

EVERETT J. MODING, M.D., Ph.D.
CURRICULUM VITAE

CONTACT INFORMATION

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EDUCATION and TRAINING

Bachelor of Arts, The Colorado College, Colorado Springs, CO Aug. 2004-May 2008
Major in Biochemistry, Summa Cum Laude
GPA 3.99/4.0, Dean's List 2005, 2006, 2007, 2008

Doctor of Medicine, Duke University School of Medicine, Durham, NC Aug. 2008-May 2015
Medical Scientist Training Program

Doctor of Philosophy, Duke University School of Medicine, Durham, NC Oct. 2010-May 2014
Molecular Cancer Biology Program

Internship, Moses H. Cone Memorial Hospital, Greensboro, NC July 2015-June 2016
Department of Internal Medicine

Residency, Stanford University Medical Center, Stanford, CA July 2016-June 2020
Department of Radiation Oncology (Current)

RESEARCH EXPERIENCE

Undergraduate Genetics Research, The Colorado College, Colorado Springs, CO Jan. 2004-Aug. 2005
Research Advisor: Ralph Bertrand, Ph.D.
Genetic Analysis of Taiwanese Aborigines Using Short Tandem Repeats

Undergraduate Chemistry Research, The Colorado College, Colorado Springs, CO June 2006-May 2008
Research Advisor: Murphy Brasuel, Ph.D.
Characterization of PEBBLEs as a Tool for Real-Time Measurement of Dictyostelium discoideum Endosomal pH

Amgen Scholars Program, University of California, San Francisco, CA June 2007-Aug. 2007
Research Advisor: Feroz Papa, M.D., Ph.D.
Knockdown of Unfolded Protein Response Sensor Ire1 α via Retrovirus and Adenovirus-delivered siRNA

Ph.D. Training, Duke University School of Medicine, Durham, NC Oct. 2010-May 2014
Research Advisor: David Kirsch, M.D., Ph.D.
Dissecting Tumor Response to Radiation Therapy Using Genetically Engineered Mouse Models

Holman Pathway Postdoctoral Fellowship, Stanford University, Stanford, CA July 2018-Present
Research Advisor: Maximilian Diehn, M.D., Ph.D.
Circulating Tumor DNA (ctDNA) Kinetics During Radiation Therapy as a Prognostic Biomarker for Non-Small Cell Lung Cancer (NSCLC)

FUNDING

National Cancer Institute F30 Predoctoral Fellowship (F30 CA177220) Apr. 2013-Mar. 2015
"Defining the cellular target of radiotherapy in primary mouse models of cancer"

RSNA Research Resident Grant

July 2018-June 2019

“Circulating tumor DNA kinetics during radiation therapy as a prognostic biomarker for non-small cell lung cancer”

ASTRO Resident Seed Grant

July 2018-June 2019

“Circulating tumor DNA kinetics during radiation therapy as a prognostic biomarker for non-small cell lung cancer”

