• **Name:** Young Kwang Chae, MD, MPH, MBA

• **Current Position & Affiliation:** Associate Professor of Medicine
Co-Director, Early Phase Clinical Trials Unit, Robert H. Lurie Comprehensive Cancer Center of Northwestern University
Co-Director, Developmental Therapeutics Fellowship Program, Division of Hematology Oncology, Department of Medicine, Feinberg School of Medicine, Northwestern University

• **Country:** USA

• **Educational Background:**

Degree-Granting Education

- MD, Seoul National University, South Korea, 2002
- MPH, Johns Hopkins University Bloomberg School of Public Health, Baltimore, Maryland, Public Health, Epidemiology and Biostatistics, 2007
- MBA, Johns Hopkins University Carey Business School, Baltimore, Maryland, Business Administration, Medical Management, 2007

Postgraduate Training

- Residency, Internal Medicine, Albert Einstein Medical Center, Philadelphia, Pennsylvania, Jul 2008-Jun 2011
- Fellowship, Hematology and Oncology, The University of Texas M. D. Anderson Cancer Center, Houston, Texas, Jul 2011- Jun 2014

CREDENTIALS
Board Certification

- Internal Medicine, American Board of Internal Medicine, 2011
- Medical Oncology, American Board of Internal Medicine, 2014

Professional Experience:

Academic Appointments

- Associate Professor, Hematology and Oncology, Department of Medicine, Northwestern University Feinberg School of Medicine
- Co-Director, Developmental Therapeutics Fellowship Program, Division of Hematology Oncology, Department of Medicine, Feinberg School of Medicine, Northwestern University
- Co-Director, Early Phase Clinical Trials Unit, Robert H. Lurie Comprehensive Cancer Center of Northwestern University
- Chair, Developmental Therapeutics Program Clinical Research Meeting, Robert H. Lurie Comprehensive Cancer Center
- Co-Leader, Early Therapeutics Multi-histology Disease Team, Robert H. Lurie Comprehensive Cancer Center

Administrative Appointments/Responsibilities

- Member, Lung Committee & Lung Working Group, Southwest Oncology Group (SWOG) 2015 – present
- Vice Chair, Early Therapeutics and Rare Cancer Committee, Southwest Oncology Group (SWOG) 2015 - present
- Member, Molecular Tumor Board, ASCO Targeted Agent and Profiling Utilization Registry (TAPUR) Study

• Professional Organizations:

- American Society of Clinical Oncology (ASCO)
- American Association for Cancer Research (AACR)
- Society for Immunotherapy of Cancer (SITC)
- International Association for the Study of Lung Cancer (IASLC)

• Main Scientific Publications:

1. **Chae YK**, Gagliato Dde M, Pai SG, Carneiro B, Mohindra N, Giles FJ, Ramakrishnan-Geethakumari P, Sohn J, Liu S, Chen H, Ueno N, Hortobagyi G, Gonzalez-Angulo AM. The Association between EGFR and cMET Expression and Phosphorylation and Its Prognostic Implication in Patients with Breast Cancer. PLoS One. 2016 Apr 7;11(4):e0152585. doi: 10.1371/journal.pone.0152585. PubMed PMID: 27055285.
2. **Chae YK**, Anker JF, Carneiro BA, Chandra S, Kaplan J, Kalyan A, Santa-Maria CA, Platanias LC, Giles FJ . Genomic landscape of DNA repair genes in cancer. Oncotarget. 2016 Apr 26;7(17):23312-21. doi: 10.18632/oncotarget.8196. PubMed PMID: 27004405.
3. **Chae YK**, Davis AA, Carneiro BA, Chandra S, Mohindra N, Kalyan A, Kaplan J, Matsangou M, Pai S, Costa R, Jovanovic B, Cristofanilli M, Platanias LC, Giles. Concordance between genomic alterations assessed by next-generation sequencing in tumor tissue or circulating cell-free DNA. Oncotarget. 2016 Oct 4;7(40):65364-65373. doi: 10.18632/oncotarget.11692. PMID: 27588476.
4. **Chae YK**, Davis AA, Jain S, Santa-Maria C, Flaum L, Beaubier N, Platanias LC, Gradishar W, Giles FJ, Cristofanilli M. Concordance of Genomic Alterations by Next-Generation Sequencing in Tumor Tissue versus Circulating Tumor DNA in Breast Cancer. Mol Cancer Ther. 2017 Jul;16(7):1412-1420. doi: 10.1158/1535-7163.MCT-17-0061. PMID: 28446639.
5. **Chae YK**, Pan AP, Davis AA, Patel SP, Carneiro BA, Kurzrock R, Giles FJ. Path toward Precision Oncology: Review of Targeted Therapy Studies and Tools to Aid in Defining "Actionability" of a Molecular Lesion and Patient Management Support. Mol Cancer Ther. 2017 Dec;16(12):2645-2655. doi: 10.1158/1535-7163.MCT-17-0597. PMID: 29203694.
6. **Chae YK**, Anker JF, Bais P, Namburi S, Giles FJ, Chuang JH. Mutations in DNA repair genes are associated with increased neo-antigen load and activated T cell infiltration in lung adenocarcinoma. Oncotarget. 2017 Dec 15;9(8):7949-7960. doi: 10.18632/oncotarget.23742. PubMed PMID: 29487705.
7. **Chae YK**, Choi WM, Bae WH, Anker J, Davis AA, Agte S, Iams WT, Cruz M, Matsangou M, Giles FJ. Overexpression of adhesion molecules and barrier molecules is associated with differential infiltration of immune cells in non-small cell lung cancer. Sci Rep. 2018 Jan 18;8(1):1023. doi: 10.1038/s41598-018-19454-3. PubMed PMID: 29348685.
8. **Chae YK**, Chang S, Ko T, Anker J, Agte S, Iams W, Choi WM, Lee K, Cruz M. Epithelial-mesenchymal transition (EMT) signature is inversely associated with T-cell infiltration in non-small cell lung cancer (NSCLC). Sci Rep. 2018 Feb 13;8(1):2918. doi: 10.1038/s41598-018-21061-1. PubMed PMID: 29440769.

