

# Stanford

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## Byung Chul Yoon, MD, PhD ("Jason")

Assistant Professor of Radiology (Veterans Affairs)

### Bio

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#### ACADEMIC APPOINTMENTS

- Assistant Professor - University Medical Line, Radiology

#### HONORS AND AWARDS

- PAVIR Bid & Proposal Award, Palo Alto Veterans Institute for Research (2022)
- Thrall Innovation Grant, Department of Radiology, Massachusetts General Hospital (2021)
- ASNR20 Head and Neck Outstanding Presentation Award, American Society of Neuroradiology (2020)
- Alpha Omega Alpha, Stanford (2018)
- Moskowitz Research Award, The Moskowitz Fund; Stanford Radiology (2015)
- Gates Cambridge Scholarship, Bill and Melinda Gates Foundation (2007)
- Overseas Research Scholars Award, Secretary of State for Education and Science, United Kingdom (2007)
- William Welch Award, Johns Hopkins School of Medicine (2007)
- Phi Beta Kappa (junior class induction), Johns Hopkins University (2003)
- Provost's Undergraduate Research Award, Johns Hopkins University (2002)
- Woodrow Wilson Undergraduate Research Fellowship, Johns Hopkins University (2002)

#### PROFESSIONAL EDUCATION

- Fellowship, Massachusetts General Hospital , Neuroradiology (Chief Fellow 2019-2020) (2020)
- Residency, Stanford Health Care , Diagnostic Radiology (Chief Resident 2017-2018) (2018)
- MD, Johns Hopkins School of Medicine , Medicine (2012)
- PhD, Cambridge University (Trinity College) , Physiology, development and neuroscience (2010)
- BA, Johns Hopkins University , Neuroscience (2005)

### Research & Scholarship

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#### CURRENT RESEARCH AND SCHOLARLY INTERESTS

Neuroradiology

## Publications

### PUBLICATIONS

- **Incorporating algorithmic uncertainty into a clinical machine deep learning algorithm for urgent head CTs.** *PloS one*  
Yoon, B. C., Pomerantz, S. R., Mercaldo, N. D., Goyal, S., L'Italien, E. M., Lev, M. H., Buch, K. A., Buchbinder, B. R., Chen, J. W., Conklin, J., Gupta, R., Hunter, G. J., Kamalian, et al  
2023; 18 (3): e0281900
- **Blood Flow Imaging in the Neonatal Brain Using Angular Coherence Power Doppler** *IEEE TRANSACTIONS ON ULTRASONICS FERROELECTRICS AND FREQUENCY CONTROL*  
Jakovljevic, M., Yoon, B., Abou-Elkacem, L., Hyun, D., Li, Y., Rubesova, E., Dahl, J. J.  
2021; 68 (1): 92–106
- **Clinical and Neuroimaging Correlation in Patients with COVID-19.** *AJNR. American journal of neuroradiology*  
Yoon, B. C., Buch, K., Lang, M., Applewhite, B. P., Li, M. D., Mehan, W. A., Leslie-Mazwi, T. M., Rincon, S. P.  
2020; 41 (10): 1791-1796
- **Comparison of Intraoperative Sonography and Histopathologic Evaluation of Tumor Thickness and Depth of Invasion in Oral Tongue Cancer: A Pilot Study.** *AJNR. American journal of neuroradiology*  
Yoon, B. C., Bulbul, M. D., Sadow, P. M., Faquin, W. C., Curtin, H. D., Varvares, M. A., Juliano, A. F.  
2020; 41 (7): 1245-1250
- **Polymeric perfluorocarbon nanoemulsions are ultrasound-activated wireless drug infusion catheters.** *Biomaterials*  
Zhong, Q., Yoon, B. C., Aryal, M., Wang, J. B., Ilovitsh, T., Baikoghli, M. A., Hosseini-Nassab, N., Karthik, A., Cheng, R. H., Ferrara, K. W., Airan, R. D.  
2019; 206: 73–86
- **Axonal mRNA localization and local protein synthesis in nervous system assembly, maintenance and repair** *NATURE REVIEWS NEUROSCIENCE*  
Jung, H., Yoon, B. C., Holt, C. E.  
2012; 13 (5): 308-324
- **Local Translation of Extranuclear Lamin B Promotes Axon Maintenance** *CELL*  
Yoon, B. C., Jung, H., Dwivedy, A., O'Hare, C. M., Zivraj, K. H., Holt, C. E.  
2012; 148 (4): 752-764
- **Implicit screening of abdominal aortic aneurysms among veterans using lumbar spine MRI.** *Current problems in diagnostic radiology*  
Mashhood, A., Malik, S., Yoon, B. C.  
2024
- **Artificial Intelligence-Enhanced Neurocritical Care for Traumatic Brain Injury : Past, Present and Future.** *Journal of Korean Neurosurgical Society*  
Kim, K. A., Kim, H., Ha, E. J., Yoon, B. C., Kim, D. J.  
2024
- **Correlation of Intraoperative Ultrasonographic Oral Tongue Shape and Border and Risk of Close Margins** *OTOLARYNGOLOGY-HEAD AND NECK SURGERY*  
Au, V. H., Yoon, B. C., Juliano, A., Sadow, P. M., Faquin, W. C., Varvares, M. A.  
2023
- **Fixel-Based Analysis of the Diffusion Properties of the Patients with Brain Injury and Chronic Health Symptoms.** *Neuroscience research*  
Kang, X., Yoon, B. C., Shah, S., Adamson, M. M.  
2023
- **Intracranial Densitometry-Augmented Machine Learning Enhances the Prognostic Value of Brain CT in Pediatric Patients With Traumatic Brain Injury: A Retrospective Pilot Study.** *Frontiers in pediatrics*  
Kim, Y. T., Kim, H., Lee, C. H., Yoon, B. C., Kim, J. B., Choi, Y. H., Cho, W. S., Oh, B. M., Kim, D. J.  
2021; 9: 750272
- **The utility of intra-oral ultrasound in improving deep margin clearance of oral tongue cancer resections.** *Oral oncology*  
Bulbul, M. G., Tarabichi, O., Parikh, A. S., Yoon, B. C., Juliano, A., Sadow, P. M., Faquin, W., Gropler, M., Walker, R., Puram, S. V., Varvares, M. A.  
2021; 122: 105512

