



Michael Gensheimer

Clinical Associate Professor, Radiation Oncology - Radiation Therapy

CLINICAL OFFICE (PRIMARY)

- **Radiation Oncology**

875 Blake Wilbur Dr Rm CC G222A

MC 5847

Stanford, CA 94305

Tel (650) 723-6171

Fax (650) 725-8231

ACADEMIC CONTACT INFORMATION

- **Clinical**

Tel (650) 721-2034

Bio

CLINICAL FOCUS

- Radiation Oncology
- Head and neck cancer
- Lung cancer
- Skin cancer

ACADEMIC APPOINTMENTS

- Clinical Associate Professor, Radiation Oncology - Radiation Therapy
- Faculty Affiliate, Institute for Human-Centered Artificial Intelligence (HAI)
- Member, Stanford Cancer Institute

ADMINISTRATIVE APPOINTMENTS

- Member, Data and Safety Monitoring Committee, Stanford Cancer Institute, (2018- present)
- Chair, Data and Safety Monitoring Committee, Stanford Cancer Institute, (2020- present)

HONORS AND AWARDS

- ESMO Congress Merit Award, European Society for Medical Oncology (2018)
- Henry S. Kaplan Memorial Prize for Teaching, Stanford Radiation Oncology Residency Program (2022)
- HIMSS Davies Award of Excellence (project lead), Healthcare Information and Management Systems Society (2023)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, Annual Meeting Education Committee, American Society for Radiation Oncology (2019 - 2023)
- Member, Head and Neck Cancer General Committee, NRG Oncology (2022 - present)

PROFESSIONAL EDUCATION

- Medical Education: Vanderbilt University School of Medicine (2010) TN
- Residency: University of Washington Dept of Radiation Oncology (2015) WA
- Board Certification: Radiation Oncology, American Board of Radiology (2016)
- Internship: Johns Hopkins Hospital Internal Medicine Residency (2011) MD
- AB with honors, Harvard College , Physics (2005)

LINKS

- Get a Second Opinion: <https://stanfordhealthcare.org/second-opinion/overview.html>
- My research home page: <https://web.stanford.edu/~mgens/>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

In addition to my clinical research in head and neck and lung cancer, I work on the application of computer science and machine learning to cancer research. I develop tools for analyzing large datasets to improve outcomes and safety of cancer treatment. I developed a machine learning prognostic model using data from around 13,000 patients with metastatic cancer which performs better than traditional models and physicians [PubMed ID 33313792]. We recently completed a prospective randomized study in thousands of patients in which the model was used to help improve advance care planning conversations.

I also work on the methods underpinning observational and predictive modeling research. My open source nnet-survival software that allows use of neural networks for survival modeling has been used by researchers internationally. In collaboration with the Stanford Research Informatics Center, I examined how electronic medical record (EMR) survival outcome data compares to gold-standard data from a cancer registry [PubMed ID 35802836]. The EMR data captured less than 50% of deaths, a finding that affects many studies being published that use EMR outcomes data.

CLINICAL TRIALS

- Combining Radiation Therapy With Immunotherapy for the Treatment of Metastatic Squamous Cell Carcinoma of the Head and Neck, Not Recruiting
- Radical-Dose Image Guided Radiation Therapy in Treating Patients With Metastatic Non-small Cell Lung Cancer Undergoing Immunotherapy, Not Recruiting
- Testing Docetaxel-Cetuximab or the Addition of an Immunotherapy Drug, Atezolizumab, to the Usual Chemotherapy and Radiation Therapy in High-Risk Head and Neck Cancer, Not Recruiting
- Trial of XRD-0394, a Kinase Inhibitor, in Combination With Palliative Radiotherapy in Advanced Cancer Patients, Not Recruiting

Publications

PUBLICATIONS

- **Incidence of Named Nerve Perineural Invasion in High-Risk Cutaneous Squamous Cell Carcinoma Treated With Mohs Micrographic Surgery at a Single Academic Institution.** *Dermatologic surgery : official publication for American Society for Dermatologic Surgery [et al.]* Aframian, K., Lopez Dominquez, J., Gensheimer, M., Hirotsu, K.
2026
- **Genetic and Immunohistochemical Profiling of Malignant Mesothelioma With Brain Metastasis: A Report of Two Cases.** *Cancer reports (Hoboken, N.J.)* Harary, P. M., Hori, Y. S., Jain, R., Kattaa, A. H., Gephart, M. H., Gensheimer, M. F., Soltys, S. G., Park, D. J., Chang, S. D.
2026; 9 (5): e70571
- **Association Between Inter-Fraction Volume Changes and Patient Outcomes from Stereotactic Ablative Radiotherapy for Early-Stage Lung Cancer** *CLINICAL LUNG CANCER*

