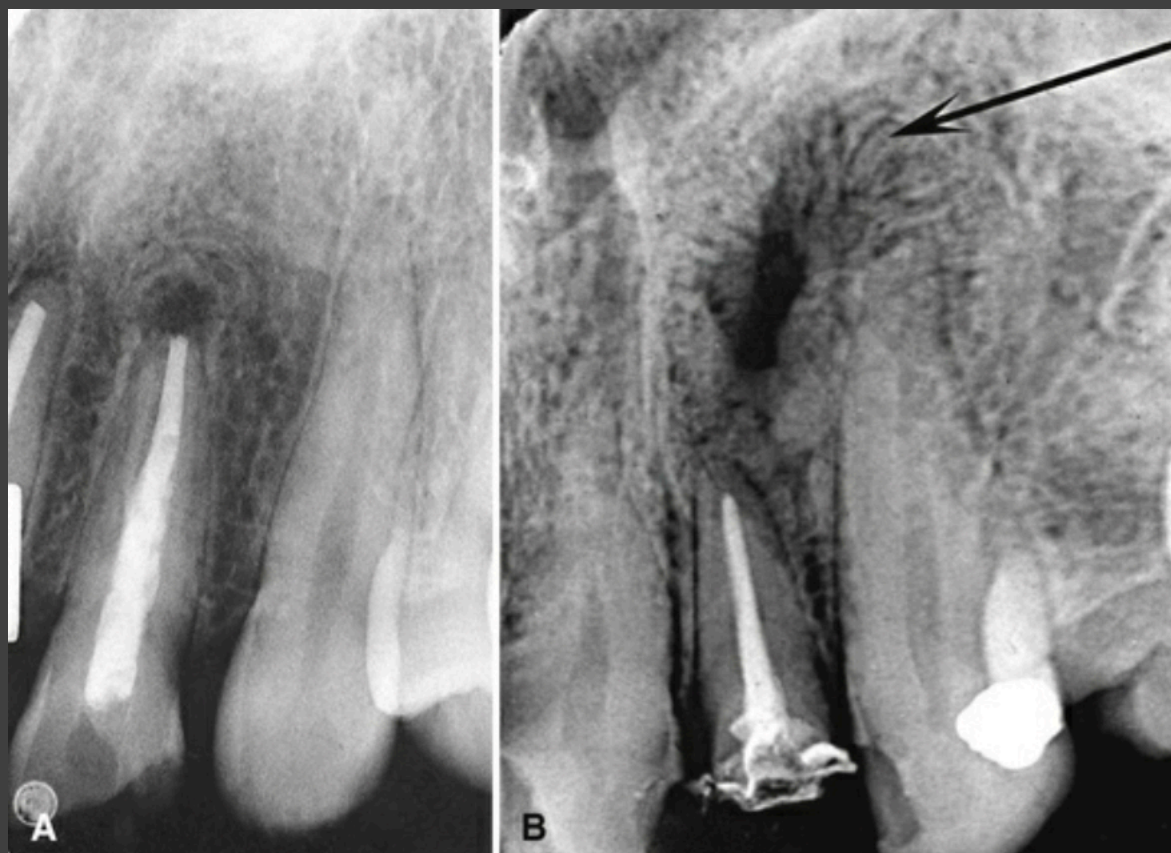




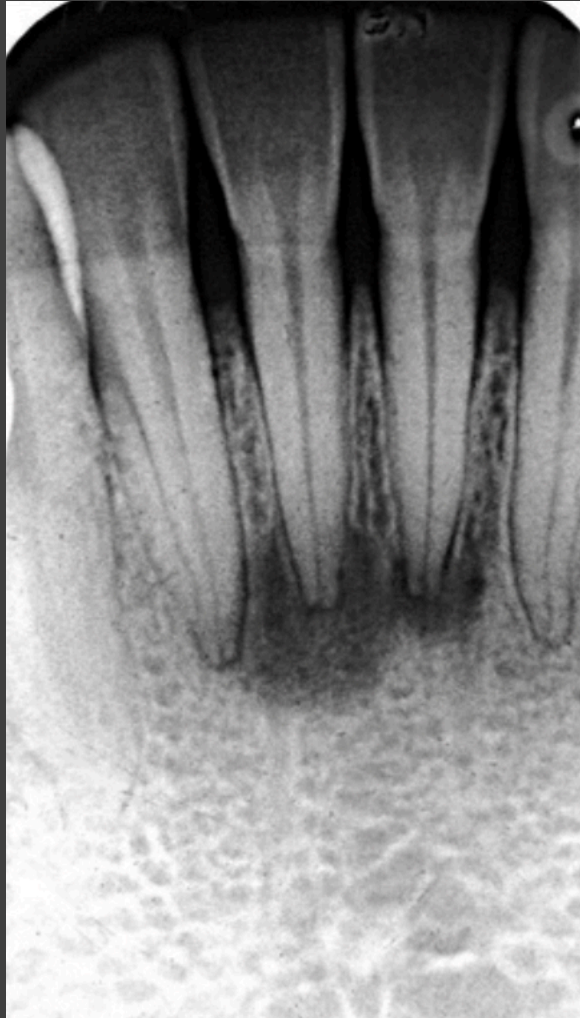








?

