

# Corporate Overview

July 2018

NASDAQ: BIOC  
[www.biocept.com](http://www.biocept.com)

**Biocept**  
Completing the Answer™

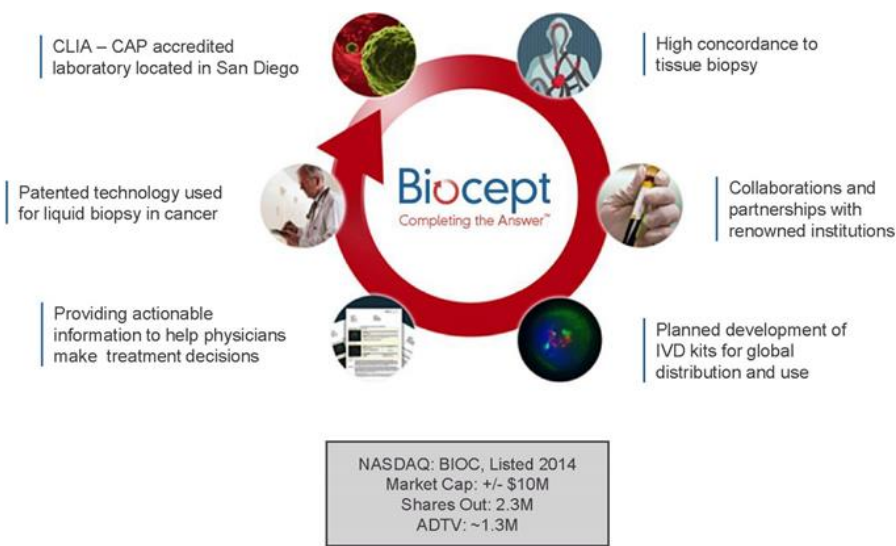
# Forward-Looking Statements

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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 Biocept, Inc. 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 that 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. This presentation does not constitute an offer to sell securities including but not limited to within any jurisdiction in which the sale of such securities would be unlawful. The information set forth herein has not been reviewed, approved or disapproved, nor has the accuracy or adequacy of the information set forth herein been passed upon, by the SEC or any state securities administrator.

The Company has filed a Registration Statement on Form S-1 (File No. 333-225147) (including a preliminary prospectus) with the SEC for the offering for which this presentation relates. The Registration Statement has not yet become effective. Before you invest, you should read the preliminary prospectus contained in the Company's Registration Statement, any amendments or supplements thereto and other documents the Company has filed with the SEC for more complete information about the Company and this offering. The preliminary prospectus and the Registration Statement, as may be amended or supplemented from time to time, may be accessed through the SEC's website at [www.sec.gov](http://www.sec.gov). Alternatively, the Company or any dealer participating in the offering will arrange to send you the preliminary prospectus and any amendments or supplements thereto if you request it through Maxim Group LLC, 405 Lexington Ave, New York, NY 10174, Attn: Syndicate Department or by Tel: (212) 895-3745. This presentation contains statistics and other data that has been obtained from or compiled from information made available by third party service providers. The Company has not independently verified such statistics or data. The information presented in this presentation is as of July 10, 2018 unless indicated otherwise.



# Investment Highlights

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## Liquid Biopsy Market Estimated at \$10+ Billion

- Potential to improve cancer patient outcomes
- Advantages of a simple blood test vs. tissue biopsy (convenience, repeatability, feasibility benefits, reduced cost and fewer complications)

## Test Menu Focused Only on Actionable Information

- Unique CTC and ctDNA testing
- Enables detection and monitoring of clinically-validated biomarkers listed in NCCN Guidelines

## Industry-Leading Test Performance

- Multiple clinical studies, publications, and presentations support Biocept's proprietary Target Selector™ platform

## Opportunities for Value-Creating Strategic Partnerships

- Potential for U.S. and Global Transactions
- Commercial and Technology Partnerships

## Strong Revenue Growth and Health Plan Reimbursement

- 4-year Revenue CAGR of 236%\*
- Indicative of platform validation and market potential
- Cost-effective liquid biopsy testing

## Evolution Toward Distributed Business Model

- Actively growing Pathology Partnership (ie TC-PC) business
- Target Selector Kits for both CTC and ctDNA platforms

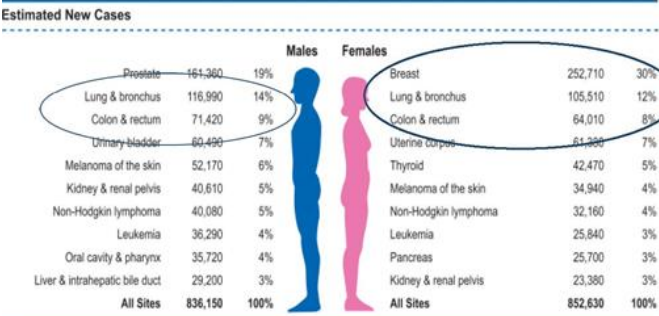
\*FY2014 through FY2017 and includes conversion to accrual revenue recognition in 1Q 2017

