Panorama Positioning and Troubleshooting Guide

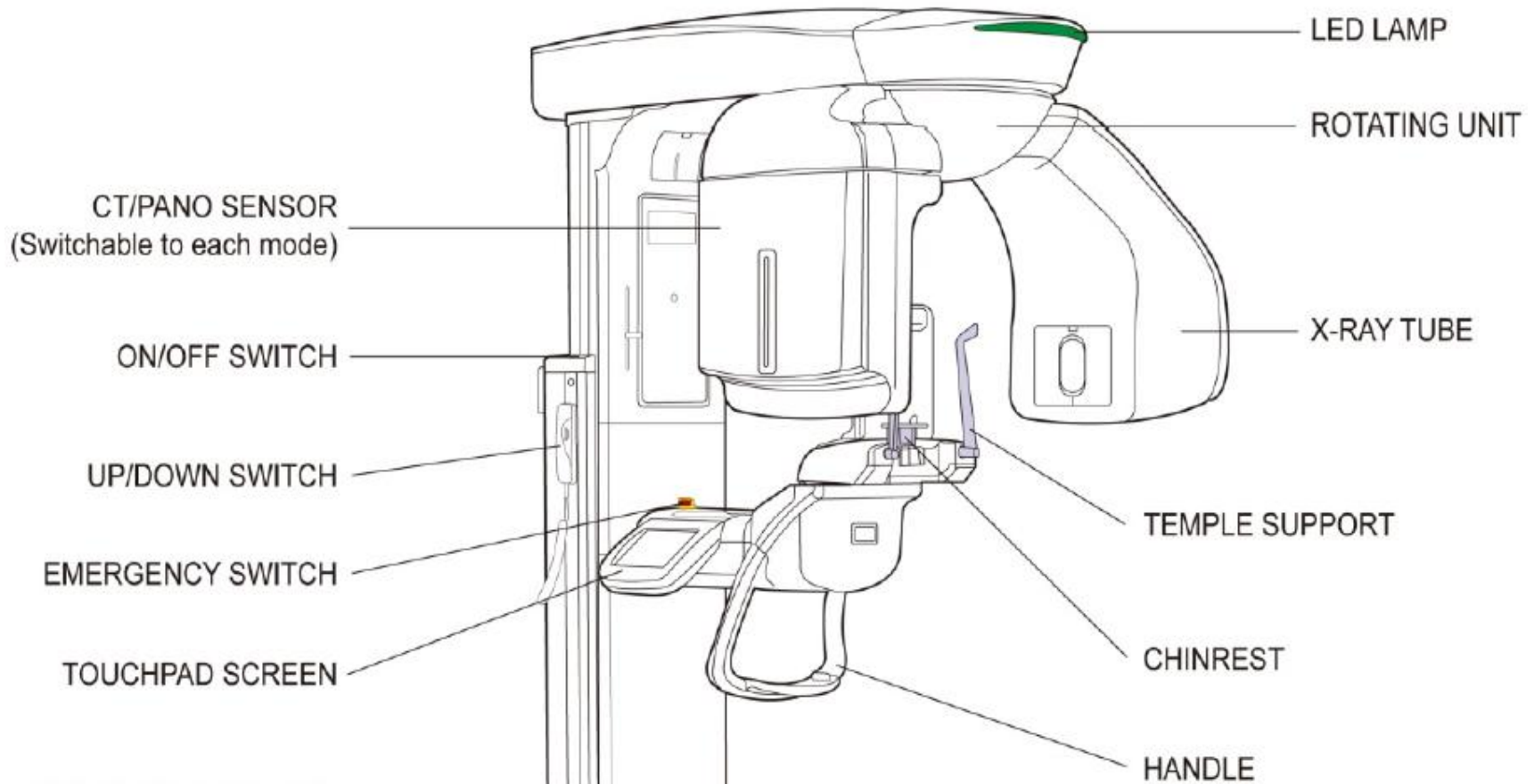**Date : January 2013**

The Education Team

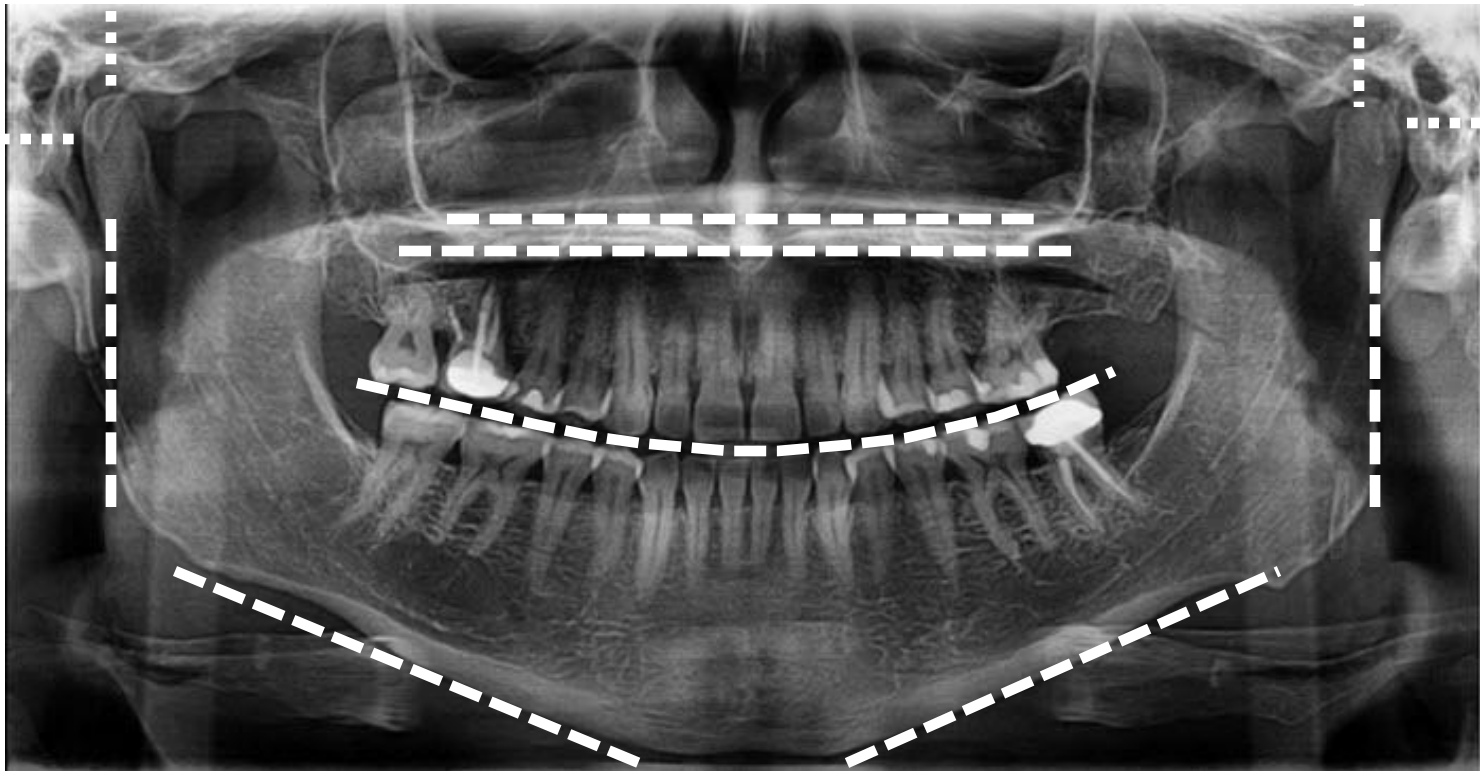**VATECH America, Inc.**

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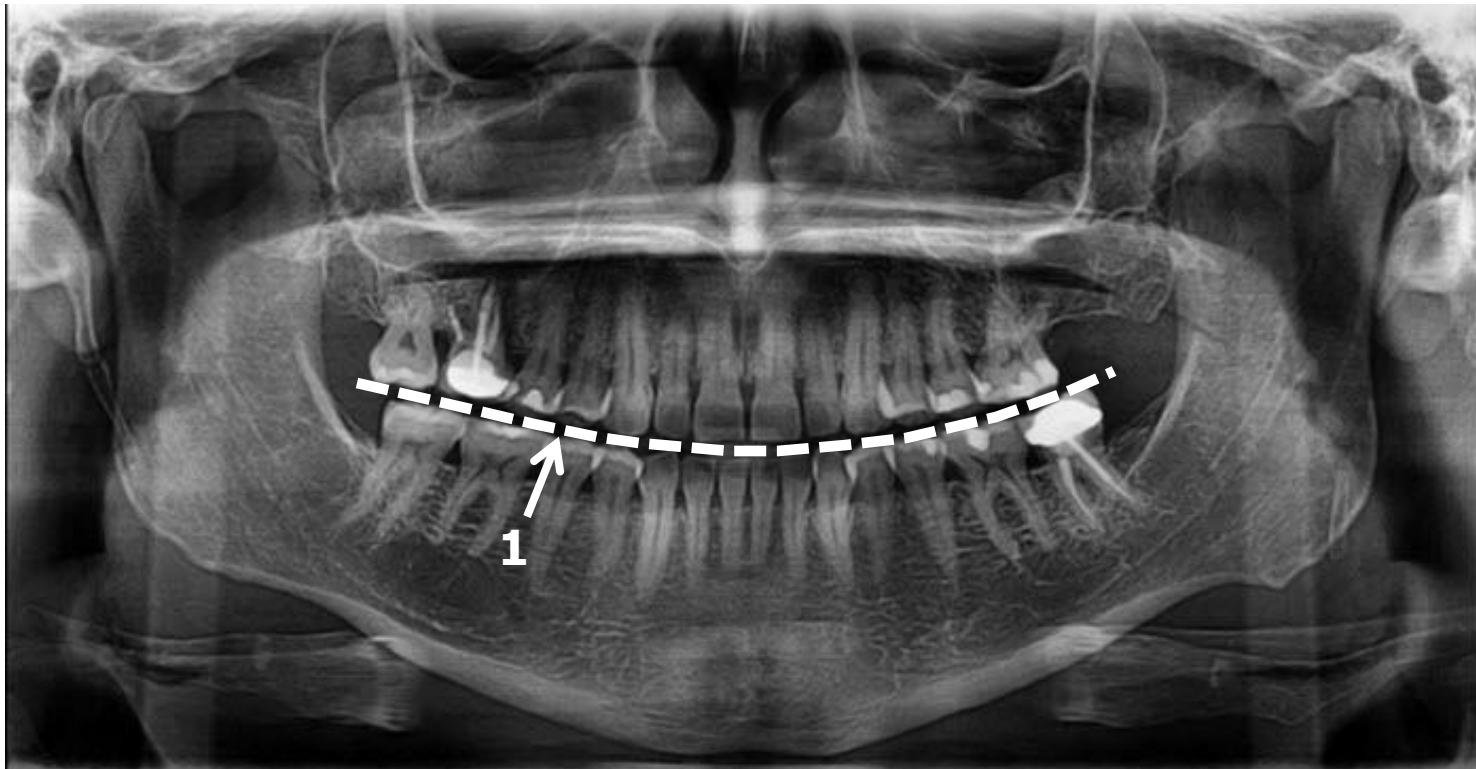4. Panorama Troubleshooting Guide

1. Components of a Panorama (Pan) Device

LED LAMP

ROTATING UNIT

CT/PANO SENSOR