PUBLICATIONS**Peer-Reviewed Original Research Articles**

1. **Moding, E.J.**, Hellyer, J., Rank, K., Lostroh, P., Brasuel, M., Characterization of PEBBLEs as a Tool for Real-Time Measurement of *Dictyostelium discoideum* Endosomal pH. *Journal of Sensors* **2009**, 235158 (2009).
2. Lee, C.L.*, **Moding, E.J.***, Huang, X., Li, Y., Woodlief, L.Z., Rodrigues, R.C., Ma, Y., Kirsch, D.G., Generation of primary tumors with Flp recombinase in FRT-flanked p53 mice. *Disease Models & Mechanisms* **5**, 397-402 (2012).
*These authors contributed equally to this work.
3. Lee, C.L., **Moding, E.J.**, Cuneo, K.C., Li, Y., Sullivan, J.M., Mao, L., Washington, I., Jeffords, L.B., Rodrigues, R.C., Ma, Y., Das, S., Kontos, C.D., Kim, Y., Rockman, H.A., Kirsch, D.G., p53 Functions in Endothelial Cells to Prevent Radiation-Induced Myocardial Injury in Mice. *Science Signaling* **5**, ra52 (2012).
4. **Moding, E.J.**, Clark, D.P., Qi, Y., Li, Y., Ma, Y., Ghaghada, K., Johnson, G.A., Kirsch, D.G., Badea, C.T., Dual energy micro-computed tomography imaging of radiation-induced vascular changes in primary mouse sarcomas. *International Journal of Radiation Oncology, Biology, and Physics* **85**, 1353-9 (2013).
5. Subashi, E., **Moding, E.J.**, Cofer, G.P., MacFall, J.R., Kirsch, D.G., Qi, Y., Johnson, G.A., A comparison of radial keyhole strategies for high spatial and temporal resolution 4D contrast-enhanced MRI in small animal tumor models. *Medical Physics* **40**, 22304 (2013).
6. Clark, D.P., Ghaghada, K., **Moding, E.J.**, Kirsch, D.G., Badea, C.T. In vivo characterization of tumor vasculature using iodine and gold nanoparticles and dual energy micro-CT. *Physics in Medicine and Biology* **58**, 1683-1704 (2013).
7. Ashton, J.R., Clark, D.P., **Moding, E.J.**, Ghaghada, K., Kirsch, D.G., West, J.L., Badea, C.T., Dual-Energy Micro-CT Functional Imaging of Primary Lung Cancer in Mice Using Gold and Iodine Nanoparticle Contrast Agents: A Validation Study. *PLoS One* **9**, e88129 (2014).
8. **Moding, E.J.**, Lee, C.L., Castle, K.D., Oh, P., Mao, L., Zha, S., Min, H.D., Ma, Y., Das, S., Kirsch, D.G., *Atm* deletion with dual recombinase technology preferentially radiosensitizes tumor endothelium. *The Journal of Clinical Investigation* **124**, 3325-3338 (2014).
9. Schönhuber, N., Seidler, B., Schuck, K., Veltkamp, C., Schachtler, C., Zukowska, M., Eser, S., Feyerabend, T.B., Paul, M.C., Eser, P., Klein, S., Lowy, A.M., Banerjee, R., Yang, F., Lee, C.L., **Moding, E.J.**, Kirsch, D.G., Scheideler, A., Alessi, D.R., Varela, I., Bradley, A., Kind, A., Schnieke, A.E., Rodewald, H.R., Rad, R., Schmid, R.M., Schneider, G., Saur, D. A next-generation dual-recombinase system for time- and host-specific targeting of pancreatic cancer. *Nature Medicine* **20**, 1340-1347 (2014).
10. Liu, Y., Ashton, J. R., **Moding, E. J.**, Yuan, H., Register, J. K., Fales, A. M., Choi, J., Whitley, M. J., Zhao, X., Qi, Y., Ma, Y., Vaidyanathan, G., Zalutsky, M. R., Kirsch, D. G., Badea, C. T., Vo-Dinh, T., A Plasmonic Gold Nanostar Theranostic Probe for In Vivo Tumor Imaging and Photothermal Therapy. *Theranostics* **5**, 946-60 (2015).
11. **Moding, E.J.**, Castle, K.D., Perez, B.A., Oh, P., Min, H.D., Norris, H., Ma, Y., Cardona, D.M., Lee, C.L., Kirsch, D.G., Tumor cells, but not endothelial cells, mediate eradication of primary sarcomas by stereotactic body radiation therapy. *Science Translational Medicine* **7**, 278ra34 (2015).

