

Hyun Gee Ryoo, MD, PhD

Clinical Professor, Department of Nuclear Medicine, Seoul National University Hospital
101, Daehak-ro, Jongno-gu, Seoul, 03080, Korea

Education

- **Ph.D. of Medicine** Seoul National University, Korea (Sep 2018 - Feb 2022)
Department of Molecular Medicine and Biopharmaceutical Sciences, Graduate School of Convergence Science and Technology, and College of Medicine or College of Pharmacy
- **M.S. of Medicine**, Seoul National University, Korea (Sep 2016 - Aug 2018)
Department of Molecular Medicine and Biopharmaceutical Sciences, Graduate School of Convergence Science and Technology, and College of Medicine or College of Pharmacy
- **M.D.** School of Medicine, Seoul National University, Korea (Mar 2010 - Feb 2014)
- **B.S. of Biological Science**, Korea Advanced Institute of Science and Technology (KAIST) (Mar 2006 - Jan 2010)
Department of Biological Science

Medical Training

- **Fellowship:** Department of Nuclear Medicine, Seoul National University Hospital, Korea (Mar 2020 - Feb 2022)
- **Resident:** Department of Nuclear Medicine, Seoul National University Hospital, Korea (Mar 2016 - Feb 2020)
- **Internship:** Seoul National University Hospital, Korea (Mar 2014 - Feb 2015)

Appointments

- **Clinical Professor**
Department of Nuclear Medicine, Seoul National University Hospital, Seoul, Korea (Mar 2025 – Present)
- **Clinical Professor**
Department of Nuclear Medicine, Seoul National University Bundang Hospital, Seongnam, Korea (Mar 2022 – Feb 2025)

Publications

1. HG Ryoo, H Choi, K Shi, A Rominger, DY Lee, DS Lee. Distinct subtypes of spatial brain metabolism patterns in Alzheimer's disease identified by deep learning-based FDG PET clusters. *Eur J Nucl Med Mol Imaging*. 51(2):443–454 (2024)
Underlined: first author.
2. HG Ryoo, M Suh, KW Kang, DW Lee, SW Han, GJ Cheon. Phase 1 study of no-carrier added (NCA) ¹⁷⁷Lu-DOTATATE (SNU-KB-01) in patients with somatostatin receptor-positive neuroendocrine tumors: The first clinical trial of peptide receptor radionuclide therapy (PRRT) in Korea. *Cancer Res Treat*. 55(1):334-343 (2023)
3. HG Ryoo, JI Byun, H Choi, KY Jung. Deep learning signature of brain [18F]FDG PET associated with cognitive outcome of rapid eye movement sleep behavior disorder. *Sci Rep*. 12(1):19259 (2022)
4. M Suh, HG Ryoo, KW Kang, JM Jeong, CW Jeong, C Kwak, GJ Cheon. Phase I clinical trial of PSMA-targeting ⁶⁸Ga-NGUL in healthy volunteers and patients with prostate cancer. *Korean J Radiol*. 23(9):911-920 (2022)
5. S Yoo, E Yoon, D Boo, B Kim, S Kim, JC Paeng, IR Yoo, IY Choi, K Kim, HG Ryoo, SJ Lee, E Song, YH Joo, J Kim, HY Lee. Transforming thyroid cancer diagnosis and staging information from unstructured reports to the observational medical outcome partnership common data model. *Appl Clin Inform*. 13(3):521-531 (2022)

