BRIAN MARK ANDERSON, PHD, DABR

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EDUCATION

Residency – The University of California, San Diego (07/2021-07/2023)
Ph.D., Medical Physics - The University of Texas Health and Science Center, MD Anderson (9/2017-05/2021)
S.M.S, Medical Physics - The University of Texas Health and Science Center, MD Anderson (9/2015-8/2017)
B.S, Nuclear Engineering - The Georgia Institute of Technology (8/10-5/15) Highest Honors

GRANTS AND FELLOWSHIPS

R-01, Co-Investigator, University of North Carolina, Chapel Hill: AHRQ Health Services Research Projects. Projects being investigated: Examining the Impact of Artificial Intelligence on Healthcare Safety. Systems-Based Approaches to Improve Patient Safety, Leading the development of artificial intelligence strategies for improving patient safety and plan quality in radiation oncology. Facilitating the implementation of useful tools for low- and middle-income groups. Efficacy of AI assisted sim review in rural settings: randomized control study (2024)

MD Anderson Dr. John J. Kopchick Fellowship: $15,000 for one year, '…for students who demonstrate exceptional character, extracurricular leadership, research excellence and scholarly merit.' (01/2021)

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Society of Interventional Radiology (SIR) Allied Scientist Grant: $40,000 total for two years *Improving Treatments of Local Liver Disease with Biomechanical Modeling and Deep Learning* (05/2019)
American Association of Physicists in Medicine (AAPM) Summer Undergraduate Fellowship Program: 10 week program designed to gain experience in medical physics; work spent commissioning new Elekta linear accelerator in Eureka, CA (2014)

CLINICAL COMPETENCY AND SKILLS

Aria/Eclipse – Fully competent in all clinical tasks: EBRT treatment planning, fusion, brachytherapy, care path, etc. Experience with creation of programs to enhance workflow and facilitate research, including data mining and plan creation.

MIM – Experience with contouring, 4DCT binning, PET and image fusion

Raystation – Fully competent with four years of intense coding experience, created several programs and technologies to improve clinical and research endeavors.

Mosaiq – Fully competent with understanding of SQL queries related to Mosaiq database, used for clinical workflow improvement, task tracking, and quality improvement.

LINACs: Varian True Beam: resident responsibility facilitating TG-51, and responsibility for monthly and annual quality assurance

Brachytherapy after loaders: full clinical practice with Bravos, Varisource, and Flexitron remote afterloaders

PROFESSIONAL SERVICE ACTIVITIES

Editor/Service on Editorial Board(s):

Associate Editor: The International Journal of Medical Physics Research and Practice (2023-Present)

Ad hoc Associate Editor**,** The International Journal of Medical Physics Research and Practice (2020-2021)

Journal Reviewer: Manuscript Reviewer, The International Journal of Medical Physics Research and Practice (2019-present)

American Association of Physicists in Medicine (AAPM): Member 2015-Present

Medical Physicists for World Benefit (MPWB): Member 2017-Present

AAPM, Summer School, Teaching Assistant: Assisted in creation, distribution, and implementation of workbooks for the annual conference (2019)

AAPM, WizKids: A STEM outreach program where we volunteer to educate local students on medical physics and other STEM opportunities, volunteered at the annual conference (2018-2019)

MD Anderson, International Students Association (ISA): Founding member of the organization as domestic liaison with the Graduate School of Biomedical Sciences. Goal being to best help international students with any problems they might have in the transition to the US (opening bank account, etc.) (2019)

MD Anderson, Science Night: An outreach program to educate children of all ages on opportunities and research in STEM occurring in UTH. Involves creating fun interactive stages to educate the students. (2017-2019)

Houston, TX, St. Vincent de Paul Food Fair: Volunteering in organization and distribution of food to families in need with St. Vincent de Paul (2018)

Houston, TX, Volunteer at Friends for Life Animal Shelter: +20 hours spent volunteering in an animal shelter (2017-2019)

Houston, TX, Hurricane Harvey Relief: Assisted in the removal of drywall, floor paneling, and ruined furniture of a local home affected by Hurricane Harvey (2017)

MD Anderson, UT House Medics: Community outreach assisting elderly citizens with home renovation and reconstruction (2016, 2018)

CLINICAL PROJECTS AND RESPONSIBILITIES

UNC, Brachytherapy Equipment tracking: Deployed a personally created inventory program to record and notify when brachytherapy supplies need reordering.

