Radiographic Anatomy
part 2

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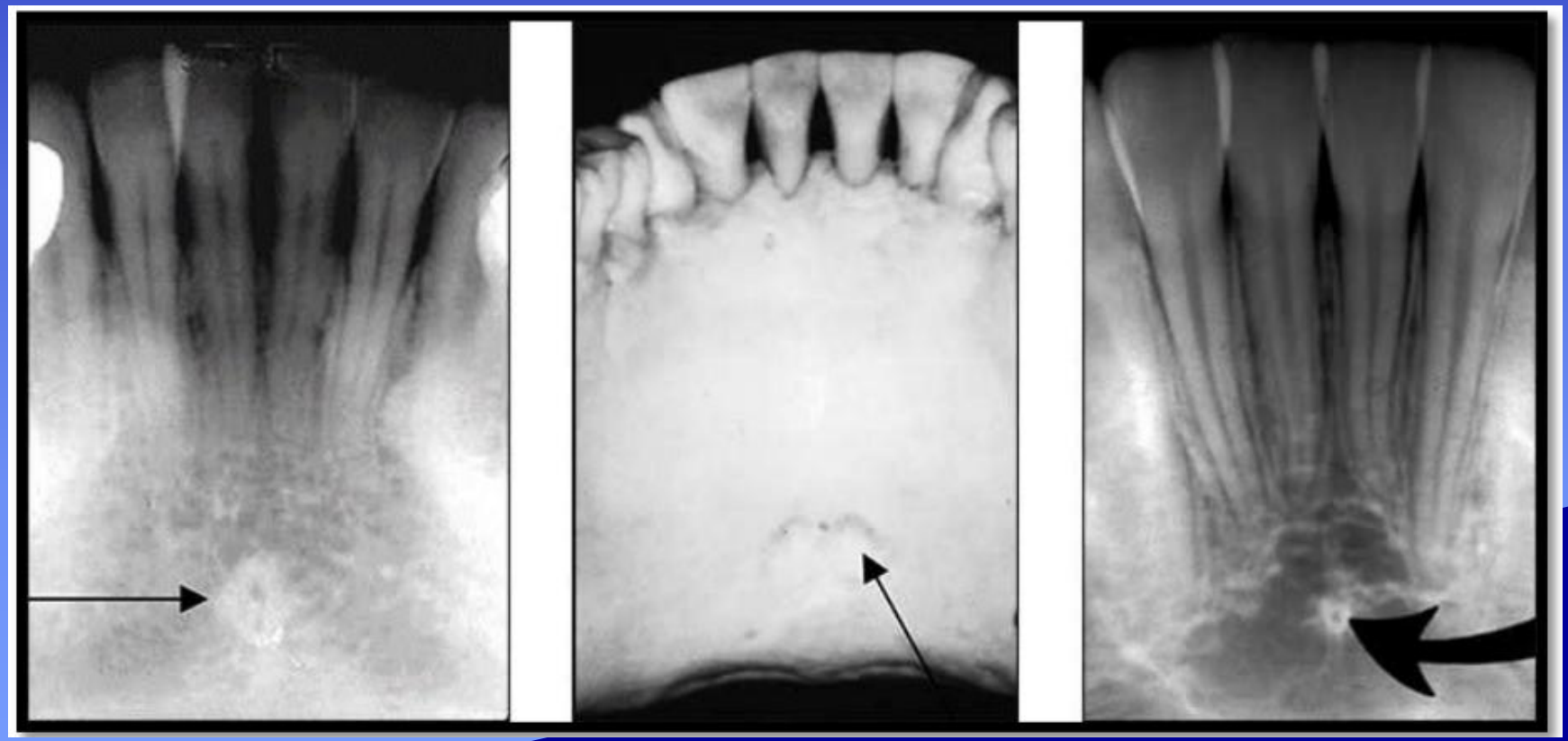
Bony Landmarks of the Mandible

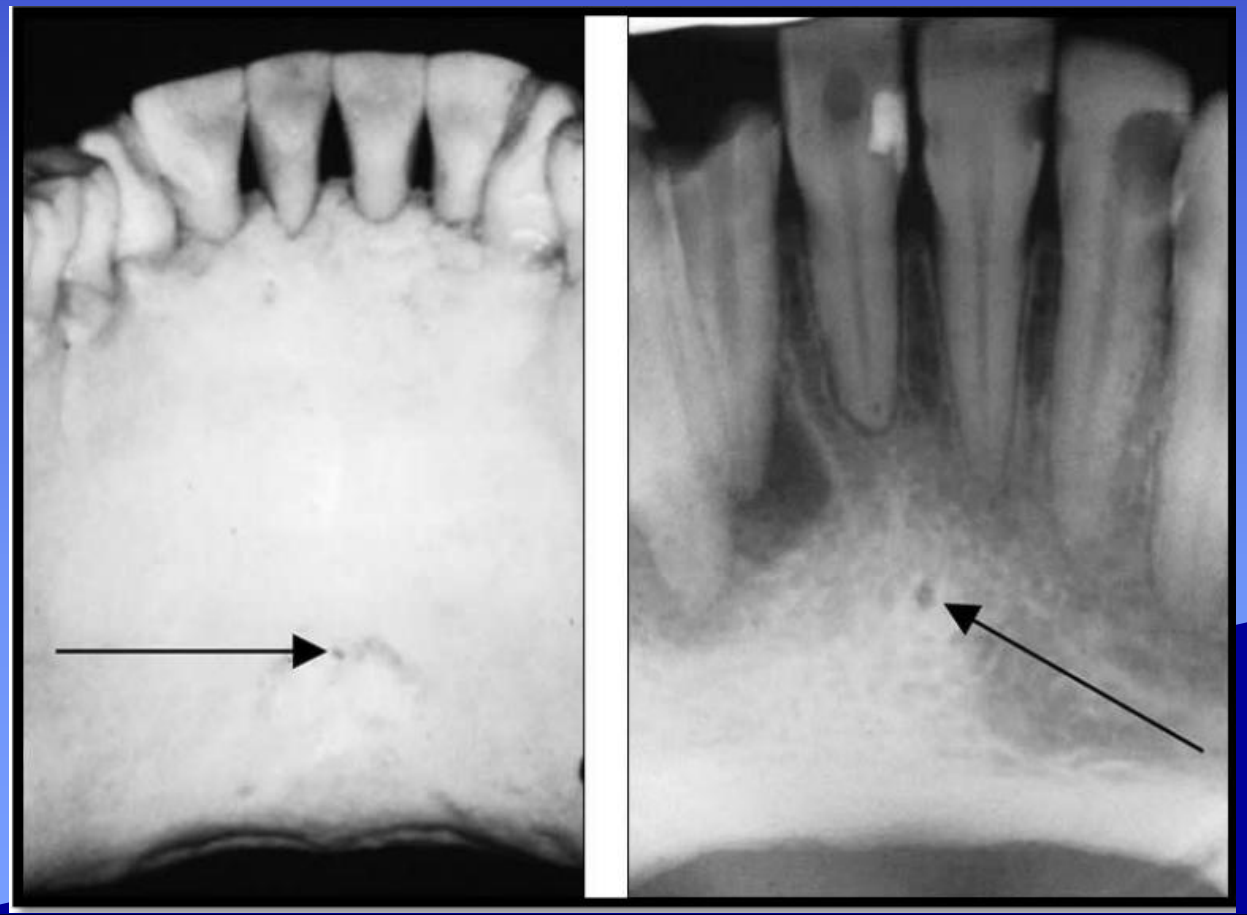
Genial Tubercles Description. Genial tubercles are tiny bumps of bone that serve as attachment sites for the genioglossus and geniohyoid muscles.

