Kareem Abdul Wahid

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Education

M.D.-PhD Medical Scientist Training Program – UT Houston, Start: July 2016, End: May 2026
McGovern Medical School, Houston, TX
Program Directors: Dianna M. Milewicz, M.D., Ph.D., George Calin, M.D., Ph.D., Alemayehu Gorfe, M.D., Ph.D., Ruth Heidelberger, M.D., Ph.D., Raghu Kalluri, M.D., Ph.D., Jason Schenkel, M.D., Ph.D., Edgar Walters, Ph.D., Wendy Woodward M.D., Ph.D.

Postdoc Image Guided Cancer Therapy (IGCT) Fellowship, Start: June 2023, End: Apr 2025
The University of Texas MD Anderson Cancer Center, Houston, TX
Primary Mentor: David Fuentes, Ph.D.
Secondary Mentors: Clifton D. Fuller, M.D., Ph.D., Andrew Sikora, M.D., Ph.D., Kristin Kostick-Quenet Ph.D.

Ph.D. Quantitative Sciences, Start: Aug 2019, End: May 2023, **GPA: 4.0/4.0**
MD Anderson UTH Graduate School of Biomedical Science, Houston, TX
Thesis: "*Multiparametric Magnetic Resonance Imaging Artificial Intelligence Pipeline for Oropharyngeal Cancer Radiotherapy Treatment Guidance*".
DOI: https://doi.org/10.6084/m9.figshare.22141871.v2.
Advisor: Clifton D. Fuller, M.D., Ph.D.
Committee: Wendy Woodward, M.D., Ph.D., Christine Peterson, Ph.D., Jason Stafford Ph.D., David Fuentes Ph.D., Carlos Cardenas Ph.D., Stephen Lai, M.D., Ph.D.

B.S. Physics/Mathematics, Start: May 2012, End: May 2016, **GPA: 4.0/4.0**, Highest Honors
University of Texas Rio Grande Valley (UTRGV), Edinburg, TX
Thesis: "*Structural and Luminescent Characterization of Eu^{3+} Doped $La_2Hf_2O_7$ Nanoparticles*"
Advisor: Yuanbing Mao, Ph.D.

Current research interests: medical imaging, machine learning, radiation oncology.

Current h-index (as per Google Scholar, Dec 1, 2025): 22

Publications (Google Scholar, ResearchGate, ORCID) * *indicates co-first author*

1. Hannan, M., **Wahid, K.**, & Nguyen, N. (2015). Assessment of natural and artificial radionuclides in Mission (Texas) surface soils. *Journal of Radioanalytical and Nuclear Chemistry*, *305*, 573–582.

2. Pokhrel, M., **Wahid, K.**, & Mao, Y. (2016). Systematic studies on RE2Hf2O7: 5% Eu3+ (RE= Y, La, Pr, Gd, Er, and Lu) nanoparticles: effects of the A-site RE3+ cation and calcination on structure and photoluminescence. *The Journal of Physical Chemistry C*, *120*(27), 14828–14839.

3. Zhang, Y., Glor, E. C., Li, M., Liu, T., **Wahid, K**., Zhang, W., … Fakhraai, Z. (2016). Long-range correlated dynamics in ultra-thin molecular glass films. *The Journal of Chemical Physics*, *145*(11).

4. **Wahid, K.**, Pokhrel, M., & Mao, Y. (2017). Structural, photoluminescence and radioluminescence properties of Eu3+ doped La2Hf2O7 nanoparticles. *Journal of Solid State Chemistry*, *245*, 89–97.

5. Pokhrel, M., Gupta, S. K., **Wahid, K.**, & Mao, Y. (2019). Pyrochlore rare-earth hafnate RE2Hf2O7 (RE= La and Pr) nanoparticles stabilized by molten-salt synthesis at low temperature. *Inorganic Chemistry*, *58*(2), 1241–1251.

6. Salem, H., Ruiz, A., Hernandez, S., **Wahid, K.**, Cao, F., Karnes, B., … Pigott, T. (2019). Borderline personality features in inpatients with bipolar disorder: impact on course and machine learning model use to predict rapid readmission. *Journal of Psychiatric Practice®*, *25*(4), 279–289.

