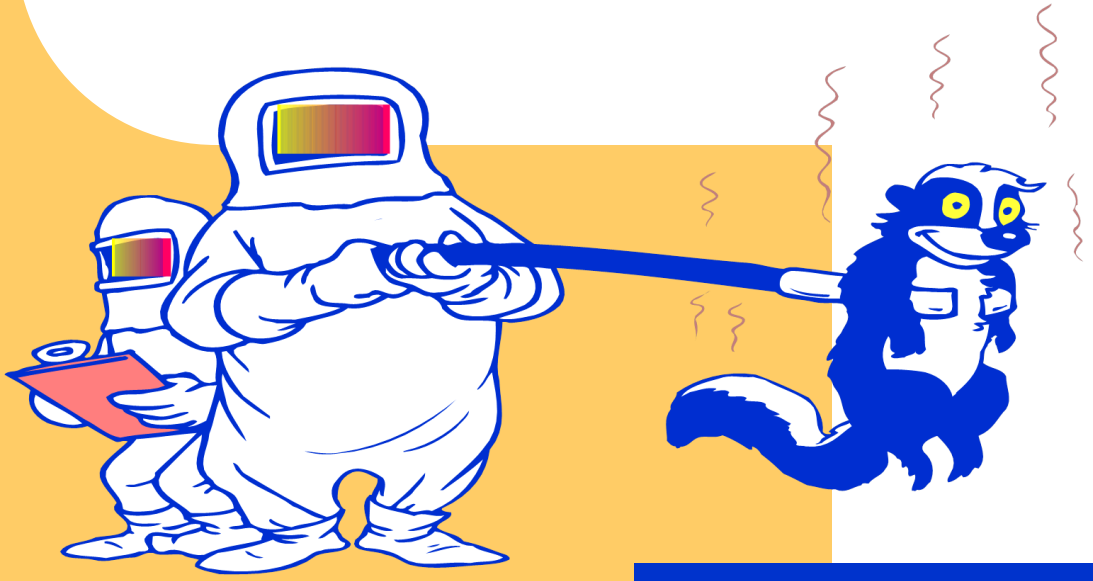
Localization



Need for Localization

- *A periapical film will identify the location of an object vertically and in a horizontal (mesiodistal) direction.*

- *Need another method for locating objects in a buccolingual direction.*

Indications

- Foreign Bodies
- Impacted Teeth
- Unerupted Teeth
- Retained Teeth
- Salivary Stones
- Jaw Fractures
- Broken Needles & Instruments
- Root Positions
- Filling Materials

General Guidelines For Localization

- *1. Compare with either an obvious reference object or with a characteristic anatomic structures.*
- *2. The object-film distance of the two objects provides clues:*
  - *Objects closer to the film appear sharper and of actual size.*
  - *Objects distant from the film appear blurred and enlarged.*
- *3.Two different central ray projections that are perpendicular to each other.*
- *4.Tube shift in vertical or horizontal direction*
- *5. **Panoramic radiography** -Objects that lie in front of the image layer appear blurred and reduced in size, while those that are behind the film appear out of focus and enlarged.*
- *Skull films are indispensable in many cases because they permit not only definitive changes of the central ray projection but also provide a clear overview.*

The two primary methods of determining the buccolingual location of objects are:

- Right-Angle Technique

  Primarily identifies buccolingual location, but may also confirm mesiodistal location seen on periapical

- Tube-shift Technique (SLOB rule, Clark's rule)