UNC, DICOM Manipulation Tools: Stand-alone GUI for changing frame of reference and series instance UIDs. Useful for registering previously inherently defined images (4D-CT and free-breathing, MRIs).

UNC, DICOM transfer server: DICOM server created to seamlessly transfer between Raystation and PACs.

UCSD, Chief Resident: Responsible for the scheduling of resident clinical responsibilities, coordinating with faculty for resident education, and participate in ongoing Quality and Safety meetings. Presenting to hospital and faculty.

UCSD, VMAT Breast Rapid Plan: Creation of a knowledge-based rapid plan model for VMAT breast, including the creation of data-mining program within Eclipse.

UCSD, Brachytherapy sterilization kit program: Created a program to record and notify when sterilization was required in the brachytherapy suite. Tool has successfully replaced previous paper system since 2021.

UCSD, DICOM transfer server: DICOM server created to seamlessly transfer between the Ethos TPS and AlignRT.

UCSD, MR DICOM tool: Inherent frames of reference are needed to be broken prior to registration of MR and CT images in the UCSD clinic. This tool automatically breaks the inherent registration among the MR images in an efficient manner, saving time and reducing likelihood of errors in renaming process.

UCSD, PDF Creator: PDF creation automatically generated via stand-alone server. Enabled automatic uploading of the generated plan PDFs from brachytherapy procedures, streamlining the process and reducing potential for errors.

HONORS AND AWARDS

AAPM Annual Meeting, Jack Krohmer Early Career Investigator Competition Winner – EPIDEEP: Predicting In-Vivo EPID Transit Images – a Deep Learning Approach (2022)

MD Anderson, Alfred G. Knudson Jr. Outstanding Dissertation Award: $5,000 Award established by MD Anderson Cancer Center to honor the late Dr. Knudson in recognition of the top selected PhD dissertation. (2022)

AAPM Practical Big Data Workshop, Early Career Investigator – Impact Award (2021)

MD Anderson, Association of Science Communication (ASC) Oral Competition 1st place: 'Why is scientific communication important?' (2019)

AAPM, Science Council Session "Deep Learning for Rapid Deformable Image Registration of Liver CT Scans" (2019)

AAPM, People's Choice Award for Medical Physics Slam: Monetary award for winning the people's choice in presentation of research to a lay audience of non-medical physicists (2018)

Southwest AAPM, 1st Place Medical Physics Slam: Challenge where students have 3 minutes to present their research to community members outside of the medical physics profession, received travel award to compete in the Medical Physics Slam in the annual meeting (2018)

Southwest AAPM 1st Place Young Investigator Award: Monetary award from SWAAPM chapter for best work presented at SWAAPM (2018)

Winter Institute of Medical Physics Early Career Medical Physicist Scholar: Travel and monetary award (2018)

MD Anderson, Summer Student Research Retreat, 2nd Place: Students are invited to present their research for a monetary prize (2017)

Georgia Institute of Technology, Graduation with Highest Honors (2015)

Georgia Institute of Technology, Presidents Undergraduate Research Award (PURA): Research studying radio resistivity of CHO cell lines, dependent on cell cycle phase (2014)

RESEARCH EXPERIENCE

University of North Carolina, Chapel Hill: Research focused on improving patient safety throughout the radiation oncology treatment planning process. Created a new data architecture which represents all aspects of a patient's plan (dose-volume histograms, region-of-interest volumes, treatment beams, modalities) in a dramatically compressed form. This architecture facilitates rapid information gathering for curating a specific dataset and answering clinical questions.

MD Anderson, PhD Dissertation: "Improving Treatment of Local Liver Ablation Therapy with Deep Learning and Biomechanical Modeling" https://digitalcommons.library.tmc.edu/utgsbs_dissertations/1099/

This work was largely focused on providing tools to improve needle guidance during local liver ablation therapy, and improving ablation assessment in a manner conducive to immediate additional ablation during the surgical procedure. Python, for both the creation of deep learning networks and work within Raystation, was a skill I am now confident in using from this project. This skill led to the creation of a clinically implemented deep learning network for liver, tumor, and ablation segmentation, built into the Raystation workflow at MD Anderson. I furthermore developed a GUI based workflow within Raystation for the process of ROI creation of the liver, tumor, and ablation volumes, and deformable image registration for needle guidance, and ablation assessment. This work directly led to the creation and success of a Phase 2 Clinal Trial (NCT04083378).