12. Lee, C.L., Castle, K.D., **Moding, E.J.**, Blum, J.D., Williams, N., Luo, L., Ma, Y., Borst, L.B., Kim, Y., Kirsch, D.G., Acute DNA damage activates the tumour suppressor p53 to promote radiation-induced lymphoma. *Nature Communications* **6**, 8477 (2015).
13. **Moding, E.J.**, Min, H.D., Castle, K.D., Ali, M., Woodlief, L., Williams, N., Ma, Y., Kim, Y., S., Lee, C.L., Kirsch, D.G., An extra copy of p53 suppresses development of spontaneous Kras-driven but not radiation-induced cancer. *JCI Insight* **1**, e86698 (2016).
14. **Moding, E.J.**, Million, L., Avedian, R., Ghanouni, P., Kunder, C., Ganjoo, K.N., Concurrent imatinib and radiation therapy for unresectable and symptomatic desmoid tumors. *Sarcoma* **2017**, 2316839 (2017).
15. Chin, A.L.*, **Moding, E.J.***, Donaldson, S.S., Gibbs, I.C., Soltys, S.G., Hiniker, S.M., Pollom, E.L., Survival Impact of Postoperative Radiotherapy Timing in Pediatric and Adolescent Medulloblastoma. *Neuro-Oncology* **20**, 1133-1141 (2018).
*These authors contributed equally to this work.
16. Castle, K.D., Daniel, A.R., **Moding, E.J.**, Luo, L., Lee, C.L., Kirsch, D.G., Mice Lacking RIP3 Kinase are not Protected from Acute Radiation Syndrome. *Radiation Research*, **189**, 627-633 (2018).
17. Cheung, P.F., Neff, F., Neander, C., Bazarna, A., Savvatakis, K., Liffers, S.T., Althoff, K., Lee, C.L., **Moding, E.J.**, Kirsch, D.G., Saur, D., Bazhin, A.V., Trajkovic-Arsic, M., Heikenwälder, M., Siveke, J.T., Notch-induced myeloid reprogramming in spontaneous pancreatic ductal adenocarcinoma by dual genetic targeting. *Cancer Research*, **78**, 4997-5010 (2018).
18. Wu, Y., Million, L., **Moding, E.J.**, Scott, G., Berry, M., Ganjoo K.N., The Impact of Post-Operative Therapy on Primary Cardiac Sarcoma. *The Journal of Thoracic and Cardiovascular Surgery*, **156**, 2194-2203 (2018).
19. **Moding, E.J.**, Advani, R., Rosenberg, S.A., Hoppe, R.T., Prognostic Factors and Patterns of Failure in Advanced Stage Hodgkin Lymphoma Treated with Combined Modality Therapy. *Radiotherapy and Oncology*, **129**, 507-512 (2018).
20. **Moding, E.J.**, Liang, R., Lartey, F.M., Maxim, P.G. Sung, A., Diehn, M., Loo, B.W., Gensheimer, M.F., Predictors of Respiratory Decline Following Stereotactic Ablative Radiotherapy to Multiple Lung Tumors. *Clinical Lung Cancer*, E-publication ahead of print (2019).

Submitted Original Research Articles

1. Chabon, J.J., Hamilton, E.G., Kurtz, D.M., Esfahani, M.S., **Moding, E.J.**, Stehr, H., Martin, J.S., Nabet, B.Y., Chen, B., Chaudhuri, A.A., Liu, C.L., Hui, A.B., Jin, M.C., Azad, T.D., Jeon, Y., Nesselbush, M.C., Bonilla, R.F., Yoo, C.H., Ko, R.B., Chen, E.L., Merriott, D.J., Massion, P.P., Mansfield, A.S., Jen, J., Ren, H.Z., Lin, S.H., Costantino, C., Tibshirani, R., West, R.B, Neal, J.W., Wakelee, H.A., Loo, B.W., Kunder, C.A., Leung, A.N., Shrager, J.B., Nair, V.S., Haber, D.A., Sequist, L.V., Alizadeh, A.A., Diehn, M., Integrating genomic features for noninvasive early lung cancer detection. Submitted.
2. **Moding, E.J.**, Liu, Y., Nabet, B.Y., Chabon, J.J., Chaudhuri, A.A., Hui, A.B., Bonilla, R.F., Ko, R.B., Yoo, C.H., Gojenola, L., Jones, C.D., He, J., Qiao, Y., Xu, T., Heymach, J.V., Tsao, A., Liao, Z., Gomez, D.R., Das, M. Padda, S.K., Ramchandran, K.J., Neal, J.W., Wakelee, H.A., Loo, B.W., Lin, S.H., Alizadeh, A.A., Diehn, M., Circulating Tumor DNA Dynamics for Predicting Benefit from Consolidation Immunotherapy in Locally Advanced Non-Small Cell Lung Cancer. Submitted.

