Approved by the Regents
May 20, 2021

PROMOTION RECOMMENDATION
THE UNIVERSITY OF MICHIGAN
DEPARTMENT OF RADIATION ONCOLOGY

Corey Speers, 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 Record:

Ph.D.	2009	Baylor University
M.D.	2010	Baylor University
B.S.	2002	Brigham Young University

Professional Record:

2015-present Assistant Professor of Radiation Oncology, University of Michigan

Summary of Evaluation:

Teaching: Dr. Speers has participated in teaching and education for undergraduate, medical, and graduate students as well as medical residents, clinical, and post-doctoral fellows and faculty. Institutionally, he has lectured in numerous courses, including Cancer Biology 554, RTT 423/NERS 584, Dentistry 741, RTT 444, and PIBS 503. His excellence in teaching has been recognized by receipt of the Cancer Biology Teacher of the Year award in 2018. At the departmental level, Dr. Speers co-organizes a weekly teaching seminar and is a regular lecturer in this series as well as in monthly departmental journal clubs. He leads weekly morning conference lectures for the clinical residents that are always well received. He assists in the training of clinical residents by serving as the breast cancer examiner for the mock oral boards sessions offered by the department. Dr. Speers is an active educator in both the graduate school on biomedical sciences and the Department of Radiation Oncology, and participates in the weekly Cancer Biology and Cellular and Molecular Biology Seminar Series where he meets weekly with the PIBS students to participate in journal clubs and/or research presentations. Dr. Speers continues to work directly with clinical residents and provide one-on-one teaching and training daily while in clinic to facilitate their learning and training as they complete their clinical training. He was recently appointed as the associate director of the Radiation Oncology Residency Program, an honor and significant continued contribution to the training of the residency program. His teaching extends as a research mentor to multiple post-doctoral, doctoral, resident, and undergraduate trainees in the laboratory setting and provides teaching and mentorship within that context. Dr. Speers has developed a national and international reputation as a thought leader in the area of radiosensitizers for aggressive forms of breast cancer, as well as molecular signature for breast radiation benefit. He has been asked to teach and lecture at numerous national and international conferences each year since 2017, and has been an invited visiting professor at M.D. Anderson Cancer Center, the University of Southern California, and the University of Alabama-Birmingham.

Research: Dr. Speers' research interests include the nomination and validation of expression-based signatures to predict patients that need treatment intensification and signatures to identify patients who will not need further adjuvant therapy for breast cancer. Moreover, his translational

work has credentialed a number of novel targets for the treatment of estrogen and progesterone receptor-negative, HER2-negative triple-negative breast cancer, a particularly aggressive and difficult to treat form of breast cancer, which has led to many publications in the past five years. As the principal investigator or co-investigator on several university, industry, private foundation, and NIH-funded grants, he remains active in the radiation and breast cancer research space by looking for more effective, targeted therapies for women with breast cancer. These targeted therapies include PARP-inhibitors, BET bromodomain inhibitors, and androgen receptor antagonists as agents for radiosensitization. Dr. Speers is interested in the mechanisms of treatment resistance that include modulation of breast tumor initiating cells and understanding novel layers of cancer biology, including the role of long non-coding RNA in triple-negative breast cancer, and works closely with collaborators outside his department but within the institution. He is an active member of the Breast Oncology Program at the University of Michigan, as well as a member of the Cancer Center. Dr. Speers has been very productive in both laboratory and clinical research. He has published 57 peer-reviewed manuscripts and has been first-or senior author on the majority of these publications. He remains heavily involved in clinical research and clinical trial development, and is actively working to translate his preclinical studies into active clinical trials. His research has led to multiple awards including the ASTRO annual meeting abstract award, Basic Science Abstract Award and the AACR Scholar-in-Training Award. He has also received the Radiation Research Society Early Career Faculty Travel Grant recipient to participate in the 2019 Radiation Research Society Annual Meeting in November 2019. He also was awarded the 2019 ASCO Breakthrough Summit Abstract Award Winner and was invited to present this work in Bangkok, Thailand.

Recent and Significant Publications:

Chandler BC, Moubadder L, Ritter CL, Liu M, Cameron M, Wilder-Romans K, Zhang A, Pesch AM, Michmerhuizen AR, Hirsh N, Androsiglio M, Ward T, Olsen E, Niknafs YS, Merajver S, Thomas DG, Brown PH, Lawrence TS, Nyati S, Pierce LJ, Chinnaiyan A, Speers C: TTK inhibition radiosensitizes basal-like breast cancer through impaired homologous recombination. *J Clin Invest* 130(2): 958-973, 2020.

Michmerhuizen AR, Pesch AM, Moubadder L, Chandler BC, Wilder-Romans K, Cameron M, Olsen E, Thomas DG, Zhang A, Hirsh N, Ritter CL, Liu M, Nyati S, Pierce LJ, Jagsi R, Speers C: PARP1 Inhibition Radiosensitizes Models of Inflammatory Breast Cancer to Ionizing Radiation. *Mol Cancer Ther.* 2019 Nov;18(11):2063-2073. doi: 10.1158/1535-7163.MCT-19-0520. Epub 2019 Aug 14.