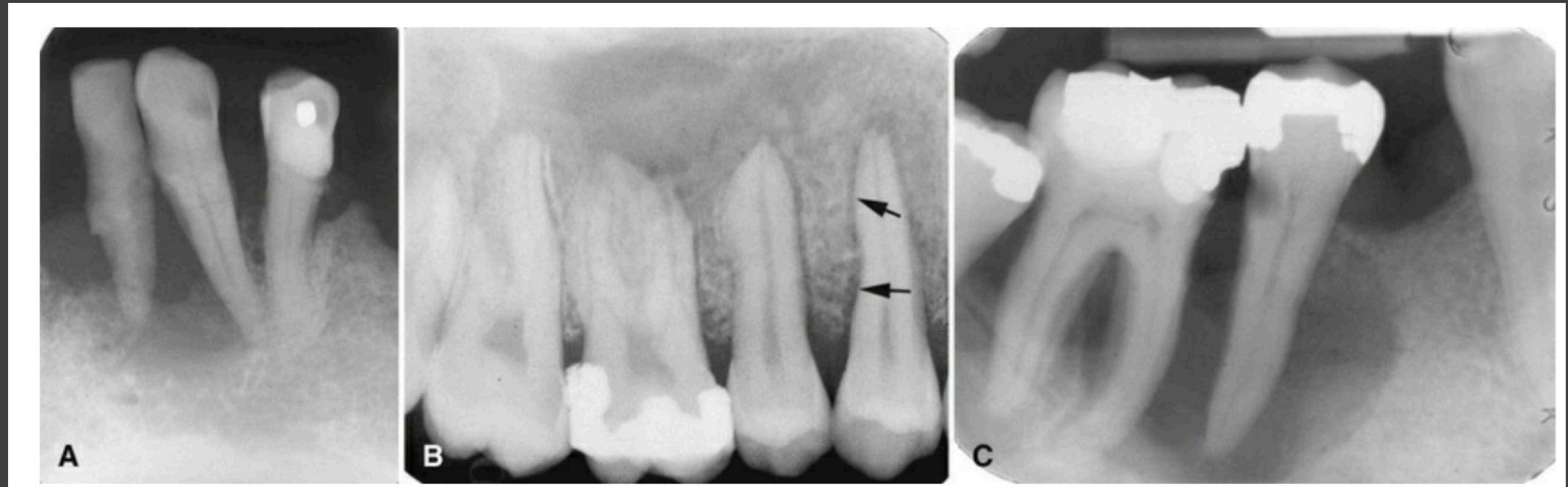


?



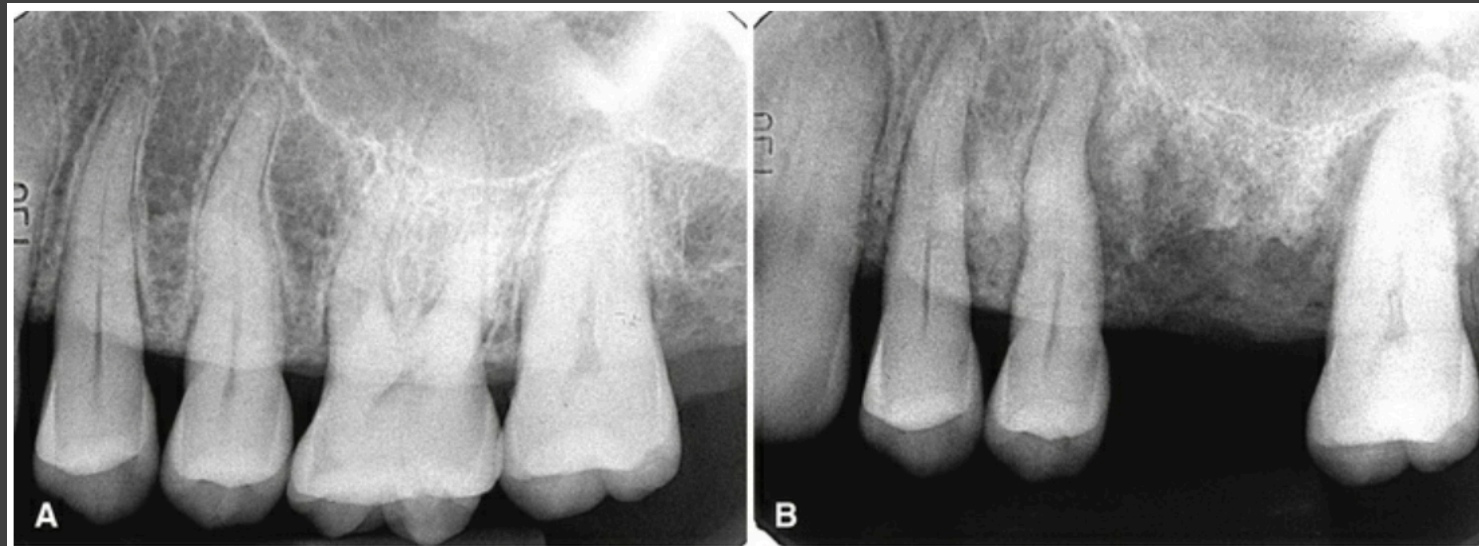


?



before

after



Importance of clinical history

End