- Mai, W. X., Frick, M. A., Jackson, S., Richter, S. A., Hasan, M., Cheunkarndee, T., Loo, B. W., Diehn, M., Vitzthum, L., Chin, A., Kastelowitz, N., Gensheimer, M. F.
2026; 27 (3): 162-169
- **Creating strong predictive models in oncology.** *Patterns (New York, N.Y.)*
Gensheimer, M. F.
2026; 7 (2): 101492
 - **Holistic evaluation of large language models for medical tasks with MedHELM.** *Nature medicine*
Bedi, S., Cui, H., Fuentes, M., Unell, A., Wornow, M., Banda, J. M., Kotecha, N., Keyes, T., Mai, Y., Oez, M., Qiu, H., Jain, S., Schettini, et al
2026
 - **Local Control in Thoracic Stereotactic Ablative Radiotherapy: Analysis of Motion Management and Single Fraction Dosimetry from the iSABR trial.** *International journal of radiation oncology, biology, physics*
Jaoude, J. A., Cui, S., Fu, J., Worth, J. E., Campbell, M. J., Lau, B., Eswarappa, S., Richter, S. A., Meurice, N., Shirato, H., Taguchi, H., Gee, H., Romero, et al
2025
 - **Treatment Interruption and Outcomes in Head and Neck Cancer: A Secondary Analysis of 3 Randomized Clinical Trials.** *JAMA otolaryngology-- head & neck surgery*
Gharzai, L. A., Morris, E., Schipper, M. J., Kidwell, K. M., Nguyen-Tân, P. F., Rosenthal, D. I., Gillison, M. L., Jordan, R. C., Garden, A. S., Koymann, S. A., Caudell, J. J., Blakaj, D. M., Dunlap, et al
2025
 - **A Precise Reirradiation Supporting Tool Initiative (PRISTIN) for Prescribing Absorbed Dose and Number of Fractions in Reirradiation.** *Advances in radiation oncology*
Hagiwara, M., Suzuki, R., Takao, S., Kinoshita, R., Yamazaki, S., Nakazato, K., Kojima, H., Hashimoto, T., Kobashi, K., Onodera, Y., Fukunaga, H., Aoyama, H., Gensheimer, et al
2025; 10 (12): 101904
 - **Association Between Inter-Fraction Volume Changes and Patient Outcomes from Stereotactic Ablative Radiotherapy for Early-Stage Lung Cancer.** *Clinical lung cancer*
Mai, W. X., Frick, M. A., Jackson, S., Richter, S. A., Hasan, M., Cheunkarndee, T., Loo, B. W., Diehn, M., Vitzthum, L., Chin, A., Kastelowitz, N., Gensheimer, M. F.
2025
 - **Adjuvant radiation is associated with reduced risks of local recurrence and nodal metastasis in high-risk localized cutaneous squamous cell carcinoma: a retrospective multicenter cohort study.** *International journal of radiation oncology, biology, physics*
Ran, N. A., Granger, E. E., Brodland, D. G., Canueto, J., Carr, D. R., Carter, J. B., Carucci, J. A., Hirotsu, K. E., Lotter, W., Mangold, A. R., Girardi, F. M., Nijhawan, R., Shahwan, et al
2025
 - **Self-Perceived Hearing Outcomes with Radiation and Cisplatin or Radiation and Cetuximab for Patients with HPV-Positive Oropharyngeal Cancer - Results from xxxxx.** *International journal of radiation oncology, biology, physics*
Runge, C. L., Lyness, J. A., Gillison, M. L., Adelstein, D. J., Harari, P. M., Ringash, J., Geiger, J. L., Krempf, G. A., Blakaj, D. M., Bates, J. E., Galloway, T. J., Jones, C. U., Gensheimer, et al
2025
 - **Automated radiotherapy treatment planning guided by GPT-4Vision.** *Physics in medicine and biology*
Liu, S., Pastor-Serrano, O., Chen, Y., Gopaulchan, M., Liang, W., Buyyounouski, M., Pollom, E., Le, Q. T., Gensheimer, M. F., Dong, P., Yang, Y., Zou, J., Xing, et al
2025
 - **Three year experience of clinical implementation of an Automated VMAT Treatment Planning Script for Head and Neck Cancer Patients**
Kovalchuk, N., Dong, P., Xiang, M., Moding, E., Gensheimer, M., Beadle, B., Le, Q., Xing, L., Yang, Y.
ELSEVIER IRELAND LTD.2025: S2850-S2851
 - **Integrating ctDNA Analysis and Radiomics for Dynamic Risk Assessment in Localized Lung Cancer.** *Cancer discovery*
Moding, E. J., Shahrokh Esfahani, M., Jin, C., Hui, A. B., Nabet, B. Y., Liu, Y., Chabon, J. J., Binkley, M. S., Kurtz, D. M., Hamilton, E. G., Chaudhuri, A. A., Liu, C. L., Li, et al
2025: OF1-OF21

- **Comparison of 1-year mortality predictions from vendor-supplied versus academic model for cancer patients.** *PeerJ*
Gensheimer, M. F., Lu, J., Ramchandran, K.
2025; 13: e18958
- **Large language model-augmented learning for auto-delineation of treatment targets in head-and-neck cancer radiotherapy.** *Radiotherapy and oncology : journal of the European Society for Therapeutic Radiology and Oncology*
Rajendran, P., Yang, Y., Niedermayr, T. R., Gensheimer, M., Beadle, B., Le, Q. T., Xing, L., Dai, X.
2025: 110740
- **Automated Deep Learning-Based Detection and Segmentation of Lung Tumors at CT.** *Radiology*
Kashyap, M., Wang, X., Panjwani, N., Hasan, M., Zhang, Q., Huang, C., Bush, K., Chin, A., Vitzthum, L. K., Dong, P., Zaky, S., Loo, B. W., Diehn, et al
2025; 314 (1): e233029
- **Automated patient selection and care coaches to increase advance care planning for cancer patients.** *Journal of the National Cancer Institute*
Gensheimer, M. F., Teuteberg, W., Patel, M. I., Gupta, D., Noroozi, M., Ling, X., Fardeen, T., Seevaratnam, B., Lu, Y., Alves, N., Rogers, B., Asuncion, M. K., Denofrio, et al
2024
- **A phase 2 single-arm trial of high-dose precision targeted radiotherapy added to immunotherapy for patients with metastatic non-small cell lung cancer.** *International journal of radiation oncology, biology, physics*
Gensheimer, M. F., Kotha, N. V., Vitzthum, L. K., Chin, A. L., Jackson, S., t Erve, I. v., Pratapneni, A., Le-Budka, M. L., Wong, S., Brown, E., Barnick, K., Wakelee, H. A., Das, et al
2024
- **RADIOMICS-BASED PREDICTION OF RECURRENCEFREE SURVIVAL IN OROPHARYNGEAL SQUAMOUS CELL CARCINOMA PATIENTS UNDERGOING CHEMORADIOTHERAPY: DEVELOPMENT AND VALIDATION OF A PROGNOSTIC MODEL**
Sit, D., Cui, S., Gensheimer, M., Beadle, B., Quynh-Thu Le, Li, R.
ELSEVIER IRELAND LTD.2024: S14-S15
- **Large Language Model-Augmented Auto-Delineation of Treatment Target Volume in Radiation Therapy.** *ArXiv*
Rajendran, P., Yang, Y., Niedermayr, T. R., Gensheimer, M., Beadle, B., Le, Q. T., Xing, L., Dai, X.
2024
- **Commissioning of a novel PET-Linac for biology-guided radiotherapy (BgRT).** *Medical physics*
Surucu, M., Ashraf, M. R., Romero, I. O., Zalavari, L. T., Pham, D., Vitzthum, L. K., Gensheimer, M. F., Yang, Y., Xing, L., Kovalchuk, N., Han, B.
2024
- **Chest wall pain after single-fraction SABR: Dosimetric analysis from the iSABR trial (NCT01463423)**
Lau, B., Wu, Y., Cui, S., Fu, J., Jackson, S., Pham, D., Dubrowski, P., Eswarappa, S., Skinner, L., Shirato, H., Taguchi, H., Gensheimer, M., Gee, et al
ELSEVIER IRELAND LTD.2024: S1674-S1676
- **Construction of clinically meaningful loss function for improved medical image auto-segmentation**
Chen, Y., Gensheimer, M., Quynh-Thu Le, Han, B., Xing, L.
ELSEVIER IRELAND LTD.2024: S3138-S3141
- **Chest wall pain after single-fraction thoracic stereotactic ablative Radiotherapy: Dosimetric analysis from the iSABR trial.** *Radiotherapy and oncology : journal of the European Society for Therapeutic Radiology and Oncology*
Lau, B., Wu, Y. F., Cui, S., Fu, J., Jackson, S., Pham, D., Dubrowski, P., Eswarappa, S., Skinner, L., Shirato, H., Taguchi, H., Gensheimer, M. F., Gee, et al
2024: 110317
- **Surrogate endpoints in clinical trials of p16-positive squamous cell carcinoma of the oropharynx: an individual patient data meta-analysis.** *The Lancet. Oncology*
Gharzai, L. A., Morris, E., Suresh, K., Nguyen-Tân, P. F., Rosenthal, D. I., Gillison, M. L., Harari, P. M., Garden, A. S., Koyfman, S., Caudell, J. J., Jones, C. U., Mitchell, D. L., Krempf, et al
2024; 25 (3): 366-375
- **First-Year Experience of Stereotactic Body Radiation Therapy/Intensity Modulated Radiation Therapy Treatment Using a Novel Biology-Guided Radiation Therapy Machine.** *Advances in radiation oncology*
Shi, M., Simiele, E., Han, B., Pham, D., Palomares, P., Aguirre, M., Gensheimer, M., Vitzthum, L., Le, Q., Surucu, M., Kovalchuk, N.

