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In vitro method for predicting cancer patient response to Pd-1 and/or Pd-l1 inhibitors (MAPRI)

Business area
Diagnostics

Market sector
Oncology

Medical Indication
Non-small cell lung cancer (NSCLC)

Research goal

Development of a proteomic signature to discriminate between patients with non-small cell lung cancer (NSCLC) who respond to immunotherapy (immune checkpoint inhibitors-ICIs) from those who do not respond.

Problem to solve

Currently, the only predictive biomarker of response to immunotherapy in first-line palliative treatment approved for clinical use is the determination of PDL-1 TPS (Tumor Proportion Score) by immunohistochemistry. However, it is not a good biomarker, as it is predictive in less than 30% of cases and non-predictive in more than 50% of cases. There is even evidence that some patients who express little or no PDL-1 respond to treatment with ICIS.

Innovation

The proteomic signature allows discrimination between responders and non-responders and their combination allows differentiation between the two groups with an area under the curve (AUC) of 1. In addition, these predictive markers are found in plasma so that a tissue biopsy is not necessary, unlike the current PD-1 TPS marker.

Market opportunity

The non-small cell lung cancer (NSCLC) market is a significant and growing sector within the pharmaceutical and healthcare industries. The global NSCLC market was valued at USD 16.1 billion in 2021 and is expected to reach USD 38.8 billion by 2030, with a compound annual growth rate (CAGR) of 10.4% during the forecast period. The market is influenced by factors such as the rise in the incidence of NSCLC, technological advancements, and the increasing adoption of novel therapeutics.

Research team

C030 – Translational Medical Oncology

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Intellectual property

European patent **EP23382377** "IN VITRO METHOD FOR PREDICTING CANCER PATIENT RESPONSE TO PD-1 AND/OR PD-L1 INHIBITORS"

Development stage:

R+D — Analytical validation — Prototype validation — Clinical validation — Regulation process — Clinical utility

Available for: *Licensing, co-development*