MD Anderson, Master's Thesis: Computer-Aided Detection of Pathologically Enlarged Lymph Nodes on Non-Contrast CT in Cervical Cancer Patients for Low-Resource Settings (2015-2017)

INVITED TALKS

1. Healthcare Data & Analytics Association (HDAA): "Building Data Highways: Mining our Treatment Planning System" (09/2024)
2. University of North Carolina, The Analytics Community (TAC): "Getting more out of our Healthcare Infrastructure" (08/2024)
3. AAPM, Therapy Symposium: Therapeutic Planning, Delivery, Adaptation: "AI for segmentation and Registration" (07/2024)
4. Georgia Institute of Technology, invited lecturer: "Reimagining Medical Physics: A Deeper Dive into Deep Learning" (11/2023)
5. ESTRO-AAPM, Joint Symposium Session: "Estro-AAPM: Big data, Big Headache", Title "Dealing with public datasets" (05/2023)
6. MD Anderson, Image Guided Cancer Therapy Workshop: "Getting Started with Artificial Intelligence", Workshop and presentation (11/2021)
7. Winter Institute of Medical Physics: "Getting Started with Deep Learning: Dicom to Predictions" Workshop and presentation (02/2020)
8. MD Anderson, Image Guided Cancer Therapy Research Program: "How to Get Started in AI", Workshop and presentation (01/2020)

9. North Central Chapter AAPM, Keynote Lecturer: “Introduction to Deep Learning: Everything I wish I’d known sooner” (11/2019)
10. Rice University, Guest Lecturer ELEC/ COMP 576: “Introduction to Deep Learning” (09/2019)
11. MD Anderson, Invited Speaker, Nuclear Medicine Practical Seminar: “Deep Learning in the Liver and our field” (05/2019)

