

MAMMOGRAPHY CLASS

Faculty Information:

Instructor: Jarek Stelmark MBA RT (R CT MR CV QM BD VI) ARRT

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Course Description:

The objective of this class is to prepare students for the successful completion of the post-primary examination in Mammography.

Class Meetings:

Lectures: **TBA**

Required Textbooks:

Merill's Atlas of Positioning and Procedures: 3 volume Set,
(latest edition)

Andolina, V, Lille, S.I. Mammographic Imaging
(latest edition)

Additional Required Course Materials:

The following copyrighted materials are the sole property of the instructor. They are available on the instructor's website and are free for students enrolled in this course only.

Computed Tomography : PPT presentations

Mammography Class

Outline

<i>Class</i>	<i>Topic</i>	<i>Chapter</i>	<i>Time</i>
1	<p><u><i>Patient Care 1</i></u></p> <p>I. Patient Communication</p> <ol style="list-style-type: none"> 1. Pre-exam instruction 2. Explanation of the procedure 3. Patient education <ol style="list-style-type: none"> a. Guidelines for mammography b. Breast self-examination d. Clinical breast examination e. Typical patient dose 	PowerPoint	Online Self-paced
2	<p><u><i>Patient Care 2</i></u></p> <p>II. Patient Assessment</p> <ol style="list-style-type: none"> 1. Epidemiology of breast cancer 2. Incidence of breast cancer 3. Risk factors of breast cancer 4. Breast cancer treatment options <ol style="list-style-type: none"> a. Non-surgical options b. Reconstruction 	PowerPoint	Online Self-paced
3	<p><u><i>Image Acquisition 1</i></u></p> <ol style="list-style-type: none"> 1. Design Characteristics of mammography units <ol style="list-style-type: none"> a. kVp range b. X-ray tube c. Compression paddles d. Grids e. System geometry 	PowerPoint	Online Self-paced

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4	<p><u>Image Acquisition 2</u></p> <ol style="list-style-type: none"> 1. Digital acquisition <ol style="list-style-type: none"> a. full field digital mammography b. Digital breast tomosynthesis 2. Image receptors 3. Monitors 4. Digital Image display 5. Computer aided detection 	PowerPoint	Online Self-paced
5	<p><u>Quality Assurance</u></p> <ol style="list-style-type: none"> 1. Accreditation and certification 2. MQSA regulations <ol style="list-style-type: none"> a. Personnel requirements b. Record keeping c. Medical outcomes audit 3. Enhanced quality using the inspection program (EQUIP) 	PowerPoint	Online Self-paced
6	<p><u>Mammographic Technique and Evaluation</u></p> <ol style="list-style-type: none"> 1. Technical factors 2. Evaluation of Image quality 	PowerPoint	Online Self-paced
7	<p><u>Anatomy and Physiology</u></p> <ol style="list-style-type: none"> 1. Localization Terminology 2. External Anatomy 3. Internal Anatomy 4. Cytology 		Online Self-paced

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8	<p><u><i>Pathology1</i></u></p> <ol style="list-style-type: none"> 1. Mammographic appearances and reporting terminology <ol style="list-style-type: none"> a. Architectural distortion b. Characteristic of masses c. Characteristic of calcifications 2. Benign pathology of mammographic appearances 	PowerPoint	Online Self-paced
9	<p><u><i>Pathology2</i></u></p> <ol style="list-style-type: none"> 1. High Risk pathology and mammographic appearance 2. Malignant Pathology 	PowerPoint	Online Self-paced
10 11	<p><u><i>Mammographic Positioning 1</i></u></p> <ol style="list-style-type: none"> 1. Views <ol style="list-style-type: none"> a. Craniocaudal b. Mediolateral c. Lateromedial d. Exaggerated craniocaudal e. cleavage f. Axillary g. Axillary Tail h. Tangential i. Nipple in profile j. Anterior compression k. Spot compression l. Magnification 	PowerPoint	Online Self-paced

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12	<p><u><i>Special Patient Situations 1</i></u></p> <ol style="list-style-type: none"> 1. Chest wall variations 2. Irradiated breast 3. Reduction mammoplasty 4. Postsurgical breast 5. Male patients 6. Kyphotic/lordotic patients 7. Protruding abdomen 8. Implanted devices 9. Breast augmentation 10. Lactating breast 11. Extremely large/small breast 	PowerPoint	Online Self-paced
13	<p><u><i>Imaging Examinations</i></u></p> <ol style="list-style-type: none"> I. Mammography 2. Breast Ultrasound 3. Breast MRI 4. Sentinel node mapping 	PowerPoint	Online Self-paced
14	<p><u><i>Interventional Procedures</i></u></p> <ol style="list-style-type: none"> 1. Informed consent 2. Biopsy ultrasound and stereotactic 3. Cyst aspiration 4. Fine needle aspiration biopsy 5. Needle localization 6. Interventional imaging <ol style="list-style-type: none"> a. Specimen b. localization c. Handling and disposing of biohazardous materials 	PowerPoint	Online Self-paced

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