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Abdelkader Mahammedi

Clinical Associate Professor, Radiology

CLINICAL OFFICE (PRIMARY)

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Bio

BIO

Dr. Abdelkader Mahammedi is Associate Professor of Neuroradiology at the Department of Radiology, Stanford University School of Medicine. He completed medical school at the University of Algiers in Algeria, and then continued a postdoctoral research fellowship in Diagnostic Radiology at Johns Hopkins Hospital under the mentorship of Dr. Stanley Siegelman. Prior to becoming a specialist neuroradiologist, Dr. Mahammedi completed a Neuroradiology fellowship at the Cleveland Clinic Imaging Institute after having completed residencies in both Nuclear Medicine and Diagnostic Radiology. His specialty interests include brain tumors, stroke, small vessel disease, head and neck imaging, and functional magnetic resonance imaging (fMRI). Dr. Mahammedi has contributed to over 30 peer-reviewed publications, including lead authoring multiple articles in high-impact journals. During the beginning of the COVID-19 pandemic, he led and collaborated with multiple institutions from Italy, Spain, and Brazil. His work was considered the first and largest study in the literature that systematically characterized neurological symptoms and neuroimaging features in hospitalized COVID-19 patients, which was published in the journal Radiology. Recently, he has published the most recent multicenter and global COVID-19-related articles, which were featured by the international media in more than 25 languages including 200 newspapers, CNN, BBC, NPR, local televised broadcasts, and the 2020 RSNA Press Release. He co-authored multiple books, including “Imaging Appearance of Migraine and Tension Type Headache” and "Humanizing BrainTumors: Strategies for You and Your Physician" which was published in 2022. Dr. Mahammedi has received numerous awards and honors, including being selected as a semi-finalist for the prestigious Cornelius Dyke Award of the American Society of Neuroradiology (ASNR) 2021, and Best Case Award at the American Institute of Radiologic Pathology (AIRP) in Neuroradiology. In 2014, he was recognized as one of the authors with top-cited articles for his work in the Journal of Thoracic Imaging at the Society of Thoracic Imaging (STR) meeting, where he introduced a new technique for early detection of pulmonary hypertension on CT scans.

CLINICAL FOCUS

- Neuroradiology
- Diagnostic Neuroimaging

ACADEMIC APPOINTMENTS

- Clinical Associate Professor, Radiology

PROFESSIONAL EDUCATION

- Fellowship: Cleveland Clinic Foundation (2018) OH
- Board Certification: Diagnostic Radiology, American Board of Radiology (2018)
- Fellowship, Cleveland Clinic Imaging Institute , OH (2018)
- Residency, Johns Hopkins University , MD (2014)
- Residency, University of Toledo , OH (2017)
- Internship, Brookdale University Hospital Medical Center , NY (2013)
- Medical Education: University of Algiers (I.N.E.S.S.M) (2008) Algeria

