DEPARTMENT OF THE AIR FORCE
59TH MEDICAL WING (AETC)
LACKLAND AIR FORCE BASE TEXAS

3 MAR 2016

MEMORANDUM FOR SGVT
ATTN: LT COL TERESA REEVES

FROM: 59 MDW/SGVU

SUBJECT: Professional Presentation Approval

1. Your paper, entitled **Panoramic Imaging Positioning Technique and Errors** presented at **Oral Presentation at Oral Medicine, Radiology and Pharmacology Short Course, Bethesda MD 4 Mar 2016** with MDWI 41-108, and has been assigned local file #**16109.**

2. Pertinent biographic information (name of author(s), title, etc.) has been entered into our computer file. Please advise us (by phone or mail) that your presentation was given. At that time, we will need the date (month, day and year) along with the location of your presentation. It is important to update this information so that we can provide quality support for you, your department, and the Medical Center commander. This information is used to document the scholarly activities of our professional staff and students, which is an essential component of Wilford Hall Ambulatory Surgical Center (WHASC) internship and residency programs.

3. Please know that if you are a Graduate Health Sciences Education student and your department has told you they cannot fund your publication, the 59th Clinical Research Division may pay for your basic journal publishing charges (to include costs for tables and black and white photos). We cannot pay for reprints. If you are 59 MDW staff member, we can forward your request for funds to the designated wing POC.

4. Congratulations, and thank you for your efforts and time. Your contributions are vital to the medical mission. We look forward to assisting you in your future publication/presentation efforts.

Linda Steel-Goodwin

LINDA STEEL-GOODWIN, Col, USAF, BSC
Director, Clinical Investigations & Research Support

PROCESSING OF PROFESSIONAL MEDICAL RESEARCH/TECHNICAL PUBLICATIONS/PRESENTATIONS

INSTRUCTIONS

USE ONLY THE MOST CURRENT 59 MDW FORM 3039 LOCATED ON AF E-PUBLISHING

1. The author must complete page two of this form:
   a. In Section 2, add the funding source for your study [e.g., 59 MDW CRD Graduate Health Sciences Education (GHSE) (SG5 O&M); SG5 R&D; Tri-Service Nursing Research Program (TSNRP); Defense Medical Research & Development Program (DMRDP); NIH; Congressionally Directed Medical Research Program (CDMRP) ; Grants; etc.]

   b. In Section 2, there may be funding available for journal costs, if your department is not paying for figures, tables or photographs for your publication. Please state "YES" or "NO" in Section 2 of the form, if you need publication funding support.

2. Print your name, rank/grade, sign and date the form in the author's signature block or use an electronic signature.

3. Attach a copy of the 59 MDW IRB or IACUC approval letter for the research related study. If this is a technical publication/presentation, state the type (e.g. case report, QA/QI study, program evaluation study, informational report/briefing, etc.) in the "Protocol Title" box.

4. Attach a copy of your abstract, paper, poster and other supporting documentation.

5. Save and forward, via email, the processing form and all supporting documentation to your unit commander, program director or immediate supervisor for review/approval.

6. On page 2, have either your unit commander, program director or immediate supervisor:
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7. Submit your completed form and all supporting documentation to the CRD for processing (59crdpubspres@us.af.mil). If you have any questions or concerns, please contact the 59 CRD/ Publications and Presentations Section at 292-7141 for assistance.

8. The 59 CRD/Publications and Presentations Section will route the request form to clinical investigations, 502 ISG/JAC (Ethics Review) and Public Affairs (59 MDW/PA) for review and then forward you a final letter of approval or disapproval.

9. Once your manuscript, poster or presentation has been approved for a one-time public release, you may proceed with your publication or presentation submission activities, as stated on this form. **Note:** For each new release of medical research or technical information as a publication/presentation, a new 59 MDW Form 3039 must be submitted for review and approval.

10. If your manuscript is accepted for scientific publication, please contact the 59 CRD/Publications and Presentations Section at 292-7141. This information is reported to the 59 MDW/CC. All medical research or technical information publications/presentations must be reported to the Defense Technical Information Center (DITC). See 59 MDWI 41-108, *Presentation and Publication of Medical and Technical Papers,* for additional information.

NOTE: All abstracts, papers, posters, etc., should contain the following disclaimer statement:
"The views expressed are those of the [author(s)] [presenter(s)] and do not reflect the official views or policy of the Department of Defense or its Components"

NOTE: All abstracts, papers, posters, etc., should contain the following disclaimer statement for research involving humans:
"The voluntary, fully informed consent of the subjects used in this research was obtained as required by 32 CFR 219 and DODI 3216.02_AFI 40-402."

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"The experiments reported herein were conducted according to the principles set forth in the National Institute of Health Publication No. 80-23, Guide for the Care and Use of Laboratory Animals and the Animal Welfare Act of 1966, as amended."

PROCESSING OF PROFESSIONAL MEDICAL RESEARCH/TECHNICAL PUBLICATIONS/PRESENTATIONS

1. TO: CLINICAL RESEARCH	2. FROM: (Author's Name, Rank, Grade, Office Symbol)	3. GME/GHSE STUDENT:	4. PROTOCOL NUMBER:
	Teresa Reeves, Lt Col, 05, SGDNB	☐ YES ☒ NO	N/A

5. PROTOCOL TITLE: (**NOTE:** For each new release of medical research or technical information as a publication/presentation, a new 59 MDW Form 3039 must be submitted for review and approval.)

Panoramic Imaging Positioning Technique and Errors

6. TITLE OF MATERIAL TO BE PUBLISHED OR PRESENTED:

Panoramic Imaging Positioning Technique and Errors

7. FUNDING RECEIVED FOR THIS STUDY? ☐ YES ☒ NO FUNDING SOURCE:

8. DO YOU NEED FUNDING SUPPORT FOR PUBLICATION PURPOSES: ☐ YES ☒ NO

9. IS THIS MATERIAL CLASSIFIED? ☐ YES ☒ NO

10. IS THIS MATERIAL SUBJECT TO ANY LEGAL RESTRICTIONS FOR PUBLICATION OR PRESENTATION THROUGH A COLLABORATIVE RESEARCH AND DEVELOPMENT AGREEMENT (CRADA), MATERIAL TRANSFER AGREEMENT (MTA), INTELLECTUAL PROPERTY RIGHTS AGREEMENT ETC.?
☐ YES ☒ NO **NOTE:** If the answer is YES then attach a copy of the Agreement to the Publications/Presentations Request Form.

