Stanford



Lawrie Skinner

Clinical Associate Professor, Radiation Oncology - Radiation Physics

Bio

BIO

Lawrie Skinner, PhD DABR is a therapeutic medical physicist with clinical expertise in external beam radiation therapy, including advanced motion management techniques and MRI-guided radiation therapy.

Research interests generally revolve around developing novel devices for advanced clinical practice. Examples include personalized 3D printed electron beam collimators, rotating couch overlays for total body radiation therapy, and radiotransparent audio visual communication and immersion displays.

Dr skinner also has a research background in synchrotron x-ray scattering, neutron scattering, molecular dynamics and Monte Carlo computational modelling.

ACADEMIC APPOINTMENTS

- Clinical Associate Professor, Radiation Oncology - Radiation Physics

ADMINISTRATIVE APPOINTMENTS

- Postdoc, UC Berkeley, (2009-2009)
- Postdoc, Stony Brook university / Argonne Nat. Lab., (2010-2012)
- Research Assistant Professor, Stony Brook University /Argonne Nat. Lab., (2012-2015)
- Chief Physics Resident, Stanford University, (2018-2018)
- AAPM Northern California, Chapter Secretary, (2019- present)

PROFESSIONAL EDUCATION

- Residency, Stanford University , Therapeutic Medical Physics (2018)
- Pg. Cert., University of Chicago , Medical Physics (CAMPEP) (2016)
- PhD, Bristol University (UK) , Physics (condensed matter) (2009)
- MSci, Bristol University (UK) , Physics (2005)

PATENTS

- Lawrie Skinner. "United States Patent S19-067/PROV -- ID:3935 Tungsten filled 3D printed field shaping devices for electron beam radiation therapy", Leland Stanford Junior University, Aug 10, 2019
- Lawrie Skinner. "United States Patent PID:26564 A NOVEL INTEGRATED MULTI-MODAL PHANTOM FOR COMBINED DOSIMETRY AND POSITIONING VERIFICATION", Leland Stanford Junior Universit, Nov 19, 2018

LINKS

- Devices for radiaton therapy: https://radoncadditive.stanford.edu/

Teaching

COURSES

2026-27

- Medical Physics and Dosimetry: BMP 251, RADO 251 (Aut)

Publications

PUBLICATIONS

- **Upright positioning in pediatric radiotherapy: rationale, safety considerations and a research roadmap.** *Technical innovations & patient support in radiation oncology*
  Placidi, L., Yip, K., Tsang, Y. M., Rodriguez, S., Skinner, L., Underwood, T., Schreuder, N.
  2026; 40: 100432

- **Streamlining Liver SABR: Validation and Initial Experience of Bulk Density Override Based Single-Session, Simulation-Free Adaptive Workflow.** *Practical radiation oncology*
  Gao, Y., Hsu, E., Pham, D., Skinner, L., Chuang, C., Liu, L., Brown, E. C., Westermark, E. A., Lefebvre, S., Hernandez-Sanchez, L., Wang, J., Rahimy, E., Pollom, et al
  2026

- **Upright positioning in pediatric radiotherapy: rationale, safety considerations and a research roadmap** *TECHNICAL INNOVATIONS & PATIENT SUPPORT IN RADIATION ONCOLOGY*
  Placidi, L., Yip, K., Tsang, Y., Rodriguez, S., Skinner, L., Underwood, T., Schreuder, N.
  2026; 40

- **Emerging FLASH therapy platforms for stereotactic radiosurgery and body radiotherapy.** *Journal of radiosurgery and SBRT*
  Chen, D., Schulz, J. B., Melemenidis, S., Skinner, L., Xing, L., Loo, B. W., Ashraf, M. R.
  2026; 10 (1-2): 101-121

