

**DIAGNOSIS DEFINED**

**CTC**  
**Metastatic Breast Cancer**  
**Case Study 1**

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# Circulating Tumor Cell (CTC) Test

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## Key Benefit of Using the CTC Test

- Elevated CTC count prompted an early PET/CT scan that confirmed disease progression

# Patient Information

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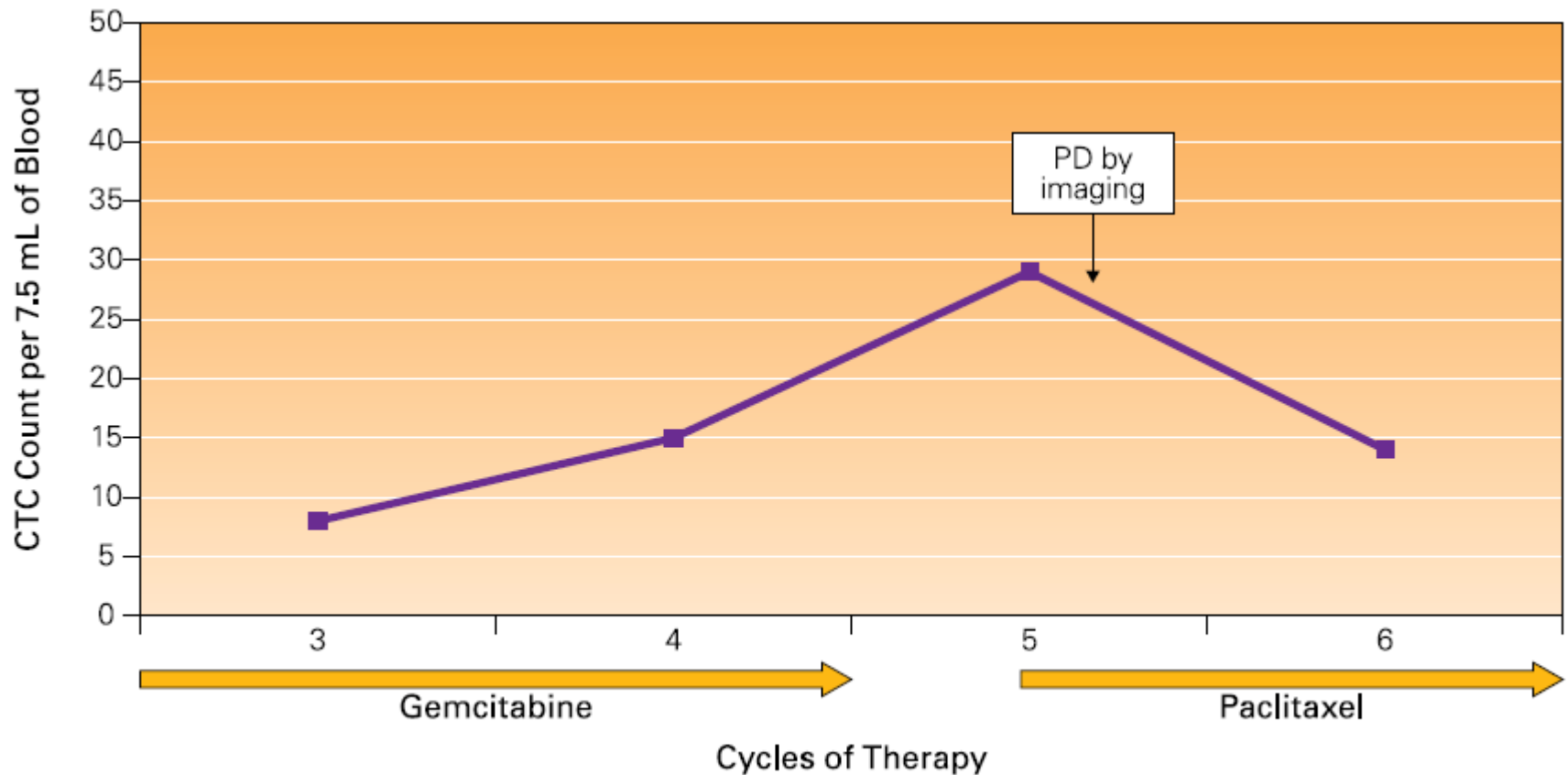
- Age: 57
- Diagnosis: Metastatic Breast Cancer (MBC)
- Line of Therapy: 4<sup>th</sup>
- Current Therapy: Paclitaxel
- Time with Metastasis: 23 months
- ER/PR & HER2 Status: ER negative/PR negative/HER2 negative
- Sites of Metastasis: Brain, axilla, liver, bone, lung