(Switchable to each mode)

X-RAY TUBE

ON/OFF SWITCH

UP/DOWN SWITCH

TEMPLE SUPPORT

EMERGENCY SWITCH

CHINREST

TOUCHPAD SCREEN

HANDLE

2. Seven (7) Key Aspects of a Diagnostically Accurate Pan Image
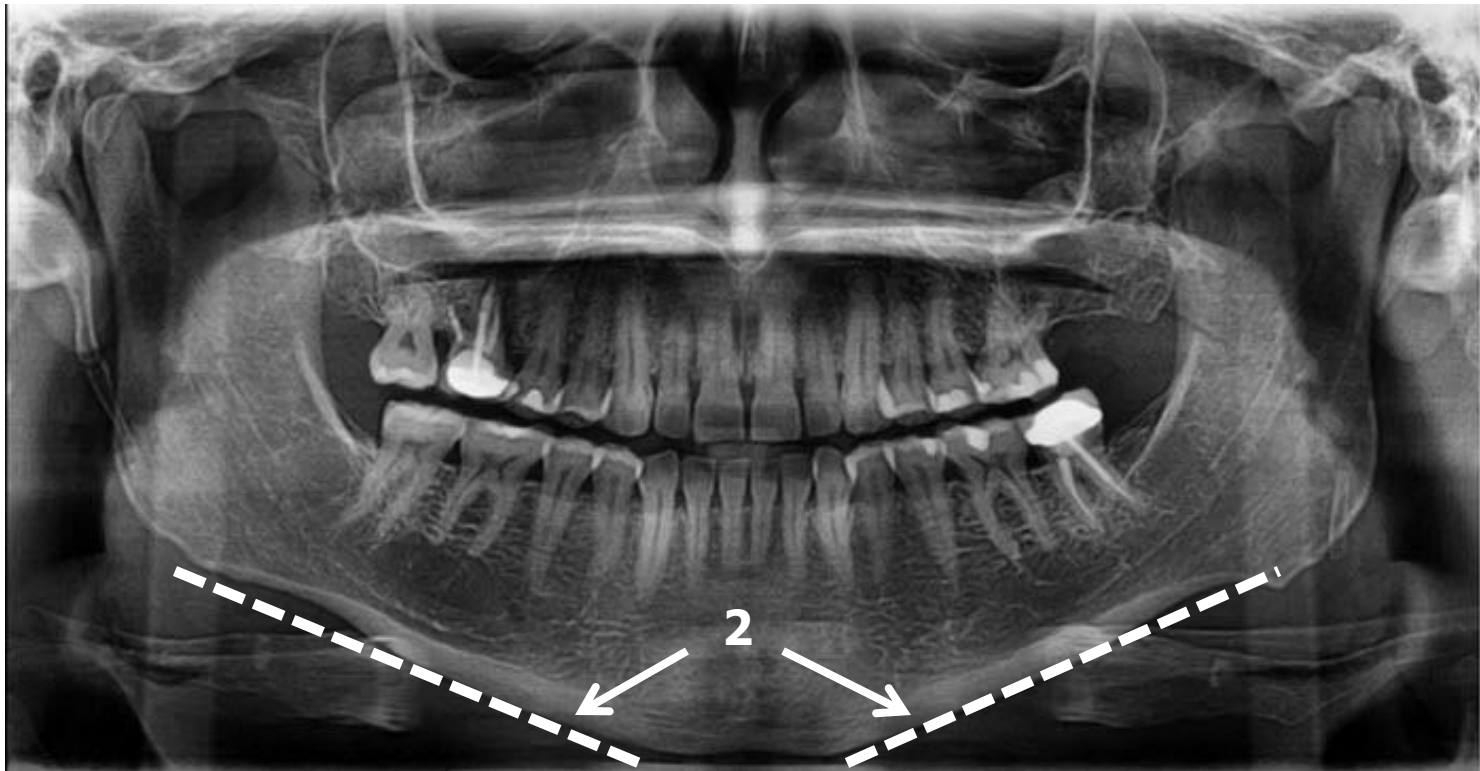
2. Seven (7) Key Aspects of a Diagnostically Accurate Pan Image

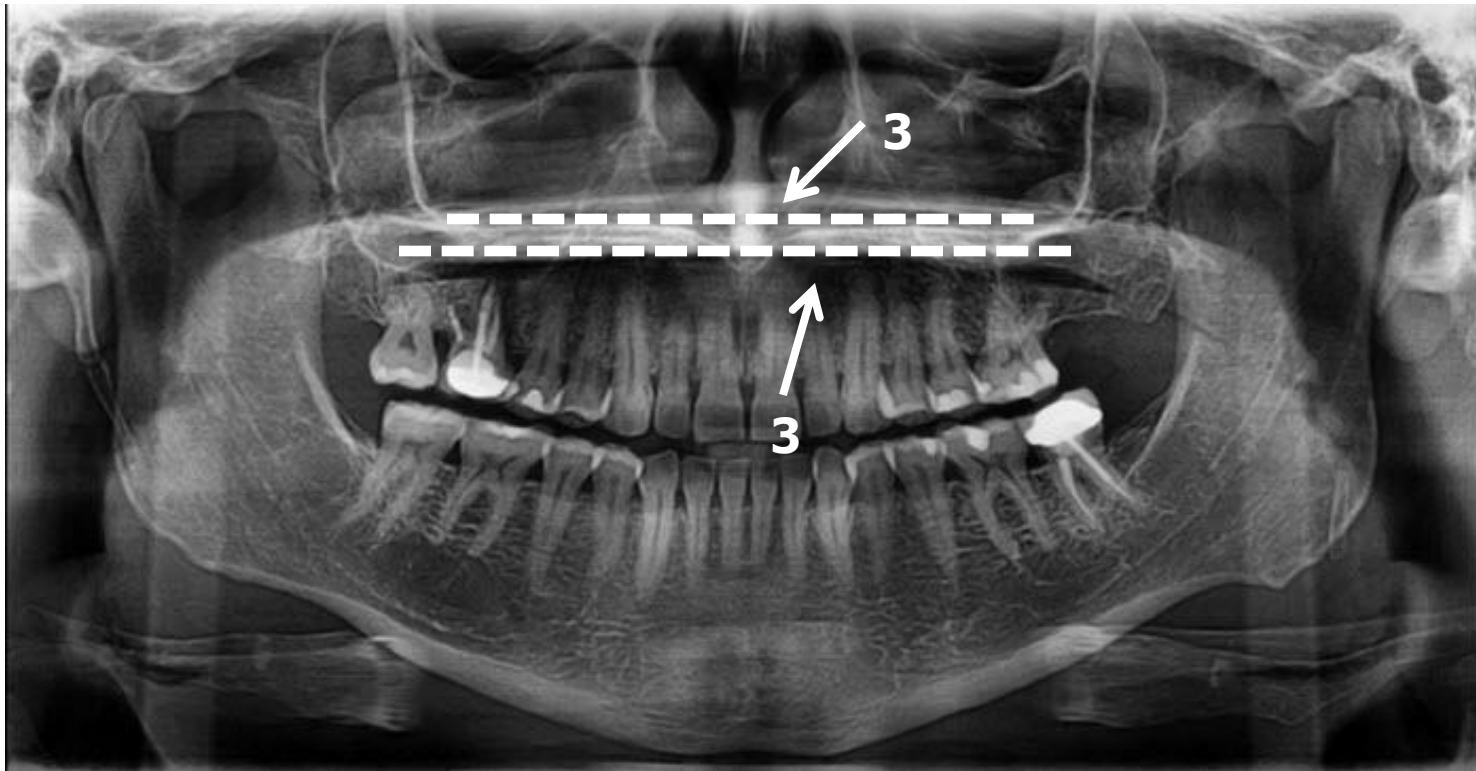1. The Occlusion should have an upward curved 'smile' effect

