

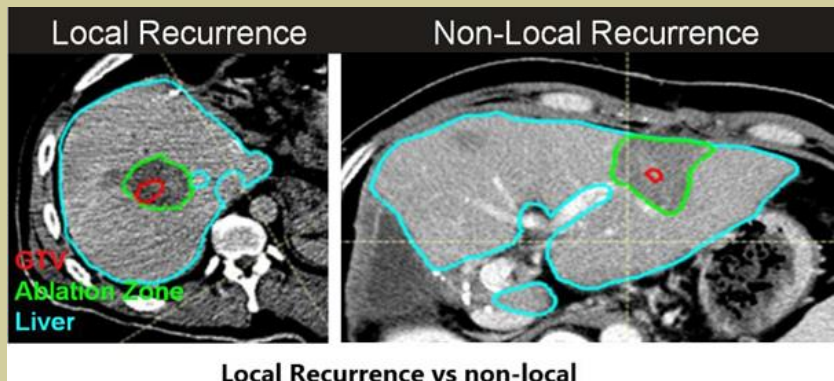
Brian M. Anderson

Graduate Student

Morfeus Lab

Current Project

My work is focused on improving the treatment of colorectal liver metastases with ablation therapy. We aim to improve both the localization of the ablation probe, as well as improving the assessment of therapy to prevent local recurrence. This will be investigated with biomechanical modeling of the liver, using Morfeus, and rapid segmentation of the liver via deep learning techniques. Ultimately we hope to create a fully autonomous system that can rapidly determine if the ablation of disease has been sufficiently delivered.



Papers

McCulloch M.M, **Anderson B.M**, et. al *Deformable Image Registration for Modelling Neck Flexion in Head and Neck Cancer Patients (In Submission)*

Ger R.B, Cardenas E.C, **Anderson B.M**, et. al *Guidelines using Imaging Biomarker Explorer (IBEX) for Radiomics. Journal of Visualized Experiments (Accepted 01/2018)*

Papers (cont'd)

Rubinstein, A. E., Ingram, S. W., Anderson, B.M, et al. Cost-effective immobilization for whole brain radiation therapy. *Journal of Applied Clinical Medical Physics*. (Accepted 04/2017)
Court L.E, Kisling K, et al. Radiation Planning Assistant – A streamlined, fully automated radiotherapy treatment planning system. *Journal of Visualized Experiments*. (Accepted 12/2017)

Oral Presentations (Presenting Author)

Anderson B.M, Lin E., et al. Automated Contouring of Contrast and Non-Contrast CT Liver Images with Fully Convolutional Neural Networks ASTRO Annual Conference. San Antonio, TX. 10/2018

Cardenas C, Anderson, B.M, et al. A Comparison of Two Deep Learning Architectures to Automatically Define Patient-Specific Beam Apertures. AAPM Annual Conference. Nashville, TN. 07/2018

Anderson, B.M, Cardenas C, et al. Deep Learning for Head and Neck Segmentation in MR: A Tool for the MR-Guided Radiotherapy. AAPM Annual Conference. Nashville, TN. 07/2018

Anderson B.M, Lin E., et al. Deep Learning and Biomechanical Models for Improving Treatment of Colorectal Liver Metastases. SWAAPM Annual Conference. Houston, TX 4/2018

Anderson, B.M, Lin E., et al. Improvement of liver ablation for Colorectal Liver Metastases MDA Cancer Imaging and Intervention Conference. Houston, TX 04/2018

Anderson, B. M., Cardenas, C. E, et al. 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

Anderson B.M, Ethan Lin, et al. Improving Colorectal Metastases Treatment: Neural Networks and Biomechanical Models. AAPM Annual Conference. Nashville, TN. 07/2018

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

Kisling K., et al. Broadening the Graduate School Experience: Paper-In-A-Day AAPM Annual Conference. Nashville, TN. 07/2018

Sen A, Anderson B.M, et. al. A Comparison of Deformable Registration Techniques for Pre and Post- Treatment Cholangiocarcinoma CT Images. AAPM Annual Conference. Nashville, TN. 07/2018

Cazoulat G, Chaudhury B, Anderson B.M, et al. Use of Vasculature Information in Biomechanical Model-Based Registration of Longitudinal Liver Cancer CT Scans. AAPM Annual Conference. Nashville, TN. 07/2018