# Anticipated Milestones Next 12 Months

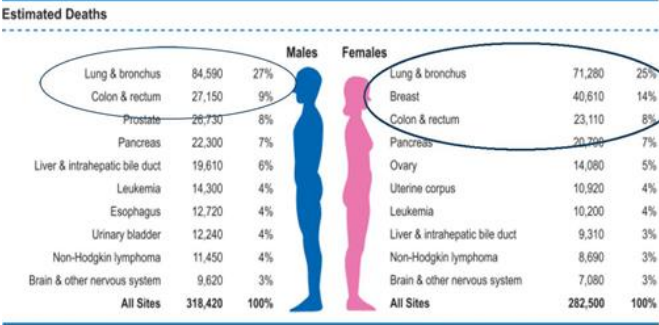
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- ✓ Increase market penetration into emerging liquid biopsy segment
- ✓ Enter into strategic commercial and technology partnerships – Global and U.S.
- ✓ Sign additional Empower TC agreements with pathologists and major hospitals
- ✓ Validate Oncomine™ NGS Panel; Become Thermo Fisher Liquid Biopsy Center of Excellence
- ✓ Grow sales of blood collection tubes under VWR marketing and distribution agreement
- ✓ Sign new third-party health plan agreements and expand relationship with BCBS
- ✓ Publish clinical case studies
- ✓ Launch additional oncology biomarker assays

# Patients Diagnosed with Cancer in the US



- » Over 1.68 million new cancer cases in 2017
- » Breast, lung, and CRC account for >36% of all new cases of cancer



- » More than 610,000 people will die of cancer in 2017
- » Breast, lung, and CRC account for >41% of all cancer related deaths

» Source: American Cancer Society 2017 – SEER Statistics

# Our Team has a Deep & Successful History of Commercializing Innovation

<b>Michael Nall</b> President & CEO	<ul style="list-style-type: none"><li>• 25+ years in healthcare sales, marketing and commercial operations</li><li>• 16 years in cancer diagnostics and genomics</li><li>• Most recently General Manager N. American Sales and Marketing for Clariant — a GE Healthcare Company</li></ul>
<b>Tim Kennedy</b> CFO & SVP of Operations	<ul style="list-style-type: none"><li>• 30+ years of financial experience, 25+ years in the clinical diagnostics industry</li><li>• Instrumental in 2.1B restructuring of Millennium Health, a privately-held urine drug lab</li><li>• Numerous senior management positions – helped transform PLUS Diagnostics into largest independent U.S pathology lab; merged National Health Labs and Roche Biomedical Labs to form LabCorp</li></ul>
<b>Lyle Arnold, Ph.D.</b> SVP, R&D & CSO	<ul style="list-style-type: none"><li>• Senior R&amp;D leadership at Gen-Probe, Incyte Genomics, Genta</li><li>• Founder/ Co-founder Oasis Biosciences, Molecular Biosystems, Aegea Biotechnologies</li><li>• Former faculty member, UCSD School of Medicine and member, UCSD Cancer Center</li><li>• 50 issued US and more than 160 issued and pending patents worldwide</li></ul>
<b>Veena Singh, MD</b> SVP & Sr. Medical Director	<ul style="list-style-type: none"><li>• Board certified AP/CP and Molecular Pathology, UCSD, Cedars Sinai trained</li><li>• Numerous publications, serves on CAP committees</li><li>• Most recently Medical Director – bioTheranostics</li></ul>
<b>Michael Terry</b> SVP, Commercial Operations	<ul style="list-style-type: none"><li>• 25+ years commercial leadership experience in molecular Dx and med-tech companies</li><li>• Former GE Healthcare executive, certified in Six Sigma</li><li>• Recent experience in liquid biopsy field; EVP commercial operations at both Sequenom and TruGene</li></ul>



# Biocept is Guided by a Board of Visionaries & Scientific Influencers

## Board of Directors

<b>David F. Hale</b> Chairman	<b>Bruce E. Gerhardt, CPA</b> Director, Member Audit Committee
<b>M. Faye Wilson, CPA, MBA</b> Lead Independent Director, Chair Audit Committee, Member Compensation Committee, Member Nominating and Governance Committee	<b>Ivor Royston, MD</b> Director, Chair – Science and Technology Committee, Member Nominating and Governance Committee
<b>Marsha A. Chandler, PhD</b> Director, Chair - Nominating and Governance Committee, Member Science and Technology Committee	<b>Bruce A. Huebner</b> Director, Chair – Compensation Committee, Member – Science and Technology Committee, Member – Audit Committee
<b>Michael W. Nall</b> Director, President & CEO	

## Clinical Advisory Board

<b>Lee Schwartzberg, MD</b> Chief, Division of Hematology Oncology; Professor of Medicine, University of Tennessee	<b>David Carbone, MD</b> Director, James Thoracic Center, James Cancer Hospital and Solove Research Institute, Ohio State University
<b>Jenny Chang, MD</b> Director, Methodist Hospital Cancer Center, Houston, Texas	<b>Michael Kosty, MD</b> Scripps Clinic Torrey Pines, San Diego California
<b>Edgardo Santos, MD</b> Medical Director, Lynn Cancer Institute, Boca Raton, Florida	<b>Melissa Johnson, MD</b> Medical Oncologist, Nashville, Tennessee
<b>Fred Hirsch, MD, PhD</b> CEO, Int'l Assoc.of Study of Lung Cancer; Professor of Medicine, University of Colorado	<b>Santosh Kesari, MD, PhD</b> Chair, Dept. of Translational Neuro-oncology and Neurotherapeutics, John Wayne Cancer Institute, Santa Monica California
<b>David Berz, MD, PhD</b> Beverly Hills Cancer Center Chief Medical Officer – Valkyrie Pharmaceuticals Beverly Hills, CA	