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CHECK APPROPRIATE BOX OR BOXES FOR APPROVAL WITH THIS REQUEST. ATTACH COPY OF MATERIAL TO BE PUBLISHED/PRESENTED.

☐ 11a. PUBLICATION/JOURNAL (List intended publication/journal.)

☐ 11b. PUBLISHED ABSTRACT (List intended journal.)

☐ 11c. POSTER (To be demonstrated at meeting: name of meeting, city, state, and date of meeting.)

☐ 11d. PLATFORM PRESENTATION (At civilian institutions: name of meeting, state, and date of meting.)

☒ 11e. OTHER (Describe: name of meeting, city, state, and date of meeting.)
Oral presentation at Oral Medicine, Radiology and Pharmacology short course, Bethesda, MD on 4 Mar 2016

12. EXPECTED DATE WHEN YOU WILL NEED THE CRD TO SUBMIT YOUR CLEARED PRESENTATION/PUBLICATION TO DTIC
NOTE: All publications/presentations are required to be placed in the Defense Technical Information Center (DTIC).

DATE	
March 01, 2016	

13. 59 MDW PRIMARY POINT OF CONTACT (Last Name, First Name, M.I., email)	14. DUTY PHONE/PAGER NUMBER
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15. AUTHORSHIP AND CO-AUTHOR(S) List in the order they will appear in the manuscript.

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a. Primary/Corresponding Author Reeves, Teresa E	05 / Lt Col	59DG/ SGDNB	
b.			
c.			
d.			
e.			
f.			

I CERTIFY ANY HUMAN OR ANIMAL RESEARCH RELATED STUDIES WERE APPROVED AND PERFORMED IN STRICT ACCORDANCE WITH 32 CFR 219, AFMAN 40-401_IP, AND 59 MDWI 41-108. I HAVE READ THE FINAL VERSION OF THE ATTACHED MATERIAL AND CERTIFY THAT IT IS AN ACCURATE MANUSCRIPT FOR PUBLICATION AND/OR PRESENTATION.

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TO: Clinical Research Division 59 MDW/CRD Contact 292-7141 for email instructions.	22. DATE RECEIVED 2/24/2016	23. ASSIGNED PROCESSING REQUEST FILE NUMBER 16109
24. DATE REVIEWED 1 Mar 2016		25. DATE FORWARDED TO 502 ISG/JAC

26. AUTHOR CONTACTED FOR RECOMMENDED OR NECESSARY CHANGES: ☒ NO ☐ YES If yes, give date. _____ ☐ N/A

27. COMMENTS ☒ APPROVED ☐ DISAPPROVED

The article is approved.

28. PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER	29. REVIEWER SIGNATURE	30. DATE
Rocky Calcote, PhD, Clinical Research Administrator	CALCOTE.ROCKY.D.1178245844 Digitally signed by CALCOTE.ROCKY.D.1178245844 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USAF, cn=CALCOTE.ROCKY.D.1178245844 Date: 2016.03.01 08:42:14 -06'00'	

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Panoramic Imaging

Positioning and Technique errors

Disclaimer

- The views expressed in this presentation are those of the author and do not reflect the official policy of USAF, Department of Defense or other departments of the US Government
- Nothing to disclose

Acknowledgments

- Thank you to all the dental technicians at JBSA-Lackland that supported the 2016 update to this presentation

Panoramic technique steps

- Prepare the patient
- Check the settings (kV/mA) based on body size
- Ensure incisors are in the grooves or chin in cup
- Close side guides
- Position the chin
- Stand the patient upright
- Check Frankfort & mid-sagittal layer lights
- Ensure teeth are in focal trough
- Ask patient to swallow, close lips and eyes
- Ask patient to press tongue against palate
- Press and hold the exposure button/switch

Prepare the patient – hair buns

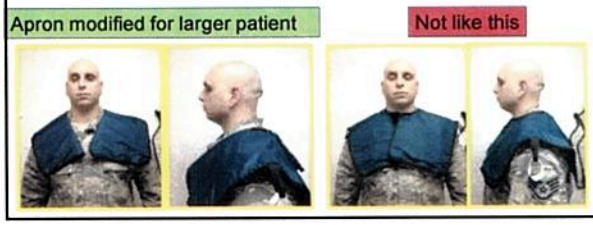
- Rubber bands, socks, hair bun holders will attenuate the x-ray beam and degrade the image quality in the center of the panoramic image
- Ask patient to remove hair bun accessories

Prepare the patient – synthetic weaves

- Ask patient to position and tack hair on <u>top</u> of head

Prepare the patient – protective apron

- Evaluate the patient body size
- Select the cape style apron without a collar
- Position apron low on the back and sides of neck
- Tuck the ends of apron under if patient is large anterior to posterior (front to back)

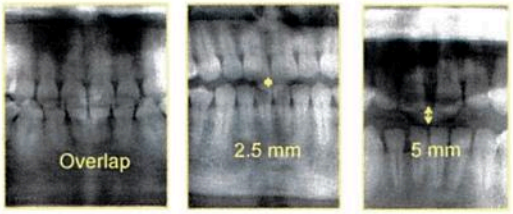


Check the settings

- The technique charts are stored in the control panel of the machine and or software programs
- Select body size (child; small; med; or large adult)
- Select jaw size
- Ensure kV and mA are appropriate

Ensure incisors are in the grooves

Not on bite stick | Teeth in grooves | Thick part of stick



- Standard technique is to use the bite stick

Ensure the proper chin cup is used

- Use the chin cup for panoramic imaging provided by the manufacturer of that machine
- Usually the chin cup devices don't mix and match

Ensure chin is positioned in chin cup

Few reasons to use a chin cup instead of bite stick...

- To visualize condyles seated in glenoid fossa
- Failure of anterior partial fixed bridge with loose anterior teeth
- Lightly sedated patient that is status post oral surgery
- Completely edentulous and without removable dentures

Not like this

More like this

Position the patient - standing

- Position the chin on chin cup or use bite stick

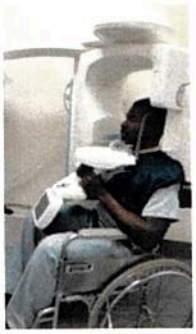
- Position machine at appropriate height
- Stand patient upright
- Ensure teeth are in bite stick grooves and tuck the chin or ...
- Position the chin in the chin cup support

Not like this

More like this

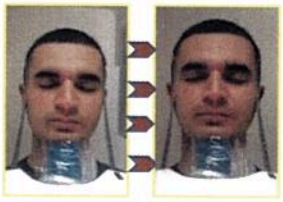
Position the patient – sitting

- Position the chin on chin cup or use bite stick
- Position machine at appropriate height
- Position the patient's chin in the chin cup support or...
- Ensure teeth are in bite stick grooves and tuck the chin