9. **Chae YK**, Tamragouri KB, Chung J, Lin X, Miller V, Ali SM, and Giles FJ. Large-Cell Neuroendocrine Carcinoma of the Lung: A Focused Analysis of BRAF Alterations and Case Report of a BRAF Non-V600–Mutated Tumor Responding to Targeted Therapy. doi: 10.1200/PO.17.00150. *JCO Precision Oncology* - published online February 16, 2018.
10. **Chae YK**, Galvez C, Anker JF, Iams WT, Bhave M. Cancer immunotherapy in a neglected population: The current use and future of T-cell-mediated checkpoint inhibitors in organ transplant patients. Cancer Treat Rev. 2018 Feb;63:116-121. doi: 10.1016/j.ctrv.2017.12.004. Review. PMID: 29276997.
11. **Chae YK**, Arya A, Iams W, Cruz MR, Chandra S, Choi J, Giles F. Current landscape and future of dual anti-CTLA4 and PD-1/PD-L1 blockade immunotherapy in cancer; lessons learned from clinical trials with melanoma and non-small cell lung cancer (NSCLC). J Immunother Cancer. 2018 May 16;6(1):39. doi: 10.1186/s40425-018-0349-3. PubMed PMID: 29769148.
12. **Chae YK**, Oh MS. Detection of Minimal Residual Disease Using ctDNA in Lung Cancer: Current Evidence and Future Directions. J Thorac Oncol. 2019 Jan;14(1):16-24. doi: 10.1016/j.jtho.2018.09.022. Review. PMID: 30296486.
13. **Chae YK**, Anker JF, Oh MS, Bais P, Namburi S, Agte S, Giles FJ, Chuang JH. Mutations in DNA repair genes are associated with increased neoantigen burden and a distinct immunophenotype in lung squamous cell carcinoma. Sci Rep. 2019 Mar 1;9(1):3235. doi: 10.1038/s41598-019-39594-4. PMID: 30824826.
14. **Chae YK**, Davis AA, Raparia K, Agte S, Pan A, Mohindra N, Villaflor V, Giles F. Association of Tumor Mutational Burden With DNA Repair Mutations and Response to Anti-PD-1/PD-L1 Therapy in Non-Small-Cell Lung Cancer. Clin Lung Cancer. 2019 Mar;20(2):88-96.e6. doi: 10.1016/j.cllc.2018.09.008. PMID: 30425022.
15. **Chae YK**, Davis AA, Agte S, Pan A, Simon NI, Iams WT, Cruz MR, Tamragouri K, Rhee K, Mohindra N, Villaflor V, Park W, Lopes G, Giles FJ. Clinical Implications of Circulating Tumor DNA Tumor Mutational Burden (ctDNA TMB) in Non-Small Cell Lung Cancer. Oncologist. 2019 Jun;24(6):820-828. doi: 10.1634/theoncologist.2018-0433. PMID:30867242.
16. **Chae YK**, Viveiros P, Lopes G, Sukhadia B, Sheikh MM, Saravia D, Florou V, Sokol ES, Frampton GM, Chalmers ZR, Ali SM, Ross JS, Chang S, Wang S, Chiec L, Rahbari A, Mohindra N, Villaflor V, Shin SH, Oh M, Anker J, Park LC, Wang V, Chuang J, Park W. Clinical and Immunological Implications of Frameshift Mutations in Lung Cancer. J Thorac Oncol. 2019 Oct;14(10):1807-1817. doi: 10.1016/j.jtho.2019.06.016. PMID: 31238177.
17. Patel SP, Othus M, **Chae YK**, Giles FJ, Hansel DE, Singh PP, Fontaine A, Shah MH, Kasi A, Baghdadi TA, Matrana M, Gatalica Z, Korn WM, Hayward J, McLeod C, Chen HX, Sharon E, Mayerson E, Ryan CW, Plets M, Blanke CD, Kurzrock R. A Phase II Basket Trial of Dual Anti-CTLA-4 and Anti-PD-1 Blockade in Rare Tumors (DART SWOG 1609) in Patients with Nonpancreatic Neuroendocrine Tumors. Clin Cancer Res. 2020 May 15;26(10):2290-2296. doi: 10.1158/1078-0432.CCR-19-3356. PMID: 31969335.
18. Cho GJ, Oh MS, Oh MJ, Park KV, Han SW, **Chae YK**. Peripartum Blood Transfusions are Associated with Increased Risk of Cancer: A National Retrospective Cohort Study. Clin Epidemiol. 2020 Jun 19;12:659-666. doi: 10.2147/CLEP.S244443. PMID: 32606991.
19. Davis AA, Iams WT, Chan D, Oh MS, Lentz RW, Peterman N, Robertson A, Shah A, Srivas R, Wilson, TJ, Lambert NJ, George PS, Wong B, Wood HW, Close JC, Tezcan A, Nesmith K, Tezcan H, **Chae YK**. Early Assessment of Molecular Progression and Response by Whole-genome Circulating Tumor DNA in Advanced Solid Tumors. Mol Cancer Ther. 2020 Jul;19(7):1486-1496. doi:10.1158/1535-7163.MCT-19-1060. PMID: 32371589.
20. **Chae YK**, Hong F, Vaklavas C, Cheng HH, Hammerman P, Mitchell EP, Zwiebel JA, Iv y SP, Gray RJ, Li S, McShane LM, Rubinstein LV, Patton D, Williams PM, Hamilton S R, Mansfield A, Conley BA, Arteaga CL, Harris LN, O'Dwyer PJ, Chen AP, Flaherty K

