

CURRICULUM VITAE

Mark Charles Smith, M.D.
November 2010

I. EDUCATIONAL AND PROFESSIONAL HISTORY

A. List of institutions attended, board certification, licensure

8/1990 - 12/1993	B.S., Physics Iowa State University, Ames, IA
1/1994 - 6/1994	Biomedical Engineering Masters Degree Program University of Iowa, Iowa City, IA
8/1994 - 6/1995	Computer Science Masters Degree Program University of Iowa, Iowa City, IA
8/1995 - 6/1999	M.D., University of Iowa, Iowa City, IA
8/1999 - 6/2004	Radiation Oncology Residency Medical College of Wisconsin, Milwaukee, WI
1/2007 - 5/2009	Masters Degree in Medical Education University of Iowa, Iowa City, IA

Board certification

June 2005 - *present* American Board of Radiology (Radiation Oncology)

Licensure

July 2004 - *present* Iowa

B. Professional and Academic Positions

7/2004 - <i>present</i>	Assistant Professor, Department of Radiation Oncology University of Iowa, Iowa City, IA
7/2005 - <i>present</i>	Director, Radiation Oncology Residency Program Department of Radiation Oncology University of Iowa, Iowa City, IA

C. Honors and Awards

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| 1993 | Phi Beta Kappa Honor Society
Iowa State University, Ames, IA |
| 1993 | Sam Legvold Award for Outstanding Academic
Performance in Physics and Astronomy
Iowa State University, Ames, IA |
| 1993 | Laura Vernon Liberal Arts and Sciences Award
Iowa State University, Ames, IA |
| 2002 | Medical College of Wisconsin Cancer Center Research
Competition, 2 nd Place
Medical College of Wisconsin, Milwaukee, WI |
| 2004-2005 | Teacher of the Year Award
Association of Residents in Radiation Oncology (ARRO) |

D. Carver College of Medicine Medical Education Program

Masters in Medical Education Degree conferred on 5/15/09

II. TEACHING

A. Teaching assignments on semester by semester basis (least to most recent)

2004 – 2010	Neuro Oncology Tumor Board Contributor Urology Oncology Tumor Board Contributor
Spring 2005	Substitute Instructor, Case-Based Learning University of Iowa, Iowa City, IA
2005 - 2010	Facilitator, Personal and Professional Development CCOM, University of Iowa, Iowa City, IA
2007 - 2010	Instructor, Radiation Biology (77:103), 1 hour, University of Iowa, Iowa City, IA
2008 - 2010	Instructor, Radiation Biology for RTT Students Department of Radiation Oncology, 3 hours, University of Iowa

B. Students Supervised

Radiation Oncology Residents

Student			Board Certified
Heather Kaiser	2001	2005	Yes
Than Nygen	2001	2005	Yes
Terese Howes	2002	2006	Yes
Reena Pramanik	2002	2006	
Joel Simmons	2003	2007	Yes
David Mattson	2004	2008	
Casey Duncan	2005	2009	
Anna Olson	2006	2010	
Samuel Andrews	2006	2010	
Joni Buechler-Price	2007	2011	
Wenqing Sun	2007	2011	
Charles Murphy	2008	2012	
William Rockey	2008	2012	
Bryan Allen	2009	2013	
Ann Morris	2010	2014	
Arshin Sheybani	2010	2014	

University of Iowa Medical Students

Shane Hopkins, Fall 2004 – 2005, accepted into residency at the Roswell Park Cancer Institute

C. Other contributions to Institutional Programs

Residency Program Director: July 2005 - present

Initiatives and Accomplishments (least to most recent)