- **Single Percussive Ventilation Breath-hold Imaging and Delivery in Lung Tumor Stereotactic Ablative Radiation Therapy: Initial Observations From a Prospective Clinical Trial.** *International journal of radiation oncology, biology, physics*
  Mai, W. X., Huang, K. Z., Kuo, J., Wang, E., Wong, S., Yauger, A., Langer, J., Free, D., Gebeyehu, P., Kathiravan, A., Swamy, A., Flores, K. Z., Merrill, et al
  2026

- **Non-invasive Reversible Software-based Electron FLASH Irradiation Configuration of a Linear Accelerator in Clinical Use.** *International journal of radiation oncology, biology, physics*
  Melemenidis, S., Chen, D., Jensen, C., Schulz, J. B., Surucu, M., Yu, A. S., Graves, E. E., Shi, M., Reilly, M., Maxim, P. G., Currell, A., Loo, B. W., Skinner, et al
  2026

- **Addressing respiratory gating latency for accurate pulse delivery in preclinical electron FLASH irradiation on a clinical linear accelerator.** *ArXiv*
  Manjappa, R., Wang, J., Melemenidis, S., Viswanathan, V., Ashraf, R., Skinner, L., Soto, L. A., Lau, B., Ko, R. B., von Eyben, R., Graves, E., Yu, S., Bush, et al
  2026

- **Addressing respiratory gating latency for accurate pulse delivery in preclinical electron FLASH irradiation on a clinical linear accelerator.** *ArXiv*
  Manjappa, R., Wang, J., Melemenidis, S., Viswanathan, V., Ashraf, R., Skinner, L., Soto, L. A., Lau, B., Ko, R. B., von Eyben, R., Graves, E., Yu, S. J., Bush, et al
  2026

- **Radiation Therapy Without Anesthesia for a 7-Month-Old Child Using Audio-Visual Assisted Therapeutic Ambience in Radiation Therapy (AVATAR).** *Advances in radiation oncology*

Turcas, A., Ewongwo, A., Skinner, L., Diaconu, O., Coltea, V., Marosan, A., Gheorghica, L., Vancea, A., Aczberger, C., Savu, E., Mihut, E., Muddle, J., Loo, et al
2026; 11 (4): 102002

