

# Immunotherapy in nonsmall-cell lung cancer: current status and future prospects for liquid biopsy

Brozos-Vázquez, E.M.

Díaz-Peña, R.

García-González, J.

León-Mateos, L.

Mondelo-Macía, P.

Peña-Chilet, M.

López-López, R.

## Abstract

Immunotherapy has been one of the great advances in the recent years for the treatment of advanced tumors, with nonsmall-cell lung cancer (NSCLC) being one of the cancers that has benefited most from this approach. Currently, the only validated companion diagnostic test for first-line immunotherapy in metastatic NSCLC patients is testing for programmed death ligand 1 (PD-L1) expression in tumor tissues. However, not all patients experience an effective response with the established selection criteria and immune checkpoint inhibitors (ICIs). Liquid biopsy offers a noninvasive opportunity to monitor disease in patients with cancer and identify those who would benefit the most from immunotherapy. This review focuses on the use of liquid biopsy in immunotherapy treatment of NSCLC patients. Circulating tumor cells (CTCs), cell-free DNA (cfDNA) and exosomes are promising tools for developing new biomarkers. We discuss the current application and future implementation of these parameters to improve therapeutic decision-making and identify the patients who will benefit most from immunotherapy.

## Author keywords

cfDNA

CTC

Immunotherapy

Liquid biopsy

Lung cáncer

NSCLC