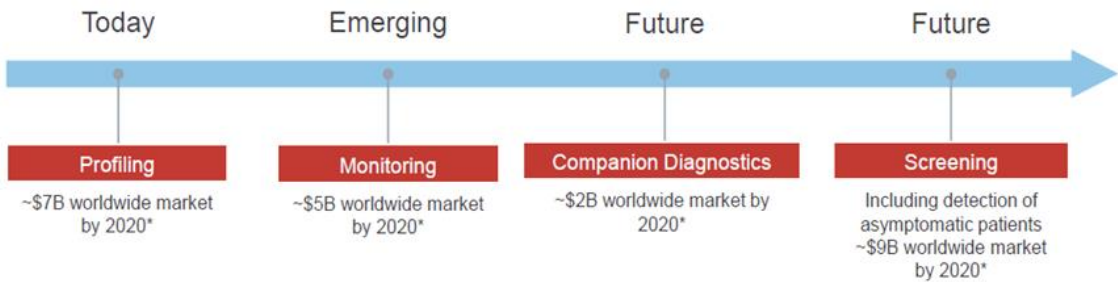
## Scientific Advisory Board

<b>David Rimm, MD, PhD</b> Professor of Pathology and Medicine (Oncology) Yale University School of Medicine	<b>Marileila Garcia, PhD</b> Professor, University of Colorado Division of Medical Oncology
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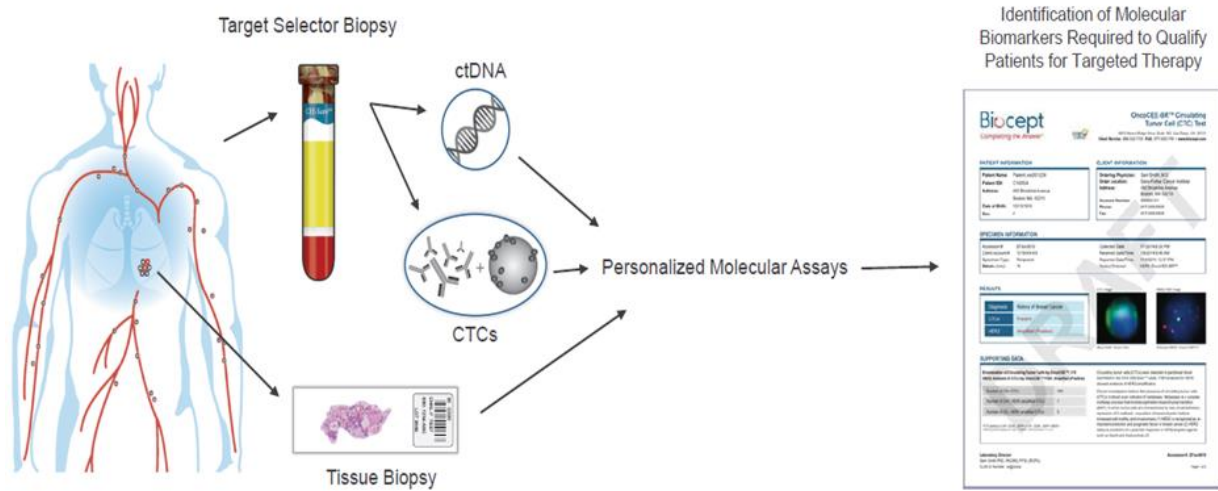


## Liquid Biopsy market segments

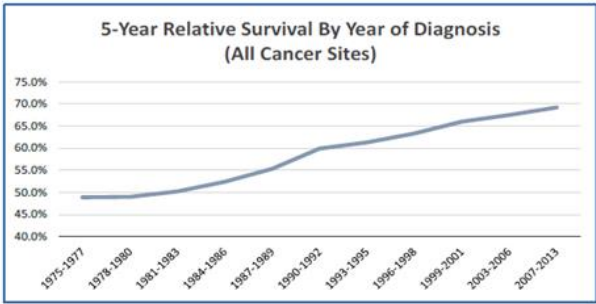
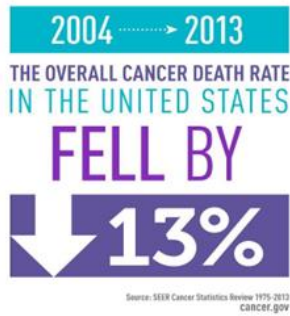


*"We sized the [global] market opportunity for liquid biopsy as \$22B by 2020..."*  
*\*J.P. Morgan Industry Report - May 27, 2015*

