

### Patient Information

<b>Patient Name:</b>	M**** K*****	
<b>Patient ID#:</b>	10503	
<b>Address:</b>	n/a	
<b>Date of Birth:</b>	03/03/1976	<b>Sex:</b> F
<b>Diagnosis:</b>	<b>Breast Cancer</b>	

### Client Information

<b>Ordering Physician:</b>	
<b>Order Location:</b>	
<b>Address:</b>	
<b>Account Number:</b>	TR500100
<b>Phone:</b>	
<b>Fax:</b>	

### Specimen Information

<b>Accession#:</b>	19844	<b>Collected Date:</b>	03/20/2017 12:00 PM
<b>Client Acqn#:</b>		<b>Received Date/Time:</b>	03/23/2017 10:00 AM
<b>Specimen Type:</b>	Peripheral Blood	<b>Reported Date/Time:</b>	03/29/2017 11:14 AM
<b>Volume(mL):</b>	30	<b>Test(s) Ordered:</b>	TARGET SELECTOR™

### Results

**Liquid Biopsy (Circulating Tumor Cell): DETECTED**

### Supporting Data

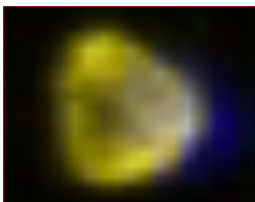
#### Enumeration of Circulating Tumor Cells by OncoCEE™: 4

Number of Cytokeratin+ CTCs	0
Number of Cytokeratin- CTCs	4
CD45 negative Cells of Unknown Significance (CUS)	0

\*CTC is defined as CD45-, DAPI+, CK+ or CK- cell.

This assay does not determine malignancy. Results should be interpreted in conjunction with all other pertinent clinical, pathological and radiological findings. Clinical investigators believe that presence of circulating tumor cells (CTCs) in blood is an indicator of metastasis. Metastasis is a complex multistep process that includes epithelial-mesenchymal transition (EMT), in which tumor cells are characterized by loss of cell adhesion, repression of E-cadherin, acquisition of mesenchymal markers, increased cell motility, and invasiveness.(1) The cells of unknown significance (CUS) may represent damaged circulating tumor cells.

CTC Image



### Method: Target Selector™ by Biocept

Positive and negative controls were run and reacted in an appropriate manner. Target Selector(TM) uses antibody based capture and detection to analyze circulating tumor cells (CTCs) in a micro-fluidic channel. This test was developed and its performance characteristics determined by Biocept Laboratories. It has not been cleared or approved by the US Food & Drug Administration (FDA). This test is used for clinical purposes. This Laboratory is certified by the Clinical Laboratory Improvement Amendments of 1988 (CLIA-88) to perform high complexity testing.

#### References:

Thiery, J.P. Epithelial-Mesenchymal Transitions in Tumour Progression. Nature Reviews Cancer 2, 442-454 (2002). Efficient capture of circulating tumor cells with a novel immunocytochemical microfluidic device. Biomicrofluidics 5, 034119 (2011). Detection of EpCAM-Negative and Cytokeratin-Negative Circulating Tumor Cells in Peripheral Blood. Journal of Oncology, Volume 2011(2011). A Novel Platform for Detection of CK+ and CK- CTCs. Cancer Discovery December 2011 1:580-586.

Electronically Signed by: 03/29/2017  
Dr. Curtis McGuyer, MD, Pathologist

(Blue=DAPI, Yellow=SA)