

PROMOTION RECOMMENDATION
UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF RADIATION ONCOLOGY

Daniel A. Hamstra, M.D., Ph.D., assistant professor of radiation oncology, Department of Radiation Oncology, Medical School, is recommended for promotion to associate professor of radiation oncology, with tenure, Department of Radiation Oncology, Medical School.

Academic Degrees:

Ph.D.	2001	University of Michigan
M.D.	2001	University of Michigan
B.A.	1993	Calvin College

Professional Record:

2007-present	Assistant Professor of Radiation Oncology, University of Michigan
2006-2007	Clinical Lecturer, Department of Radiation Oncology, University of Michigan

Summary of Evaluation:

Teaching: Dr. Hamstra is a dedicated, talented, and inspiring teacher. He has been particularly active in graduate medical education and has served on the graduate medical education committee in his department as well as in the resident application/review process for more than six years. In regards to clinical teaching, he spends 15-20 hours every week in direct one-on-one apprenticeship and teaching of individual residents. His dedication to teaching has also extended to running a series of Socratic review sessions each spring with the graduating residents to help them with their understanding and preparation in the fields of pediatric and genitourinary radiation oncology. These sessions have been so well received that he has also had resident physicians from Henry Ford Hospital and Beaumont Hospital who have chosen to attend these individual or group sessions. Teaching of medical students and residents has also included regularly scheduled teaching conferences, journal clubs, and seminars. Dr. Hamstra always has some of the best teaching evaluations of any of the department's clinical faculty, in fact he was awarded the clinical teacher of the year award in 2010.

Further, with his appointment in the Cancer Biology Division within the department, Dr. Hamstra also regularly lectures to medical residents, undergraduate, and graduate students for courses both within the department and across the University Campus in the School of Public Health, Rackham Graduate School and the College of Engineering. He has received uniformly outstanding evaluations for these courses and was awarded the departmental outstanding teaching award for Radiation Biology in 2011. Dr. Hamstra has also inspired a number of students and residents to work with him on research projects with numerous publications and presentations at national meetings coming (and pending) from his mentorship. As part of his

research, both clinical and laboratory based, he served as a mentor to five undergraduate students, seven medical students, six resident physicians, and two post-doctoral fellows. A number of these individuals have gone on to medical school, residencies in radiation oncology, as well as faculty appointments. His teaching of undergraduate students has also extended to being appointed the medical director of the Bachelor of Science in Radiation Therapy Program where he participates in the management and evaluation of this under-graduate program, directs the final clinical course, and lectures to the radiation therapy students. Finally, Dr. Hamstra has been invited as an educational speaker at a number of national meetings.

Research: Dr. Hamstra has been exceptionally productive in his research despite maintaining a very active clinical practice. He has 52 peer-reviewed papers published or in press with 28 of these as first or corresponding author, and 26 of these are from 2008-present. Dr. Hamstra has received an impressive number of early faculty grants from *The American Society of Clinical Oncology (ASCO)*, *The Radiologic Association of America (RSNA)*, and *The Prostate Cancer Foundation (PCF)* all focused upon his work in prostate cancer. As such, he is on his way to transitioning from his previous work in molecular imaging to someone with an expertise in prostate cancer, and he has gained a national reputation both as a translational biologist and as an expert in prostate cancer research. This is evident in the large number of papers on prostate cancer that Dr. Hamstra produced since 2008. In addition, his prostate cancer research was so highly regarded that he was invited to give four oral presentations at the 2011 annual meeting of the *American Society for Radiation Oncology (ASTRO)*. Finally, this level of accomplishment has made him a sought-after presenter, having been invited to speak at such prestigious institutions as Yale University, The Ohio State University and Wayne State University.

