

A close-up photograph of a dental procedure. A metal surgical instrument, likely a crown lengthener, is positioned vertically on a tooth. The tooth is partially covered with a white protective material. The background shows the surrounding gum tissue, which is slightly red and inflamed. The text "RADIOGRAPHIC CONSIDERATION IN CROWN LENGTHENING SURGERY" is overlaid in blue, bold, capital letters across the center of the image.

# RADIOGRAPHIC CONSIDERATION IN CROWN LENGTHENING SURGERY

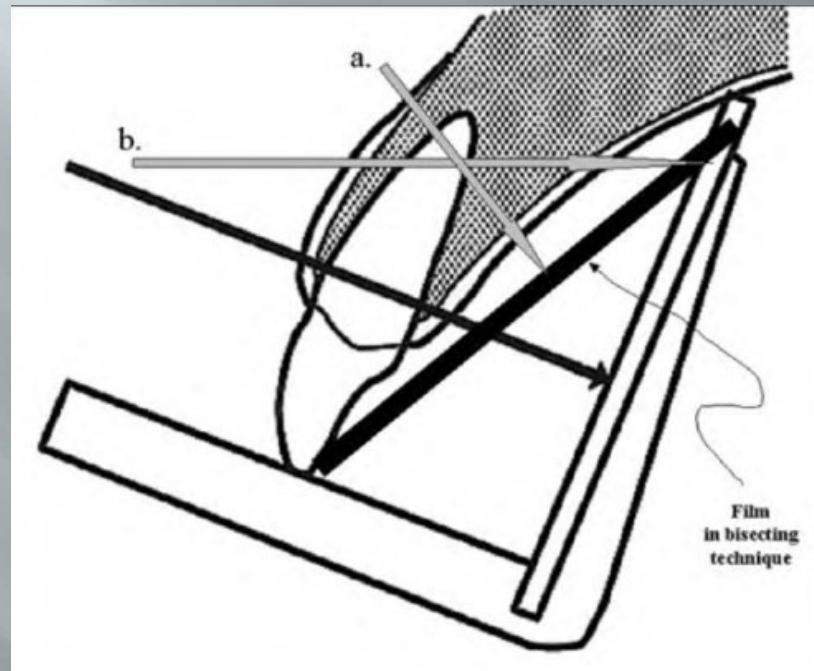
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# Paralel vs bisect



# criteria to determine adequate angulation of periapical radiographs

- 1. The radiograph should show the tips of molar cusps with little or none of the occlusal surface showing.
- 2. Enamel caps and pulp chambers should be distinct.
- 3. Interproximal spaces should be open.
- 4. Proximal contacts should not overlap unless teeth are out of line anatomically