## The Standard of Care in Personalized Treatment

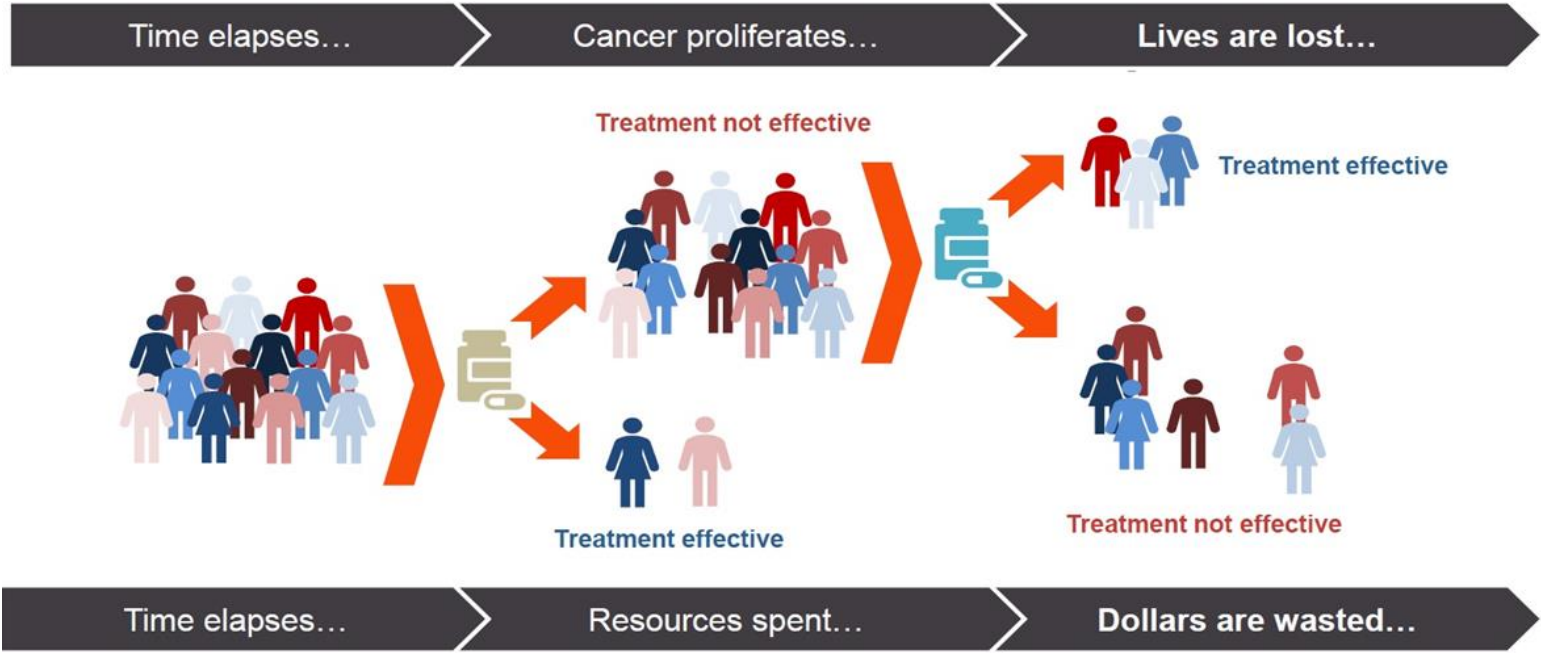


# Personalized Treatment ➡ Improved Outcomes





\*NCI Cancer Statistics [https://seer.cancer.gov/csr/1975\\_2014/browse\\_csr.php?sectionSEL=2&pageSEL=sect\\_02\\_table.08.html](https://seer.cancer.gov/csr/1975_2014/browse_csr.php?sectionSEL=2&pageSEL=sect_02_table.08.html)

# Matching Cancer Patients to Personalized Therapy Remains Challenging



# Legacy Cancer Diagnostic Tools Do Not Tell The Complete Story

	Advantages	Disadvantages	Cost
 <p><b>Traditional Surgical Biopsy</b></p>	<ul style="list-style-type: none"> <li>▪ Required for diagnosis</li> <li>▪ Considered standard of care</li> <li>▪ Source of cancer (histology)</li> <li>▪ Results for all known oncogenic alterations</li> <li>▪ Analysis of whole cells</li> </ul>	<ul style="list-style-type: none"> <li>▪ Invasive – not appropriate for monitoring</li> <li>▪ Risk of adverse events</li> <li>▪ Expensive</li> <li>▪ Often inadequate for complete molecular profiling</li> <li>▪ Only 57% of tissue biopsies have sufficient tissue for analysis</li> <li>▪ Can take as much as 30 days for results</li> <li>▪ Heterogeneity of tumor can lead to false negatives</li> <li>▪ Does not account for evolving cancer over time – snapshot view</li> </ul>	<p><b>\$15,000 to \$45,000</b></p>
 <p><b>NGS Based Liquid Biopsy Panels</b></p>	<ul style="list-style-type: none"> <li>▪ Real time</li> <li>▪ Non-invasive – appropriate for profiling</li> <li>▪ Faster availability of results</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cannot deliver information on all biomarkers</li> <li>▪ Varying sensitivity and specificity by biomarker</li> <li>▪ Expensive</li> <li>▪ Non-clinically actionable information</li> <li>▪ One size fits all approach – not individualized</li> <li>▪ Based solely on DNA fragments – ctDNA</li> <li>▪ Target market – medical oncology only</li> </ul>	<p><b>\$6,800</b></p>

# Biocept Solves the Problem by Combining the Best of Both Worlds

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## Target Selector Biopsy – Completing the Answer™



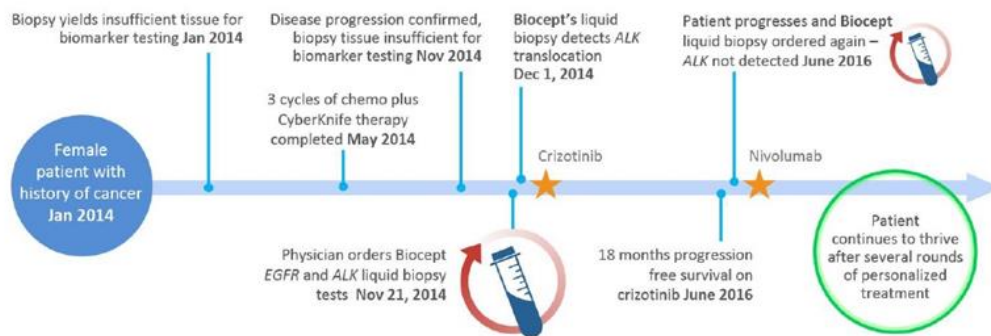
### The Biocept Advantage

- ✓ Combined results from whole cells (CTCs) and ctDNA from a single blood sample
  - ✓ Enables results for all types of oncogenic alterations including SNVs, Indels, Fusions, CNVs, and Protein Expression
- ✓ Turnaround in 7 days or less enabling targeted therapy to move into frontline
- ✓ Individually validated all alterations – delivers high concordance with tissue
- ✓ Marketed as single tests or profiles enables personalized results for each patient
- ✓ Value – pay for individual and/or actionable alterations only
- ✓ Reimbursement advantages
- ✓ Addresses challenges of tumor heterogeneity
- ✓ Real time results versus static snapshots
- ✓ Non-invasive - appropriate for both profiling and monitoring