2024; 9 (1): 101300

- **BIOGUIDE-X: A First-in-Human Study of the Performance of Positron Emission Tomography-Guided Radiotherapy.** *International journal of radiation oncology, biology, physics*
Vitzthum, L. K., Surucu, M., Gensheimer, M. F., Kovalchuk, N., Han, B., Pham, D., Chang, D., Shirvani, S. M., Aksoy, D., Maniyedath, A., Narayanan, M., Da Silva, A. J., Mazin, et al
2023
- **Lessons Learned from a Multi-Site, Team-Based Serious Illness Care Program Implementation at an Academic Medical Center.** *Journal of palliative medicine*
Seevaratnam, B., Wang, S., Fong, R., Hui, F., Callahan, A., Chobot, S., Gensheimer, M. F., Li, R. C., Nguyen, D., Ramchandran, K., Shah, N. H., Shieh, L., Zeng, et al
2023
- **Individualized Stereotactic Ablative Radiotherapy for Lung Tumors: The iSABR Phase 2 Nonrandomized Controlled Trial.** *JAMA oncology*
Gensheimer, M. F., Gee, H., Shirato, H., Taguchi, H., Snyder, J. M., Chin, A. L., Vitzthum, L. K., Maxim, P. G., Wakelee, H. A., Neal, J., Das, M., Chang, D. T., Kidd, et al
2023
- **Cancer Informatics for Cancer Centers: Sharing Ideas on How to Build an Artificial Intelligence-Ready Informatics Ecosystem for Radiation Oncology.** *JCO clinical cancer informatics*
Bitterman, D. S., Gensheimer, M. F., Jaffray, D., Pryma, D. A., Jiang, S. B., Morin, O., Ginart, J. B., Upadhaya, T., Vallis, K. A., Buatti, J. M., Deasy, J., Hsiao, H. T., Chung, et al
2023; 7: e2300136
- **Potential Biases in a Population-based Study of Surveillance Imaging for Head and Neck Cancer.** *Radiology*
Gensheimer, M. F.
2023; 308 (2): e230286
- **Lessons and Opportunities for Biomarker-Driven Radiation Personalization in Head and Neck Cancer.** *Seminars in radiation oncology*
Rahimy, E., Gensheimer, M. F., Beadle, B., Le, Q. T.
2023; 33 (3): 336-347
- **Study of Patient and Physician Attitudes Toward Automated Prognostic Models for Patients With Metastatic Cancer.** *JCO clinical cancer informatics*
Hildebrand, R. D., Chang, D. T., Ewongwoo, A. N., Ramchandran, K. J., Gensheimer, M. F.
2023; 7: e2300023
- **Adaptive Region-Specific Loss for Improved Medical Image Segmentation.** *IEEE transactions on pattern analysis and machine intelligence*
Chen, Y., Yu, L., Wang, J., Panjwani, N., Obeid, J., Liu, W., Liu, L., Kovalchuk, N., Gensheimer, M. F., Vitzthum, L. K., Beadle, B. M., Chang, D. T., Le, et al
2023; PP
- **Predicting benefit from immune checkpoint inhibitors in patients with non-small-cell lung cancer by CT-based ensemble deep learning: a retrospective study.** *The Lancet. Digital health*
Saad, M. B., Hong, L., Aminu, M., Vokes, N. I., Chen, P., Salehjehromi, M., Qin, K., Sujit, S. J., Lu, X., Young, E., Al-Tashi, Q., Qureshi, R., Wu, et al
2023
- **Unilateral diaphragmatic paralysis after stereotactic ablative radiotherapy to a lung tumor abutting the course of the phrenic nerve.** *Practical radiation oncology*
Eke, I., Guo, H. H., Loo, J. B., Sung, A. W., Diehn, M., Vitzthum, L., Chin, A. L., Gensheimer, M. F.
2023
- **Patient-specific Auto-segmentation on Daily kVCT Images for Adaptive Radiotherapy.** *International journal of radiation oncology, biology, physics*
Chen, Y., Gensheimer, M. F., Bagshaw, H. P., Butler, S., Yu, L., Zhou, Y., Shen, L., Kovalchuk, N., Surucu, M., Chang, D. T., Xing, L., Han, B.
2023
- **Pulmonary Hemorrhage in Patients Treated with Thoracic Stereotactic Ablative Radiotherapy and Anti-Angiogenic Agents.** *Journal of thoracic oncology : official publication of the International Association for the Study of Lung Cancer*
Lau, B., Wu, Y. F., No, H. J., Ko, R. B., Devine, M., Das, M. S., Neal, J. W., Wakelee, H. A., Ramchandran, K., Gensheimer, M. F., Diehn, M., Chin, A. L., Loo, et al

