

SYLLABUS

COURSE: CLIN 3003 Radiology Clinic
SEMESTER: Fall/Spring/Summer
CREDIT HOURS: 1.0

REVISED: 2009
REPRINTED: 2009

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GOAL

The radiographic examination is an integral component of the dental diagnostic process. Radiographic procedures are utilized for various types of patient evaluations including comprehensive, recall and emergency patient evaluations. Radiographs are also used to monitor the progress of endodontic procedures and the healing response following surgical procedures. Occasionally, radiographs are used for pre and post-cementation evaluations of cast and ceramic restorations.

Dental students have had preclinical training in various technical parameters of x-radiography that include the components of x-ray equipment, projection geometry, film processing and radiation biology. Students have also had instruction on the radiographic recognition of dental pathoses. This course affords the opportunity to integrate these principles into the clinical diagnostic process. Students will utilize various types of radiographic surveys for their patient evaluations including the full mouth survey (i.e., FMS), partial FMS evaluations, bitewing and panoramic evaluations. This will give them vital practical experience that is essential to become proficient in diagnostic radiography.

CRITERIA TO ACHIEVE COMPETENCY

The student must be able to expose diagnostic intraoral and panoramic radiographs and interpret the images to determine the presence and extent of hard tissue pathoses. It is expected that the dental student take radiographs on a continuous basis during his/her academic experience in order to demonstrate competency. The following guidelines will be used to assess competency.

1. Ordering of Radiographs

The student must be able to determine the appropriate type of radiographic survey for the patient. This decision is based on the diagnostic needs of the patient. Factors used in this decision are the findings from the initial dental examination, the suspected presence of disease activity, past dental history, chief complaint, presence of previous radiographs and the type of dental examination for which the patient presents, i.e., new patient, recall, urgent care, etc. These radiographs will ultimately be used to establish the presence of any disease patterns and formulate the appropriate treatment plan. A written entry requesting the types of radiographs and the need for the radiographs is required in the patient's electronic record with electronic approval from the supervising faculty member.

2. Radiology Room/Cubicle Preparation

The student must assure that the radiology room/cubicle is prepared for a procedure in the following areas.

A. Infection control protocol

1. Clinic attire
2. Use of protective barriers
3. Patient preparation

B. Instruments

C. Supplies

Proper infection control must also be followed in the viewing room (1.071K). Latex examination gloves are not permitted in this area. The use of overgloves is permitted in this area.

3. Radiographic Exposure and Scanning

The student must be able to expose a diagnostic radiographic survey assuring that the patient can tolerate the procedure. The student must also be able to scan each phosphor plate correctly.

4. Film Mounting

The radiographs must be mounted in the proper area of the electronic film mount. The film mount must also have the proper information recorded for identification purposes. Panoramic radiographs must also be labeled with the appropriate information.

5. Technique Evaluation

The radiograph must have acceptable technical parameters with respect to the following areas:

A. Intraoral

- 1) Film placement
 - a. proper anatomic coverage
 - b. apices with ≥ 2.0 mm of bone beyond the PDL
 - c. coronal anatomy contained
 - d. proper side of packet exposed
 - e. dot in occlusal/incisal area of periapical films
- 2) Dimensional distortion
 - a. elongation
 - b. foreshortening
- 3) Overlapping
- 4) Cone cut

B. Panoramic

- 1) Patient position
 - a. antero-posterior
 - b. medio-lateral
 - c. chin position
- 2) Patient posture
 - a. cervical posture
 - b. shoulder posture

C. Intraoral and Panoramic

- 1) Film handling
 - a. bending
 - b. scratches
- 2) Exposure error
 - a. overexposed
 - b. underexposed
- 3) Mounting error
- 4) Processing error
 - a. light
 - b. dark
 - c. film contamination

6. Interpretation Evaluation

Radiographic surveys need to be evaluated for recognition of the range of variation of normal anatomic entities and for identification of disease processes affecting the dentition and adjacent anatomy. Interpretation reports are completed by listing the radiographic signs of disease under the following sub-headings:

- A. Maxillary antra - proximity of dentition to sinus floor, integrity of sinus floor and mucosal lining, alterations in density of lumen, etc.
- B. Trabecular bone - periapical disease, alterations in trabecular patterns, radiolucent, radiopaque or mixed radiolucent-radiopaque lesions, etc.
- C. Dental caries - list tooth number, surface and degree of caries extension
- D. Periodontal disease - areas and degree of horizontal and/or vertical bone loss, furca involvement, unfavorable crown:root ratios, etc.
- E. Other findings - includes variations in tooth size, shape and contour, acquired or congenital anomalies, etc

Students are expected to identify a minimum of six (6) anatomic structures on the radiographic survey when quizzed by the supervising faculty member. Selection of the structures is at the discretion of the instructors. A list of the anatomic structures is available in the Appendix of this syllabus, DENF 2703 Oral & Maxillofacial Radiology I and DENF 3703 Oral & Maxillofacial Radiology II course syllabi.

7. Record Keeping

The student must make the proper entries in the Tx History of the EPR. Completion of the Radiology Evaluation Sheet is also required.

8. Professionalism

Respectful interaction with radiology staff, faculty and patients is expected at all times. Proper clinical attire as per the clinic manual is also mandatory in clinical areas.

Each student is required to complete a self-evaluation for any radiographic procedure performed in clinic based upon the stipulated criteria mentioned previously. The radiology faculty member will discuss the competency evaluation with the student to ensure the expectations for competency are understood by the student. An evaluation score to demonstrate competency is assigned as follows:

FMS Technique Competency Criteria

	5	4	3	2	1
Core Values, Infection Control, Patient Record Keeping	Ethical, professional behavior, followed all clinic policies and procedures, complied with infection control policies, documentation in record was legible, complete and accurate	Minor error(s) in one or two areas	Minor errors in multiple areas	Critical error in one area	Critical error in multiple areas
Ordering of Radiographs	Complete with date, RX request and faculty signature			Incomplete with one item missing	Incomplete with > one item missing
Room Preparation	Room correctly prepared for taking radiographs	Minor error(s) in one or two areas	Minor errors in multiple areas	Critical error in one area	Critical error in multiple areas
Exposure and Darkroom Processing	Radiographs exhibit no exposure or processing errors	No more than one or two items with exposure or processing error	No more than three or four items with exposure or processing error	No more than five or six items with exposure or processing error	More than six items incorrectly exposed or processed
Film Mounting	All films are correctly placed in the film mount and pertinent information is written on the film mount	No more than one or two items with mounting error and/or pertinent information missing on film mount	No more than three or four items with mounting error and/or pertinent information missing on film mount	No more than five or six items with mounting error and/or pertinent information missing on film mount	More than six items incorrectly mounted and/or pertinent information missing on film mount
Technique Evaluation	93 - 100	85 – 92	75 - 84	70 - 74	Below 70

A composite evaluation score of at least 4 must be obtained in order to demonstrate competency.

FMS Interpretation Competency Criteria

	5	4	3	2	1
Core Values, Infection Control, Patient Record Keeping	Ethical, professional behavior, followed all clinic policies and procedures, complied with infection control policies, documentation in record was legible, complete and accurate	Minor error(s) in one or two areas	Minor errors in multiple areas	Critical error in one area	Critical error in multiple areas
Interpretation	Combination of significant/ minor errors which result in ≤ 2 point deduction	Combination of significant/ minor errors which result in 2.5 - 4.5 point deduction	Combination of significant/ minor errors which result in 5 - 7 point deduction	Combination of significant/ minor errors which result in 7.5 - 9 point deduction	Combination of significant/ minor errors which result in > 9 point deduction

A composite evaluation score of at least 3 must be obtained in order to demonstrate competency.

RESOURCES

A. Human Resources

1. Faculty

Lisa P. Thomas, R.D.H., D.D.S.
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Email: Lisa.P.Thomas@uth.tmc.edu

Kenneth Abramovitch, D.D.S., M.S.
Availability: M-F
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Wenjian Zhang, DDS, MS, PhD
Availability: M-F
Phone: 713-500- 4154, Room 1.076
Email: Wenjian.Zhang@uth.tmc.edu

2. Support Staff

Anita B. Rodriguez, CDA - *Sr Support Specialist*
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Inga Leon, CDA, LRT - *Assistant Chief Radiologic Technologist Supervisor*
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Liliana Arvizu, CDA - *Dental Radiologic Technologist*
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B. Foundational Knowledge

