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  - **Current Position & Affiliation:** Assistant Professor, Department of Radiation Oncology, Yongin Severance Hospital
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• **Educational Background:**

2014 Bachelor of Medicine, Yonsei University College of Medicine

2020 Ph.D. in Medicine, Yonsei University College of Medicine

• **Professional Experience:**

2015-2019 Resident, Department of Radiation Oncology, Yonsei Cancer Center

2019-2021 Fellow, Department of Radiation Oncology, Yonsei Cancer Center

2021-2022 Clinical Assistant Professor, Department of Radiation Oncology, Yonsei Cancer Center

2023-present Assistant Professor, Department of Radiation Oncology, Yongin Severance Hospital

• **Professional Organizations:**

Member, Korean Society for Radiation Oncology (KOSRO)

Member, Korean Cancer Association (KCA)

Member, Korean Breast Cancer Society (KBCS)

Member, Korean Liver Cancer Association (KLCA)

Member, Korean Society of Artificial Intelligence in Medicine (KoSAIM)

• **Main Scientific Publications:**

- Byun HK, Park HS, Choi SH, Park S, Chang JS, Lee IJ, et al. Excluding Upper Axillary Level 1 in Regional Nodal Irradiation Does Not Increase Axillary Recurrence Risk in Patients With Breast Cancer. *Pract Radiat Oncol.* 2025;15(2):144-54.
- Byun HK, Kim H, Son J, Cho Y, Kwon YJ, Kim DW, et al. Impact of bra application in breast cancer radiotherapy: A pilot prospective randomized trial. *Radiotherapy and oncology.* 2025;206:110785.
- Kim YJ, Lee HS, Kim D, Byun HK, Koom WS, Koh WG. Bilayer 3D co-culture platform inducing the differentiation of normal fibroblasts into cancer-associated fibroblast like cells: New in vitro source to obtain cancer-associated fibroblasts. *Bioeng Transl Med.* 2025;10(1):e10708.
- Lee J, Byun HK, Kim YT, Shin J, Kim YB. A Study on Breast Cancer Patient Care

Using Chatbot and Video Education for Radiation Therapy: A Randomized Controlled Trial. *Int J Radiat Oncol Biol Phys.* 2024; S0360-3016(24)03732-5.

- Kim S, Byun HK, Shin J, Lee IJ, Sung W. Normal Tissue Complication Probability Modeling of Severe Radiation-Induced Lymphopenia Using Blood Dose for Patients With Hepatocellular Carcinoma. *Int J Radiat Oncol Biol Phys.* 2024;119(3):1011-20.
- Byun HK, Koom WS, Park SJ, Kim SI, Kim JH, Kim YH, et al. Different decision-making in spine metastasis management among radiation oncologists and orthopedic surgeons: a Korean online survey study. *Front Neurol.* 2024;14:1317858.
- Byun HK, Kim C, Seong J. Carbon Ion Radiotherapy in the Treatment of Hepatocellular Carcinoma. *Clin Mol Hepatol.* 2023;29(4):945-57.
- Byun HK, Chang JS, Kim H, Kim J, Han MC, Kim SY, et al. Cosmetic Outcome and Toxicity After Stereotactic Accelerated Partial Breast Irradiation in Early Breast Cancer: A Prospective Observational Cohort Study. *Int J Radiat Oncol Biol Phys.* 2023;117(3):690-700.
- Byun HK, Kim JS, Chang JS, Cho Y, Ahn SJ, Yoon JH, et al. Validation of a nomogram for predicting the risk of lymphedema following contemporary treatment for breast cancer: a large multi-institutional study (KROG 20-05). *Breast cancer research and treatment.* 2022;192(3):553-61.
- Byun HK, Chang WI, Lee JH, Park CK, Kim IA, Kim CY, et al. Adjuvant Radiotherapy Versus Surveillance for Grade 2 Intracranial Meningiomas: A Multi-Institutional Propensity Score-Matched Study. *Frontiers in oncology.* 2022;12:877244.
- Byun HK, Kim KJ, Han SC, Seong J. Effect of Interleukin-7 on Radiation-Induced Lymphopenia and Its Antitumor Effects in a Mouse Model. *Int J Radiat Oncol Biol Phys.* 2021;109(5):1559-69.
- Byun HK, Han MC, Yang K, Kim JS, Yoo GS, Koom WS, et al. Physical and Biological Characteristics of Particle Therapy for Oncologists. *Cancer Res Treat.* 2021;53(3):611-20.
- Byun HK, Chung SY, Kim KJ, Seong J. Role of Interleukin-7 in the Development of and Recovery from Radiation-Induced Lymphopenia: A Post-hoc Analysis of a Prospective Cohort. *Cancer Res Treat.* 2021;53(4):962-72.
- Byun HK, Chang JS, Jung M, Koom WS, Chung KY, Oh BH, et al. Prediction of Immune-Checkpoint Blockade Monotherapy Response in Patients With Melanoma Based on Easily Accessible Clinical Indicators. *Frontiers in oncology.* 2021;11:659754.
- Byun HK, Chang JS, Im SH, Kirova YM, Arsene-Henry A, Choi SH, et al. Risk of Lymphedema Following Contemporary Treatment for Breast Cancer: An Analysis of 7617 Consecutive Patients From a Multidisciplinary Perspective. *Ann Surg.* 2021;274(1):170-8.
- Byun HK, Chang JS, Choi MS, Chun J, Jung J, Jeong C, et al. Evaluation of deep learning-based autosegmentation in breast cancer radiotherapy. *Radiat Oncol.* 2021;16(1):203.