2023

- **Stratified assessment of an FDA-cleared deep learning algorithm for automated detection and contouring of metastatic brain tumors in stereotactic radiosurgery.** *Radiation oncology (London, England)*
Wang, J. Y., Qu, V., Hui, C., Sandhu, N., Mendoza, M. G., Panjwani, N., Chang, Y. C., Liang, C. H., Lu, J. T., Wang, L., Kovalchuk, N., Gensheimer, M. F., Soltys, et al
2023; 18 (1): 61
- **Mitigation of IMRT/SBRT treatment planning errors on the Reflexion X1 system using FMEA within Six Sigma framework** *Advances in Radiation Oncology*
Simiele, E., Han, B., Skinner, L., Pham, D., Lewis, J., Gensheimer, M., Vitzthum, L., Chang, D., Surucu, M., Kovalchuk, N.
2023
- **Improving lung cancer screening rates among patients with head and neck cancer in a radiation oncology clinic.** *Journal of thoracic disease*
Soto, L., Nesbit, S., Ramsey, M., Gensheimer, M. F., Le, Q. T., Beadle, B. M., Lui, N. S.
2022; 14 (12): 4633-4640
- **Use of Machine Learning and Lay Care Coaches to Increase Advance Care Planning Conversations for Patients With Metastatic Cancer.** *JCO oncology practice*
Gensheimer, M. F., Gupta, D., Patel, M. I., Fardeen, T., Hildebrand, R., Teuteberg, W., Seevaratnam, B., Asuncion, M. K., Alves, N., Rogers, B., Hansen, J., DeNofrio, J., Shah, et al
2022: OP2200128
- **Improving lung cancer screening rates among patients with head and neck cancer in a radiation oncology clinic** *JOURNAL OF THORACIC DISEASE*
Soto, L., Nesbit, S., Ramsey, M., Gensheimer, M. F., Le, Q., Beadle, B. M., Lui, N. S.
2022
- **Safety of nivolumab added to chemoradiotherapy platforms for intermediate and high-risk local-regionally advanced head and neck squamous cell carcinoma: RTOG Foundation 3504.** *International journal of radiation oncology, biology, physics*
Gillison, M. L., Ferris, R. L., Harris, J., Colevas, A. D., Mell, L. K., Kong, C., Jordan, R. C., Moore, K. L., Truong, M., Kirsch, C., Chakravarti, A., Blakaj, D. M., Clump, et al
2022
- **Dosimetric Predictors of Local Control after Stereotactic Ablative Radiotherapy (SABR) for Lung Tumors: A Secondary Analysis of a Phase II Prospective Trial of Individualized SABR (iSABR)**
Wu, Y., Lau, B., Fu, J., Skinner, L., Gensheimer, M., Gee, H., Diehn, M., Loo, B., Chin, A., Vitzthum, L.
LIPPINCOTT WILLIAMS & WILKINS.2022: S16
- **Posttreatment FDG-PET/CT Hopkins criteria predict locoregional recurrence after definitive radiotherapy for oropharyngeal squamous cell carcinoma.** *Head & neck*
Miller, J. A., Moradi, F., Sundaram, V., Liang, R., Zhang, C., Nguyen, N. K., Akhtar, F., Liu, Y., Ren, Y., Harandi, N., Weng, Y., Pollom, E. L., Colevas, et al
2022
- **Use of systemic cancer treatments based on a validated survival prediction model in metastatic cancer.**
Roy, M., Gensheimer, M. F., Chang, D., Singhal, S., Khaki, A.
LIPPINCOTT WILLIAMS & WILKINS.2022
- **Accuracy of Electronic Medical Record Follow-Up Data for Estimating the Survival Time of Patients With Cancer.** *JCO clinical cancer informatics*
Gensheimer, M. F., Narasimhan, B., Henry, A. S., Wood, D. J., Rubin, D. L.
2022; 6: e2200019
- **De-escalating elective nodal irradiation for nasopharyngeal carcinoma.** *The Lancet. Oncology*
Miller, J. A., Beadle, B. M., Gensheimer, M. F., Le, Q.
2022
- **Uncovering interpretable potential confounders in electronic medical records.** *Nature communications*
Zeng, J., Gensheimer, M. F., Rubin, D. L., Athey, S., Shachter, R. D.
2022; 13 (1): 1014