Dr. Hamstra's research displays a broad range extending from laboratory based work to imaging, translational biology and clinical research. While working with the Center for Molecular Imaging, he was a critical figure helping to effectively translate MRI based molecular imaging to early clinical evaluation as well as in studies on a novel radiation protector. His vital contribution to this group is reflected in the prominent role he played in publications in *Proceedings of the National Academy of Sciences*, *The Journal of Clinical Oncology* and *Clinical Cancer Research*. Dr. Hamstra used these experiences as he started an independent research group with a focus on the role of the mammalian target of rapamycin (mTOR) pathway in prostate cancer response to radiation therapy. He received grants to support this research and to carry-out a Phase I and biomarker study of this treatment in men with high-risk prostate cancer. This trial will also enroll patients at Johns Hopkins, Duke and Northwestern Universities through the Department of Defense funded Prostate Cancer Clinical Trials Consortium (PCCTC). It is worth noting that this trial is entirely of Dr. Hamstra's design and springs from basic science observations which originated in his laboratory. A further area of clinical research is a multi-institutional Phase II study of hypofractionated prostate radiation therapy of which Dr. Hamstra is also the principal investigator. This study is open at five institutions (UMHS, Fox Chase Cancer Center, Washington University, Cedars Sinai Medical Center, and Sutter Memorial Health (Sacramento, CA)). It is a testament to Dr. Hamstra's success as a translational researcher that he was not only able to obtain funding for these two studies, but also to garner enthusiastic support from such a group of highly respected institutions to collaborate in these trials. Dr. Hamstra also is an active member of the Genitourinary Cancers steering committee for the *Radiation Therapy Oncology Group (RTOG)*; the largest cooperative group dedicated

entirely to clinical research in radiation oncology. He is a co-investigator and the lead radiation oncologist on an exciting Phase III trial (RTOG-1115) that was recently approved by the Clinical Trials Evaluation Program (CTEP) at the National Cancer Institute that will investigate the role of CYP-17 inhibition in addition to conventional hormonal and radiation therapy in men with high-risk prostate cancer. CYP-17 inhibitors are exciting new area of research with the first such drug (abiraterone) recently approved by the FDA for use in men with hormone-refractory metastatic prostate cancer. However, this new study will be the first to evaluate this exciting family of drugs in the adjuvant setting and as such has the potential to significantly change the treatment for men with such advanced (but non-metastatic) disease. Overall, Dr. Hamstra has made astounding success as a translational scientist who is now clearly establishing a role as one of the preeminent prostate cancer clinical researchers in his generation.

Recent and Significant Publications:

Sabolch A, Feng FY, Daignault-Netwon S, Halverson S, Blas K, Phelps L, Olson KB, Sandler HM, Hamstra DA: Gleason Pattern 5 is the greatest risk factor for clinical failure and death from prostate cancer after dose-escalated radiation therapy and hormonal ablation. *Int J Rad Oncol Biol Phys* 81:3351-e360, 2011.

Halverson S, Schipper M, Blas K, Lee V, Sabolch A, Olson K, Sandler HM, Feng FY, Hamstra DA: Cancer of the prostate risk assessment (CAPRA) score in patients treated with external beam radiation therapy: Evaluation and optimization in patients at higher risk of relapse. *Radiotherapy and Oncology* 101:513-520, 2011.

Murphy JD, Spalding AC, Somnay YD, Markwart S, Ray ME, Hamstra DA: Inhibition of mTOR radiosensitizes soft tissue sarcoma and tumor vasculature. *Clin Cancer Res* 15:589-596, 2009.

Hamstra DA, Galban C, Ross DL, Meyer CR, Sundgren PC, Tsien C, Lawrence TS, Junck L, Rehemtulla A, Ross BD, Chenevert TL: Functional diffusion map (fDM) as an early imaging biomarker for overall survival in high-grade glioma. *J Clin Oncol* 26:3387-3394, 2008.