7. Head, J., Cooperative, N. M.-R. D., van Dijk, L. V., Ventura, J., **Wahid, K.**, Zhu, L. L., … Others. (2020). Black bone MRI morphometry for mandibular cortical bone measurement in head and neck cancer patients: Prospective method comparison with CT. *medRxiv*, 2020–2007.

8. Stieb, Sonja, Mohamed, A. S. R., He, R., Zhu, L. L., McDonald, B. A., **Wahid, K.**, … Others. (2021). Development and validation of a contouring guideline for the taste bud bearing tongue mucosa. *Radiotherapy and Oncology*, *157*, 63–69.

9. Naser, M. A., van Dijk, L. V., He, R., **Wahid, K. A.**, & Fuller, C. D. (2020). Tumor segmentation in patients with head and neck cancers using deep learning based-on multi-modality PET/CT images. In *3D Head and Neck Tumor Segmentation in PET/CT Challenge* (pp. 85–98). Springer International Publishing Cham.

10. Anderson, B. M., **Wahid, K. A.**, & Brock, K. K. (2021). Simple python module for conversions between DICOM images and radiation therapy structures, masks, and prediction arrays. *Practical Radiation Oncology*, *11*(3), 226–229.

11. Wang, J. H., **Wahid, K. A.**, van Dijk, L. V., Farahani, K., Thompson, R. F., & Fuller, C. D. (2021). Radiomic biomarkers of tumor immune biology and immunotherapy response. *Clinical and Translational Radiation Oncology*, *28*, 97–115.

12. Salzillo, T. C., Taku, N., **Wahid, K. A.**, McDonald, B. A., Wang, J., van Dijk, L. V., … Others. (2021). Advances in imaging for HPV-related oropharyngeal cancer: Applications to radiation oncology. *Seminars in Radiation Oncology*, *31*, 371–388. WB Saunders.

13. Naser, M. A., **Wahid, K. A.**, van Dijk, L. V., He, R., Abdelaal, M. A., Dede, C., … Fuller, C. D. (2021). Head and neck cancer primary tumor auto segmentation using model ensembling of deep learning in PET/CT images. In *3D Head and Neck Tumor Segmentation in PET/CT Challenge* (pp. 121–133). Springer International Publishing Cham.

14. **Wahid, Kareem A.**, Ahmed, S., He, R., van Dijk, L. V., Teuwen, J., McDonald, B. A., … Others. (2022). Evaluation of deep learning-based multiparametric MRI oropharyngeal primary tumor auto-segmentation and investigation of input channel effects: Results from a prospective imaging registry. *Clinical and Translational Radiation Oncology*, *32*, 6–14.

15. **Wahid, Kareem A.**, He, R., Dede, C., Mohamed, A. S. R., Abdelaal, M. A., van Dijk, L. V., … Naser, M. A. (2021). Combining tumor segmentation masks with PET/CT images and clinical data in a deep learning framework for improved prognostic prediction in head and neck squamous cell carcinoma. In *3D Head and Neck Tumor Segmentation in PET/CT Challenge* (pp. 300–307). Springer International Publishing Cham.

16. Naser, M. A., **Wahid, K. A.**, Mohamed, A. S. R., Abdelaal, M. A., He, R., Dede, C., … Fuller, C. D. (2021). Progression free survival prediction for head and neck cancer using deep learning based

on clinical and PET/CT imaging data. In *3D Head and Neck Tumor Segmentation in PET/CT Challenge* (pp. 287–299). Springer International Publishing Cham.

17. **Wahid, Kareem A.**, He, R., McDonald, B. A., Anderson, B. M., Salzillo, T., Mulder, S., … Others. (2021). Intensity standardization methods in magnetic resonance imaging of head and neck cancer. *Physics and Imaging in Radiation Oncology*, *20*, 88–93.

18. **Wahid, K. A.***, Naser, M. A., Ahmed, S., Salama, V., Dede, C., Edwards, B. W., … Others. (2023). Quality assurance assessment of intra-acquisition diffusion-weighted and T2-weighted magnetic resonance imaging registration and contour propagation for head and neck cancer radiotherapy. *Medical Physics*, *50*(4), 2089–2099.

19. Taku, N., **Wahid, K. A.**, van Dijk, L. V., Sahlsten, J., Jaskari, J., Kaski, K., … Naser, M. A. (2022). Auto-detection and segmentation of involved lymph nodes in HPV-associated oropharyngeal cancer using a convolutional deep learning neural network. *Clinical and Translational Radiation Oncology*, *36*, 47–55.

