

RV LAB

ILLUMINIZER

RV Cancer Test
Screening

About RVCancer Test

RVcancer Test is an uncomplicated blood test that can detect various tumors—even tumors for which blood tests are not yet available.

Tumors develop slowly and gradually. From the first tumor cell, to the identification of the tumor itself, there can be a timespan of as much as 10 years. The turning point where a locally growing tumor develops into an invasive, metastasizing cancer is paramount for curability.

It is the objective of RVcancer test to detect a tumor in time before this critical turning point. Such locally growing tumor can often easily be removed in surgery or treated successfully.

Fast Facts

97.5%

Sensitivity

99.5%

Specificity

2.7 ml EDTA blood

Sample material

Flow cytometry

Technology

IVD-CE

Test certificate

Validation data

1011 patients with various kinds of tumors tested

Examples of included tumor entities: pancreas, bladder, bronchi, colon, skin, sweat glands, kidneys, thyroid, neuroblastomas, oesophagus, appendix, liver, lung, etc.

277 cancer patients

Results of study: 270 positive results,
7 negative results
Results in sensitivity of 97.5%

734 healthy control patients

Results of study: 7 positive results,
727 negative results
Results in specificity of 99.5%*

*For the determination of specificity the blood donors, spread throughout all age groups, were classed as healthy. In Germany, 0.5% of the population is diagnosed with cancer every year (incidence). This forms the assumptions that of the 7 positively tested healthy control patients, 3.57 were assessed true positive and 3.42 were assessed false positive.



Every second person develops cancer throughout their lifetime

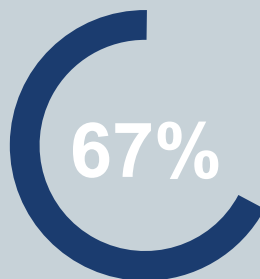
Thus, every person is directly affected by cancer or indirectly through family and friends

Cancer survival rate...