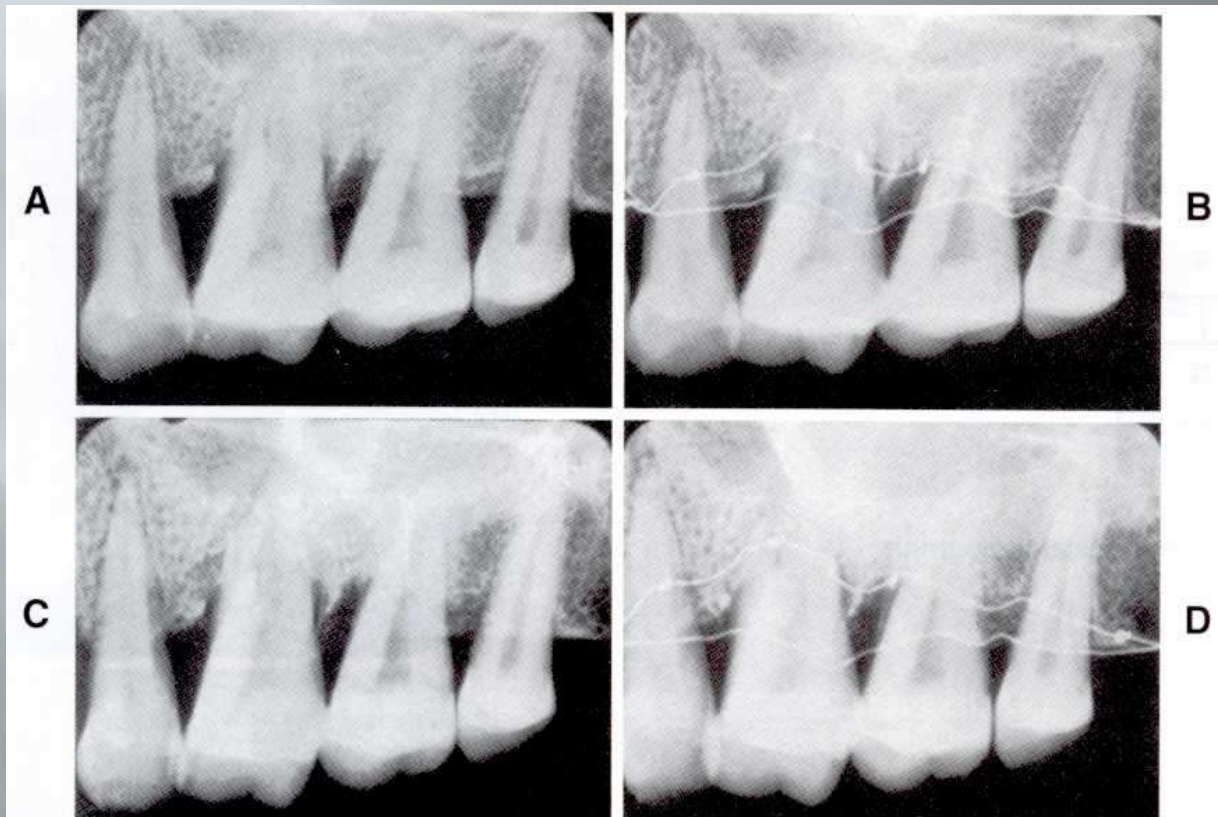


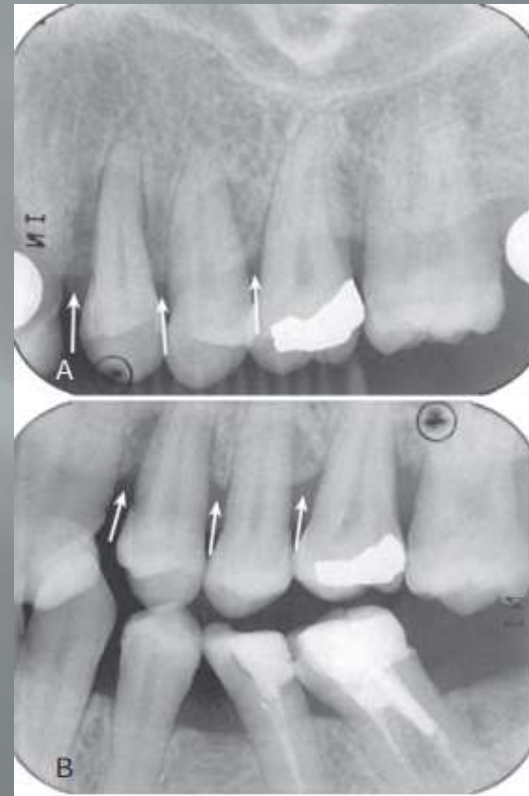
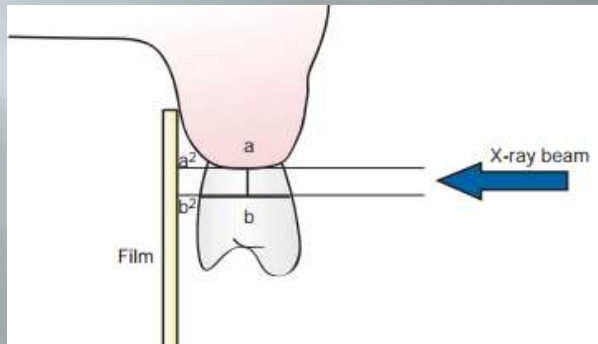
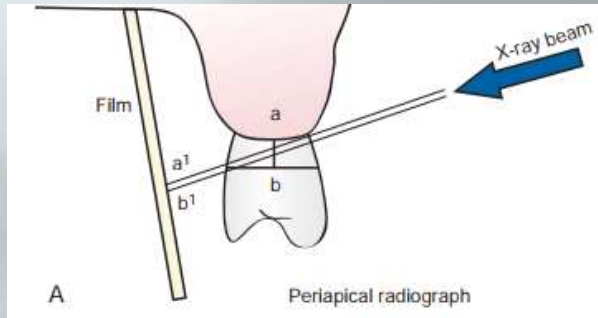
Periapical image of the same region where the carious lesions around the premolar are not visible because of the increased vertical angulation.