Reviews and Book Chapters

1. **Moding, E.J.**, Kirsch, D.G., Genetically Modified Mouse Models of Lung Cancer. *The Health Risks of Extraterrestrial Environments*, <http://three.usra.edu/articles/MouseModels.pdf> (2012).
2. **Moding, E.J.**, Kastan, M.B., Kirsch, D.G., Strategies for optimizing the response of cancer and normal tissues to radiation. *Nature Reviews Drug Discovery* **12**, 526-542 (2013).
3. Lee, C.L., **Moding, E.J.**, Kirsch, D.G., Reining in Radiation Injury: HIF2 α in the Gut. *Science Translational Medicine* **6**, 236fs20 (2014).

4. **Moding, E.J.**, Mowery, Y.M., Kirsch, D.G., Opportunities for Radiosensitization in the Stereotactic Body Radiation Therapy (SBRT) Era. *The Cancer Journal* **22**, 267-273 (2016).
5. Qian, Y., Weiner, J.P., **Moding, E. J.**, Kovalchuk, N., Koong, A.C., Hong, T.S., Chang, D.T., Liver. Stereotactic Radiosurgery and Stereotactic Body Radiation Therapy. Heron, D.E., Huq, M.S., Herman, J.M., ed., Demos Medical Publishing (2018).
6. **Moding, E.J.**, Diehn, M., Wakelee, H.A., Circulating Tumor DNA Testing in Advanced Non-Small Cell Lung Cancer. *Lung Cancer* **119**, 42-47 (2018).