Courses

DENS	1503	Oral Histology and Embryology
DENF	1601	Dental Anatomy I
DENF	1502	Gross Anatomy
DEPS	1614	Operative Dentistry I
DEPF	2614	Operative Dentistry II
DENF	2703	Oral and Maxillofacial Radiology I

DENF 3703 Oral and Maxillofacial Radiology II

C. Foundational Skills

Courses

DENF 2703 Oral and Maxillofacial Radiology I

ACTION PLAN

Selecting the appropriate radiographs for a radiographic examination is a judicious process that must be approved by a supervising faculty member. The requisition must state the reason(s) why the appropriate radiograph(s) is/are necessary. In most instances, the reason pertains to identifying the presence or lack of specific disease processes either affecting the entire dentition or specifically identified areas of the jaws. The supervising faculty member's EPR approval is accomplished with the electronic signature of the requisition entry in the patient's Tx History.

Intraoral Radiographic Procedures

If a student is taking an FMS under concurrent care, the student assignment record must reflect this delegation. Students taking radiographs delegated from another clinician must also be aware of the need and indications for the radiographs in order to perform in a responsible and professional manner. Familiarity with the patient's needs facilitates the overall delivery of professional services in the Dental Branch clinics.

Diagnostic radiographic procedures are taken under the direct supervision of radiology faculty or technicians in the main radiology clinic (Rooms 1.071 and 1.069), and Rooms 112, 114, 115. Reservation of a radiology room is made using axiUm. Bring your patient, film-holding devices and any other necessary materials, to the Radiology Clinic. Begin the technique procedure after check-in for infection control and obtaining faculty or technician approval. **If the FMS is to be a competency for either technique or interpretation, electronic approval must be given by the Radiology staff/faculty member prior to beginning the procedure in order to receive competency credit.** Once the radiographs are taken and scanned, the technicians check the radiographs for any remakes that are deemed necessary. When the radiographs are considered satisfactory with regard to diagnostic quality, they can be scored for the technique evaluation. After completion of procedures for any particular session, make an accurate and complete entry into the patient's electronic permanent record. At this time, Evaluation Forms must also be completed to receive credit for any completed procedures.

Radiographs taken during assessment are to be interpreted by the student to whom the patient is later assigned. The interpretation must be completed prior to the treatment planning appointment so that the information gained during the interpretation can be incorporated into the treatment plan. The interpretation is reviewed, evaluated and approved by one of the attending radiology faculty members. Credit will be given for the FMS procedure if it is completed prior to the treatment planning appointment. Electronic approval for the treatment plan should not be entered in axiUm unless the radiographic interpretation has been completed. If the interpretation is not completed in a timely manner, credit will not be given.

Panoramic Radiographs

Panoramic procedures are taken under the direct supervision of radiology faculty or technicians. Students develop patient management and technical skills in panoramic radiography by working with the technician during the panoramic exposure and then completing the interpretation with Radiology faculty. Students may recruit patients for this procedure either from their own patient family, assessment rotation, delegation from another student or assignment from the Radiology Clinic. An appointment for the panoramic radiograph must be scheduled in axiUm. The patient's electronic record must have a written request along with the diagnostic need for the radiograph approved by the supervising faculty member. The requisition is approved electronically by a supervising faculty member's EPR signature in the Tx History. The requisition must state the reason(s) why the panoramic radiograph is necessary. Scheduling appointments and obtaining written requests are not the responsibility of the student if patients are delegated from the Radiology Clinic. Similar to intraoral radiographic procedures, students taking

panoramic radiographs delegated from another clinician must also be aware of the need and indications for the radiograph. Familiarity with the patient's needs facilitates the responsible delivery of professional services in the Dental Branch clinics.

Once the panoramic image is obtained, the Tx History entry is checked by the attending faculty/staff to ensure that the student has entered all pertinent information. If so, the radiology faculty/staff member electronically approves the technique procedure. Then the panoramic radiograph must be shown to an attending radiology faculty member to determine if a supplemental panoramic interpretation exercise is necessary to receive credit. Panoramic radiographs taken on assessment patients are to be interpreted by the student to whom the patient is assigned. The interpretation must be completed prior to the treatment planning appointment so that the information gained during the interpretation can be incorporated into the treatment plan. The interpretation is reviewed, evaluated and approved by one of the attending radiology faculty members. Electronic approval for the treatment plan should not be entered in axiUm unless the radiographic interpretation has been completed. If the interpretation is not completed in a timely manner, credit will not be given for the procedure.