- **A Smartphone-Based Motion Monitoring System for Surface Guided Radiation Therapy.** *Advances in radiation oncology*
  Capaldi, D. P., Hirata, E., Witztum, A., Porter, E., Yu, A. S., Skinner, L. B., Braunstein, S. E., Morin, O., Prionas, N. D.
  2026; 11 (3): 101970
- **The Spinning Manny Indexed Overlay System for VMAT total body irradiation.** *Journal of applied clinical medical physics*
  Skinner, L., Simiele, E., Yang, Z., Hui, C., Romero, I., Binkley, M., Hoppe, R., Hiniker, S. M., Kovalchuk, N.
  2026; 27 (1): e70350
- **Emerging FLASH therapy platforms for stereotactic radiosurgery and body radiotherapy** *JOURNAL OF RADIOSURGERY AND SBRT*
  Chen, D., Schulz, J. B., Melemenidis, S., Skinner, L., Xing, L., Loo Jr, B. W., Ashraf, M.
  2026; 10 (1): 101-121
- **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
- **Automated contouring, treatment planning, and quality assurance for total marrow lymphoid irradiation** *FRONTIERS IN ONCOLOGY*
  Simiele, E., Hui, C., Romero, I., Yang, Z., Skinner, L., Xing, L., Ross, J. B., Hoppe, R. T., Binkley, M. S., Hiniker, S. M., Kovalchuk, N.
  2025; 15
- **Efficacy and toxicity of hyperfractionated thoracic reirradiation.** *Radiotherapy and oncology : journal of the European Society for Therapeutic Radiology and Oncology*
  Butler, S. S., Raclin, T., Lau, B., Raja, N., Skinner, L., Kastelowitz, N., Chin, A. L., Diehn, M., Loo, B. W., Vitzthum, L. K.
  2025: 111001
- **Effectiveness of FLASH vs. Conventional Dose Rate Radiotherapy in a Model of Orthotopic, Murine Breast Cancer.** *Cancers*
  Melemenidis, S., Viswanathan, V., Dutt, S., Kapadia, N., Lau, B., Soto, L. A., Ashraf, M. R., Thakur, B., Mutahar, A. Z., Skinner, L. B., Yu, A. S., Surucu, M., Casey, et al
  2025; 17 (7)
- **Rapid Sterilization of Clinical Apheresis Blood Products Using Ultra-High Dose Rate Radiation.** *International journal of molecular sciences*
  Melemenidis, S., Nguyen, K. D., Baraceros-Pineda, R., Barclay, C. K., Bautista, J., Lau, H. D., Ashraf, M. R., Manjappa, R., Dutt, S., Soto, L. A., Katila, N., Lau, B., Viswanathan, et al
  2025; 26 (6)
- **Nontoxic generalized patient shielding devices for total skin electron therapy** *PHYSICS & IMAGING IN RADIATION ONCOLOGY*
  Gibson, C., Schulz, J. B., Yu, A., Dubrowski, P., Skinner, L.
  2025; 33
- **Nontoxic generalized patient shielding devices for total skin electron therapy.** *Physics and imaging in radiation oncology*
  Gibson, C., Schulz, J. B., Yu, A., Dubrowski, P., Skinner, L.
  2025; 33: 100697
- **Evaluation of artificial intelligence and optical image recognition techniques used in Onelso, an off-axis Winston-Lutz quality assurance phantom.** *Biomedical physics & engineering express*
  Grafil, E., De Jean, P., Capaldi, D., Skinner, L. B., Xing, L., Yu, A. S.
  2024
- **Rapid Sterilization of Clinical Apheresis Blood Products using Ultra-High Dose Rate Radiation.** *bioRxiv : the preprint server for biology*
  Melemenidis, S., Nguyen, K. D., Baraceros-Pineda, R., Barclay, C. K., Bautista, J., Lau, H., Ashraf, M. R., Manjappa, R., Dutt, S., Soto, L. A., Katila, N., Lau, B., Visvanathan, et al
  2024
- **A Pilot Study to Evaluate Percussive Ventilation Breathhold to Improve Lung Stereotactic Ablative Radiotherapy (PVB-SABR)**
  Mai, W., Swamy, A., Flores, K., Langer, J., Free, D., Gebeyehu, P., Skinner, L., Wong, S., Huang, K., Pranoto, A., Lao, O., Loo, B., Blomain, et al

LIPPINCOTT WILLIAMS & WILKINS.2024: S3-S4

- **Integrating Audiovisual Immersion Into Pediatric Radiation Therapy Across Multiple Centers: Methodology, Timeliness, and Cost of the Audiovisual-Assisted Therapeutic Ambience in Radiation Therapy Prospective Multi-Institutional Trial.** *Advances in radiation oncology*
  Oh, J., Skinner, L., Gutkin, P. M., Jiang, A., Donaldson, S. S., Loo, B. W., Wang, Y. P., Ewongwo, A., Bredfeldt, J. S., Breneman, J. C., Constine, L. S., Faught, A. M., Haas-Kogan, et al
  2024; 9 (10): 101589

- **Integrating Audiovisual Immersion Into Pediatric Radiation Therapy Across Multiple Centers: Methodology, Timeliness, and Cost of the Audiovisual-Assisted Therapeutic Ambience in Radiation Therapy Prospective Multi-Institutional Trial** *ADVANCES IN RADIATION ONCOLOGY*
  Oh, J., Skinner, L., Gutkin, P. M., Jiang, A., Donaldson, S. S., Loo Jr, B. W., Wang, Y., Ewongwo, A., Bredfeldt, J. S., Breneman, J. C., Constine, L. S., Faught, A. M., Haas-Kogan, et al
  2024; 9 (10)

