BioSpectrum
the business of Bio & Health Sciences
ASIA EDITION

Aichi Cancer Center, NEC study advanced cancer immunotherapy

July 10, 2020 | News

Aims to improve the performance of NEC's neoantigen prediction system and developing predictive biomarkers through the fusion of AI and Experimental Immunology



Japan based Aichi Cancer Center and NEC Corporation have announced the launch of fundamental research aiming to realize the promise of advanced personalized cancer immunotherapy by improving the performance of NEC's neoantigen prediction system and developing predictive biomarkers for patient stratification through the fusion of AI and experimental immunology.

The research aims to identify suitable neoantigen for vaccine use by using the neoantigen prediction system which NEC has been working on and the screening techniques using T cells for neoantigen from Aichi Cancer Center. In addition, this research aims to develop biomarkers for patient stratification using AI based on analytical data on a tumor immune microenvironment and clinical data.

Advanced personalized cancer immunotherapy boosts the immune system especially in combination with immune checkpoint inhibitors (ICIs).

The joint research mainly focused on;

Performance improvement of the neoantigen prediction system
Aichi Cancer Center and NEC will identify neoantigens recognized by T cells by using both the neoantigen prediction system and the immunological experimental approach. In the future, NEC will improve the performance of the neoantigen prediction system by using this high-quality data.

Development of biomarkers for patient stratification
Aichi Cancer Center and NEC will comprehensively analyze the tumor immune microenvironment of each patient. This research aims to develop biomarkers for patient stratification using AI based on clinical information, genetic mutation, gene expression, and experimental data obtained from the experiments described above.