- **Considerations in the reliability and fairness audits of predictive models for advance care planning** *Frontiers in Digital Health*
Lu, J., Sattler, A., Wang, S., Khaki, A. R., Callahan, A., Fleming, S., Fong, R., Ehler, B., Li, R., Shieh, L., Ramchandran, K., Gensheimer, M., Chobot, et al
2022: 943768
- **IMRT and SBRT Treatment Planning Study for the First Clinical Biology-Guided Radiotherapy System.** *Technology in cancer research & treatment*
Pham, D., Simiele, E., Breikreutz, D., Capaldi, D., Han, B., Surucu, M., Oderinde, S., Vitzthum, L., Gensheimer, M., Bagshaw, H., Chin, A., Xing, L., Chang, et al
2022; 21: 15330338221100231
- **Acute and Late Esophageal Toxicity Following Stereotactic Ablative Radiotherapy to Thoracic Tumors near or Abutting the Esophagus.** *International journal of radiation oncology, biology, physics*
Sodji, Q. H., Ko, R., von Eyben, R., Owen, S. G., Capaldi, D. P., Bush, K., Binkley, M. S., Alrowais, F., Pickthorn, B., Maxim, P. G., Gensheimer, M. F., Diehn, M., Loo, et al
1800
- **Human-level comparable control volume mapping with a deep unsupervised-learning model for image-guided radiation therapy.** *Computers in biology and medicine*
Liang, X., Bassenne, M., Hristov, D. H., Islam, M. T., Zhao, W., Jia, M., Zhang, Z., Gensheimer, M., Beadle, B., Le, Q., Xing, L.
1800; 141: 105139
- **Local Recurrence Outcomes of Colorectal Cancer Oligometastases Treated With Stereotactic Ablative Radiotherapy.** *American journal of clinical oncology*
Benson, K. R., Sandhu, N., Zhang, C., Ko, R., Toesca, D. A., Lee, P. E., Von Eyben, R., Diehn, M., Gensheimer, M., Maxim, P. G., Bush, K., Loo, B. W., Soltys, et al
2021
- **Radiological tumor classification across imaging modality and histology.** *Nature machine intelligence*
Wu, J., Li, C., Gensheimer, M., Padda, S., Kato, F., Shirato, H., Wei, Y., Schönlieb, C. B., Price, S. J., Jaffray, D., Heymach, J., Neal, J. W., Loo, et al
2021; 3: 787-798
- **Radiological tumour classification across imaging modality and histology** *NATURE MACHINE INTELLIGENCE*
Wu, J., Li, C., Gensheimer, M., Padda, S., Kato, F., Shirato, H., Wei, Y., Schönlieb, C., Price, S., Jaffray, D., Heymach, J., Neal, J. W., Loo, et al
2021
- **Natural Language Processing to Identify Cancer Treatments With Electronic Medical Records.** *JCO clinical cancer informatics*
Zeng, J., Banerjee, I., Henry, A. S., Wood, D. J., Shachter, R. D., Gensheimer, M. F., Rubin, D. L.
2021; 5: 379–93
- **Postoperative Observation Versus Radiotherapy for Pathologic N1 Oral Cavity Squamous Cell Carcinoma.** *American journal of clinical oncology*
Xiang, M. n., Holsinger, F. C., Gensheimer, M. F., Divi, V. n., Pollom, E. L., Colevas, A. D., Le, Q. T., Beadle, B. M.
2021; Publish Ahead of Print
- **Treatment Breaks During Definitive Head/Neck Radiotherapy: Survival Impact and Predisposing Factors**
Xiang, M., Gensheimer, M., Pollom, E., Holsinger, F., Colevas, A., Quynh-Thu Le, Beadle, B.
ELSEVIER SCIENCE INC.2020: E39
- **Automated model versus treating physician for predicting survival time of patients with metastatic cancer.** *Journal of the American Medical Informatics Association : JAMIA*
Gensheimer, M. F., Aggarwal, S. n., Benson, K. R., Carter, J. N., Henry, A. S., Wood, D. J., Soltys, S. G., Hancock, S. n., Pollom, E. n., Shah, N. H., Chang, D. T.
2020
- **Cancer Treatment Classification with Electronic Medical Health Records**
Zeng, J., Banerjee, I., Gensheimer, M., Rubin, D., Assoc Advancement Artificial Intelligence
ASSOC ADVANCEMENT ARTIFICIAL INTELLIGENCE.2020: 13981-13982
- **Predicting per-lesion local recurrence in locally advanced non-small cell lung cancer following definitive radiation therapy using pre- and mid-treatment metabolic tumor volume.** *Radiation oncology (London, England)*

- Binkley, M. S., Koenig, J. L., Kashyap, M. n., Xiang, M. n., Liu, Y. n., Sodji, Q. n., Maxim, P. G., Diehn, M. n., Loo, B. W., Gensheimer, M. F.
2020; 15 (1): 114
- **Early response evaluation using primary tumor and nodal imaging features to predict progression-free survival of locally advanced non-small cell lung cancer.** *Theranostics*
Zhang, N., Liang, R., Gensheimer, M. F., Guo, M., Zhu, H., Yu, J., Diehn, M., Loo, B. W., Li, R., Wu, J.
2020; 10 (25): 11707–18
 - **Multicenter Clinical Cancer Research After COVID-19: A Perspective From NRG Oncology.** *International journal of radiation oncology, biology, physics*
Gensheimer, M. F., Yom, S. S., Soto, N., Dignam, J. J., Le, Q., Machtay, M., Curran, W. J.
2020; 108 (2): 483–85
 - **Prolongation of definitive head and neck cancer radiotherapy: Survival impact and predisposing factors.** *Radiotherapy and oncology : journal of the European Society for Therapeutic Radiology and Oncology*
Xiang, M. n., Gensheimer, M. F., Pollom, E. L., Holsinger, F. C., Colevas, A. D., Le, Q. T., Beadle, B. M.
2020
 - **Proton radiotherapy and treatment delay in head and neck squamous cell carcinoma.** *The Laryngoscope*
Jin, M. C., Harris, J. P., Sabolch, A. N., Gensheimer, M., Le, Q., Beadle, B. M., Pollom, E. L.
2019
 - **Predicting Survival for Patients with Metastatic Disease.** *International journal of radiation oncology, biology, physics*
Benson, K. R., Aggarwal, S., Carter, J. N., von Eyben, R., Pradhan, P., Prionas, N. D., Bui, J. L., Soltys, S. G., Hancock, S., Gensheimer, M. F., Koong, A. C., Chang, D. T.
2019
 - **Tumor Subregion Evolution-based Imaging Features to Assess Early Response and Predict Prognosis in Oropharyngeal Cancer.** *Journal of nuclear medicine : official publication, Society of Nuclear Medicine*
Wu, J., Gensheimer, M., Zhang, N., Guo, M., Liang, R., Zhang, C., Fischbein, N., Pollom, E., Beadle, B., Le, Q., Li, R.
2019
 - **Radiographic Extranodal Extension in Human Papillomavirus-Associated Oropharyngeal Carcinoma: Can it Help Tailor Treatment?** *International journal of radiation oncology, biology, physics*
Gensheimer, M. F., Le, Q.
2019; 104 (5): 1028–29
 - **Automated Survival Prediction in Metastatic Cancer Patients Using High-Dimensional Electronic Medical Record Data** *JNCI-JOURNAL OF THE NATIONAL CANCER INSTITUTE*
Gensheimer, M. F., Henry, A., Wood, D. J., Hastie, T. J., Aggarwal, S., Dudley, S. A., Pradhan, P., Banerjee, I., Cho, E., Ramchandran, K., Pollom, E., Koong, A. C., Rubin, et al
2019; 111 (6): 568–74
 - **Adverse Radiation Effect and Disease Control in Patients Undergoing Stereotactic Radiosurgery and Immune Checkpoint Inhibitor Therapy for Brain Metastases** *WORLD NEUROSURGERY*
Koenig, J. L., Shi, S., Sborov, K., Gensheimer, M. F., Le, G., Nagpal, S., Chang, S. D., Gibbs, I. C., Soltys, S. G., Pollom, E. L.
2019; 126: E1399–E1411
 - **Increases in Serial Pretreatment 18F-FDG PET-CT Metrics Predict Survival in Early Stage Non-Small Cell Lung Cancer Treated With Stereotactic Ablative Radiation Therapy.** *Advances in radiation oncology*
Prionas, N. D., von Eyben, R., Yi, E., Aggarwal, S., Shaffer, J., Bazan, J., Eastham, D., Maxim, P. G., Graves, E. E., Diehn, M., Gensheimer, M. F., Loo, B. W.
2019; 4 (2): 429–37
 - **Increases in Serial Pretreatment F-18-FDG PET-CT Metrics Predict Survival in Early Stage Non-Small Cell Lung Cancer Treated With Stereotactic Ablative Radiation Therapy** *ADVANCES IN RADIATION ONCOLOGY*
Prionas, N. D., von Eyben, R., Yi, E., Aggarwal, S., Shaffer, J., Bazan, J., Eastham, D., Maxim, P. G., Graves, E. E., Diehn, M., Gensheimer, M. F., Loo, B. W.
2019; 4 (2): 429–37
 - **Adverse Radiation Effect and Disease Control in Patients Undergoing Stereotactic Radiosurgery and Immune Checkpoint Inhibitor Therapy for Brain Metastases.** *World neurosurgery*

