



The CEE Solution
Personalized Medicine from a Liquid Biopsy

Forward-Looking Statements

This presentation contains, and any accompanying oral presentation would no doubt contain, forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995, regarding us (Biocept), and our business. Forward-looking statements include all statements that are not historical facts and generally can be identified by terms such as anticipates, believes, could, estimates, expects, intends, may, plans, potential, predicts, projects, should, will, would, or the negative of those terms and similar expressions.

Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. For details about these risks, please see our SEC filings.

All forward looking statements contained in this presentation speak only as of the date hereof, and except as required by law, we assume no obligation to update these forward-looking statements whether as a result of any new information, future events, changed circumstances or otherwise.

FWP Statement

This presentation highlights basic information about us and the offering to which this communication relates. Because it is a summary, it does not contain all of the information that you should consider before investing in our common stock.

We have filed a registration statement (including a prospectus, which currently is in preliminary form) with the US Securities and Exchange Commission for the offering to which this presentation relates. The registration statement has not yet become effective. Before you invest, you should read the preliminary prospectus in the registration statement (including the risk factors described therein) and other documents we have filed with the SEC for more complete information about us and the offering.

You may access these documents for free by visiting EDGAR on the SEC website at <http://www.sec.gov>

The preliminary prospectus, dated January 10, 2014, is available on the SEC Web site at <http://www.sec.gov/Archives/edgar/data/1044378/000119312514007841/d567346ds1a.htm>

Alternatively, we or any underwriter participating in the offering will arrange to send you the preliminary prospectus and, when available, the final prospectus and/or any supplements thereto if you contact Aegis Capital Corp., Prospectus Department, 810 Seventh Avenue, 18th Floor, New York, NY 10019, telephone: 212-813-1010, e-mail: prospectus@aegiscap.com

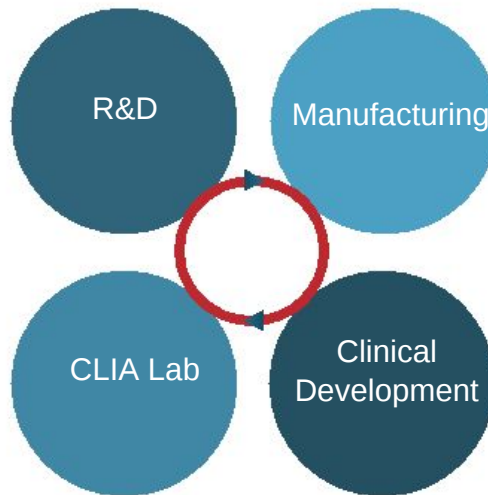
Initial Public Offering Summary

Issuer	Biocept, Inc.
Exchange/Ticker	NASDAQ Capital Market / BIOC
Shares Offered	1,818,181 (100% Primary)
Price Range	\$10.00 - \$12.00
Use of Proceeds	<ul style="list-style-type: none">• Sales and Marketing for test offerings• Research and Development• Automation and scale up
Book Running Mgr. Co-managers	Aegis Capital Corporation Feltl & Company, MLV & Company

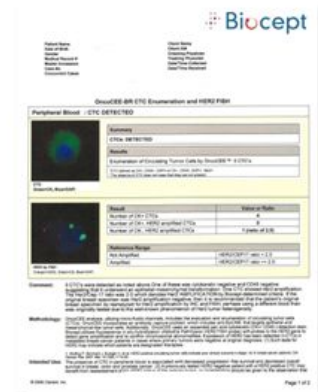
Business Overview



*CLIA facility in
San Diego, CA*



*R&D, test kits
manufactured and
samples analyzed*



*Genomic test results
sent to physicians*

Investment Highlights

Commercial stage cancer diagnostics company with ground-breaking technology platform utilizing a simple blood test

- OncoCEE™: measures circulating tumor cells (CTCs)
- OncoCEE-BR™: first commercialized test for breast cancer
- CEE-Selector™: platform expansion for mutation analysis
- Robust test pipeline focused on solid tumor genomic diagnostics including lung, breast, colon, prostate and melanoma
- Established, certified and scalable CLIA lab
- Clear path to market penetration
- Established research collaborations and strategic partnerships