20. Mulder, S. L., Heukelom, J., McDonald, B. A., Van Dijk, L., **Wahid, K. A.**, Sanders, K., … Fuller, C. D. (2022). MR-guided adaptive radiotherapy for OAR sparing in head and neck cancers. *Cancers*, *14*(8), 1909.

21. Head, J., Cooperative, N. R.-M. D., Mohamed, A. S. R., Abusaif, A., He, R., **Wahid, K. A.**, … Others. (2023). Prospective validation of diffusion-weighted MRI as a biomarker of tumor response and oncologic outcomes in head and neck cancer: Results from an observational biomarker pre-qualification study. *Radiotherapy and Oncology*, *183*, 109641.

22. Naser, M. A., **Wahid, K. A.**, Grossberg, A. J., Olson, B., Jain, R., El-Habashy, D., … Others. (2022). Deep learning auto-segmentation of cervical skeletal muscle for sarcopenia analysis in patients with head and neck cancer. *Frontiers in Oncology*, *12*, 930432.

23. **Wahid, K. A**., Olson, B., Jain, R., Grossberg, A. J., El-Habashy, D., Dede, C., Salama, V., Abobakr, M., Mohamed, A. S. R., He, R., Jaskari, J., Sahlsten, J., Kaski, K., Fuller, C. D., & Naser, M. A. (2022). Muscle and adipose tissue segmentations at the third cervical vertebral level in patients with head and neck cancer. *Scientific Data*, 9(1), 470.

24. **Wahid, K. A.**, Xu, J., El-Habashy, D., Khamis, Y., Abobakr, M., McDonald, B., O'Connell, N., Thill, D., Ahmed, S., Sharafi, C. S., Preston, K., Salzillo, T. C., Mohamed, A. S. R., He, R., Cho, N., Christodouleas, J., Fuller, C. D., & Naser, M. A. (2022). Deep-learning-based generation of synthetic 6-minute MRI from 2-minute MRI for use in head and neck cancer radiotherapy. *Frontiers in Oncology*, 12, 975902.

25. Head, J., Cooperative, N. R.-M. D., Head, M. D. A., Group, N. C. S. W., Sanders, K. L., Mulder, S., **Wahid, K. A.**, … Others. (2022). Improved Xerostomia Prediction in Head and Neck Cancer Patients with Dixon Magnetic Resonance Imaging of Glandular Adiposity: Validation of Semi-Quantitative Parotid T1 Signal Intensity Metrics for Biomarker Pre-Qualification. *medRxiv*, 2022–2007.

26. **Wahid, Kareem A.,** Glerean, E., Sahlsten, J., Jaskari, J., Kaski, K., Naser, M. A., … Fuller, C. D. (2022). Artificial intelligence for radiation oncology applications using public datasets. *Seminars in Radiation Oncology*, *32*, 400–414. WB Saunders.

27. van Dijk, Lisanne V., Mohamed, A. S. R., Ahmed, S., Nipu, N., Marai, G. E., **Wahid, K**., … Others. (2023). Head and neck cancer predictive risk estimator to determine control and therapeutic outcomes of radiotherapy (HNC-PREDICTOR): development, international multi-institutional validation, and web implementation of clinic-ready model-based risk stratification for head and neck cancer. *European Journal of Cancer*, *178*, 150–161.

28. **Wahid, K. A.***, Lin, Diana, Nelms, B. E., He, R., Naser, M. A., Duke, S., Sherer, M.V., Christodouleas, J.P., Mohamed, A.S.R., Cislo, M., Murphy, J.D., Fuller, C.D., Gillespie, E.F., (2023). E pluribus unum: prospective acceptability benchmarking from the Contouring Collaborative for Consensus in Radiation Oncology crowdsourced initiative for multiobserver segmentation. *Journal of Medical Imaging*, *10*(S1), S11903–S11903.

29. Eisenmann, M., Reinke, A., Weru, V., Tizabi, M. D., Isensee, F., Adler, T. J., …, **Wahid, K.**, …, Others. (2022). Biomedical image analysis competitions: The state of current participation practice. *arXiv Preprint arXiv:2212. 08568*.

