Reading Hospital School of Health Sciences
Medical Imaging Program
MI 263 Clinical Seminar V
2021-2022

Mandible

Routine:	**AP Axial Towne, PA, and Bilateral Axiolateral Obliques**
Position/Projection:	**Erect or Recumbent (AP Axial Towne)**
Patient Prep:	Remove anything removable from their mouth or head.
Technique:	**85 kVp ○●○: non AEC 10 mAs (Bucky)**
SID:	40" SID
Collimation:	10 X 8 Landscape (Crosswise)
Patient Position:	Place patient in an AP projection. Rest the patient's posterior skull against the vertical bucky/ table. Align the midsagittal plane perpendicular to the IR. Tuck the chin so the OML if perpendicular to the IR.
Central Ray:	Tube is angled 30° caudad entering about 1" above the nasion at the glabella (slightly above eyebrow level). If the patient is unable to bring OML perpendicular, align the IOML perpendicular and increase the tube angle 7 degrees.
Marker Placement:	Right or left marker on appropriate anatomical side.
Shielding:	Gonadal shielding required.
Breathing Instructions:	Suspended respiration.
Purpose/ Structures:	Demonstrates condyloid processes of mandible and temporomandibular fossae

Evaluation Criteria:

- Evidence of proper collimation & presence of side marker placed clear of anatomy of interest
- Head should not be rotated.
- There should be only minimal superimposition by the petrosa on the condyles.

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Routine:	**AP Axial Towne, PA, and Bilateral Axiolateral Obliques**
Position/Projection:	**Erect or Recumbent (PA)**
Patient Prep:	Remove anything removable from their mouth or head.
Technique:	**85 kVp ○●○: non AEC 6.3 mAs (Bucky)**
SID:	40" SID
Collimation:	8 X 10 Landscape (Crosswise)
Patient Position:	Place the patient in a PA projection. Patient positioned so the midsagittal plane is perpendicular to the IR. Place the patient so the OML is perpendicular to IR.
Central Ray:	Tube is perpendicular and central ray exits the acanthion.
Marker Placement:	Right or left marker on appropriate anatomical side.
Shielding:	Gonadal shielding required.
Breathing Instructions:	Suspended respiration.
Purpose/ Structures:	Demonstrates mandibular body and rami. Central part of body will superimpose on C-spine.

Evaluation Criteria:

- Evidence of proper collimation & presence of side marker placed clear of anatomy of interest
- Entire mandible
- No rotation or tilt, demonstrated by:
    - Mandibular body and rami should be symmetric on each side.
    - MSP of head aligned with long axis of collimated field.
- Soft tissue and bony trabecular detail.

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Routine:	**AP Axial Towne, PA, and Bilateral Axiolateral Obliques**
Position/Projection:	**Erect or Recumbent (Right & Left Axiolateral Obliques)**
Patient Prep:	Remove anything removable from their mouth or head.
Technique:	**85 kVp ○●○: non AEC 6.3 mAs (Bucky)**
SID:	40" SID
Collimation:	10 X 8 Landscape (Crosswise)
Patient Position:	Side to be examined should be against the board. At RH we do a lateral to include the condyles, ramus and body. If erect, it is important to have the patient upright in the chair. Keep the IR board upright. Patient seated in the chair so the midsagittal plane is parallel to the vertical bucky. Have the patient close their mouth and bring teeth together. Place the patient's head so the parietal portion is against the vertical bucky. Turn the patient's head away from the vertical bucky about 20°. Extend the patient's chin to prevent superimposition of the c-spine on the mandible. Shoulder should not superimpose the mandibular body. NOTE: The patient may be obliqued LAO and RAO if it will help keep the shoulder from superimposing the mandible. The patient may also stay in a true lateral and posteriorly rotate the shoulder closest to the tube to keep it from superimposing the mandible.
Central Ray:	Tube is angled 15-25° cephalad directed between the mandibular angles.
Marker Placement:	Right or left marker on appropriate anatomical side.
Shielding:	Gonadal shielding required.
Breathing Instructions:	Suspended respiration.
Purpose/ Structures:	Demonstrates rami, condylar and coronoid processes, body, and mentum of mandible nearest the IR.

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Evaluation Criteria:
Body and ramus:

- Evidence of proper collimation & presence of side marker placed clear of anatomy of interest
- Soft tissue and bony trabecular detail
- No overlap of the ramus by the opposite side of the mandible
- No elongation or foreshortening of ramus or body.
- No superimposition of ramus by the cervical spine.

NOTE:
1. Merrill's states the CR should be directed at a tube angle of 25 degrees cephalad (RH does 15-25 degrees)
2. Merrill's states that rotation of the patient's head should be to place a particular area of interest parallel to IR as follows:

Ramus – keep the head in a true lateral position.
Body – rotate the patient's head 30 degrees toward the IR.
Mandibular symphysis – rotate the patient's head 45 degrees toward the IR.
"Central ray is directed through mandibular area of interest"

3. At RH, we rotate the head 20 degrees away from IR for all areas of interest, and center midway between mandibular angles. We don't do one specific area. We get a general survey of the entire mandible.