Biocept Executive Team

David Hale <i>Executive Chairman</i>	<ul style="list-style-type: none"> Chairman and CEO of Hale BioPharma Ventures with over 35 years in life science companies Current or past chairman of Santarus, Conatus, Micromet (acquired by Amgen), SkinMedica (acquired by Allergan) CEO of Hybritech (acquired by Lilly), Gensia (acquired by Teva) 	 
Michael Nall <i>President and CEO</i>	<ul style="list-style-type: none"> More than 25 years in healthcare commercial operations 13 years in cancer diagnostics and genomics Most recently GM N. American Sales and Marketing for Clariant, a GE Healthcare Company 	 
Bill Kachioff <i>SVP, Finance and CFO</i>	<ul style="list-style-type: none"> More than 20 years life sciences experience 14 years of experience in public company finance Abbott Labs, Cutera, Coulter Pharmaceutical, Althea, Vivus Diverse finance and operations management experience 	  
Lyle Arnold, Ph.D. <i>SVP, R&D and CSO</i>	<ul style="list-style-type: none"> Senior R&D Leadership at Gen-Probe, Incyte Genomics, Genta Founder/ Co-founder Oasis Biosciences, Molecular Biosystems, Aegea Biotechnologies Former faculty member, UCSD School of Medicine and member, UCSD Cancer Center 39 issued US and 140 issued and pending patents worldwide 	 
Farideh Bischoff, Ph.D. <i>VP Translational Research</i>	<ul style="list-style-type: none"> Former Associate Professor and member, Cancer Center at Baylor College of Medicine Postdoc at MD Anderson and Baylor College of Medicine More than 130 peer reviewed papers and book chapters 	 

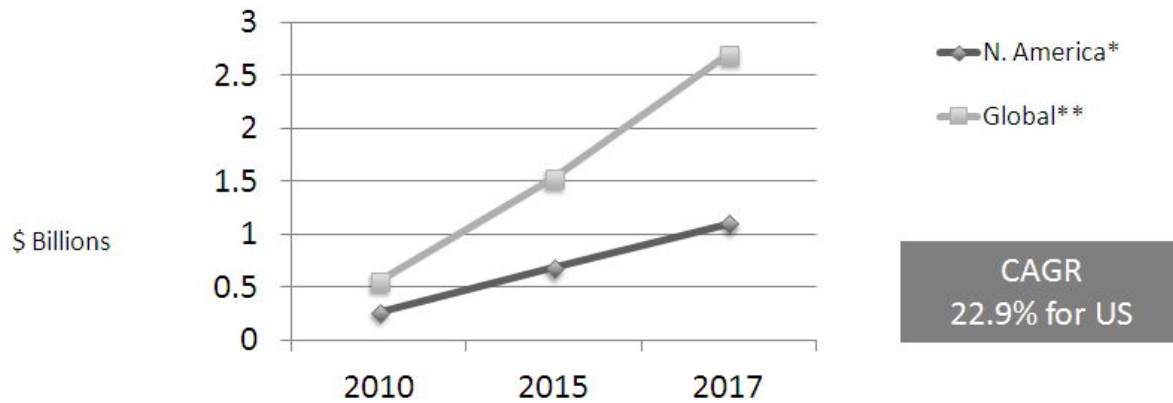
US Market Opportunity



Cancer Type	New Cases/ Year	Living with Cancer	Deaths/ Year
Breast	232,340	2,829,041	39,620
Prostate	238,590	2,617,682	29,720
Lung	228,190	399,431	159,480
Colorectal	142,820	1,154,481	50,830
Melanoma	76,690	921,780	9,480
Total	918,630	7,922,415	289,130

* Incidence, prevalence, and deaths data provided by National Cancer Institute: <http://seer.cancer.gov/statfacts/>

Molecular Cancer Testing Market



Market Characteristics:

- Increased reliance on molecular diagnostics for treatment decisions
 - Expanding use of targeted therapies
 - Greater sophistication of oncology diagnostics
- Limited by need for tumor tissue

*GEN Magazine, Bold Prediction for Future Cancer Tests

*Frost and Sullivan Research 2011

**Jain Pharma Biotech June 2011

Limitations of Tissue Biopsy

Cancer is a heterogeneous disease

- Molecular properties differ within a tumor
- Primary tumor biopsy may not reflect current disease condition
- Therapy causes changes in tumor cells

Biopsy is invasive

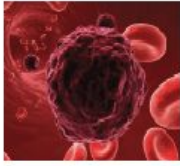
- May not be feasible based on patient condition or tumor accessibility
- Impractical for periodic monitoring for progression / recurrence

Biopsy tissue is limited

- Greater demand due to molecular profiling
- Surgery is costly

Liquid Biopsy Addresses Limitations in Standard of Care

New Molecular Paradigm Liquid Biopsy



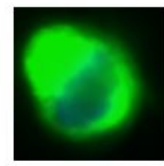
Solid tumors shed CTCs and ctDNA into blood