30. Sahlsten, J., **Wahid, K. A.**, Glerean, E., Jaskari, J., Naser, M. A., He, R., … Kaski, K. (2023). Segmentation stability of human head and neck cancer medical images for radiotherapy applications under de-identification conditions: Benchmarking data sharing and artificial intelligence use-cases. *Frontiers in Oncology*, *13*, 1120392.

31. Sahlsten, J., Jaskari, J., **Wahid, K. A.**, Ahmed, S., Glerean, E., He, R., … Others. (2024). Application of simultaneous uncertainty quantification and segmentation for oropharyngeal cancer use-case with Bayesian deep learning. *Communications Medicine*, *4*(1), 110.

32. Sahin, O., **Wahid, K. A.**, Taku, N., He, R., Naser, M. A., Mohamed, A. S. R., … Others. (2025). Multi-Specialty Expert Physician Identification of Extranodal Extension in Computed Tomography Scans of Oropharyngeal Cancer Patients: Prospective Blinded Human Inter-Observer Performance Evaluation. *Cancer.*

33. **Wahid, Kareem A.**, Lin, D., Sahin, O., Cislo, M., Nelms, B. E., He, R., Naser, M.A., Duke, S., Sherer, M.V., Christodouleas, J.P., Mohamed, A.S.R., Muyphy, J.D., Fuller, C.D., Gillespie, E.F. (2023). Large scale crowdsourced radiotherapy segmentations across a variety of cancer anatomic sites. *Scientific Data*, *10*(1), 161.

34. Eisenmann, M., Reinke, A., Weru, V., Tizabi, M. D., Isensee, F., Adler, T. J., …, **Wahid, K.,** … Others. (2023). Why is the winner the best? *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition*, 19955–19966.

35. El-Habashy, D. M., **Wahid, K. A.**, He, R., McDonald, B., Rigert, J., Mulder, S. J., … Others. (2023). Longitudinal diffusion and volumetric kinetics of head and neck cancer magnetic resonance on a 1.5 T MR-Linear accelerator hybrid system: A prospective R-IDEAL Stage 2a imaging biomarker characterization/pre-qualification study. *Clinical and Translational Radiation Oncology*, *42*, 100666.

36. Andrearczyk, V., Oreiller, V., Abobakr, A., …, **Wahid, K.**, …, Others. (2023). Overview of the HECKTOR challenge at MICCAI 2022: automatic head and neck tumor segmentation and outcome prediction in PET/CT images. In *3D head and neck tumor segmentation in PET/CT challenge* (pp. 1–30). Springer.

37. McDonald, B. A., Cardenas, C. E., O'Connell, N., Ahmed, S., Naser, M. A., **Wahid, K. A.**, … Others. (2023). Investigation of autosegmentation techniques on T2-weighted MRI for off-line dose reconstruction in MR-linac workflow for head and neck cancers. *Medical Physics*.

38. Ye, Z., Saraf, A., Ravipati, Y., Hoebers, F., Catalano, P. J., Zha, Y., …, **Wahid, K.A.**, …, Others. (2023). Development and Validation of an Automated Image-Based Deep Learning Platform for Sarcopenia Assessment in Head and Neck Cancer. *Jama Network Open*, *6*(8), e2328280–e2328280.

39. Neck Radiotherapy-MRI Development Cooperative, J. H. A., Salzillo, T. C., Dresner, M. A., Way, A., **Wahid, K. A.**, McDonald, B. A., ... & Fuller, C. D. (2023). Development and implementation of optimized endogenous contrast sequences for delineation in adaptive radiotherapy on a 1.5 T MR-linear-accelerator: a prospective R-IDEAL stage 0-2a quantitative/qualitative evaluation of in vivo site-specific quality-assurance using a 3D T2 fat-suppressed platform for head and neck cancer. *Journal of Medical Imaging*, *10*(6), 065501-065501.

40. **Wahid, K. A.**, Kiser, K. J., Sanders, K. L., Sharafi, C. S., McCoy, L. A., Ventura, J., ... & van Dijk, L. V. (2024). Radiotherapy outcome prediction with medical imaging. In *Machine Learning and Artificial Intelligence in Radiation Oncology* (pp. 239-315). Academic Press.

