4 • CT for Technologists

Screening with CT

CT for Technologists is a training program designed to meet the needs of radiologic technologists entering or working in the field of computed tomography (CT). This series is designed to augment classroom instruction and on-site training for radiologic technology students and professionals planning to take the review board examinations, as well as provide a review for those looking to refresh their knowledge base in CT imaging.

Release Date:
April 2016

Expiration Date
May 1, 2019

This material will be reviewed for continued accuracy and relevance.

Refer to www.icpme.us for current expiration dates.

*Terms in **bold** appear in the glossary.*

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The skill of the technologist is the single most important factor in obtaining high quality diagnostic images. A successful CT examination is the culmination of many factors under the direct control of the technologist.

4 CT for Technologists • Screening with CT introduces the learner to the benefits of screening for coronary artery disease, lung cancer, colorectal cancer, and visceral fat. These important exams not only detect cancer early in the disease process, but assist both the physician and patient in the management of general health and lifestyle.

The unit is comprised of five chapters. To receive credit, you must complete all five chapters.

EDUCATIONAL CREDIT

This program has been approved by the American Society of Radiologic Technologists (ASRT) for 2.75 hours of ARRT Category A continuing education credit.

OBJECTIVES

After completing this material, the learner should be able to:

- Describe atherosclerosis and its effect on the function of the coronary arteries
- Explain how CT calcium scoring is performed and calculated
- Discuss how the results of calcium scoring can impact patient management
- Implement the patient preparation protocol for coronary CTA
- Explain when and how prospective and retrospective triggering should be used
- Describe the benefits of dual source CT in cardiac imaging
- Compare the benefits and disadvantages of screening CCTA to stress testing and cardiac catheterization
- Describe the types of artifact that appear on cardiac CTA and how to minimize or eliminate them
- Discuss how to reduce radiation dose for CCTA and how it compares to other cardiac testing
- List the risks for developing lung cancer
- Discuss who should be screened for lung cancer
- Implement a low-dose CT lung cancer screening protocol
- Describe techniques for minimizing radiation dose
- Discuss what makes low-dose CT an effective screening tool
- Explain the risks of undergoing low-dose CT for lung cancer screening
- Discuss the health risks associated with excess visceral fat
- Explain how visceral fat builds up and how to minimize it
- Implement CT protocols for visceral fat volume measurement
- Explain when colon cancer screening should be performed
- Prepare the patient to undergo virtual colonoscopy CT exam
- Implement the scanning protocol for virtual colonoscopy
- Discuss the value of virtual colonoscopy CT as a screening tool
- Compare the advantages and disadvantages of virtual colonoscopy CT to conventional colonoscopy

HOW TO ENROLL

Time to complete this activity is 2.75 hours.

- Click **ENROLL NOW**, **CONTINUE** through the shopping cart, **CONFIRM ORDER**, and **ACCESS COURSE NOW**.
- Once you are enrolled, you can return to this course anytime by logging to your account at www.icpme.us.
- Click on MY ACCOUNT, then click on the course title

HOW TO RECEIVE CREDIT

- Login to your account at www.icpme.us
- Once you register and pay for the course, you may review the material on-line or download and print it.
- After reviewing the material, login to your account at www.icpme.us, click on MY ACCOUNT, and click on the Course title.
- From the course home page, click the tabs for POSTTEST and for EVALUATION.
- A passing grade of at least 75% is required to receive credit. You may take the test up to three times.
- Upon receipt of a passing grade, you will be able to print a certificate of credit from your account at www.icpme.us.

Your certificate of credit will remain in your account as a permanent record of credits earned at www.icpme.us

TUITION

Tuition for this course includes: downloadable course content, unlimited access to the course, Certificate of Credit.

ACKNOWLEDGMENTS

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In addition to managing the 3D Lab at Fairfax Radiological Consultants (FRC), Mr. Jennings oversees CT protocols at six outpatient CT centers and has served as Director/Instructor of the GE/FRC *Cardiac CTA for CT Technologists* course.

Mr. Jennings co-authored an article published in *Radiology* with James P. Earls, MD, titled *Prospectively gated transverse coronary CT angiography versus retrospectively gated helical technique: improved image quality and reduced radiation dose.*

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