Panoramic radiographs are often requested for limited dental conditions (eg. position of impacted teeth, evaluation of mixed dentition stage, third molar pericoronitis, single tooth odontalgia, etc...). In such cases, there are often limited signs of radiographic disease. Consequently, the interpretation findings are very limited. Students must have the panoramic radiograph approved for panoramic interpretation credit by a radiology faculty member. If the panoramic radiograph has limited panoramic findings, a supplemental panoramic interpretation exercise is necessary to receive interpretation credit. The assigned panoramic interpretation exercise must be completed by the end of the semester in order to receive academic credit for the panoramic procedure (i.e., Both panoramic technique and interpretation are required for academic credit. Supplemental panoramic interpretation exercises may need to be completed as part of the panoramic requirement for assessment, pediatric dentistry, urgent care, graduate (prosthodontic, OMFS, AEGD, etc...) or routine undergraduate clinic patients. If the 00330 Step 2 interpretation on an assigned exercise is not completed in a timely manner by the end of the current semester, credit will not be given for 00330 Step 1 of the procedure.

A numerical score of 3 is assigned for the panoramic technique. Panoramic interpretations are evaluated in a manner similar to the intraoral radiographic interpretations.

A student may interpret up to two (2) FMS procedures; or one (1) FMS and two (2) panoramic procedures per day.

In order to maintain proficiency in radiographic technique and interpretation, it is necessary for the student to take radiographs on a continual basis during the academic school year.

EVALUATION METHODS

Overall Course Evaluation

Third-year students will be evaluated in this course as follows:

<i>Competency Assessment</i>	<i>70%</i>
<i>Daily Evaluation in Clinical Technique and Interpretation</i>	<i>20%</i>
<i>Daily Evaluation in Clinical Practice</i>	<i>10%</i>

The Clinical Practice component will be based upon core values, infection control, and record keeping.

Clinical Competency Assessments

- 2 FMS Technique Competency Assessments
- 2 FMS Interpretation Competency Assessments
- 2 Panoramic Interpretation Competency Assessments

The first FMS **technique** competency assessment may be taken any time after September 12th of the fall semester. The first FMS **interpretation** competency assessment may be performed upon receipt of a passing grade on the DENF 3703 mid-term examination. The second FMS technique and interpretation competency assessments must be completed during the spring semester. Only one competency exam (FMS or Panoramic) can be taken per day. The intraoral interpretation competency must be taken on either assigned hard copy FMS images, digital images that are assigned on UTHSC-H Blackboard, or on recently exposed digital images viewed on Radiology clinic monitors. The panoramic competencies may be taken anytime during the spring semester and will be performed on either assigned hard copy panoramic images, digital images that are assigned on UTHSC-H Blackboard, or on recently exposed digital images viewed on Radiology clinic monitors. A student will be expected to perform another competency technique if they receive a score of less than 85% on any technique competency assessment. Similarly, they will have to perform another competency interpretation if they receive less than 75% on any interpretation competency.

If the first FMS competency interpretation is not completed by the end of the fall semester, then the student will take a mass exam competency to be scheduled in January, 2010. Similarly, if the second FMS and panoramic competency interpretations are not completed by 04/16/10, then the student will take a mass exam competency to be scheduled during the last two weeks of the spring semester clinic.

Daily Clinical Productivity

Third year dental students are expected to continually expose and interpret radiographs throughout the academic year to maintain their radiographic skills. If it is determined that this has not occurred, the student will be assessed a 5% penalty of their final grade.

Daily Evaluations

Daily evaluations are assigned as follows:

Excellent	(93 - 100%)	Acceptable
Above Average	(85 - 92%)	Acceptable
Average	(75 - 84%)	Acceptable
Below Average	(70 - 74%)	Unacceptable
Failure	(< 70%)	Unacceptable

A legend of technique errors and the point deductions for technique and interpretation evaluations are listed on the Radiographic Evaluation Form.