41. **Wahid, K. A.**, Sahin, O., Kundu, S., Lin, D., Alanis, A., Tehami, S., Kamel, S., Duke, S., Sherer, M.V., Rasumusen, M., Korreman, S., Fuentes, D., Cislo, M., Nelms, B.E., Christodouleas, J.P., Murphy, J.D., Mohamed, A.S.R., He, R., Naser, M.A., Gillespie, E.F., Fuller, C.D. (2024). Associations Between Radiation Oncologist Demographic Factors and Segmentation Similarity Benchmarks: Insights From A Crowd-Sourced Challenge Using Bayesian Estimation. *Journal of Clinical Oncology Clinical Cancer Informatics*.

42. El-Habashy, D. M., **Wahid, K. A.**, He, R., McDonald, B. A., Mulder, S. J., Ding, Y. A., … Others. (2024). Dataset of weekly intra-treatment diffusion weighted imaging in head and neck cancer patients treated with MR-Linac. *Scientific Data*, *11*(1), 487.

43. Salama, V., Youssef, S., Xu, T., **Wahid, K. A.**, Chen, J., Rigert, J., … Others. (2023). Temporal characterization of acute pain and toxicity kinetics during radiation therapy for head and neck cancer. A retrospective study. *Oral Oncology Reports*, 100092.

44. **Wahid, K. A.**, Rooney, M. K., Gunther, J. R., Moreno, A. C., Pinnix, C. C., Thomas Jr, C. R., & Fuller, C. D. (2024). Empirically Derived Principles for Research Funding Success: A Primer for Early Career Academic Investigators. *International Journal of Radiation Oncology* Biology* Physics*, *118*(3), 590-594.

45. **Wahid, K.A.**, Cardenas, C.E., Marquez, B., Netherton, T.J., Kann, B.H., Court, L.E., He, R., Naser, M.A., Moreno, A.C., Fuller, C.D. and Fuentes, D. (2024). Evolving Horizons in Radiotherapy Auto-Contouring: Distilling Insights, Embracing Data-Centric Frameworks, and Moving Beyond Geometric Quantification. *Advances in Radiation Oncology*.

46. Salama, V., Godinich, B., Geng, Y., Humbert-Vidan, L., Maule, L., **Wahid, K. A.**, ... & Moreno, A. C. (2024). Artificial intelligence and machine learning in cancer pain: a systematic review. *Journal of pain and symptom management*.

47. **Wahid, K. A.**, Sahlsten, J., Jaskari, J., Dohopolski, M. J., Kaski, K., He, R., ... & Fuentes, D. (2024). Harnessing uncertainty in radiotherapy auto-segmentation quality assurance. *Physics and Imaging in Radiation Oncology*, *29*.

48. Salama, V., Humbert-Vidan, L., Godinich, B., **Wahid, K. A.**, El-Habashy, D., Naser, M. A., ... & Moreno, A. C. (2025). Machine learning predicting acute pain and opioid dose in radiation treated oropharyngeal cancer patients. *Frontiers in Pain Research, 6, 1567632.*

49. **Wahid, K. A.**, & Fuentes, D. (2024). Weak Supervision, Strong Results: Achieving High Performance in Intracranial Hemorrhage Detection with Fewer Annotation Labels. *Radiology: Artificial Intelligence*, *6*(1), e230598.

50. Dal Lago, E. A., Sousa, L. G., Yang, Z., Hoff, C. O., Bonini, F., Sawyer, M., Wang, K., Lewis, W., **Wahid, K.A.,** Others ... & Ferrarotto, R. (2024). Prognostic value of tumor volume doubling time in lung-metastatic adenoid cystic carcinoma. *Oral Oncology*, *151*, 106759.

51. Nosrat, F., Dede, C., McCullum, L. B., Garcia, R., Mohamed, A. S., Scott, J. G., Bates, J., McDonald, B.A., **Wahid, K.A.**, Others ... & Fuller, C. D. (2025). Optimal Timing of Organs-at-Risk-Sparing Adaptive Radiation Therapy for Head-and-Neck Cancer under Re-planning Resource Constraints. *Physics and Imaging in Radiation Oncology.*

52. **Wahid, K. A.**, Kaffey, Z. Y., Farris, D. P., Humbert-Vidan, L., Moreno, A. C., Rasmussen, M., ... & Fuentes, D., Dohopolski, M. J. (2024). Artificial Intelligence Uncertainty Quantification in Radiotherapy Applications-A Scoping Review. *Radiotherapy and Oncology, 201*.