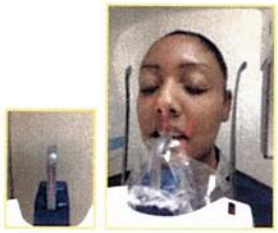


Reference lights – mid sagittal

- Check position of the mid-sagittal reference



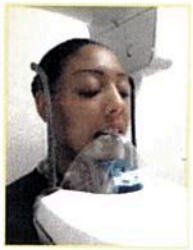
Straighten the head before the exposure



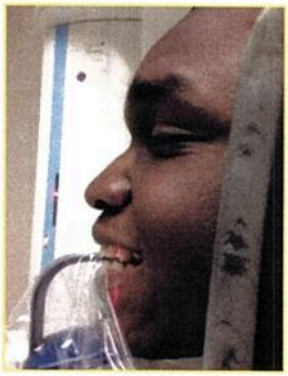
Verify the position of the light on the center of the bite stick

Reference light – Frankfort horizontal

- Check position of Frankfort horizontal
- Line up the border of the inferior orbital rim with the top of the external auditory canal



Reference light – dental arch focus



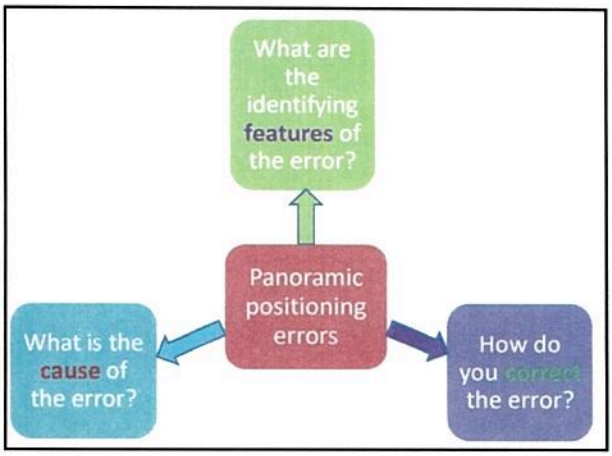
- Position vertical reference light
- Focus the focal trough
- Some manufactures are manual focus, others are automatic selection of "dental arch morphology" on the control panel and "incisors orientation"

Final steps…

- Swallow, close lips, close eyes
- Press tongue and hold it flat against palate
- Press and hold exposure button

Three things to <u>screen</u> for

- Image quality
  - Metallic jewelry removed from the hair, around the neck, face, ears and tongue?
  - How was the patient positioned?
  - What were the technique parameters?
- Anatomy
  - Normal versus normal variants
- Abnormalities in the image

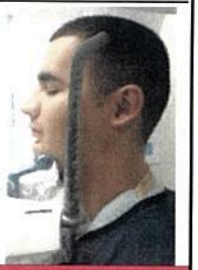


Common Panoramic Errors

- Patient too far forward
- Patient too far back
- Chin positioned too low
- Chin positioned too high
- Patient twisted
- Patient tilted
- Slumped position
- Chin not on chin rest
- Tongue not on palate
- Patient movement
- Lips open
- Ghost images
- Hair buns and or synthetic (braided) hair
- Apron artifact

Error – focal trough	Correction – ensure teeth are in focal trough
Patient too far forward	anterior teeth appear small and indistinct spine is visible on sides of image bicuspids overlap, bilaterally
Patient too far back	anterior teeth are wide and blurred condyles approach lateral edges of image blurring of anterior maxilla and mandible

- Check that the
  --max and man ant incisors are in grooves or
  --the chin isn't pressed ahead of the chin cup ledge

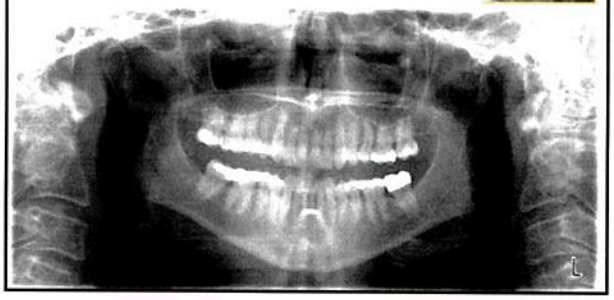


Teeth not in grooves

Chin too far forward

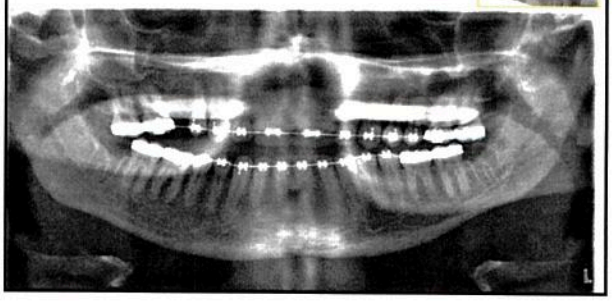
Patient too far forward

- Narrow, indistinct anterior teeth
- Bicuspids overlap bilaterally



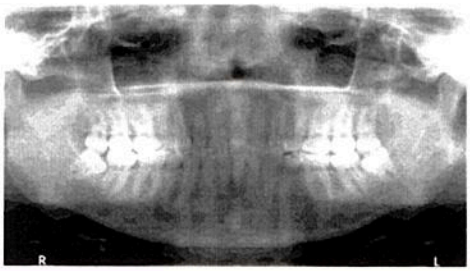
Patient too far back

- Wide, blurred anterior teeth
- Condyles off the lateral edges



Patient too far back

- Wide, blurred anterior teeth
- Condyles off the lateral edges

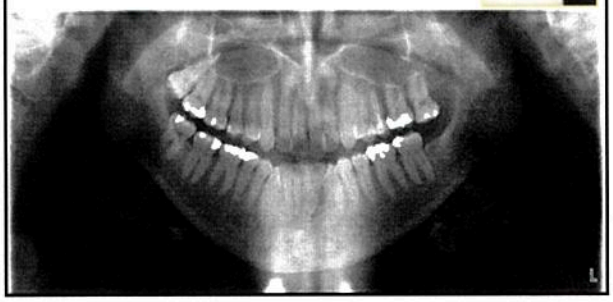


Error – Frankfort horizontal	Correction – reposition head to align with the Frankfort horizontal (inferior border of orbit / EAC)
Chin too low	exaggerated smile hyoid streaked across mandible condyles at top of image
Chin too high	flattened occlusal plane reversed smile or frown condyle(s) approach lateral edge(s) of image