Appearance. On a mandibular periapical image, genial tubercles appear as a ring-shaped radiopacity inferior to the apices of the mandibular incisors.



Lingual Foramen Description. The lingual foramen is a tiny opening or hole in bone located on the internal surface of the mandible. The lingual foramen is located near the midline and is surrounded by genial tubercles.

Appearance. On a mandibular periapical image, the lingual foramen appears as **a small, radiolucent dot located inferior to the apices of the mandibular incisors.**

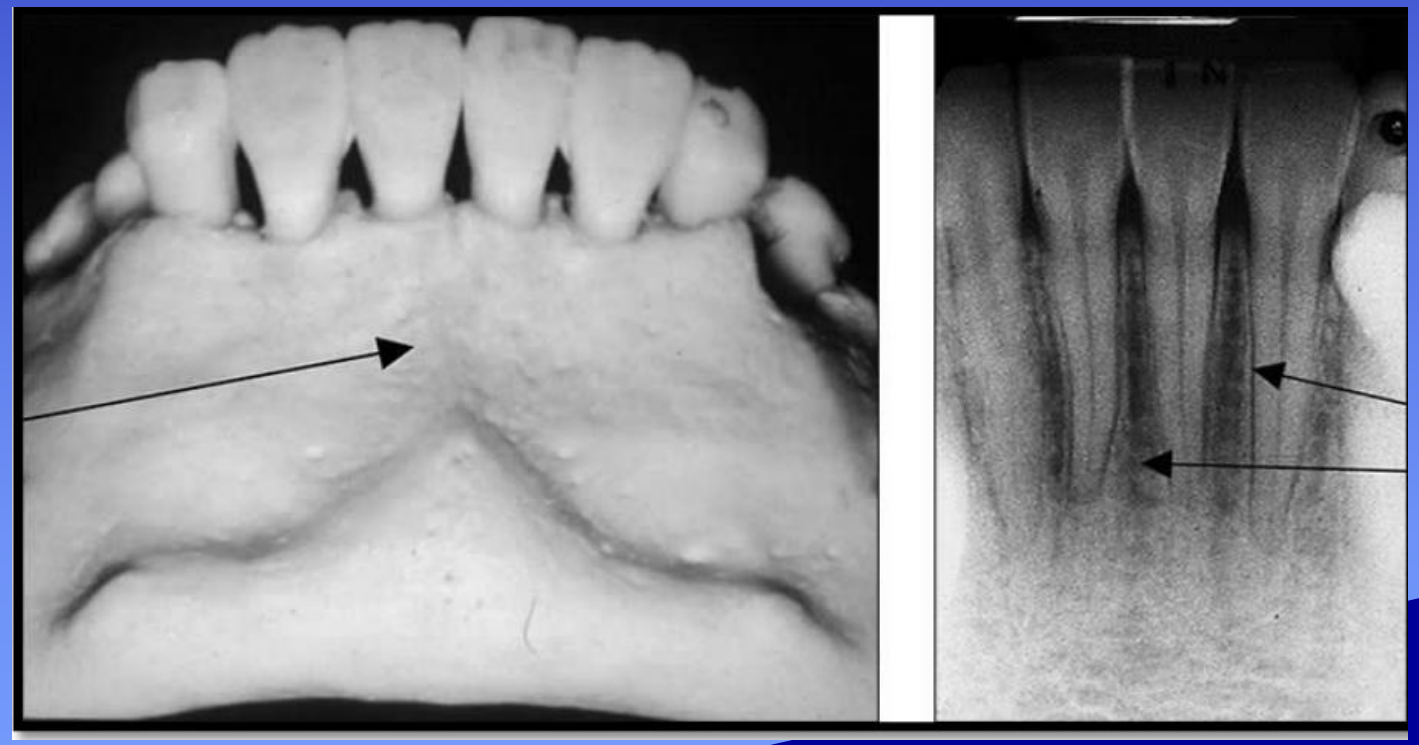


Mental Ridge Description. The mental ridge is a linear prominence of cortical bone located on the external surface of the anterior portion of the mandible

Appearance. On a mandibular periapical image, the mental ridge appears as a thick radiopaque band that extends from the premolar region to the incisor region.