CTCs and ctDNA travel via bloodstream



CTCs & ctDNA analyzed for patient treatment decisions



Breast cancer CTC

- CTCs – Circulating Tumor Cells, ctDNA – Circulating tumor DNA
- CTCs and ctDNA: demonstrated surrogate for tumor tissue biopsy
- Can be captured and characterized for biomarkers, similar to tissue
- Liquid biopsy repeatable throughout treatment, particularly when tissue unavailable
- 66% of researchers say analysis of CTCs will be standard of care in the next 4 years*

*CTC industry overview Hanson and Wade 2013

OncoCEE-BR™

Commercially Available Breast Cancer Diagnostic



Step 1-
Identify breast
cancer



Step 2-
Confirm with
a biopsy



Step 3-
Additional
testing,
including CTC
testing



Step 4-
Surgery and
tissue analysis



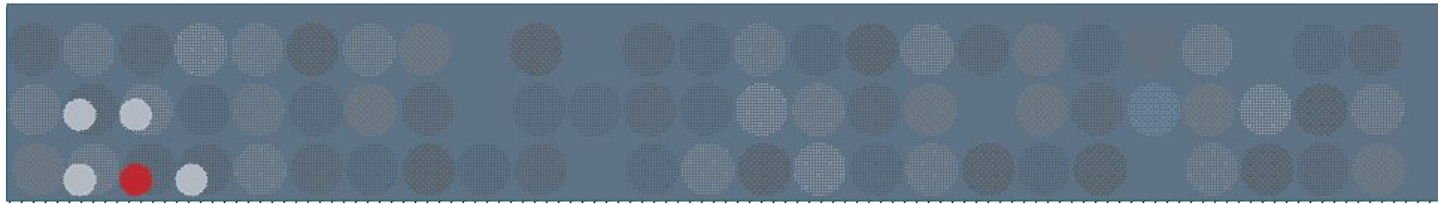
Step 5-
Treatment
decisions
informed by
CTC testing



Step 6-
Monitoring:
additional
CTC testing

OncoCEE-BR™ a simple blood test

- Confirm tumor characterization (HER2, ER, PR)
- Reduce false negatives *identify more patients for therapy*
- Monitor patient response to therapy
- Detect metastasis, recurrence and biomarker conversion
- Define tumor status to aid therapy selection when tissue not available



CEE Technology Overview

Farideh Bischoff, PhD

VP Translational Medicine

The OncoCEEPTM Platform Solution

Simple blood test for prognosis, therapy selection and monitoring for cancer patients

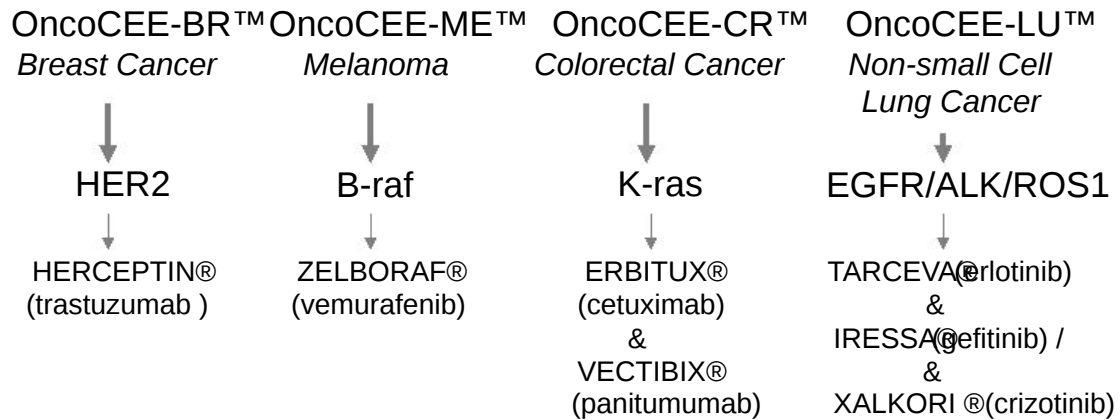
- Isolate and analyze CTCs in Biocept CLIA lab
- Significantly reduced “no result” or “non-reportable” cases due to greater sensitivity and broader capture
- On demand, current genomic status of tumor
- Monitoring for drug efficacy and tumor recurrence
- Enables improved patient outcomes at reduced cost of care
- Can be adapted for wide range of cancer types

