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

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

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Assistant Professor of Radiation Oncology (primary appointment)
**PHD Hebrew University 2007**

**B**

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MD University of Pennsylvania 2012  
BA Princeton University 2003

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MS Washington Univ in St. Louis 1983  
BE Washington Univ in St. Louis 1980  
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S. Lee Kling Professor of Radiation Oncology (primary appointment)  
MD University of Arkansas 1993  
BA Drury College 1989

**C**

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PHD Ohio University 2011

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PHD University of Bonn 2004

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Professor of Medicine  
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MD Emory University 1982  
BA West Georgia College 1978  
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**D**

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PHD University of Pennsylvania 2015  
PHD University of NC Charlotte 2013  
MS Shahid Beheshti University 2007  
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MD Osmania Medical College 1973

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

**G**

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Associate Professor of Radiation Oncology (primary appointment)  
Associate Professor of Radiology  
PHD University of Pittsburgh 1998

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BS University of Puerto Rico 1995  
MS Finch Univ of Health Sciences 1997

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PHD Andhra University 1991

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PHD Washington Univ in St. Louis 2008  
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Professor of Obstetrics and Gynecology  
Professor of Radiology  
MS University of Kentucky 1978  
BS University of Kentucky 1974  
MBA Washington Univ in St. Louis 1990  
MD University of Kentucky 1982

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PHD University of MO St Louis 2014

**H**

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Professor of Biomedical Engineering
Professor of Cell Biology and Physiology
Professor of Molecular Microbiology
Professor of Pathology and Immunology
MD Rush University 1984
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MS Chinese Academy of Sciences 1995

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Professor Emeritus of Radiation Oncology (primary appointment)
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M

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MA Washington Univ in St. Louis 1991
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BA Cornell University 1963
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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.