

The Russell H. Morgan
**DEPARTMENT OF RADIOLOGY
AND RADIOLOGICAL SCIENCES**
presents

Course Director:
Elliot K. Fishman, MD

CT Angiography and 3D Imaging: Current State-of-the-Art

*with special focus on Cardiac CT
and hands-on workstation training*

October 17-19, 2008

Hilton Baltimore Hotel • Baltimore, Maryland



JOHNS HOPKINS
M E D I C I N E

CONTINUING MEDICAL EDUCATION

Office of Continuing Medical Education

The Johns Hopkins University
School of Medicine
720 Rutland Avenue, Turner 20
Baltimore, Maryland 21205-2195

Course Director:
Elliot K. Fishman, MD

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AND RADIOLOGICAL SCIENCES**
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and 3D Imaging:**
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*with special focus on Cardiac CT
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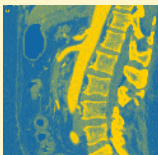
October 17-19, 2008

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DATED MATERIAL

Description



The rapid evolution of multidetector CT (MDCT) provides the radiologist with unprecedented capabilities to acquire high resolution CT datasets. The development of 64 slice MDCT scanners provide the capability for subsecond data acquisition of isotropic datasets. Many now are recognizing that these datasets represent far more than just a stack of images, but represent a volume of data that needs to be analyzed as a volume in what is commonly called volume visualization. Within this term lies a range of capabilities spanning the gamut from 3D imaging to CT angiography to virtual imaging. Applications like CT angiography, virtual colonoscopy and 3D orthopaedic imaging are becoming more mainstream and new applications like coronary CTA and runoff studies promise to be the next frontier in CT scanning. This course addresses the principles, exam techniques and clinical applications in 3D imaging and CT angiography, with a special focus on new applications like CTA and cardiac imaging. This is done through a series of lectures and panel discussions, as well as hands-on experience with a state-of-the-art real-time imaging workstation. There will be ample time for discussion, as well as for defining how to use these exciting technologies in your clinical practice.

Objectives

Upon completion of this activity, participants will be able to:

- Define the basic principle of 3D imaging, including the various reconstruction techniques (VRT, MIP)
- Demonstrate how to optimally acquire data for CT angiography and virtual imaging
- Practice using a 3D workstation to understand the advantages of real-time rendering
- Describe the role of MDCT in cardiac imaging, including CT angiography of the coronary arteries
- Describe the renal applications of CT angiography
- Define the role of CT angiography in the evaluation and follow-up of the liver, pancreas and aortic aneurysms
- Discuss the role of CT angiography and virtual imaging in thoracic disease
- Define the role of virtual colonoscopy

Who Should Attend

This activity is intended for Radiologists, Diagnostic Radiologists, Cardiologists, and Radiologic Technologists.

Accreditation Statement

The Johns Hopkins University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

Credit Designation Statement

The Johns Hopkins University School of Medicine designates this educational activity for a maximum of 19 **AMA PRA Category 1 Credits**™ for the general sessions and a maximum of 2 **AMA PRA Category 1 Credits**™ for the hands-on training sessions. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Johns Hopkins Speakers

Elliot K. Fishman, MD, FACP

*Activity Director
Professor of Radiology and Radiological Science and Oncology
Director, Diagnostic Imaging and Body CT*

Laura M. Fayad, MD

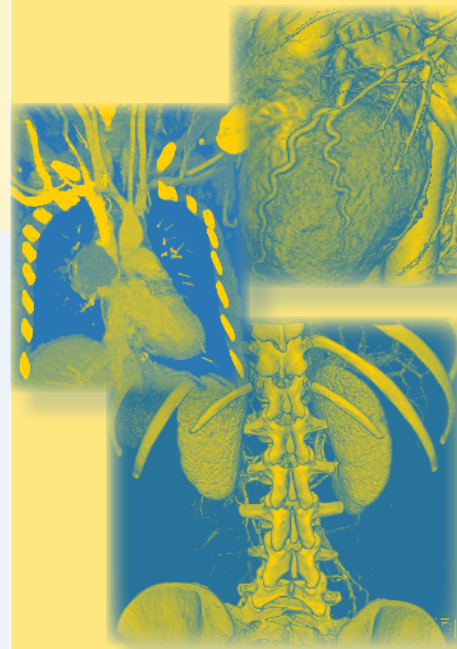
Assistant Professor of Radiology and Radiological Science and Orthopaedic Surgery