- Check the
  --Frankfort horizontal matches the reference light on the machine
  --ask the patient to smile while biting in the grooves
  --evaluate the max post occlusion for a slight upward slant
  --tuck the chin

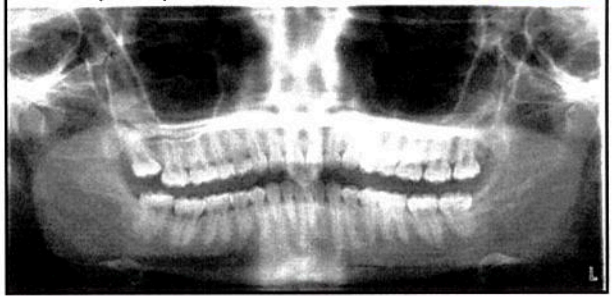
Chin positioned too low

- Exaggerated smile line
- Condyles off the top of image

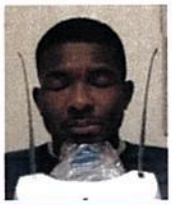


Chin positioned too high

- Reverse smile
- Hard palate and floor of nasal cavity are superimposed over the max roots



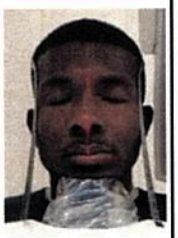
Error -- mid-sagittal	Correction – align mid-sagittal light with center of forehead
Head twisted	anterior teeth normal unequal magnification between left & right
Head tilted	head not centered one condyle higher than other



Reposition the patient's head

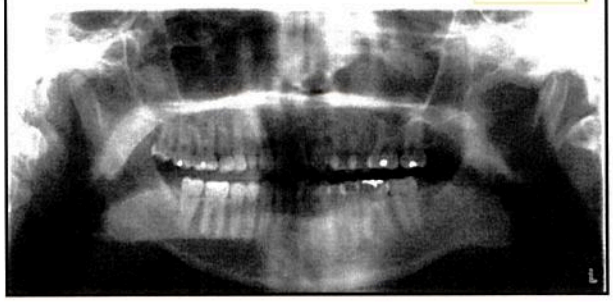
- Line the mid-sagittal light up with the middle of forehead

More like this



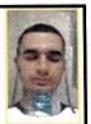
Head twisted

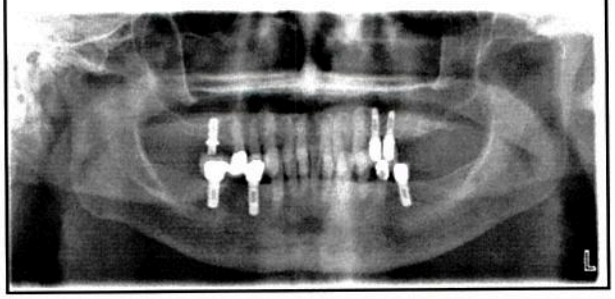
- Head not centered
- Unequal magnification of structures



Head twisted

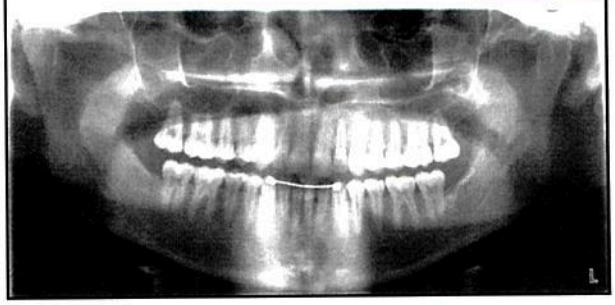
- Closed mouth -- errors
- Twisted -distortion of left ramus and condyle





Head tilted

- Patient's head not centered
- Distortion in image

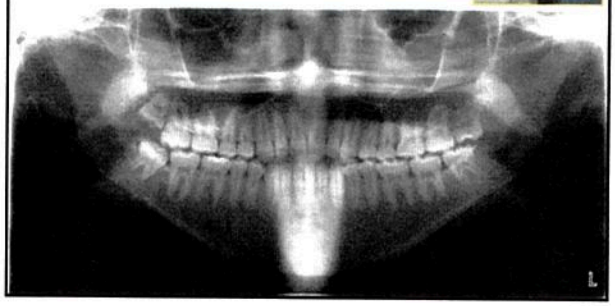


Error – cervical spine	Correction – stand the patient up straight to ensure a straight spine and the chin is on the chin support or chin cup
Slump	white triangle image of spine over man anterior teeth
Curved spine	curved spine seen on sides of image anterior arch of atlas C-1 superimposes ramus
Chin not on support	structures in upper 1/3 may be cut off top of image

- Evaluate the patient's neck and body position to ensure they are standing upright
- Move the barrier bag to see the chin on the chin support
- Tuck the chin down slightly

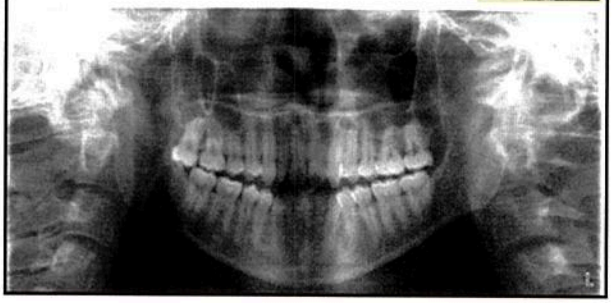
Slumped position

- Neck is stretched forward on a slant



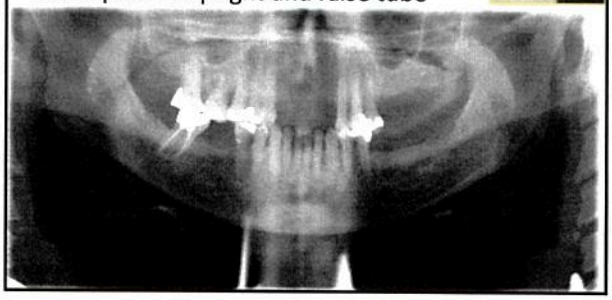
Curved spine

- Curved spine seen on sides of image
- Stand patient upright and raise tube



Chin not on chin support

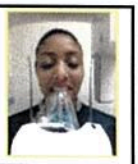
- Structures in the upper 1/3 of the image are cut off
- Stand patient upright and raise tube