- **Case 30-2021: A 47-Year-Old Man with Recurrent Unilateral Head and Neck Pain** *NEW ENGLAND JOURNAL OF MEDICINE*  
Lindsay, M. E., Dudzinski, D. M., Yoon, B. C., Jaff, M. R., Thakuria, J. V.  
2021; 385 (14): 1317-1325
- **Severity of Chest Imaging is Correlated with Risk of Acute Neuroimaging Findings among Patients with COVID-19.** *AJNR. American journal of neuroradiology*  
Lang, M., Li, M. D., Jiang, K. Z., Yoon, B. C., Mendoza, D. P., Flores, E. J., Rincon, S. P., Mehan, W. A., Conklin, J., Huang, S. Y., Lang, A. L., Giao, D. M., Leslie-Mazwi, et al  
2021; 42 (5): 831-837
- **Brachiocephalic vein compression with jugular venous reflux may mimic cavernous dural arteriovenous fistula on arterial spin labeling** *NEURORADIOLOGY*  
Deng, F., Yoon, B. C.  
2021; 63 (3): 291-294
- **Comparison between computed tomography and ultrasound for presurgical evaluation of oral tongue squamous cell carcinoma tumor thickness.** *American journal of otolaryngology*  
Yoon, B. C., Buch, K., Cunnane, M. E., Sadow, P. M., Varvares, M. A., Juliano, A. F.  
2021; 42 (6): 103089
- **Lung apical findings in coronavirus disease (COVID-19) infection on neck and cervical spine CT.** *Emergency radiology*  
Applewhite, B. P., Buch, K., Yoon, B. C., Lang, M., Li, M. D., Rincon, S. P., Mehan, W. A.  
2020; 27 (6): 731-735
- **Risk of Acute Cerebrovascular Events in Patients with COVID-19 Infection.** *AJNR. American journal of neuroradiology*  
Lang, M., Li, M. D., Buch, K., Yoon, B. C., Applewhite, B. P., Leslie-Mazwi, T. M., Rincon, S., Mehan, W. A.  
2020; 41 (11): E92-E93
- **Chest CT Scanning in Suspected Stroke: Not Always Worth the Extra Mile.** *AJNR. American journal of neuroradiology*  
Li, M. D., Lang, M., Yoon, B. C., Applewhite, B. P., Buch, K., Rincon, S. P., Leslie-Mazwi, T. M., Mehan, W. A.  
2020; 41 (11): E86-E87
- **Paraspinal Myositis in Patients with COVID-19 Infection.** *AJNR. American journal of neuroradiology*  
Mehan, W. A., Yoon, B. C., Lang, M., Li, M. D., Rincon, S., Buch, K.  
2020; 41 (10): 1949-1952
- **Evaluation of Thick-Slab Overlapping MIP Images of Contrast-Enhanced 3D T1-Weighted CUBE for Detection of Intracranial Metastases: A Pilot Study for Comparison of Lesion Detection, Interpretation Time, and Sensitivity with Nonoverlapping CUBE MIP, CUBE, and Inversion-Recovery-Prepared Fast-Spoiled Gradient Recalled Brain Volume.** *AJNR. American journal of neuroradiology*  
Yoon, B. C., Saad, A. F., Rezaii, P., Wintermark, M., Zaharchuk, G., Iv, M.  
2018
- **Current Clinical State of Advanced Magnetic Resonance Imaging for Brain Tumor Diagnosis and Follow Up.** *Seminars in roentgenology*  
Iv, M. n., Yoon, B. C., Heit, J. J., Fischbein, N. n., Wintermark, M. n.  
2018; 53 (1): 45-61
- **Changes in the gray and white matter of patients with ischemic-edematous insults after traumatic brain injury.** *Journal of neurosurgery*  
Kim, H. n., Kim, Y. T., Song, E. S., Yoon, B. C., Choi, Y. H., Kim, K. n., Kim, D. J.  
2018: 1-11
- **CORRELATION OF VASARI-BASED MRI PHENOTYPES WITH MGMT AND IDH STATUS ACROSS GLIOMA GRADES: A STATISTICAL ANALYSIS IN 372 PATIENTS**  
Das, D., Yoon, B., Golden, L., Samghabadi, P., Vogel, H., Yeom, K., Iv, M., Massoud, T.  
OXFORD UNIV PRESS INC.2017: 150
- **THE EFFECT OF PATIENT AGE AT GLIOMA PRESENTATION ON MRI PHENOTYPE: A COMPREHENSIVE ANALYSIS OF VASARI-BASED FEATURE-SET CRITERIA IN 711 PATIENTS**  
Das, D., Yoon, B., Golden, L., Samghabadi, P., Vogel, H., Yeom, K., Iv, M., Massoud, T.  
OXFORD UNIV PRESS INC.2017: 158