- Revised and updated the resident handbook
- Created electronic resident portfolios
- Implemented 360 degree and patient survey evaluations
- Made in-service exam questions available on ICON
- Placed ARRO key articles on ICON
- Initiated Mock Oral Board exams
- Created the Systems Based Practice Assignment
- Created the Practice Based Learning Assignment
- Arranged for residents to receive feedback on dictations/billing
- Arranged for incoming residents to receive basic textbooks
- Arranged for residents to receive annual funds for books
- Improved chart rounds by displaying dosimetry and e-chart
- Developed basic goals and objectives for each clinical service
- Required that all clinical rotations have an orientation
- Required that all clinical rotations provide mid-rotation feedback
- Revised resident and faculty evaluation forms
- RRC Site Visit in June 2009
 - Continued Accreditation, 4 year cycle
- Created the Friday Noon Dosimetry & Brachytherapy Conference
- Implemented conference evaluations
- Clarified goals and objectives for Nuclear Medicine, Radiology, and Private Practice elective rotations
- Arranged for a resident statistics course
- Arranged for a resident lecture on sleep deprivation and fatigue
- Created Radiosurgery rotation goals and objectives
- Revised resident vacation, travel, and sick leave policies

Radiation Oncology Clinical Instructor: July 2004 - present

- Clinical Instructor
- Case Conference Presenter and Facilitator (2-3 hours per month)

D. Course Materials

- Rotation goals and objectives for GU/CNS Oncology and Radiosurgery
- Systems Based Practice and Practice Based Learning Assignments
- Brachytherapy and Dosimetry Checklists

III. SCHOLARSHIP

A. Publications or creative works (least to most recent)

Peer Reviewed Journal Articles and Book Chapters

1. Anderson WB, Lakes RS, **Smith MC**, Holographic Evaluation of Warp in the Torsion of a Bar of Cellular Solid, *Cellular Polymers*, 14(1): 1-13, 1995
2. **Smith MC**, Ryken TC, Buatti JM, "Radiotoxicity Following Conformal Radiation Therapy for Benign Intracranial Tumors", *Neurosurg Clin N Am*. 2006 Apr; 17(2):169-80.
3. Buatti JM, Ryken TC, **Smith MC**, Sneed P, Suh JH, Mehta M, Olson JJ. Radiation Therapy of Pathologically Confirmed Newly Diagnosed Glioblastoma in Adults. *J Neurooncol*. 2008; 89(3): 313-37 PMID: 18712283.
4. Bylund KC, Bayouth JE, **Smith MC**, Hass C, Bhatia SK, Buatti JM. Analysis of interfraction prostate motion using megavoltage cone beam CT. *Int J Radiat Oncol Biol Phys*. 2008; 72(3): 949-56.
5. Bylund KC, Bhatia SK, **Smith MC**, Buechler-Price JL, Buatti JM, Bayouth JE, Hass AC. Interobserver Variation in Megavoltage Cone Beam CT (MV CBCT) Based Corrections in Head and Neck Image Guided Radiotherapy. *American Radium Society 2008 Annual Meeting Proceedings*, page 46. May 3-7, 2008, Laguna Niguel, CA.
6. Bylund KC, Bayouth JE, **Smith MC**, Siochi RA, Buatti JM. Geometric and Dosimetric Impact of Interfraction Prostate Motion Measured with Megavoltage Cone Beam CT. *International Journal of Radiation Oncology Biology Physics* 2008: 72(1): S338.
7. Muruganandham M, Bayouth JE, Kearney W, **Smith MC**, Buatti JM. Integration and Verification of 3T Magnetic Resonance Spectroscopic Imaging in Radiation Therapy Treatment Planning. *Medical Physics* 2008: 35: 2704.
8. Olson AK, **Smith MC**, Ryken TC, Hitchon PW, Pennington EC, Smith BJ, Bayouth JE, Buatti JM. Frameless Stereotactic Radiosurgery for Treatment of Intracranial Metastases. *International Journal of Radiation Oncology Biology Physics* 2008: 72(1): S203.
9. Muruganandham M, Bayouth JE, **Smith MC**, Buatti JM. Impact of 3-Tesla MR Spectroscopic Imaging in the Delineation of High Grade Glioma Target Volumes for Radiation Therapy Planning. *International Journal of Radiation Oncology Biology Physics* 2008: 72(1): S210.

10. Olson A, Ryken T, **Smith MC**, Bayouth JE, Pennington EC, Hitchon P, Buatti JM. Surgical Resection and Frameless Stereotactic Radiosurgery For Solitary Intracranial Metastatic Disease. *Neuro-Oncology* 2008; 10(5):912.