Karen M. Horton, MD

Associate Professor of Radiology and Radiological Science

Beatrice Mudge

CT Imaging Manager



Guest Speakers

Jonathan W. Berlin, MD

*Associate Professor of Radiology
Evanston Northwestern Healthcare
Northwestern University
Evanston, Illinois*

DeAnn M. Haas

*Global Manager
Cardiac CT Manager
GE Healthcare
Milwaukee, Wisconsin*

David G. Heath, PhD

*Vice President, HipGraphics, Inc
Baltimore, Maryland*

Derek R. Ney, BS

*President, HipGraphics, Inc
Baltimore, Maryland*

Jill E. Jacobs, MD

*Associate Professor of Radiology
Chief, Cardiac Imaging
NYU Medical Center
New York, New York*

John F. Phelps

*CT Manager
WebSpace | MMWP | Oncology
Siemens Medical Solutions
Malvern, Pennsylvania*

Marilyn Siegel, MD

*Professor of Radiology and Pediatrics
Washington University School of Medicine
Malinckrodt Institute of Radiology
St. Louis, Missouri*

Other Credit

This activity is pending Category A approval for technologists.

Policy On Speaker And Provider Disclosure

It is the policy of The Johns Hopkins University School of Medicine that the speaker and provider disclose real or apparent conflicts of interest relating to the topics of this educational activity, and also disclose discussions of unlabeled/unapproved uses of drugs or devices during their presentation(s). The Johns Hopkins University School of Medicine OCME has established policies in place that will identify and resolve all conflicts of interest prior to this educational activity. Detailed disclosure will be made in the activity handout materials.

Program

Friday, October 17, 2008

- 7:00 - 8:00 **Registration** and Continental Breakfast
- 8:00 - 8:10 **Welcome and Course Overview**
Elliot K. Fishman, MD, FACR
- 8:10 - 8:50 **CT Angiography: Current State-of-the-Art**
Elliot K. Fishman, MD, FACR
- 8:50 - 9:30 **Virtual Colonoscopy: Part 1 – How to Do It**
Karen M. Horton, MD
- 9:30 - 10:10 **3D Visualization: MPR vs. VRT vs. MIP**
Elliot K. Fishman, MD, FACR
- 10:10 - 10:30 Refreshment Break
- 10:30 - 11:10 **Virtual Colonoscopy: Part 2 – How We Read Them**
Karen M. Horton, MD
- 11:10 - 11:50 **Reimbursement Trends in CT/CTA and Beyond**
Jonathan W. Berlin, MD
- 11:50 - 12:30 **CTA/3D Imaging of Liver Tumors**
Elliot K. Fishman, MD, FACR
- 12:30 - 1:45 Lunch
- 1:45 - 2:25 **3D Imaging of Pancreatic Tumors**
Karen M. Horton, MD
- 2:25 - 3:05 **MDCT of the Kidneys: Pearls and Pitfalls**
Jonathan W. Berlin, MD
- 3:05 - 3:45 **CTA/3D of the Kidney: Current Applications**
Elliot K. Fishman, MD, FACR
- 3:45 - 4:00 Refreshment Break
- 4:00 - 4:40 **MDCT/3D of Gastric Pathology**
Karen M. Horton, MD
- 4:40 - 5:20 **The Role of the CT Technologist in a 3D World**
Beatrice Mudge

Concurrent Hands-on Workstation Training – These sessions will be held during the general session on Friday, Saturday and Sunday. Each participant will be assigned to one hands-on session. Please indicate on the Registration Form your first, second and third choices.

- 1:45 - 3:45 **Hands-on Workstation Session 1**
- 4:00 - 6:00 **Hands-on Workstation Session 2**

Saturday, October 18, 2008

- 7:00 - 8:00 Continental Breakfast
- 8:00 - 8:40 **Normal Cardiac Anatomy and Evaluation of Coronary Artery Anomalies**
Jill E. Jacobs, MD
- 8:40 - 9:20 **Cardiac CT: Basic Principles and Concepts**
DeAnn M. Haas
- 9:20 - 10:00 **How to Perform an Optimized Cardiac CT Angiogram**
Jill E. Jacobs, MD
- 10:00 - 10:20 Refreshment Break
- 10:20 - 11:00 **CTA and 3D Imaging in Children: Practical Techniques and Applications**
Marilyn Siegel, MD
- 11:00 - 11:40 **Post-Processing and Dictating Cardiac CT Angiograms**
Jill E. Jacobs, MD
- 11:40 - 12:30 **CTA and 3D Imaging of Thoracic Arterial Anomalies**
Marilyn Siegel, MD
- 12:30 - 1:30 Lunch
- 1:30 - 2:10 **3D CT of the Airways**
Karen M. Horton, MD
- 2:10 - 2:50 **CTA and 3D Imaging of Thoracic Venous Anomalies**
Marilyn Siegel, MD
- 2:50 - 3:30 **Business Issues Regarding Cardiac CTA**
Jonathan W. Berlin, MD
- 3:30 - 3:45 Refreshment Break
- 3:45 - 4:15 **How I Do 3D Rendering**
Elliot K. Fishman, MD, FACR
- 4:15 - 4:45 **How I Do Cardiac CT: The GE Approach**
DeAnn M. Haas
- 4:45 - 5:15 **How I Do Cardiac CT: The Siemens Approach**
John F. Phelps