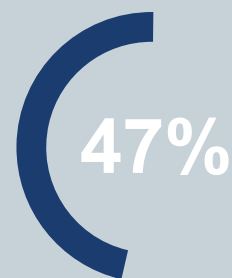
...in stage I



...in stage II



...in stage III

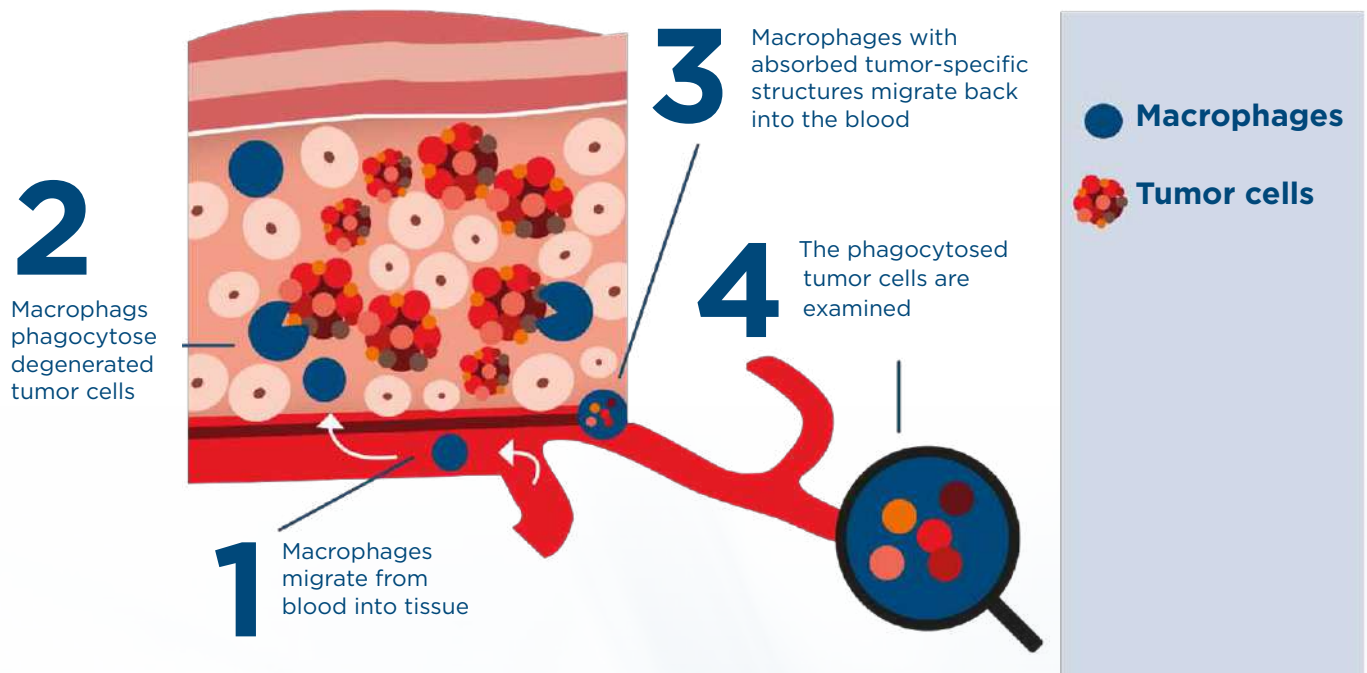


5-year survival rate in percent of cancer patients by stage of the tumor at first diagnosis; average of 7 most common cancer types (bowel, lung, skin, prostate, breast, cervix, ovaries)
Source of statistic: Cancer Research UK, <https://www.cancerresearchuk.org/>, age 15-99, data for 2002-2006

Early detection of tumors significantly increases chance of survival and cure

The turning point from a locally growing tumor to an aggressive and metastasizing cancer is paramount. For best chances of survival and cure it is critical to identify the tumor in an early stage.

EDIM Technology



RV cancer test is based on the innovative EDIM technology. EDIM is an entirely new technology which utilizes mechanisms of the immune system in order to achieve drastically improved sensitivity and specificity data.

EDIM technology examines macrophages to detect antigens that have been phagocytosed by macrophages and thus taken up into the cell. Macrophages constantly patrol through the body to search for cell debris, bacteria, viruses and degenerated cells. If unwanted or degenerated cells are identified, they are eliminated through phagocytosis by the macrophages. These processes are highly accurate and specific and critical to ensure that macrophages do not attack healthy cells.

These mechanisms explain the strong performance data of the RVcancer test. Macrophages only phagocytose cells that have been defined as degenerated resulting in the high specificity of RVcancer test of 99.5%. Additionally, the RVcancer test reaches its high sensitivity of 97.5% through the detection of antigens in macrophages, where they are highly concentrated, instead of diluted in 6 - 7 litres of blood.