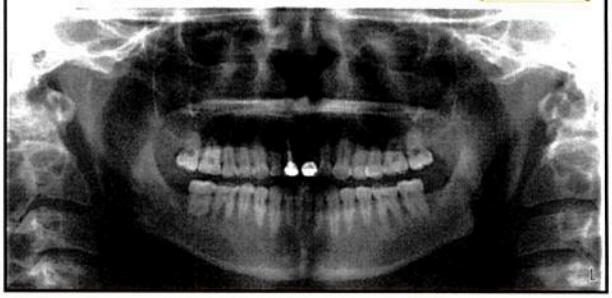
Error -- instructions	Correction – give patient clear and concise instructions they can understand
Tongue not on palate	dark shadow over roots of maxillary teeth
Lips open	saturation of anterior maxillary and mandibular teeth may mimic caries in premolars at bilateral shadow of commissure
Motion artifact	vertical defect in image from top to bottom hyoid bone distortion with swallowing

- Ask patient to close lips tight and press and hold tongue up
- Evaluate for clearance between the patient's shoulders, back and the machine

Tongue not on palate

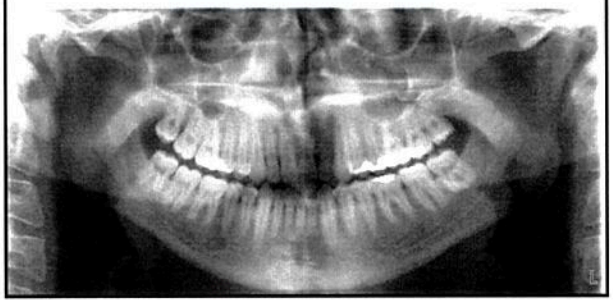


- Dark crescent shaped shadow over the maxillary teeth roots
- Palatoglossal airspace artifact



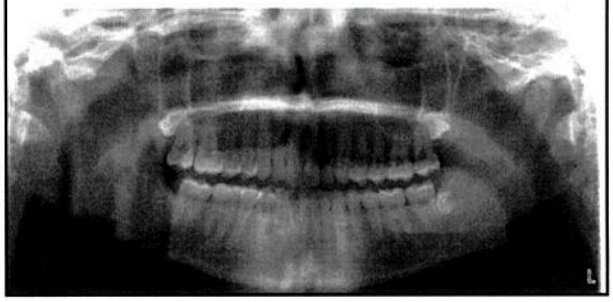
Lips open

- Anterior teeth are darkened between parted lips because of lack of x-ray beam attenuation
- Radiolucency's can be mimicked in bicuspid areas

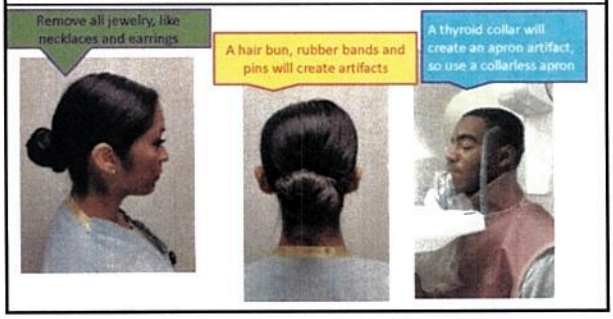


Motion artifact

- Wavy lines that extend from the top of image to the bottom of the image

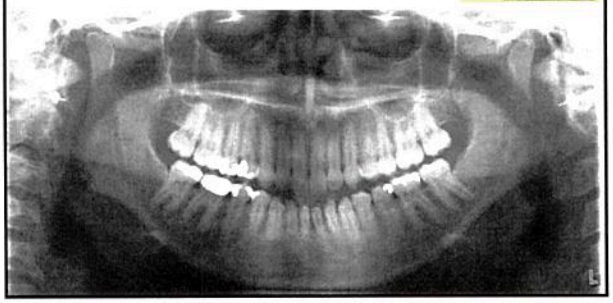


Error – prepare patient	Correction – ask patient to remove jewelry; re-position hair on top of head if wearing synthetic weave; position apron to avoid apron artifact
Hair bun	RO line in center of image
Synthetic hair	multiple vertical lines at lateral sides of image
Ghost images	appear on opposite side of image and are more superior and blurred
Apron artifact	white opacity along lower border of image



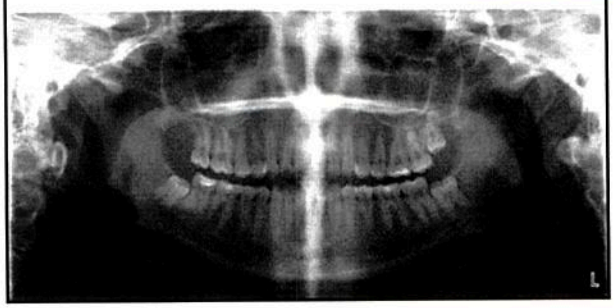
Earring artifacts

- Appear on the opposite side
- Appear superior and blurred



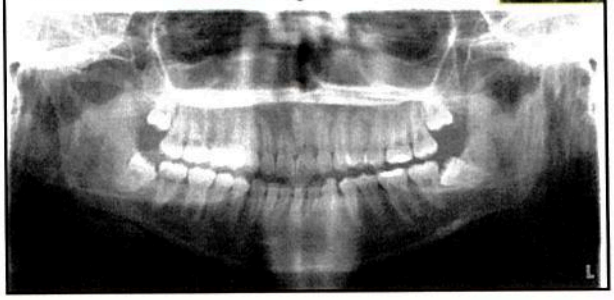
Hair bun artifact

- Sock bun or thick rubber bands
- Vertical RO artifact in center of image



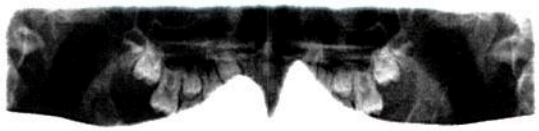
Synthetic hair artifact

- Synthetic braided hair
- Artifacts are wavy or straight vertical lines on the lateral sides of image



Apron artifact

- Artifact cause by the thyroid collar



Apron artifact

- Apron high on sides and or back of neck

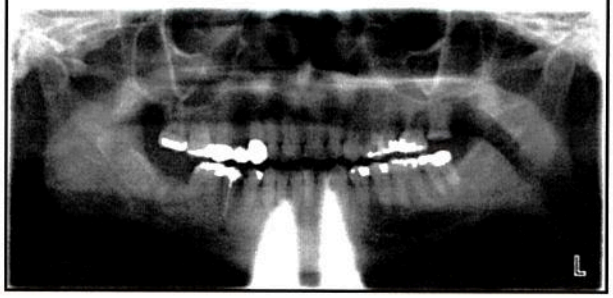
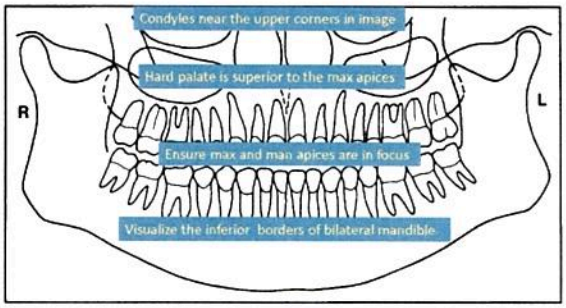