- **Dosimetric calibration of anatomy-specific ultra-high dose rate electron irradiation platform for preclinical FLASH radiobiology experiments.** *Medical physics*
  Wang, J., Melemenidis, S., Manjappa, R., Viswanathan, V., Ashraf, R. M., Levy, K., Skinner, L. B., Soto, L. A., Chow, S., Lau, B., Ko, R. B., Graves, E. E., Yu, et al
  2024

- **A multi-institutional study to investigate the sparing effect after whole brain electron FLASH in mice: Reproducibility and temporal evolution of functional, electrophysiological, and neurogenic endpoints.** *Radiotherapy and oncology : journal of the European Society for Therapeutic Radiology and Oncology*
  Drayson, O. G., Melemenidis, S., Katila, N., Viswanathan, V., Kramár, E. A., Zhang, R., Kim, R., Ru, N., Petit, B., Dutt, S., Manjappa, R., Ramish Ashraf, M., Lau, et al
  2024: 110534

- **Volumetric modulated arc therapy total body irradiation improves toxicity outcomes compared to 2D total body irradiation.** *Frontiers in oncology*
  Hui, C., Simiele, E., Lozko, Y., Romero, I., Skinner, L., Binkley, M. S., Hoppe, R., Kovalchuk, N., Hiniker, S. M.
  2024; 14: 1459287

- **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

- **4-Year Experience with the VMAT TBI Technique using Autoplanning Scripts**
  Kovalchuk, N., Simiele, E., Skinner, L., Yang, Y., Hui, C., Binkley, M., Hoppe, R., Hiniker, S.
  ELSEVIER IRELAND LTD.2024: S3622-S3625

- **Automated Contouring, Planning, and Quality Assurance for VMAT Craniospinal Irradiation (VMAT-CSI)**
  Simiele, E., Romero, I., Wang, J., Chen, Y., Lozko, Y., Severyn, Y., Skinner, L., Yang, Y., Xing, L., Gibbs, I., Hiniker, S., Kovalchuk, N.
  ELSEVIER IRELAND LTD.2024: S924-S927

- **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

- **Automated contouring, treatment planning, and quality assurance for VMAT craniospinal irradiation (VMAT-CSI).** *Frontiers in oncology*
  Simiele, E., Romero, I. O., Wang, J. Y., Chen, Y., Lozko, Y., Severyn, Y., Skinner, L., Yang, Y., Xing, L., Gibbs, I., Hiniker, S. M., Kovalchuk, N.
  2024; 14: 1378449

- **Multi-Institutional Audit of FLASH and Conventional Dosimetry with a 3D-Printed Anatomically Realistic Mouse Phantom.** *International journal of radiation oncology, biology, physics*
  Ashraf, M. R., Melemenidis, S., Liu, K., Grilj, V., Jansen, J., Velasquez, B., Connell, L., Schulz, J. B., Bailat, C., Libed, A., Manjappa, R., Dutt, S., Soto, et al
  2024

- **A clinical solution for non-toxic 3D-printed photon blocks in external beam radiation therapy.** *Journal of applied clinical medical physics*