  Utilizes two films with different horizontal or vertical angulations

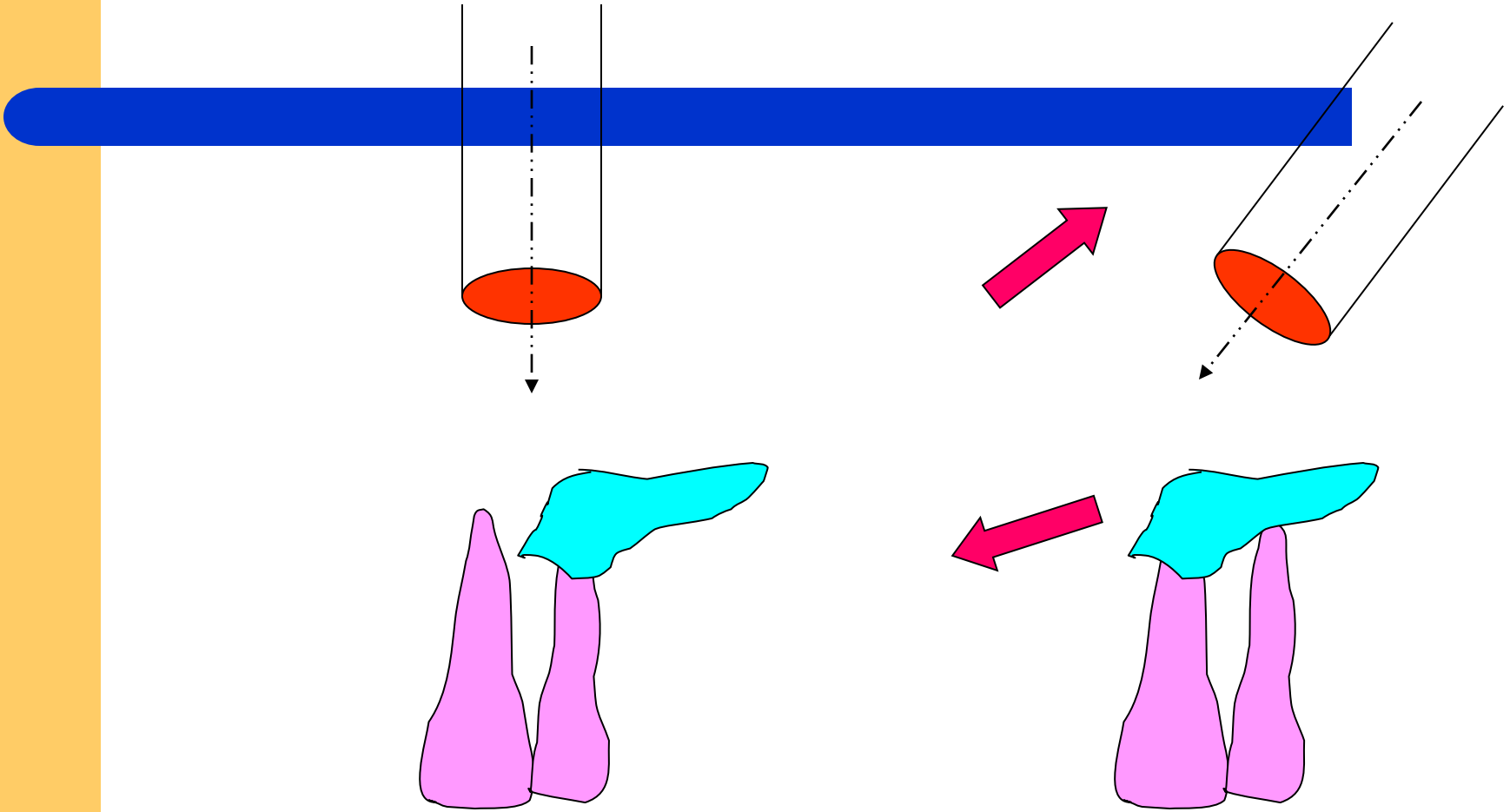
Tube-shift Technique (SLOB rule, Clark's rule)

- *Can be done by changing direction of central rays in vertical or horizontal direction.*