Teaching

STANFORD ADVISEES

Med Scholar Project Advisor

Vilina Mehta

Publications

PUBLICATIONS

- **Lessons learned from evolving frameworks in adult glioblastoma.** *Handbook of clinical neurology*
  Lechpammer, M., Mahammedi, A., Pomeranz Krummel, D. A., Sengupta, S.
  2023; 192: 131-140
- **Imaging Appearance of Migraine and Tension Type Headache.** *Neurologic clinics*
  Mahammedi, A., Wang, L. L., Vagal, A. S.
  2022; 40 (3): 491-505
- **Humanizing Brain Tumors Strategies for You and Your Physician** *Humanizing Brain Tumors Strategies for You and Your Physician*
  Mahammedi, A., Sengupta, S., Forbes, J.
  2022
- **Small Vessel Disease, a Marker of Brain Health: What the Radiologist Needs to Know** *AMERICAN JOURNAL OF NEURORADIOLOGY*
  Mahammedi, A., Wang, L. L., Williamson, B. J., Khatri, P., Kissela, B., Sawyer, R. P., Shatz, R., Khandwala, V., Vagal, A.
  2021: 650-660
- **Brain and Lung Imaging Correlation in Patients with COVID-19: Could the Severity of Lung Disease Reflect the Prevalence of Acute Abnormalities on Neuroimaging? A Global Multicenter Observational Study** *AMERICAN JOURNAL OF NEURORADIOLOGY*
  Mahammedi, A., Ramos, A., Bargallo, N., Gaskill, M., Kapur, S., Saba, L., Carrete, H., Sengupta, S., Salvador, E., Hilario, A., Revilla, Y., Sanchez, M., Perez-Nunez, et al
  2021; 42 (6): 1008-1016
- **Imaging of Neurologic Disease in Hospitalized Patients with COVID-19: An Italian Multicenter Retrospective Observational Study** *RADIOLOGY*
  Mahammedi, A., Saba, L., Vagal, A., Leali, M., Rossi, A., Gaskill, M., Sengupta, S., Zhang, B., Carriero, A., Bachir, S., Crivelli, P., Pasche, A., Premi, et al
  2020; 297 (2): E270-E273
- **Tumor Habitat-derived Radiomic Features at Pretreatment MRI That Are Prognostic for Progression-free Survival in Glioblastoma Are Associated with Key Morphologic Attributes at Histopathologic Examination: A Feasibility Study** *RADIOLOGY-ARTIFICIAL INTELLIGENCE*
  Verma, R., Correa, R., Hill, V. B., Statsevych, V., Bera, K., Beig, N., Mahammedi, A., Madabhushi, A., Ahluwalia, M., Tiwari, P.

2020; 2 (6): e190168

- **Prediction of recurrent glioblastoma after laser interstitial thermal therapy: The role of diffusion imaging.** *Neuro-oncology advances*
  Mahammedi, A., Bachir, S., Escott, E. J., Barnett, G. H., Mohammadi, A. M., Larvie, M.
  2019; 1 (1): vdz021

- **USE-Evaluator: Performance metrics for medical image segmentation models supervised by uncertain, small or empty reference annotations in neuroimaging.** *Medical image analysis*
  Ostmeier, S., Axelrod, B., Isensee, F., Bertels, J., Mlynash, M., Christensen, S., Lansberg, M. G., Albers, G. W., Sheth, R., Verhaaren, B. F., Mahammedi, A., Li, L. J., Zaharchuk, et al
  2023; 90: 102927

- **Complete Response of a Patient With a Mismatch Repair Deficient Aggressive Pituitary Adenoma to Immune Checkpoint Inhibitor Therapy: A Case Report.** *Neurosurgery*
  Shah, S., Manzoor, S., Rothman, Y., Hagen, M., Pater, L., Golnik, K., Mahammedi, A., Lin, A. L., Bhabhra, R., Forbes, J. A., Sengupta, S.
  2022; 91 (2): e51-e56

- **Imaging of Headache Attributed to Vascular Disorders.** *Neurologic clinics*
  Wang, L. L., Mahammedi, A., Vagal, A. S.
  2022; 40 (3): 507-530

- **Pearls & Oy-sters: Pivoting Treatment Regimens of Pediatric Atypical Teratoid Rhabdoid Tumors to Optimize Care in Adult ATRT: A Case Report** *NEUROLOGY*
  Rao, R., Koehler, A., Rothman, Y., Turner, B., Denlinger, J., Erickson, M., Hagen, M., Braverman, T. S., Mahammedi, A., Golnik, K., Zuccarello, M., Gozal, Y. M., Broun, et al
  2022; 98 (17): 726-730

- **Role of imaging in rare COVID-19 vaccine multiorgan complications** *INSIGHTS INTO IMAGING*
  Cau, R., Mantini, C., Monti, L., Mannelli, L., Di Dedda, E., Mahammedi, A., Nicola, R., Roubil, J., Suri, J. S., Cerrone, G., Fanni, D., Faa, G., Carriero, et al
  2022; 13 (1): 44