PRESENTATIONS

Oral Presentations

1. **Moding, E.J.**, Garcia-Bertrand, R., Genetic Analysis of Taiwanese Aborigines Using Short Tandem Repeats, **Pew Midstates Science and Mathematics Consortium** (Oral Presentation, St. Louis, MO, Oct. 2005).
2. **Moding, E.J.**, Papa, F.R., Knockdown of unfolded protein response sensor Ire1 α via retrovirus and adenovirus delivered siRNA, **Undergraduate Summer Research Program Poster Session and Oral Presentations** (Oral Presentation, San Francisco, CA, Aug. 2007).
3. **Moding, E.J.**, Dual recombinase technology defines a therapeutic window for ATM inhibitors during radiation therapy. **Duke MSTP Symposium** (Oral Presentation, Durham, NC, Apr. 2014).
4. **Moding, E.J.**, Lee, C.L., Castle, K.D., Oh, P., Kirsch, D.G., Using Mouse Genetics to Dissect the Radiobiology of SBRT: Tumor Cells, Not Endothelial Cells, Regulate Local Control. **56th Annual American Society for Radiation Oncology (ASTRO) Meeting** (Oral Presentation, San Francisco, CA, Sep. 2014).
5. **Moding, E.J.**, Lee, C.L., Castle, K.D., Oh, P., Kirsch, D.G., Dual Recombinase Technology Defines a Therapeutic Window for ATM Inhibitors to Selectively Radiosensitize Tumors. **56th Annual American Society for Radiation Oncology (ASTRO) Meeting** (Oral Presentation, San Francisco, CA, Sep. 2014).
6. **Moding, E.J.**, From slime mold to genetically engineered mice: how CC prepared me to be a physician scientist. **Colorado College Molecular Biology Day** (Keynote Speaker, Colorado Springs, CO, Apr. 2016).
7. **Moding, E.J.**, Safety and Efficacy of SABR to Multiple Lung Tumors. **2017 Malcolm Bagshaw Visiting Professorship and Research Seminar** (Oral Presentation, Stanford, CA, Mar. 2017).
8. **Moding, E.J.**, CNS Case Discussions. **Stanford Symposium on Contemporary Topics in Radiation Oncology** (Oral Presentation, Stanford, CA, Sep. 2017).
9. **Moding, E.J.**, Prognostic Factors and Patterns of Failure in Advanced Stage Hodgkin Lymphoma Treated with Stanford V and Radiotherapy. **2018 Malcolm Bagshaw Visiting Professorship and Research Seminar** (Oral Presentation, Stanford, CA, Mar. 2018).
10. **Moding, E.J.**, Liu, Y., Nabet, B.Y., Chabon, J.J., Chaudhuri, A.A., Hui, A.B., He, J., Qiao, Y., Heymach, J.V., Tsao, A., Liao, Z., Gomez, D.R., Ramchandran, K.J., Neal, J.W., Wakelee, H.A., Loo, B.W., Lin, S.H., Alizadeh, A.A., Diehn, M., Circulating Tumor DNA Analysis for Personalization of Consolidation Immunotherapy in Localized Non-small Cell Lung Cancer. **2019 Malcolm Bagshaw Visiting Professorship and Research Seminar** (Oral Presentation, Stanford, CA, May 2019).
11. **Moding, E.J.**, Nabet, B.Y., Liu, Y., Chabon, J.J., Chaudhuri, A.A., Hui, A.B., Binkley, M.S., He, J., Qiao, Y., Xu, T., Yao, L., Ghandi, S., Liao, Z., Das, M., Ramchandran, K.J., Padda, S.K., Neal, J.W., Wakelee, H.A., Gensheimer, M.F., Loo, B.W., Lin, S.H., Alizadeh, A.A., Diehn, M., Circulating Tumor DNA Changes During Chemoradiation for Lung Cancer Predict Patient Outcomes. **61st Annual American Society for Radiation Oncology (ASTRO) Meeting** (Oral Presentation, Chicago, IL, Sep. 2019).
12. **Moding, E.J.**, Circulating tumor DNA as a biomarker of lung cancer response to chemoradiation and consolidation immunotherapy. **65th Annual Radiation Research Society Meeting** (Invited Speaker, San Diego, CA, Nov. 2019).