- **SLOB Rule**

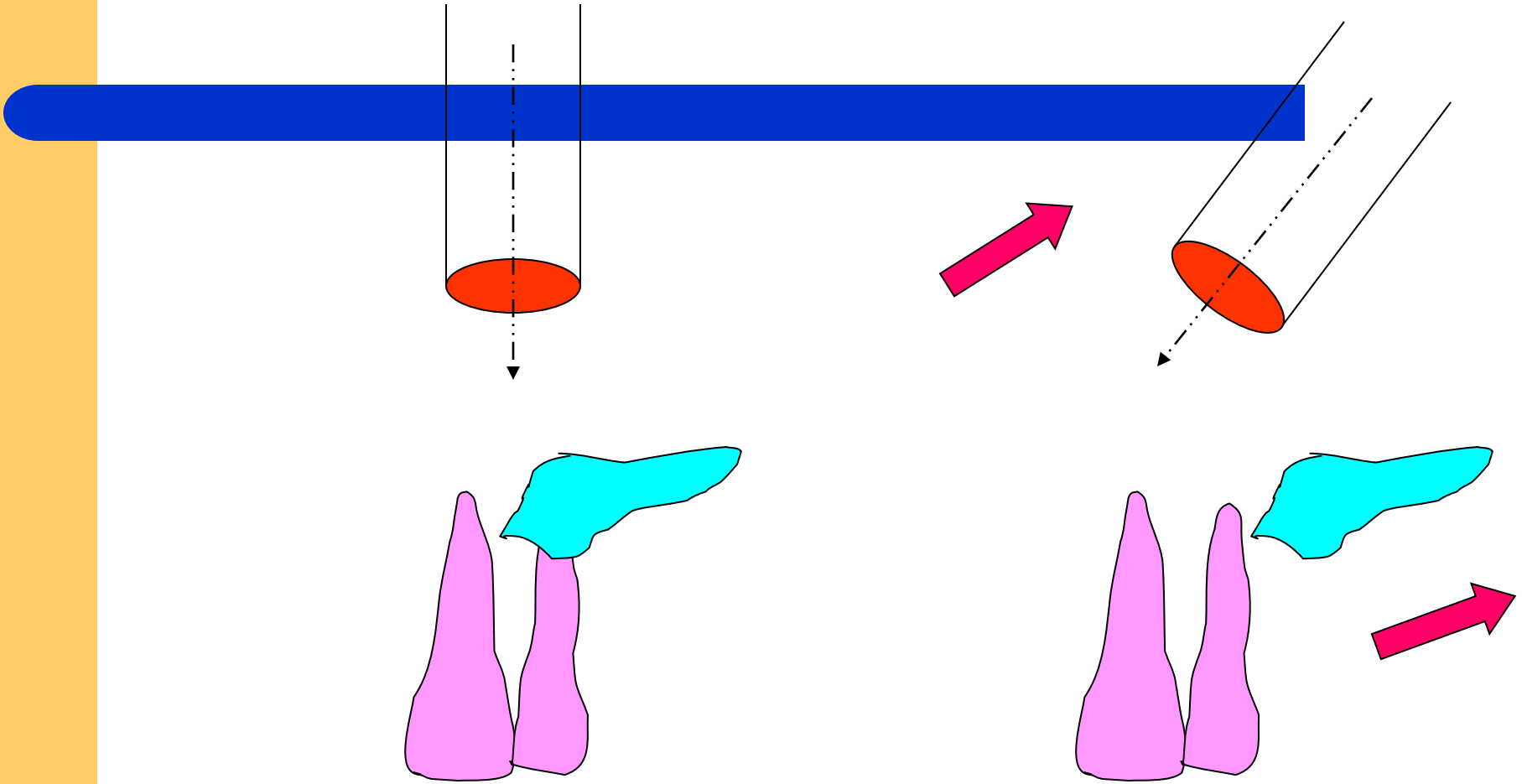
  Same Lingual Opposite Buccal

Localization by horizontal shift of central rays



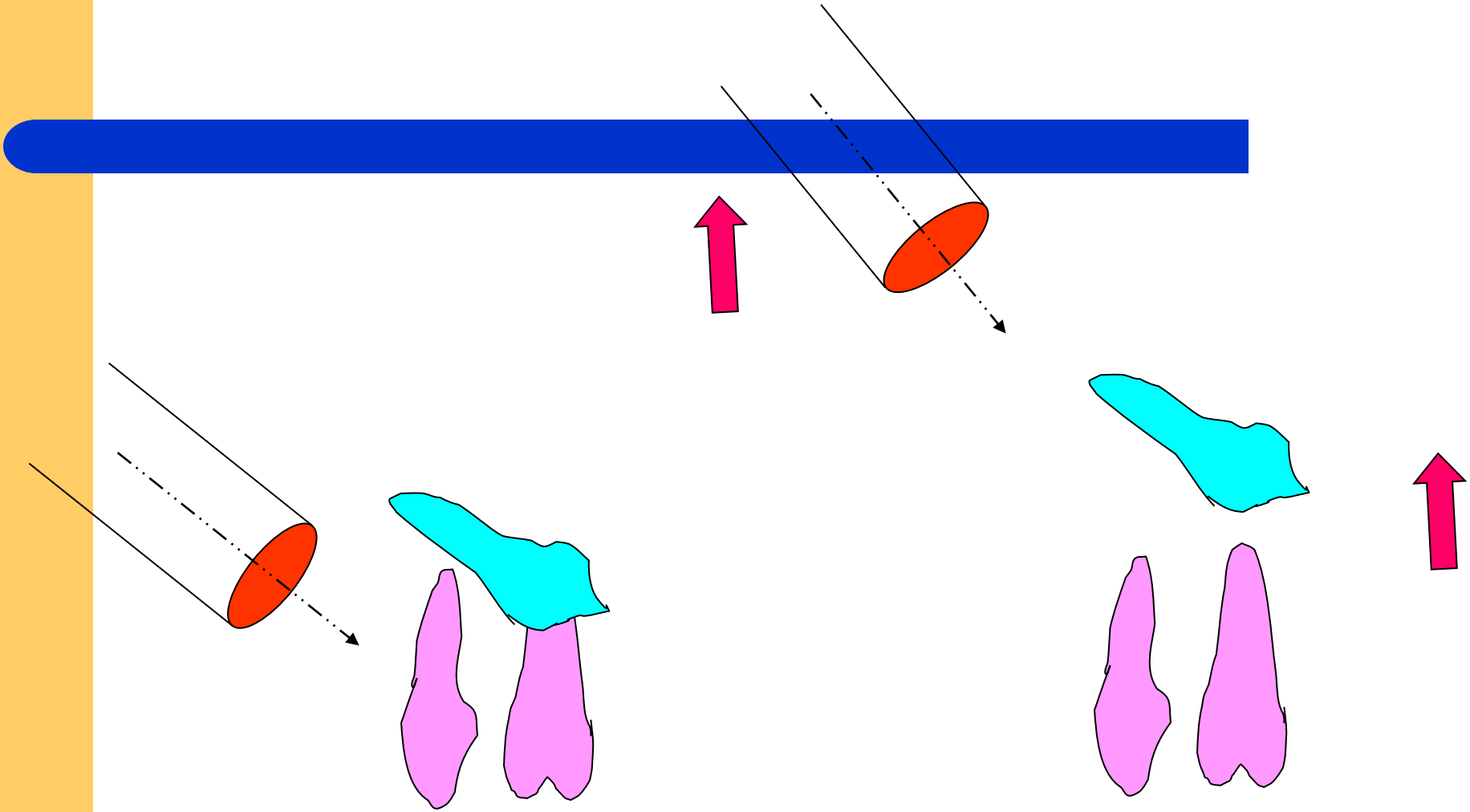
Buccal Position

Localization by horizontal shift of central rays



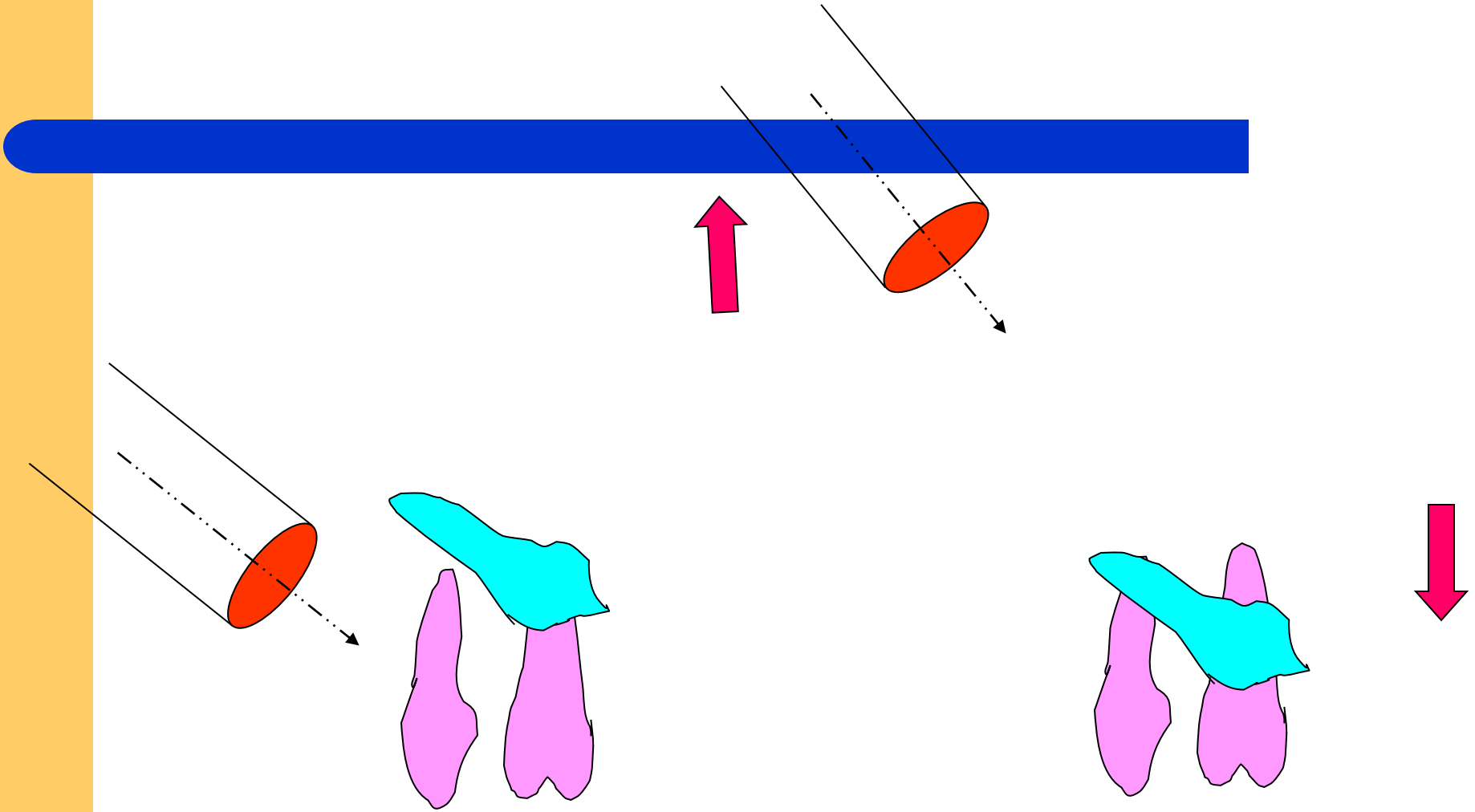