Personalized Biomarker Analysis

OncoCEE™ Personalized Genomic Diagnostics



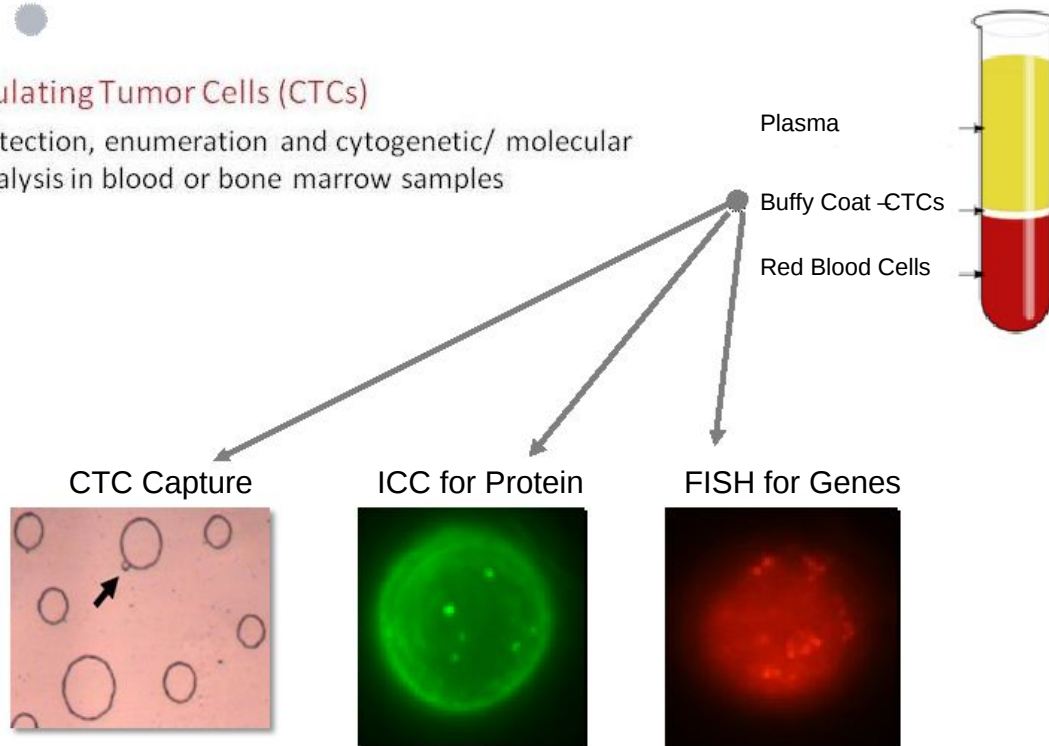
The Right Therapy for the Right Patient at the Right Time



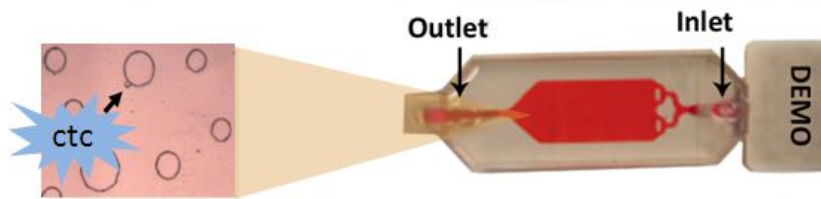
OncoCEE CTC Testing

Circulating Tumor Cells (CTCs)

- Detection, enumeration and cytogenetic/ molecular analysis in blood or bone marrow samples



CEE® Microfluidic Channel



- Patented arrangement of posts optimized for ultra-sensitive rare cell capture
- Mounted on glass slide and transparent, enabling direct microscopic visualization of captured CTCs
- Multiple assays can be performed on captured CTCs
- Cells can be released for further analysis, including CEE-Selector mutation analysis, and for next generation sequencing at Biocept with industry partners