Poster Presentations

1. **Moding, E.J.**, Nguyen, M., Garcia-Bertrand, R., Genetic STR Analysis of the Bunun and Tsou Aborigines of Taiwan, **Pew Midstates Science and Mathematics Consortium** (Poster, Chicago, IL, Oct. 2004).
2. **Moding, E.J.**, Brasuel, M., Coumarin 343 PEBBLES selectively monitor intracellular magnesium ion concentrations inside *Dictyostelium discoideum*, **233rd American Chemical Society National Meeting** (Poster, Chicago, IL, Mar. 2007).
3. **Moding, E.J.**, Lee, C.L., Blum, J.M., Sullivan J.M., Jeffords L.B., Rodrigues, R.C., Ma, Y., Kim, Y., Kirsch, D.G., Temporary knockdown of the tumor suppressor p53 during total-body irradiation prevents radiation-induced lymphomagenesis, **22nd Annual NASA Space Radiation Investigators' Workshop** (Poster, League City, TX, Sep. 2011).
4. **Moding, E.J.**, Lee, C.L., Huang, X., Kirsch, D.G., A $p53^{FRT}$ mouse to generate tumors by Flp recombinase to allow for manipulation of the tumor microenvironment by Cre recombinase, **AACR Tumor Microenvironment Complexity Special Conference** (Poster, Orlando, FL, Nov. 2011).
5. **Moding, E.J.**, Woodlief, L.Z., Lee, C.L., Ma, Y., Kirsch, D.G., Role of p53 in Lung Carcinogenesis after Exposure to Space Radiation. **23rd Annual NASA Space Radiation Investigators' Workshop** (Poster, Durham, NC, July 2012).
6. **Moding, E.J.**, Lee, C.L., Kirsch, D.G., Using dual recombinase technology to study the response of primary cancers to radiation therapy. **58th Annual Radiation Research Society Meeting** (Poster, San Juan, PR, Sep. 2012).
7. **Moding, E.J.**, Min, H.D., Lee, C.L., Williams, N., Woodlief, L.Z., Ma, Y., Kirsch, D.G., Dissecting the Function of p53 in Lung Carcinogenesis Following Fractionated Exposure to X-rays and ^{56}Fe . **Heavy Ion in Therapy and Space Radiation Symposium 2013** (Poster, Chiba, Japan, May 2013).
8. **Moding, E.J.**, Loss of ATM preferentially sensitizes proliferating tumor endothelial cells to radiation. **28th Annual National MD/PhD Student Conference** (Poster, Keystone, CO, July 2013).
9. **Moding, E.J.**, Lee, C.L., Min, H.D., Ma, Y., Kirsch, D.G., Endothelial cell-specific deletion of ATM preferentially sensitizes proliferating tumor endothelial cells to radiation. **59th Annual Radiation Research Society Meeting** (Poster, New Orleans, LA, Sep. 2013).
10. **Moding, E.J.**, Lee, C.L., Castle, K.D., Kirsch, D.G., Tumor cells, but not endothelial cells, mediate the eradication of primary cancers by radiation therapy. **60th Annual Radiation Research Society Meeting** (Poster, Las Vegas, NV, Sep. 2014).
11. **Moding, E.J.**, Maxim, P.G., Diehn, M., Loo, B.W., Gensheimer, M., Safety and Efficacy of Stereotactic Ablative Radiotherapy (SABR) to Multiple (Three or More) Lung Tumors. **59th Annual American Society for Radiation Oncology (ASTRO) Meeting** (Poster, San Diego, CA, Sep. 2017).
12. **Moding, E.J.**, Ranjana, R.H., Rosenberg, S.A., Hoppe, R.T., Prognostic Factors and Patterns of Failure in Advanced Stage Hodgkin Lymphoma Treated with Stanford V and Radiotherapy. **60th Annual American Society for Radiation Oncology (ASTRO) Meeting** (Poster Discussion, San Antonio, TX, Oct. 2018).
13. **Moding, E.J.**, Liu, Y., Nabet, B.Y., Chabon, J.J., Chaudhuri, A.A., Hui, A.B., He, J., Qiao, Y., Heymach, J.V., Tsao, A., Liao, Z., Gomez, D.R., Ramchandran, K.J., Neal, J.W., Wakelee, H.A., Loo, B.W., Lin, S.H., Alizadeh, A.A., Diehn, M., ctDNA analysis for personalization of consolidation immunotherapy in localized non-small cell lung cancer. **American Society of Clinical Oncology (ASCO) Annual Meeting** (Poster, Chicago, IL, June 2019).

HONORS and AWARDS

City of Colorado Springs Mayor's 100 Teens
Manitou Springs High School Valedictorian
Mother Moon Service Scholarship
Barnes Chemistry Full Tuition Scholarship

