

OncoTherapy Science, Inc.

July 16, 2020

Publication of a case study supported by Cancer Precision Medicine  
for the neoantigen and TCR repertoire analyses

OncoTherapy Science, Inc. (President & CEO: Jae-Hyun Park; hereinafter, “OncoTherapy”) today announced the publication of a case report, in which the subsidiary company, Cancer Precision Medicine, Inc. (CPM) provided the technical support for the analyses of the patient’s sample. This is a part of the achievement from the research collaboration between Fukuoka General Cancer Clinic and CPM. The results were published in *Immunological Investigations*.

<https://www.tandfonline.com/doi/full/10.1080/08820139.2020.1778721>

This report demonstrated the clinical and immunological effect of neoantigen peptide-loaded dendritic cell (DC) therapy to treat a patient with chemorefractory ovarian cancer. Intranodal administration of DCs, loaded with four neoantigen peptides that were predicted by cancer immunogenomic analysis, remarkably lowered the level of tumor markers (CA-125) and improved the tumor-related symptoms (e.g. respiratory discomfort). Neoantigen-specific T cell responses were detected by IFN- $\gamma$  ELISPOT assay using the patient’s peripheral blood mononuclear cells (PBMC). Furthermore, T cell receptor (TCR) repertoire analysis suggests that the neoantigen-specific cytotoxic T lymphocytes (CTLs) are induced by the vaccination, and the CTLs could infiltrate into tumor lesions and then be present in the malignant ascites.

The findings in this study suggest that intranodal injection of neoantigen peptide-loaded DC vaccines induces clinical and immunological responses for cancer therapy, even may serve as a promising therapy in chemoresistant-advanced cancer patients.

CPM provided neoantigen analysis, CTL functional analysis and TCR repertoire analysis in this study.