- Koenig, J. L., Shi, S., Sborov, K., Gensheimer, M. F., Li, G., Nagpal, S., Chang, S. D., Gibbs, I. C., Soltys, S. G., Pollom, E. L.
2019
- **A scalable discrete-time survival model for neural networks** *PEERJ*
Gensheimer, M. F., Narasimhan, B.
2019; 7
 - **Impact of Accuracy of Survival Predictions on Quality of End-of-Life Care Among Patients With Metastatic Cancer Who Receive Radiation Therapy.** *Journal of oncology practice*
Sborov, K., Giaretta, S., Koong, A., Aggarwal, S., Aslakson, R., Gensheimer, M. F., Chang, D. T., Pollom, E. L.
2019: JOP1800516
 - **Predictors of Respiratory Decline Following Stereotactic Ablative Radiotherapy to Multiple Lung Tumors.** *Clinical lung cancer*
Moding, E. J., Liang, R. n., Lartey, F. M., Maxim, P. G., Sung, A. n., Diehn, M. n., Loo, B. W., Gensheimer, M. F.
2019
 - **A scalable discrete-time survival model for neural networks.** *PeerJ*
Gensheimer, M. F., Narasimhan, B.
2019; 7: e6257
 - **A radiation oncology-specific automated trigger indicator tool for high-risk near-miss safety events.** *Practical radiation oncology*
Hartvigson, P. E., Gensheimer, M. F., Spady, P. K., Evans, K. T., Ford, E. C.
2019
 - **In Regard to Valdes et al.** *International journal of radiation oncology, biology, physics*
Gensheimer, M. F., Trister, A. D.
2018; 102 (5): 1593-1594
 - **A Quantitative CT Imaging Signature Predicts Survival and Complements Established Prognosticators in Stage I Non-Small Cell Lung Cancer** *INTERNATIONAL JOURNAL OF RADIATION ONCOLOGY BIOLOGY PHYSICS*
Lee, J., Li, B., Cui, Y., Sun, X., Wu, J., Zhu, H., Yu, J., Gensheimer, M. F., Loo, B. W., Diehn, M., Li, R.
2018; 102 (4): 1098–1106
 - **Adaptive radiotherapy for head and neck cancer: Are we ready to put it into routine clinical practice?** *Oral oncology*
Gensheimer, M. F., Le, Q.
2018; 86: 19–24
 - **Adaptive radiotherapy for head and neck cancer: Are we ready to put it into routine clinical practice?** *ORAL ONCOLOGY*
Gensheimer, M. F., Le, Q.
2018; 86: 19–24
 - **Automated Survival Prediction in Metastatic Cancer Patients Using High-Dimensional Electronic Medical Record Data.** *Journal of the National Cancer Institute*
Gensheimer, M. F., Henry, A. S., Wood, D. J., Hastie, T. J., Aggarwal, S., Dudley, S. A., Pradhan, P., Banerjee, I., Cho, E., Ramchandran, K., Pollom, E., Koong, A. C., Rubin, et al
2018
 - **Factors Associated With Treatment of Clinical Stage I Non-Small-cell Lung Cancer: A Population-based Analysis.** *Clinical lung cancer*
Berry, M. F., Canchola, A. J., Gensheimer, M. F., Gomez, S. L., Cheng, I.
2018; 19 (5): e745–e758
 - **Factors Associated With Treatment of Clinical Stage I Non-Small-cell Lung Cancer: A Population-based Analysis** *CLINICAL LUNG CANCER*
Berry, M. F., Canchola, A. J., Gensheimer, M. F., Gomez, S. L., Cheng, I.
2018; 19 (5): E745–E758
 - **Prognostic Value of Pretreatment FDG-PET Parameters in High-dose Image-guided Radiotherapy for Oligometastatic Non-Small-cell Lung Cancer** *CLINICAL LUNG CANCER*
Chin, A. L., Kumar, K. A., Guo, H. H., Maxim, P. G., Wakelee, H., Neal, J. W., Diehn, M., Loo, B. W., Gensheimer, M. F.
2018; 19 (5): E581–E588