✓ Cost = \$1,200

# Patient Case Study – Biocept’s Testing Provides “The Gift of Time”

Biocept’s Target Selector Enables Personalized Treatment for Non-Small Cell Lung Cancer (NSCLC) Patient After Tissue Biopsy Proves Inadequate



# Highly Relevant Test Menu:

Industry Leading Assays Trusted by Clinicians, Patients, and Payers

## 15 Actionable Biomarkers Found in the Guidelines

Cancer	Target Selector CTC	Target Selector ctDNA
Breast	HER2*, ER*, FGFR1, AR, PDL1, PR*	ESR1 mutations
Gastric	HER2*, FGFR1	
Lung	ALK*, ROS1*, MET*, FGFR1, PDL1*, RET	EGFR*, KRAS*, BRAF* mutations, ALK mutations
Colon	EGFR amplification	KRAS*, BRAF*, NRAS* mutations
Prostate	AR, ARv7	
Melanoma		BRAF*, NRAS* mutations

\* In NCCN guidelines

- Biomarkers currently available for clinical use
- Biomarkers under development

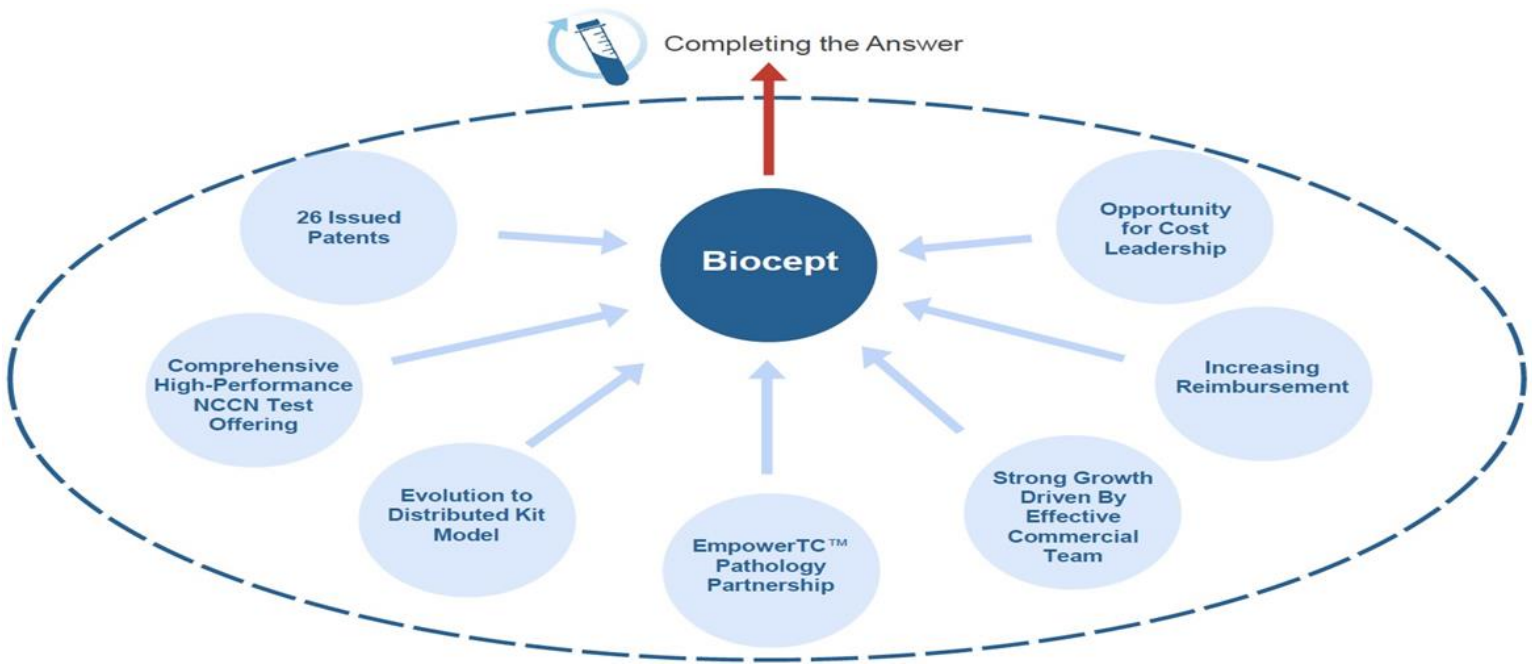


Controlled Validation Concordance (standard criteria) – 99.3%

CTC Biomarkers + ctDNA Analytical Validation	CTC Biomarkers + ctDNA Analytical Combined
Data Size (N)	4641
Accuracy	4610/4641 (99.3%)
Sensitivity	99.2%
Specificity	99.6%

Concordance to Tissue (real-world experience) - 87%

CTC Biomarkers + ctDNA Clinical Validation	CTC Biomarkers + ctDNA Clinical Combined
Data Size (N)	407
Accuracy	354/407 (87%)
Sensitivity	74%
Specificity	94.6%



# Differentiated Product Offerings

Company	CTCs / Whole Cells	ctDNA / DNA Fragments	Proprietary Collection Tube	Pathology Partnership Strategy
Genomic Health (GHDX)		✓		
Epic Sciences (private)	✓			
Foundation Medicine (FMI)		✓		
Guardant Health (private)		✓		
Biocept (BIOC)	✓	✓	✓	✓

## Biocept Advantage

- Leading company commercializing both CTCs and ctDNA from a single blood sample
- Demonstrated high concordance with tissue
- Assays for most appropriate tumor target from blood for each biomarker
- Blood more likely to contain intact cells and is less fragmented than other fluids such as urine
- Broad, international patent coverage
- Cost and reimbursement advantages

**Family 1**

MicroChannel for CTC Capture

- Patent 1 – Recovery of rare cells using microchannel
- Patent 2 – Device for Cell Separation

**1) Issued in US with 11 international counterparts**

- China – Korea – China - France – Germany – Great Britain  
Italy – Spain – Hong Kong – Japan – pending Aus. – Can.