Schulz, J. B., Dubrowski, P., Gibson, C., Yu, A. S., Skinner, L. B.
2024: e14225

- **Exploring deep learning for estimating the isoeffective dose of FLASH irradiation from mouse intestinal histology images.** *International journal of radiation oncology, biology, physics*
  Fu, J., Yang, Z., Melemenidis, S., Viswanathan, V., Dutt, S., Manjappa, R., Lau, B., Soto, L. A., Ashraf, R., Skinner, L., Yu, S. J., Surucu, M., Casey, et al
  2024
- **A multi-institutional trial evaluating the use of an integrated quality assurance phantom for frameless single-isocenter multitarget stereotactic radiosurgery.** *Frontiers in oncology*
  Capaldi, D. P., Skinner, L. B., Pinkham, D. W., Zavgorodni, S., Stafford, O., Shirmohammad, M., Matney, J. E., Dubrowski, P., De Jean, P., Grafil, E. M., Yu, A. S.
  2024; 14: 1445166
- **AVATAR 2.0: next level communication systems for radiotherapy through face-to-face video, biofeedback, translation, and audiovisual immersion.** *Frontiers in oncology*
  Schulz, J. B., Zalavari, L., Gutkin, P., Jiang, A., Wang, Y., Gibson, C., Garza, A., Bush, K. K., Wang, L., Donaldson, S. S., Loo, B. W., Hiniker, S. M., Skinner, et al
  2024; 14: 1405433
- **Automating the Treatment Planning Process for Volumetric Modulated Arc Therapy Craniospinal Irradiation (VMAT-CSI).** *Practical radiation oncology*
  Romero, I. O., Simiele, E. A., Lozko, Y., Severyn, Y., Skinner, L. B., Yang, Y., Wang, J. Y., Xing, L., Gibbs, I., Hiniker, S. M., Kovalchuk, N.
  2023
- **Tungsten filled 3D printed lung blocks for total body irradiation.** *Practical radiation oncology*
  Capaldi, D. P., Gibson, C., Villa, A., Schulz, J. B., Ziemer, B. P., Fu, J., Dubrowski, P., Yu, A. S., Fogh, S., Chew, J., Boreta, L., Braunstein, S. E., Witztum, et al
  2023
- **FLASH-RT does not affect chromosome translocations and junction structures beyond that of CONV-RT dose-rates.** *Radiotherapy and oncology : journal of the European Society for Therapeutic Radiology and Oncology*
  Barghouth, P. G., Melemenidis, S., Montay-Gruel, P., Ollivier, J., Viswanathan, V., Jorge, P. G., Soto, L. A., Lau, B. C., Sadeghi, C., Edlabadkar, A., Zhang, R., Ru, N., Baulch, et al
  2023: 109906
- **Shaping success: clinical implementation of a 3D-printed electron cutout program in external beam radiation therapy.** *Frontiers in oncology*
  Schulz, J. B., Gibson, C., Dubrowski, P., Marquez, C. M., Million, L., Qian, Y., Skinner, L., Yu, A. S.
  2023; 13: 1237037
- **An Integrated 3D Printed Enclosure for a Radioluminescent-Based Phantom for Quality Assurance on a Robotic-Arm Linac.** *Physics in medicine and biology*
  Ashraf, M. R., Gibson, C., Skinner, L. B., Gu, X., Xing, L., Wang, L.
  2023
- **Clinical LINAC-based electron FLASH: Pathway for practical translation to FLASH clinical trials: LINAC electron FLASH.** *International journal of radiation oncology, biology, physics*
  No, H. J., Wu, Y. F., Dworkin, M. L., Manjappa, R., Skinner, L., Ashraf, M. R., Lau, B., Melemenidis, S., Viswanathan, V., Yu, A. S., Surucu, M., Schüler, E., Graves, et al
  2023
- **3D printing in brachytherapy: A systematic review of gynecological applications.** *Brachytherapy*
  Fahimian, B. P., Liu, W., Skinner, L., Yu, A. S., Phillips, T., Steers, J. M., DeMarco, J., Fraass, B. A., Kamrava, M.
  2023
- **Feasibility of the Audio-Visual Assisted Therapeutic Ambience in Radiotherapy (AVATAR) system for anesthesia avoidance in pediatric patients: A multicenter trial.** *International journal of radiation oncology, biology, physics*
  Gutkin, P. M., Skinner, L., Jiang, A., Donaldson, S. S., Loo, B. W., Oh, J., Wang, Y. P., von Eyben, R., Snyder, J., Bredfeldt, J. S., Breneman, J. C., Constine, L. S., Faught, et al
  2023