PCU¹ values for radiology procedures are assigned in the following manner:

Procedure	PCU Value
0210.1 Intraoral - complete series technique	2.0
0210.2 Intraoral - complete series interpretation	2.0
0210.3 Intraoral - complete series competency technique	2.0
0210.4 Intraoral - complete series competency interpretation	2.0
0211.1 ² Intraoral - partial series technique	1.0
0211.2 ² Intraoral - partial series interpretation	1.0
0272.1 Two Bitewings technique	0.20
0272.2 Two Bitewings interpretation	0.20
0273.1 Three Bitewings	0.30
0273.2 Three Bitewings interpretation	0.30
0274.1 Four Bitewings technique	0.40
0274.2 Four Bitewings interpretation	0.40
0330.1 Panoramic film technique	1.0
0330.2 Panoramic film interpretation	1.0
0330.4 Panoramic film competency interpretation	1.0

¹ Used for CLIN 3014 Clinical Practice I evaluation

² Denotes partial FMS procedures, a minimum of 5 to a maximum of 11 intraoral exposures.

Remediation

A procedural step in either technique or interpretation receiving a score of less than 75% will require a student to perform a remediation exercise to demonstrate competent clinical skills. For an unacceptable score (less than 75%) on technique, a student must complete a 20-film FMS on DXTTR at an 85% competency level. For an unacceptable score (less than 75%) on interpretation, an interpretation report on another assigned case must be completed, at a passing level of $\geq 75\%$.

APPENDIX

RADIOGRAPHIC INTERPRETATION REPORT GUIDE

The University of Texas Dental Branch at Houston

The interpretation report should be based on radiographic (not clinical) findings and must be completed prior to the Treatment Planning appointment. Any findings in this report that require action or that will affect the Treatment Plan must be entered as Interpretation Findings in the Progress Notes of the patient's electronic chart.

MINIMAL REQUIREMENTS FOR AN INTERPRETATION COMPETENCY ARE THE FOLLOWING:

Maxillary Antra:.....one significant finding
Trabecular Bone:.....one significant finding
Caries:.....one C3 depth caries must be present in at least two quadrants
Periodontal:.....radiographic evidence of periodontal disease in at least two quadrants
Other Findings:.....three different types of findings

The following are examples of significant findings:
Print **N.S.F.** if **No Significant Findings** are present.

Maxillary Antra

- **Size and Position:** describe location of sinus with regard to the anterior & posterior teeth, apices and ridge e.g. The sinus cavities extend from the maxillary tuberosity area to the first premolar region. The apices of #2, #3, #4 and #13, #14, #15 superimpose the sinus ~ 3 mm.
- **Continuity of Sinus Floor:** describe any variation in the sinus floor outline such as areas of reverse concavity or if there is a loss of the sinus floor outline (i.e., break in the continuity) etc...
- **Sinus Mucosa:** describe any variation of the mucosa lining the sinus
- **Density:** describe any variation noted within the sinus air spaces; clear sinuses are radiolucent

Trabecular Bone

- **Periapical Disease:** list specific teeth involved and describe the lesion in terms of density, size and margin outline and appearance
e.g. #4 - periapical radiolucency ~ 4mm in diameter with corticated margin
- **Density:** describe any variation or alteration of trabecular pattern
- **Pathoses:** make a comprehensive description of any pathological entity/entities noted
 - Site, size, shape and symmetry
 - Borders - degree of definition
 - Contents - radiolucent, radiopaque, mixed radiolucent - radiopaque
 - Association to normal anatomic structures - helps localize and determine origin, extent and aggressivity of lesions

Caries

For each quadrant, list the teeth with carious lesions by identifying:

- surface(s) affected and
- degree of severity (C1, C2, C3, C4) for each surface
- mark recurrent caries i.e. "R"
- for severely decayed teeth, i.e., C4 on multiple surfaces, list as *gross coronal decay*
- if decay is severe and there is no supracrestal tooth structure, list as root tip

e.g. #19-D (C2); i.e. distal surface of #19 with C2 virgin caries
#5-M (C3) R; i.e. mesial surface of #5 with C3 recurrent caries
#30-D (C3) M (C2); i.e. distal surface of #30 with C3 and mesial surface of #30 with C2 virgin caries
#13 & #14 – gross coronal decay

