

The Problem: Cancer is a highly individualized disease. Targeted therapeutic drug treatment is the preferred approach. Unfortunately, the response rate is only 20-30%, there are significant side effects and costs can exceed \$50K/year for one patient. Currently, there is no standard procedure for optimal treatment selection.

The Solution: Comprehensive Cancer Cells Diagnostics, LLC (CCCD) has developed the **Drug Response Indicator Test (DRIT)** to assist physicians in designing personalized treatment regimens for patients fighting breast, lung, colon, gastric, esophageal and pancreatic cancers. These six cancers total 55% of the annual U.S. mortality rate.

In one test, the **DRIT** provides a reliable and detailed profile of a patient's tumor response for up to seven (7) FDA-approved anticancer drugs. The **DRIT** allows physicians to **choose the appropriate effective drug treatments for individual patients** resulting in optimal use of the time window for treatment, reduction of side effects and significant financial savings.

The Technology: The **Drug Response Indicator Test** is a proprietary platform technology combining immunofluorescence and computerized microscopy to measure the overall drug sensitivity and resistance of the tumor. The data correlates to drug response of the individual patient's tumor and predicts duration of effective drug treatment.

The Company: CCC Diagnostics, LLC was formed in 2004 by a core group of former Johns Hopkins University researchers who are leaders in biophysics, oncology, cell biology and imaging.

The DRIT Unique Advantage:

- Only Assay Test that simultaneously evaluates tumor response for up to 7 FDA approved anticancer drugs
- Detailed statistical analysis of the probability of tumor resistance and sensitivity to a specific drug treatment
- Standardization of fluorescent measurement to minimize inter-laboratory & inter-observer variation
- Direct imaging of specified targets within a tumor tissue section and quantification of the complexity of the tumor
- Adaptable to different cancers, new chemotherapeutic drugs & additional biomarkers

Progress: Current clinical verification progress of DRIT in retrospective correlation studies with Cancer Center of University of Maryland, Baltimore, MD: Walter Reed Army Medical Center and Harbor Hospital (MedStar System) Baltimore, MD.

1. Late stage **Breast Cancer** - Correlation accuracy of DRIT with the clinical response

- 61 patients and 110 treatment interventions
- Analysis based on (No. of accurate predictions/no. of treatment interventions)
- Monotherapy: 75/84=89%; Doublet Therapy: 25/26=96%; Combined Results: 100/110=90%;
- Positive correlation accuracy 88/97=90%: (tumors sensitive to treatment)
- Negative correlation accuracy, 12/13=92% (tumors resistant to treatment)
- Estrogen Receptor status - DRIT offers higher % correlation accuracy (93%) than commercial kits (74%)

2. **DRIT** – Recent Presentations

- San Antonio Breast Cancer Conference, 2007
- AACR-NCI-EORTC International Conference, San Francisco, 2007
- ICACT Conference, Paris, France, 2008

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