**2) Issued in US**

2025

**Family 2**

CTC Capture With Antibody Cocktail

- Patent 1 – Devices & Methods of Cell Capture Analysis
- Patent 2 – Method and Reagents for Signal Amplification

**1) Issued in US with 8 international counterparts**

- Aus. – France – Germany – Great Britain – Spain – Italy – Hong Kong - Japan – pending in Can - China

**2) Issued in US, Japan, and China - 4 international cases pending**

- Canada – Europe - Hong Kong –Korea

2030

**Family 3**

Collection Tube

Patent 1 – Use of DU for Anti-Clumping of Biological Sample

**1) Issued in US**

2031

**Family 4**

Switch Blockers for ctDNA Analysis

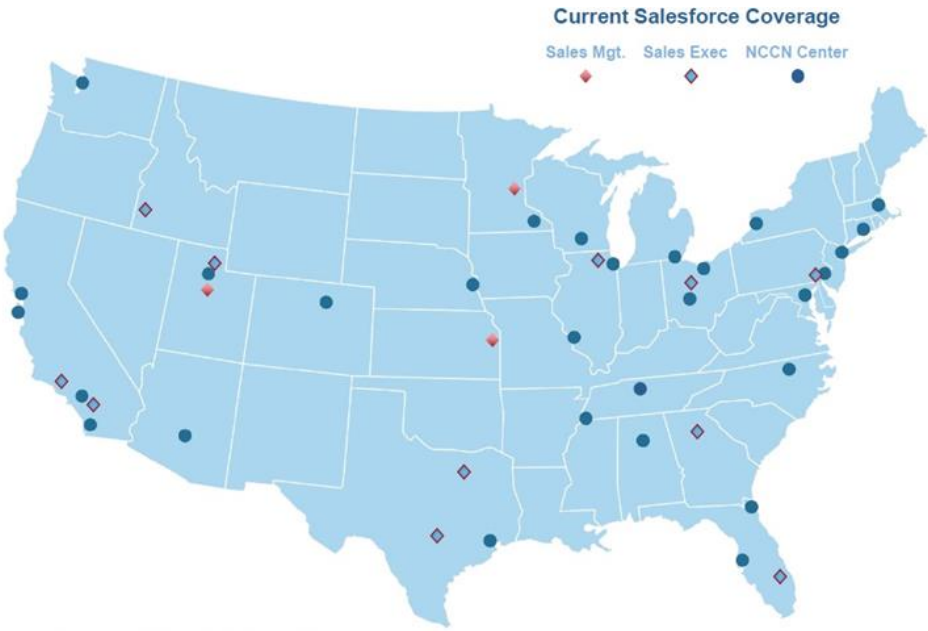
Patent 1 – Methods for Detecting Nucleic Acid Sequence Variants

**1) Issued in US, Australia, and China with 4 international counterparts**

Europe – Japan – Hong Kong – Korea – Brazil

2033

Extensive IP portfolio expected to allow Biocept to monetize IP through out-licensing and moving to distributed model based on developing diagnostic kits



**Customer Focus**

- Target select cancer center regions
- Focus on community oncologists (80% of cancer care)
- Partner with integrated delivery networks and local pathologists

**Commercial team**

- Experienced leadership
- Regionally based team with significant oncology sales experience
- Managed care expertise


# Commercial Adoption

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- Executing on strategy to contract with major cancer treatment institutions, GPOs, and distributors
- Increasing patient access
- Accelerating adoption of liquid biopsy
- Leveraging sales and marketing resources by increasing awareness of Biocept's liquid biopsy platform within large health systems
- Roll out new tests and service offerings including molecular pathology partnering model (ie —TC-PC||)

# “AND” Campaign Debut at ASCO 2017



Target Selector™  
Liquid Biopsy

Increasing Targeted Therapies via Liquid Biopsy

When treating cancer patients, it's no longer an either/or world.

At Biocept, we're all about the **AND...**

It's time to consider molecular information from both tissue **AND** blood.

Biocept is the industry's first to offer cancer biomarker testing using both ctDNA **AND** CTCs.

Focused on approved NCCN biomarkers, Biocept's tests include targeted therapy **AND** immunotherapy markers.

Visit Booth #25160 to learn about Biocept's Liquid Biopsy Technology.  
[www.biocept.com](http://www.biocept.com)



Completing the Answer™

Empower TC™  
Tech-Only Liquid Biopsy

Empowering Local Pathologists  
With World-Class Diagnostics

The first in the industry to offer cancer biomarker testing using both ctDNA AND CTCs.