Periodontal Disease

- **Bone loss:** list areas of crestal bone resorption and state amount in **mm**;
do not list for each individual tooth
state whether the loss is; - localized or generalized and,
 - horizontal or vertical
- **Furcation(s):** list teeth where furcation areas demonstrate bone loss
e.g. localized vertical 3 mm bone loss noted between #30 and #31; furcation involvement
- **Root Anatomy:** list any unusual root morphology (dilacerations, atypical multiple roots, etc...)
- **Crown to Root Ratio:** identify teeth with ratios more severe than 1:2
- **Calculus:** state whether generalized or list specific areas if isolated

Other Findings

- abrasion
- apices in proximity to IAN
 mental foramen
- attrition
- dens in dente
- dilacerations
- drifting, migration & tilting
- erosion
- hypercementosis
- impactions with degree of bone
 (partial or complete) and angle
 of long axis (mesioang., etc...)
- macrodonts
- microdonts
- missing teeth (congenital)
- peg laterals
- RCT fillings - list material
 and state if over/underfill
- restorations with under contours
 over contours, open margins, or
 overhangs
- supernumeraries
- taurodont
- etc...

FMS Radiographic Anatomy Recognition

Students should be able to recognize any of these anatomical landmarks if the landmarks are present on the films.

ANTERIOR REGION

Border of nasal cavity, septum, and anterior spine
Canine eminence / lateral fossa
Incisive (nasopalatine) foramen
Incisive canal - left and right walls
Median palatal (intermaxillary) suture

Nasal conchae
Nasal fossa
Nasal membrane
Soft tissue of the nose (tip and ala)

Genial tubercles
Lingual foramen
Lower / inferior border of mandible

Mental fossa
Mental ridge / protuberance

Soft tissue of lip

POSTERIOR REGION

Coronoid process
Hamulus
Maxillary sinus, septa, walls and membrane
Maxillary tuberosity
Nasolabial fold

Posterior superior alveolar (PSA) canal
Pterygoid plate
Zygomatic arch,
- zygomatic (malar) bone,
- zygomatic (malar) process of maxilla

External oblique ridge
Internal (mylohyoid) ridge
Mandibular (inferior alveolar) canal

Mental foramen
Submandibular fossa

LANDMARKS FOUND IN ANTERIOR AND POSTERIOR AREAS

Alveolar crest
Cancellous bone
- normal variations of trabecular bone pattern
Cementum
Dentin

Enamel
Lamina dura
Nutrient canals
Periodontal ligament space
Pulp

Basic Panoramic Anatomy

I. BONE LANDMARKS

- | | |
|---|--|
| a. Anterior nasal spine (rare) | f. Infraorbital foramen |
| b. Hamulus (rare) | g. Maxillary sinus outlines-anterior, posterior, superior & inferior outlines; internal septa(e) |
| c. Hard palate | h. Maxillary tuberosity |
| d. Incisive foramen (rare) | i. Orbit-floor and lateral wall |
| e. Infraorbital canal | j. Zygomatic arch segments; zygoma, malar process of maxilla, & temporal component |
| k. Condyle | q. Mandibular canal |
| l. Coronoid process | r. Mandibular foramen |
| m. External oblique ridge | s. Mental foramen |
| n. Genial tubercles (rare) | t. Mental ridge (rare) |
| o. Glenoid fossa | u. Sigmoid notch |
| p. Lingual foramen | v. Styloid process |
| w. Articular eminence | aa. Mastoid process |
| x. Cervical spine; C ₁ - C ₇
- anterior tubercle of C ₁
- odontoid process of C ₂ | bb. Nasal septum / Vomer |
| y. Hyoid bone | cc. Panoramic innominate line; malar process & lateral wall of orbit |
| z. Lateral pterygoid plate (rare) | |

II. SOFT TISSUE SHADOWS AND AIR SPACES

- | | |
|-------------------------------------|--------------------------------|
| a. Border of soft palate | i. Nasolabial fold |
| b. Commissure (rare) | j. Nasopharynx (Nasal Pharynx) |
| c. Common nasal meatus; nasal fossa | k. Maxillary sinus |

- d. Dorsum of tongue
- e. Ear lobe
- f. Ethmoid sinus (rare)
- g. External acoustic meatus (canal)
- h. Nasal conchae (turbinates)
- i. Oropharynx (Oral pharynx)
- m. Palatoglossal airspace
- n. Pterygomaxillary fissure
- o. Tip of nose
- p. Upper and lower lip (rare)