PUBLICATIONS

Papers

1. **Anderson B.M,** Padilla L, Ryckman J, Covington E, Hong DS, Woods K, Katz MS, Estes C, Moore K, Bojechko C. *Open RT Structures: A Solution for TG-263 Accessibility* International Journal of Radiation Oncology *Biology* Physics (Red Journal) (06/2024)
2. Covington E, Suresh K, **Anderson B.M**, Barker M, Dess K, Price J, Moncio A, Vaccarelli M, Santanam L, Xiao Y, Mayo C *Perceptions on roadblocks to implementation of standardized nomenclature in radiation oncology: survey from TG-263U1* Radiation Oncology Physics (04/2024)
3. Gay S, Kisling K, **Anderson B.M,** Zhang L, Rhee D.J, Nguyen C., Netherton T., Yang J., Brock K., Jhingran A., Simonds H., Klopp A., Beadle B. M., Court L., Cardenas C. *Identifying the optimal deep learning architecture and parameters for automatic beam aperture definition in 3D radiotherapy* Radiation Oncology Physics 09/2023
2. Rigaud B, Weaver O.O, Dennison J. B, Awais M, **Anderson B. M,** Chiang T-Y. D, Yang W. T, Hanash S. M, Brock K. K *Deep Learning Models for Automated Assessment of Breast Density Using Multiple Mammographic Image Types* Cancers 10/2022
3. Woodland M, Wood J, **Anderson B.M**, Kundu S, Lin E, Koay E, Odisio B, Chung C, Kang H.C, Venkatesan A.M, Yedururi S, De B, Lin Y-M, Patel A.B, Brock K.K *Evaluating the Performance of StyleGAN2-ADA on Medical Images* Simulation and Synthesis in Medical Imaging. SASHIMI 2022. Lecture Notes in Computer Science, vol 13570. Springer, Cham 09/2022
4. Lin Y-M, **Anderson B.M**, et al. *Study Protocol COVER-ALL: Clinical impact of a volumetric image method for confirming tumour coverage with ablation on patients with malignant liver lesions* CardioVascular and Interventional Radiology 09/2022
5. He Y, **Anderson B.M**, Cazoulat G, Rigaud B, Almodovar-Abreu L, Pollard-Larkin J, Balter P, Liao Z, Mohan R, Odisio B, Svensson S, Brock KK. *Optimization of mesh generation for geometric accuracy, robustness, and efficiency of biomechanical-model-based deformable image registration* Medical Physics 08/2022
6. **Anderson B.M**, B. Rigaud, Y Lin, K Jones, H Kang, B Odisio, K Brock *Automated Segmentation of Colorectal Liver Metastasis and Liver Ablation on Contrast-Enhanced CT Images* Frontiers in Radiation Oncology 08/2022
7. Wahid K, He R, McDonald B, **Anderson B.M,** Salzillo T, Mulder S., Wang J., Sharafi C., McCoy L, Naser M., Ahmed S., Sanders K., Mohamed A., Ding Y, Wang J, Hutcheson K., Lai S., Fuller C., Van Dijk L. *MRI Intensity Standardization Evaluation Design for Head and Neck Cancer Quantitative Analysis Applications* Physics and Imaging in Radiation Oncology 10/2021
8. Cazoulat G, **Anderson B.M**, McCulloch MM, Rigaud B, Koay EJ, Brock KK *Detection of vessel bifurcations in CT scans for automatic objective assessment of deformable image registration accuracy* The International Journal of Medical Physics Research and Practice 08/2021
9. **Anderson B.M,** Lin YM, Lin EY, Cazoulat G, Gupta S, Kyle Jones A, Odisio BC, Brock KK *A novel use of biomechanical model based deformable image registration (DIR) for assessing colorectal liver metastases ablation outcomes* The International Journal of Medical Physics Research and Practice *Accepted* 07/2021
10. He Y, Cazoulat G, Wu C, Peterson C, McCulloch M, **Anderson B.M**, Pollard-Larkin J, Balter P, Liao Z, Mohan R, Brock K *Geometric and Dosimetric Accuracy of Deformable Image Registration between Average-Intensity Images for 4DCT-Based Adaptive Radiotherapy for Non-Small Cell Lung Cancer* Journal of Applied Clinical Medical Physics 06/2021
11. **Anderson B.M,** Wahid K., Brock K. *Simple Python Module for Dicom and RT: Conversions to Images and Masks, and Predictions to Dicom-RT Structures* Practical Radiation Oncology 02/2021