Image quality check for dental techs

1. Condyles near the upper corners in image
2. Hard palate is superior to the max apices
3. Ensure max and man apices are in focus
4. Visualize the inferior borders of the mandible

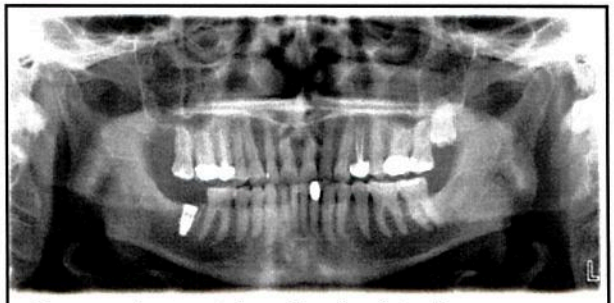
Image quality check for dental techs



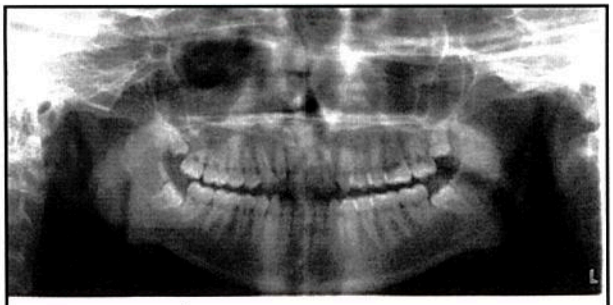
Schematic from Goaz PW, White SC: Oral Radiology: Principles and Interpretation, 3rd ed. St Louis, Mosby-Year Book, 1994.

Panoramic Imaging Practice

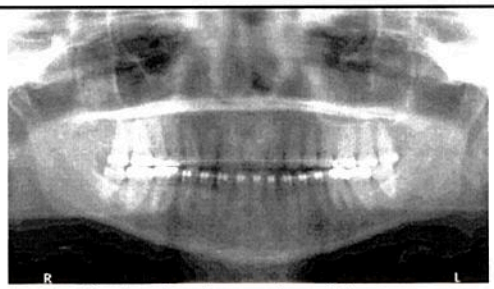
Identify the errors
Describe the characteristic features
Discuss the correction



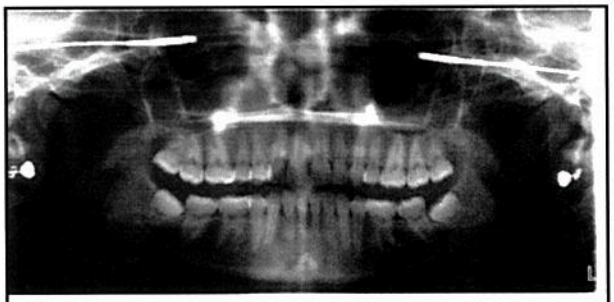
- Error: patient not closed on back teeth
- Features: incisors end to end
- Correction: ask patient to close on back teeth



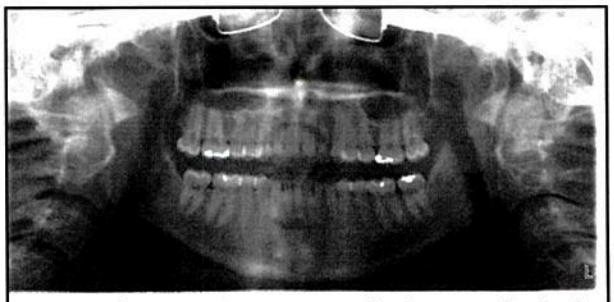
- Error: twisted
- Features: overlapped premolars & distortion (left)
- Correction: use reference lights



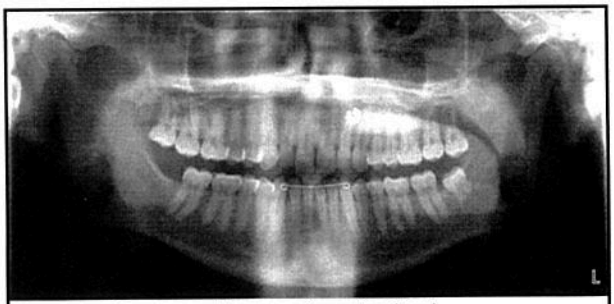
- Error: too far back when using chin cup
- Features: anterior teeth are magnified and blurred; condyles approach lateral edges of image
- Correction: select chin cup for panoramic; verify correct patient position in chin cup; use ref lights



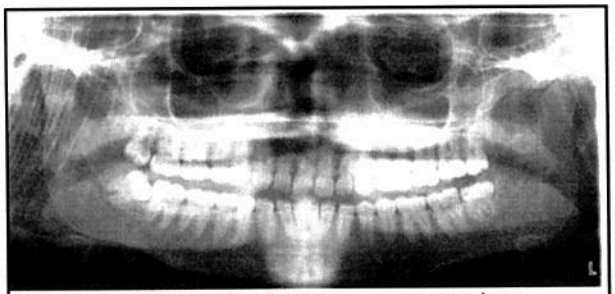
- Error: chin too high; jewelry; glasses; tilt & twisted
- Features: hard palate low; ghost artifact; condyles approach lateral borders; right bicuspids overlap
  Correction: prep patient; use reference lights



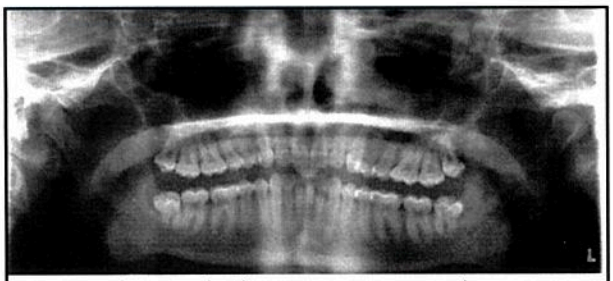
- Error: glasses in image; curved spine; too far fwd
- Features: artifact; curved spine in image; spine superimposes rami; bicuspids overlap bilaterally
- Correction: prep pt; stand up straight; use ref



