Name	Sang Won Park
Affiliation	BIOLINK Inc.
Country	South Korea
Major Field	Medical Informatics

Educational Background

Ph.D. in Medical Big Data Convergence
  - **Kangwon National University**, Republic of Korea, March 2020 - August 2022
  - **Thesis:** Deep and Machine Learning Application for the Classification of Alzheimer's Disease using Tau PET
  - **Adviser:** Jae-Won Jang, M.D., Ph.D.
  - **Area of Study: AI, Machine Learning, Clinical information, Neuroimaging, Neuroscience, Digital Health**

M.S. in Radiological Cancer Medicine
  - **University of Science and Technology (UST)- Korea Institute of Radiological & Medical Sciences (KIRAMS)**, Republic of Korea, March 2017 – February 2020.
  - **Thesis:** A study on radiomics application for **survival prediction analysis** of Head and Neck Squamous Cell Carcinoma(HNSCC) patients using PET image
  - **Adviser:** Jin Su Kim, Ph.D.

Area of Study: Medical image analysis, Positron Emission Tomography

Professional Experience

Research Director |BIOLINK Inc.   **January 2026** – Present
- **Research directing for medical AI studying in neuroscience based on brain image data and cancer research study design in pulmonary CT image data.**
- **Mobile health (Digital healthcare) platform development to hospital patients transfer assistance.**

Research Professor | Kangwon National University Hospital   November 2024 – December 2025
- **Contributed to the statistical design** of observational studies, selecting appropriate methods for high-dimensional, multi-source clinical data.
- **Developed and executed statistical analysis plans** for projects involving longitudinal patient data, and communicated analysis requirements to data teams.
- **Reviewed study results** and contributed to the preparation of statistical methods sections for manuscripts

Inviting Researcher | National Cancer Center   February 2023 – February 2024
- **Led the statistical methodology preparation** for multiple research projects, including the selection of advanced models (e.g., survival models, XAI).
- **Authored the analysis sections of clinical reports and publications,** ensuring accurate interpretation and communication of statistical results to collaborators and medical personnel.
- **Generated and validated analysis databases** from raw, large-scale national cohort and EHR data.

Research Professor | Kangwon National University   September 2022 – October 2024
- Developed and implemented novel **deep learning algorithms**
- Researched **multi-modal learning** approaches by integrating T1 MRI and PET data with clinical information to improve machine learning model performance.

Applied explainable AI (XAI) to develop mortality prediction models for septic patients using **incomplete and multi-source** biomedical data from a nationwide EHR-based cohort.

Main Scientific Publications (Recent 3 years)

1 Impact of a Mobile Nutrition App on Dietary Outcomes in Cancer Survivors: A Pilot Feasibility Study, JMIR Cancer. 2026;Jan.

2. De-identification Strategy and Re-identification Risks for Head Computed Tomography Images via Deep Learning, J Imaging Inform Med, 2026; Jan.

3. Development of explainable machine learning models to predict side effects in patients with rheumatoid arthritis taking methotrexate treatment: a nationwide multicentre cohort study. BMJ Open. 2025; November

4. Real-world validation of a deep learning model for detecting nasogastric tube placement on chest X-rays. Tomography. 2025; December

5. Explainable AI for colorectal cancer mortality and risk factor prediction in Korea: A nationwide cancer cohort study. Int J Med Inform. 2025; October

6. Hearing Loss and the Risk of Dementia: A Longitudinal Analysis of the Korean National Health Insurance Service Senior Cohort. J Alzheimers Dis. 2025; March.

7. Association of psychosis with cognitive impairment is mediated by amyloidopathy in cognitive impairment. Front. Aging Neurosci. 2025; Dec.

8. Predictive Mortality and Gastric Cancer Risk Using Clinical and Socio-Economic Data: A Nationwide Multicenter Cohort Study. Cancers. 2024;December

9. Mortality Prediction Modeling for Patients with Breast Cancer Based on Explainable Machine Learning. Cancers. 2024; December.

10. Multi-classification of Osteoporosis Grading Stages Using Abdominal Computed Tomography with Clinical Variables: Application of Deep Learning with a Convolutional Neural Network. J Korean Soc Radiol. 2024; May.

11. Status of MyHealthWay and Suggestions for Widespread Implementation, Emphasizing the Utilization and Practical Use of Personal Medical Data. Healthc Inform Res. 2024; April.

12. Early Prediction of Mortality for Septic Patients Visiting Emergency Room Based on Explainable Machine Learning: A Real-World Multicenter Study. J Korean Med Sci. 2024; February.

13. M4: Multi-modality Multi-task Model for mRS Prediction Using Diffusion-Weighted Magnetic Resonance Imaging. Sci Rep. 2024; August.

14. Predicting the Progression of MCI to Alzheimer's Dementia Using Recurrent Neural Networks with a Series of Neuropsychological Tests. J Clin Neurol. 2024; May.

15. Association Between Nicotine Dependence, Smartphone Usage Patterns, and Expected Compliance with the Smoking Cessation Application Among Smokers. Healthc Inform Res. 2024; May.

16. Deep Learning Model Integrating Radiologic and Clinical Data to Predict Mortality After Ischemic Stroke. Heliyon. 2024; May.

17. Lower-Body Fractures and the Risk of Dementia: A Nationwide Population-Based Study. J Clin Neurol. 2024; January.

18. Deep Learning Application for the Classification of Alzheimer's Disease Using 18F-

flortaucipir (AV-1451) Tau Positron Emission Tomography. Sci Rep. 2023; May.

19. Machine Learning Application for Classification of Alzheimer's Disease Stages Using 18F-fortaucipir Positron Emission Tomography. Biomed Eng Online. 2023; April.

20. In-Advance Prediction of Pressure Ulcers via Deep Learning-Based Robust Missing Value Imputation on Real-Time Intensive Care Variables. J Clin Med. 2023; December.

21. The Image and Multimodal Classification for Alzheimer's Disease by Convolutional Neural Network and Combination with Long Short-Term Memory Using Tau-PET Images. Alzheimer's Assoc Int Conf. 2022; July.

22. Quantitative Assessment of the Longitudinal Changes of Pulmonary Vascular Counts in Chronic Obstructive Pulmonary Disease. Respir Res. 2022; February.

23. Machine Learning-Based Automatic Estimation of Cortical Atrophy Using Brain Computed Tomography Images. Sci Rep. 2022; August.

24. Predicting Progression to Dementia with 'Comprehensive Visual Rating Scale' and Machine Learning Algorithms. Front Neurol. 2022; July.

25. Indirect Volume Estimation for Acute Ischemic Stroke from Diffusion-Weighted Image Using Slice Image Segmentation. J Pers Med. 2022; March.

26. Analysis of Treatment Patterns of Anti-Dementia Medications in Newly Diagnosed Alzheimer's Dementia Using OMOP CDM. Sci Rep. 2022; March.