- **Probabilistic Prognostic Estimates of Survival in Metastatic Cancer Patients (PPES-Met) Utilizing Free-Text Clinical Narratives.** *Scientific reports*
Banerjee, I., Gensheimer, M. F., Wood, D. J., Henry, S., Aggarwal, S., Chang, D. T., Rubin, D. L.
2018; 8 (1): 10037
- **Probabilistic Prognostic Estimates of Survival in Metastatic Cancer Patients (PPES-Met) Utilizing Free-Text Clinical Narratives** *SCIENTIFIC REPORTS*
Banerjee, I., Gensheimer, M., Wood, D. J., Henry, S., Aggarwal, S., Chang, D. T., Rubin, D. L.
2018; 8
- **Chest wall dose reduction using noncoplanar volumetric modulated arc radiation therapy for lung stereotactic ablative radiation therapy** *PRACTICAL RADIATION ONCOLOGY*
Yu, A. S., Maxim, P. G., Loo, B. W., Gensheimer, M. F.
2018; 8 (4): E199–E207
- **A Quantitative CT Imaging Signature Predicts Survival and Complements Established Prognosticators in Stage I Non-Small Cell Lung Cancer.** *International journal of radiation oncology, biology, physics*
Lee, J. n., Li, B. n., Cui, Y. n., Sun, X. n., Wu, J. n., Zhu, H. n., Yu, J. n., Gensheimer, M. F., Loo, B. W., Diehn, M. n., Li, R. n.
2018
- **Prognostic Value of Pretreatment FDG-PET Parameters in High-dose Image-guided Radiotherapy for Oligometastatic Non-Small-cell Lung Cancer.** *Clinical lung cancer*
Chin, A. L., Kumar, K. A., Guo, H. H., Maxim, P. G., Wakelee, H. n., Neal, J. W., Diehn, M. n., Loo, B. W., Gensheimer, M. F.
2018
- **Mid-radiotherapy PET/CT for prognostication and detection of early progression in patients with stage III non-small cell lung cancer** *RADIOTHERAPY AND ONCOLOGY*
Gensheimer, M. F., Hong, J. C., Chang-Halpenny, C., Zhu, H., Eclow, N. C. W., To, J., Murphy, J. D., Wakelee, H. A., Neal, J. W., Le, Q., Hara, W. Y., Quon, A., Maxim, et al
2017; 125 (2): 338–43
- **Practical workflow for rapid prototyping of radiation therapy positioning devices** *PRACTICAL RADIATION ONCOLOGY*
Gensheimer, M. F., Bush, K., Juang, T., Herzberg, B., Villegas, M., Maxim, P. G., Diehn, M., Loo, B. W.
2017; 7 (6): 442–45
- **Circulating Tumor DNA Detects Residual Disease and Anticipates Tumor Progression Earlier Than CT Imaging**
Chaudhuri, A. A., Chabon, J. J., Lovejoy, A. F., Newman, A. M., Stehr, H., Azad, T. D., Zhou, L., Liu, C., Scherer, F., Kurtz, D. M., Esfahani, M. S., Say, C., Carter, et al
ELSEVIER SCIENCE INC.2017: E4
- **Stereotactic Ablative Radiotherapy for Stage I Non-Small-Cell Lung Cancer Tumors Greater Than 5 cm**
Anderson, E. M., Sharma, A., Westover, K. D., Timmerman, R., von Eyben, R., Gensheimer, M. F., Maxim, P., Loo, B. W., Diehn, M., Shultz, D. B.
ELSEVIER SCIENCE INC.2017: E38
- **Pulmonary function after lung tumor stereotactic ablative radiotherapy depends on regional ventilation within irradiated lung.** *Radiotherapy and oncology*
Binkley, M. S., King, M. T., Shrager, J. B., Bush, K., Chaudhuri, A. A., Popat, R., Gensheimer, M. F., Maxim, P. G., Henry Guo, H., Diehn, M., Nair, V. S., Loo, B. W.
2017; 123 (2): 270-275
- **Optimal Radiation Therapy for Small Cell Lung Cancer.** *Current treatment options in oncology*
Gensheimer, M. F., Loo, B. W.
2017; 18 (4): 21-?
- **Sinoatrial node dysfunction after stereotactic ablative radiation therapy in the chest**
Qian, Y., Dudley, S., Kumar, K., Chaudhuri, A., Chin, A., Harris, J., Prionas, N., Nwachukwu, C., Bagshaw, H., Pollom, E. L., Ben Durkee, Shultz, D., Gensheimer, M. F., et al
AMER SOC CLINICAL ONCOLOGY.2017
- **Prognostic value and molecular correlates of a CT image-based quantitative pleural contact index in early stage NSCLC.** *European radiology*