Biocept offers specialized tests for approved NCCN biomarkers, including targeted therapy AND immunotherapy markers.

ctDNA

- BRAF
- EGFR
- KRAS
- NRAS

CTC

- ALK
- AR
- ER
- FGFR1
- HER2
- MET
- PD-L1
- PR
- RET
- ROS1
- CTC Count



**Our World-Class Lab. Your Expertise.**

Partner with Biocept for **Tech-Only Services** that combine our leading **CTC Testing Technology** with **Your Local Knowledge**.

ALK Gene Rearrangement by FISH: DETECTED (1 CTC/16 mL)  
Case Study: Biocept's Liquid Biopsy Enables Personalized Treatment for Non-Small Cell Lung Cancer (NSCLC) Patient After Tissue Biopsy Proves Inadequate.

Customer Service 888-332-7729 • FAX 877-300-1761

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www.biocept.com



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- Seek to Validate Thermo Fisher Oncomine™ NGS Panel in Biocept's CLIA-certified laboratory
- Once validated, Biocept to be designated as Thermo Fisher Liquid Biopsy —Center of Excellence|| for oncology-focused liquid biopsy initiatives with the companies jointly pursuing various commercial opportunities
- Initially target the pharmaceutical industry to provide diagnostic testing services for drug development, clinical trial support, and companion diagnostics (CDx)
- Collaboration also intends to evaluate the feasibility of developing best-in-class products based on the integration of Biocept's Target Selector™ technology with Thermo Fisher's Ion Torrent™ NGS platform and Oncomine™ liquid biopsy-based NGS panels.

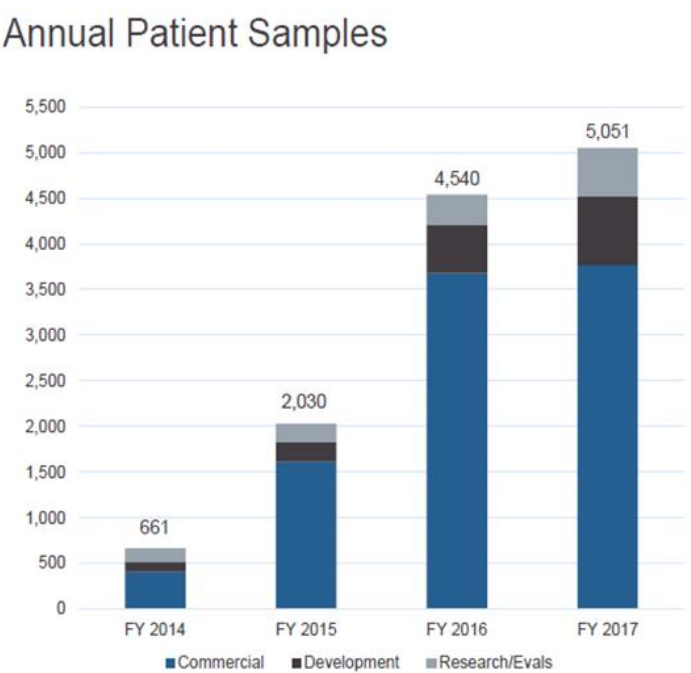
# Health Plan Access Continues to Expand with Third Party Contracts

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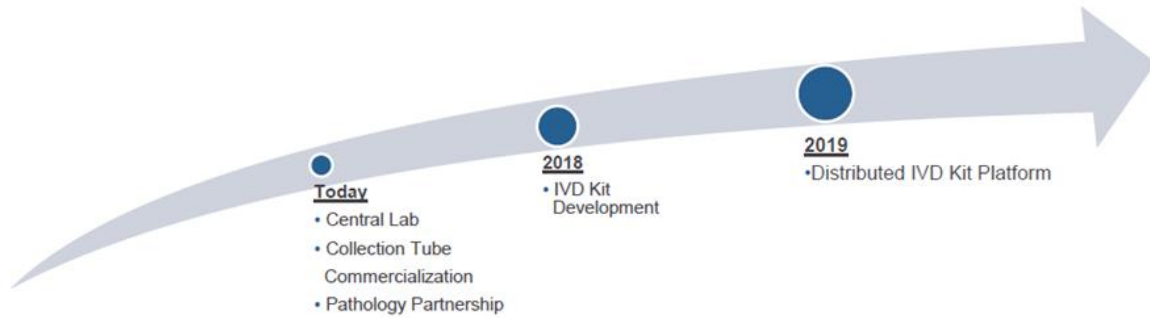
- Managed Care agreements in place covering >200 million lives
- Dedicated managed care leadership with years of experience from GE, LabCorp and Quest
- Payors have positive coverage for biomarkers listed in guidelines
- Aligns with goals of healthcare reform
- Improved outcomes while reducing costs
- Utilize established CPT codes