Palatal Position

Localization by vertical shift of central rays



Palatal Position

Localization by vertical shift of central rays

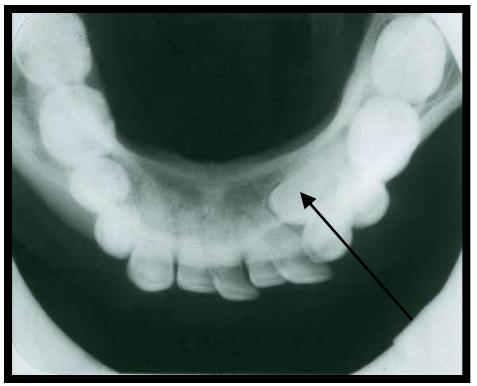


Buccal Position

Localization by Right Angle Technique

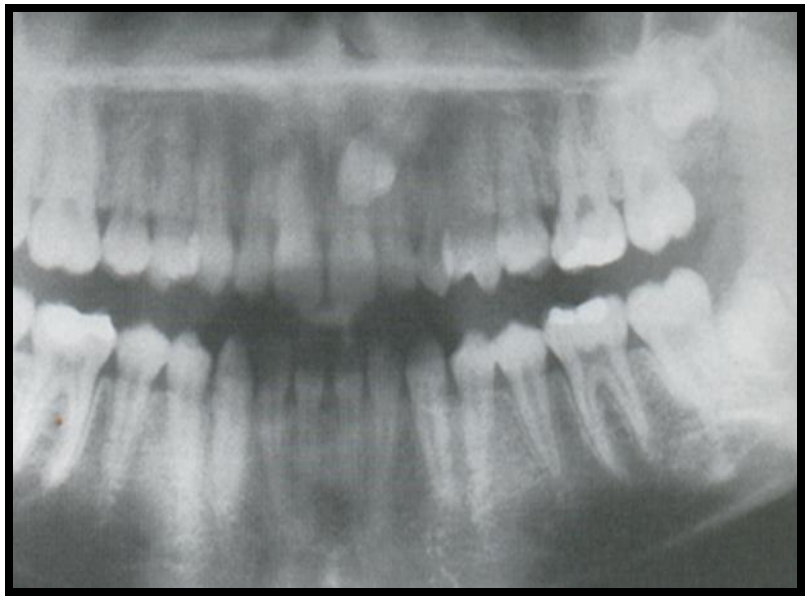