T. Phase II Study of AZD4547 in Patients With Tumors Harboring Aberrations in the FG FR Pathway: Results From the NCI-MATCH Trial (EAY131) Subprotocol W. J Clin Onco l. 2020 Jul 20;38(21):2407-2417. doi: 10.1200/JCO.19.02630. Epub 2020 May 28.

21. **Chae YK**, Kim WB, Davis AA, Park LC, Anker JF, Simon NI, Rhee K, Song J, Cho A, Chang S, Ko T, Oh M, Bhave M, Viveiros P. Mass spectrometry-based serum proteomic signature as a potential biomarker for survival in patients with non-small cell lung cancer receiving immunotherapy. Transl Lung Cancer Res. 2020 Aug;9(4):1015-1028. doi: 10.21037/tlcr-20-148. PMID: 32953481.
22. Oh MS, Anker JF, **Chae YK**. High gene expression of estrogen and progesterone receptors is associated with decreased t cell infiltration in patients with NSCLC. Cancer Treat Res Commun. 2021 Jan 21;27:100317. doi: 10.1016/j.ctarc.2021.100317. PMID: 33711637.
23. Cho S, Park J, Lee M, Lee D, Choi H, Gim G, Kim L, Kang CY, Oh Y, Viveiros P, Vagia E, Oh MS, Cho GJ, Bharat A, **Chae YK**. Blood transfusions may adversely affect survival outcomes of patients with lung cancer: a systematic review and meta-analysis. Transl Lung Cancer Res. 2021 Apr;10(4):1700-1710. doi: 10.21037/tlcr-20-933.
24. Bae WH, Hwang JY, Hur WK, Choi J, Nam M, Choi Y, Kim L, Kim E, Fridland S, Cho HS, Low C, Yu E, Jung CM, Vagia E, Kiedrowski L, **Chae YK**. Metastatic CDK12-Mutated Neuroendocrine Tumor of Lung Showed an Exceptional Response to Olaparib and Paclitaxel. JCO Precision Oncology. 2021 May. doi:10.1200/PO.20.00400.
25. Fridland S, Choi J, Nam M, Schellenberg SJ, Kim E, Lee G, Yoon N, **Chae YK**. Assessing tumor heterogeneity: integrating tissue and circulating tumor DNA (ctDNA) analysis in the era of immuno-oncology - blood TMB is not the same as tissue TMB. J Immunother Cancer. 2021 Aug;9(8):e002551. doi: 10.1136/jitc-2021-002551. PMID: 34462324.
26. Lee D, Park J, Choi H, Gim G, Cho S, Kim L, Oh Y, Kang CY, Kim Y, Tan D, Hermida de Viveiros PA, **Chae YK**. Association of HLA class I homozygosity with unfavorable clinical outcomes in patients with non-small cell lung cancer treated with chemo-immunotherapy or immunotherapy as first-line therapy. Heliyon. 2021 Sep 2;7(9):e07916. doi: 10.1016/j.heliyon.2021.e07916. eCollection 2021 Sep. PMID: 34568594.