

How to detect cancer: \$400,000 for the most accurate cancer test



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The development of the Skolkovo resident will increase the accuracy of many types of cancer by one and a half times

ПОДЕЛИТЬСЯ

A resident of the Skolkovo Foundation, JVS Diagnostics Ilc, will receive \$400,000 from the main shareholder to finalize its cancer test and register a test kit in the Russian Federation. This was reported to Forbes correspondent during the "Open Innovations".



The funds were raised through the Canadian UCT Research & Development, the main shareholder of JVS Diagnostics, as Russian companies now have difficulty raising funds due to sanctions. In addition, the current interaction of companies allows each of them to be certified in their country.



The development of the Russian JVS "Oncotest CA-62" is designed to detect epithelial carcinomas (one of the types of cancer) at the earliest stages and monitor their treatment. The test is based on the measurement in the patient's blood of the biomarker N-glycoprotein CA-62, which is formed on the surface of epithelial cells (surface layers of the skin and many body tissues) when they turn into cancerous ones.

At the initial stage of human development, its embryo consists of one type of cell. Subsequently, they are differentiated, i.e. transformed based on the functions inherent in them - become epithelial, muscle, etc. However, tumor cells are similar to low-differentiated cells: they produce the substance CA-62 in large quantities. Healthy mature cells stop producing it, so it is possible to create a highly sensitive test.

According to the company, the sensitivity of their test to the antigen CA-62 in the blood of patients with early stages of cancer is more than 90% with the same level of specificity.

"There are tests on the market to identify more than 30 cancer markers characteristic of various cancer pathologies. Unfortunately, most of these tests have either high sensitivity at low specificity, or vice versa," explained Vyacheslav Kondratiev, President of UCT Research and Development, the advantages of the new product. He explained that if there is a disease, existing tests catch it almost 100% likely, but in half of cases report cancer incorrectly. This causes stress in the patient and negative attitude of oncologists. "Such cancer markers resemble a coin that was thrown up, and it can have both an "eagle" and a "tail," explains Kondratiev. He claims that the sensitivity of the Russian test is more than 90%, which is close to the level of mistakes of the best histologists, who make mistakes in about 5% of cases.

The company notes that tests do not replace histological analysis, but help to detect cancer at an earlier stage, as blood tests are easier to make, which means that it can be carried out more often.

Research has been conducted in cancer centers in Europe, the USA, Canada and Russia and has affected stages I and II of prostate, breast, ovarian cancer, as well as stage III and IV of common cancers: malignant tumors of the lung, stomach and colorectal cancer.

Davis Diagnostics has applied for a patent for the test kit and plans to enter the Russian market in 2019. The cost of tests in Russia is planned at the level of 6,000 rubles, in the West - \$300. Entering the markets of developed countries will be carried out through Canada, through the main shareholder.

The Skolkovo Foundation accepted Davis Diagnostics as a resident in January 2018 and helped organize the laboratory. It is planned to receive a Skolkovo grant from the Russian company.