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Liquid Biopsy for Advanced NSCLC: A Consensus Statement From the International Association for the Study of Lung Cancer

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Review Articles

Liquid Biopsy for Advanced NSCLC: A Consensus Statement From the International Association for the Study of Lung Cancer

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Abstract

Although precision medicine has had a mixed impact on the clinical management of patients with advanced-stage cancer overall, for NSCLC, and more specifically for [lung adenocarcinoma](#), the advances have been dramatic, largely owing to the genomic complexity and growing number of druggable oncogene drivers. Furthermore, although tumor tissue is historically the “accepted standard” biospecimen for these molecular analyses, there are considerable innate limitations. Thus, [liquid biopsy](#) represents a practical alternative source for investigating tumor-derived somatic alterations. Although data are most robust in NSCLC, patients with other cancer types may also benefit from this minimally invasive approach to facilitate selection of targeted therapies. The liquid biopsy approach includes a variety of methodologies for circulating analytes. From a clinical point of view, plasma [circulating tumor DNA](#) is the most extensively studied and widely adopted alternative to tissue tumor genotyping in [solid tumors](#), including NSCLC, first entering clinical practice for detection of EGFR mutations in NSCLC. Since the publication of the first International Association for the Study of Lung Cancer (IASLC) liquid biopsy statement in 2018, several additional advances have been made in this field, leading to changes in the therapeutic decision-making algorithm for advanced NSCLC and prompting this 2021 update. In view of the novel and impressive technological advances made in the past few years, the growing clinical application of plasma-based, next-generation sequencing, and the recent Food and Drug Administration approval in the United States of two different assays for circulating tumor DNA analysis, IASLC revisited the role of liquid biopsy in therapeutic decision-making in a recent workshop in October 2020 and the question of “plasma first” versus “tissue first” approach toward molecular testing for advanced NSCLC. Moreover, evidence-based recommendations from IASLC provide an international perspective on when to order which test and how to interpret the results. Here, we present updates and additional considerations to the previous statement article as a consensus from a multidisciplinary and international team of experts selected by IASLC.

Keywords

ctDNA; Liquid biopsy; IASLC; NSCLC; Oncogene addicted; Immunotherapy

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Citing articles (5)

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