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2. Seven (7) Key Aspects of a Diagnostically Accurate Pan Image

2. The Mandible should be inclined approximately 15 – 20 degrees

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Panorama Positioning and Troubleshooting Guide

2. Seven (7) Key Aspects of a Diagnostically Accurate Pan Image

3. The Anterior and Posterior of the Maxilla should be separated vertically.

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2. Seven (7) Key Aspects of a Diagnostically Accurate Pan Image

4. The Ramus should be vertical and equal distance from the edge of the image

2. Seven (7) Key Aspects of a Diagnostically Accurate Pan Image
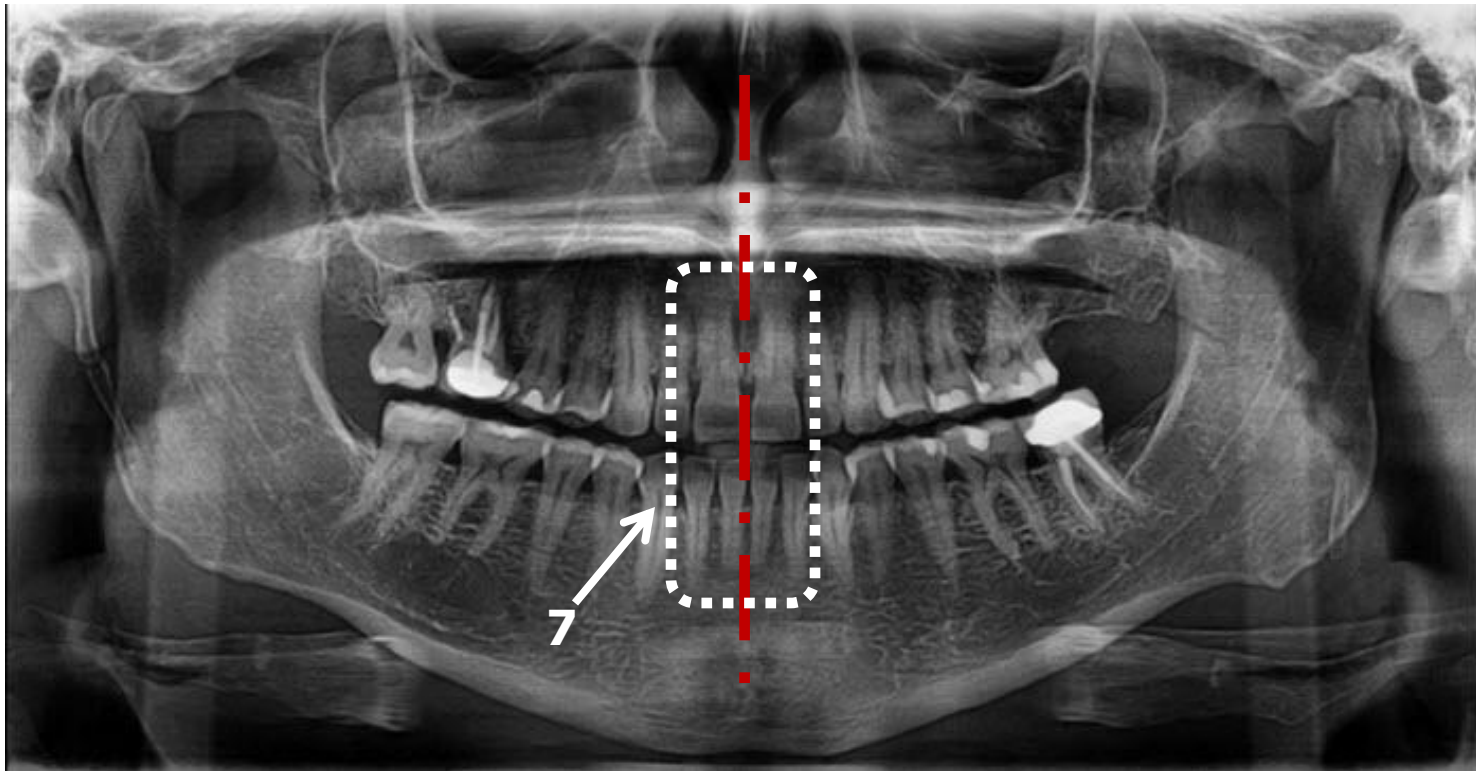

5. The Condyle should be equal distance from the sides of the image

2. Seven (7) Key Aspects of a Diagnostically Accurate Pan Image

6. The top of the Condyle head should be level and equal distance from the top of the image

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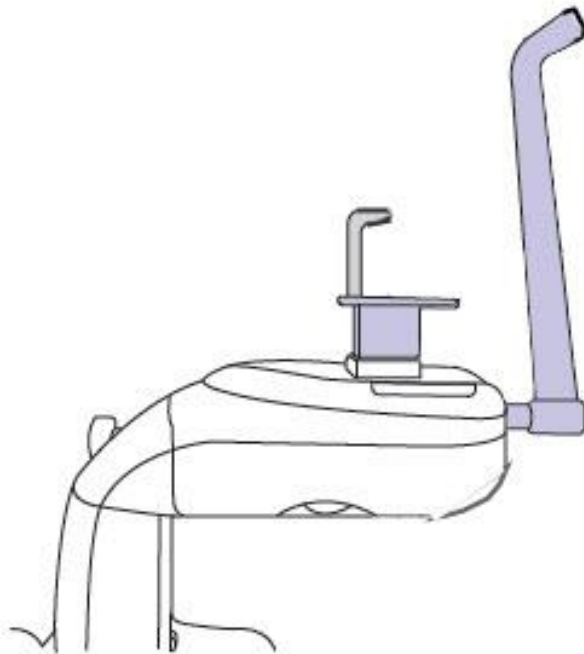## 2. Seven (7) Key Aspects of a Diagnostically Accurate Pan Image

7. The Anterior teeth should be in the center of the image

3. Proper Patient Positioning for a Successful Pan Image

3. Proper Patient Positioning for a Successful Pan Image

Step 1 –

Insert the normal chin support and bite block in the unit's chinrest adaptor.

Place a new hygienic cover over the bite block.
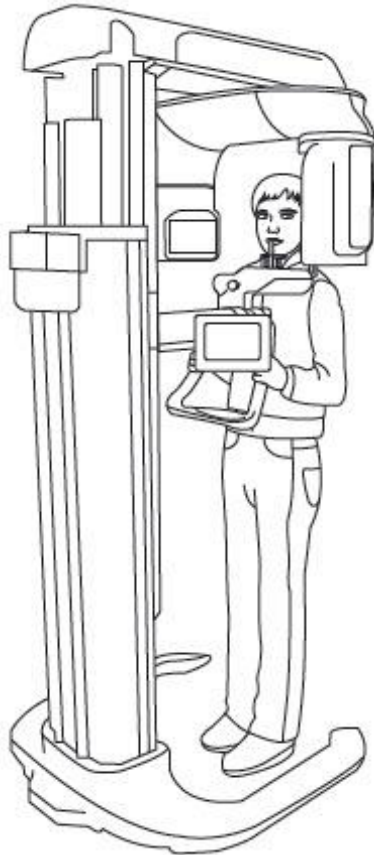
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3. Proper Patient Positioning for a Successful Pan Image

Step 2 –

Have the patient remove all jewelry and metallic objects, such as earrings, hair pins, spectacles, dentures, and orthodontic appliances.

These items can cause shadow images that may obscure diagnosis.

