Clinical and Translational Research in T-cell and NK/T-cell Lymphoma in Korea

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T-cell and NK/T-cell lymphomas represent a heterogeneous group of aggressive malignancies with limited therapeutic options and historically poor outcomes. In Korea, the relatively high prevalence of extranodal NK/T-cell lymphoma and nodal T-cell lymphomas has provided a unique opportunity to advance both clinical and translational research in this field. This lecture will summarize key clinical trials and biomarker-driven translational studies conducted in Korea, with a focus on efforts to improve treatment outcomes and understand disease biology.

Clinically, investigator-initiated multicenter trials have explored novel therapeutic strategies, including immune checkpoint blockade, epigenetic therapy, and combination approaches incorporating CD38 targeting, azacitidine-based regimens, and immunomodulatory agents in relapsed or refractory T-cell and NK/T-cell lymphomas. These studies have contributed to defining feasible and effective treatment options in diseases with limited standard therapies.

In parallel, translational research using patient-derived tumor tissues, circulating tumor DNA, serum biomarkers, and exosomal components has provided insights into mechanisms of immune evasion, treatment resistance, and disease progression. Integrated genomic and immune profiling has enabled the identification of prognostic and predictive biomarkers, including PD-L1 expression patterns, mutational landscapes, and circulating immune-related factors, which may guide patient stratification and therapeutic decision-making.

Together, these clinical and translational efforts illustrate how collaborative research frameworks in Korea have advanced the understanding and management of T-cell and NK/T-cell lymphomas. Future directions will focus on biomarker-guided precision therapy and rational combination strategies to further improve patient outcomes.