53. McCullum, L., **Wahid, K. A.**, Marquez, B., & Fuller, C. D. (2024, July). OAR-Weighted Dice Score: A spatially aware, radiosensitivity aware metric for target structure contour quality assessment. In *The use of computers in radiation therapy. International Conference on the Use of Computers in Radiation Therapy* (Vol. 2024, p. 755).

54. Zhao, Y., Wang, X., Phan, J., Chen, X., Lee, A., Yu, C., Kai, H., Court, L., Pan, T., Wang, H., **Wahid, K.A.,** Others ... & Yang, J. (2024). Multi-modal segmentation with missing image data for automatic delineation of gross tumor volumes in head and neck cancers. *Medical physics*, *51*(10), 7295-7307.

55. **Wahid, K. A.**, Dede, C., El-Habashy, D. M., Kamel, S., Rooney, M. K., Khamis, Y., ... & Fuller, C. D. (2024). Overview of the Head and Neck Tumor Segmentation for Magnetic Resonance Guided Applications (HNTS-MRG) 2024 Challenge. *Challenge on Head and Neck Tumor Segmentation for MRI-Guided Applications, 1-35*.

56. **Wahid, K. A.**, Fuller, C. D., & Fuentes, D. (2024). Precision in the Face of Noise--Lessons from Kahneman, Siboney, and Sunstein for Radiation Oncology. *arXiv preprint arXiv:2412.02724*.

57. Mao, S., Wang, J., McMillan, H., Mohamed, A. S. R., Buoy, S., Ahmed, S., Mulder, S., Naser, N., He, R., **Wahid, K.A.**, Others, ... & MD Anderson Head and Neck Cancer Symptom Working Group. (2024). Exploring Quantitative MRI Biomarkers of Head and Neck Post-Radiation Lymphedema and Fibrosis: Post Hoc Analysis of a Prospective Trial. *Head & Neck*.

58. McCullum, L., Belal, Z., Floyd, W., Ali, A. M. S., West, N., Mulder, S., Ding, Y., Xu, J., Thill, D., O'Connell, N., Stancanello, J., **Wahid, K.A.**, Others ... & Fuller, C. D. (2025). A Method for Sensitivity Analysis of Automatic Contouring Algorithms Across Different MRI Contrast Weightings Using SyntheticMR. *Accepted, Physics and Imaging in Radiation Oncology*.

59. Kaffey, Z., Mirbahaeddin, S., **Wahid, K. A.**, Kamel, S., Vouffo, M., Otun, A., ... & Humbert-Vidan, L. (2025). Radiographic classification of mandibular osteoradionecrosis: A blinded prospective multi-disciplinary interobserver diagnostic performance study. *Radiotherapy and Oncology, 110917.*

60. Humbert-Vidan, L., Kamel, S., Wentzel, A., Kaffey, Z., Abdelaal, M., Spier K., West, N., Marai, G., Canahuate, G., Zhang Z., Chen, M., **Wahid, K.A.**, Others ... & Neck Symptom Working Group. (2025). Externally validated digital decision support tool for time-to-osteoradionecrosis risk-stratification using right-censored multi-institutional observational cohorts. *Radiotherapy and Oncology, 110890.*

61. MD Anderson Head and Neck Cancer Symptom Working Group, Kamel, S., Humbert-Vidan, L., Kaffey, Z., Abusaif, A., Fuentes, D. T., **Wahid, K.A**., Others ... & Mohamed, A. S. (2025). Computed tomography radiomics-based cross-sectional detection of mandibular osteoradionecrosis in head and neck cancer survivors. *Accepted, Oral Oncology.*

62. Humbert-Vidan, L., Castelo, A. H., He, R., van Dijk, L. V., Rhee, D. J., Wang, C., **Wahid, K. A.**, Others, ... & Moreno, A. C. (2025). Image-based Mandibular and Maxillary Parcellation and Annotation using Computer Tomography (IMPACT): A Deep Learning-based Clinical Tool for Orodental Dose Estimation and Osteoradionecrosis Assessment. *Accepted, Physics and Imaging in Radiation Oncology*.

63. Belal, Z., **Wahid, K.A.**, Stieb, S., Drummey, R., Sharafi, C.S., Lai, S.Y., Fuller, C.D., McDonald, B.A. (2025). Optimizing Atlas Counts for MRI-Guided Atlas-Based Autosegmentation of Swallowing Muscles in Head and Neck Radiotherapy. *medRxiv*.