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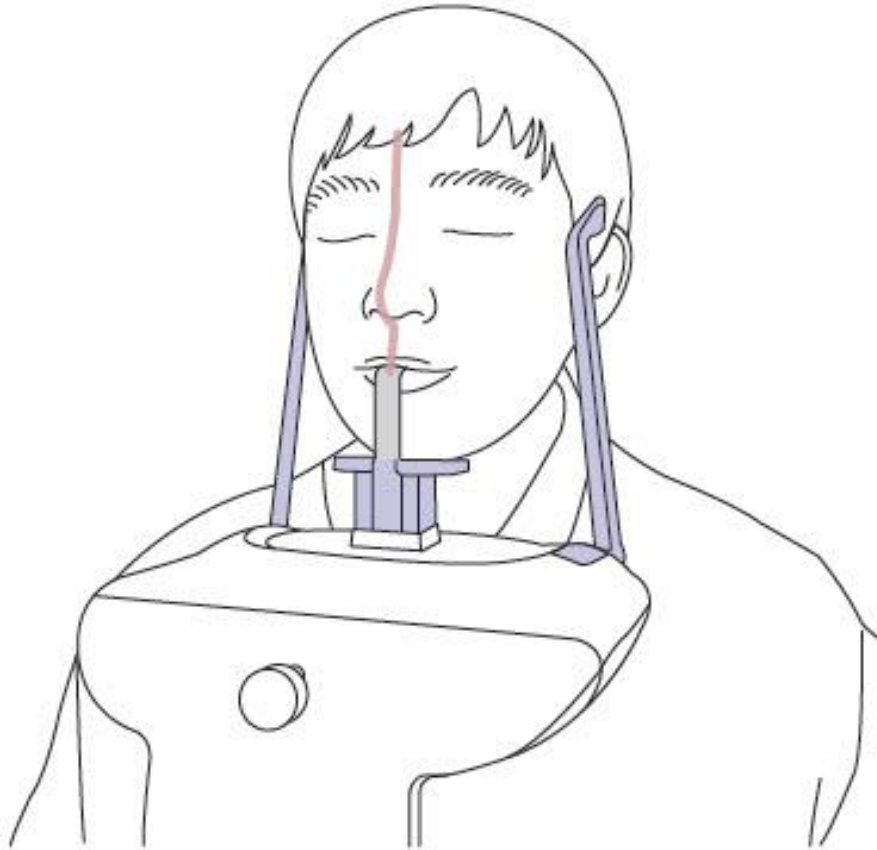## 3. Proper Patient Positioning for a Successful Pan Image

Step 3 –

Have the patient stand upright at the center of the machine with the chin in line with the chinrest.

Ask the patient to firmly grip the handles on both sides of the unit. Ask the patient to position the feet slightly forward.

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3. Proper Patient Positioning for a Successful Pan Image

Step 4 –

Ensure that the patient's shoulders remain level and the neck is relaxed.

To prevent magnifications on the left and right sides of the final image, make sure that the vertical laser beam (mid-sagittal) is in between the eyebrows and center of the upper lip.

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## 3. Proper Patient Positioning for a Successful Pan Image
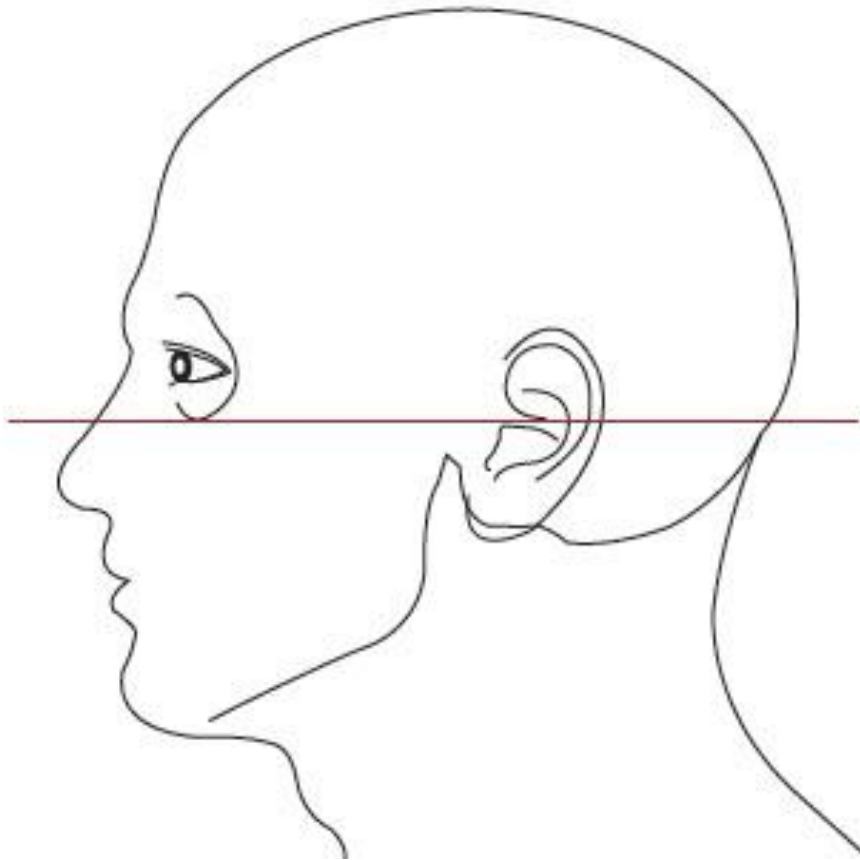
Step 5 –

Position the head of the patient to properly align the Frankfort plane with the horizontal laser beam.

For proper positioning, adjust the chin by elevating or lowering the device until the laser light passes thru the top of the tragus and thru the lower border of the orbit.

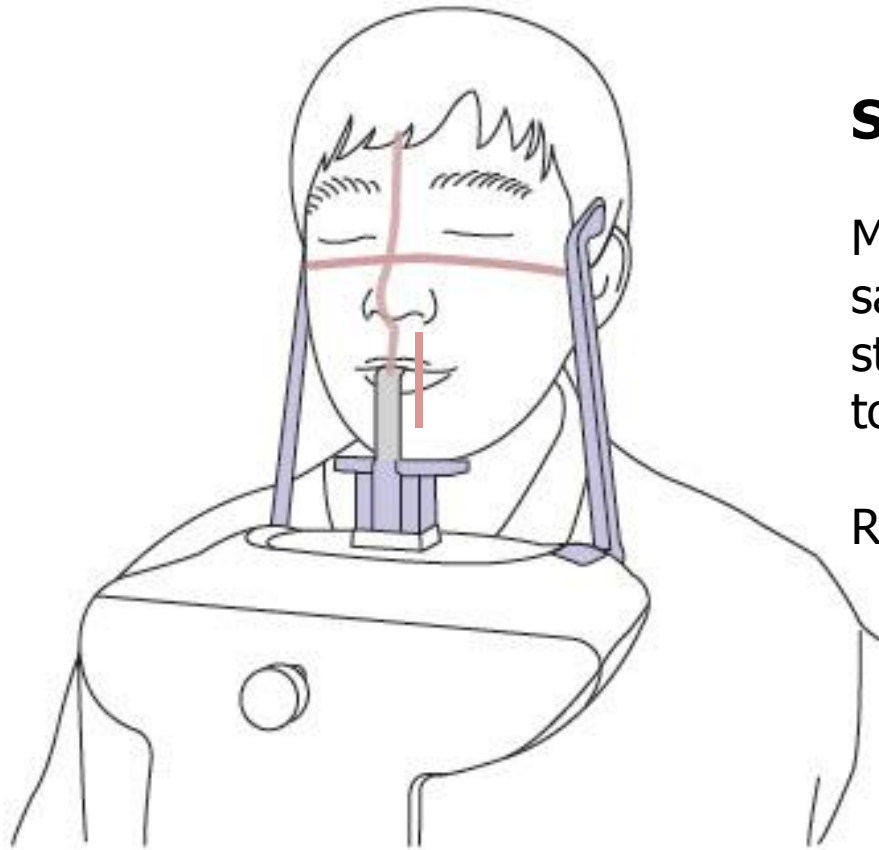## 3. Proper Patient Positioning for a Successful Pan Image
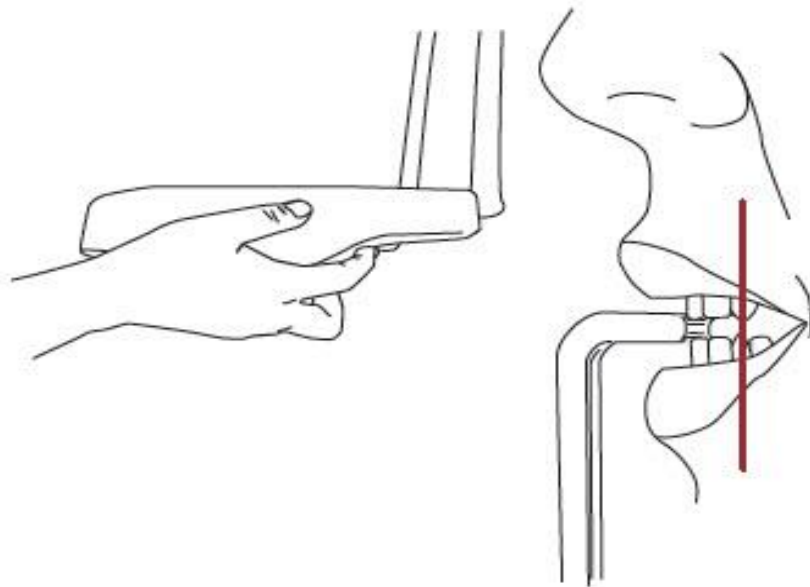
Step 6 –

Have the patient smile to properly position the canine laser beam at the center of the patient's canine tooth.