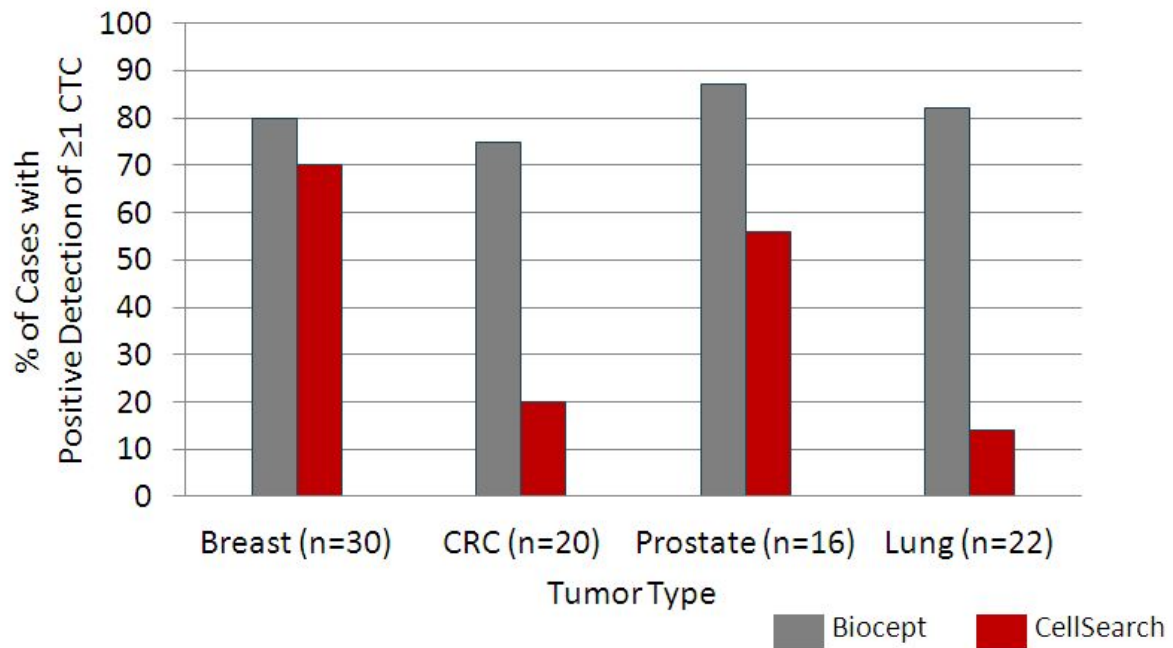
OncoCEE™

A New Standard in Oncology Diagnostics

OncoCEE Platform	CellSearch (J&J) Platform
<ul style="list-style-type: none">✓ Proprietary CTC antibody capture cocktail✓ Not limited to “traditional” epithelial CTCs✓ Captures more CTCs	<ul style="list-style-type: none">• Single capture antibody• Limited to “traditional” epithelial CTCs
<ul style="list-style-type: none">✓ Immediate post-capture biomarker analysis	<ul style="list-style-type: none">• No biomarker analysis offered
<ul style="list-style-type: none">✓ Developing tests applicable to broad range of solid tumors	<ul style="list-style-type: none">• Only available for Breast, Colon, Prostate

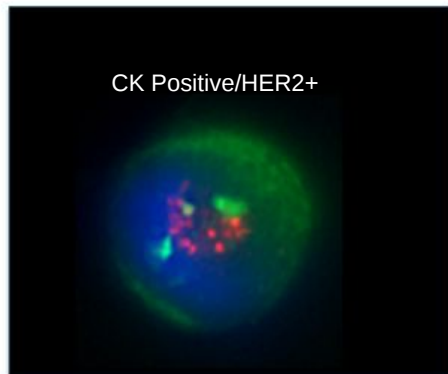
Published CTC Enumeration Comparison*

Traditional Definition of CTCs (CK+, CD45-, DAPI+)