11. Muruganandham M, Bayouth J, **Smith MC**, et al. MO-EE-A4-02: Metabolic Changes in Malignant Brain Tumors During Mid-Course Radiation Therapy: Initial Findings of 3Tesla Volumetric Magnetic Resonance Spectroscopic Imaging.

Abstracts

1. Bylund KC, **Smith MC**, Bhatia SK, Bayouth JE, Hass AC, Buatti JM, Buechler-Price JL, "Interobserver Variation in Megavoltage Cone Beam CT (MV CBCT) Based Corrections in Head and Neck Image Guided Radiotherapy (IGRT). Accepted for presentation at 2008 American Radium Society Annual Meeting, Laguna Niguel, CA, May 2008.

2. Muruganandham M, Bayouth JE, Kearney W, **Smith MC**, Buatti JM Integration and verification of 3T magnetic resonance spectroscopic imaging in radiation therapy treatment planning. 2008 American Association of Physicists in Medicine National Meeting, July 27-31, Houston, TX.

3. Bylund KC, Bayouth JE, **Smith MC**, Siochi RAC, Buatti JM. Geometric and dosimetric impact of interfraction prostate motion measured with megavoltage cone beam CT. ASTRO Annual Meeting, Boston, MA, Sept 21-25, 2008.

4. Muruganandham M, Bayouth JE, **Smith MC**, Buatti JM. Impact of 3-Tesla MR spectroscopic imaging in the delineation of high grade glioma target volumes for radiation therapy planning. ASTRO Annual Meeting, Boston, MA, Sept 21-25, 2008.

5. Bylund KC, Bayouth JE, **Smith MC**, Buatti JM. Analysis of interfraction prostate motion using megavoltage cone beam CT. Submitted to ESTRO 27, Sept 14-18, 2008 in Goteborg, Sweden.

6. Duncan CE, Olson AK, **Smith MC**. Ultrasound versus cone beam CT for prostate localization in external beam radiotherapy: No evidence of early biochemical failure. Accepted for presentation at 2009 ARS Annual Meeting.

B. Areas of Research Interest and Current Projects

Investigator Initiated Clinical Trials (co-Investigator and designated supervising faculty)

- Outcome of permanent prostate brachytherapy for treatment of T1-T2 prostate cancer: the University of Iowa experience (Simmons, PI; IRB 200601728)
- Radiosurgery combined with embolization treatment for AVM: the University of Iowa experience. (Grignon PI; IRB 200410732)

Investigator Initiated Clinical Trials (co-Investigator)

Genitourinary

Evaluation of an Efficient Detector for the Megavoltage Cone Beam Computed Tomography (MVCBCT) Patient Positioning System, PI Dr. Ryan Flynn

Evaluation of Modified Radiation Therapy Imaging Beam Line, PI Dr. Ryan Flynn

Assessment of Daily Positional and Dosimetric Variations During Prostate and Head and Neck External Beam Radiotherapy Using Megavoltage Conebeam CT, PI Dr. Ryan Flynn

Phase II Study of Adenovirus/PSA Vaccine in Men with Hormone-Refractory Prostate Cancer, PI Dr. David Lubaroff

Phase II Study of Adenovirus/PSA Vaccine in Men with Recurrent Prostate Cancer after Local Therapy, PI Dr. David Lubaroff

Central Nervous System

Impact of 3-Tesla MR Spectroscopic Imaging in the Delineation of High Grade Glioma Target Volumes in Radiation Therapy Planning, PI Dr. Manickam Muruganandham

An Update on Clinical Experience with Frameless Radiosurgery for Patients with Intracranial Metastases, PI Dr. John Buatti

Verification of MRI Imaging Technique and Output, PI Dr. Manickam Muruganandham

Lung

Quantifying Radiation Induced Changes in Pulmonary Function in Irradiated and Non-Irradiated Lung Tissue, PI Dr. John Bayouth

Cooperative Group Trials (local co-investigator)

Genitourinary

CALGB 140602 / NCIC CTG PR.11: A phase III study of active Surveillance Therapy Against Radical Treatment in Patients with Favorable Risk Prostate Cancer (START), PI Dr. Daniel Vanea

RTOG 0415: A Phase III Randomized Study of Hypofractionated 3D-CRT/IMRT versus conventionally fractionated 3D-CRT/IMRT in Patients with Favorable Risk Prostate Cancer, accrued 2 patients