Rotate the thumb wheel, located under the patient support rest forward and backward to properly align the beam.

3. Proper Patient Positioning for a Successful Pan Image

Step 7 –

Make sure that all 3 light beams (Mid-sagittal, Frankfort, Canine beams) are still positioned correctly corresponding to the imaging mode.

Reposition them if necessary.

3. Proper Patient Positioning for a Successful Pan Image

Step 8 –

Adjust the temple supports to fit firm on both sides of the patient's head using the temple support wheel.

The patient's head also needs to be immobile and stabile. Have the patient close the lips and keep the entire tongue pressed against his or her palate throughout the image acquisition. Lastly, ensure that the patient's eyes are closed throughout the acquisition to increase stability and immobility.

4. Panorama Troubleshooting Guide

Panorama Positioning and Troubleshooting Guide
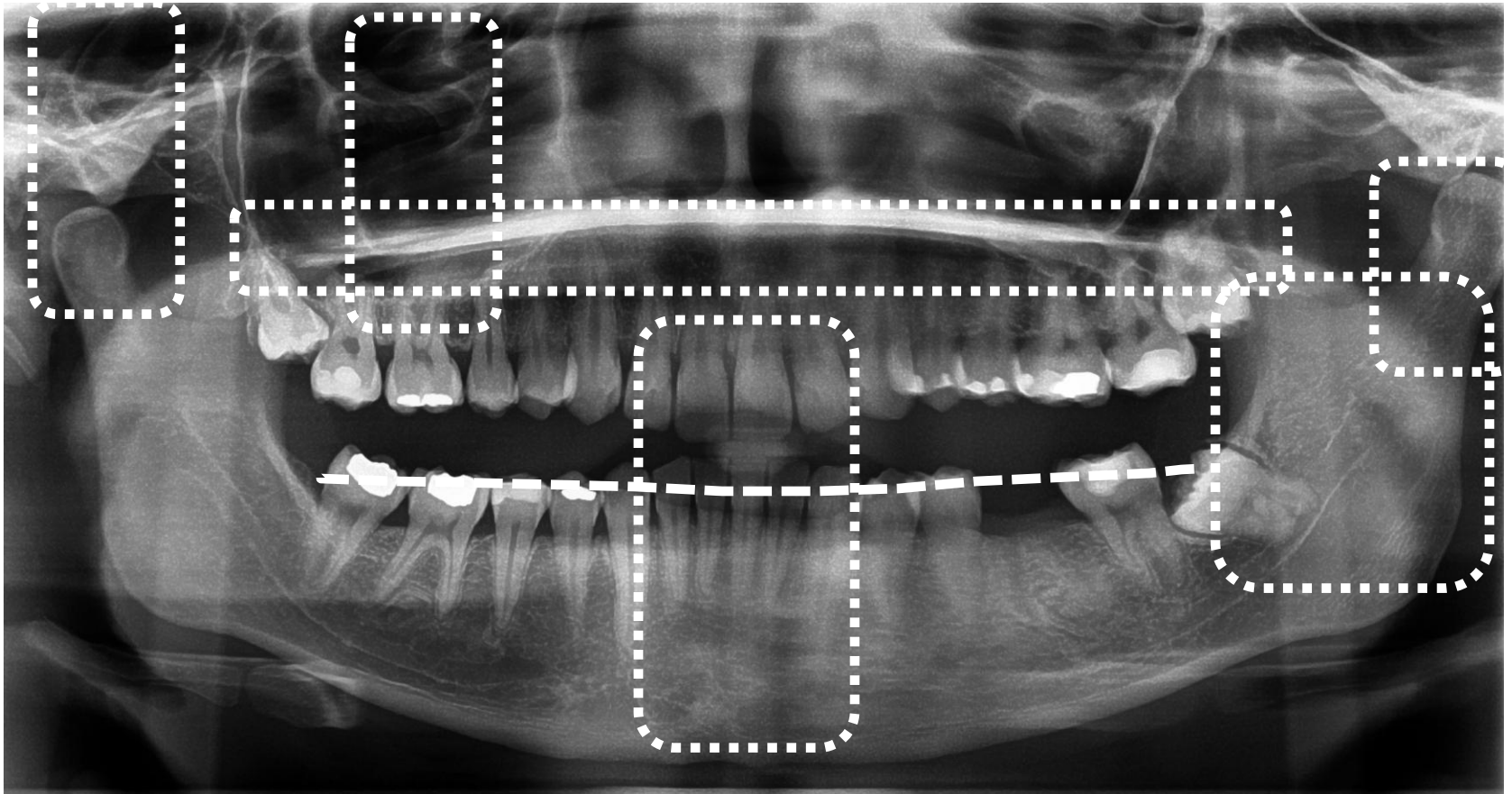
4. Panorama Troubleshooting Guide – Patient is positioned too far forward
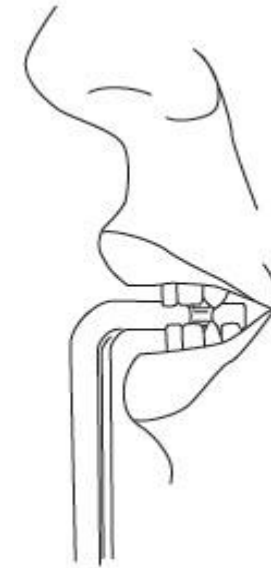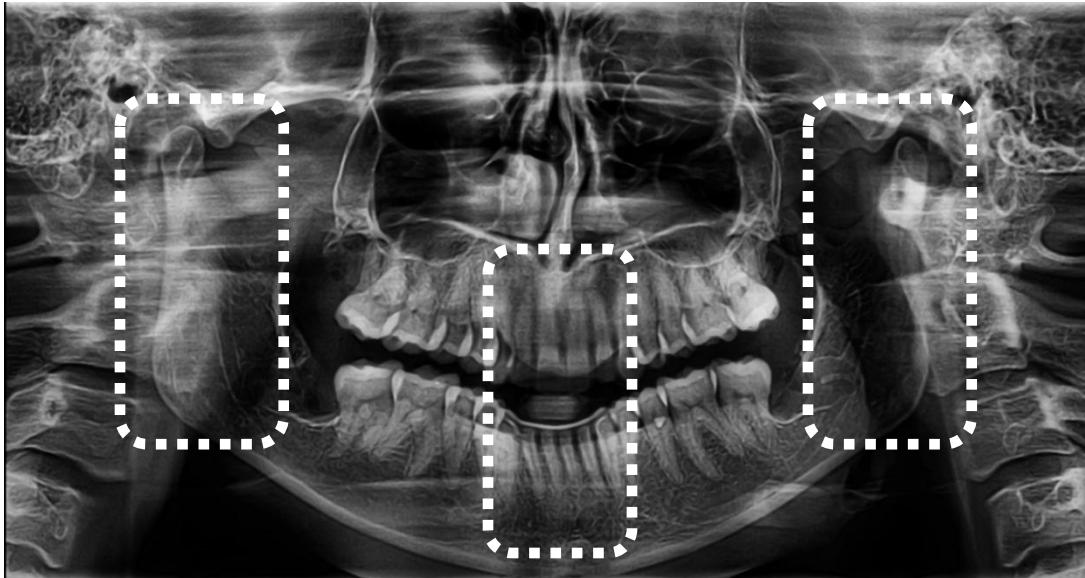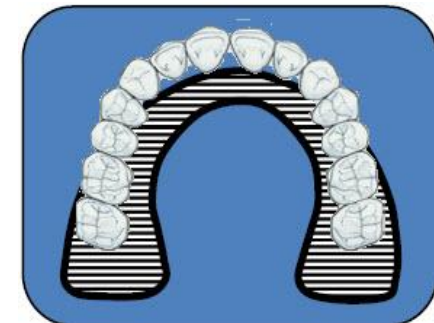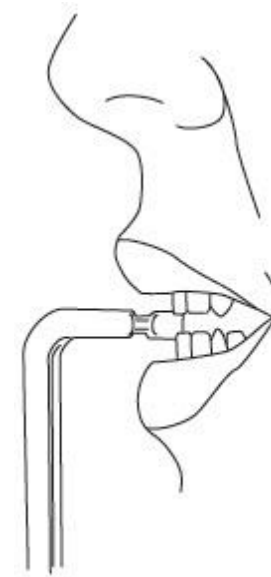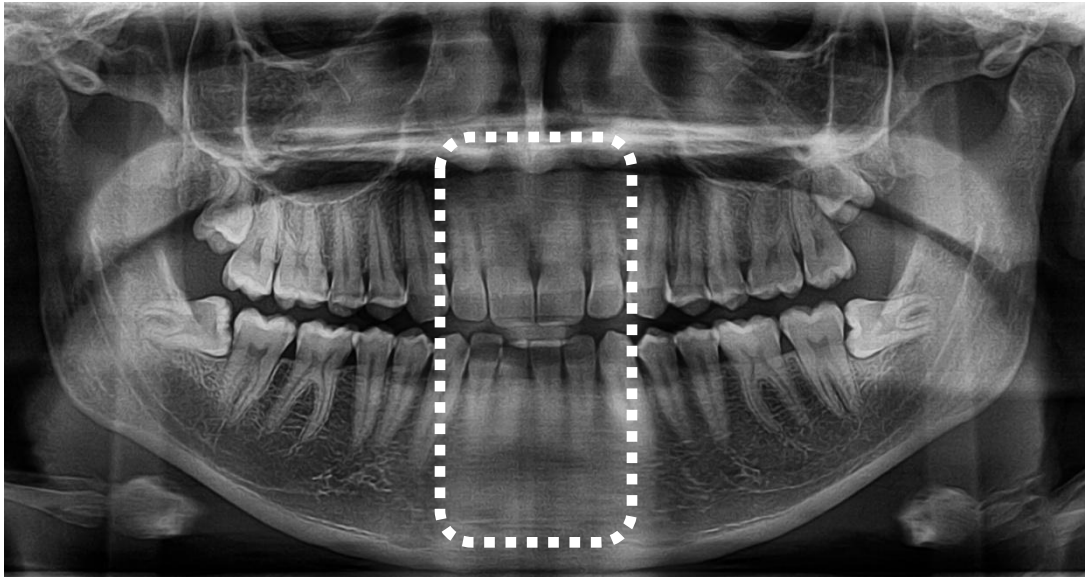