- **FLASH-RT does not affect chromosome translocations and junction structures beyond that of CONV-RT dose-rates.** *bioRxiv : the preprint server for biology*
  Barghouth, P. G., Melemenidis, S., Montay-Gruel, P., Ollivier, J., Viswanathan, V., Jorge, P. G., Soto, L. A., Lau, B. C., Sadeghi, C., Edlabadkar, A., Manjappa, R., Wang, J., Bouteiller, et al
  2023

- **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

- **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

- **Design and validation of a dosimetric comparison scheme tailored for ultra-high dose-rate electron beams to support multicenter FLASH preclinical studies.** *Radiotherapy and oncology : journal of the European Society for Therapeutic Radiology and Oncology*
  Gonçalves Jorge, P., Melemenidis, S., Grilj, V., Buchillier, T., Manjappa, R., Viswanathan, V., Gondré, M., Vozenin, M. C., Germond, J. F., Bochud, F., Moeckli, R., Limoli, C., Skinner, et al
  2022

- **The Stanford VMAT TBI Technique.** *Practical radiation oncology*
  Kovalchuk, N., Simiele, E., Skinner, L., Yang, Y., Howell, N., Lewis, J., Hui, C., Blomain, E. S., Hoppe, R. T., Hiniker, S. M.
  2022

- **Radiation Therapy without Anesthesia for a 2-Year Old Child using Audio-Visual Assisted Therapeutic Ambience in Radiotherapy (AVATAR).** *Practical radiation oncology*
  Prasad, R. N., Baliga, S., Banner, J., Cadieux, C., Centnar, A., Degnan, M., Depinet, M., Ewing, A., Hobbs, N., Jiang, A. L., Manring, I., Perlow, H. K., Rock, et al
  1800

- **Technical report: 3D-printed patient-specific scalp shield for hair preservation in total skin electron beam therapy.** *Technical innovations & patient support in radiation oncology*
  Rahimy, E., Skinner, L., Kim, Y. H., Hoppe, R. T.
  2021; 18: 12-15

- **CT-less electron radiotherapy simulation and planning with a consumer 3D camera.** *Journal of applied clinical medical physics*
  Skinner, L., Knopp, R., Wang, Y., Dubrowski, P., Bush, K. K., Limmer, A., Trakul, N., Million, L., Marquez, C. M., Yu, A. S.
  2021

- **Radiation Therapy for Primary Cutaneous Gamma Delta Lymphoma Prior to Stem Cell Transplantation.** *Cancer investigation*
  Wu, Y. F., Skinner, L., Lewis, J., Khodadoust, M. S., Kim, Y. H., Kwong, B. Y., Weng, W., Hoppe, R. T., Sodji, Q., Hui, C., Kastelowitz, N., Fernandez-Pol, S., Hiniker, et al
  2021: 1–11

- **Use of Audiovisual Assisted Therapeutic Ambience in Radiotherapy (AVATAR) for Anesthesia Avoidance in a Pediatric Patient With Down Syndrome.** *Advances in radiation oncology*
  Gutkin, P. M., Donaldson, S. S., Skinner, L., Callejas, M., Cimino, J., Lore, J., Bush, K., Hiniker, S. M.
  2021; 6 (2): 100637

- **A robotically assisted 3D printed quality assurance lung phantom for Calypso.** *Physics in medicine and biology*
  Capaldi, D. P., Skinner, L. B., Dubrowski, P. n., Zhang, H. n., Xing, L. n., Chuang, C. F., Loo, B. W., Bush, K. K., Fahimian, B. P., Yu, A. S.
  2021

- **Nontoxic electron collimators.** *Journal of applied clinical medical physics*
  Breitkreutz, D. Y., Skinner, L., Lo, S., Yu, A.
  2021

- **Deep learning-augmented radiotherapy visualization with a cylindrical radioluminescence system.** *Physics in medicine and biology*
  Jia, M., Li, X., Wu, Y., Yang, Y., Kasimbeg, P., Skinner, L. B., Wang, L., Xing, L.

