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Country	South Korea
Major Field	Gastrointestinal, Hepatobiliary & Pancreas pathology Digital pathology and AI

Educational Background

03/1996-02/2002 M.D The Catholic University of Korea, Collage of Medicine
03/2006-02/2013 The Catholic University of Korea, Graduate School of Biomedical Science (Ph.D.)

Professional Experience

03/2011-02/2013 Fellowship, Department of hospital pathology, The Catholic University of Korea, Seoul St. Mary′s Hospital

03/2014-Present Clinical Assistant Professor/ Assistant Professor/ Associate Professor/ Professor Department of Hospital Pathology, The Catholic University of Korea, Seoul St. Mary′s Hospital

08/2017-08/2018 Visiting research scholar, The center for biomedical informatics & biostatistics, University of Arizona & Quantitative Health Sciences, Lerner Research Institute, Cleveland Clinic

Main Scientific Publications

Published Articles (2024~present, 1st author or Corresponding author only)
1. Spatial dissection of tumour microenvironments in gastric cancers reveals the immunosuppressive crosstalk between CCL2+ fibroblasts and STAT3-activated macrophages. Gut. 2025 Apr 7;74(5):714-727.
2. Artificial Intelligence Applications in Image-Based Diagnosis of Early Esophageal and Gastric Neoplasms. Gastroenterology. 2025 Aug;169(3):396-415.e2.
3. Deep Gaussian process with uncertainty estimation for microsatellite instability and immunotherapy response prediction from histology. NPJ Digit Med. 2025 May 19;8(1):294.
4. Molecular Classification of Breast Cancer Using Weakly Supervised Learning. Cancer Res Treat. 2025 Jan;57(1):116-125.
5. Pathologic diagnosis and molecular features of gastrointestinal stromal tumors: a mini-review. Front Oncol. 2024 Nov 19:14:1487467.
6. Interpretable deep learning model to predict lymph node metastasis in early gastric cancer using whole slide images. Am J Cancer Res. 2024 Jul 15;14(7):3513-3522.
7. Refining of cancer-specific genes in microsatellite-unstable colon and endometrial cancers using modified partial least square discriminant analysis. Medicine (Baltimore). 2024 Dec 27;103(52):e41134.

8. AI-Driven Digital Pathology: Deep Learning and Multimodal Integration for Precision Oncology. Int J Mol Sci. 2025 Dec 29;27(1):379.

9. Adaptive compression framework for giga-pixel whole slide images. Nat Commun. 2025 Dec 3;17(1):207.

10. Interaction between ENPP1 and homologous recombination deficiency defines distinct pan-cancer signatures: A retrospective observational study. Medicine (Baltimore). 2026 Jan 2;105(1):e47164.

11. Subtype classification of gastric spindle cell tumors in whole slide images. Comput Biol Med. 2026 Jan 15:201:111410.