Clinical Data in Over 1,500 Patients Across All Stages of Breast Cancer with Target Selector™
Circulating Tumor Cell Technology

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Background

The detection and molecular characterization of circulating tumor cells (CTCs) in patients with breast cancer affords the ability to profile and monitor patients in real time for progression, risk stratification, recurrence, identification of potentially actionable therapeutic targets, and monitoring of treatment efficacy and emergence of resistance mechanisms. To harness the promise of CTC analysis a highly sensitive, robust, reproducible and clinically validated technology is required. Information acquired from a single tissue biopsy has temporal and spatial limitations; additionally, in patients with progressive/metastatic disease, a single biopsy may be non-informative or in some instances difficult to perform and might fail to reflect inherent tumoral heterogeneity. CTCs on the other hand can provide a contemporaneous landscape of all cancerous lesions (primary and metastases) as well as the opportunity to track the evolving tumor genetic mechanisms.

Methods

Peripheral blood from 2,757 patients across all stages of breast cancer and treatment time points (pre-treatment, post-treatment, on treatment) were collected in CEE-Sure™ blood collection tubes and analyzed. CTC capture, staining, and FISH were performed in the microchannel as previously described. Briefly, the CEE-Sure™ Microchannels were stained with pan-cytokeratin cocktail, CD45, pan-CTC stain, and DAPI.

Results

CEE-Sure™ Blood Collection Tubes

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