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 health 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 linear accelerator rooms, three simulator rooms, and a brachytherapy center with two high dose-rate treatment units. Furthermore, the facility houses the latest Gamma Knife Perfexion unit. We have advanced treatment planning computer systems for 3-D conformal and intensity-modulated radiation therapy. We have five 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. We recently implemented a new type of proton treatment facility, using a superconducting synchrocyclotron mounted on a gantry, and also recently implemented the world's first MRI-guided radiation therapy treatment program. Additionally, the department provides radiation therapy treatment at BJ South County, BJ West County, BJ Christian Hospital Northeast, and BJ St. Peters.

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 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

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

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

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

Michael Bernard Altman, PHD
Assistant Professor of Radiation Oncology (primary appointment)
PHD University of Chicago 2010

Anthony John Apicelli III, MD, PHD
Assistant Professor of Radiation Oncology (primary appointment)
MD Washington Univ in St. Louis 2009
BS Princeton University 1999
PHD Washington Univ in St. Louis 2009

Abdelkareem Azab, PHD
Assistant Professor of Radiation Oncology (primary appointment)
PHD Hebrew University 2007

B

Shahed Nicholas Badiyan, MD
Assistant Professor of Radiation Oncology (Pending Executive
Faculty Approval) (primary appointment)
BS University of Texas Austin 2005
MD University of Texas Austin 2009

Kathy Baglan
Instructor in Clinical Radiation Oncology (primary appointment)

Brian Christopher Baumann, MD
Assistant Professor of Radiation Oncology (primary appointment)
MD University of Pennsylvania 2012
BA Princeton University 2003

Walter R Bosch, BE, PHS, MS
Associate Professor of Radiation Oncology (primary appointment)
BE Washington Univ in St. Louis 1980
PHS Washington Univ in St. Louis 1990
MS Washington Univ in St. Louis 1983

Jeffrey D Bradley, MD
S. Lee Kling Professor of Radiation Oncology (primary appointment)
BA Drury College 1989
MD University of Arkansas 1993

C

Bin Cai, PHD
Instructor in Radiation Oncology (primary appointment)
PHD Ohio University 2011

Jochen Cammin, PHD
Instructor in Radiation Oncology (Pending Dean's Approval)
(primary appointment)
PHD University of Bonn 2004

David T Curiel, MD, PHD
Distinguished Professor of Radiation Oncology (primary appointment)
Professor of Medicine
Professor of Obstetrics and Gynecology
MD Emory University 1982
BA West Georgia College 1978
PHD University of Groningen 2000

D

Mackenzie Daly, MD
Assistant Professor of Radiation Oncology (primary appointment)
MD University of MO Kansas City 2005

Arash Darafsheh, PHD, PHD, MS, MS
Assistant Professor of Radiation Oncology (Pending Executive
Faculty Approval) (primary appointment)
PHD University of NC Charlotte 2013

Yuxing Gu, PHD
Assistant Professor of Radiation Oncology (primary appointment)
PHD University of MO St Louis 2014

H

Lannis Hall, MD, M PH
Assistant Professor of Clinical Radiation Oncology (primary appointment)
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
BS University of Illinois 1980
MD Rush University 1984

Jiayi Huang, MD
Assistant Professor of Radiation Oncology (primary appointment)
MD University of Massachussetts 2007

Geoffrey Douglas Hugo
Professor of Radiation Oncology (primary appointment)

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

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

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

Nels C Knutson, PHD, MS
Instructor in Radiation Oncology (primary appointment)
BS University of Montana Missoula 2009
PHD Univ of Massachusetts Lowell 2016
MS Louisiana St University 2012

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

Hua Li, PHD
Assistant Professor of Radiation Oncology (primary appointment)
BS Huazhong University of Science 1994
PHD Huazhong University of Science 2001

Hsiu-San Lin, PHD, MD
Professor Emeritus of Radiation Oncology (primary appointment)
PHD University of Chicago 1968
MD National Taiwan University 1960

Stephanie Markovina, MD
Assistant Professor of Radiation Oncology (primary appointment)
MD University of Wisconsin-Madiso 2010

Thomas Rolf Mazur, PHD
Instructor in Radiation Oncology (primary appointment)
BS Union College New York 2007
PHD University of Texas Austin 2014

Jeff Michael Michalski, MD, MBA
Carlos Perez Distinguished Professor of Radiation Oncology (primary appointment)
Vice Chairman of Radiation Oncology
MD Univ of Wisconsin Madison 1986
BS Univ of Wisconsin Madison 1982
MBA Washington Univ in St. Louis 2001

Timothy John Mitchell, PHD, MS, PHD
Instructor in Radiation Oncology (primary appointment)
PHD University of MO St Louis 2014
MS Washington Univ in St. Louis 2007
PHD Washington Univ in St. Louis 2011
BS John Carroll University 2005

Daniel F Mullen, MS, DDENT
Assistant Professor of Radiation Oncology (primary appointment)
PHD University of Missouri 1972
MS University of Missouri 1984
DDENT University of Missouri 1977

Sasa Matic, PHD, MS
Professor of Radiation Oncology (primary appointment)
Vice Chair Medical Physics and Clinical Strategy in Radiation Oncology
BS Cameron University 1994
PHD University of MO Columbia 2011
MS University of Colorado Boulder 1996

Robert J Myerson, PHD, MD
Professor Emeritus of Radiation Oncology (primary appointment)
PHD University of California 1974
BA Princeton University 1969
MD University of Miami 1980

