Department of Radiation Oncology

The Department of Radiation Oncology (http://radonc.wustl.edu) was created on July 1, 2001, having been part of the Mallinckrodt Institute of Radiology for many decades. The department has a broad academic program that focuses on excellence in patient care and the development of new treatment paradigms; innovative research in each of the four divisions of clinical, physics, biology and bioinformatics; and teaching for residents in radiation oncology, medical students and allied health personnel. The department is one of the largest, most academically balanced and best equipped in the country, and is responsible for all radiation therapy procedures at Washington University Medical Center. Our faculty have gained international recognition for innovative technological advances in physics and treatment planning, biological research, computer applications and clinical investigation.

Milestones

- Implementation of novel respiratory gating algorithms
- Development of biomarkers of DNA repair capacity of tumors
- Demonstrated the use of proton therapy
- Implementation of first Mevion S250 single-room proton therapy system
- Implementation of real-time MRI guidance for radiation therapy treatment with the ViewRay system. Real-time MRI guidance provides the ability to see tumors move in real-time during a patient's entire treatment. This helps ensure that tumor targets are hit and healthy tissue is spared.
- Acquisition of high-intensity focused ultrasound (HIFU) with MRI thermometry mapping

The Department of Radiation Oncology currently occupies a large and convenient clinical facility on the lower level of the Center for Advanced Medicine. The downtown clinical facility includes nine treatment rooms, three simulator rooms, and a brachytherapy center with two high dose-rate treatment units. Furthermore, the facility houses the latest Gamma Knife, the ICON unit. We have advanced treatment planning computer systems for 3D conformal and intensity-modulated radiation therapy. We have six linear accelerators with on-board CT imaging capability. The brachytherapy suite includes capability for high dose-rate remote afterloading and for image-guided permanent prostate seed implants. Interstitial and external hyperthermia treatments are also available. In 2013, we implemented a new type of proton treatment facility, using a superconducting synchrocyclotron mounted on a gantry. In addition, we implemented the world's first MRI-guided radiation therapy treatment program in 2014. The department provides radiation therapy treatment at Siteman Cancer Center-South County, Siteman Cancer Center at Barnes-Jewish St. Peters Hospital, and Alton Memorial Hospital.

The Physics faculty have research laboratories and offices on the fourth floor of the Clinical Sciences Research Building plus designated areas adjacent to the clinical facility in the Center for Advanced Medicine (CAM) building. The Radiation Biology laboratory and faculty offices are housed at the 4511 Forest Park Building and Wohl Hospital Building.

Website: http://radonc.wustl.edu

Degrees & Requirements

The Department of Radiation Oncology works closely with the Department of Biomedical Engineering to jointly offer a post-PhD Graduate Certificate in Medical Physics. Further information about this program can be found in the Biomedical Engineering (http://bulletin.wustl.edu/grad/engineering/biomedical/#degreerequirements) section of this Bulletin.

While the Department of Radiation Oncology does not offer its own degree, some of the department's courses are open to students in the MD and MSTP (MD/PhD) programs. Further information about the MD and MSTP degrees can be found in the Degrees & Programs Offered (http://bulletin.wustl.edu/medicine/degrees) section of this Bulletin.

Research

Please visit the Department of Radiation Oncology website (http://radonc.wustl.edu/research) for more information about current research in the department.

Faculty

Department Head
Dennis Hallahan, MD

Clerkship Director
Maria Thomas, MD

Director of Education in Medical Physics
Rao Khan, PhD

Visit our website for more information about our faculty (https://radonc.wustl.edu/faculty) and their appointments.

A

Christopher Abraham, MS, MD
Assistant Professor of Radiation Oncology (Pending Executive Faculty Approval) (primary appointment)
MS Washington Univ in St. Louis 2011
MD Saint Louis University 2006
BS Medical College Georgia 2005
Michael Bernard Altman, PHD
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PHD University of Chicago 2010

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BS Princeton University 1999
PHD Washington Univ in St. Louis 2009
MD Washington Univ in St. Louis 2009

Abdelkareem Azab, PHD
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PHD Hebrew University 2007

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MS Washington Univ in St. Louis 1983

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S. Lee Kling Professor of Radiation Oncology (primary appointment)
BA Drury College 1989
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PHD Ohio University 2011

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PHD University of Groningen 2000
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MD University of MO Kansas City 2005

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PHD University of NC Charlotte 2013
BS University of Tehran 2004
MS Shahid Beheshti University 2007

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BS Dartmouth College 2004
MD Washington Univ in St. Louis 2012
PHD Washington Univ in St. Louis 2016

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MD Osmania Medical College 1973

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Associate Professor of Radiology
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MS Finch Univ of Health Sciences 1997

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BS University of Puerto Rico 1996
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Professor of Radiation Oncology (primary appointment)
PHD Andhra University 1991
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BS Washington Univ in St. Louis 2002  
MS Washington Univ in St. Louis 2004  
PHD Washington Univ in St. Louis 2008

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Professor of Radiation Oncology (primary appointment)  
Professor of Obstetrics and Gynecology  
Professor of Radiology  
MBA Washington Univ in St. Louis 1990  
MS University of Kentucky 1978  
BS University of Kentucky 1974  
MD University of Kentucky 1982

Yuxing Gu, PHD  
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PHD University of MO St Louis 2014

H

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BA University of Michigan 1988  
MD Howard University 1992  
M PH Saint Louis University 1995