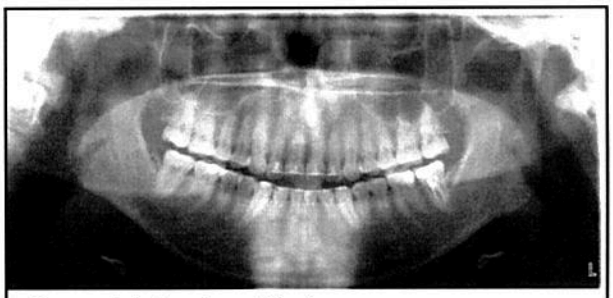
- Error: foreign object; twisted; tilted
- Features: artifact; rt bicuspids overlap & mag
- Correction: remove jewelry; use reference lights (Frankfort horiz & mid-sagittal)



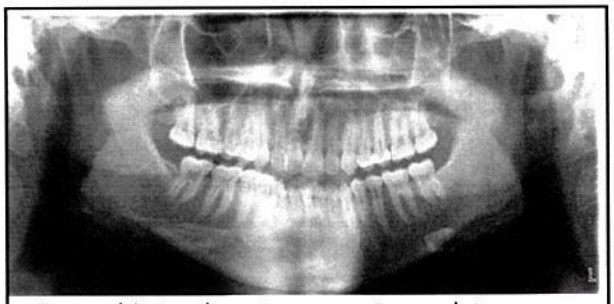
- Error: syn hair ; tilted; tongue not on palate
- Features: artifact; right condyle higher than left; palatoglossal air space artifact
- Correction: re-position hair; center their bite in grooves; use ref lights; press tongue against palate



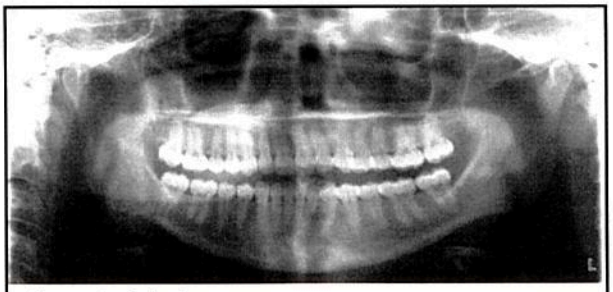
- Error: chin too high; tongue not on palate
- Features: condyles approach lateral edges of image; reversed smile; palatoglossal air space artifact
- Correction: stand up straight; tuck chin down; use reference lights; press tongue against palate



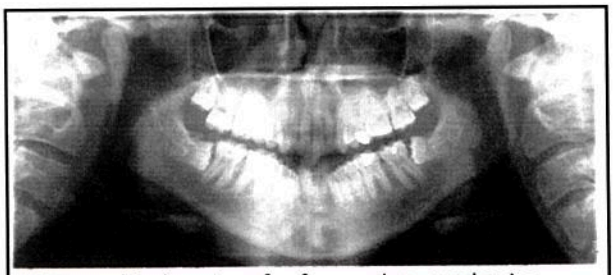
- Error: chin too low; tilted
- Features: exaggerated smile; condyles approach the top of image; right condyle higher than left
- Correction: ensure patient is standing up straight; use reference lights



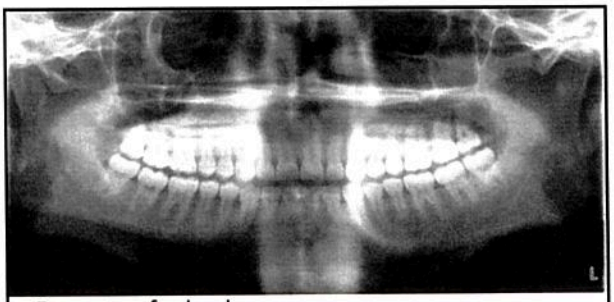
- Error: chin too low; tongue not on palate
- Features: exaggerated smile; condyles approach top of image; hyoid bone across mandible
- Correction: stand them up straight; use reference lights; press tongue against palate



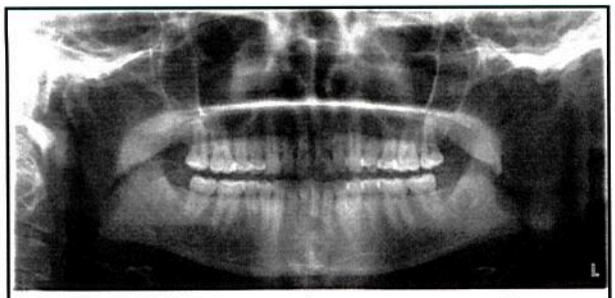
- Error: twisted
- Features: off sides on bite stick; left bicuspids overlap & magnification of left side
- Correction: center midline of maxillary teeth in the center of bite stick; use reference lights



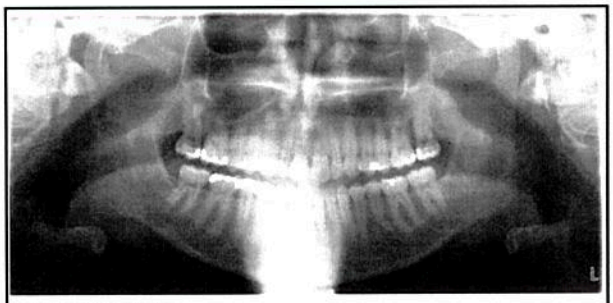
- Error: chin low; too far forward; curved spine
- Features: exaggerated smile; condyles approach the top of image; indistinct ant teeth; bicuspids overlap bilaterally; curved spine in image
- Correction: stand up straight; bite in grooves; use reference lights (Frankfort horiz and mid-sagittal)



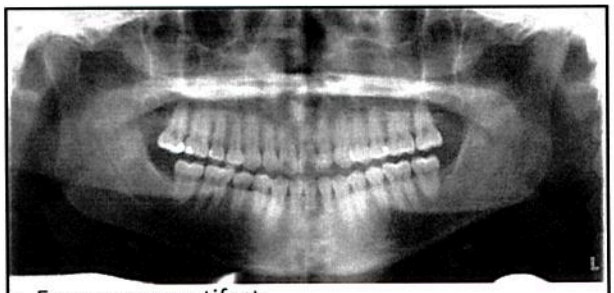
- Error: too far back
- Features: widened and blurred anterior teeth, roots; blurring of anterior max and man
- Correction: bite in grooves or use proper chin cup; ensure patient position in focal trough