Parag J. Parikh, MD
Associate Professor of Radiation Oncology (primary appointment)
Associate Professor of Biomedical Engineering  
BS Case Western Reserve Univ 1997  
MD Washington Univ in St. Louis 2001  

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)  
BS Union University 2001  
MD University of Tenn Memphis 2005  

James Vernon Piephoff, MD  
Instructor in Clinical Radiation Oncology (primary appointment)  
MD University of South Carolina 1989  
BS Citadel 1985  

James A Purdy, PHD, MA  
Emeritus Professor of Radiation Oncology (primary appointment)  
PHD University of Texas Austin 1971  
MA University of Texas Austin 1969  
BS Lamar University 1967  

Francisco Javier Reynoso, MS, PHD  
Instructor in Radiation Oncology (Pending Dean's Approval) (primary appointment)  
MS Georgia Tech 2008  
PHD Georgia Tech 2014  

Michael Charles Roach, MD  
Assistant Professor of Radiation Oncology (primary appointment)  
BS Vanderbilt University 2007  
MD Duke University 2011  

Clifford Grant Robinson, MD  
Associate Professor of Radiation Oncology (primary appointment)  
BS University of Pittsburgh 2000  
MD Case Western Reserve Univ 2004  

Buck Edward Rogers, MA, PHD  
Professor of Radiation Oncology (primary appointment)  
Adjunct Professor of Chemistry (Courtesy Affiliation)  
Professor of Radiology  
MA Washington Univ in St. Louis 1991  
PHD Washington Univ in St. Louis 1995  
BS Loyola University Chicago 1989  

Tapan Roy, MS  
Instructor in Clinical Radiation Oncology (primary appointment)  
MS Baroda Medical College 1974  

Lakshmi Santanam, MS, PHD  
Associate Professor of Radiation Oncology (primary appointment)  
BS University of Madras 1991  
MS University of Madras 1993  
PHD Wayne State University 2003  

Julie K Schwarz, MD, PHD  
Associate Professor of Radiation Oncology (primary appointment)  
Associate Professor of Cell Biology and Physiology  
MD Washington Univ in St. Louis 2004  
PHD Washington Univ in St. Louis 2004  
BS Duke University 1995  

Girdhar G Sharma, BS1, PHD1, MS1  
Assistant Professor of Radiation Oncology (primary appointment)  
BS1 Banaras Hindu University 1990  
PHD1 Banaras Hindu University 2000  
MS1 Banaras Hindu University 1992  

Joseph Rogers Simpson, MD, PHD  
Professor Emeritus of Radiation Oncology (primary appointment)  
MD Harvard University 1973  
PHD University of Chicago 1967  
BA Cornell University 1963  

Christopher Spencer, MA, MD, BAS  
Adjunct Instructor in Radiation Oncology (primary appointment)  
MA Truman State University 2006  
MD Saint Louis University 2010  
BAS Truman State University 2005  

William L Straube, MEE  
Associate Professor of Radiation Oncology (primary appointment)  
BS University of Illinois 1983  
MEE Washington Univ in St. Louis 1992  

Baozhou Sun, PHD, MS  
Assistant Professor of Radiation Oncology (primary appointment)  
BS Jilin Medical University 2000  
PHD College of William and Mary 2005  
MS College of William and Mary 2002  

Maria A Thomas, MD, PHD  
Assistant Professor of Radiation Oncology (primary appointment)  
MD Saint Louis University 2008  
PHD Saint Louis University 2006  
BS Creighton University 2000  

Wade L Thorstad, MD  
Associate Professor of Radiation Oncology (primary appointment)  
BS Trinity University 1986  
MD University of Texas Austin 1991  

Dinesh Thotala, PHD, MS  
Assistant Professor of Radiation Oncology (primary appointment)
Amaris Renee Tippey, PHD
Assistant Professor of Clinical Radiation Oncology (primary appointment)
PHD East Carolina University 2014

Christina Irene Tsien, MD
Professor of Radiation Oncology (primary appointment)
BS John Abbot College 1990
MD McGill University 1995

Gregory Riccardo Vlacich, MD, PHD
Assistant Professor of Radiation Oncology (primary appointment)
MD University of Chicago 2009
PHD University of Chicago 2007

Bruce J Walz, MD
Associate Professor of Clinical Radiation Oncology (primary appointment)
MD Washington Univ in St. Louis 1966
BA Washington Univ in St. Louis 1962

Xiaowei Wang, PHD
Associate Professor of Radiation Oncology (primary appointment)
PHD Tufts University 2000
BS Nankai University 1993

Jeffrey F Williamson
Professor of Radiation Oncology (Pending Executive Faculty Approval) (primary appointment)

Qin Yang, MD, PHD
Associate Professor of Radiation Oncology (primary appointment)
MD West China University 1983
PHD Heidelberg University 1997

Deshan Yang, MS, PHD
Associate Professor of Radiation Oncology (primary appointment)
MS Illinois Institute of Technol 2001
PHD Univ of Wisconsin Madison 2005
BS Tsinghua University, China 1992

Jin Zhang, PHD, MS
Instructor in Radiation Oncology (Pending Dean’s Approval) (primary appointment)
BS Tianjin University 2005
PHD University of Connecticut 2012

Imran Zoberi, MD
Professor of Radiation Oncology (primary appointment)
MD Washington Univ in St. Louis 1996
BS University of South Dakota 1992

Jacqueline Esthappan Zoberi, PHD
Associate Professor of Radiation Oncology (primary appointment)
BA University of Chicago 1995
PHD University of Chicago 2000

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