

# Appendix 10 - Part 2 Sample Questions and Answers

#### Anatomy

Which of the following is not transmitted through the pterygomaxillary fissure?

- Maxillary division of the trigeminal nerve
- Posterior superior alveolar nerve
- Optic nerve
- Terminal branches of the maxillary artery

What is the origin of the canalis sinuosus?

- Middle superior canal
- Infraorbital canal
- Anterior superior alveolar canal
- Posterior superior alveolar canal

What is the "cortical niche" sign?

- Extension of the most cephalad portion of the jugular bulb superior to the floor of the internal auditory canal within the petrous portion of the temporal bone.
- Bilateral increase in height at the midportion of the internal auditory canal within the petrous portion of the temporal bone
- Grooving of the medial cortical plate of the ramus superior to the lingula by the inferior alveolar neurovascular bundle
- Radiographic indentation on the internal margin of the lingual cortex of the mandible by the inferior alveolar neurovascular bundle

## Pathophysiology

Which of the following conditions never presents as a multilocular lesion?

- Aneurysmal bone cyst.
- Ameloblastoma.
- Dentigerous cyst.
- Odontogenic keratocyst

The pericoronal space of an unerupted tooth should be considered suspicious of pathology if it is greater than \_\_\_\_\_ mm on a panoramic image?

- 2mm.
- 3mm
- 4mm
- 5mm

Multiple dentigerous cysts are associated with which of the following?

- Pierre Robin Sequence
- Nevoid Basal Cell Carcinoma Syndrome
- Cherubism
- Maroteaux--Lamy syndrome

Craniofacial dysjunction is seen in which of the following?

- Guerrin's fracture
- High LeFort I
- Le Fort III fracture
- Pyramidal fracture

A "J shaped radiolucent/low density lesion" involving the periapical and unilateral PDL space is suggestive of which of the following?

- Vertical root fracture
- Osteosarcoma
- Trauma from occlusion
- Class III furcation periodontal bone loss



## WRITTEN CASE INTERPRETATION REPORT

#### HISTORY

A 29-year-old woman complains of right condylar tenderness with joint noise and fullness on the left jaw. On examination she presents with facial asymmetry and chin deviation to the right. The proposed treatment is orthognathic surgery with fixed orthodontic appliance therapy. The medical history is non-contributory.

**Images** (NOTE: The following images are provided as illustrations only – the candidate is not to capture screenshots for submission with their report)















#### REPORT

#### Image Identification

**Type of data provided and FOV:** A full (12 cm diameter x 13.3 cm vertical height) field of view (FOV) cone beam CT volumetric dataset. Antero-posteriorly the FOV extends from approximately 1cm anterior to the incisal edges of the crowns of the maxillary teeth to just posterior of the glenoid fossa, but not including the external auditory meatus. Supero-inferiorly the FOV extends from the lower border of C4 to approximately 1cm superior to the glabella.

Factors affecting image interpretation: The FOV only partially includes the left TMJ articulation.

**Pertinent clinical information:** Right condylar tenderness with joint noise, facial asymmetry, chin deviation to the right and fullness on the left.

## Findings

## General findings

*Dental:* Completely dentate with all permanent teeth present and erupted, including the third molars. Minor restorations (mostly composite) are present - no teeth demonstrate root canal fillings, periapical pathology or radiographic marginal alveolar (crestal) bone loss. The premolar and molar crown cusps are flattened.

*Gnathic:* Brachycephalic facial type with Class III skeletal and dental malocclusion with maxillary hypoplasia producing antero-posterior and transverse deficiency (posterior crossbite), anterior open bite, bimaxillary protrusion with minor mandibular asymmetry resulting from right mandibular body hypertrophy (2mm discrepancy), right condylar neck shortening (approx. 7mm ramal height discrepancy) and an expansile, moderately sized, mixed density lesion in the mandibular left symphyseal region.

*Extra-Gnathic:* The paranasal sinuses, nose, soft tissues of the neck, cervical spine, airway, and cranial vault are normal.



## Specific findings

Normal left mandibular condyle (as far as can be determined); Loss of bone volume of the right condyle, flattening, antero-superior osteophyte formation and substantial reduction in condylar neck length; the right inter-articular space is reduced laterally. The right glenoid fossa height is reduced.

## Non-routine findings

There is a single, large, ovoid (2cm [length] x 1.5cm [height] x 1cm [width]) mixed density lesion occupying the left mandibular alveolus and a portion of the intramedullary basal bone in the parasymphyseal region. The lesion has a central irregular globular high-density component with a low density, peripheral rim of variable width involving the apices of #21-25 and extending inferiorly approx. 10mm. There is no root resorption. There is expansion and thinning of the labial cortical plate with minor buccal discontinuity adjacent to # 21/22.

#### IMPRESSION

## Entity specific:

- 1. Class III skeletal and dental malocclusion with maxillary hypoplasia, anterior open bite, and bimaxillary protrusion.
- 2. Relative hypoplasia of the right mandibular body and ramus with reduced ramal height due to shortened condylar neck resulting in mandibular asymmetry.
- 3. Right mild to moderate TMJ DJD / the condition of the left TMJ is unable to be determined.

**Recommendation/Comment:** Perform a limited FOV of both TMJ articulations ensuring maximum intercuspal position to include the left TMJ for comparison. If orthognathic surgery is contemplated, then SPECT CT scan should be considered to determine "hot spot" activity in the TMJ.

## Non-routine:

1. Focal osteoblastic (Stage II) cemento-osseous dysplasia with labial expansion of the alveolus and dentition in the left anterior parasymphyseal mandible. Surgical bulk reduction is not recommended as there is an increased incidence of post-operative osteomyelitis with surgical intervention.

