IHI Call Days | Call 9 – SO 2

BREATHE

Biomarker-aided Refinements in the Assessment and Treatment of lung cancer for Health Enhancement

Contact person name:

Mark Dethlefsen (Siemens Healthineers)

E-mail inquiries to: wiktoria.humanicka@siemens-healthineers.com

Link to the IHI brokerage platform:

- IHI Call Days - Call 9 | Dashboard → Proposals → BREATHE

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Challenges and objectives

Lung cancer remains one of the most common and deadliest cancers despite large efforts in developing new and better biomarkers and treatment options. Survival rates could be drastically improved through earlier detection and the use of personalized treatment in early-stage cancers.

The proposed project aims to improve outcomes by:

- Bringing together in-vivo and in-vitro diagnostics to better classify indetermined nodules and guide treatment
- Harness the potential of AI-based technologies along the lung cancer patient journey
- Integrating Industry solutions for coordinated Decision-making
- Provide the required (federated-) infrastructure to enable improved care

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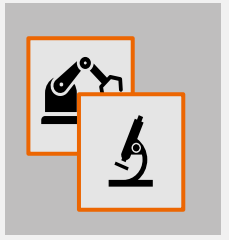
Approach

Multimodal biomarkers in clinical studies for screening, risk assessment, treatment response prediction and the management of the patient follow-up care in lung cancer

Verify multimodal biomarkers for the LC patient journey from early detection to outcome prediction



Apply new technologies for the collection, purification and measurement of novel types of biomarkers

Develop and validate biomarkers for novel treatment methods such as radiotherapy and neoadjuvant therapy for early-stage LC

Provide a Digital Platform enabling the sharing, analysis, and interpretation of multimodal biomarker data

Develop a regulatory strategy including the possibility to include liquid biopsy into reimbursement pathways

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Outcomes and Impact

- Validated multimodal biomarkers and data analytics models for the classification of indetermined lung nodules and for treatment stratification, monitoring and follow-up

- Validated regulatory strategy to translate these biomarkers into regular clinical use

- Demonstration of a sustainable platform for data sharing, federated learning and the development and validation of data analytic models

→ Earlier detection, better classification and improved personalised treatment of indetermined lung nodules has the potential to positively affect patient outcomes

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Expertise and resources

Existing partners:

- Project Management & Coordination
- Clinical / Academic Partners
- Professional / Patient Organisations
- Industry (Diagnostics + Radiotherapy + Pharma)
- SMEs

Open for:

- Pharma Partners
- Diagnostic / MedTech Partners Addressing gaps
- Regulatory Authorities

Duration: 60 months | **Budget:** appr. €25mil (50% in-kind contribution)

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