# Deploying Capital To Fuel Accelerated Growth



# Biocept – Execution of Value Creation Strategy

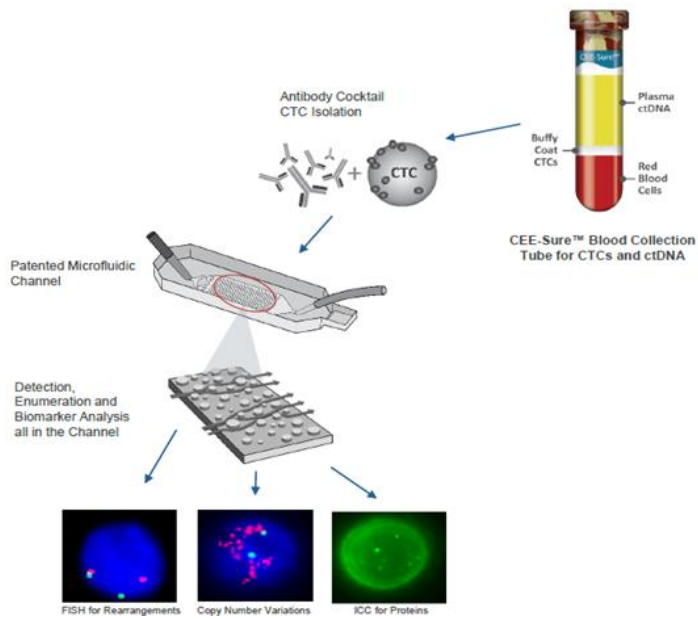
- Investment in technology development of over \$100M resulting in full commercialization
- Liquid Biopsy moving from early adopter orders to mainstream clinician orders for profiling.
- First liquid biopsy (plasma based EGFR testing) now in NCCN guidelines – will increase routine adoption (—AND|| campaign)
- Early adopters now using for monitoring for response or progression indicating that the broader group will follow over coming year
- 14 sales representatives in the field – driving deeper market penetration
- Only liquid biopsy company to market to oncologist and pathologist by providing value to both, with a goal of standardization at the institutional level
- Paid today by payors as coverage policies exist for Biocept menu, therefore generating revenue – per accession revenue of approx \$1000 - \$1200.
- At beginning of 2016, approx 5% of the cash needs provided by operations, 2017 approx 17%



# Appendix



# Patented Target Selector™ Platform Enables both CTC and ctDNA Analysis



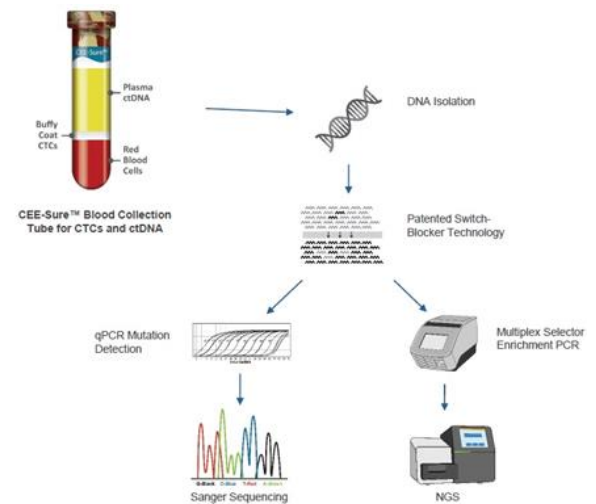
## Benefits:

- CTCs obtained through our platform can be used to molecularly characterize tumor cells and evaluate changes in protein expression with the same techniques done in tissue.
- The same specimen can be microscopically analyzed for DNA and protein targets.
- All CTC tests are enumerated and can be used in monitoring applications.

# Patented Target Selector™ Platform Enables both CTC and ctDNA Analysis

## Benefits:

- Performing PCR upfront and then sequencing delivers added confidence to final result.
- Switch-Blocker technology enriches oncogene mutations and suppresses wild type DNA resulting in ultra-high sensitivity and specificity.
- All ctDNA tests are quantitative and can be used to monitor mutation load.
- NGS technology allows multiplexing capabilities and future panel development.



## 42 Scientific/Clinical Presentations

- 9 Peer-Reviewed Journal Publications and 3 Published Case Reports
- 23 Poster Presentations at Leading Scientific/Clinical Meetings
- 1 Technology Description
- 6 Abstracts: Scientific/Clinical Meetings

*Clinical & Translational*  
**Oncology**  
Official publication of the American Society of Clinical Oncology

**SAN ANTONIO  
BREAST CANCER  
SYMPOSIUM**

HOLLANDS FREE  
**CANCER  
MEDICINE**

**ASCO**  
American Society of  
Clinical Oncology

**Cancer  
Genetics**

**AMP** ASSOCIATION  
FOR MOLECULAR  
PATHOLOGY

**CANCER  
DISCOVERY**

**Journal of  
Thoracic  
Oncology**

**IASLC**  
International Association for the Study of Lung Cancer

**ESMO** GOOD SCIENCE  
BETTER MEDICINE  
BEST PRACTICE

**Clinics in Oncology**

**Oncology &  
Hematology Review**



# Partners in Establishing Clinical Utility

- Collaborations with major cancer centers
- Participating in medical meetings and symposia
- Engaging KOL Advisors
- Building relationships with patient advocacy groups
- Expanding strategic partnerships with pharma and biotech for personalized diagnostics



**The Addario Lung Cancer Medical Institute (ALCMI)** is an international research consortium driving clinical research via a world-class team of investigators from 25 member institutions in the U.S. UK, and Europe. It is supported by a dedicated centralized research infrastructure including standardized biorepositories and data systems.



- 400 Lung Cancer Patients
- 25 Treatment Sites (U.S. and International)
- 1 Year Study Duration Evaluating Clinical Utility of Biocept Liquid Biopsy Testing
- Up to 2,400 Liquid Biopsy Data Points
- Key Endpoints:
  - Demonstrate Concordance vs. Tissue
  - Evaluate Response To Drug Therapy
  - Identify Resistance Mechanisms
  - Predict Treatment Failure Early

## Achievements Since Going Public

Now	At IPO
✓ Revenue of \$5.1M in FY 2017	\$0 Revenue
✓ In-house billing and collections	Outsourced
✓ 26 Issued Patents	1
✓ 16 Members on Commercial Team (14 sales reps)	None
✓ Multiple health plan agreements signed including BCBS plans covering over 200M lives	None
✓ 4 Pharma Agreements	None
✓ Nearly 30 ongoing clinical studies & numerous published papers and presentations at medical and scientific conferences	Less than 6
✓ Multitudes of patients helped	Minimal

