

NON-INVASIVE DETECTION OF CANCER BIOMARKERS IN EXHALED AIR



DEVICE FOR
SCREENING TESTS

MARKET OPPORTUNITY

Early diagnosis of cancers is one of the biggest challenges in disease prophylaxis. Around the world, cancer morbidity and mortality statistics are very high, particularly for lung and breast cancer. Various types of prophylactic and screening tests that detect cancer in its early stages, which enables more-effective therapies to be started, may improve the situation.

Large-scale screening tests to detect cancer are costly and often use invasive methods.

Any innovation that decreases the cost of testing, allows testing to be available to entire communities, and leads to the possibility of detecting cancer in a non-invasive way is a huge market opportunity. The non-invasive detection of cancer biomarkers in exhaled air we are offering is this type of innovation.

TARGET GROUP

We're looking for investors from the medical equipment and apparatus manufacturing sector interested in introducing screening test technologies into mass use.

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HOW DOES IT WORK?

The method involves collecting a sample of exhaled air from the patient, and conducting the measurement using a laser spectrometer. The ultra-sensitive measurement methods allow the detection of volatile cancer biomarkers, and determine their concentration. The test can be done in several minutes, which significantly decreases its cost compared with, for example, the costs of testing using gas chromatography. The result can be an indication to perform specialised diagnostic tests.

WHAT BUILDS AN ADVANTAGE

- Quick and simple actions. The device can be used in any doctor or outpatient clinic. The test results are available within several minutes.
- The possibility of detecting malignant cancer biomarkers that in the first phases of development don't give any symptoms that are felt by patients (including lung and breast cancer).
- Low costs of the test.
- Versatility of the solution – the device detects, among others, formaldehyde, ethane and other volatile compounds.

BENEFITS:

POTENTIAL

The technology can significantly increase access to prophylactic testing, giving tens of thousands of patients the chance to survive.

PATIENT COMFORT

Test samples are collected in a non-invasive way. Patients receive results soon after the test.

QUICK TESTING

The test results are available on the spot within several minutes.

LOW COSTS

The solution is inexpensive to manufacture and in all stages of implementation.

EASY OPERATION

No qualified medical staff are required to operate the device.

WIDE DIAGNOSTIC SCOPE

One solution can detect various biomarkers, increasing the efficiency of screening tests.

PHASE OF DEVELOPMENT OF THE TECHNOLOGY:

The prototype needs clinical testing

IP PROTECTION STATUS:

Patent application No. PL416703

TRL: 6



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