Notable Presentations, a more complete list of indexed conference abstracts can be found in my Google Scholar.

1. Crowdsourcing Tumor Auto-Contouring Solutions for MR-Guided Radiotherapy: The HNTS-MRG 2024 Challenge, ***Oral Presentation*** at The American Society for Radiation Oncology (ASTRO) National Meeting, San Francisco, CA, 2025.
2. Data science competitions as a pathway to innovative AI approaches in radiation oncology, ***Invited Talk*** at The European Society for Radiotherapy and Oncology (ESTRO) International Meeting, Vienna, Austria, 2025.
3. Evolving horizons in radiotherapy auto-contouring: Insights from hosting an international data science competition, ***Invited Talk*** at UT Austin AI Medical Imaging (AIMI) Seminar Series, Virtual, 2024.
4. Are Non-Experts Comparable to Experts?, ***Invited Talk*** at 2023 GSBS Quantitative Science Program Retreat, Houston, TX, 2023.
5. Multiparametric MRI Artificial Intelligence Pipeline for Oropharyngeal Cancer Radiotherapy Treatment Guidance, ***Invited Talk*** at 2022 GSBS Presidents' Research Scholars Symposium, 2022.
6. Combining Tumor Segmentation Masks with PET/CT Images and Clinical Data in a Deep Learning Framework for Improved Prognostic Prediction in Head and Neck Squamous Cell Carcinoma, ***Invited Talk*** (1^{st} place data science competition winner) at MICCAI HECKTOR Challenge, Virtual, 2021.
7. Artificial Intelligence in Oncology, ***Invited Talk*** *at Texas Oncology* 2^{nd} *Annual Cancer Athlon Symposium*, South Padre Island, TX, 2019.
8. Prediction of Disability and Treatment Response from Radiomic Features: A Machine Learning Analysis from the CombiRx Multi-Center Cohort, ***Platform Presentation*** *at Americas Committee for Treatment and Research in Multiple Sclerosis Meeting*, Dallas, TX, 2019; **Recipient of Young Investigator Grant, Best Presentation Finalist**.
9. Structural and Optical Characterization of Eu^{3+} Doped $La_2Hf_2O_7$ Nanoparticles, *Poster Presentation at University of Texas Rio Grande Valley Engaged Scholar Symposium*, Edinburg, TX, 2016; **Winner of Top 5 Presentation Award**.

10. Doped Lanthanum Hafnates as Scintillating Materials for High-Energy Photon Detection, *Poster Presentation at American Physical Society March Meeting*, Baltimore, MD, 2016; **Winner of Outstanding Research Award**.

Other Notable Academic Contributions

1. Update on AI for Oncologic Imaging, Blog Post, *Radiology Artificial Intelligence*, https://pubs.rsna.org/page/ai/blog/2023/05/ryai_editorsblog050323, May 2023.
2. Algorithmic Fairness in Machine Learning, Blog Post, *Radiology Artificial Intelligence*, https://pubs.rsna.org/page/ai/blog/2023/08/ryai_editorsblog082523, August 2023.
3. Podcast Interview, *Radiology Artificial Intelligence*, https://rsnaradiologyai.libsyn.com/algorithmic-fairness-in-machine-learning, September 2023.

Competitive Research Fellowships and Awards

RSNA Medical Student Research Grant	Spring 2025-Spring 2026
NIH IGCT T32 Post-doctoral Fellowship, Houston, TX	Summer 2023-Spring 2025
Outstanding Research Trainee in Cancer Prevention Award, Houston, TX	Spring 2023
Presidents' Research Scholarship, Houston, TX	Summer 2022
Kopchick Fellowship, Houston, TX	Spring 2022, 2023
NIH NIDCR F31 Fellowship, Bethesda, MD	Spring 2022-Spring 2025
American Legion Auxiliary Fellowship in Cancer Research, Houston, TX	Spring 2021, 22
PD Soros Fellowship Finalist, Los Angeles, CA	Spring 2020
CCTS TL1 Fellowship, UTHealth, Houston, TX	Spring 2020 – Fall 21
Center for Systems Biology Fellowship, Harvard Medical School	Summer 2015
HHMI Leaders in Scientific Research Training Program, UTRGV	Spring 2014 - Spring 16
C-STEM Student Research Program, UTPA	Fall 2013 - Spring 15
LRSM NSF REU, University of Pennsylvania	Summer 2014