- *Once identified an object on the periapical film, we can take an occlusal film with the beam at a right angle (perpendicular) to the direction of the beam for the periapical.*

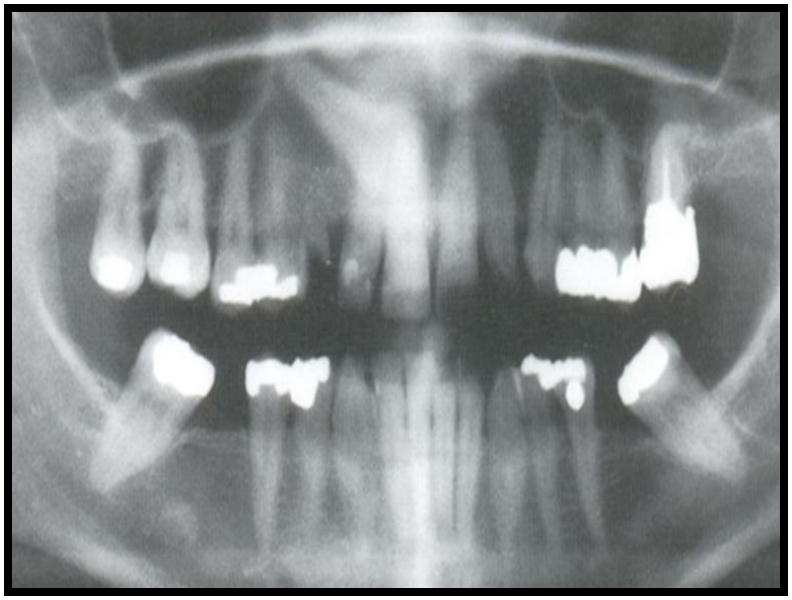
IOPA



True Occlusal

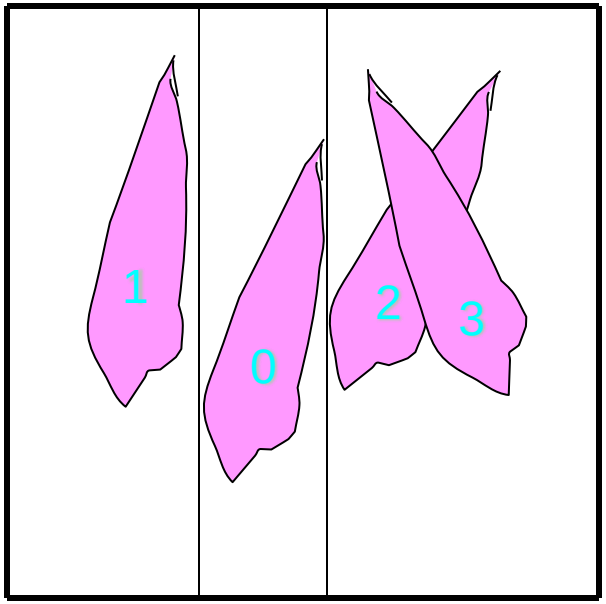
Panoramic Radiology As Aid In Localization



