LABORATORY REPORT	
Name :	
Gender : Female	Age : 59
TEST : EDIM Test	Blood Collection Date :

PROGENIC BioTech

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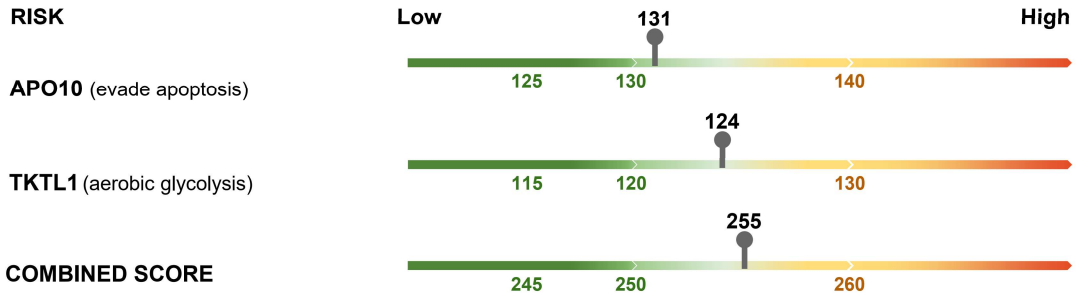
EDIM TEST REPORT

IMMUNE CELL	SPECIMEN	Method	Result	Unit	Reference Range*
%MONOCYTES	EDTA-WB	Flow cytometry	4.97	%	3 - 9
%CD14	EDTA-WB	Flow cytometry	79.68	%	73 - 93
%CD16	EDTA-WB	Flow cytometry	18.67	%	6 - 14

*Average level of healthy people (internal lab data)

BIOMARKER INFORMATION



Relative risk		Suggestion
Low	< 250	Within healthy range, retest in 12 months.
Medium	250 260	High apoptotic cells or inflammation, retest in 6 months.
High	> 260	Risk of malignant tumor. Retest in 3 months.

Consult your doctor for further testing with specific markers and/or PET/CT scan.

TEST DESCRIPTION

EDIM test is a screening (pre-diagnostic) test using epitope detection in activated monocyte method analyzed by flow cytometric technique for early detection solid tumors before they grow invasively and metastasize which is difficult to treat. Finding it early gives a greater chance of recovery. The test detects universal tumor markers "APO10 & TKTL1" presented in 40 types of solid tumors/cancers.

APO10 relates to apoptotic cells (e.g. aging, damaged, dying or transformed cells and tumor cells).

TKTL1 relates to inflammation and a change of energy production in cells.

Combined score (APO10+TKTL1) suggests a risk of malignant tumor status.

EDIM TEST
Interpretation guideline

Apo10 is accumulated in abnormal cells with impaired apoptosis such as tumor and cancer cells.

Apo10 < 130 suggests a ratio of abnormal cells with impaired apoptosis in the green zone.

Apo10 130 - 140 suggests a ratio of abnormal cells with impaired apoptosis in the yellow zone.

Apo10 > 140 suggests a ratio of abnormal cells with impaired apoptosis in the large proliferation level of systemic tissue lesions.

TKTL1 is associated with inflammation, tumor invasiveness, metastasis, and treatment resistance.

TKTL1 < 120 suggests a ratio of cells with typical cancer metabolism in the green zone.

TKTL1 120 - 130 suggests an increased ratio of inflammation or cells with typical cancer metabolism.

TKTL1 > 130 suggests a high ratio of abnormal cells with typical cancer metabolism.

Combined score reflects probability of systemic tissue lesion.

Score < 250 suggests that systemic tissue lesion is within the healthy zone.

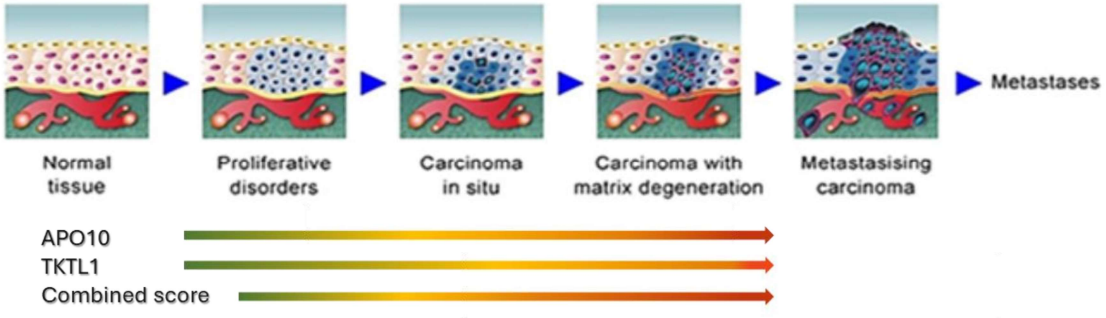
Score 250 - 260 suggests moderate probability of hyperplasia events, large proliferation or benign tumor.