- **Abilities of a Densitometric Analysis of Computed Tomography Images and Hemorrhagic Parameters to Predict Outcome Favorability in Patients With Intracerebral Hemorrhage.** *Neurosurgery*  
Kim, H. n., Yang, X. n., Choi, Y. H., Yoon, B. C., Kim, K. n., Kim, D. J.  
2017
- **Finite element analysis of periventricular lucency in hydrocephalus: extravasation or transependymal CSF absorption?** *JOURNAL OF NEUROSURGERY*  
Kim, H., Jeong, E., Park, D., Czosnyka, Z., Yoon, B. C., Kim, K., Czosnyka, M., Kim, D.  
2016; 124 (2): 334-341
- **Finite element analysis for normal pressure hydrocephalus: The effects of the integration of sulci** *MEDICAL IMAGE ANALYSIS*  
Kim, H., Park, D., Yi, S., Jeong, E., Yoon, B. C., Czosnyka, M., Sutcliffe, M. P., Kim, D.  
2015; 24 (1): 235-244
- **Thresholds of resistance to CSF outflow in predicting shunt responsiveness** *NEUROLOGICAL RESEARCH*  
Kim, D., Kim, H., Kim, Y., Yoon, B. C., Czosnyka, Z., Park, K., Czosnyka, M.  
2015; 37 (4): 332-340
- **National trends in burn and inhalation injury in burn patients: results of analysis of the nationwide inpatient sample database.** *Journal of burn care & research*  
Veeravagu, A., Yoon, B. C., Jiang, B., Carvalho, C. M., Rincon, F., Maltenfort, M., Jallo, J., Ratliff, J. K.  
2015; 36 (2): 258-265
- **Quantitative analysis of computed tomography images and early detection of cerebral edema for pediatric traumatic brain injury patients: retrospective study** *BMC MEDICINE*  
Kim, H., Kim, G., Yoon, B. C., Kim, K., Kim, B., Choi, Y. H., Czosnyka, M., Oh, B., Kim, D.  
2014; 12
- **14-3-3 proteins regulate retinal axon growth by modulating ADF/cofilin activity** *DEVELOPMENTAL NEUROBIOLOGY*  
Yoon, B. C., Zivraj, K. H., Strohlic, L., Holt, C. E.  
2012; 72 (4): 600-614
- **Local translation and mRNA trafficking in axon pathfinding.** *Results and problems in cell differentiation*  
Yoon, B. C., Zivraj, K. H., Holt, C. E.  
2009; 48: 269-288