Simplified Positioning
for Dental Radiology

Presented by:
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**Dental Radiology “CHEAT SHEET”**

<table>
<thead>
<tr>
<th>Area Imaged</th>
<th>General Technique and Tips</th>
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<tbody>
<tr>
<td>Lower PM and M</td>
<td>Place film in vestibule between the tongue and teeth. The beam is angled perpendicular to film. This is the only “parallel technique”</td>
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<td>Lower incisors</td>
<td>Start by aiming beam on ventral midline perpendicular to the film. Then tip the tube head forward 20 degrees so the beam is angled 20 degrees caudally. If desired, using larger film will allow visualization of the lower canines on the same film.</td>
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<tr>
<td>Canines/Canines</td>
<td>Start by aiming beam on ventral midline, perpendicular to the film. Then tip the tube head forward so the beam is angled 20 degrees caudally.</td>
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<td>Upper incisors</td>
<td>Start by aiming beam dorsally over the top of the canine, similar to the upper incisor view. Then tip the tube head 20 degrees forward and 20 degrees to the side. The film should slightly overlap the root of the premolars. The film should slightly overlap the root of the premolars. The film should slightly overlap the root of the premolars. The film should slightly overlap the root of the premolars.</td>
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<td>Upper canines</td>
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<tr>
<td>Upper PM and M</td>
<td>Place the film mostly over the palate. Start dorsally over the top of the target teeth. Tip the tube head 45 degrees to the side of the face. cats require a modified technique to avoid superimposition of the Zygomatic Arch. The film is placed diagonally across the mouth from the inside of the maxillary teeth on the side opposite that to be imaged, to the inside of the mandibular teeth on the side to be imaged. Position the patient so that the target teeth are on top and the teeth line up parallel to the table top. Start the beam lateral to the maxillary premolars, and tip the tube head 20 degrees over the top of the nose. Tipping too little cuts off part of the target teeth from the edge of the film. Tipping too far accentuates the Zygomatic Arch.</td>
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**“Three Simple Rules”**

All positioning errors involve the three parameters of tube angulation, tube position and film position. Three simple rules serve to identify and correct any errors.

1. If the image is foreshortened or elongated, adjust the tube angle. To make the roots longer, move the tube head more laterally. If you cut the target off at the edge of the beam (cone cut), simply move the beam over toward the area of cone cut.  If you cut the target off at the edge of the film, move the film over toward the area you cut off.
2. If you cut the target off at the edge of the beam (cone cut), simply move the beam over toward the area of cone cut.  If you cut the target off at the edge of the film, move the film over toward the area you cut off.
3. If you cut the target off at the edge of the film, move the film over toward the area you cut off.
Positioning for maxillary canines

1. Side view of initial film and tube positions. Note that the beam is centered directly over the target tooth and is also perpendicular to the film.

2. Front view after the tube head is tipped forward in step #2.

3. The tube head is first tipped 20 degrees forward, similar to the upper incisor view. This tipping makes the image of the canine longer.

4. The tube head is then tipped 20 degrees to the side. This moves the canine tooth away from the premolars, preventing superimposition.

Positioning for maxillary premolars / molars

1. Film placement across the palate. Here the tube is positioned directly over the top of the maxillary premolars.

2. Here the tube is positioned directly to the side of the maxillary premolars.

3. Splitting the difference between position #1 and #2 gives the correct beam angle of 45 degrees.

Positioning for feline maxillary premolars and molars, using the “near parallel technique”

1. Front view of film placement for imaging the right maxillary premolars/molar in feline patients.

2. Side view of correct film placement. The maxillary premolars will be visible near the edge of the film.


4. Patient in lateral recumbency. The arcade to be imaged is away from the table and parallel to the table top. The beam is started sideways to the teeth to be imaged.

5. The tube head is then tipped approximately 20 degrees over the top of the nose.

Positioning for feline maxillary premolars and molars, using an extraoral technique

1. Front view showing the film placement and beam angle for the extraoral technique.

2. Positioning for the extraoral technique, shown from the perspective of the X-ray beam.
SIMPLIFIED POSITIONING FOR DENTAL RADIOLOGY

Beam angulation used to separate overlying structures

- Caudal (posterior) oblique
- Lateral
- Rostral (anterior) oblique

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