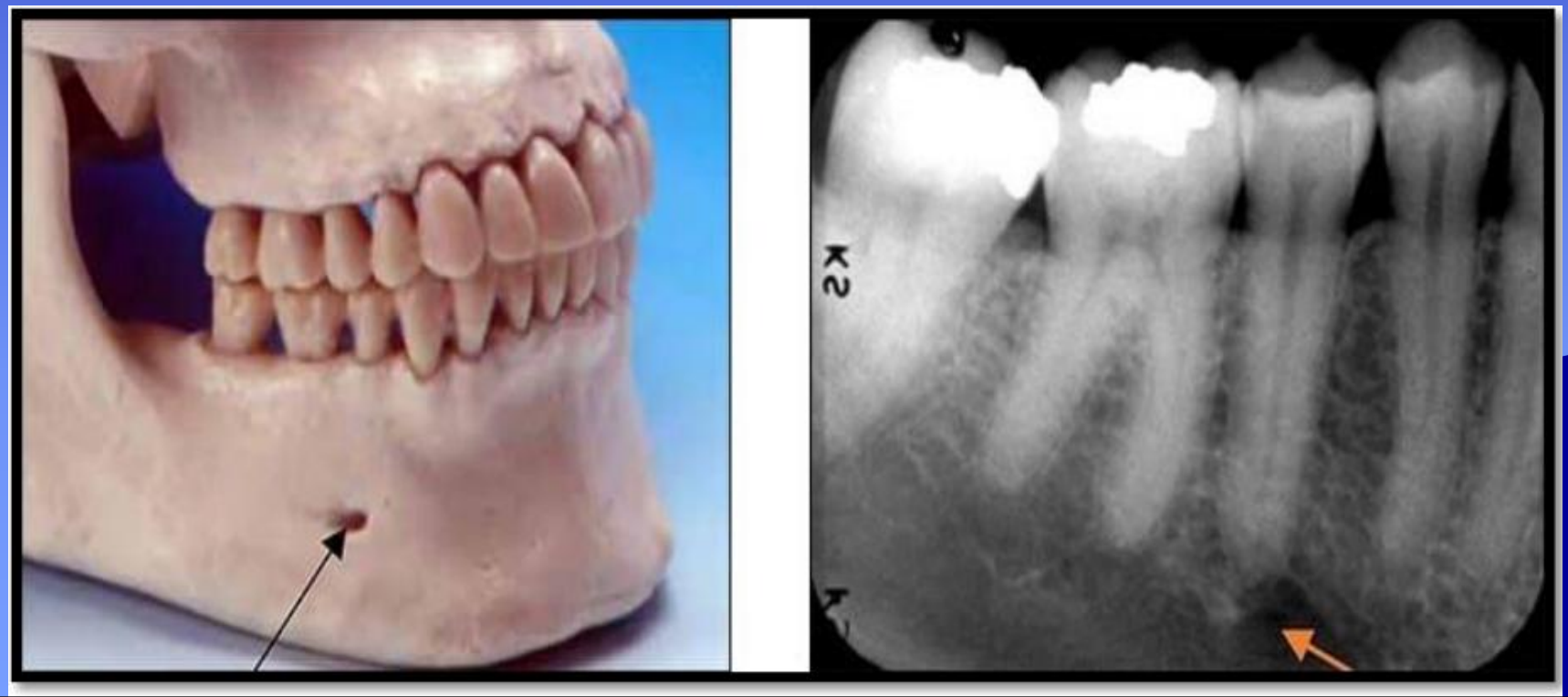
Mental Fossa Description. The mental fossa is a depressed area of bone located on the external surface of the anterior mandible

Appearance. On a mandibular periapical image, the mental fossa appears as a radiolucent area above the mental ridge.



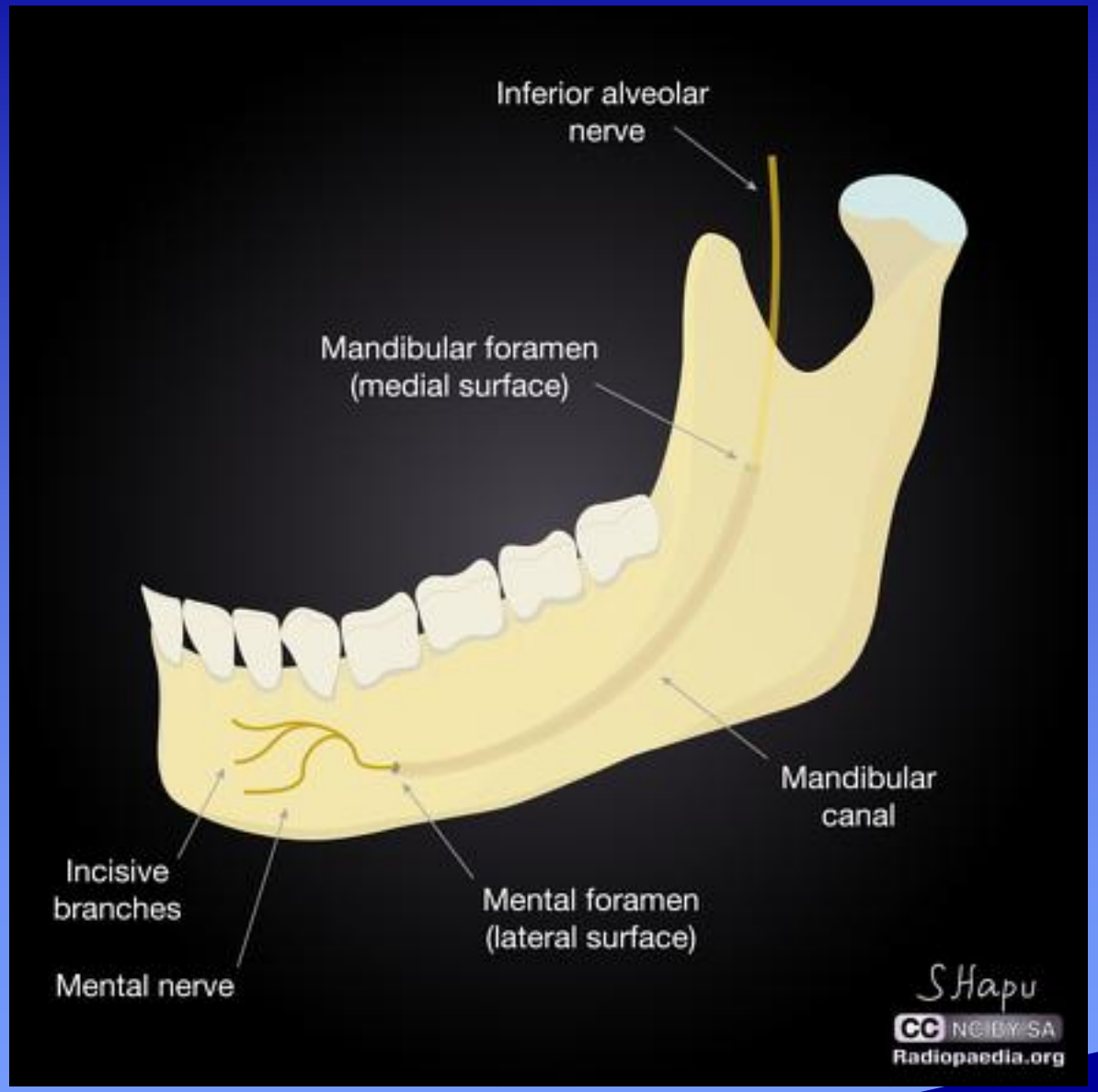
Mental Foramen Description. The mental foramen is an opening or hole in bone located on the external surface of the mandible in the region of the mandibular premolars. Blood vessels and nerves that supply the lower lip exit through the mental foramen.