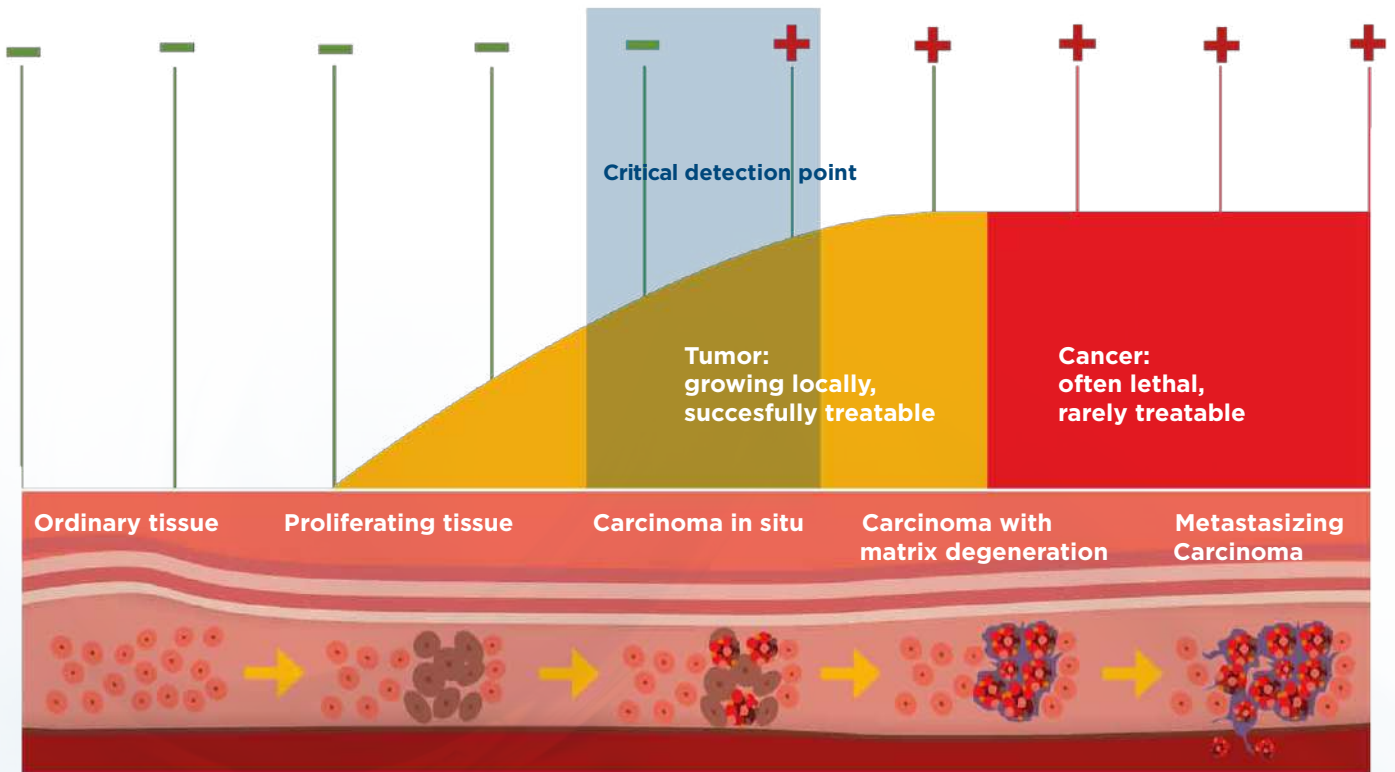
RVLAB uses the biomarkers Apo10 and TKTL1. Numerous studies¹⁾ have shown that these biomarkers detect numerous different tumor entities, because they represent universal biophysical mechanisms in tumor cells. Apo10 is formed in early stages of a tumor, TKTL1 is detectable in advanced stages.

EDIM technology determines a score for each biomarker and both scores are then summed up to form the RVcancer test score. Studies have shown that the summed up score results in best performance data.

¹⁾ See list of studies on page 7

Increased security through annual screening with RVLAB

RV cancer test yearly testing



The test should be performed once a year. Within 12 months early stage tumors usually do not develop into aggressive metastasizing cancers. With yearly check-ups using RVLAB, a possible first positive result will still mean that the last negative result was maximally one year ago. This means any tumor identified will not have had more than a year to develop and become aggressive since the last test and therefore chances are it is still in an early stage. Such early-stage tumors can often simply be removed surgically or treated successfully.

Yearly screening with RVCancer test provides the opportunity to recognize a growing cancer early enough before the critical turning point where action for successful treatment or removal can still be taken.

RVCancer test is:

- Liquid biopsy
- not invasive or otherwise dangerous
- affordable
- universal (tumor entities)



Advantages and risks associated with RVcancer test

Advantages

- Simple, inexpensive blood test
- Suitable for annual screening
- Thus, good chances of detecting tumors while they still grow locally
- Good chances for successful treatment of such locally growing tumors
- screening protects patients from dangerous cancers

Risks

- 1 of 200 results (0.5%) is false positive
- false positive results are a psychological strain for the patient
- sensitivity of 97.5% is very high, but tumors can remain undetected
- New test that is not yet reimbursed by health insurance and has to be paid by the patient



A personal decision for the patient

For the above-mentioned reasons, the use of RVcancer test as a yearly screening for cancer is always a personal decision for the patient. It is important to be well-informed of the risks of false positive and false negative results and to weigh these against the benefits of a cancer screening test.



Other recommended check-ups

RV cancer test cannot and should not replace other recommended screening check-ups. It is therefore advised to perform the RVcancer test in combination with other screening tests at regular intervals.



List of studies

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