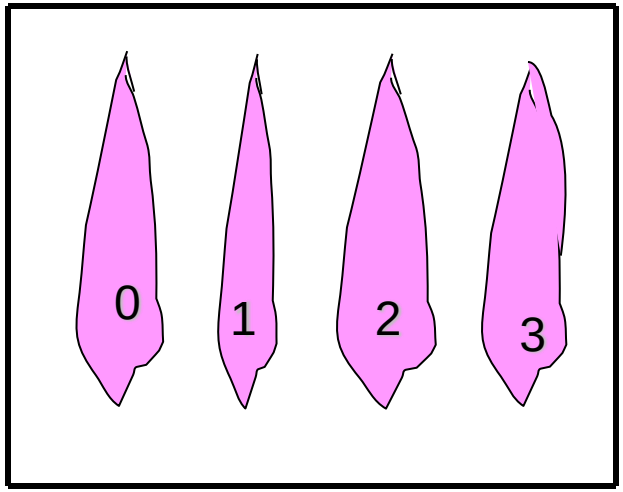


Images of Impacted teeth appears Enlarged

Panoramic Radiology As Aid In Localization

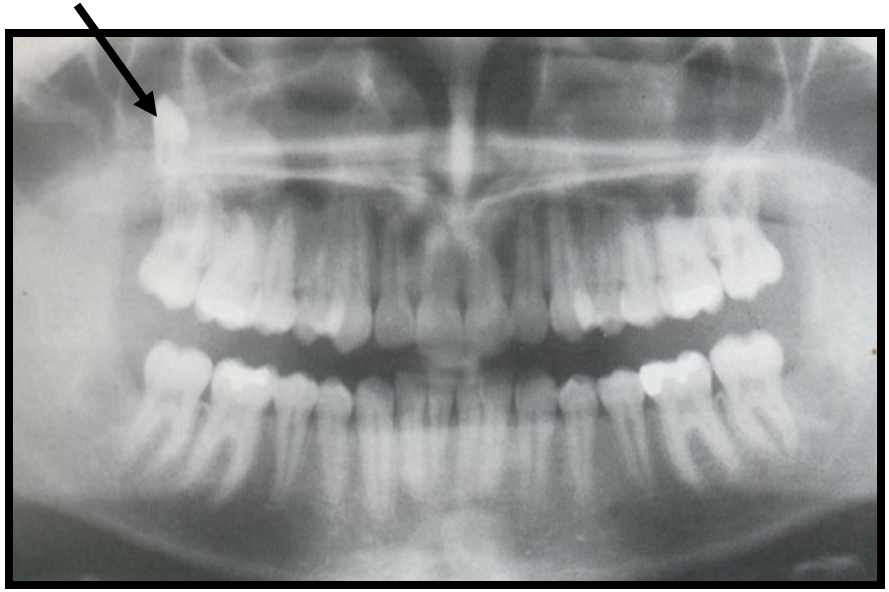


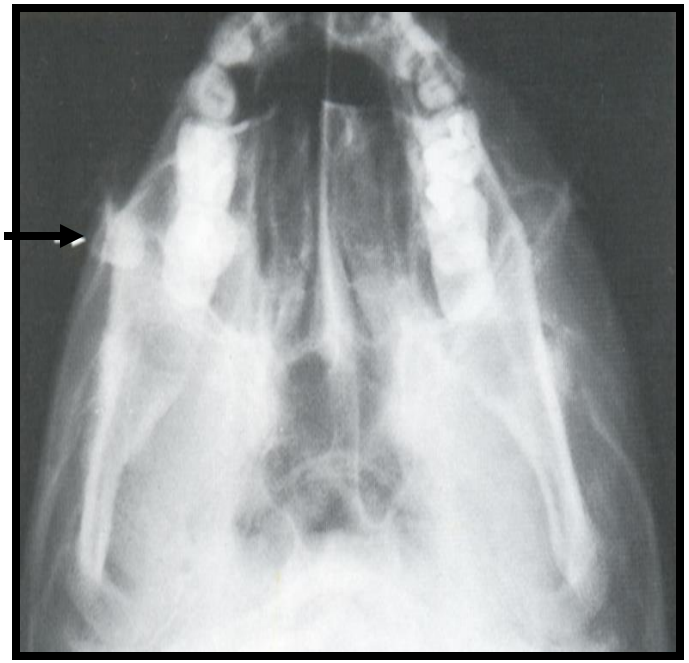
Actual Tooth positions