Appearance. On a mandibular periapical image, the mental foramen appears as a small, ovoid or round radiolucent area located in the apical region of the mandibular premolars.



Mandibular Canal Description. The mandibular canal is a tubelike passageway through bone that travels the length of the mandible. The mandibular canal extends from the mandibular foramen to the mental foramen and houses the inferior alveolar nerve and blood vessels.

Appearance. On a mandibular periapical image, the mandibular canal appears as a radiolucent band. Two thin radiopaque lines that represent the cortical walls of the canal outline the mandibular canal. The mandibular canal appears below or superimposed over the apices of the mandibular molar teeth.


Inferior alveolar nerve
Mandibular foramen (medial surface)
Mandibular canal
Incisive branches
Mental nerve
Mental foramen (lateral surface)
SHapu
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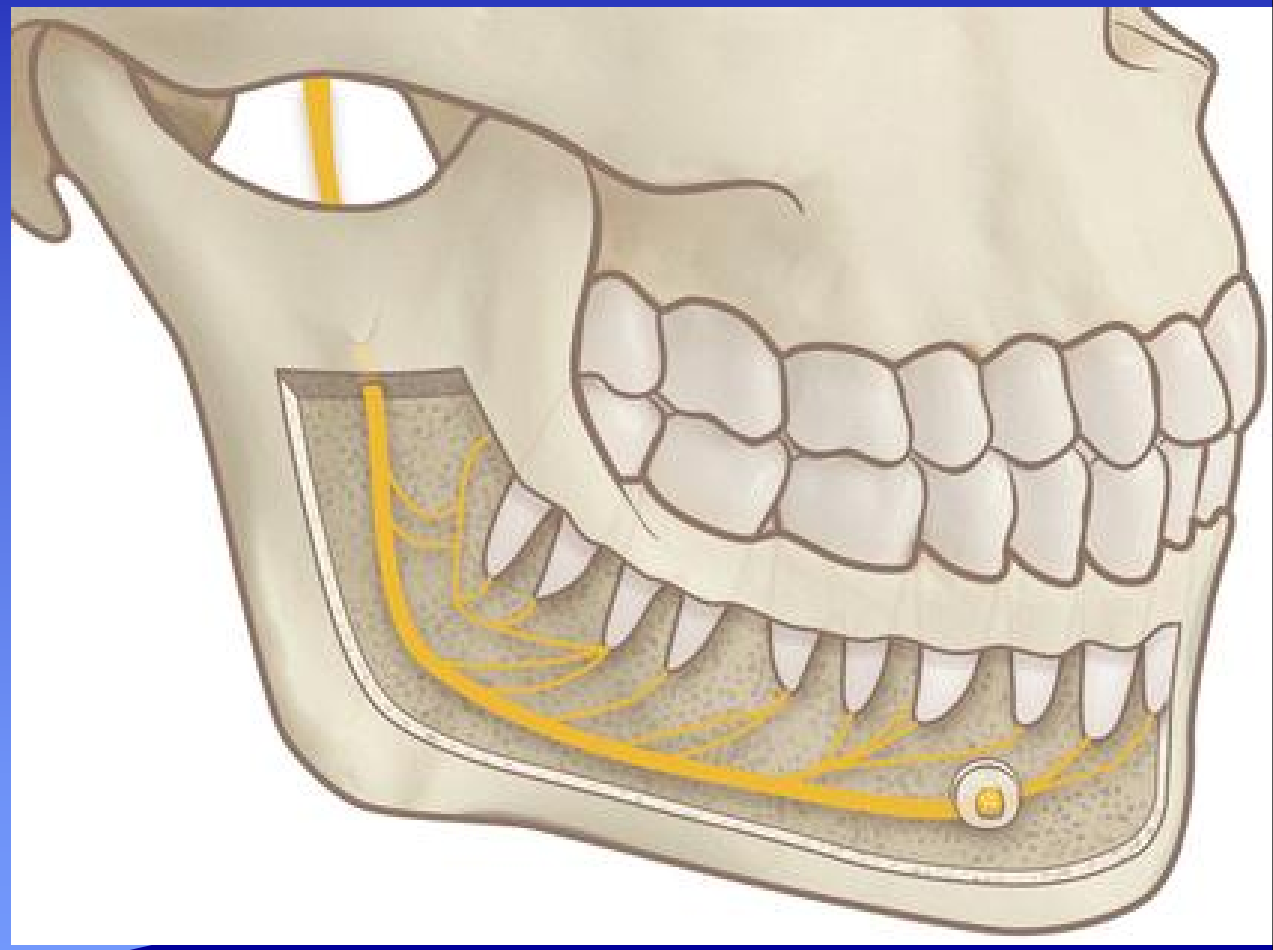
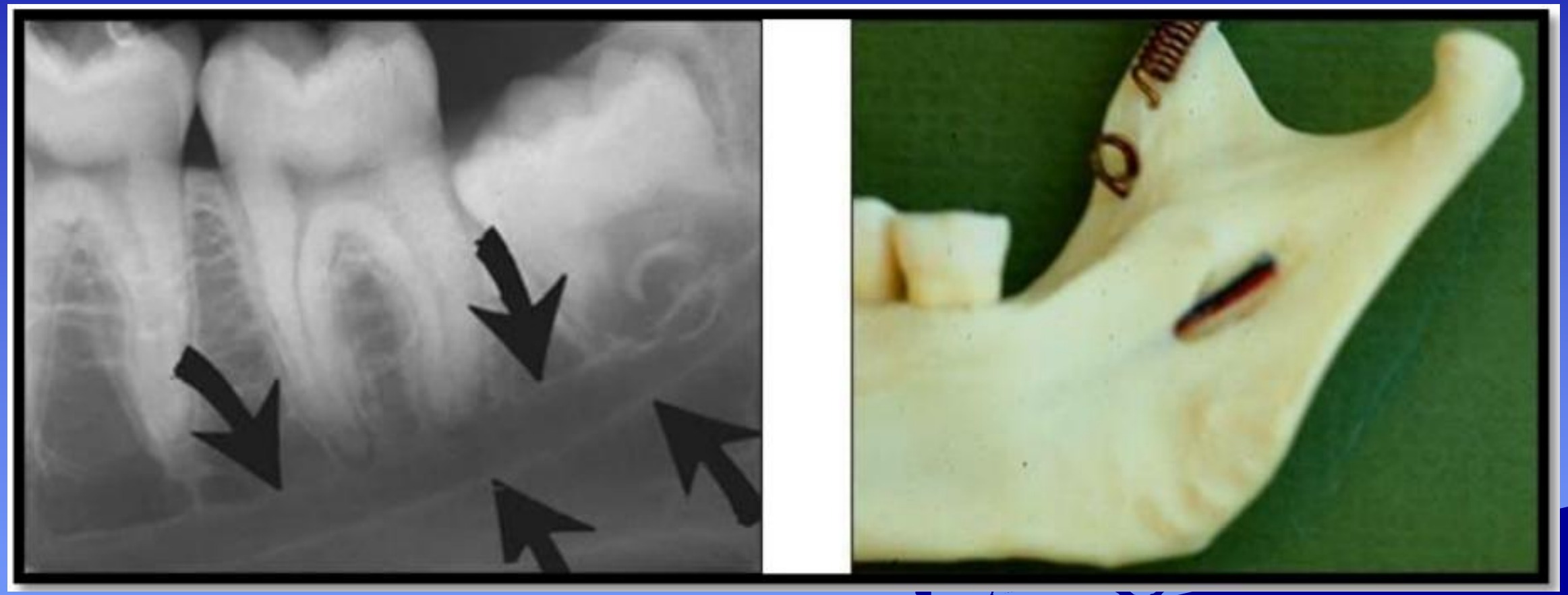
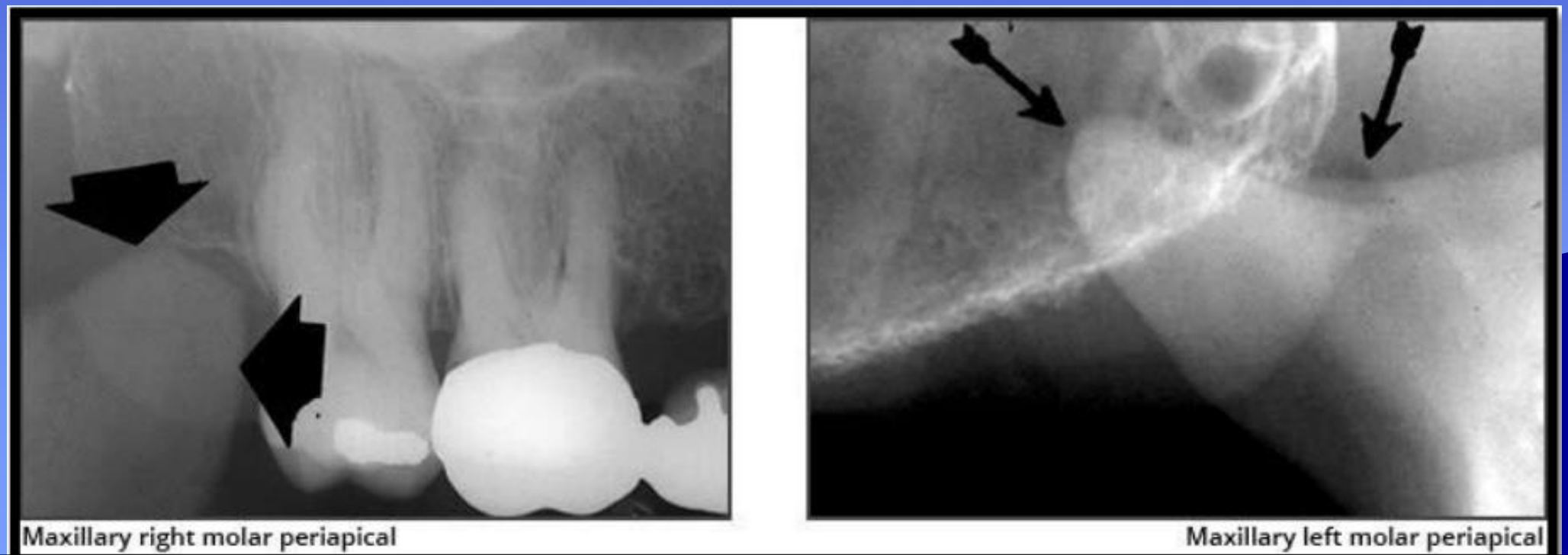