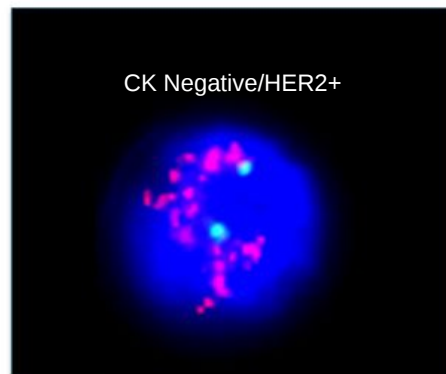


*Pecot et al, Cancer Discovery, Dec. 2011

Biocept Technology Detects More CTCs

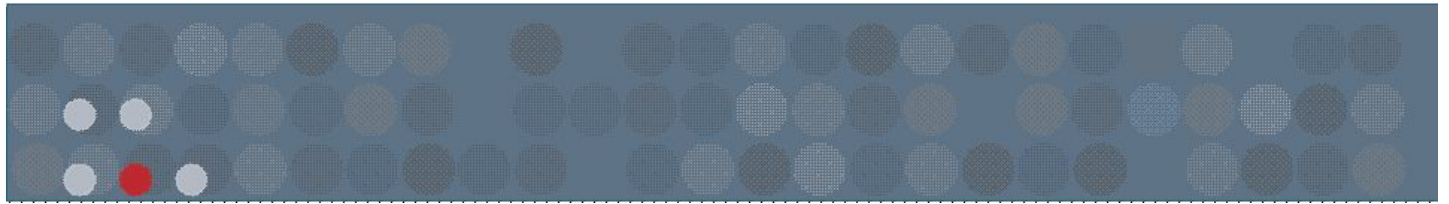


- Traditional definition of CTC
- Biocept captures more of these due to antibody cocktail and microfluidic channel design



- Frequently, HER2 positive tumor cells are CK negative*
- CK negative cells missed by competitors
- Biocept captures these types of cells

* Mayer et al. Cancer Genetics, 2011

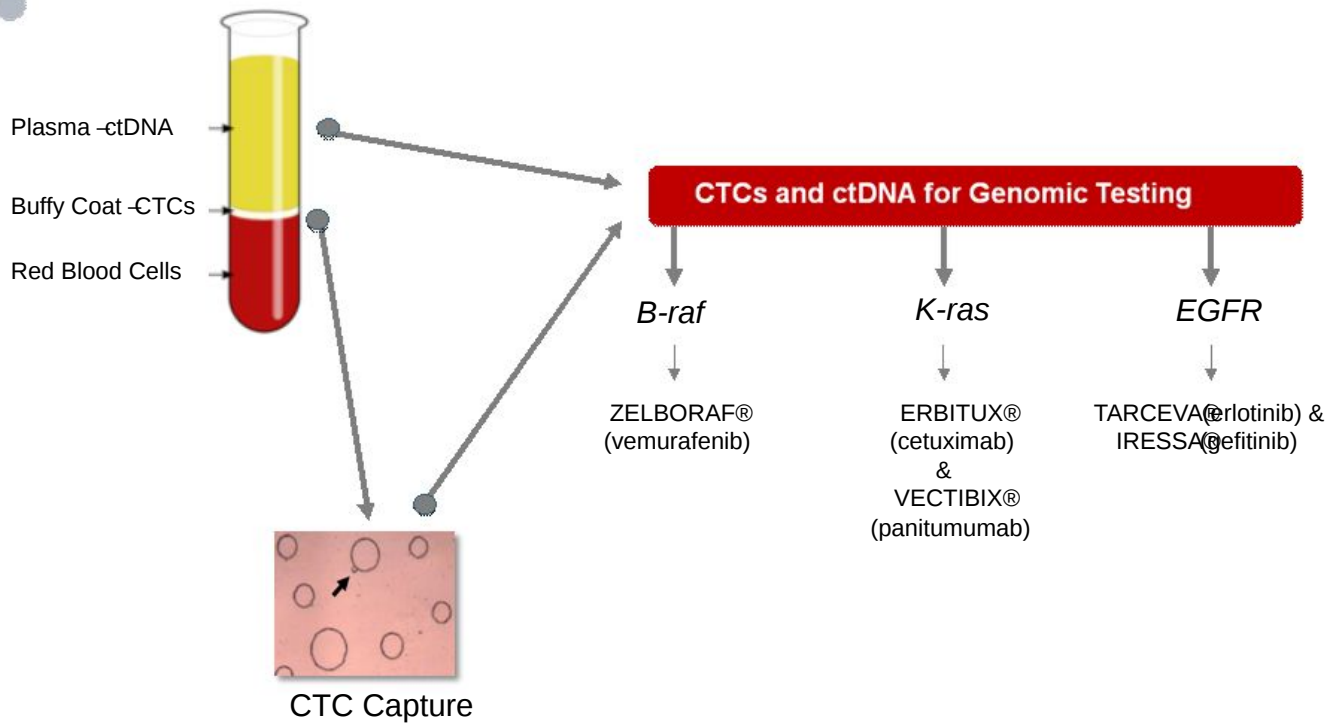


CEE Selector Overview

Lyle Arnold, PhD

Chief Scientific Officer

CEE-Selector Platform (*Launch Expected 2014*)



