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|-----------------------------|------------------------------|---------------------|-------------|---------------------------------|
| Patient NAME Mr John Doe | DATE OF BIRTH 1992-Jun-12 | DISEASE Prostate | STAGE II | Physician NAME Administrator |
| SPECIMEN 20ml Blood | VIAL IDs 1 | | | |

REPORT SUMMARY

CTCs COUNT: Isolated 3.3 cells/ml , SD +/- 0.3 cells

Information

Laboratory Process

Isolation of malignant cells using flow cytometry with which the circulating tumor cells are enumerated and immunophenotyped

Index of circulating cells number

If over limit: Advanced or progression of disease.

If less than limit: Early disease or disease is responding to a treatment plan

| | |
|---|---------------------------------|
| Breast Cancer | < 5 cells / 7.5 ml |
| Prostate Cancer | < 20 cells / ml |
| Sarcoma | < 15 cells / 6.5 ml |
| Colon Cancer | < 5 cells / ml |
| Lung Cancer | (Lc=0, r=0.99):< 10 cells / ml |
| All cancer types other than those listed above should be < 5 cells / ml | |

Disclaimers

*This test will NOT DETECT cancers of the brain or other cancers that have been “encapsulated” by the body, not releasing circulating tumor or stem cells (CTC, CSC) into the blood stream or if any of these cells are dormant. We still recommend the use of biopsy, blood markers and/or various scans with this test when cancer is suspected or known to exist. No test is 100% accurate

*The methodology has a sensitivity of 86,2% and specificity of 83,9%

Markers

| Category | Name | Results |
|--|----------|---------------------------|
| Significant CD45 positive cells (Hematologic origin cells) | Nanog | Positive |
| | OKT-4 | Negative |
| | Sox-2 | Dim |
| | CD15 | Positive |
| CD45 negative cells (non Hematologic origin) | Nanog | Positive (25% of all CTC) |
| | OKT-4 | Negative |
| | Sox-2 | Dim |
| | PSMA | Positive (50% of all CTC) |
| | PSA | Negative |
| | EpCam | Dim |
| | CD133 | Positive (75% of all CTC) |
| | c-MET | Negative |
| | CD31 | Dim |
| | PanCK | Positive (50% of all CTC) |
| | EpCAm+ve | 2.7 cells/ml |

Index of markers

| | |
|-------------------------------------|--|
| CD44, CD133, Sox-2*, OKT-4*, Nanog* | Tumor stem cell marker |
| c-MET* | Membrane antigen that regulates the mesenchymal to epithelial transition |
| CD34* | Hematological stem cell and blast cell marker, epithelioid |
| CD45 | Hematologic origin cell |
| BCR-ABL, CD30, CD15 | Hematologic malignancy marker |
| CD19 (CD45 negative cells) | Lung neuroendocrine malignancy |
| CD19 (CD45 positive cells) | Hematological malignancy |
| CD31 | Endothelial cell membrane antigen |
| CD63 | Melanoma cell marker |
| CD99 | Sarcoma marker |
| EpCam | Epithelial origin marker |
| MUC-1 | Breast cancer antigen |
| PSMA | Prostate specific cancer stem cell membrane antigen |
| VHL mut | Renal carcinoma marker |
| panCK | Epithelial origin cell marker |

*Significant markers

Sincerely,

Dr. Ioannis Papisotiriou MD, PhD, SCym

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