CURRICULUM VITAE

Date of Revision:	May 18, 2021
Name:	John Onofrey, PhD
School:	Yale School of Medicine

Education:

BS, Johns Hopkins University Computer Science 2003
MS, Johns Hopkins University Computer Science 2007
MS, Yale University Biomedical Engineering 2008
MPhil, Yale University Biomedical Engineering 2009
PhD, Yale University Biomedical Engineering 2013

Career/Academic Appointments:

2013 - 2014	Postgraduate Associate, Radiology and Biomedical Imaging, Yale School of Medicine, New Haven, CT
2013 - 2015	Postdoctoral Associate, Radiology and Biomedical Imaging, Yale School of Medicine, New Haven, CT
2014 - 2016	Postdoctoral Associate, Radiology & Biomedical Imaging, Yale School of Medicine, New Haven, CT
2016 - 2019	Associate Research Scientist, Radiology and Biomedical Imaging, Yale School of Medicine, New Haven, CT
2019 - present	Assistant Professor, Radiology and Biomedical Imaging, Yale School of Medicine, New Haven, CT
2019 - present	Assistant Professor, Urology, Yale School of Medicine, New Haven, CT

Grants/Clinical Trials History:

Current Grants

Agency:	National Cancer Institute
I.D.#:	R42 CA224888
Title:	Image Analysis Tools for mpMRI Prostate Cancer Diagnosis Using PI-RADS
Role:	Principal Investigator
Percent effort:	40%
Direct costs per year:	N/A
Total costs for project period:	$1,503,918.00
Project period:	9/1/2020 - 8/31/2022

Agency:	National Institute of Biomedical Imaging and Bioengineering
I.D.#:	R21 EB028954

Title:	Data-driven Head Motion Correction in PET Imaging Using Deep Learning
P.I.:	Lu, Yihuan
Role:	Co Principal Investigator
Percent effort:	25%
Direct costs per year:	N/A
Total costs for project period:	$661,900.00
Project period:	4/15/2020 - 1/31/2023

Current Clinical Trials

Agency:	ZMK Medical Technologies, Inc. dba Eigen
I.D.#:	HIC# 2000024079MRR
Title:	Methodological Evaluation of Machine Learning Methods for Multi-modal Prostate Cancer
Role:	Principal Investigator
Percent effort:	N/A
Total costs for project period:	N/A
Project period:	10/12/2018

Agency:	Yale University School of Medicine
I.D.#:	HIC# 1405014045REG
Title:	Yale Acute Brain Injury Registry and Tissue Repository
P.I.:	Kevin Sheth
Role:	Sub-Investigator
Percent effort:	N/A
Total costs for project period:	N/A
Project period:	6/25/2014

Past Clinical Trials

Agency:	NO FUNDING
I.D.#:	HIC# 2000024091EXEMPT
Title:	Retrospective Review of All Patients with Neurogenic Bladder Before and After Treatment
P.I.:	Israel Franco
Role:	Sub-Investigator
Percent effort:	N/A
Total costs for project period:	N/A
Project period:	11/26/2018 - 11/26/2018

Pending Clinical Trials

Agency:	NO FUNDING
I.D.#:	HIC# 2000029516MRR
Title:	Telemedicine Opportunities and Obstacles
P.I.:	Jaime A. Cavallo
Role:	Sub-Investigator
Percent effort:	N/A
Total costs for project period:	N/A
Project period:	1/4/2021

Agency:	Department of the Army
I.D.#:	HIC# 2000027508
Title:	Determining Genomic Signatures of Prostate Cancer to Predict Subject Outcome
P.I.:	Darryl Martin
Role:	Sub-Investigator
Percent effort:	N/A
Total costs for project period:	N/A
Project period:	3/16/2020

Agency:	NO FUNDING
I.D.#:	HIC# 2000024295MRR
Title:	Imaging biomarkers for tumor classifications in brain and head/neck tumors using radiomics and machine-learning algorithms
P.I.:	Amit Mahajan
Role:	Sub-Investigator
Percent effort:	N/A
Total costs for project period:	N/A
Project period:	12/20/2019

Agency:	National Institutes of Health (NIH)
I.D.#:	HIC# MPMRIPIRADS
Title:	Image Analysis Tools for mpMRI Prostate Cancer Diagnosis Using PI-RADS
Role:	Principal Investigator
Percent effort:	N/A
Total costs for project period:	N/A

Professional Service:

Journal Service

Reviewer

2013 - 2021 Reviewer, IEEE Transactions on Medical Imaging
2013 - 2021 Reviewer, Medical Image Analysis

Public Service

2020 Featured Expert and Consultant, Yale Cancer Answers: AI to improve diagnosis in prostate cancer, Connecticut WNPR

Bibliography:

