

## Hummingbird Diagnostics Announces Publication of miLung Small RNA-Based Blood Test for Early Detection of Lung Cancer in the *Journal of Thoracic Oncology*

- *Proprietary small RNA signature (miLung)-based blood test may support early lung cancer detection in primary care settings*
- *Results also presented in a poster at ASCO 2023*

**HEIDELBERG, Germany, July 11, 2023** – Hummingbird Diagnostics GmbH, a leader in reading blood-based small RNAs for early disease detection and characterization, today announced a publication in the *Journal of Thoracic Oncology*<sup>1</sup> following a poster presentation at the *American Society for Clinical Oncology (ASCO) 2023 Annual Meeting* on the miLung small RNA blood test for early-stage lung cancer detection.

The results of the study provide clear evidence for the viability of a small RNA-based blood test as an alternative to low-dose computed tomography (LDCT) screening, which could be deployed in a primary care setting for early-stage lung cancer detection. Screening was performed on stabilized whole blood samples from 1,384 individuals meeting National Lung Screening Trial (NLST) lung cancer eligibility criteria (age 55-74, pack-years  $\geq 30$ ) by leveraging ultra-deep small RNA sequencing. A newly discovered 18-small RNA signature (miLung) was validated as a molecular biomarker for lung cancer in an independent cohort of 441 individuals. The miLung small RNA blood test is noninvasive and identifies specific small RNAs, molecular biomarkers associated with lung cancer in whole blood samples that can be drawn at the point of care.

“We have developed a sensitive yet robust analysis using small RNA tumor markers to detect early-stage lung cancer,” remarked Bruno Steinkraus, PhD, Chief Scientific Officer of Hummingbird Diagnostics. “Our approach integrates tumor-derived and immune system derived small RNAs into unbiased machine learning to inform early-stage lung cancer detection.”

The multicenter study was performed in collaboration with Dr. Amita Sharma at Massachusetts General Hospital, Professor Alexander Bankier at Beth Israel Deaconess Medical Center, Professor Martin Reck at LungenClinic Grosshansdorf, Professor Clemens Aigner of University Medicine Essen and Professor Klaus Rabe of LungenClinic Grosshansdorf amongst others.

“Early cancer detection remains the most effective strategy to reduce mortality associated with lung cancer,” commented Jochen Kohlhaas, Founder and Chief Executive Officer of Hummingbird Diagnostics. “We envision the miLung test as a non-invasive alternative to LDCT scans for use in primary care settings to improve participation in screening, and potentially reduce gender- and race-based disparities in access to lung cancer screening.”

The ASCO poster presentation titled "Early detection of lung cancer using small RNAs" can be found here <https://meetings.asco.org/abstracts-presentations/226486>.

The article can be found on the Journal of Thoracic Oncology's website: [https://www.jto.org/article/S1556-0864\(23\)00670-6/fulltext](https://www.jto.org/article/S1556-0864(23)00670-6/fulltext)

<sup>1</sup>Sikosek T and Horos R et al. Early Detection of Lung Cancer Using Small RNAs. Journal of Thoracic Oncology 2023

#### **About Hummingbird Diagnostics GmbH**

Hummingbird is harnessing the predictive power of blood-borne small RNAs to provide insights into human health and disease. Analyzing small RNAs with Hummingbird's platform holds the potential for early disease detection, disease-specific prognostics, treatment response prediction, and the development of patient-centric therapies. To learn more, visit: <https://www.hummingbird-diagnostics.com>

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