oncoMonitor™

Development status

Phase 4

The transition from the prototype to the final and fully functional form. At this stage, the prototype is already fully tested, or the technology is certified and ready for mass deployment.

IP protection status

US Patent 6,989,085, Czech utility model 30141, A new patent application in preparation - filing in Q2/2020 (Industrial property office - EU, US, Japan atd.)

Partnering strategy

Co-development, Collaboration, investment

Institution

i&i Prague

Challenge

Cancer is the second most common cause of death in developed countries. Oncology patients are treated surgically (tumor removal) or by applying various oncology therapies (radiation, chemotherapy, etc.). After the initial successful treatment, the recurrence of the disease is a very common phenomenon, therefore most patients are treated repeatedly. Continuous monitoring of the effect of treatment and early detection of recurrence has a fundamental effect on the overall patient survival. The current follow-up approaches are currently almost exclusively based on imaging techniques such as computed tomography, magnetic resonance or ultrasound (ultrasound). oncoMonitor™ is a blood test for non-invasive monitoring of the course of treatment of the disease and early detection of recurrence based on a personalized detection of tumor-specific DNA in blood plasma.

Description

Blood test for oncology patients enabling early detection of cancer recurrence and monitoring the effect of oncological treatment. The test is based on the so-called liquid biopsy, e.g. detection of the presence of tumor-specific DNA in the peripheral blood circulation of patients. Because this test is no burden on the patient, it can be repeated frequently and is an ideal tool for monitoring patients when used as an extension of existing radiological imaging methods. In the case of metastatic colorectal carcinoma the technology, also referred to as so-called liquid biopsy, is able to detect recurrence with 100% specificity and 85% sensitivity. At the same time, it enables the monitoring of efficacy or resistance to anticancer treatment allowing for rational decisions and selection of treatment procedure. The oncoMonitor™ project is based on many years of research carried out at Genomac research institute, s.r.o. in cooperation with a number of leading domestic clinical cancer centers (Central Military Hospital, University Hospital in Motol, Thomayer Hospital, University Hospital in Hradec Králové, University Hospital in Pilsen, IKEM and others). As a result of several clinical project studies methodological procedures were developed and also pilot-validated in groups of oncology patients. With the support of seed investment from the biotechnology incubator i&i Prague, s.r.o. Elphogene, s.r.o. was founded as a spin-off in 2019 with the aim of further development and especially the commercialization

of the technologies. Elphogene became the owner of all technologies and know-how related to the oncoMonitor project. At present, it has 7 employees, patient samples are processed in own laboratory, which is accredited according to the ČSN EN ISO 15189: 2013 standard as a medical laboratory No. 8279.

Commercial opportunity

Commercialization of the project outputs is based on three models: 1. Providing the oncoMonitor™ test to self-paying patients 2. Providing the oncoMonitor™ test to complex oncology centers 3. Providing the oncoMonitor™ test within clinical or grant studies Company is searching for an investor or/and a partner for further application and distribution of oncoMonitor™ technology. Plan is to provide the oncoMonitor™ method in cooperation with clinical laboratories.