Dennis E Hallahan, MD  
Professor of Radiation Oncology (primary appointment)  
Elizabeth H and James S McDonnell III Distinguished Professor of Medicine  
Head of the Department of Radiation Oncology  
Professor of Biomedical Engineering  
Professor of Cell Biology and Physiology  
Professor of Molecular Microbiology  
Professor of Pathology and Immunology  
MD Rush University 1984  
BS University of Illinois 1980

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Assistant Professor of Radiation Oncology (primary appointment)  
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PHD University of CA Los Angeles 2003

K

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Instructor in Radiation Oncology (primary appointment)  
BS University of Saint Thomas 2008  
MS Louisiana St University 2011

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Associate Professor of Radiation Oncology (primary appointment)  
Associate Professor of Biomedical Engineering  
MD Quaid-Azam University 1997  
PHD McMaster University 2003

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Assistant Professor of Radiation Oncology (primary appointment)  
MD University of Pittsburgh 2012  
BS University of California 2006

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MS Louisiana St University 2012  
BS University of Montana Missoula 2009  
PHD Univ of Massachusetts Lowell 2016

L

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PHD Duke University 2009  
MD Duke University 2010

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Professor of Radiation Oncology (primary appointment)  
PHD Friedrich-Alexander Universit 2001  
BS Huashong University of Science 1992  
MS Chinese Academy of Sciences 1995

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PHD Huazhong University of Science 2001  
BS Huazhong University of Science 1994

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MD National Taiwan University 1960  
PHD University of Chicago 1968

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PHD University of Mississippi Med 1999  
BS Fudan University 1990

M

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MD University of Wisconsin-Madiso 2010

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BS Union College New York 2007  
PHD University of Texas Austin 2014

Jeff Michael Michalski, MD, MBA
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**Distinguished Professor of Radiation Oncology (primary appointment)**

- Vice Chairman of Radiation Oncology
- MD Univ of Wisconsin Madison 1986
- MBA Washington Univ in St. Louis 2001
- BS Univ of Wisconsin Madison 1982

**Timothy John Mitchell, MS, PHD, PHD**

Instructor in Radiation Oncology (primary appointment)

- MS Washington Univ in St. Louis 2007
- PHD University of MO St Louis 2014
- BS John Carroll University 2005
- PHD Washington Univ in St. Louis 2011

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Assistant Professor of Radiation Oncology (primary appointment)

- DDENT University of Missouri 1977
- MS University of Missouri 1984
- BS University of Missouri 1972

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Professor of Radiation Oncology (primary appointment)

- MS University of Colorado Boulder 1996
- PHD University of MO Columbia 2011
- BS Cameron University 1994

**Robert J Myerson, PHD, MD**

Professor Emeritus of Radiation Oncology (primary appointment)

- BA Princeton University 1969
- PHD University of California 1974
- MD University of Miami 1980

**Chunjoo Park, ME, BE, PHD**

Assistant Professor of Radiation Oncology (primary appointment)

- ME The Catholic Univ of Korea 2009
- BE Hanyang University Hospital 2007
- PHD University of CA Berkeley 2013

**Stephanie Mabry Perkins, MD**

Associate Professor of Radiation Oncology (primary appointment)

- MD University of Tenn Memphis 2005
- BS Union University 2001

**James Vernon Piephoff, MD**

Instructor in Clinical Radiation Oncology (primary appointment)

- BS Citadel 1985
- MD University of South Carolina 1989

**James A Purdy, MA, PHD**

Emeritus Professor of Radiation Oncology (primary appointment)

- MA University of Texas Austin 1969
- BS Lamar University 1967
- PHD University of Texas Austin 1971

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- PHD Georgia Tech 2014
- MS Georgia Tech 2008

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- MD Duke University 2011
- BS Vanderbilt University 2007

**Clifford Grant Robinson, MD**

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- MD Case Western Reserve Univ 2004
- BS University of Pittsburgh 2000

**Buck Edward Rogers, PHD, MA**

Professor of Radiation Oncology (primary appointment)

- Adjunct Professor of Chemistry (Courtesy Affiliation)
- Professor of Radiology
- BS Loyola University Chicago 1989
- PHD Washington Univ in St. Louis 1995
- MA Washington Univ in St. Louis 1991

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Instructor in Clinical Radiation Oncology (primary appointment)

- MS Baroda Medical College 1974

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Associate Professor of Radiation Oncology (primary appointment)

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- PHD Wayne State University 2003
- BS University of Madras 1991

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- Associate Professor of Cell Biology and Physiology
- MD Washington Univ in St. Louis 2004
- BS Duke University 1995
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- PHD1 Banaras Hindu University 2000

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- MD Saint Louis University 2010
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PHD Saint Louis University 2006
BS Creighton University 2000
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MD University of Texas Austin 1991
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MD West China University 1983

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MS Illinois Institute of Technol 2001
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BS Tianjin University 2005
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MD Washington Univ in St. Louis 1996
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BA University of Chicago 1995
PHD University of Chicago 2000
Courses

Post-PhD Graduate Certificate in Medical Physics

For course information, please visit the Biomedical Engineering (http://bulletin.wustl.edu/grad/engineering/biomedical/#courses) page of this Bulletin.

MD/MSTP Programs

For course information, please visit the Radiology (http://bulletin.wustl.edu/medicine/departments/radiology/#courses) page of this Bulletin.