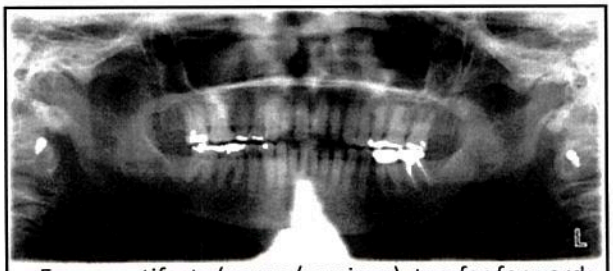
- Error: machine bumped patient at start of scan
- Features: wavy vertical lines from top to bottom where bump occurred (pt left)
- Correction: stand up straight; ensure clearance



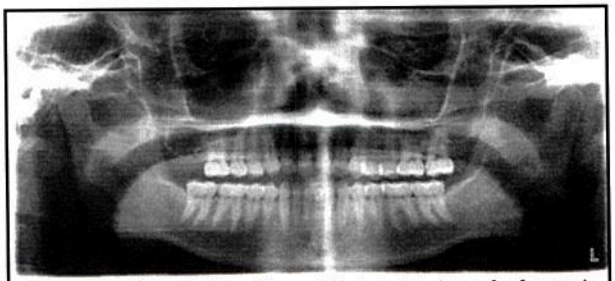
- Error: slump
- Features: white triangle image of spine over man anterior teeth
- Correction: stand up straight – check spine



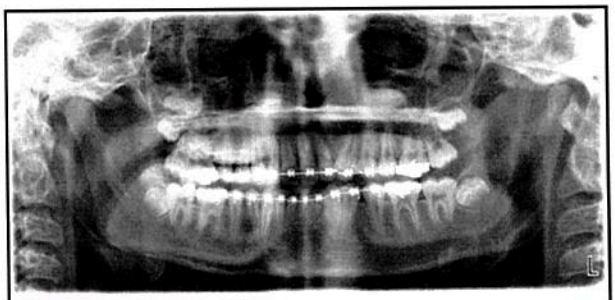
- Error: apron artifact
- Features: radiopacity of real image in lower right and left corners with artifact near center
- Correction: ensure apron isn't too tight around the sides of neck and keep it low in back



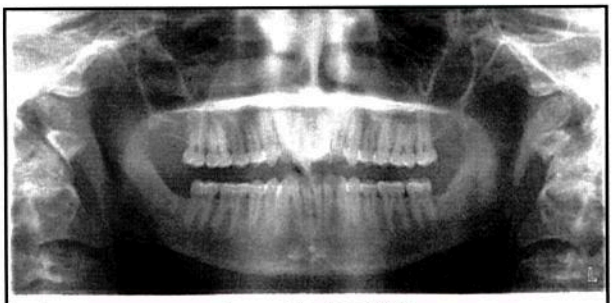
- Errors: artifacts (apron/earrings); too far forward; chin too high; chin not on chin support
- Features: objects; ghosting; ant teeth indistinct; reversed smile; condyles approach lateral edges
- Correction: prep patient; check apron position; stand up straight; tuck chin; use reference lights



- Errors: synthetic hair and bun artifact; twisted; too far forward; tongue not on palate
- Features: hair artifacts; left bicuspids overlap & magnification of left side; ant teeth indistinct; palatoglossal air space artifact
- Correction: position hair atop head; tuck chin; use ref lights; press tongue up

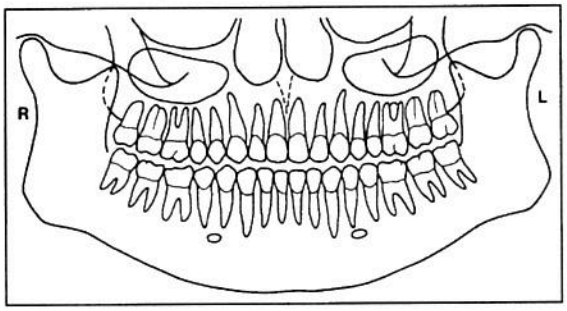


- Errors: double appearance of teeth in antrums; double appearance of condyles and rami; tongue
- Features: same as above (equip/software failure)
- Correction: Call for service



- Error: reverse spine; chin too high
- Features: radiopacity superimposed over max ants
- Correction: tuck chin; use reference lights (Frankfort horiz and mid-sagittal)

What questions do you have?



From Goaz PW, White SC: Oral Radiology: Principles and Interpretation, 3rd ed. St Louis, Mosby-Year Book, 1994.

Contact information

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DEPARTMENT OF THE AIR FORCE
AIR EDUCATION AND TRAINING COMMAND

1 March 2016

MEMORANDUM FOR 59 MDW
ATTN: LT COL TERESA E. REEVES

FROM: 502 ISG/JA

SUBJECT: Ethics Review for Presentation Approval Request (Reeves)

1. A request for a legal review of a slide presentation titled "Panoramic Imaging Positioning Technique and Errors" was submitted by Lt Col Reeves. She plans to present the slides at the 2016 Oral Medicine, Radiology and Pharmacology short course in Bethesda, Maryland on 4 March 2016. This legal review is limited to the ethics issues regarding the presentation. The presentation slides included the required disclaimer discussed below. A Public Affairs review will be required if it has not already been obtained. There are no conflict of interest issues with presenting this research at this professional society meeting.

2. FACTS: Lt Col Reeves plans to present the slide presentation titled "Panoramic Imaging Positioning Technique and Errors" at the Oral Medicine, Radiology and Pharmacology short course.

3. LAWS AND REGULATIONS: DoD 5500.07-R, Joint Ethics Regulation (JER), section 3-305 lays out rules governing "Teaching, Speaking and Writing." If the presentation will "deal in significant part with any ongoing or announced policy, program or operation" of the Air Force, the presenter is required to include a disclaimer that states the "views presented are those of the speaker or author and do not necessarily represent the views of DoD or its Components."

4. ANALYSIS: The presentation does not "deal in significant part with any ongoing or announced policy, program or operation" of the Air Force; however, the author included the required disclaimer that the views presented are those of the authors and do not necessarily represent the views of DoD or its Components on the slide presentation. Although the disclaimer language included on the presentation is not verbatim from the JER, the language used is appropriate and clearly captures the intent of the language used in the JER. A Public Affairs review will be needed if it has not already been obtained. There are no apparent conflicts of interest that would prohibit the presentation.

5. CONCLUSIONS: The slide presentation for review included the disclaimer required by the JER. There are no conflicts of interest.

6. If you have any questions, please call me at 210-671-5771.

VERNISHA N. FOSTER, Capt
Assistant Staff Judge Advocate

I concur.

ARLENE R. CHRISTILLES
Chief, Civil Law

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