Peer-Reviewed Original Research

1. **Onofrey JA**, Staib LH, Papademetris X. Learning nonrigid deformations for constrained multi-modal image registration. Medical Image Computing And Computer-assisted Intervention : MICCAI ... International Conference On Medical Image Computing And Computer-Assisted Intervention 2013, 16:171-8.
2. **Onofrey JA**, Staib LH, Papademetris X. Segmenting the Brain Surface from CT Images with Artifacts Using Dictionary Learning for Non-rigid MR-CT Registration. Information Processing In Medical Imaging : Proceedings Of The ... Conference 2015, 24:662-74.
3. **Onofrey J**, Papademetris X, Staib L. Low-Dimensional Non-Rigid Image Registration Using Statistical Deformation Models From Semi-Supervised Training Data. IEEE Transactions On Medical Imaging 2015, 34:1522-1532.
4. **Onofrey JA**, Staib LH, Sarkar S, Venkataraman R, Papademetris X. LEARNING NONRIGID DEFORMATIONS FOR CONSTRAINED POINT-BASED REGISTRATION FOR IMAGE-GUIDED MR-TRUS PROSTATE INTERVENTION. Proceedings / IEEE International Symposium On Biomedical Imaging: From Nano To Macro. IEEE International Symposium On Biomedical Imaging 2015, 2015:1592-1595.
5. **Onofrey JA**, Staib LH, Papademetris X. Learning intervention-induced deformations for non-rigid MR-CT registration and electrode localization in epilepsy patients. NeuroImage. Clinical 2016, 10:291-301.
6. **Onofrey JA**, Staib LH, Sarkar S, Venkataraman R, Nawaf CB, Sprenkle PC, Papademetris X. Learning Non-rigid Deformations for Robust, Constrained Point-based Registration in Image-Guided MR-TRUS Prostate Intervention. Medical Image Analysis 2017, 39:29-43.
7. Chan C, **Onofrey J**, Jian Y, Germino M, Papademetris X, Carson RE, Liu C. Non-Rigid Event-by-Event Continuous Respiratory Motion Compensated List-Mode Reconstruction for PET. IEEE Transactions On Medical Imaging 2018, 37:504-515.
8. Lu Y, Fontaine K, Mulnix T, **Onofrey JA**, Ren S, Panin V, Jones J, Casey ME, Barnett R, Kench P, Fulton R, Carson RE, Liu C. Respiratory Motion Compensation for PET/CT with Motion Information Derived from Matched Attenuation-Corrected Gated PET Data. Journal Of Nuclear Medicine : Official Publication, Society Of Nuclear Medicine 2018, 59:1480-1486.

9. Sadda P, **Onofrey J**, Imamoglu M, Papademetris X, Qarni B, Bahtiyar MO. Real-time computerized video enhancement for minimally invasive fetoscopic surgery. Laparoscopic, Endoscopic, And Robotic Surgery 2018, 1:27-32.
10. Sadda P, Imamoglu M, Dombrowski M, Papademetris X, Bahtiyar MO, **Onofrey J**. Deep-learned placental vessel segmentation for intraoperative video enhancement in fetoscopic surgery. International Journal Of Computer Assisted Radiology And Surgery 2019, 14:227-235.
11. **Onofrey JA**, Staib LH, Papademetris X. Segmenting the Brain Surface From CT Images With Artifacts Using Locally Oriented Appearance and Dictionary Learning. IEEE Transactions On Medical Imaging 2019, 38:596-607.
12. Lu Y, Gallezot JD, Naganawa M, Ren S, Fontaine K, Wu J, **Onofrey JA**, Toyonaga T, Boutagy NE, Mulnix T, Panin VY, Casey ME, Carson RE, Liu C. Data-driven voluntary body motion detection and non-rigid event-by-event correction for static and dynamic PET. Physics In Medicine And Biology 2019, 64:065002.
13. Boutagy NE, Ravera S, Papademetris X, **Onofrey JA**, Zhuang ZW, Wu J, Feher A, Stacy MR, French BA, Annex BH, Carrasco N, Sinusas AJ. Noninvasive In Vivo Quantification of Adeno-Associated Virus Serotype 9-Mediated Expression of the Sodium/Iodide Symporter Under Hindlimb Ischemia and Neuraminidase Desialylation in Skeletal Muscle Using Single-Photon Emission Computed Tomography/Computed Tomography. Circulation. Cardiovascular Imaging 2019, 12:e009063.
14. Lu W, **Onofrey JA**, Lu Y, Shi L, Ma T, Liu Y, Liu C. An investigation of quantitative accuracy for deep learning based denoising in oncological PET. Physics In Medicine And Biology 2019, 64:165019.
15. **Onofrey JA**, Casetti-Dinescu DI, Lauritzen AD, Sarkar S, Venkataraman R, Fan RE, Sonn GA, Sprenkle PC, Staib LH, Papademetris X. GENERALIZABLE MULTI-SITE TRAINING AND TESTING OF DEEP NEURAL NETWORKS USING IMAGE NORMALIZATION. Proceedings / IEEE International Symposium On Biomedical Imaging: From Nano To Macro. IEEE International Symposium On Biomedical Imaging 2019, 2019:348-351.
16. **Onofrey JA**, Staib LH, Huang X, Zhang F, Papademetris X, Metaxas D, Rueckert D, Duncan JS. Sparse Data-Driven Learning for Effective and Efficient Biomedical Image Segmentation. Annual Review Of Biomedical Engineering 2020, 22:127-153.
17. Shi L, **Onofrey JA**, Liu H, Liu YH, Liu C. Deep learning-based attenuation map generation for myocardial perfusion SPECT. European Journal Of Nuclear Medicine And Molecular Imaging 2020, 47:2383-2395.
18. Netto JMB, Scheinost D, **Onofrey JA**, Franco I. Magnetic resonance image connectivity analysis provides evidence of central nervous system mode of action for parasacral transcutaneous electro neural stimulation - A pilot study. Journal Of Pediatric Urology 2020, 16:536-542.
19. Murali N, Kucukkaya A, Petukhova A, **Onofrey J**, Chapiro J. Supervised Machine Learning in Oncology: A Clinician's Guide. Digestive Disease Interventions 2020, 4:73-81.