2020

- **Precision radiotherapy using monochromatic inverse Compton x-ray sources.** *Medical physics*
  Simiele, E. A., Breitkreutz, D. Y., Capaldi, D. P., Liu, W., Bush, K. K., Skinner, L. B.
  2020
- **Second window near-infrared dosimeter (NIR2D) system for radiation dosimetry.** *Physics in medicine and biology*
  Kim, T. J., Cheng, K., Zhang, H., Liu, S., Skinner, L., Xing, L.
  2020; 65 (17): 175013
- **FLASH irradiation enhances the therapeutic index of abdominal radiotherapy in mice**
  Natarajan, S., Levy, K., Wang, J., Chow, S., Eggold, J., Loo, P., Manjappa, R., Lartey, F. M., Schuler, E., Skinner, L., Rafat, M., Ko, R., Kim, et al
  AMER ASSOC CANCER RESEARCH.2020
- **Intensity modulated Ir-192 brachytherapy using high-Z 3D printed applicators.** *Physics in medicine and biology*
  Skinner, L. B., Niedermayr, T., Prionas, N., Perl, J., Fahimian, B. P., Kidd, E.
  2020
- **Impact of Audio-Visual Assisted Therapeutic Ambience in Radiotherapy (AVATAR) on Anesthesia Use, Payer Charges, and Treatment Time in Pediatric Patients.** *Practical radiation oncology*
  Balazy, K. E., Gutkin, P. M., Skinner, L., von Eyben, R., Fowler, T., Pinkham, D. W., Rodriguez, S., Maxim, P. G., Donaldson, S. S., Loo, B. W., Bush, K., Hiniker, S. M.
  2020
- **Technical Note: Evaluation of Audiovisual Biofeedback Smartphone Application for Respiratory Monitoring in Radiation Oncology.** *Medical physics*
  Capaldi, D. P., Nano, T. F., Zhang, H. n., Skinner, L. B., Xing, L. n.
  2020
- **FLASH Irradiation Results in Reduced Severe Skin Toxicity Compared to Conventional-Dose-Rate Irradiation.** *Radiation research*
  Soto, L. A., Casey, K. M., Wang, J. n., Blaney, A. n., Manjappa, R. n., Breitkreutz, D. n., Skinner, L. n., Dutt, S. n., Ko, R. B., Bush, K. n., Yu, A. S., Melemenidis, S. n., Strober, et al
  2020
- **A preliminary report of gonadal-sparing TBI using a VMAT technique.** *Practical radiation oncology*
  Blomain, E. S., Kovalchuk, N. n., Neilsen, E. n., Skinner, L. n., Hoppe, R. T., Hiniker, S. M.
  2020
- **Patient motion tracking for non-isocentric and non-coplanar treatments via fixed frame-of-reference 3D camera.** *Journal of applied clinical medical physics*
  Gasparyan, S. n., Ko, K. n., Skinner, L. B., Ko, R. B., Loo, B. W., Fahimian, B. P., Yu, A. S.
  2020
- **An integrated quality assurance phantom for frameless single-isocenter multitarget stereotactic radiosurgery.** *Physics in medicine and biology*
  Capaldi, D. P., Skinner, L. B., Dubrowski, P. n., Yu, A. S.
  2020
- **Abdominal FLASH irradiation reduces radiation-induced gastrointestinal toxicity for the treatment of ovarian cancer in mice.** *Scientific reports*
  Levy, K. n., Natarajan, S. n., Wang, J. n., Chow, S. n., Eggold, J. T., Loo, P. E., Manjappa, R. n., Melemenidis, S. n., Lartey, F. M., Schüler, E. n., Skinner, L. n., Rafat, M. n., Ko, et al
  2020; 10 (1): 21600
- **Volumetric Modulated Arc Therapy and 3-Dimensional Printed Bolus in the Treatment of Refractory Primary Cutaneous Gamma Delta Lymphoma of the Bilateral Legs** *PRACTICAL RADIATION ONCOLOGY*
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