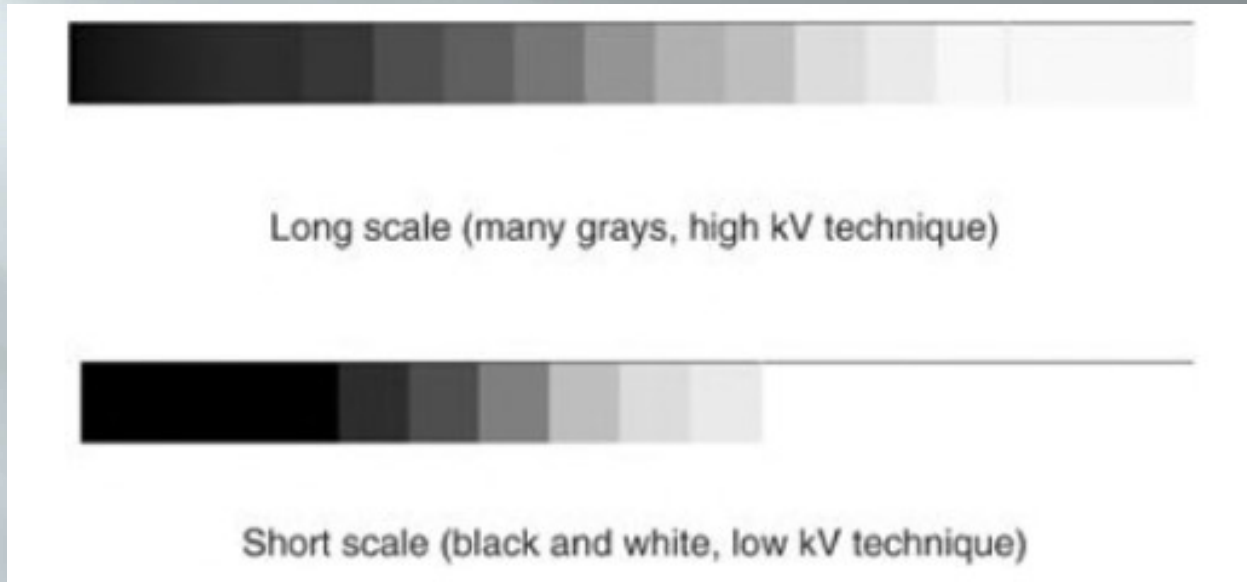
Bitewing image showing recurrent carious lesion on both the mesial and distal of the maxillary left second premolar and on the mesial of the second molar (*arrows*)

# Comparison of long-cone paralleling and bisection-of-the-angle techniques









- ❑ A long scale of contrast (top) reveals many shades of gray.
- ❑ A short scale of contrast (bottom) reveals only blacks and whites



**X-ray film with a longer gray scale contrast for detecting early bone loss at the alveolar crest**



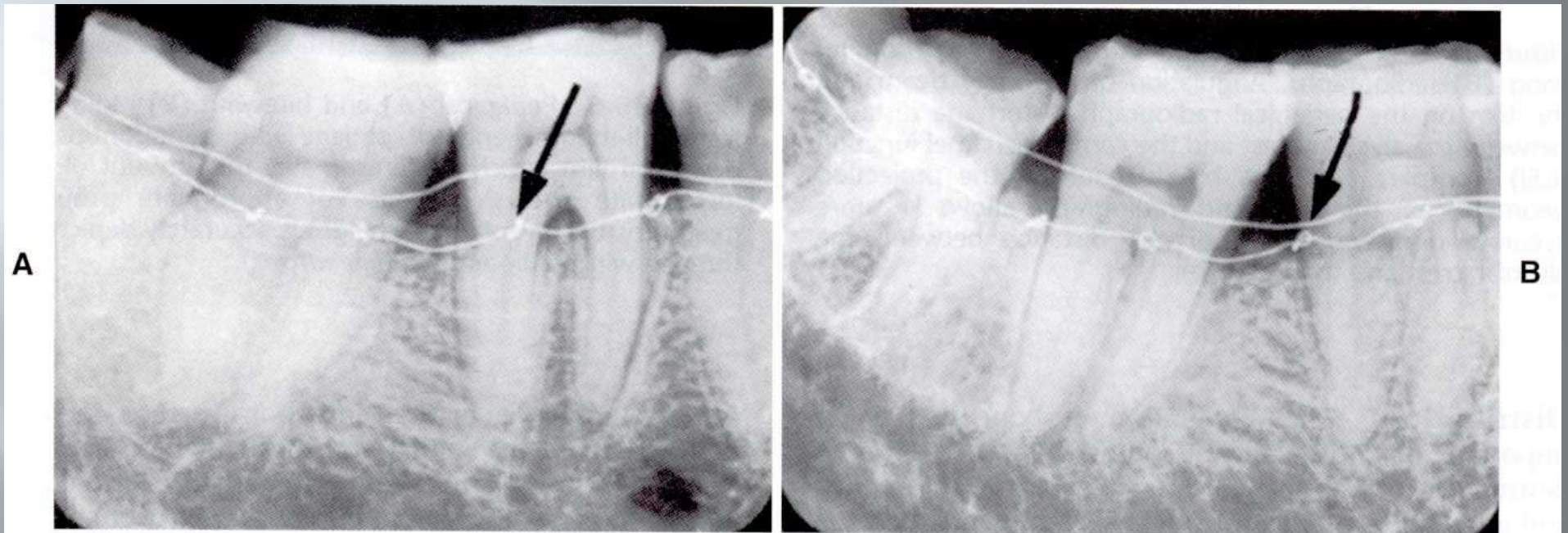
**High-contrast x-ray image used for detecting interproximal carious lesions**

