Cynvenio Biosystems: changing the way doctors diagnose and treat cancer.

"The right drug for the right patient at the right time."

Over 1.5 million people are diagnosed with cancer annually in the US, and nearly 570,000 die as a result of the disease. The national Institute of Health also estimates overall costs of cancer in 2010 at $263.8 billion of which $102.8 billion is for direct medical costs. One of the most difficult aspects of cancer diagnosis and treatment is the fact that cancer is a highly individualized disease with every tumor having distinct characteristics. The preferred approach, targeted therapeutic drug treatment, is difficult because there is no standard procedure for selecting the optimal chemotherapy regimen. Currently there are two ways to obtain patients’ cancer cells - the biological sample necessary to perform molecular analysis: a traditional tissue biopsy which is expensive, carries risks and requires a pathologist’s interpretation; or a LiquidBiopsy® blood draw, which is a new way to retrieve circulating tumor cells (CTCs) from whole blood. LiquidBiopsy is virtually pain free and can be repeated frequently to establish trends in patient response to treatments.

Cynvenio Biosystems was founded in 2007 to address this problem and make personalized medicine a reality in the field of cancer diagnosis and treatment. Their fully automated Liquid Biopsy system is a highly-efficient platform that extracts and analyzes circulating tumor cells in under three hours. This allows physicians to analyze and respond to a patient’s unique physiology in order to individualize their treatment, including matching them with the best targeted therapy and tracking their response to treatment in real time.

Key Benefits of Cynvenio's Technology:

- Improved diagnoses and earlier detection of disease
- Better selection of individualized patient therapies
- Improved drug development through a better understanding of genetic variations
- Timely identification of disease recurrence
- Substantially lower cost of healthcare by shifting treatment to early stage and prevention.

In addition to developing a system that meets the needs of patients in real-time, Cynvenio has also created over 26 new jobs for California and attracted in excess $10 million in investment. Headquartered in Westlake, CA, Cynvenio is a shining example of how companies founded on UCSB technologies are leading their industries and changing peoples' lives for the better. Cynvenio's LiquidBiopsy technology is currently available as a platform for deployment in customer research laboratories or as a CLIA lab service offering CTC cell isolation, enumeration and molecular analysis from Cynvenio’s lab in California.

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