Other Notable Awards

2024-2025 Trainee Peer to Peer Mentor Award (MD Anderson)	2025
2024 RSNA Honored Educator Award	2024
2023-2024 Radiology: AI Editor's Recognition Award - Special Distinction	2024

Editorial and Peer Review Experience

Associate Editor for *Physics and Imaging in Radiation Oncology* – 35 editorial decisions to-date.
Peer reviewer for *Radiology* – 37 reviews to-date.
Peer reviewer for *Physics and Imaging in Radiation Oncology* – 21 reviews to-date.
Peer reviewer for *Physica Medica* – 2 reviews to-date.
Peer reviewer for *BJR|Artifical Intelligence* – 2 reviews to-date.
Peer reviewer for *Radiotherapy and Oncology* – 7 review to-date.
Peer reviewer for *Radiotherapy and Oncology* – 7 review to-date.
Peer reviewer for *International journal of radiation oncology, biology, physics* – 1 review to-date.
Peer reviewer for *Frontiers in Oncology* – 1 review to-date.

Leadership and Service Experience

Physics and Imaging in Radiation Oncology Editorial Board Spring 2024 - Current

Associate Editor

Currently serve as Associate Editor for the Computer Science section of Physics and Imaging in Radiation Oncology (phiRO), an international, peer-reviewed journal dedicated to advancing research in medical physics, imaging, and radiation oncology. Responsible for critically evaluating and triaging manuscript submissions, managing peer review processes, and making informed editorial decisions to uphold the journal's high scientific standards and publication integrity. Tenure began March 2025.

Editorial Board Member

Participated in review process and contribute to the journal's activities. 1-year term before promotion to associate editor.

Radiology Artificial Intelligence Trainee Editorial Board Summer 2022 - 2024
Board Member
Participated in the Radiological Society of North America (RSNA) Radiology AI journal's review process and contributed to the journal's activities, such as the editor's blog, social media, and journal club. 2-year term.

HECKTOR Challenge Organizing Committee Spring 2022 - Current
Organizer, Data Liaison
Assisted with organization of Head and Neck Tumor Segmentation and outcome Prediction in PET/CT images (HECKTOR) international data science challenge (3rd edition – 2022, and 4th edition – 2025). Acted as the central liaison between the MD Anderson contributors and the HECTKOR organizers, where my duties primarily involved the extraction and organization of large-scale imaging data, management of several clinician annotators from our institution. I also helped organize the live MICCAI event, chaired an oral session on tumor segmentation, and contributed to manuscript reviews for the participant's entries.

GSBS QS Program Machine Learning Journal Club Summer 2020 –2023
GSBS QS Department, Houston, TX
Lead Coordinator
Lead bi-weekly journal club. Activities including logistical planning, soliciting invited presentation, maintaining email list and web presence, and documentation of presentations.

UTPA/UTRGV Society of Physics Students (SPS) Chapter Fall 2013 - Spring 2016
UTPA/UTRGV Department of Physics, Edinburg, TX
President
Ensured execution of initiatives to educate the local community on physics and helped members benefit from scientific research/conferences. Chapter was awarded prestigious "Distinguished Chapter Award" from SPS National Office for 2013-14, 2014-15, and 2015-16 academic years.

Texas Oncology Breast Cancer Awareness Ride, Run, Walk Event Fall 2012,13,14,15
Texas Oncology, McAllen, TX
Walk coordinator
Coordinated and organized "Walk" portion of annual event to raise donations for cancer research and survivors. Directed 30 undergraduate student volunteers in preparation for event.

Educational Certificates

Google Project Management: Specialization, Coursera	2025
Ethical AI, Udacity	2023
Ethics of AI, The London School of Economics and Political Science	2022
AI Programming with Python Nanodegree, Udacity	2018
Deep Learning Specialization, Coursera	2018
Deep Learning Nanodegree Foundation, Udacity	2018
Machine Learning Engineer Nanodegree, Udacity	2017

Languages
Spanish - speak fluently and read/write with high proficiency.
French - speak, read, and write with basic competence.
Bengali - speak with basic competence.

Social Media and Web Presence

LinkedIn: https://www.linkedin.com/in/kareem-wahid-307241178/
X: https://x.com/Kareem_A_Wahid
Personal Website: https://kareemwahid111.wixsite.com/kareem-wahid