

## CURRICULUM VITAE

**Kyu Sung Choi, M.D., Ph.D.**



### **Personal Info**

Name: Kyu Sung Choi

Title: Assistant Professor

Affiliation: Seoul National University Hospital (SNUH)

### **Contact Information**

Address 101 Daehak-ro, Jongno-gu, Seoul, 03080, Republic of Korea

Webpage: <https://sites.google.com/view/snuhradaicon>

Github: <https://github.com/kyuchoi>

---

**Research interest :** Radiology, Neuroimage, Deep Learning, Medical Image Analysis

### **Education and Training**

2004.3 – 2008.2 **B.S.** in Electrical Engineering (*Magna Cum Laude*)

Department of Electrical and Computer Engineering,

Seoul National University, Seoul, Korea

2008.3 – 2012.2 **B.S.** in Medicine (**M.D.**) (*Cum Laude*)

College of Medicine,

Seoul National University, Seoul, Korea

2015.3 – 2017.2 **M.S.** in Clinical Medical Science (Radiology)

College of Medicine,

Seoul National University, Seoul, Korea

2017.3 – 2021.2 **Ph.D.** in Medical Science and Engineering

Graduate School of Medical Science and Engineering,

Korea Advanced Institute of Science and Technology, Daejeon, Korea

(Advisor: Prof. BumSeok Jeong)

2021.3 – 2022.2 **Clinical Fellowship** in

Department of Radiology,

Seoul National University Hospital, Seoul, Korea

2022.3 – Present **Assistant Professor** in

Department of Radiology,

Seoul National University Hospital, Seoul, Korea

### **Internship**

2012.3 – 2013.2 Seoul National University Hospital, Seoul, Korea

### **Residency**

2013.3 – 2017.2 Department of Radiology, Seoul National University Hospital, Seoul, Korea

### **Awards**

2004 The Presidential Science Scholarship

2017 Korean Society of Radiology (KSR) Excellent publication award for resident

2020 Korean Society of Neuroradiology (KSNR), Brain Function Research Group, Excellent publication award (grand prize)

2020 Korean Society of Radiology (KSR) Excellent publication award (excellence award)

2022 Korean Society of Neuroradiology (KSNR), Brain Function Research Group, Excellent publication award

2023 Korean Society of Neuroradiology (KSNR), Brain Function Research Group, Excellent publication award (grand prize)

2023 Korean Society of Artificial Intelligence in Medicine (KoSAIM), Best oral presentation award (silver prize) (Corresponding)

2023 Korean Society of Artificial Intelligence in Medicine (KoSAIM), Best poster presentation award (Corresponding)

2023 The 11th International Congress on Magnetic Resonance Imaging & 28th Annual Scientific Meeting of KSMRM (ICMRI), Contribution award

2023 The 11th International Congress on Magnetic Resonance Imaging & 28th Annual Scientific Meeting of KSMRM (ICMRI), Poster presentation (gold prize) (Corresponding)

2023 The 11th International Congress on Magnetic Resonance Imaging & 28th Annual Scientific Meeting of KSMRM (ICMRI), Oral presentation (silver prize) (Corresponding)

### **Selected Publications**

(\* indicates corresponding author)

1. **Choi KS**, You S-H, Han Y, Ye JC, Jeong B, Choi SH. Improving the Reliability of Pharmacokinetic Parameters at Dynamic Contrast-enhanced MRI in Astrocytomas: A Deep Learning Approach. *Radiology*. 2020; 297(1):178-188 (**IF=19.7**).

2. **Choi KS**, Kim SH, Kim SG, Han JK. Early gastric cancers: is CT surveillance necessary after curative endoscopic submucosal resection for cancers that meet the expanded criteria? *Radiology*. 2016; 281(2):444-453 (**IF=19.7**).

3. Lee JO, Ahn SS, **Choi KS\***, Lee J, Jang J, Park JH, Hwang I, Park CK, Park SH, Chung JW, Choi SH. Added Prognostic Value of 3D Deep Learning-Derived Features from Preoperative MRI for Adult-type Diffuse Gliomas. *Neuro Oncol*. 2023 Oct 19:noad202. doi: 10.1093/neuonc/noad202. Epub ahead of print. PMID: 37855826. (**IF=15.9**)

4. **Choi KS**, Choi SH, Jeong B. Prediction of IDH genotype in gliomas with dynamic susceptibility contrast perfusion MR imaging using an explainable recurrent neural network. *Neuro-Oncology*. 2019; 21(9):1197-1209 (**IF=15.9**).

