

Multi-Cancer Early Detection blood test

When cancer is diagnosed early, mortality and patient burden during treatment can be reduced. At OncoInv we believe that people everywhere in the world deserve affordable, accessible, and available early detection of cancer. OncoInv offers such a test with OncoSeek®. Please watch our [OncoSeek Video](#).



How it works

OncoSeek® is a Machine Learning algorithm that uses the results of a simple blood test to detect 9 high-mortality cancer types by analysing the concentration of a selected number of protein tumour markers. The algorithm analyses the specific relations between markers and clinical factors, drastically reducing false positives when compared to the standard analysis of multiple, individually judged, protein tumour markers. The average sensitivity is 51.7% (37.1% to 77.6%) with a specificity of 92.9%*. The test also gives an indication for the tissue of origin which guides the following diagnostic steps.

9 high-mortality cancer types

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|------------------|----------------------|----------------|
| ● Stomach cancer | ● Pancreatic cancer | ● Lung cancer |
| ● Ovarian cancer | ● Colorectal cancer | ● Liver cancer |
| ● Breast cancer | ● Oesophageal cancer | ● Lymphoma |

Straightforward

The lab analysis process is straightforward and can be performed on widely available analysis platforms using off-the-shelf reagents. The Machine Learning based technology, combined with an off-the-shelf lab analysis process, results in a very cost-effective and implementable solution.

OncoSeek® has been validated with several validation cohorts with a total of 15.000 study participants*. OncoSeek® is a CE marked registered test.

Use cases

OncoSeek® targets symptomatic patients with suspicions for cancer in primary and ambulatory care settings. OncoSeek® also targets at-risk populations for cancer through screening, either stand alone or as a complementary tool to existing screening.

Operational



Lab analysis on Roche Cobas, Abbott, GBI or Bio-Rad. Analysis with off-the-shelf reagents, widely available globally.



Algorithm analysis is cloud based. Data is processed in the EU (Germany) in compliance with the EU General Data Protection Regulation.



Service delivery: Specific patient and lab data is communicated to our platform; the platform will produce and share the report to a specified recipient.

Costs

OncoSeek® is a low-cost test, offered not-for-profit in low- & middle-income countries. First research into cost effectiveness of Multi Cancer Early Detection indicates positive outcomes.**

Impact of multi-cancer early detection



Reduces patient mortality



Reduces treatment burden



Improves quality of life



Reduces healthcare cost

The facts

Sample collection:

8ml of venous blood collected by a medical professional.

Cancer types:

Ovarian, Colorectal, Liver, Pancreatic, Lung, Oesophageal, Breast, Stomach, Lymphoma.

- Collectively account for ~60% of cancer deaths worldwide
- Detects aggressive cancers
- Detects cancers that are currently not screened for

Protein Tumour Markers:

AFP, CA125, CA15-3, CA19-9, CEA, CYFRA 21-1

Test results:

Results are communicated via a low-, medium- or high-probability of cancer (POC) score. In case of a high-POC score, a Tissue Of Origin is indicated. The results should be interpreted by a physician.

Performance*:

- Overall sensitivity 51.7%
- Overall specificity 92.9%

Concentration values are analysed by a Machine Learning powered algorithm. Uniquely, the algorithm measures the interrelations between the different markers which generates superior results.

About OncoInv

OncoInv is a social enterprise and a subsidiary of [Inspire2Live](#), a non-profit patient advocacy organisation with representatives in 40+ countries.

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References:

* [EClinicalMedicine. 2023 Jun 15;61:102041](#)

** [Br J Cancer. 2021 Nov;125\(10\):1432-1442](#)