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• **Current Position & Affiliation:** Assistant Professor, Department of Radiology, Severance Hospital, Research Institute of Radiological Science and Center for Clinical Image Data Science, Yonsei University College of Medicine, Seoul, South Korea

• **Country:** Republic of Korea

• **Educational Background:**

Mar. 1996 – Feb. 2000	Bachelor of Computer Science, Seoul National University, Seoul, South Korea
Mar. 2000 – Feb. 2002	Master's Degree in Computer Engineering, Seoul National University, Seoul, South Korea
Mar. 2007 – Feb. 2011	Doctor of Medicine, Yonsei University College of Medicine, Seoul, Korea
Mar. 2016 – Feb. 2020	Doctoral Degree in Medicine, Yonsei University College of Medicine, Seoul, Korea

• **Professional Experience:**

Mar. 2002 – Feb. 2003	Researcher, Electronics and Telecommunications Research Institute (ETRI), Daejeon, South Korea
Aug. 2003 – Nov. 2006	Researcher, Search Engine Team, *Naver*, Seoul, South Korea
Mar. 2011 - Feb. 2012	Internship, Severance Hospital, Yonsei University College of Medicine, Seoul, South Korea
Mar. 2012 – Feb. 2016	Residency, Severance Hospital, Department of Radiology, Yonsei University College of Medicine, Seoul, South Korea
Mar. 2016 – Feb. 2018	Fellowship, Severance Hospital, Department of Radiology, Yonsei University College of Medicine, Seoul, South Korea
Mar. 2018 – Feb. 2020	Clinical Assistant Professor, Department of Radiology, Yonsei University College of Medicine, Seoul, South Korea
Mar. 2020 – Present	Assistant Professor, Department of Radiology, Yonsei University College of Medicine, Seoul, South Korea

• **Professional Organizations:**

- 2018-2020 Academic Secretary, KCR 2018, Academic committee
- 2019-2020 Vice-director, Division of Medical Information and Technology, Yongin Severance Hospital
- 2020-2021 Director, Center for Information Strategy, Division of Medical Information

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- 2022-present Director, Center for Digital Health Strategy, Division of Digital Health, Yonsei University Health System
- 2021-present Director, Korean Society of Imaging Informatics in Medicine (KSIIM)

• Main Scientific Publications:

1. Shin, J., Seo, N., Baek, S. E., Son, N. H., Lim, J. S., Kim, N. K., ... & Kim, S. MRI radiomics model predicts pathologic complete response of rectal cancer following chemoradiotherapy. Radiology. 2022, 211986 (published online:Feb 8 2022).
2. Koh J, Yoon Y, Kim S, Han K, Kim EK. Deep Learning for the Detection of Breast Cancers on Chest Computed Tomography. Clin Breast Cancer. 2022 Jan;22(1):26-31. doi: 10.1016/j.clbc.2021.04.015. Epub 2021 May 5. PMID: 34078566.
3. Bae H, Lee H, Kim S, Han K, Rhee H, Kim DK, Kwon H, Hong H, Lim JS. Radiomics analysis of contrast-enhanced CT for classification of hepatic focal lesions in colorectal cancer patients: its limitations compared to radiologists. Eur Radiol. 2021 Nov;31(11):8786-8796. doi: 10.1007/s00330-021-07877-y. Epub 2021 May 10. PMID: 33970307.
4. Lee, S., Lim, J., Shin, J., Kim, S., & Hwang, H. (2021). Pathologic Complete Response Prediction after Neoadjuvant Chemoradiation Therapy for Rectal Cancer Using Radiomics and Deep Embedding Network of MRI. *Applied Sciences*, *11*(20), 9494.
5. Kim S, Lee CJ, Han K, Lee KH, Lee HJ, Park S. Histogram-derived modified thresholds for coronary artery calcium scoring with lower tube voltage. Sci Rep. 2021 Aug 31;11(1):17450. doi: 10.1038/s41598-021-96695-9. PMID: 34465816; PMCID: PMC8408203.
6. Kim JM, Kang JG, Kim S, Cheon JH. Deep-learning system for real-time differentiation between Crohn's disease, intestinal Behçet's disease, and intestinal tuberculosis. J Gastroenterol Hepatol. 2021 Aug;36(8):2141-2148. doi: 10.1111/jgh.15433. Epub 2021 Feb 20. PMID: 33554375.
7. Kim K, Kim S, Han K, Bae H, Shin J, Lim JS. Diagnostic Performance of Deep Learning-Based Lesion Detection Algorithm in CT for Detecting Hepatic Metastasis from Colorectal Cancer. Korean J Radiol. 2021 Jun;22(6):912-921. doi: 10.3348/kjr.2020.0447. Epub 2021 Feb 25. PMID: 33686820; PMCID: PMC8154788.
8. Lee SE, Sim Y, Kim S, Kim EK. Predictive performance of ultrasonography-based radiomics for axillary lymph node metastasis in the preoperative evaluation of breast cancer. Ultrasonography. 2021 Jan;40(1):93-102. doi: 10.14366/usg.20026. Epub 2020 Apr 1. PMID: 32623841; PMCID: PMC7758097.
9. Shin J, Lim JS, Huh YM, Kim JH, Hyung WJ, Chung JJ, Han K, Kim S. A radiomics-based model for predicting prognosis of locally advanced gastric cancer in the preoperative setting. Sci Rep. 2021 Jan 21;11(1):1879. doi: 10.1038/s41598-021-81408-z. PMID: 33479398; PMCID: PMC7820605.
10. Son J, Lee SE, Kim EK, Kim S. Prediction of breast cancer molecular subtypes using radiomics signatures of synthetic mammography from digital breast tomosynthesis. Sci Rep. 2020 Dec 9;10(1):21566. doi: 10.1038/s41598-020-78681-9. PMID: 33299040; PMCID: PMC7726048.
11. Choi, K., Lim, J. S., & Kim, S. (2020). StatNet: Statistical image restoration for low-dose CT

