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 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.

A

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

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

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

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

B

Kathy Baglan
Instructor in Clinical Radiation Oncology (primary appointment)

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

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

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
BA West Georgia College 1978
MD Emory University 1982
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, MS, PHD, MS, PHD
Assistant Professor of Radiation Oncology (Pending Executive Faculty Approval) (primary appointment)
MS University of NC Charlotte 2011
PHD University of Pennsylvania 2015
BS University of Tehran 2004
MS Shahid Beheshti University 2007
PHD University of NC Charlotte 2013

Venkata Rao Devineni, MD
Associate Professor of Clinical Radiation Oncology (primary appointment)
MD Osmania Medical College 1973

Todd Alan DeWees, PHD, MSSP
Assistant Professor of Radiation Oncology (primary appointment)
PHD University of MO Columbia 2009
MSSP Arizona State University 2003
BA Dana College 2001

Igor Dmitriev, PHD
Assistant Professor of Radiation Oncology (primary appointment)
PHD SRC Vector 1994

H

H Michael Gach, PHD
Associate Professor of Radiation Oncology (primary appointment)
Associate Professor of Radiology
PHD University of Pittsburgh 1998

Jose L Garcia, MS
Assistant Professor of Radiation Oncology (primary appointment)
MS Finch Univ of Health Sciences 1997
BS University of Puerto Rico 1995

Hiram Alberto Gay, MD
Associate Professor of Radiation Oncology (primary appointment)
MD University of Puerto Rico 2000
BS University of Puerto Rico 1996

Sreekrishna M Goddu, PHD, MS
Associate Professor of Radiation Oncology (primary appointment)
PHD Andhra University 1991

Olga Leonidovna Green, PHD, MS
Assistant Professor of Radiation Oncology (primary appointment)
BS Washington Univ in St. Louis 2002
PHD Washington Univ in St. Louis 2008
MS Washington Univ in St. Louis 2004

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

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)
MD Howard University 1992
BA University of Michigan 1988
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 Massachusetts 2007

**Geoffrey Douglas Hugo**
Professor of Radiation Oncology (Pending Executive Faculty Approval) (primary appointment)

**K**

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

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

**Hyun Kim, MD**
Assistant Professor of Radiation Oncology (Pending Executive Faculty Approval) (primary appointment)
BS University of California 2006
MD University of Pittsburgh 2012

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

**L**

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

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

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

**M**

**Stephanie Markovina, MD**
Assistant Professor of Radiation Oncology (primary appointment)
MD University of Wisconsin-Madison 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, MBA, MD**
Carlos Perez Distinguished Professor of Radiation Oncology (primary appointment)
Vice Chairman of Radiation Oncology
MBA Washington Univ in St. Louis 2001
MD Univ of Wisconsin Madison 1986
BS Univ of Wisconsin Madison 1982

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

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

**Sasa Mutic, 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)
BA Princeton University 1969
PHD University of California 1974
MD University of Miami 1980

**P**

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

Chunjoo Park, PHD, ME, BE
Assistant Professor of Radiation Oncology (primary appointment)
PHD University of CA Berkeley 2013
ME The Catholic Univ of Korea 2009
BE Hanyang University Hospital 2007

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)
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
PHD University of Texas Austin 1971
BS Lamar University 1967

Michael Reilly, MS, PHD
Instructor in Radiation Oncology (primary appointment)
BS Univ of IL -Urbana-Champaign 2003
MS Univ of IL -Urbana-Champaign 2005
PHD Univ of IL -Urbana-Champaign 2009

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

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

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

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

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

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

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

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

Dinesh Thotala, MS, PHD
Assistant Professor of Radiation Oncology (primary appointment)
BS Bangalore University 1990
MS Bangalore University 1993
PHD Bangalore University 1998

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)
MD McGill University 1995
BS John Abbot College 1990

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

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

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

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

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

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

Jin Zhang, PHD, MS
Instructor in Radiation Oncology (Pending Dean's Approval) (primary appointment)
BS Tianjin University 2005
PHD University of Connecticut 2012
MS Tianjin Polytech University 2008

Tiezhi Zhang, PHD, MS
Assistant Professor of Radiation Oncology (primary appointment)
PHD Univ of Wisconsin Madison 2004
MS Drexel University 1999
BS Jilin Medical University 1994

Tianyu Zhao, PHD, MS
Assistant Professor of Radiation Oncology (primary appointment)
BS Shanghai Jiao Tong University 1998
PHD Washington Univ in St. Louis 2010
MS Shanghai Jiao Tong University 2001

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.