12. Rigaud B, **Anderson B.M**, Yu ZH, Gobeli M, Cazoulat G, Söderberg J, Samuelsson E, Lidberg D, Ward C, Taku N, Cardenas C, Rhee DJ, Venkatesan AM, Peterson CB, Court L, Svensson S, Löfman F, Klopp AH, Brock KK *Automatic segmentation using deep learning for online dose optimization during adaptive radiotherapy of cervical cancer* International Journal of Radiation Oncology, Biology, Physics 10/2020
13. Kisling K, Cardenas C, **Anderson B.M.**, Zhang L, Jhingran A, Simonds H, Balter P, Howell RM, Schmeler K, Beadle BM, Court L. *Automatic Verification of Beam Apertures for Cervical Cancer Radiation Therapy* Practical Radiation Oncology 09/2020
14. **Anderson B.M**, Lin EY, Cardenas CE, Gress DA, Erwin WD, Odisio BC, Koay EJ, Brock KK *Automated Contouring of Contrast and Non-Contrast CT Liver Images with Fully Convolutional Networks (FCNs)* Advances in Radiation Oncology 05/2020
15. Cazoulat G, Elganainy D, **Anderson B.M**, Zaid M, Park PC, Koay EJ, Brock KK *Vasculature-Driven Biomechanical Deformable Image Registration of Longitudinal Liver Cholangiocarcinoma Computed Tomographic Scans*. Advances in Radiation Oncology 03/2020
16. Jin Y, Randall J., Elhalawani H., Feghali K., Elliot A., **Anderson B.M**, Lacerda L., Tran B., Mohamed A., Brock KK, Fuller C., Chung C. "*Detection of Glioblastoma Subclinical Recurrence Using Serial Diffusion Tensor Imaging"* Cancers 02/2020
17. McCulloch M., **Anderson B.M**, Cazoulat G, Peterson CB, Mohamed ASR, Volpe S, Elhalawani H, Bahig H, Rigaud B, King JB, Ford AC, Fuller CD, Brock KK *Biomechanical modeling of neck flexion for deformable alignment of the salivary glands in head and neck cancer images* Physics in Medicine and Biology 07/2019
18. Kisling KD, Ger RB, Netherton TJ, Cardenas CE, Owens CA, **Anderson B.M**, Lee J, Rhee DJ, Edward SS, Gay SS, He Y, David SD, Yang J, Nitsch PL, Balter PA, Urbauer DL, Peterson CB, Court LE, Dube S *"A snapshot of medical physics practice patterns,"* J. Appl. Clin. Med. Phys., vol. 19, no. 6, pp. 306–315, (11/2018)
19. Cardenas, E.C, **Anderson B.M**, Aristophanous M, Yang J, Rhee DJ, McCarroll RE, Mohamed ASR, Kamal M, Elgohari BA, Elhalawani HM, Fuller CD, Rao A, Garden AS, Court LE *Auto-delineation of Oropharyngeal Clinical Target Volumes Using Three-Dimensional Convolutional Neural Networks* Physics in Medicine and Biology 10/2018
20. **Anderson B.M,** Lin E., Cazoulat G., Gupta S., Odisio B., Brock KK. *Improvement of liver ablation treatment for colorectal liver metastases*. Medical Imaging 2018: Image-Guided Procedures, Robotic Interventions, and Modeling, 2018, p. 74.
21. McCulloch M.M, **Anderson B.M**, Mohamed A., Volpe S., Elhalawani H., Cazoulat G., Bahig H., Fuller C., Brock KK *Deformable Image Registration for Modeling Neck Flexion in Head and Neck Cancer Patients.* Physics in Medicine and Biology 09/2019
22. Ger R.B, Cardenas E.C, **Anderson B.M**, Yang J, Mackin DS, Zhang L, Court LE *Guidelines and Experience Using Imaging Biomarker Explorer (IBEX) for Radiomics*. Journal of Visualized Experiments 01/2018
23. Court, L. E., Kisling, K., McCarroll, R., Zhang, L., Yang, J., Simonds, H., du Toit, M., Trauernicht, C., Burger, H., Parkes, J., Mejia, M., Bojador, M., Balter, P., Branco, D., Steinmann, A., Baltz, G., Gay, S., **Anderson, B.M**, Cardenas, C., Jhingran, A., Shaitelman, S., Bogler, O., Schmeller, K., Followill, D., Howell, R., Nelson, C., Peterson, C., Beadle, B *Radiation Planning Assistant – A streamlined, fully automated radiotherapy treatment planning system*. Journal of Visualized Experiments. 12/2017
24. Rubinstein, A. E., Ingram, S. W., **Anderson, B.M**, Gay SS, Fave XJ, Ger RB, McCarroll RE, Owens CA, Netherton TJ, Kisling KD, Court LE, Yang J, Li Y, Lee J, Mackin DS, Cardenas CE *Cost-effective immobilization for whole brain radiation therapy*. Journal of Applied Clinical Medical Physics. 04/2017

Oral Presentations (Presenting Author)

1. **Anderson B.M,** Moore K., Padilla L., Bojechko C. *Enabling Adoption of TG-263 Standardization of Nomenclature: A Tool to Reduce the Headache* AAMD Annual Conference 06/2023
2. **Anderson B.M,** Moore K., Bojechko C. *EPIDEEP: Predicting In-Vivo EPID Transit Images – a Deep Learning Approach* AAPM Annual Conference 07/2022

