The extra-oral technique for maxillary cheek teeth in cats
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Intraoral dental radiographs are an excellent means of imaging the dental/oral structures the vast majority of the time. However, when imaging the maxillary premolars and molar in feline patients utilizing standard intraoral imaging techniques, the zygomatic arch interferes with good visualization of the maxillary third and fourth premolars. In general, the interference created with the standard intraoral bisecting angle has only a mild impact on the interpretation with digital systems. However, there are times that visualizing the roots without interference is very important. This is likely most important when searching for fractured and retained roots, especially if they were left previously. For this reason, practitioners should be familiar with the extraoral technique.

This image is created with the film/sensor/plate outside of the patient’s mouth. It is performed by placing the film/sensor on the table with the side which is towards the tubehead “up”. Next, the cat is placed on top of the sensor with the arcade to be imaged resting on the sensor/plate/film. The cusp tips of the teeth to be imaged should rest at the ventral edge of the sensor/plate film. A loose radiolucent mouth gag should be loosely placed in the mouth and the endotracheal tube positioned ventrally (near the tongue). Then the beam is angled through the mouth to create a bisecting angle which is approximately 30 degrees. (Figure 1)

When performed correctly, this should create an accurate representation of the arcade. However, this technique is not foolproof and often several images are necessary to obtain a good image. This is one big advantage of DR (sensor) systems.

Figure 9: Extra-oral imaging of the right maxillary arcade.
   a) Correct extraoral angulation.
   b) Proper resultant image.
   (Note that this “appears” to be the left side as it was exposed extraorally)

One very important point is that these images are like a mirror image of an intraoral view. Therefore, it is imperative that the practitioner somehow mark or flip the images so that the correct side is known. This MUST be done at the time of obtaining the image.