Vuyuri SB*, Hamstra DA*, Khanna D, Hamilton CA, Markwart S, Campbell KCM, Ross BD, Rehemtulla A: Evaluation of D-methionine as a novel oral radiation protector for prevention of radiation induced mucositis. *Clin Cancer Research* 14:2161-2170, 2008. (*Co-first authors)

Service: Dr. Hamstra provides outstanding clinical care for patients with genitourinary cancers. In addition, Dr. Hamstra also cares for all pediatric patients who receive radiation therapy at UMHS. He also is active in the University of Michigan Radiation Oncology Network providing care on average 20-25 days a year at our satellite clinics across the State of Michigan. In this role he supports departmental needs and the mission to provide a high level of radiation oncology care to not only the patients treated in Ann Arbor, but also to those served by our satellites clinics at eight additional centers.

Dr. Hamstra's commitment to service also extends to administrative work where he has been a member of the Graduate Medical Education Committee for more than six years and also was a

member of the first LEAN Thinking Committee that was developed in the department to streamline care and improve clinical efficacy. Dr. Hamstra also participated in a committee established to evaluate the utility and application of charged particles (protons and or heavy ions) for therapy of cancer. This is of particular importance for patients with pediatric malignancies. Within the Cancer Center he participates in the review process for both the Prostate SPORE and the MICHR and is on the clinical advisory board for the prostate SPORE.

Nationally, Dr. Hamstra serves on the GU Steering Committee for the RTOG, on the publications council for RSNA, and has performed peer review for a number of national and international organizations including *The American Cancer Society* and the Congressionally Appointed Prostate Cancer Research Program through the Department of Defense. He also performs peer review service for a wide range of high-impact journals, and was recently asked to serve on the editorial board of *The International Journal of Radiation Oncology, Biology, and Physics*.

External Reviewers:

Reviewer A: “Dr. Hamstra possesses a strong ability to collaborate...He brings a great deal of knowledge to any collaborative effort and other scientists are enthusiastic about working with him. I have found his scholarly work to be outstanding over the last few years and look forward to continuing to follow his career.”

Reviewer B: “Dr. Hamstra’s educational skills and interdisciplinary achievements are also quite evident...He has won numerous awards including the Teacher of the Year Award from the University of Michigan Department of Radiation Oncology and the Teacher of the Year Award from the Association of Residents in Radiation Oncology, which is a national organization.”

Reviewer C: “...Dr. Hamstra has become internationally renown [sic] for his expertise in prostate cancer and image guided research in this area. He is recognized as a key opinion leader in radiation oncology who has keen insight into the very hot field...his work is changing the standard of care for the treatment of patients. His work is relevant in shifting the paradigm of cancer care, from indiscriminate use of cytotoxic agents to that of personalized medicine. He has definitely made numerous impacts on the field...”

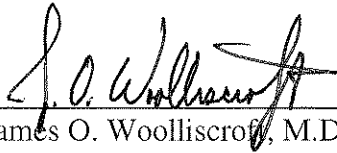
Reviewer D: “I...have followed his career with great interest and with a bit of envy, as he represents the model academician, just the person that one wants to recruit and retain in their own department. By every metric imaginable, Dr. Hamstra exhibits impressive scholarship that has advanced our field.”

Reviewer E: “He is highly regarded among radiation oncologists around the world for his innovative work in prostate cancer....There is no question that Dr. Hamstra’s research has had, and continues to have, significant implications for radiation oncologists and their patients.”

Reviewer F: “Simply put, Dr. Hamstra is the most promising Assistant Professor that I know of in the entire country. He has first-class training and education and has demonstrated that he can compete for peer-reviewed funding in a manner that few clinician-scientists can duplicate.”

Summary of Recommendation:

Dr. Hamstra has a national reputation in prostate cancer research. He has compiled an impressive publication record and has successfully competed for external funding. He is a highly regarded teacher and has won the "Teacher of the Year" award for the department. He has accomplished this while running a busy clinical practice focused both on GU and pediatric cancers. I am pleased to recommend Daniel A. Hamstra, M.D., Ph.D. for promotion to associate professor of radiation oncology, with tenure, Department of Radiation Oncology, Medical School.



James O. Woolliscroft, M.D.

Dean

Lyle C. Roll Professor of Medicine

May 2012