Changes in tooth sizes

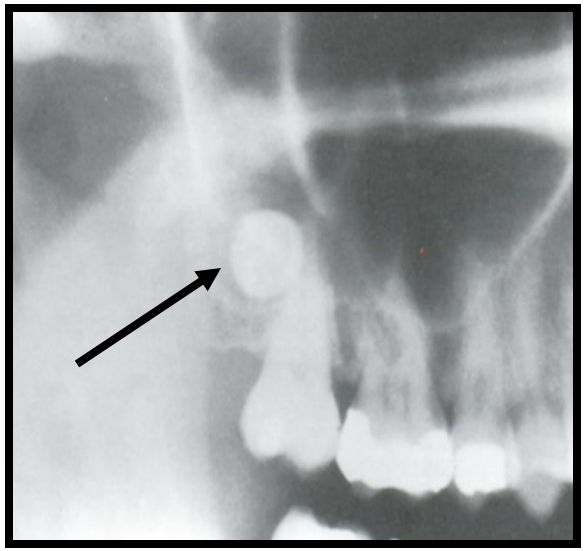
Skull Radiographs

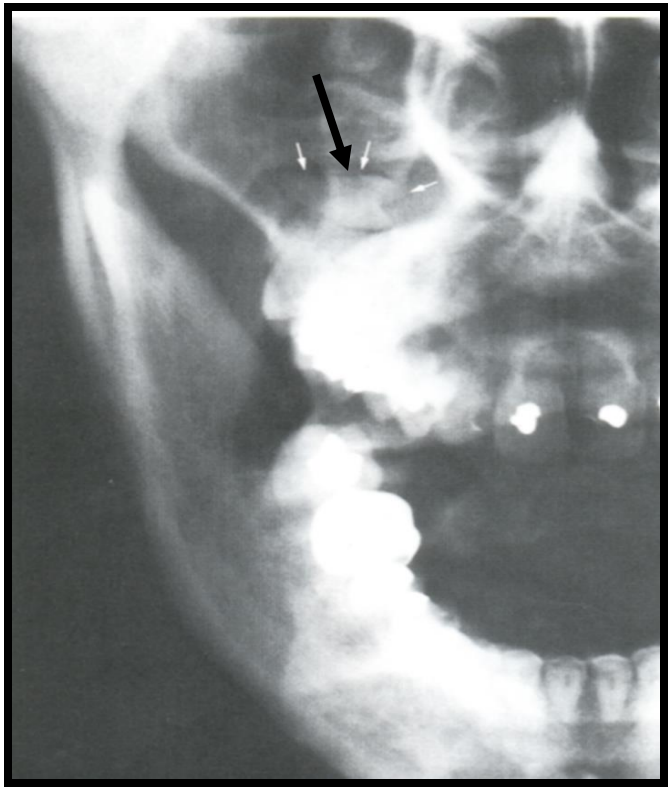




Localization of apically displaced Maxillary third molars

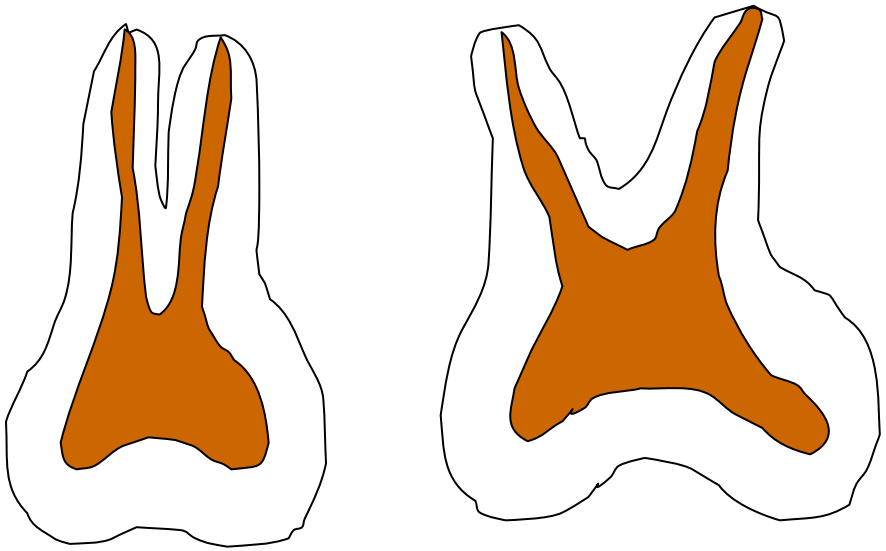