using deep learning. *IEEE Journal of Selected Topics in Signal Processing*, *14*(6), 1137-1150.

12. Koh J, Lee E, Han K, Kim EK, Son EJ, Sohn YM, Seo M, Kwon MR, Yoon JH, Lee JH, Park YM, Kim S, Shin JH, Kwak JY. Diagnosis of thyroid nodules on ultrasonography by a deep convolutional neural network. Sci Rep. 2020 Sep 17;10(1):15245. doi: 10.1038/s41598-020-72270-6. PMID: 32943696; PMCID: PMC7498581.
13. Kim SJ, Roh JW, Kim S, Park JY, Choi D. Current State and Strategy for Establishing a Digitally Innovative Hospital: Memorial Review Article for Opening of Yongin Severance Hospital. Yonsei Med J. 2020 Aug;61(8):647-651. doi: 10.3349/ymj.2020.61.8.647. PMID: 32734727; PMCID: PMC7393291.
14. Sim Y, Lee SE, Kim EK, Kim S. A Radiomics Approach for the Classification of Fibroepithelial Lesions on Breast Ultrasonography. Ultrasound Med Biol. 2020 May;46(5):1133-1141. doi: 10.1016/j.ultrasmedbio.2020.01.015. Epub 2020 Feb 24. PMID: 32102739.
15. Kim S, Kim MJ, Kim EK, Yoon JH, Park VY. MRI Radiomic Features: Association with Disease-Free Survival in Patients with Triple-Negative Breast Cancer. Sci Rep. 2020 Feb 28;10(1):3750. doi: 10.1038/s41598-020-60822-9. PMID: 32111957; PMCID: PMC7048756.
16. Kim S, Shin J, Kim DY, Choi GH, Kim MJ, Choi JY (2019) Postoperative Recurrence of Hepatocellular Carcinoma: The Importance of Distinguishing between Intrahepatic Metastasis and Multicentric Occurrence-Response. Clinical cancer research: an official journal of the American Association for Cancer Research 25(17):5427. doi: 10.1158/1078-0432.CCR-19-1403.
17. Kim S, Shin J, Kim DY, Choi GH, Kim MJ, Choi JY (2019) Radiomics on gadoxetic acid-enhanced magnetic resonance imaging for prediction of postoperative early and late recurrence of single hepatocellular carcinoma. Clinical cancer research : an official journal of the American Association for Cancer Research. 25(13):3847-3855. doi: 10.1158/1078-0432.CCR-18-2861.
18. Kim, S., Yoon, H., Lee, M. J., Kim, M. J., Han, K., Yoon, J. K., ... & Shin, H. J. (2019). performance of deep learning-based algorithm for detection of ileocolic intussusception on abdominal radiographs of young children. Scientific Reports, 9(1), 1-8. doi: 10.1038/s41598-019-55536-6.
19. Kim S, Han K, Seo N, Kim HJ, Kim MJ, Koom WS, Ahn JB, Lim JS (2018) T2-weighted signal intensity-selected volumetry for prediction of pathological complete response after preoperative chemoradiotherapy in locally advanced rectal cancer. Eur Radiol 28 (12):5231-5240. doi:10.1007/s00330-018-5520-1
20. Kim K, Kim S, Lee YH, Lee SH, Lee HS, Kim S (2018) Performance of the deep convolutional neural network based magnetic resonance image scoring algorithm for differentiating between tuberculous and pyogenic spondylitis. Scientific reports 8 (1):13124. doi:10.1038/s41598-018-31486-3
21. Kim S, Kim DY, An C, Han K, Won JY, Kim GM, Kim MJ, Choi JY (2019) Evaluation of Early Response to Treatment of Hepatocellular Carcinoma with Yttrium-90 Radioembolization Using Quantitative Computed Tomography Analysis. Korean journal of radiology 20 (3):449-458. doi:10.3348/kjr.2018.0469
22. Kim S, An C, Han K, Kim MJ (2019) Gadoxetic acid enhanced magnetic resonance imaging for prediction of the postoperative prognosis of intrahepatic mass-forming cholangiocarcinoma. Abdominal radiology (New York) 44 (1):110-121. doi:10.1007/s00261-018-1727-5
23. Kim YY, An C, Kim S, Kim MJ (2018) Diagnostic accuracy of prospective application of the

Liver Imaging Reporting and Data System (LI-RADS) in gadoxetate-enhanced MRI. Eur Radiol 28 (5):2038-2046. doi:10.1007/s00330-017-5188-y