CONCURRENT HANDS-ON WORKSTATION SESSION

- 8:00 - 10:00 **Hands-on Workstation Session 3**
- 10:20 - 12:20 **Hands-on Workstation Session 4**
- 1:30 - 3:30 **Hands-on Workstation Session 5**
- 3:30 - 5:30 **Hands-on Workstation Session 6**

Sunday, October 19, 2008

- 7:30 - 8:00 Continental Breakfast
- 8:00 - 8:50 **3D Imaging of the Small Bowel and Mesentery**
Elliot K. Fishman, MD, FACR
- 8:50 - 9:30 **Musculoskeletal CT: 3D Applications**
Laura M. Fayad, MD
- 9:30 - 10:15 **CT Angiography: Miscellaneous Applications**
Elliot K. Fishman, MD, FACR
- 10:15 - 10:30 Refreshment Break
- 10:30 - 11:10 **Musculoskeletal CT and MRI: When is CT the Study of Choice**
Laura M. Fayad, MD
- 11:10 - 11:50 **CT Angiography: Pearls and Pitfalls**
Elliot K. Fishman, MD, FACR
- 11:50 - 12:00 **Summary Overview**
Elliot K. Fishman, MD, FACR
- 12:00 **Adjourn** – Please complete and return the Evaluation and Credit Report Form

CONCURRENT HANDS-ON WORKSTATION TRAINING

- 8:00 - 10:00 **Hands-on Workstation Session 7**

The Johns Hopkins University School of Medicine takes responsibility for the content, quality and scientific integrity of this CME activity.

This schedule is subject to change.

Upcoming CT Continuing Medical Education Activities

Computed Body Tomography – The Cutting Edge
February 12-15, 2009
Disney Yacht and Beach Club Resort
Orlando, Florida

CT Angiography and 3D Imaging: Current State-of-the-Art
With special focus on Cardiac CT and hands-on workstation training
Spring 2009
Location TBA

Advanced Topics in Multidetector CT Scanning
July 31-August 7, 2009
A Cruise to Alaska, Departs from Seattle, Washington

CT Angiography and 3D Imaging: Current State-of-the-Art
With special focus on Cardiac CT and hands-on workstation training
Fall 2009
Location TBA

General Information

Registration

Friday, October 17, 2008 – 7:00 – 7:55 a.m.

Location

Hilton Baltimore
401 West Pratt Street
Baltimore, Maryland 21201

Fees

Registration Cut-Off Date:
Friday, October 17, 2008

Methods of Payment: Payment by check or credit card must accompany registration form prior to the activity. On-site payments by credit card only. Foreign payments must be by credit card or with a U.S. Dollar World Money Order. The registration fee includes instructional materials, continental breakfasts, refreshment breaks and lunches.

Physicians \$ 600

Residents*/Fellows*/Allied Health Professionals \$ 500
*with verification of status

You will receive a confirmation by e-mail if you have provided your e-mail address. Otherwise confirmation will be sent by mail. If you have not received it by Friday, October 10, 2008, call (410) 502-9634 to confirm that you are registered. Certificates of attendance will be mailed by December 2, 2008.

The Johns Hopkins University reserves the right to cancel or postpone any activity due to unforeseen circumstances. In this event, the University will refund the registration fee but is not responsible for travel expenses.

Late Fee And Refund Policy

A \$50 late fee applies to registrations received after 5:00 p.m. EST on Friday, October 10, 2008. A handling fee of \$50 will be deducted for cancellation. Refund requests must be received by fax or mail by Friday, October 10, 2008. No refunds will be made thereafter. Transfer of registration to another Johns Hopkins conference in lieu of cancellation is not possible.