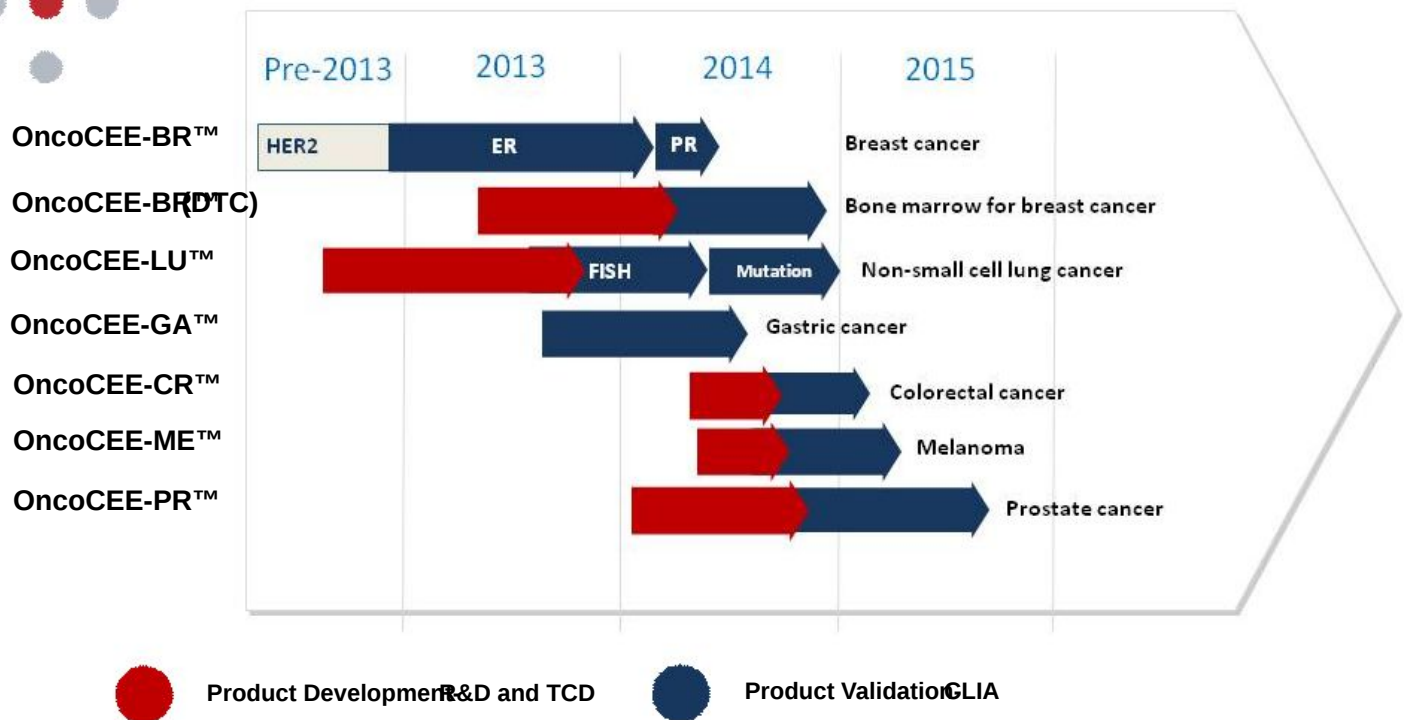
Advantages of CEE-SelectorTM Platform

*Mutation determination sensitivity 10-100x better than competing platforms**

- Allows for both CTC and ctDNA analysis
- Detects 1 mutation out of >10,000 normal DNA
- Works with various nucleic acid targets (DNA and RNA)
- Compatible with sequencing and PCR instruments
- Multiplexing reduces costs and enhances reimbursement
- Potential applications in all stages of cancer

* Biocept internal data

Product Development Pipeline



OncoCEE^{PM} Product Profiles

Product	Tumor Type	OncoCEE TM CTC	CEE-Selector TM
OncoCEE-BR TM (launched)	Breast	Enumeration of CTCs , HER2, ER, PR	Currently no clinically actionable mutations identified
OncoCEE-GA TM	Gastric	Enumeration of CTCs, HER2	Currently no clinically actionable mutations identified
OncoCEE-LU TM	Lung	Enumeration of CTCs, ALK, ROS1	EGFR, K-ras, B-raf mutations
OncoCEE-CR TM	Colon	Enumeration of CTCs, EGFR	K-ras, B-raf mutations
OncoCEE-PR TM	Prostate	Enumeration of CTCs, AR, and PTEN deletion (blood or bone marrow)	Currently no clinically actionable mutations identified
OncoCEE-ME TM	Melanoma	Enumeration of CTCs	B-raf and N-ras mutations