Issue:
- Anterior teeth are blurred and minimized.
- Spine is superimposed over condyles.

Solution:
- Ensure incisors are in the bite block grooves and align canine light properly.

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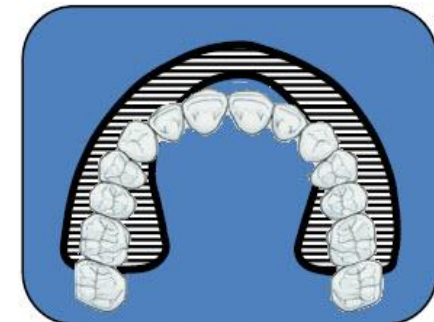## 4. Panorama Troubleshooting Guide – Patient is positioned too far backward

Issue:
• Anterior teeth are magnified and unclear.
• White out caused by ghost image of cervical spine in the middle and mandible burn out.

Solution:
• Ensure incisors are in the bite block grooves and align canine laser light to the center of the canine tooth.

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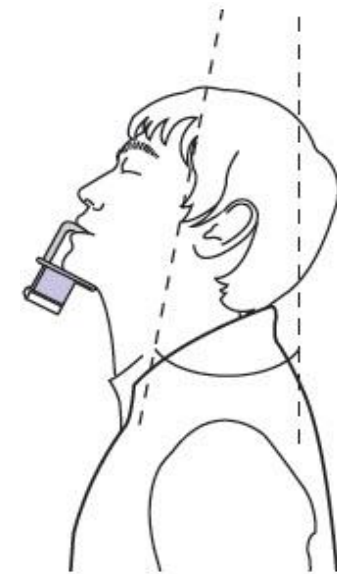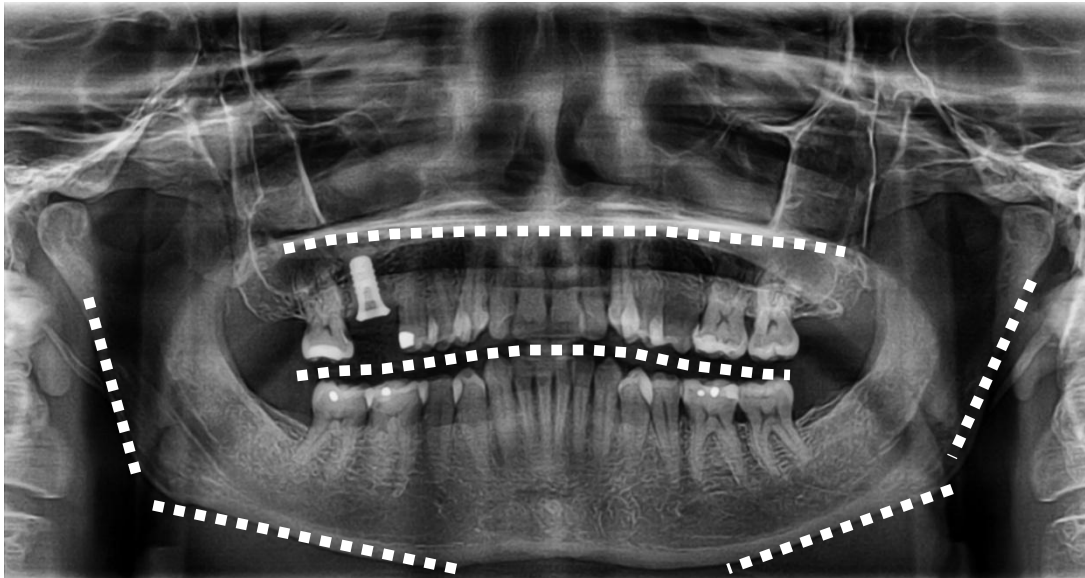## 4. Panorama Troubleshooting Guide – Patient head is tilted too far down
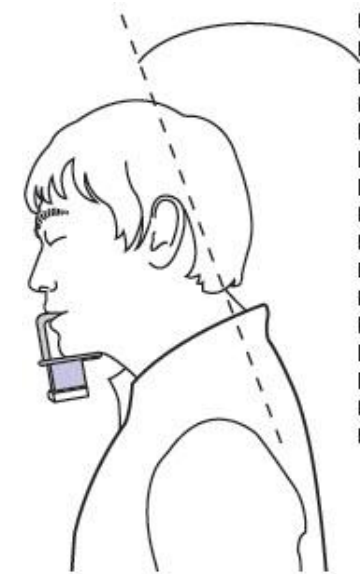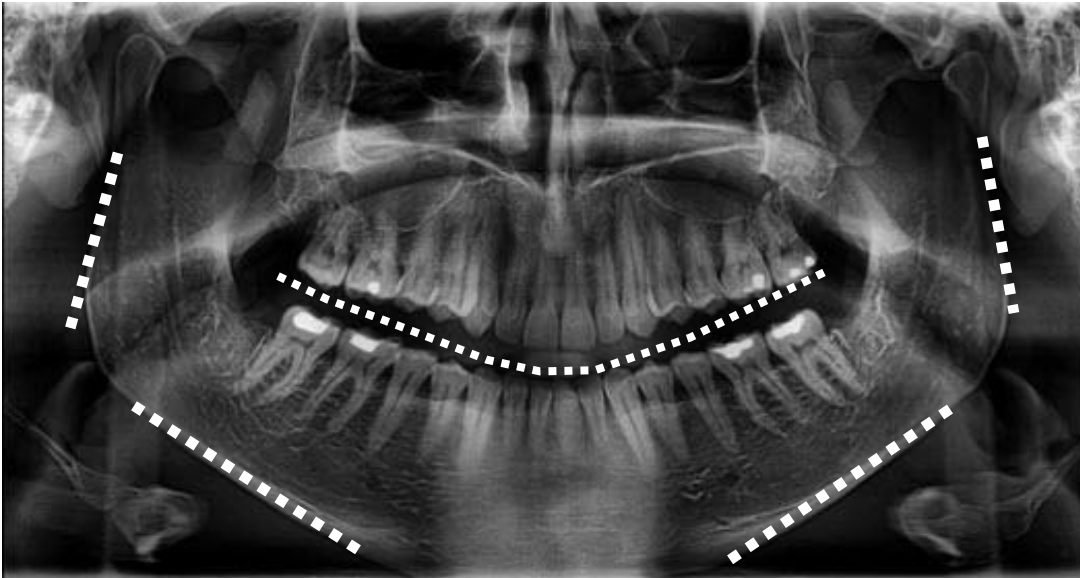
Issue:
• Upward and steep curvature of occlusal plane.
• Lower border of the Mandible is extremely steep.
• The Ramus is tilted inward.
• Lower incisors are foreshortened.

Solution:
• Raise chin until the Frankfurt Plane is aligned properly.

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4. Panorama Troubleshooting Guide – Patient head is tilted too high

Issue:
• Occlusal plane flattened.
• Condyle heads are flared out toward the edge of image
• The anterior and posterior border of the Maxilla are superimposed
• Lower Border of the Mandible is flattened.

Solution:
• Lower chin rest until Frankfurt plane is aligned properly.