Hotel And Travel Information

We strongly encourage you to book your accommodations at the Hilton Baltimore, which is the conference headquarters hotel. The Johns Hopkins Office of CME makes every effort to secure the best rate for overnight accommodations. The rate is part of a negotiated conference package that incorporates many services. By staying at the host hotel and booking within the room block, you help

us maintain current conference benefits and keep future registration fees reasonable. Please consider this when making your overnight accommodations decision.

Hilton Baltimore

Phone: (800) HILTONS
(443) 573-8732
FAX: (443) 573-8799

Online Hotel Reservations:
<http://www.hilton.com/en/hil/groups/personalized/BWICCHH-JHM-20081016/index.jhtml>

Hotel Reservation Cut-Off Date: September 25, 2008

The ideal destination, the Hilton Baltimore, is neatly situated in Baltimore's scenic Inner Harbor, directly opposite Oriole Park at Camden Yards. The Hotel is directly linked by covered pedestrian sky bridge to the Baltimore Convention Center and located near many of the city's leading historic and cultural attractions. Call the Hilton Baltimore directly to make your reservations and mention that you are attending the **Johns Hopkins CT Angiography and 3D Imaging: Group Code JHM DBLB** course to receive the special group room rate of \$219, single or double, plus tax. On-site parking is available at an additional charge. Check-in time is 3:00 p.m.

Call United Airlines at (800) 521-4041 for discounted rates and refer to Meeting ID Number 549TJ.

Emergency Calls

During the days of this activity only, October 17 – 19, 2008, direct emergency calls to the Hotel, (443) 573-8700. Messages will be posted for participants.

Americans With Disabilities Act

The Johns Hopkins University School of Medicine fully complies with the legal requirements of the ADA and the rules and regulations thereof. **Please notify us if you have any special needs.**

To Register Or For Further Information

Register Online www.HopkinsCME.edu
Register by Phone (410) 502-9634
Register by Fax (410) 955-0807
Confirmation/Certificates (410) 502-9634
General Information (410) 955-2959
E-mail the Office of CME at cmenet@jhmi.edu

Visit our CT Education website at:
www.ctisus.com

Registration Form

Course Number 80018410

CT Angiography and 3D Imaging: Current State-of-the-Art

To Register: Online: www.HopkinsCME.edu **By phone:** (410) 502-9634 **By fax:** (410) 955-0807
Or mail this form to The Johns Hopkins University, Office of Continuing Medical Education,
P.O. Box 64128, Baltimore, Maryland 21264-4128. Include check payable to
HOPKINS/80018410, or include credit card information below

PAYMENT MUST ACCOMPANY FORM TO CONFIRM YOUR REGISTRATION

Please type or print clearly:

last name first name middle initial

primary degree (for name badge) primary specialty

preferred mailing address

city state ZIP + 4 code country

daytime telephone fax number

e-mail _____

You will receive confirmation notice by e-mail if you provide your e-mail address.

Check here if you wish to receive e-mail and/or fax notices about upcoming CME activities.

Registration Fees (please check)

Physicians \$600.

Residents*/Fellows*/Nurses/Allied Health Professionals \$500.

*with verification of status

For registrations received after 5:00 p.m. EST on October 10, 2008 please include a \$50 late fee.

On-site registrations are payable only by credit card.

Total amount enclosed \$ _____.

Concurrent Hands-on Workstation Training

Please indicate your first, second and third choices below. Each participant will be assigned to one session. Every effort will be made to assign you to your first choice. Workshop capacity is limited

Friday Session:

Session 1: _____ 1:45 – 3:45 p.m.

Session 2: _____ 4:00 – 6:00 p.m.

Saturday Session

Session 3: _____ 8:00 – 10:00 a.m.

Session 4: _____ 10:20 – 12:20 p.m.

Session 5: _____ 1:30 – 3:30 p.m.

Session 6: _____ 3:30 – 5:30 p.m.

Sunday Session

Session 7: _____ 8:00 – 10:00 a.m.

For Credit Card Registrations: VISA MASTERCARD DISCOVER AMEX

Card # _____ Exp. Date _____

Name as it appears on card _____
Please print clearly

Signature _____

Please notify us if you have any special needs. _____

What do you hope to learn by attending this activity? _____

JHU Faculty/Staff Only: Complete registration form and return with appropriate form below to OCME, Turner 20

Payment by Internal Order Number: The ION data Request Form, can be found online at:
<http://www.hopkinscme.edu/pdfs/IonRequest.pdf>

Payment by Tuition Remission: To apply for TR, go to:
<http://training.jhu.edu/html/EducationalAssistance/TuitionRemission.asp>.