Skull Radiographs

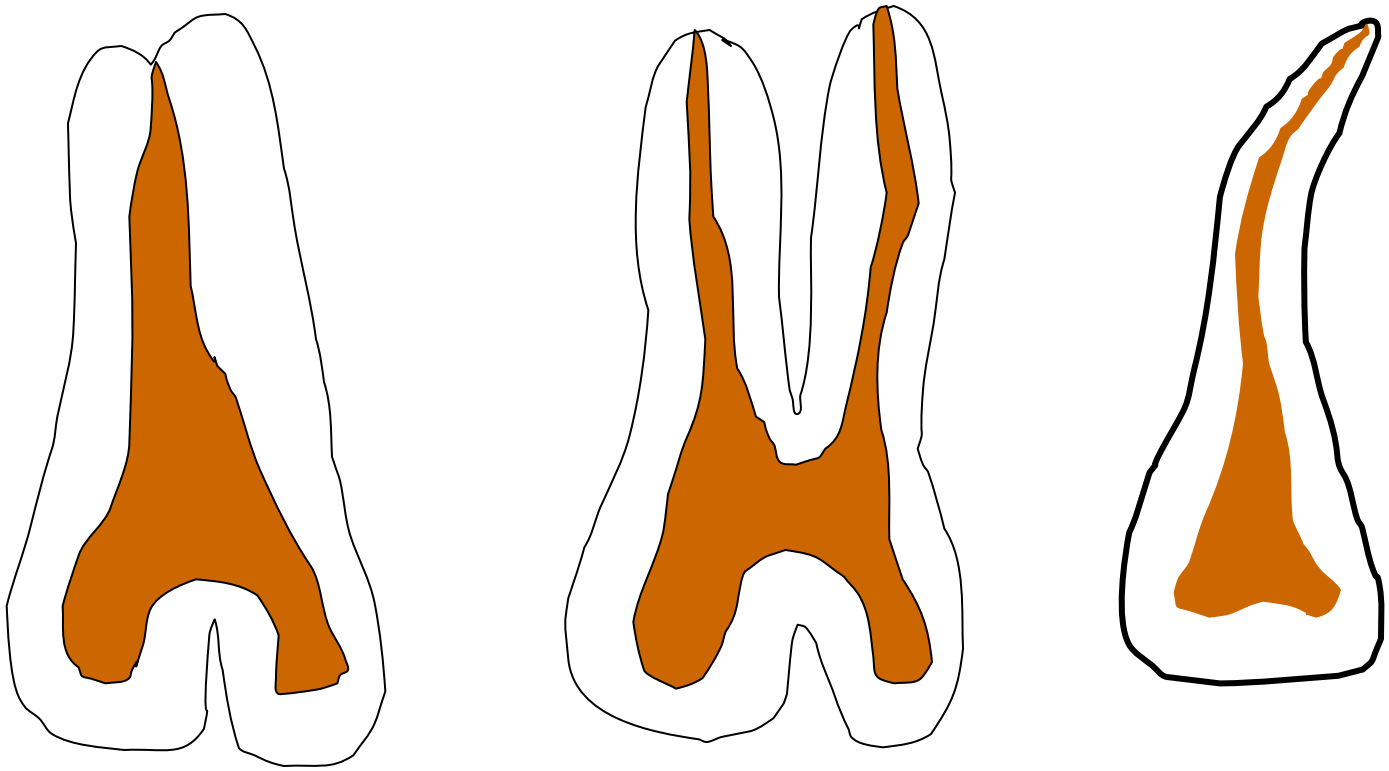


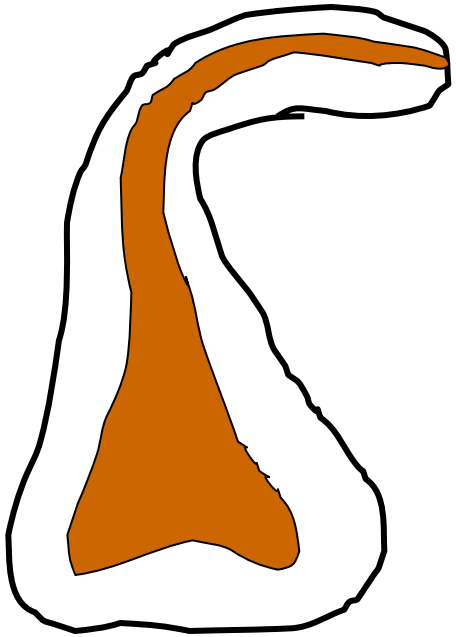


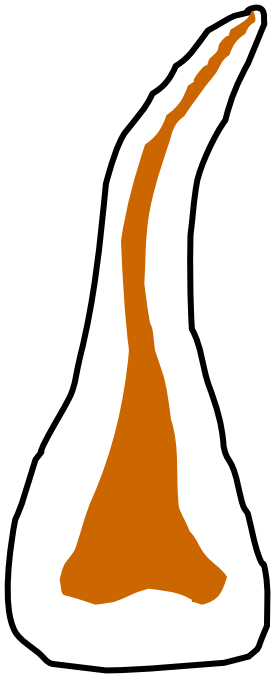
Localization of axially displaced Maxillary third molars


THANK YOU









Dens Evaginatus