Coronoid Process Description. The coronoid process is a marked prominence of bone on the anterior ramus of the mandible . The coronoid process serves as an attachment site for one of the muscles of mastication

Appearance. The coronoid process is not seen on a mandibular periapical image but may appear on a maxillary molar periapical image. The coronoid process appears as a triangular radiopacity superimposed over, or inferior to, the maxillary tuberosity region.



Maxillary right molar periapical

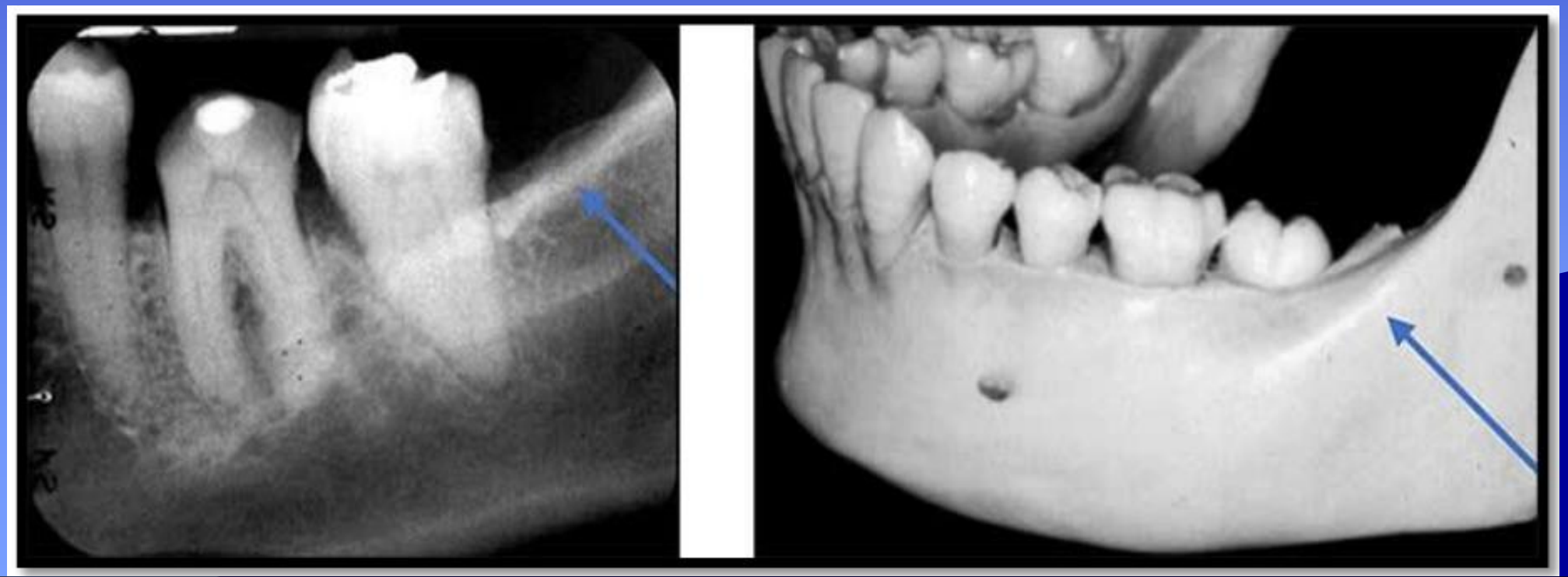
Maxillary left molar periapical

Mylohyoid Ridge Description. The mylohyoid ridge (also known as the internal oblique ridge) is a linear prominence of bone located on the internal surface of the mandible The mylohyoid ridge extends from the third molar region do and forward to the second premolar area. The mylohyoid ridge serves as an attachment site for a muscle of the same name.

Appearance. On a mandibular periapical image, the mylohyoid ridge appears as a dense radiopaque band that extends downward and forward from the third molar region at the level of the apices of the posterior teeth.

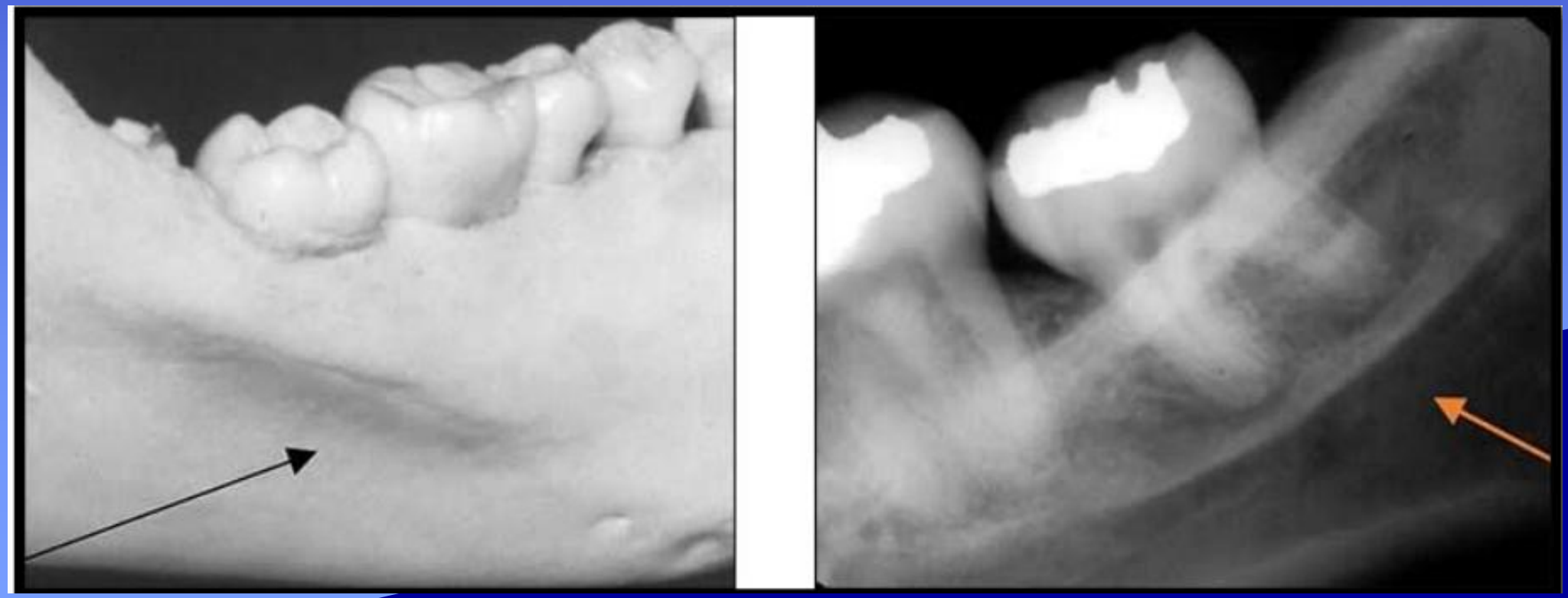
External Oblique Ridge Description. The external oblique ridge (also known as the external oblique line) is a linear prominence of bone located on the external surface of the body of the mandible. The anterior border of the ramus ends in the external oblique ridge

Appearance. On a mandibular molar periapical image, the external oblique ridge appears as a radiopaque band extending downward and forward from the anterior border of the ramus of the mandible.