# Radiographic Analysis

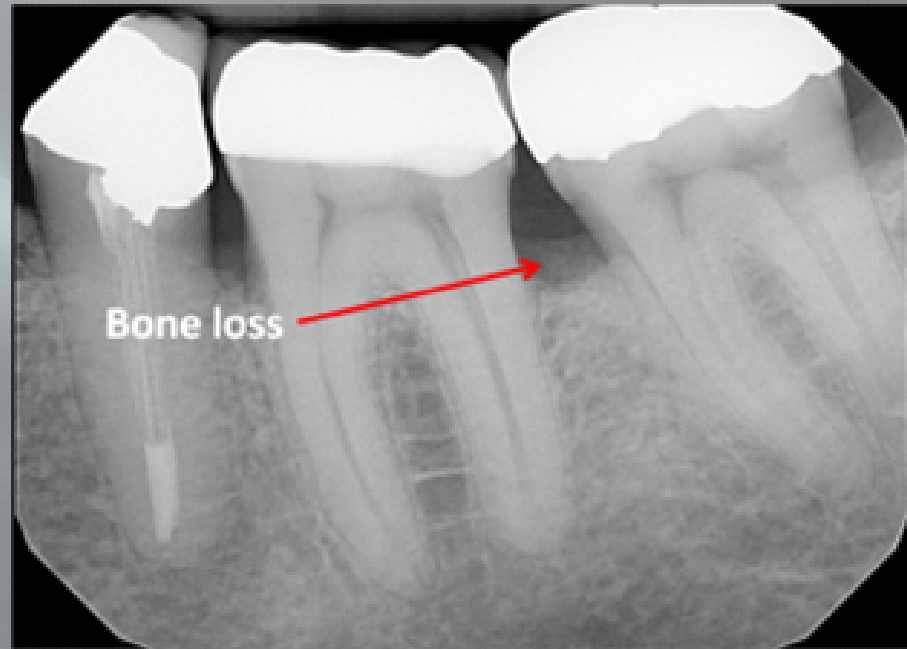
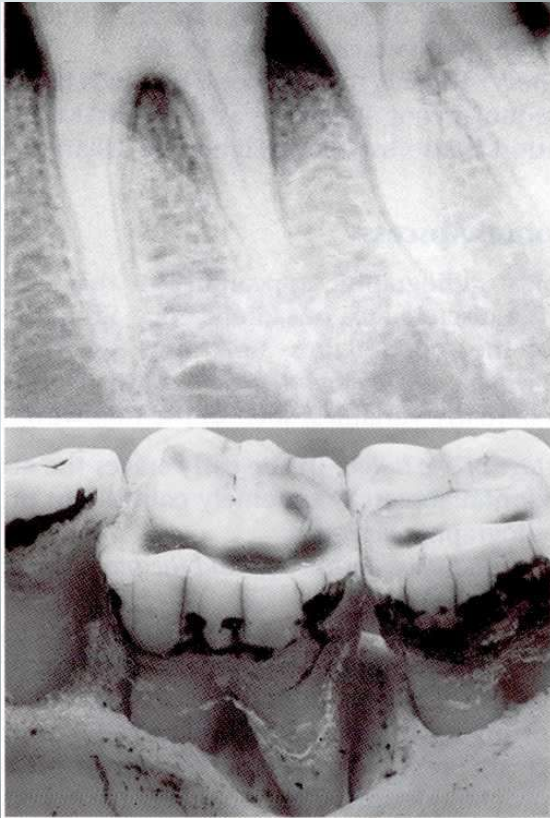
1. Level of alveolar crest
2. Apical extent of fracture or caries
3. Pulpal involvement
4. Root length
5. Root form
6. Furcation
7. Crown-to-root ratio (at present or posttreatment)
8. Root trunk length
9. Compromise of adjacent periodontium or esthetics