Speers C, Zhao SG, Chandler B, Liu M, Wilder-Romans K, Olsen E, Nyati S, Ritter C, Alluri PG, Kothari V, Hayes DF, Lawrence TS, Spratt DE, Wahl DR, Pierce LJ, Feng FY: Androgen receptor as a mediator and biomarker of radioresistance in triple-negative breast cancer. *NPJ Breast Cancer* 3: 29, 2017.

Speers C, Zhao SG, Kothari V, Santola A, Liu M, Wilder-Romans K, Evans J, Batra N, Bartelink H, Hayes DF, Lawrence TS, Brown PH, Pierce LJ, Feng FY: Maternal Embryonic Leucine Zipper Kinase (MELK) as a Novel Mediator and Biomarker of Radioresistance in Human Breast *Cancer. Clin Cancer Res* 22(23): 5864-5875, 2016.

Speers C, Zhao S, Liu M, Bartelink H, Pierce LJ, Feng FY: Development and validation of a novel radiosensitivity signature in human breast cancer *Clinical Cancer Research* 21(16): 3667-3677, 2015.

Service: Dr. Speers has served as a member of numerous professional societies, including the American Society for Therapeutic Radiology and Oncology, the Radiological Society of North America, the American Society of Clinical Oncology, the Radiation Research Society, and the American Radium Society. He is an active reviewer for numerous journals including *Nature* and *Nature Communications*, *the Journal of Clinical Oncology* and the *Journal of the National Cancer Institute*. He is also a reviewer and member of the biology scientific section for the American Society for Therapeutic Radiology and Oncology. Dr. Speers remains an active contributing member nationally to the ASTRO Biology track and reviews abstracts and help shape the program for their annual meeting. He serves on the Scientific Review Committee for ASCO, and the Conquer Cancer Foundation, the grant review selection committee and the annual meeting scientific program committee. He has served as a reviewer for the grant selection committees of the 2020 Innovation Fund from the Fonds de recherche du Québec – Santé and the Canada Foundation for Innovation (CFI), the ASTRO Scientific and Grants Selection Committee, the KWF Kankerbestrijding – Dutch Cancer Society Scientific Review Committee, the ASTRO-BCRF grant selection committee, the Department of Defense Breast Cancer Research Committee, and the Worldwide Cancer Research Grant Committee (London, England). He has been selected to serve a three-year term (from 2020-2023) for ASCO's Cancer Communications Committee.

External Reviewers:
Reviewer A: "Dr. Speers has established a reputation as a talented, collaborative, and productive scholar. He regularly publishes in high impact journals both as senior author and as a collaborating author…Most impressively, several of these studies also lead to clinical trials clearly demonstrating the translational impact of his work…It has led to patents, publications, clinical trials, and national and international collaborations…It is my opinion that Dr. Speers' is of equivalent standing compared to this esteemed group and that his collaborative work is head and shoulders above that of his peers."

Reviewer B: "In sum, Corey Speers has greatly succeeded in establishing himself as a superb physician scientist focused on the clinical problems of breast cancer. He has emerged, to no one's surprise as a leader in the field, and is most deserving of promotion with tenure. Amongst his peers, Corey is definitely in the upper echelon of laboratory based radiation oncology physician scientists."

Reviewer C: "The *academic/scholarly* contributions of Dr. Speers would be considered *outstanding*…The slope of his academic productivity continues to increase in a positive direction…I want to add that he has been prolific in submitting grants…In aggregate, the *academic/scholarly* output from Dr. Speers would reach the level of *outstanding*…Dr. Speers is one of the best and brightest within our specialty. His reputation is continuing to develop in a positive sense, both domestically and internationally."

Reviewer D: "Corey's outstanding work delving into genomic signatures of local recurrence in breast cancer and response to radiotherapy is novel. He has successfully created a niche in this

area by which he has a national reputation…Dr. Speers' accomplishments in the areas of scholarship, service, and teaching easily put him in the top 5% of his peers."

Reviewer E: "As detailed below, Dr. Speers has excelled and distinguished himself nationally as an expert breast researcher and has also achieved excellence in the areas of teaching and service…As evidence for the high impact and significance of is research, he has been recognized nationally with best abstract awards, invited platform talks, selection to 'Best of" series, and a number of travel awards to national conferences."

Summary of Recommendation:
Dr. Speers is an outstanding clinician and a highly regarded teacher. He has developed a national reputation with an emphasis on biomarkers of radiation response and on the role of MELK, both as a response marker and a possible therapeutic target. I am pleased to recommend Corey Speers, M.D., Ph.D. for promotion to associate professor of radiation oncology, with tenure, Department of Radiation Oncology, Medical School.

Marschall S. Runge, M.D., Ph.D.
Executive Vice President of Medical Affairs
Dean, Medical School

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