Score > 260 suggests high probability of malignant tumor or cancer.

BIOMARKER & RISK ZONE	GREEN	YELLOW	RED
APO10	< 130	130 - 140	> 140
TKTL1	< 120	120 - 130	> 130
COMBINED SCORE	< 250	250 - 260	> 260

A new method of detecting the presence of biomarkers Apo10 and TKTL1 in immune cells (activated monocytes) known as epitope detection in monocyte (EDIM) technology. The detection of certain biomarkers suggests a possibility of the existence of solid tumors or cancers.

Tumors develop slowly and gradually at the beginning. It can take up to 10 years from the first tumor cells to the detection of a tumor mass. Tracking the transition from a locally growing tumor to an invasively growing and metastases developed eventually is beneficial for cancer prevention and treatment. By testing annually, if the result is positive, the last negative result was only a maximum of one year ago, so that an identified tumor is very likely to be at an early stage and the candidate wins vital time in the fight against cancer.



Significance and interpretation of the single markers

Apo10 is one of the characteristics of tumor cells with abnormal apoptosis and proliferation. This marker becomes measurable in the test when cell apoptosis is disrupted and cells continue to duplicate instead of dying. Following this interpretation, the Apo10 stands for abnormal cell growth and thus for tumor development in a category “size”.

Transketolase-like 1 (**TKTL1**) suggests the change of energy generation from oxidative phosphorylation to fermentative energy release (Warburg effect). The activation of TKTL1 gene in tumor cells leads to a fermentative anaerobic metabolism that involves an increased uptake of glucose and generation of lactic acid. This form of energy production is associated with invasive growth and therefore for metastasizing and resistance against radical- and apoptosis-reducing therapies. Following this interpretation, the TKTL1 marker stands for tumor development in the category “invasiveness or aggressiveness”.

Remark

False negative - EDIM test recognizes tumors with a high hit rate, but not 100%. An annual repetition of the test is also important in order to be able to discover and treat the previously unrecognized tumors.

False positive - False positive result found with an elevated Apo10 could be many small events which imaging cannot reveal evidence of premalignant lesions. If an elevated Apo10 is caused by a large premalignant lesion accompanied by an elevated TKTL1, PET/CT imaging will reveal the lesions. Injury and inflammation can cause an increase of apoptotic cells and a switch of glucose metabolism to support cell repair. Separated events also lead to false positive findings. It is advisable to repeat the test after 3 months. This repetition serves to confirm the positive result and can rule out an accumulation of events that affect the upward test.

Suggestions for abnormal scores

Combined score in the yellow zone is not an indication for cancer, but instead shows an increased likeliness of the current development of a tumor. For candidates resulting in the yellow zone, it is likely to signal that your immune system is fighting off abnormal cells to prevent tumor/cancer forming in the body. Thus, it is necessary to lower cancer risk factors and improve a sense of well-being. To fuel and strengthen the immune system, so it can fight off cancer can be achieved by

i. taking a healthy lifestyle e.g. eat healthy diets, exercise, sleep well, and try to minimize stress
ii. avoiding cancer risk factors e.g. alcoholic drink, smoking etc.

In addition, checking immune status and taking immune boosters would be beneficial but should be taken under the supervision of a physician. EDIM test repetition is recommended in 3 - 6 months for the candidate.

Combined score in the red zone requires repetition within 3 months to confirm the positive and can rule out that an accumulation of events affected the screening test previously.

The guidelines to confirm and localize a potential tumor in positive candidates

A tumor anamnesis guide serves to reveal tumor entities by inquiring about medical history, family medical history, patient life styles and other relevant factors. Further testing suggested as follows;

i. Indirect tests that may provide useful information on health issues.
   e.g. Complete Blood Count, Immune cell status, Liver and kidney function tests, ESR, CRP, calcium, etc.
ii. General tumor markers
   Although general tumor markers are often not suitable for cancer screening, they may provide valuable information in order to confirm and locate a malignant tumor or cancer.
   e.g. CEA, CA 19-9, CA15-3, CA 125, PSA, AFP, NSE, Beta hCG, LDH, etc.
iii. The most accurate and reliable way to confirm and localize a tumor is a PET/CT scan.