- Lee, J. n., Cui, Y. n., Sun, X. n., Li, B. n., Wu, J. n., Li, D. n., Gensheimer, M. F., Loo, B. W., Diehn, M. n., Li, R. n.
2017
- **Sinoatrial node toxicity after stereotactic ablative radiation therapy to lung tumors.** *Practical radiation oncology*
Qian, Y. n., Zhu, H. n., Pollom, E. L., Durkee, B. Y., Chaudhuri, A. A., Gensheimer, M. F., Diehn, M. n., Shultz, D. B., Loo, B. W.
2017
 - **Chest wall dose reduction using noncoplanar volumetric modulated arc radiation therapy for lung stereotactic ablative radiation therapy.** *Practical radiation oncology*
Yu, A. S., Maxim, P. G., Loo, B. W., Gensheimer, M. F.
2017
 - **Early detection of molecular residual disease in localized lung cancer by circulating tumor DNA profiling.** *Cancer discovery*
Chaudhuri, A. A., Chabon, J. J., Lovejoy, A. F., Newman, A. M., Stehr, H. n., Azad, T. D., Khodadoust, M. S., Esfahani, M. S., Liu, C. L., Zhou, L. n., Scherer, F. n., Kurtz, D. M., Say, et al
2017
 - **Contribution of submandibular gland and swallowing structure sparing to post-radiation therapy PEG dependence in oropharynx cancer patients treated with split-neck IMRT technique** *RADIATION ONCOLOGY*
Gensheimer, M. F., Nyflot, M., Laramore, G. E., Liao, J. J., Parvathaneni, U.
2016; 11
 - **Hypofractionated Intensity-Modulated Radiotherapy for Patients With Non-Small-Cell Lung Cancer.** *Clinical lung cancer*
Pollom, E. L., Qian, Y., Durkee, B. Y., von Eyben, R., Maxim, P. G., Shultz, D. B., Gensheimer, M., Diehn, M., Loo, B. W.
2016; 17 (6): 588-594
 - **Robust Intratumor Partitioning to Identify High-Risk Subregions in Lung Cancer: A Pilot Study.** *International journal of radiation oncology, biology, physics*
Wu, J., Gensheimer, M. F., Dong, X., Rubin, D. L., Napel, S., Diehn, M., Loo, B. W., Li, R.
2016; 95 (5): 1504-1512
 - **Pre-treatment non-target lung FDG-PET uptake predicts symptomatic radiation pneumonitis following Stereotactic Ablative Radiotherapy (SABR).** *Radiotherapy and oncology*
Chaudhuri, A. A., Binkley, M. S., Rigdon, J., Carter, J. N., Aggarwal, S., Dudley, S. A., Qian, Y., Kumar, K. A., Hara, W. Y., Gensheimer, M., Nair, V. S., Maxim, P. G., Shultz, et al
2016; 119 (3): 454-460
 - **SU-D-207B-05: Robust Intra-Tumor Partitioning to Identify High-Risk Subregions for Prognosis in Lung Cancer.** *Medical physics*
Wu, J., Gensheimer, M., Dong, X., Rubin, D., Napel, S., Diehn, M., Loo, B., Li, R.
2016; 43 (6): 3349-?
 - **Influence of planning time and treatment complexity on radiation therapy errors.** *Practical radiation oncology*
Gensheimer, M. F., Zeng, J., Carlson, J., Spady, P., Jordan, L., Kane, G., Ford, E. C.
2016; 6 (3): 187-193
 - **Mentorship Programs in Radiation Oncology Residency Training Programs: A Critical Unmet Need** *INTERNATIONAL JOURNAL OF RADIATION ONCOLOGY BIOLOGY PHYSICS*
Dhami, G., Gao, W., Gensheimer, M. F., Trister, A. D., Kane, G., Zeng, J.
2016; 94 (1): 27-30
 - **Simple tool for prediction of parotid gland sparing in intensity-Modulated radiation therapy** *MEDICAL DOSIMETRY*
Gensheimer, M. F., Hummel-Kramer, S. M., Cain, D., Quang, T. S.
2015; 40 (3): 232-234
 - **Trimodality Treatment of Malignant Pleural Mesothelioma: An Institutional Review.** *American journal of clinical oncology*
Kapeles, M., Gensheimer, M. F., Mart, D. A., Sottero, T. L., Kusano, A. S., Truong, A., Farjah, F., Laramore, G. E., Stelzer, K. J., Patel, S. A.
2015: -?
 - **Assessing the scale of tumor heterogeneity by complete hierarchical segmentation of MRI** *PHYSICS IN MEDICINE AND BIOLOGY*
Gensheimer, M. F., Hawkins, D. S., Ermoian, R. P., Trister, A. D.
2015; 60 (3): 977-993

- **The use of stereotactic radiosurgery for brain metastases from breast cancer: Who benefits most?** *BREAST CANCER RESEARCH AND TREATMENT*
Cho, E., Rubinstein, L., Stevenson, P., Gooley, T., Philips, M., Halasz, L. M., Gensheimer, M. F., Linden, H. M., Rockhill, J. K., Gadi, V. K.
2015; 149 (3): 743-749
- **Submandibular gland-sparing radiation therapy for locally advanced oropharyngeal squamous cell carcinoma: patterns of failure and xerostomia outcomes** *RADIATION ONCOLOGY*
Gensheimer, M. F., Liao, J. J., Garden, A. S., Laramore, G. E., Parvathaneni, U.
2014; 9
- **Differentiation of overall survival by breast cancer tumor subtype following stereotactic radiosurgery for brain metastasis.**
Cho, E., Rubinstein, L., Redman, M., Rockhill, J., Halasz, L., Gensheimer, M., Phillips, M., Linden, H. M., Gadi, V. K.
AMER SOC CLINICAL ONCOLOGY.2014
- **Neutron Radiotherapy for Adenoid Cystic Carcinoma of the Lacrimal Gland** *OPHTHALMIC PLASTIC AND RECONSTRUCTIVE SURGERY*
Gensheimer, M. F., Rainey, D., Douglas, J. G., Liao, J. J., Laramore, G. E., Jian-Amadi, A., Chow, L. Q., Koh, W., Parvathaneni, U.
2013; 29 (4): 256-260
- **Challenges and opportunities in patient-specific, motion-managed and PET/CT-guided radiation therapy of lung cancer: review and perspective.** *Clinical and translational medicine*
Bowen, S. R., Nyflot, M. J., Gensheimer, M., Hendrickson, K. R., Kinahan, P. E., Sandison, G. A., Patel, S. A.
2012; 1 (1): 18-?
- **IN VIVO PROTON BEAM RANGE VERIFICATION USING SPINE MRI CHANGES** *INTERNATIONAL JOURNAL OF RADIATION ONCOLOGY BIOLOGY PHYSICS*
Gensheimer, M. F., Yock, T. I., Liebsch, N. J., Sharp, G. C., Paganetti, H., Madan, N., Grant, P. E., Bortfeld, T.
2010; 78 (1): 268-275
- **Administration of oxaliplatin to a pregnant woman with rectal cancer** *CANCER CHEMOTHERAPY AND PHARMACOLOGY*
Gensheimer, M., Jones, C. A., Graves, C. R., Merchant, N. B., Lockhart, A. C.
2009; 63 (2): 371-373
- **Chalcone isomerase family and fold: No longer unique to plants** *PROTEIN SCIENCE*
Gensheimer, M., Mushegian, A.
2004; 13 (2): 540-544