# Case Study Snapshot

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- CTC levels were monitored in this patient on a monthly basis.
- Subsequent consecutive elevated CTC counts after the 4th cycle of treatment prompted an early PET/CT scan which confirmed progression of the disease
- Patient was switched to a new therapy and has stable disease

# Patient Longitudinal Graph



PD-Progressive Disease by PET/CT.

The clinical cutoff of CTC per 7.5 mL of blood for MBC patients is  $\geq 5$ .

# Background on the Patient

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- Patient presented to the emergency room with a headache in May 2006.
- Subsequent evaluation revealed her to have metastatic breast cancer to her brain and bones.
- Following whole brain radiation and six cycles of TAC (paclitaxel, doxorubicin, and carboplatin chemotherapy combination), she was without evidence of disease.

# Background on the Patient

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- Following the completion of therapy, her disease free interval lasted 6 months, when she was noted to have progressive disease in the liver.
- We initiated therapy with capecitabine and again achieved a complete response after three cycles.
- Unfortunately, she again progressed by the 6th cycle.

# Background on the Patient

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- Moving forward, we measured CTC on a monthly basis and PET/CT scans on a bimonthly basis.
- On the fourth month of therapy, her CTC count showed substantial elevation greater than the clinical cutoff of 5 CTC per 7.5 mL of blood, though the patient remained asymptomatic.
- There was another increase in the CTC count in her fifth month of therapy.

# Background on the Patient

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- Because of her sustained elevated CTC count, we obtained a PET/CT scan earlier than we had previously planned.
- This scan demonstrated progression in the liver and lung; her therapy was changed to paclitaxel, on which she continues to do well with a partial response and stable disease.

# Value of CTC in the Treatment of this MBC Patient

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- Sustained elevated CTC counts, as determined by serial monitoring of this patient, prompted an early PET/CT scan, which demonstrated progression.
- We were, therefore, able to make a change in treatment prior to a clinical manifestation of progression.

## For *In Vitro* Diagnostic Use

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- The Circulating Tumor Cell test is intended for the enumeration of circulating tumor cells (CTC) of epithelial origin (CD45-, EpCAM+, and cytokeratins 8, 18+, and/or 19+) in whole blood.
- The presence of CTC in the peripheral blood, as detected by the CellSearch™ Circulating Tumor Cell test, is associated with decreased progression-free survival and decreased overall survival in patients treated for metastatic breast, colorectal or prostate cancer.

## For *In Vitro* Diagnostic Use

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- For further information on intended use, warnings, and limitations, please refer to the CellSearch™ CTC Test Instructions for Use, or visit [www.veridex.com](http://www.veridex.com).
- CTC results should be used in conjunction with all clinical information derived from diagnostic test (e.g., imaging or laboratory tests), physical examination and complete medical history, in accordance with appropriate management procedures.

## For *In Vitro* Diagnostic Use

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- This case study is for educational purposes only and does not constitute professional medical advice.
  - The information provided in this case study should not be relied upon as the basis for making patient management decisions.
  - This case study is not intended to show that any line of therapy is any more or less effective than any other or no therapy.
- \* The content for this presentation was provided by Veridex, LLC  
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