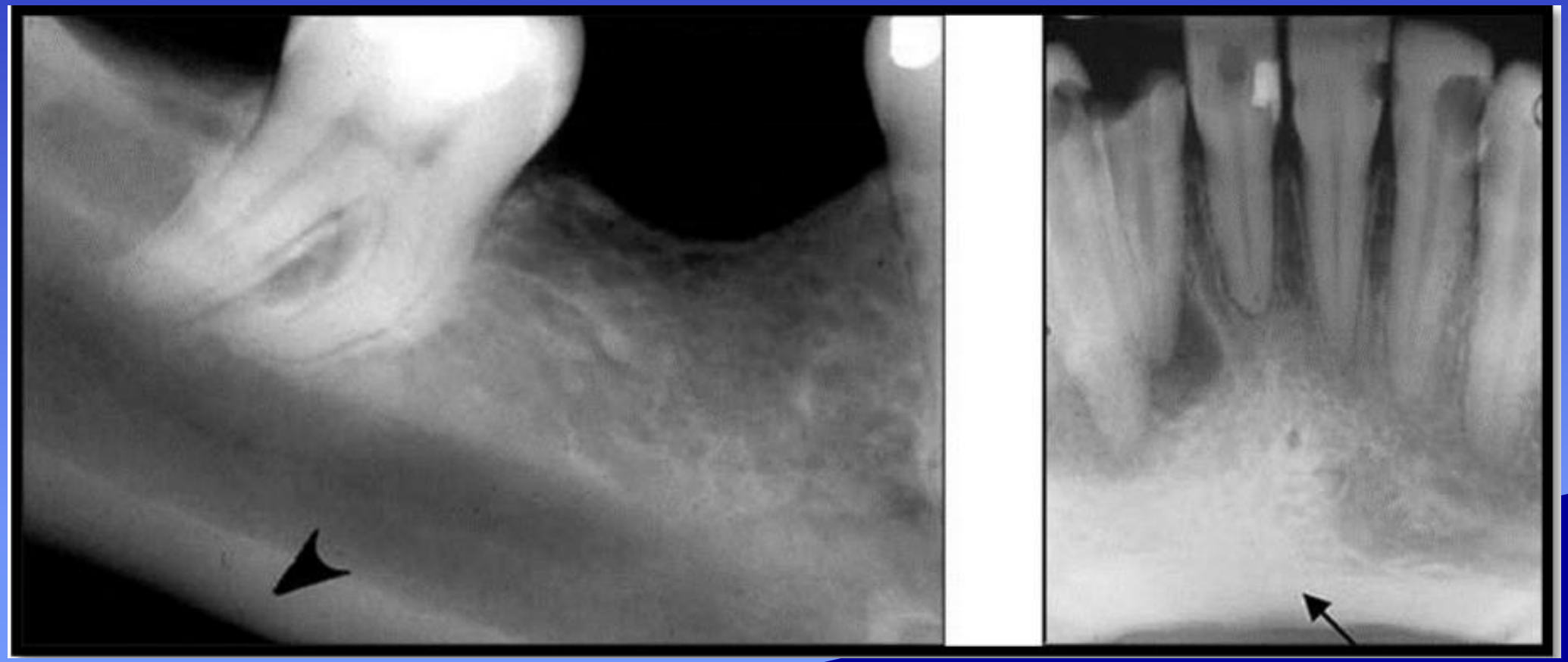


Submandibular Fossa Description. The submandibular fossa (also known as the mandibular fossa or submaxillary fossa) is a scooped-out, depressed area of bone located on the internal surface of the mandible inferior to the mylohyoid ridge. The submandibular salivary gland is found in the submandibular fossa.

Appearance. On a mandibular periapical image, the submandibular fossa appears as a radiolucent area in the molar region below the mylohyoid ridge.



Inferior border of mandible is the lower most part of the mandible. Appears as dense broad radiopaque band of bone.



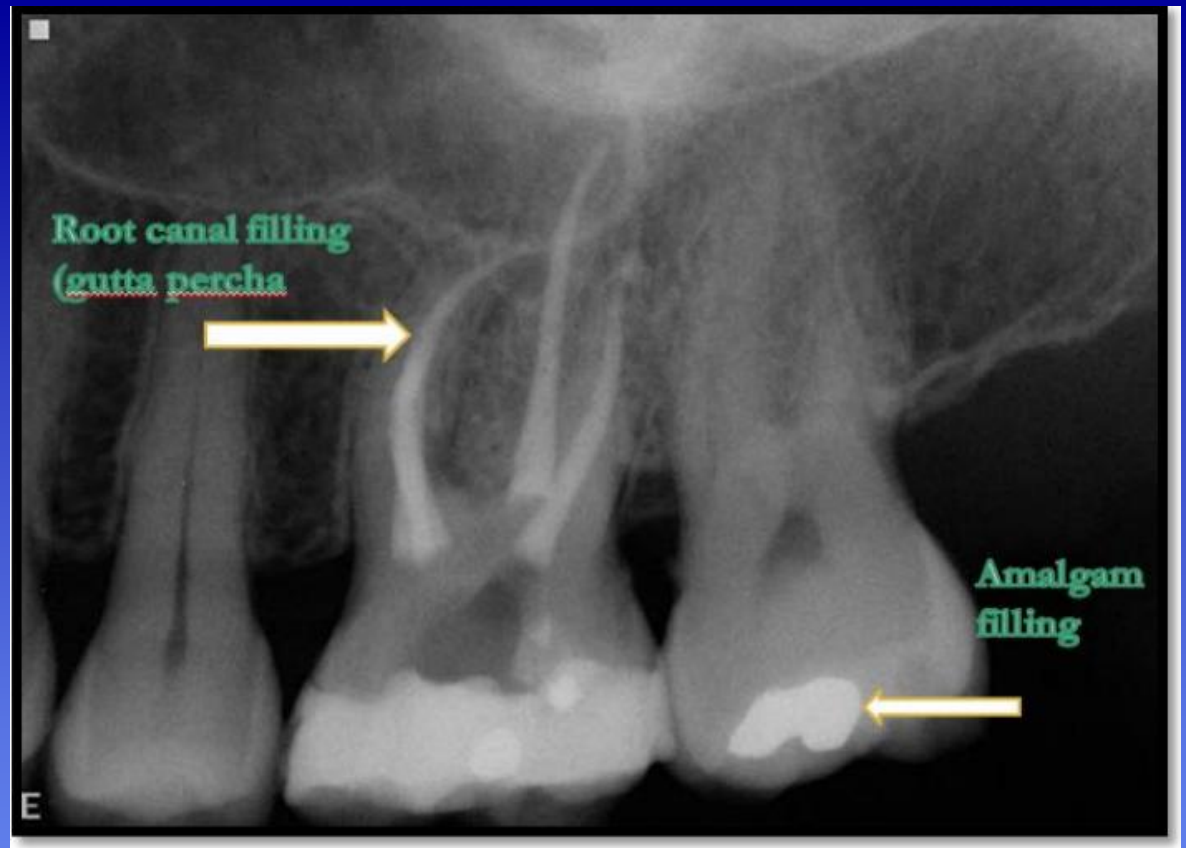
Radiographic appearance of restorative materials:

Radiopaque restorative materials:

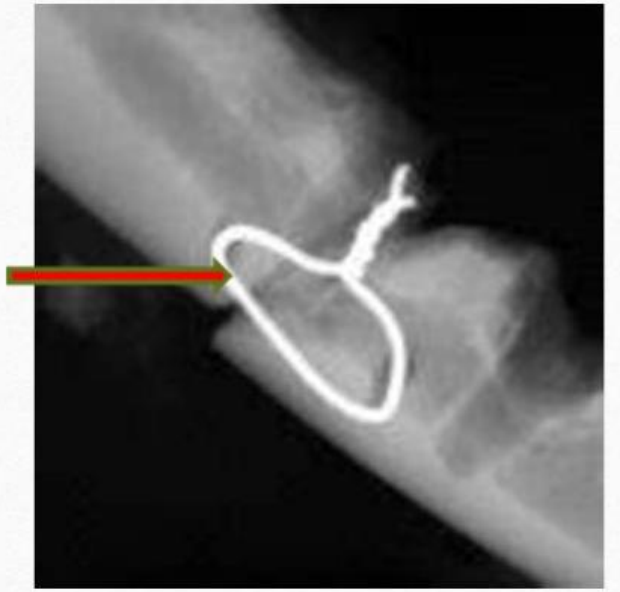
Gold , Silver amalgam , Zinc oxide – eugenol , Zinc phosphate cement , Gutta – percha , Silver points , Metal bands & crowns , Metal wires & dental implants

Radiolucent restorative materials:

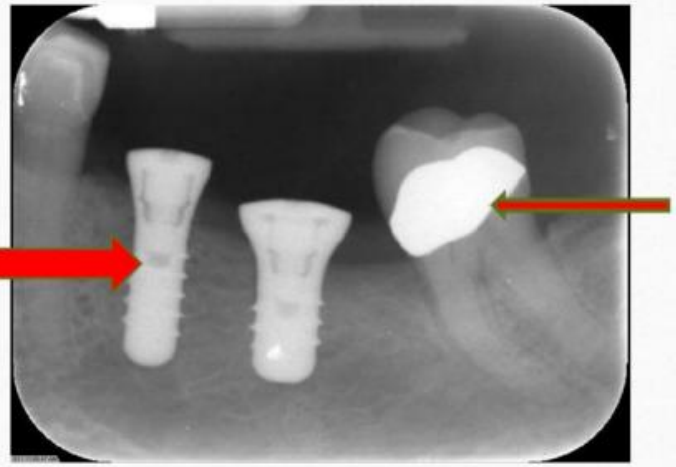
Acrylic, Silicates, Calcium hydroxide pastes, & Porcelain.



Fixing wire

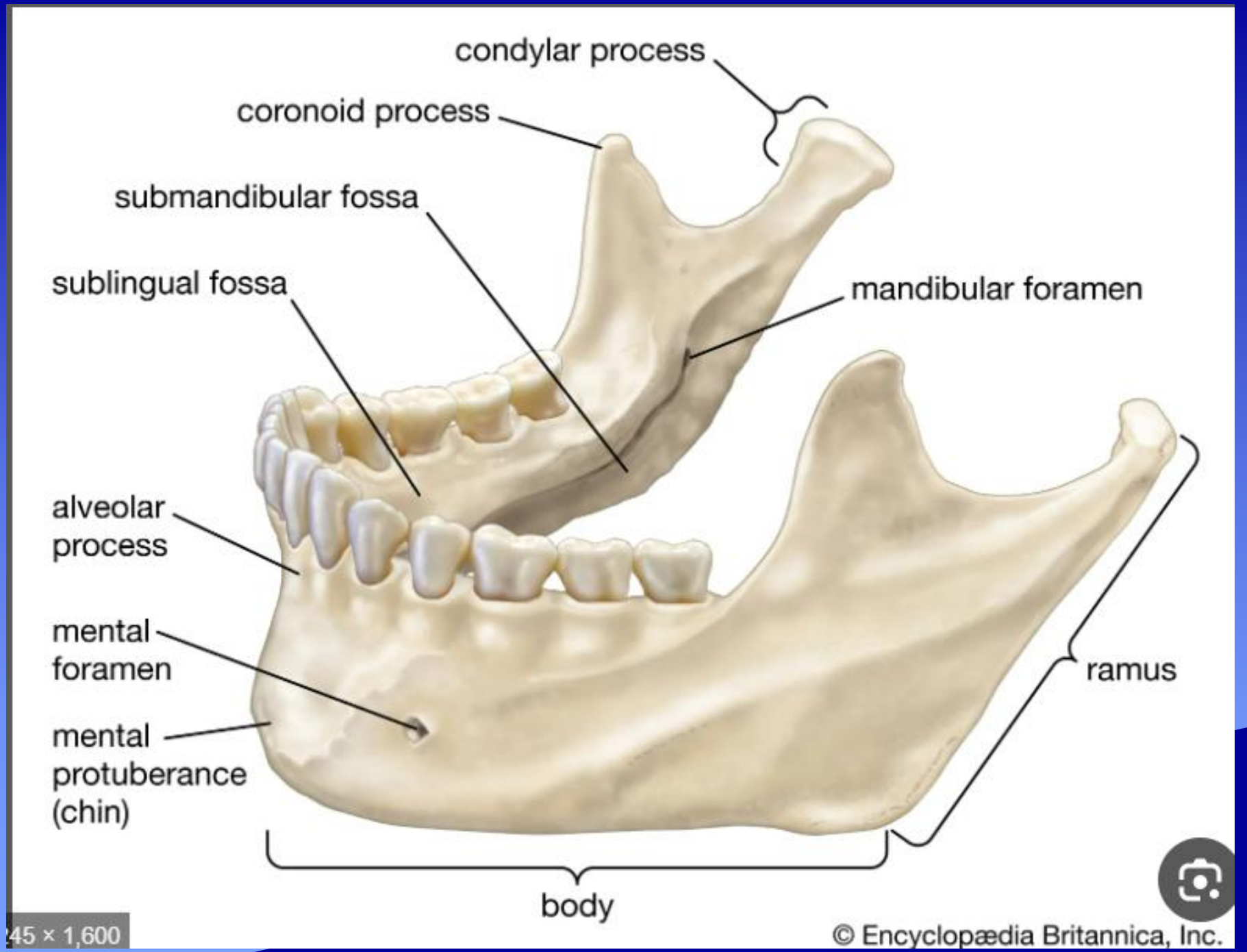


Orthodontic appliance



Dental implant

Amalgum filling


condylar process
coronoid process
submandibular fossa
sublingual fossa
mandibular foramen
alveolar process
mental foramen
mental protuberance (chin)
ramus
body
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Thank you