- ✘ Sulcus depth
- ✘ Gingival health
- ✘ Occlusal space
- ✘ Esthetic compromise
- ✘ Tooth arch relationship inadequacy

## Level of alveolar crest



## Level of alveolar crest



# Apical extent of fracture or caries



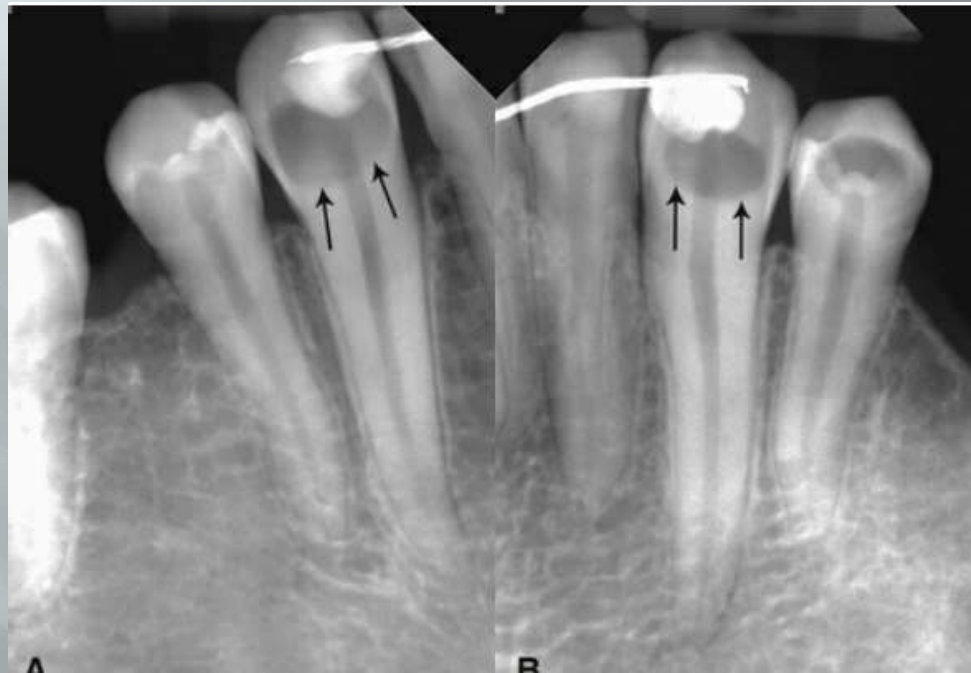




# Pulpal involvement



# Buccal caries



- Buccal caries (*arrows*) usually have a circular shape, are well defined, and are in the cervical area