5. Nam JY, Chung HJ, **Choi KS**, ... & Lee JH (2022). Deep learning model for diagnosing gastric mucosal lesions using endoscopic images: development, validation, and method comparison. *Gastrointestinal Endoscopy*, 95(2), 258-268 (**IF=7.7; 2021 IF=10.396**).

### **Invited Lectures**

2019 de L'IRM 7 TESLA participation (2019-11-18, "Deep Learning Applications in Gliomas", Poitiers, France)

2021 the 6th Annual Scientific Meeting of the International Society for Magnetic Resonance in Medicine (ISMRM) Japanese Chapter (2021-09-11, “Perfusion MRI Analysis of Gliomas: Deep Learning Approach”, Yokohama, Japan)

2021 Korean Society of Artificial Intelligence in Medicine (KOSAIM) (2021-10-23, “Experience of engineering PhD for MD”, Seoul, Korea)

2021 International Congress on Magnetic Resonance Imaging (ICMRI) (2021-11-06, “Perfusion MRI Analysis of Gliomas: Deep Learning Approach” , Seoul, Korea)

2022 World Federation of Neuro-Oncology Societies (WFNOS) (2022-03-24, “Perfusion MRI analysis for radiogenomics of gliomas: Deep-learning approach” , Seoul, Korea)

2021 Asian Society of Magnetic Resonance in Medicine (ASMRM) (2022-05-22, “Perfusion MRI analysis for radiogenomics of gliomas: Deep-learning approach”, Taipei, Taiwan)

2023 Korean Society of Artificial Intelligence in Medicine (KoSAIM) (2023-10-19, “Medical Research Using ChatGPT: What Now and Next?” , Seoul, Korea)

2023 Annual Conference of Korean Society for Bioinformatics (KSBI) (2023-11-13, “Deciphering Glioma: A Comprehensive Transition from Radiomics to Deep Learning in Perfusion MRI Analysis”, Yeosu, Korea)

### **International Conference Chairman**

2022 World Federation of Neuro-Oncology Societies (WFNOS) Chair person

(Co-chair, Prof. Manfred Westphal; President of the European Neurosurgery Congress, 2021)

### **Invited Review Articles**

1. **Choi KS**, Sunwoo L. Artificial Intelligence in Neuroimaging: Clinical Applications. *Investig Magn Reson Imaging*. 2022;26(1):1-9
2. **Choi KS**. Deep Learning Applications in Perfusion MRI: Recent Advances and Current Challenges. *Investig Magn Reson Imaging*. 2022;26(4):246-255
3. Park YW, Vollmuth P, Foltyn-Dumitru M, Sahm F, **Choi KS**, Park JE, Ahn SS, Chang JH, Kim SH. The 2021 WHO Classification for Gliomas and Implications on Imaging Diagnosis: Part 3-Summary

of Imaging Findings on Glioneuronal and Neuronal Tumors. *J Magn Reson Imaging*. 2023 Sep 16. doi: 10.1002/jmri.29016. Epub ahead of print. PMID: 37715567.

### **Editorials**

**Choi, KS**, Editorial for “Prediction of H3K27M Alteration Status in Brainstem Glioma Using Multi-Shell Diffusion MRI Metrics”. *J Magn Reson Imaging*. <https://doi.org/10.1002/jmri.29102>

### **Reviewer**

*Nature Machine Intelligence, Neuro-Oncology, Radiology: Artificial Intelligence, IEEE Transactions on Medical Imaging, IEEE Open Journal of Signal Processing, British Journal of Radiology, European Radiology, Korean Journal of Radiology, Journal of Magnetic Resonance Imaging, Investigative Magnetic Resonance Imaging, Journal of Neuroradiology, Neuroradiology, World Journal of Surgical Oncology, Acta Radiologica, Cancer Imaging, Scientific Reports*

*British Journal of Radiology* reviewer certificate 2021

*European Radiology* reviewer certificate 2022