III. GHOST IMAGES

- a. Cervical spine
- b. Jewelry - earrings, tongue stud, etc...
- c. Ramus (of mandible)

IV. DOUBLE IMAGES

- a. Cervical spine
- b. Epiglottis
- c. Hard palate
- d. Hyoid bone
- e. Soft palate
- f. Uvula

V. MACHINE PARTS

- a. Bite block
- b. Bite rod
- c. Chin rest
- d. Lateral head positioners

RADIOGRAPHIC INTERPRETATION REPORT

Write a brief description of your findings under the following headings. Print N.S.F. if No Significant Findings are present. Competency exercises must meet criteria as stipulated on the radiographic interpretation report guideline sheet located in the radiology viewing room and must be approved by an attending radiology faculty member prior to performing the interpretation exercise.

Maxillary Antra: The sinus cavity superimposes the apices of #2 - #4 & #13 - #15 by 3 mm. The right sinus extends from the maxillary tuberosity to #5 and the left sinus extends from the maxillary tuberosity to #11. The left sinus floor appears to be slightly elevated at the apex of #14 with thickening of the mucoperiosteum. The right sinus lumen has slight radiopacity, possibly sinusitis.

Trabecular Bone: A fusiform, well-demarcated radiopaque area ~ 5 mm x 5 mm noted between #8 and #9 (mesiodens); 4 mm diameter radiolucency noted at #14 apex with slightly corticated border (DD: granuloma, periradicular cyst); well-demarcated radiopaque areas ~ 5 mm in diameter located in area of mandibular premolars consistent with bilateral mandibular tori.

Caries:

Upper Right #2 D (C3) R, #4 M (C2) D (C2), #5 M (C3), #6 D (C3)

Upper Left #9 D (C2), #10 M (C2), #14 M (C4), #15 O (C3) D (C2)

Lower Left #18 D (C3), #19 MOD (C3)R, #20 D (C3), #21 root tip

Lower Right #28 M (C2) D (C3), #29 MO (C3), #30 MOD (C3) R

Periodontal Disease: Generalized horizontal bone loss ~ 2-3 mm present. Localized vertical bone loss between #4 and #5 ~ 2mm. Furcation involvement #19. Generalized crown to root ratio 1:1.5 except for #2, #15, #23, and #24 with a crown to root ratio of 1:1. Widened PDL #3 and #14. Generalized interproximal calculus.

Other Findings: RCT#10 gutta percha overfilled 1mm and RCT #30 mesial root silver point and distal root gutta percha underfilled 3 mm. #1 and #16 full bony mesioangular impaction; #17 and #32 mesioangular partial bony impaction. Attrition noted on all maxillary and mandibular anteriors. Overhang #3 M. Undercontoured amalgam #13 D. Missing restorative crown #31. Dens in dente #7 and #10. Dilacerated mesial root #18 and #31.

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Maxillary Antra: The sinus cavity extends from the tuberosity to the first premolar region bilaterally. The sinus floor extends inferiorly to the level of the posterior tooth apices. It extends to within 1.0mm of the crest of the edentulous alveolar ridge in the #3 area. There is 1-3mm thickening of the sinus membrane in the left sinus. The sinus membrane is 6.0mm thick in the #3 area. A smooth, sessile radiopacity ~10mm x5mm with a dense trabecular pattern superimposes the posterior right sinus and is consistent with the appearance of a palatal torus.

Trabecular Bone: #7 has a 3mm wide PDL at the apex consistent with pulpal necrosis/PA disease. The generalized trabecular pattern is dense. A horizontal root fracture is present at the apical 1/8 of #20.

Caries:

Upper Right #4 M (C3)

Upper Left NSF

Lower Left #20 D (C3)

Lower Right NSF

Periodontal Disease: Generalized horizontal bone loss ~ 2-3 mm in the mandible. There is 4-6mm horizontal bone loss in the anterior maxilla, 7mm in the left maxilla. #5 has a 7mm vertical bony defect. Furcation involvement #1 & #14. Generalized crown to root ratio 1:1.5 except #6 - #11 is 1:1 and #12 - #14 1.5:1

Other Findings: RCT#8 Ag point overfilled by 2mm. Severe attrition #22 - #27. #5 D overhang
