

Magnetic Resonance Image Quality And Radiation Oncology Applications

An Educational Symposium for the Clinical Medical Physicist

Jerry Allison, Ph.D., Perry Sprawls, Ph.D., and Jon Trueblood, Ph.D., Course Directors
March 8-9, 2001

**Crowne Plaza Ravinia Hotel
Atlanta, Georgia**

Sponsored by:

**Southeast Chapter of the
American Association of Physicists in Medicine
(SEAAPM)**

Symposium Faculty

Perry Sprawls, Ph.D. Professor Department of Radiology Emory University School of Medicine	Edward F. Jackson, Ph.D. Associate Professor Department of Radiology U.T.M.D. Anderson Cancer Center
Jerry Allison, Ph.D. Professor Department of Radiology Medical College of Georgia	Ioannis Constantinidis, Ph.D. Associate Professor of Radiology Director, Division of Radiological Sciences Emory University School of Medicine
Wlad Sobol, Ph.D. Professor Department of Radiology University of Alabama, Birmingham	

Course Description:

The objectives of the symposium are to provide attendees with introductory knowledge of the magnetic resonance imaging process with emphasis on radiation oncology applications. It is designed especially for attendees who have little or no MRI experience. It begins with an introduction to the basic principles and then develops more specific topics such as imaging methods, spatial characteristics, and image quality factors. This is followed by presentations on several applications of MRI in the specific area of radiation oncology and treatment planning. The symposium is intended for medical physicists, especially those working in radiation oncology, and radiation oncologists. It will be of value to graduate students and residents who have an interest in MRI applications.

Lectures will be presented in a classroom format with ample opportunity for discussion. A course notebook will be provided to attendees.

Symposium Schedule

Wednesday, March 7, 2001

6:00 PM - 8:00 PM	Symposium Registration and drinks
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Thursday, March 8, 2001

7:00 AM	Registration & Continental Breakfast	
8:15 AM	Welcome & Introduction	Jon Trueblood
	Symposium Session I General Principles	
8:30AM-9:30AM	Magnetic Resonance Image Characteristics	Perry Sprawls
9:30AM-10:30AM	The Magnetic Resonance Imaging System	Jerry Allison
10:30AM-11:00AM	Break	
11:00AM-12:00N	Magnetic Resonance and Tissue Magnetization	Perry Sprawls
12:00PM-1:30PM	Lunch Break	
	Symposium Session II Imaging Methods	
1:30PM-2:30PM	Magnetic Resonance Imaging Methods and Protocols	Jerry Allison
2:30PM-3:30PM	Magnetic Resonance Image Spatial Characteristics	Perry Sprawls
3:30PM-4:00PM	Break	
	Session III Image Quality	
4:00PM-4:45PM	Magnetic Resonance Image Detail and Noise	Perry Sprawls
4:45PM-5:30PM	Magnetic Resonance System Evaluation with The ACR Accreditation Phantom	Wlad Sobol

Friday, March 9, 2000

7:00 AM - 8:00 AM	Continental Breakfast	
	Session IV Advanced Methods	
8:30AM-9:15AM	Functional MRI: Principles and Applications in Oncology	Ed Jackson
9:15AM-10:00AM	Magnetic Resonance Spectroscopy Principles and Applications	Ioannis Constantinidis
10:00AM-10:30AM	Break	

Session V Radiation Oncology Applications		
10:30AM-11:15AM	Applications of Advanced MR Techniques in Oncologic Imaging	Ed Jackson
11:15AM-12:00PM	Image-Guided Therapy Planning Using MRI Data: Spatial Accuracy and Imaging Protocol Considerations	Ed Jackson
12:00PM-12:30PM	Panel Discussion	All Faculty

SEAAPM 2001 Annual Scientific Meeting Tentative Schedule

Friday, March 9, 2001

1:30PM - 2:00PM	Optimized Conformal Therapy: Non-IMRT Treatment Strategies	John Gibbons
2:00PM - 2:30PM	Dose Algorithms in the IMRT Era	Nikos Papanikolaou
2:30PM - 3:00PM	Best Paper Award: To Be Announced	
3:00PM - 3:30PM	Afternoon Break in Commercial Exhibit Area	
3:30PM - 4:00PM	Flat Panel Displays: Acceptance & Routine QA	TBA
4:00PM - 4:30PM	The Physicist's Role in PACS and RIS Systems	TBA
4:30PM - 5:00PM	Physics Labs for Diagnostic Radiology Residents; Where Increased Exposure is a Good Thing	George David
Evening	Night Out at The Crown Plaza Ravinia.	

Saturday, March 10, 2001

7:00AM - 8:00AM	Continental Breakfast	
8:00AM - 8:20AM	Best Student Paper Award: To Be Announced	
8:20AM - 8:40AM	Design & Shielding for Radiation Therapy Rooms with Direct Shielded Doors	Patton McGinley
8:40AM - 9:10AM	Overview of Professional Standards, Guidelines, and Recommendations	TBA
9:10AM - 10:00AM	Understanding & Implementing the TG-51 Protocol	RPC Staff
10:00AM - 10:30AM	Afternoon Break in Commercial Exhibit Area	
	Parallel Afternoon Workshops	
10:30AM - 12:30PM	Digital Mammography Presentations	TBA
10:30AM - 12:30PM	Task Group 51 Protocol Workshop	RPC Staff
12:30PM - 1:30PM	Luncheon for Chapter Meeting Registrants	
1:30PM - 3:00PM	Business Meeting, Election Results and Awards Presentations	