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4. Panorama Troubleshooting Guide – Patient head is tilted

Issue:
• Magnification ratio of right and left side looks different.
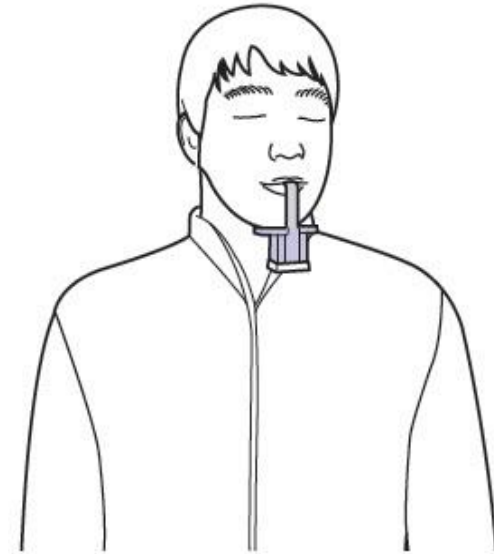
Solution:
• Adjust mid-sagittal beam correctly to the center of the patient's face

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Panorama Positioning and Troubleshooting Guide
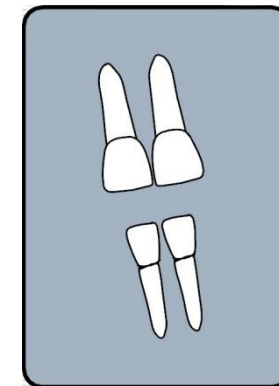
4. Panorama Troubleshooting Guide – Patient head is turned to one side

Issue:
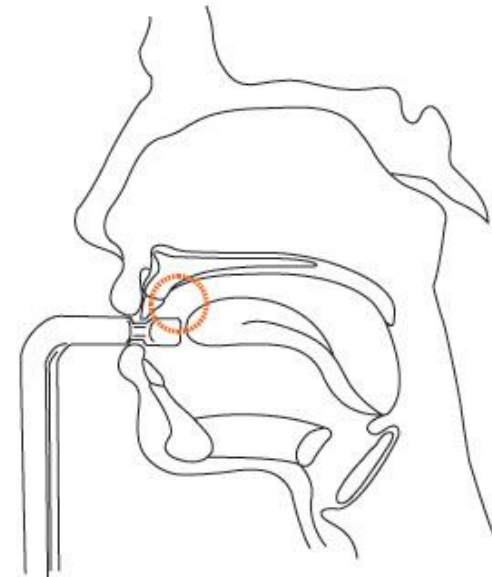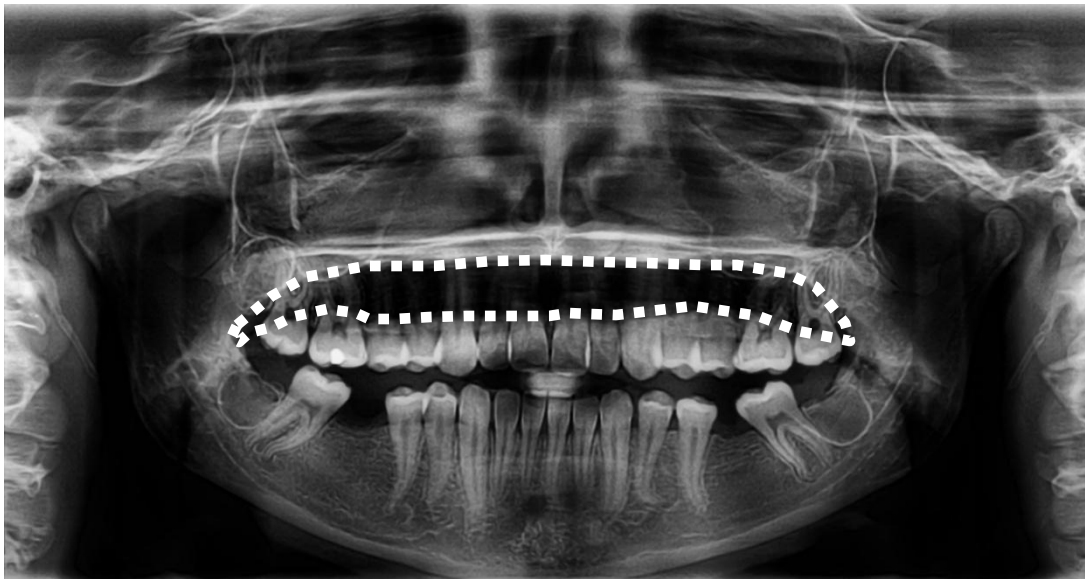• Patient's left side is enlarged compared to right.

Solution:
Ensure the Patient's head is positioned symmetrical in the device and temple rods are positioned properly.
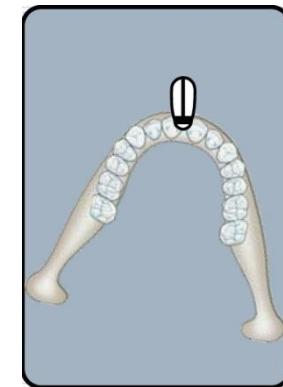
4. Panorama Troubleshooting Guide – Tongue is not pressed against palate
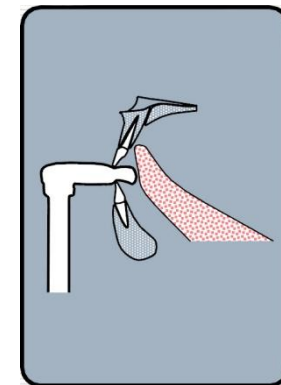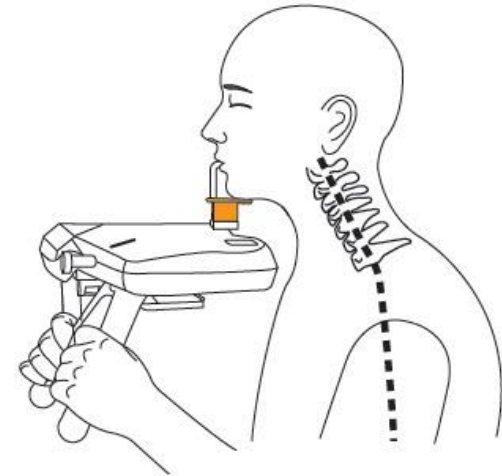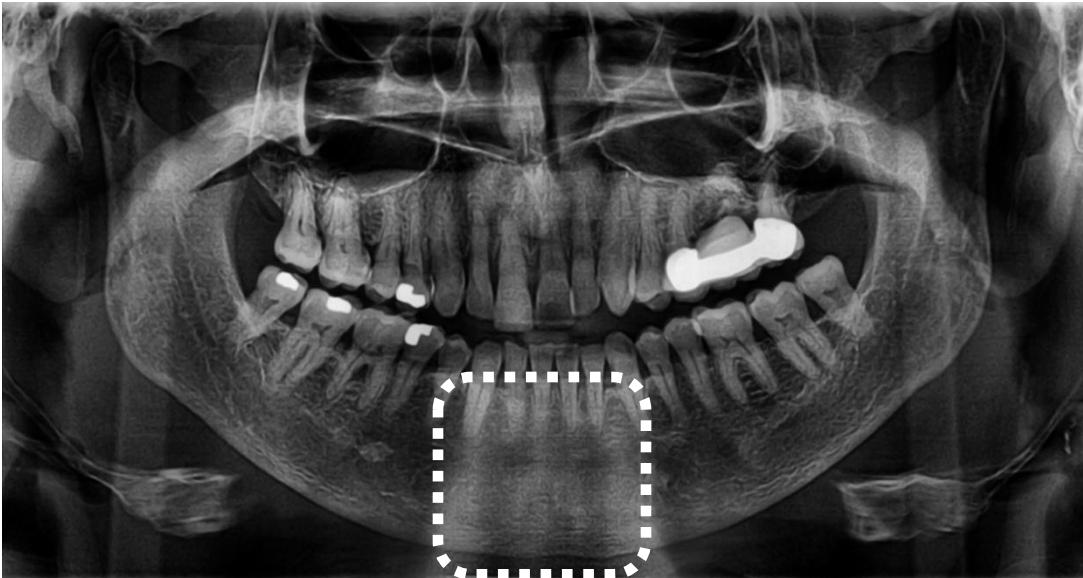

Issue:
•Large airway shadow directly over the roots of the maxillary teeth.

Solution:
•Patient's tongue is not being placed on the hard palate during the exposure.