Sep. 2003
May 2004
Aug. 2004
Aug. 2004-May 2008

Alpha Lambda Delta Honor Society	May 2005
First Year Chemistry Award	May 2005
Biology in Chinese Culture Program Scholar	Mar. 2006-May 2006
William C. Champion Prize in Organic Chemistry	May 2006
American Chemistry Society Analytical Chemistry Award	May 2007
University of California San Francisco Amgen Scholar	June 2007-Aug. 2007
Alpha Lambda Delta Book Award	May 2008
Frank Henry John Figge Award	May 2008
Merck Index Award in Biochemistry	May 2008
Phi Beta Kappa Honor Society	May 2008
National Institutes of Health Medical Scientist Training Program Fellowship	Aug. 2008-May 2015
NASA Space Radiation Summer School Scholar	June 2011
Travel Support for NASA Space Radiation Investigators' Workshop	Sep. 2011
Travel Support for NASA Space Radiation Investigators' Workshop	July 2012
NASA Space Radiation Graduate Student Poster Contest 2 nd Place	July 2012
Pharmacology and Cancer Biology Retreat Poster Contest Winner	Sep. 2012
Fitzgerald Academic Achievement Award	Mar. 2013
Radiation Research Society Scholars-in-Training Travel Award	Sep. 2013
ASTRO Basic Science Abstract Award	Sep. 2014
Best of ASTRO Meeting Abstract Selection	Oct. 2014
B. Leonard Holman Research Pathway	July 2018-Mar. 2020
Radiation Research Society Scholars-in-Training Travel Award	July 2019
Stanford Radiation Oncology Kaplan Fellowship	July 2019-Present

PROFESSIONAL ASSOCIATIONS

Radiation Research Society	June 2012-Present
American College of Radiology	July 2016-Present
Radiological Society of North America	July 2016-Present
American Society for Radiation Oncology	June 2017-Present
American Association for Cancer Research	May 2018-Present
American Society of Clinical Oncology	April 2019-Present

LEADERSHIP and MENTORING

Duke MSTP Science Advisory Committee Member	Apr. 2009-Aug. 2009
Duke MSTP Davison Council Representative	Aug. 2010-May 2013
Duke School of Medicine Admissions Interviewer	Sep. 2010-Jan. 2011
Duke MSTP 2012 Symposium Planner	July 2011-Apr. 2012
Stanford SMART Program Mentor	Sep. 2016-July 2017
Stanford Radiation Oncology MRI Simulation Workflow Committee	Apr. 2017-May 2017
Stanford Radiation Oncology Chief Resident	July 2019-Present

CLINICAL TEACHING and EXPERIENCE

Clinical Lectures

Unexpected Death in a Patient Undergoing Whole Brain Radiation Therapy (M&M)	Oct. 2016
Prostate Cancer Adjuvant and Salvage Radiation Therapy Case Discussion	Nov. 2016
Genitourinary Cancer In-Service Question Review	Nov. 2016
Soft Tissue Sarcoma Radiation Therapy Case Discussion	June 2017
Radiation Myelopathy After Post-Operative Spine Radiation Therapy (M&M)	Aug. 2017
Brain Metastases Radiation Therapy Case Discussion	Aug. 2017
Genitourinary Cancer Anatomy and Overview	Nov. 2017
Bladder Cancer Radiation Therapy Case Discussion	Dec. 2017
Indolent Lymphoma Radiation Therapy Case Discussion	Jan. 2018
Radiation Therapy for Hemoptysis (M&M)	Feb. 2018

Early Stage Invasive Breast Cancer	Mar. 2018
Radiation Therapy for Non-Metastatic Rectal Cancer	Aug. 2018
Craniospinal Irradiation Practical	Aug. 2018
Vulvar Cancer Radiation Therapy Case Discussion	Nov. 2018
Lung Cancer Clinical Lecture	Nov. 2018
Lymphoma Anatomy and Overview	Jan. 2019
Anorectal Cancer Clinical Lecture	Jan. 2019
Meningioma and Schwannoma Radiation Therapy Case Discussion	Aug. 2019

Specific Clinical Skills

- Intensity modulated radiation therapy (IMRT) and volumetric arc therapy (VMAT)
- CyberKnife brain and spine radiosurgery
- VMAT craniospinal irradiation
- Lung and gastrointestinal stereotactic ablative radiotherapy (SABR)
- Amplitude and phase-based gating
- Total lymphoid and total body irradiation
- Total skin electron beam therapy
- High dose rate (HDR) interstitial and intracavitary brachytherapy
- Intraoperative radiation therapy