6. S Kim, JI Bang, D Boo, B Kim, IY Choi, SJ Ko, IR Yoo, K Kim, J Kim, YH Joo, **HG Ryoo**, JC Paeng, JM Park, W Jang, B Kim, Y Chung, D Yang, S Yoo, HY Lee. Second primary malignancy risk in thyroid cancer and matched patients with and without radioiodine therapy analysis from the observational health data sciences and informatics. *Eur J Nucl Med Mol Imaging*. 49(10):3547-3556 (2022)
7. **HG Ryoo**, M Suh, JC Paeng, JK Chung. Short Essay on 60 Years' Challenges and Achievements of KSNM. *Nucl Med Mol Imaging*. 55(1):2-6 (2021)
8. M Suh, HJ Im, **HG Ryoo**, KW Kang, JM Jeong, S Kumar, SS Ballal, MP Yadav, C Bal, CW Jeong, C Kwak, GJ Cheon. Head to head comparison of ⁶⁸Ga-NGUL and ⁶⁸Ga-PSMA-11 in patients with metastatic prostate cancer: a prospective study. *J Nucl Med*. 62(10):1457-1460 (2021)
9. J Park, JS Lee, D Oh, **HG Ryoo**, JH Han, WW Lee. Quantitative salivary gland SPECT/CT using deep convolutional neural networks. *Sci Rep*. 11(1):7842 (2021)
10. TH Lee, **HG Ryoo**, R Lee, JC Paeng, H Chung, HJ Kim. Comparison of endoscopically determined gross tumor volume and metabolic tumor volume in esophageal cancer. *Medicine (Baltimore)*. 100(24):e26338 (2021)
11. **HG Ryoo**, H Choi, DS Lee. Deep learning-based interpretation of basal/acetazolamide brain perfusion SPECT leveraging unstructured reading reports. *Eur J Nucl Med Mol Imaging*. 47(9):2186-2196 (2020)
12. **HG Ryoo**, JC Paeng, BL Koo, GJ Cheon, DS Lee, KW Kang. Clinical Implication of ¹⁸F-NaF PET/CT Indexes of Aortic Calcification in Coronary Artery Disease Patients: Correlations with Cardiovascular Risk Factors. *Nucl Med Commun*. 41(1):58-64 (2020)
13. **HG Ryoo**, H Choi, GJ Cheon. Spleen scan for ⁶⁸Ga-DOTATOC PET-positive pancreatic tail lesion: differential diagnosis of neuroendocrine tumor from accessory spleen. *Nucl Med Mol Imaging*. 54(1):43-47 (2020)
14. TH Wong, QA Shagera, **HG Ryoo**, S Ha, DS Lee. Basal and Acetazolamide Brain Perfusion SPECT in Internal Carotid Artery Stenosis. *Nucl Med Mol Imaging*. 54(1):9-27 (2020)
15. **HG Ryoo**, WW Lee, JY Kim, E Kong, WH Choi, JK Yoon. Minimum Standardized Uptake Value from Quantitative Bone Single-Photon Emission Computed Tomography/Computed Tomography for Evaluation of Femoral Head Viability in Patients with Femoral Neck Fracture. *Nucl Med Mol Imaging*. 53(4):287-295 (2019)
16. JY Kim, HY Suh, **HG Ryoo**, D Oh, H Choi, JC Paeng, GJ Cheon, KW Kang, DS Lee. Amyloid PET quantification via end-to-end training of a deep learning. *Nucl Med Mol Imaging*. 53(5):340-348 (2019)
17. HY Suh, S Park, **HG Ryoo**, JY Kim, TS Kim, JM Lee, MS Kim, HC Yang, SK Kim. Comparative analysis of lung perfusion scan with SPECT/CT for the evaluation of functional lung capacity. *Nucl Med Mol Imaging*. 53(6):406-413 (2019)
18. **HG Ryoo**, SK Kim, JE Cheon, JY Lee, KC Wang, JH Phi. Slit ventricle syndrome and early-onset secondary craniosynostosis in an infant. *Am J Case Rep*. 15:246-253 (2014)
19. J Han, YJ Koh, HR Moon, **HG Ryoo**, CH Cho, I Kim, GY Koh. Adipose tissue is an extramedullary reservoir for functional hematopoietic stem and progenitor cells. *Blood*. 115(5):957-964 (2010)

Awards

- **Frontier Medical Scientist Award (Best Oral Presentation Award)**, Korean Society of Nuclear Medicine (2023)
- **International Best Abstract Award**, Society of Nuclear Medicine and Molecular Imaging (2022)
- **Asian Young Investigator Award (Gold prize)**, Japanese Society of Nuclear Medicine (2021)
- **Best Paper Award**, Korean Society of Nuclear Medicine (2021)
- **Best Paper Award**, Korean Federation of Science and Technology Societies (2020)