# Root length and form



# Furcation



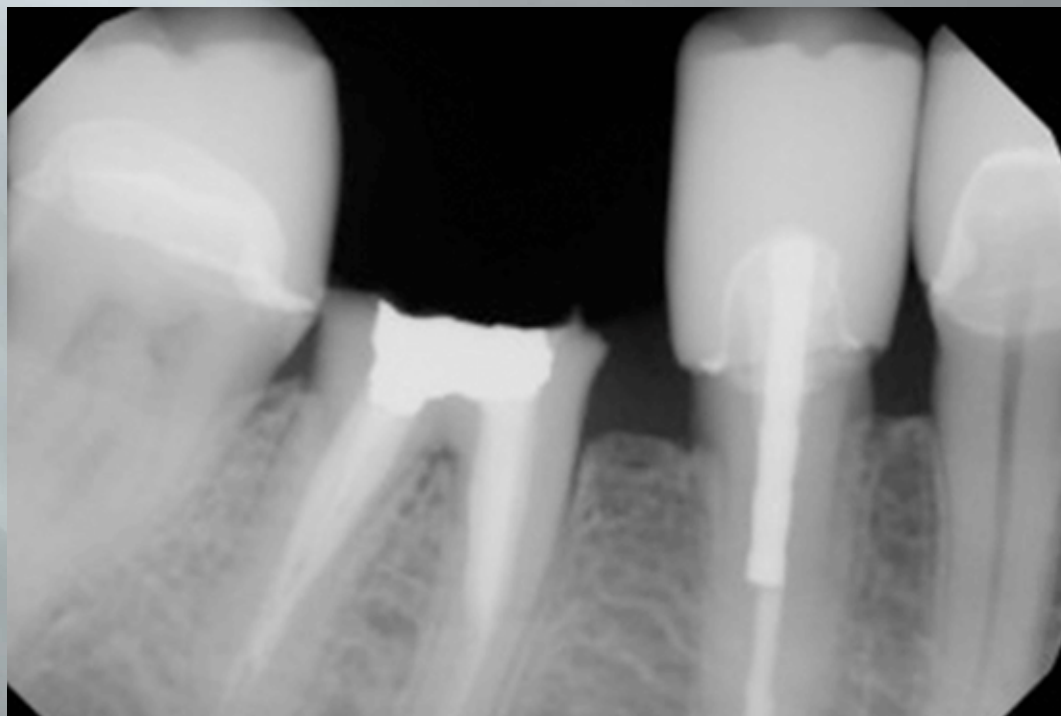
## Crown-to-root ratio (at present or posttreatment)



## Crown-to-root ratio (at present or posttreatment)



# Root trunk length



# Compromise of adjacent periodontium or esthetics

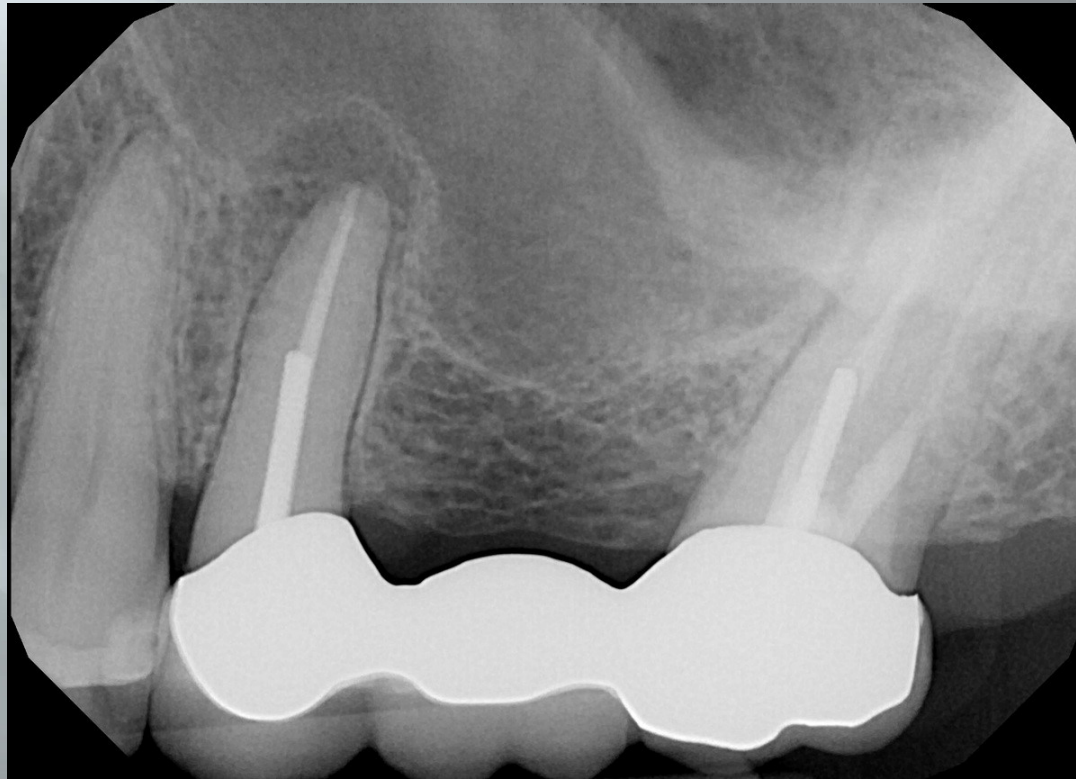








use of the tooth as an abutment



presence of a large periapical lesion





Thanks for your attention

***Carranza's Clinical Periodontology***  
**ATLAS OF COSMETIC AND RECONSTRUCTIVE  
PERIODONTAL SURGERY**

