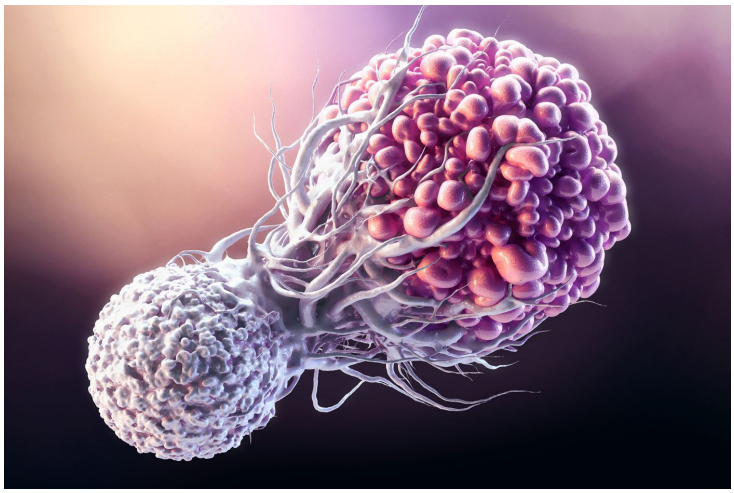
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ASIA EDITION

Korea shows AI tool as novel biomarker for immunotherapy response

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Breakthrough study validates Artificial Intelligence (AI) as a novel biomarker in predicting immunotherapy response



Lunit, a South Korea-based startup has announced the publication of its study in the *Journal of Clinical Oncology* (JCO). Findings from the study validate the effectiveness of Lunit's AI biomarker, Lunit SCOPE IO, in predicting clinical outcomes of immunotherapy in patients with advanced non-small cell lung cancer (NSCLC).

"Immune phenotyping of tumor microenvironment is a logical biomarker for immunotherapy, but objective measurement of such would be extremely challenging," said Professor Tony Mok from the Chinese University of Hong Kong, co-senior author of the journal. "This is the first study that adopted AI technology to define the tumor immune phenotype, and to demonstrate its ability in predicting treatment outcomes of anti-PD-L1 therapy in two large cohorts of patients with advanced non-small cell lung cancer."

Immune checkpoint inhibitors (ICI) are a standard therapy method for advanced NSCLC with programmed death ligand-1 (PD-L1) expression. However, outcomes vary depending on the patient's tumor microenvironment.

Assessing the PD-L1 tumor proportion score (TPS) can bring predictive benefit for patients with high expression (over 50%), who show superior response to ICI therapy over standard chemotherapy. However, ICIs lose their potency in patients with PD-L1 TPS between 1% and 49%, showing outcomes similar to chemotherapy. Therefore, the development of an accuracy-enhanced biomarker to predict ICI response in NSCLC patients with low PD-L1 expression is highly warranted.