3. **Anderson, B.M.**, Rigaud B., Lin YM, Cazoulat G., Koay E., Jones AK., Odisio B, Brock KK *Deep Learning for Near Real-Time Image-Guided Focal Ablation* AAPM Annual Conference. Virtual. 07/2021.
4. **Anderson, B.M.**, McCulloch M., Kirimli E., Lin YM., Rigaud B., Lin E., TranCao H., Qayyum, Koay E., Odisio B., Brock KK *Closing the Variability Gaps on Liver Surgery: Deep Segmentation of Disease and Lobes* AAPM Annual Conference. (Virtual) Vancouver, Canada. 07/2020.
5. **Anderson, B.M.**, Cazoulat G., Lin E., Odisio O., Brock KK. *Deep Learning for Rapid Deformable Image Registration of Liver CT Scans* AAPM Annual Conference. San Antonio, TX. 07/2019.
6. **Anderson B.M**, Lin E., Koay E., Brock KK, Odisio O. *Improving Colorectal Liver Metastasis Treatments with Biomechanical Modeling and Deep Learning* SIR Annual Conference. Austin, TX. 03/2019.
7. **Anderson B.M**, Lin E., Cardenas C., Koay E., Odisio O., Brock KK. *Automated Contouring of Contrast and Non-Contrast CT Liver Images with Fully Convolutional Neural Networks* ASTRO Annual Conference. San Antonio, TX. 10/2018
8. Cardenas C, **Anderson, B.M**, Zhang L., Jhingran A., Simonds H., Yang J., Brock Kk., Klopp A., Beadle B., Court L., Kisling K. *A Comparison of Two Deep Learning Architectures to Automatically Define Patient-Specific Beam Apertures.* AAPM Annual Conference. Nashville, TN. 07/2018
9. **Anderson, B.M,** Cardenas C, Elgohari B., Volpe S., Pei Y., Mohamed A., Elhalawani H., Chung C., Fuller C., Brock KK. *Deep Learning for Head and Neck Segmentation in MR: A Tool for the MR-Guided Radiotherapy.* AAPM Annual Conference. Nashville, TN. 07/2018
10. **Anderson B.M, Lin E.,** et al. *Deep Learning and Biomechanical Models for Improving Treatment of Colorectal Liver Metastases*. SWAAPM Annual Conference. Houston, TX 04/2018
11. **Anderson, B.M**, Lin E. Cazoulat G., Gupta S., Koay EJ., Odisio B., Brock KK. *Improvement of liver ablation for Colorectal Liver Metastases* MDA Cancer Imaging and Intervention Conference. Houston, TX 04/2018
12. **Anderson, B. M.**, Cardenas, C. E, Klopp A., Kry S., Johnson J., Ho J., Rao A., Yang J., Cressman E., Court L. *Computer-Aided Detection of Pathologically Enlarged Lymph Nodes of Non-Contrast CT in Cervical Cancer Patients for Low-Resource Settings* AAPM Annual Conference. Denver, CO. 07/2017.

Poster Presentations (Presenting Author)

1. **Anderson B.M,** Fried D, Hawkins M, Das S, Repka M, Shen C, Cen X *Simple Method for Functional Sparing of Parotid Glands in Head and Neck IMRT: Small Volume, Big Change* ASTRO 09/2024
2. **Anderson B.M,** Baughan N, Marks L, Chen S, Yanagihara T, Das S *Unlocking Insights: A Python-Based RayStation Data Mining Tool* AAPM 07/2024
3. **Anderson B.M,** Das S, Fried D, Dong F, Morse R, Shen C, Repka M, Chen S. *Predicting Dysphagia in Head and Neck Radiation Therapy with Deep Learning*. AAPM 07/2024
4. **Anderson B.M,** *Quick Guide to Setting Up GitHub and Jupiter Notebook*. AAPM Practical Big Data Workshop. Virtual. 09/2021
5. **Anderson B.M,** *Setting up the pipeline of data to TensorFlow .tfrecords*. AAPM Practical Big Data Workshop. Virtual. 09/2021
6. **Anderson B.M**, Ethan Lin, Cazoulat G., Gupta S., Odisio B., Brock KK. *Improving Colorectal Metastases Treatment: Neural Networks and Biomechanical Models.* AAPM Annual Conference. Nashville, TN. 07/2018
7. **Anderson B.M**, Lin E., et al. *Improvement of liver ablation treatment for Colorectal Liver Metastases (CLM)* SPIE Annual Conference. Houston, TX. 02/2017

Abstracts

1. Woodland M, Wood J, **Anderson B.M,** Kundu S., Lin E., Koay E., Odisio O., Chung C., Kang H., Venkateson A., Yedururi S., De B., Lin Y., Patel A., Brock KK. *Comparing Transfer Learning, Data Augmentation, and Data Expansion in the Improvement of Medical Image Generation* AAPM Annual Conference 07/2022