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4. Panorama Troubleshooting Guide – Spine is compressed or slumped
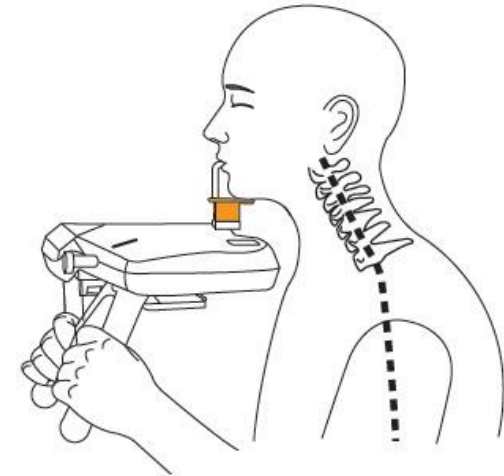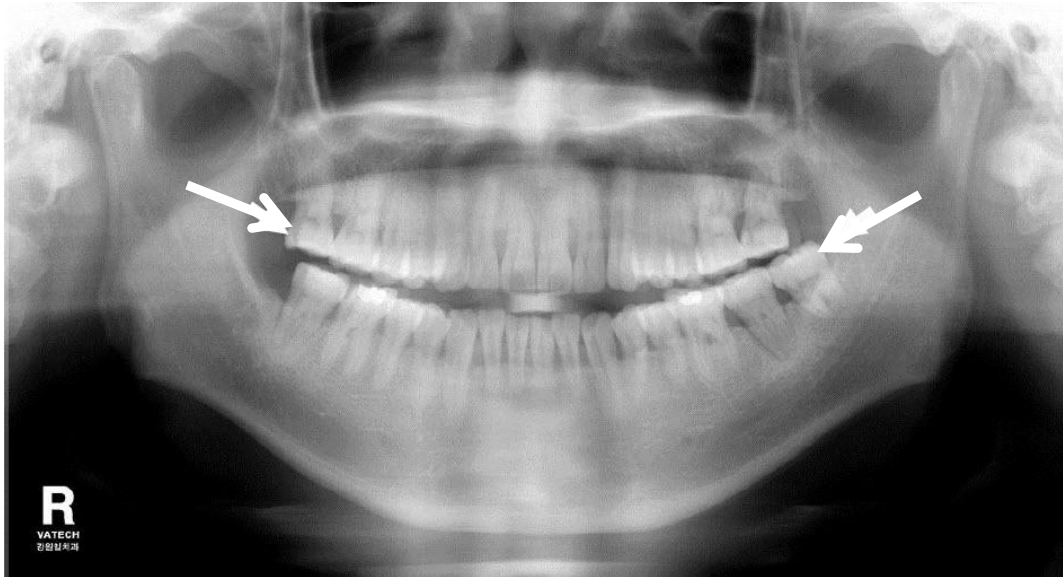

Issue:
• White tapered washed out region in the anterior area of the mandible.

Solution:
• Ensure the patient is standing upright and keep the spine vertical.

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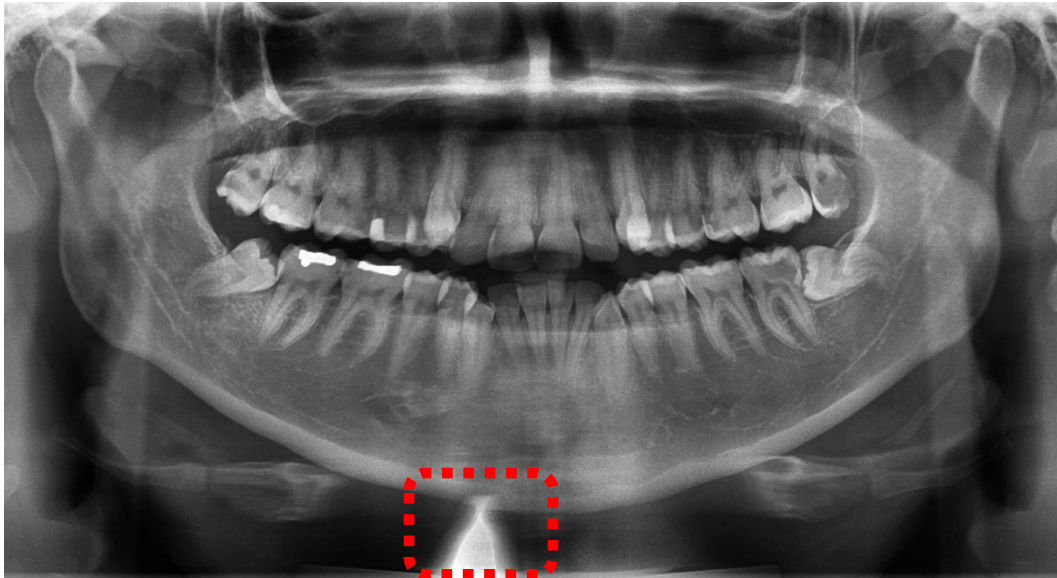## 4. Panorama Troubleshooting Guide – Patient moves during acquisition

Issue:
• Portions of panorama are blurred.

Solution:
Instruct the patient to remain motionless during the acquisition
.

Panorama Positioning and Troubleshooting Guide

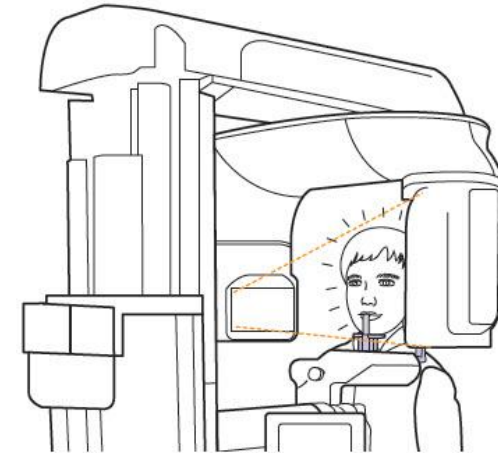## 4. Panorama Troubleshooting Guide – Lead apron is not positioned correctly

Issue:
• A white triangular shaped appears along the bottom edge of the image

Solution:
Position the apron correctly so that the collar, and corners are flat against the patient's shoulders and neck.

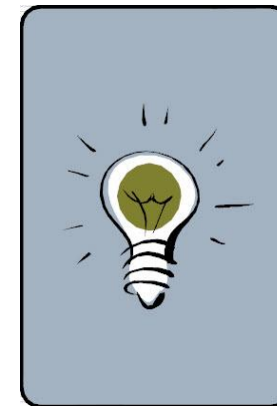## 4. Panorama Troubleshooting Guide – Image is Underexposed

Issue:
The image is bright and washed out.
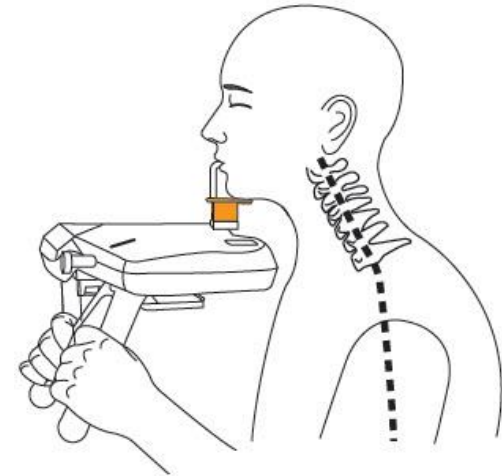
Solution:
Increase kVp and mA based on the morphology, culture and age of the patient.

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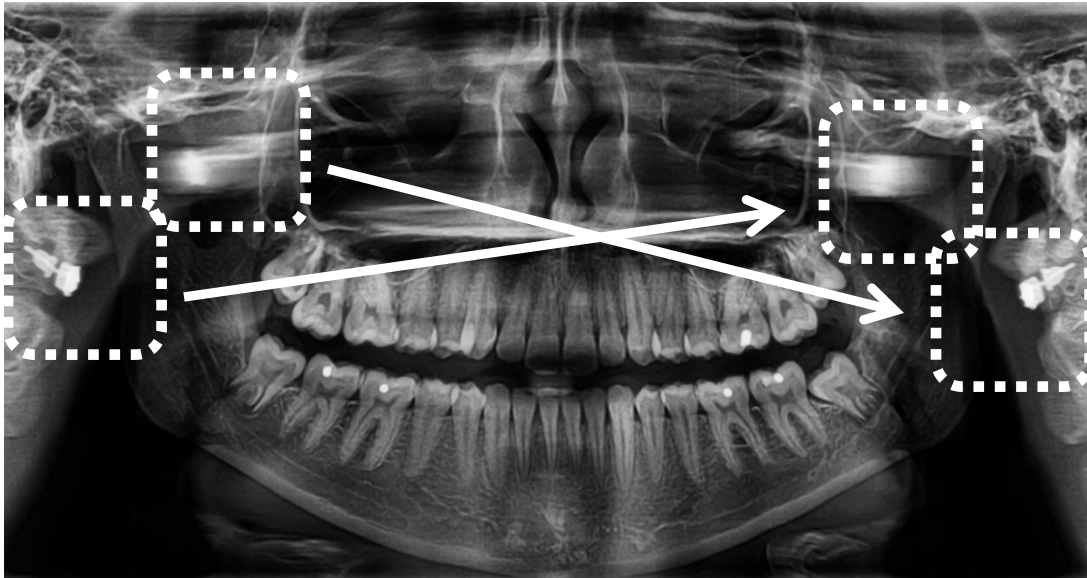## 4. Panorama Troubleshooting Guide – Image is overexposed

Issue:
Image is dark.

Solution:
Decrease the kVp and mA based on the morphology, culture and age of the patient.

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4. Panorama Troubleshooting Guide – Patient wearing jewelry

Issue:
White objects appear in multiple areas in the image

Solution:
Instruct the Patient to remove all jewelry, glasses, dentures and other metal objects above the neckline.

Thank You

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