- **Association Between CT Angiogram Collaterals and CT Perfusion in Delayed Time Windows for Large Vessel Occlusion Ischemic Strokes** *JOURNAL OF STROKE & CEREBROVASCULAR DISEASES*
  Voleti, S., Aziz, Y. N., Vidovich, J., Corcoran, B., Zhang, B., Mistry, E., Khandwala, V., Khatri, P., Tomsick, T., Wang, L., Mahammedi, A., Vagal, A.
  2022; 31 (3): 106263

- **Automated grading of enlarged perivascular spaces in clinical imaging data of an acute stroke cohort using an interpretable, 3D deep learning framework** *SCIENTIFIC REPORTS*
  Williamson, B. J., Khandwala, V., Wang, D., Maloney, T., Sucharew, H., Horn, P., Haverbusch, M., Alwell, K., Gangatirkar, S., Mahammedi, A., Wang, L. L., Tomsick, T., Gaskill-Shipley, et al
  2022; 12 (1): 788

- **The use of ARMCan app to improve the quality of life in breast cancer patients with chemobrain** *The use of ARMCan app to improve the quality of life in breast cancer patients with chemobrain.*
  Koehler, A.
  2022

- **Complications in COVID-19 patients: Characteristics of pulmonary embolism** *CLINICAL IMAGING*
  Cau, R., Pacielli, A., Fatemeh, H., Vaudano, P., Arru, C., Crivelli, P., Stranieri, G., Suri, J. S., Mannelli, L., Conti, M., Mahammedi, A., Kalra, M., Saba, et al
  2021; 77: 244-249

- **Progressive myelopathy in myelin oligodendrocyte glycoprotein antibody-associated disease: A new mimicker of progressive multiple sclerosis?** *MULTIPLE SCLEROSIS AND RELATED DISORDERS*
  Marcucci, S. B., Elkasaby, M., Walch, R., Zare-Shahabadi, A., Mahammedi, A., Abboud, H., Zabeti, A.
  2021; 52: 102964

- **Reuse of Molecules for Glioblastoma Therapy** *PHARMACEUTICALS*
  Koehler, A., Karve, A., Desai, P., Arbiser, J., Plas, D. R., Qi, X., Read, R. D., Sasaki, A. T., Gawali, V. S., Toukam, D. K., Bhattacharya, D., Kallay, L., Krummel, et al
  2021; 14 (2)

- **Neurofibromatosis Type 2 (NF2) and the Implications for Vestibular Schwannoma and Meningioma Pathogenesis** *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*
  Bachir, S., Shah, S., Shapiro, S., Koehler, A., Mahammedi, A., Samy, R. N., Zuccarello, M., Schorry, E., Sengupta, S.
  2021; 22 (2)

- **Pyogenic brain abscess, ventriculitis and diffuse meningitis with fatal outcome in an adult: Radiologic-pathologic correlation#,.** *Radiology case reports*
  Mahammedi, A., Bachir, S., Purdy, J., Larvie, M., Buehler, M.
  2018; 13 (5): 1063-1068

- **Semiautomatic Volumetric Tumor Segmentation for Hepatocellular Carcinoma: Comparison between C-arm Cone Beam Computed Tomography and MRI** *ACADEMIC RADIOLOGY*
  Tacher, V., Lin, M., Chao, M., Gjesteby, L., Bhagat, N., Mahammedi, A., Ardon, R., Mory, B., Geschwind, J.
  2013; 20 (4): 446-452

- **Pulmonary Artery Measurements in Pulmonary Hypertension The Role of Computed Tomography** *JOURNAL OF THORACIC IMAGING*
  Mahammedi, A., Oshmyansky, A., Hassoun, P. M., Thiemann, D. R., Siegelman, S. S.
  2013; 28 (2): 96-103