2. Rigaud, B., Kirimli E., Yedururi S., Cazoulat G., **Anderson B.M.,** Zaid M., Elganainy D., Koay E., Brock KK. *Evaluation of Deep Learning-Based Automatic Segmentation of the Pancreas* AAPM Annual Conference. Virtual, 07/2021
3. McCulloch, M., Cazoulat G., Rigaud B., **Anderson B.M.,** Kirimli E., Gryshkevych S., Svensson S., Ohrt A., Chopra A., Mathew R., Zaid M., Elganainy D., ,Balter P., Koay E., Brock KK. *Use of Deep Learning Segmentation and Biomechanical Models to Improve Dose Accumulation Accuracy in GI Structures* AAPM Annual Conference. Virtual, 07/2021
4. Reber, B., **Anderson, B.M.**, Mohamed A., Van Dijk L., Rigaud B., McCulloch M., He Y., Woodland M., Fuller C., Lai S., Brock KK *Predicting Osteoradionecrosis From Head and Neck Radiotherapy Using a Residual convolutional Neural Network* AAPM Annual Conference. Virtual, 07/2021
5. Brock, K., **Anderson, B.M.**, et al *Anatomical Modeling to Improve the Precision of Image Guided Liver Ablation* Image-Guided Therapy Workshop Rockville, MD. 04/2020
6. Owens, C., Gupta, A., Shrestha, S., **Anderson, B.M.**, et al *Development of a colon model for colon dosimetry in late effect studies* International Society of Radiation Epidemiology and Dosimetry, Sitges, Spain. 05/2020
7. Elhalawani, H., Jin Y., Randall J.W., Mahajan A., Mohamed A., Elliot A., **Anderson B.M.,** Landry L., Zhu H., Fuller C., Chung C. *Longitudinal and Dose Dependent Analysis on White Matter Injury in Glioblastoma Radiation Therapy* ASTRO Annual Conference, Chicago, IL. 09/2018
8. McCulloch M., Elhalawani H., **Anderson B.M**, et. al *Biomechanical model-based Deformable Image Registration for OARs in Glioma Patients* RSNA Annual Conference, Chicago, IL. 11/2018
9. Lin E.Y., **Anderson B.M**, et al. *Application of a biomechanical deformable registration image method for assessing ablation margins in colorectal liver metastases*. CIRSE Annual Conference. Barcelona, Spain (09/2018)
10. Kisling K., Ger R., Cardenas C., Rubinstein A., Netherton T., Ingram W., Fave X., Owens C., **Anderson B.M,** Lee J., Gay S., Yang J.,, McCarroll R., Machin D., Li Y., Rhee D., Edward S., He Y., David S., Nitsch P, Balter P., Court L *Broadening the Graduate School Experience: Paper-In-A-Day* AAPM Annual Conference. Nashville, TN. 07/2018
11. Sen A, **Anderson B.M**, Cazoulat G., Zaid M., Chaudhury B., Elganainy D., Koay E., Brock KK. *A Comparison of Deformable Registration Techniques for Pre and Post-Treatment Cholangiocarcinoma CT Images.* AAPM Annual Conference. Nashville, TN. 07/2018
12. Cazoulat G, Chaudhury B, **Anderson B.M**, Zaid M., Elganainy D., Koay E., Brock KK *Use of Vasculature Information in Biomechanical Model-Based Registration of Longitudinal Liver Cancer CT Scans.* AAPM Annual Conference. Nashville, TN. 07/2018

PROFESSIONAL TRAINING

UCSD Patient Communication for Medical Physicists Workshop: Two-day workshop focused on improving communication skills with physicists and patients. Paid actors simulated treatment meetings for patients receiving breast and prostate therapy (2022)

European Society of Interventional Radiology: Reliability in Percutaneous Tumour Ablation. (2019)

MD Anderson, Gulf Coast Consortia workshop, Rigor and Reproducibility: instructing researchers on the importance of robust research with unbiased analysis and reporting of results. (2019)

BigData4Imaging: Conference and workshop for training in machine and deep learning (2018)

OTHER

Ordained Minister: Received ordination to minister for the wedding of friends (2022)

Eagle Scout (2008)