

# Development of personalized cancer vaccine against advanced stage lung cancer patients with immunotherapy resistance

PENTAMEDIX CO. LTD.



ONCOLOGY	Candidate
Product Type	Personalized cancer vaccine
Indication	Advanced-stage lung cancer with immunotherapy resistance
Target	Tumor specific neoantigens predicted from deep learning platform technology
MoA(Mechanism of Action)	<ol style="list-style-type: none"> <li>1) Selection of effective neoantigen targets essential for tumor cell proliferation DeepNeoVx® platform</li> <li>2) Production of synthetic long peptide vaccine</li> <li>3) Antigen presenting by antigen-presenting cells (APC) after vaccine injection</li> <li>4) Activation of Cytotoxic T lymphocytes with antigen recognition</li> <li>5) Tumor cell recognition and destruction</li> </ol>
Competitiveness	<p>Our unique DeepNeoVx® platform technology for predicting effective neoantigen targets using deep learning is divided by two elemental technologies as follows</p> <ol style="list-style-type: none"> <li>1) DeepDependency : a novel method to predict neoantigen targets originated from genes essential for cancer cell growth, that can be the best strategy to overcome immune evasion of cancer</li> <li>2) DeepNeo : the first algorithm to predict the affinity for binding neoantigen-MHC complex to TCR, as well as the binding between neoantigen and MHC</li> </ol> <p>Comparing to existing technologies, we have innovative and novel approach for neoantigen prediction tools with low cost and high efficiency</p>
Development Stage	Candidate
Route of Administration	SC