Established CLIA Facility



- CLIA inspected and certified
- CAP accredited for high complexity testing
- Manufacturing and Lab Operations in place
- Scalable for future growth
- Laboratory Information System with client portal
- Adjacent clinical development and research facility

Targeted Commercialization Strategy

- Raise awareness of the value of CTCs and ctDNA
- Drive OncoCEE-BR adoption
 - Market directly to oncologists
 - Develop key opinion leader speakers
- Build relationships with patient advocacy groups
- Publish studies with major cancer centers
- Participate in medical meetings / symposia
- Deepen payor relationships and expand reimbursement coverage
- Expand strategic partnerships with pharma and biotech for personalized diagnostics

Driving Adoption for Growth

3 year sales team plan



12 Month Commercial Team Build

- Head of sales and marketing
- Regionally based sales team
- Sales team for Pharma
- Managed care expert
- Internal marketing
- Leverage partner sales forces

Reimbursement Strategy

- Utilize established CPT codes
 - Medicare covers analysis component of testing
 - Select private payors cover CTC capture, enumeration and analysis
 - Seeking Medicare coverage for capture and enumeration
- Diversify revenue streams
 - Grow clinical trial business and other fee for service channels
 - Establish new revenue sources through partnerships
- Perform health economics studies against tissue biopsy

Clinical Utility Studies



Dana-Farber

- Metastatic Breast Cancer patients with HER2 negative primary biopsy
- CTC HER2 positive patients, as detected by OncoCEE-BR, placed on Herceptin
- Sponsored by Genentech
- Results expected in 2014



MD Anderson

- Recently diagnosed breast cancer patients
- 18.8% of patients with HER2 negative primary biopsy found to be HER2 positive by OncoCEE-BR
- Published in Cancer Medicine – April 2013



Other studies

- Four additional peer reviewed published studies validating technology
- Additional pending studies with collaborators
- Planned study in Non Small Cell Lung Cancer

Intellectual Property

Biocept Developed Solutions

CEE-Sure™
Stability
Transport Tube
Patent pending



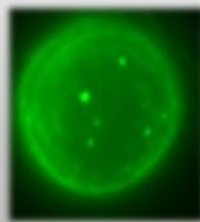
*One US and associated
foreign patents pending*

Patented
CEE®
Microfluidic Channel



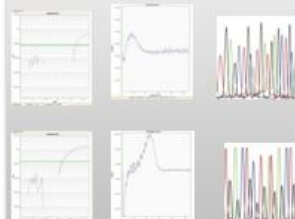
*Two issued US patents and
two issued foreign patents;
multiple pending US and
foreign patents*

OncoCEE™
Chemistry: Antibody
Cocktail
Patent pending



*Two US and associated
foreign patents pending for
capture; one US and
associated foreign patents
pending for detection*

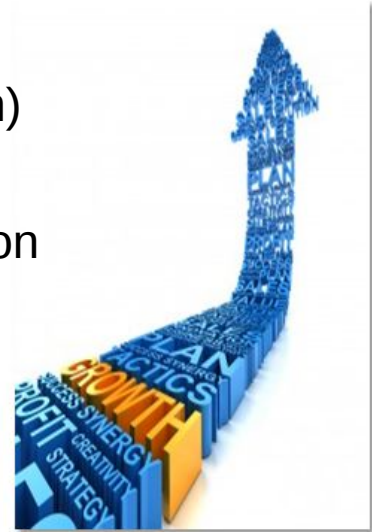
CEE-Selector™
Mutation Analysis
Patent pending



*One US and associated
foreign patents pending*

Use of Proceeds to Drive Growth

- Sales and Marketing investment to commercialize test offerings (~\$5 Million)
- Research and Development, including clinical utility studies, future test validation and enhancements (~\$5 million)
- Operational Efficiency: automation and scale up (~\$3 million)
- General and Corporate Purposes



Pre-IPO Capital Structure

	Shares Outstanding (in thousands)	%
Common Stock ¹	2,460	72%
Equity Awards ²	579	17%
Warrants ³	<u>398</u>	<u>11%</u>
Fully Diluted Shares Outstanding	3,437	100%

¹ Assuming conversion of all preferred stock and convertible debt to common stock.

² Average option strike price of \$5.13

³ Strike price is IPO price, assuming \$11

Comparables



Market cap \$664M



Market cap \$219M



Sold to GE Healthcare \$576M



Market cap \$335M



Market Cap \$907M



Sold to Novartis - \$470M

* As of January 10, 2014

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The CEE Solution
Personalized Medicine from a Liquid Biopsy