Central Nervous System

RTOG 0825 ACRIN 6686: Phase III double-blind placebo-controlled trial of conventional concurrent chemoradiation and adjuvant temozolamide plus bevacizumab versus conventional concurrent chemoradiation and adjuvant temozolamide in patients with newly diagnosed glioblastoma, PI Dr. Geraldine Jacobson, accrued 1 patient

RTOG 0614: A randomized, phase III, double-blind, placebo-controlled trial of memantine for prevention of cognitive dysfunction in patients receiving whole-brain radiotherapy, PI Dr. Geraldine Jacobson, accrued 1 patient

RTOG 0525: A phase III trial comparing conventional adjuvant temozolamide with dose-intensive temozolamide in patients with newly diagnosed glioblastoma, PI Dr. Geraldine Jacobson, accrued 2 patients

ECOG E3F05: Phase III study of radiation therapy with or without temozolamide for symptomatic or progressive low grade gliomas, PI Dr. Geraldine Jacobson

Sponsored National Clinical Trials (local co-investigator)

- C. Published reviews of Scholarship**
- D. Grants Received**

E. Invited Lectures, Conference Presentations, Visiting Professorships

Spring 2005	Urology Grand Rounds, University of Iowa, Iowa City IA
April 2005	University of Iowa Urology Conference, Screening Guidelines in the Elderly for Prostate Cancer, Des Moines IA
November 2005	Guest speaker, Prostate Cancer Support Group, University of Iowa Hospitals and Clinics, Iowa City IA
September 2006	Implementation of a Web-Based Radiation Oncology Residency Portfolio, 2006 ASTRO Health Services/Outcomes Research in Radiation Oncology Symposium, San Diego, CA
November 2006	Guest speaker, Prostate Cancer Research Group, University of Iowa Hospitals and Clinics, Iowa City IA
November 2006	Implementation of a Web-Based Radiation Oncology Residency Portfolio, 2006 RSNA, Chicago, IL
September 2007	Image Guided Radiation Therapy for Prostate Cancer, 2007 ISTRO, Iowa City, IA
November 2007	Comparison of Daily Conebeam CT and Ultrasound Imaging for Prostate Localization, 2007 RSNA, Chicago, IL
May 2008	Electronic Resident Portfolio, GME Symposium, University of Iowa Hospitals and Clinics, Iowa City IA
May 2008	A Systems Based Practice Assignment for Radiation Oncology Residents, GME Symposium, University of Iowa Hospitals and Clinics, Iowa City IA
October 2008	Fractionation Schedules and the BED Equation, Hematology/Oncology Conference, University of Iowa Hospitals and Clinics, Iowa City IA
April 2010	Scofield Oncology Nursing Conference, Image Guided Radiation Therapy for Prostate Cancer
April 2010	Iowa Urology Association Annual Meeting, Advances in Radiation Oncology for Prostate Cancer, Great River Medical Center, Burlington IA

F. Pending Decisions

IV. SERVICE

A. Memberships in Professional Organizations

<i>2000-current</i>	American Society of Therapeutic Radiology and Oncology
<i>2000-current</i>	American Medical Association
<i>2004-present</i>	Member, RTOG
<i>2005-present</i>	Board Certified, American Board of Radiology, Radiation Oncology
<i>2006-present</i>	Member, CALGB
<i>2006-present</i>	Member, CTSU

B. Clinical assignments since last promotion

C. Other contributions to institutional programs

Clinical Residency Program Director
Responsibilities

Screen resident applicants and invite students for interviews
Lead the resident selection committee that ranks applicants
Lead the department's quarterly Education Committee meetings
Assist in developing the resident rotation and conference schedule
Meet with residents to determine areas in need of improvement
Complete biannual performance reviews for each resident

University of Iowa Physicians

At-large member of the Faculty Practice Plan	2005 - 2007
Compliance, Credentialing, and Malpractice Subcom.	2007 - 2009

Graduate Medical Education Committee Member

GME Internal Review Committee Member	2005 - 2010
GME Program Modification Subcommittee	2006 - 2010

Iowa Carver College of Medicine Curriculum Renewal
Committee Member

2010