



Corporate Overview

November 2019

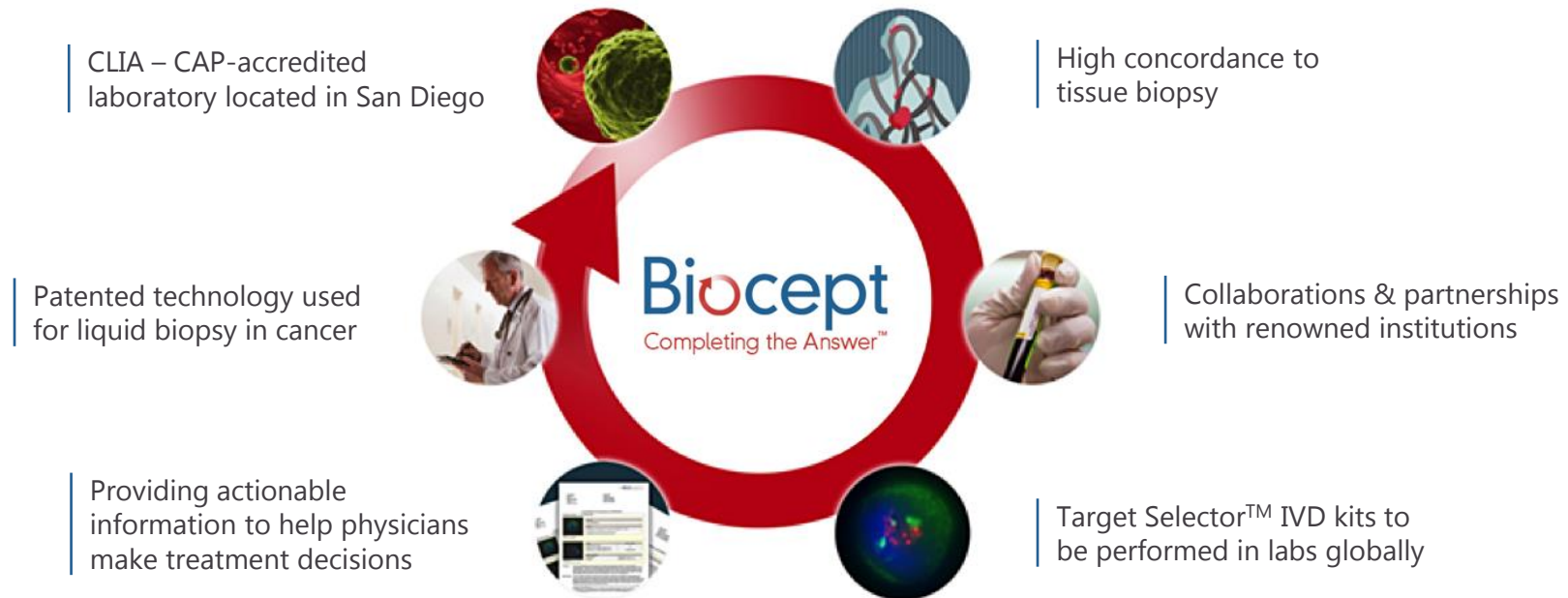
Forward-Looking Statements

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 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.

Corporate Profile



NASDAQ: BIOC, Listed 2014
Market Cap: +/- \$15M
Shares Out: 23M (Incl. Series A Convertible Preferred Stock If Converted)
ADTV: ~380K

Investment Highlights

Liquid Biopsy Market Forecast to Reach in the Billions

- Commercial organization, improving cancer patient outcomes
- Advantages of a simple blood test vs. tissue biopsy (high sensitivity, actionable, rapid results, non-invasive, cost effective)

Test Menu Focused on Actionable Information

- Unique CTC and ctDNA testing platform
- 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
- Favorable reimbursement – cost-effective liquid biopsy testing, fits with health care reform goals

Opportunities for Value-Creating Strategic Partnerships

- Current partnerships with industry leading companies
- Potential for U.S. and global transactions
- Commercial and technology partnerships

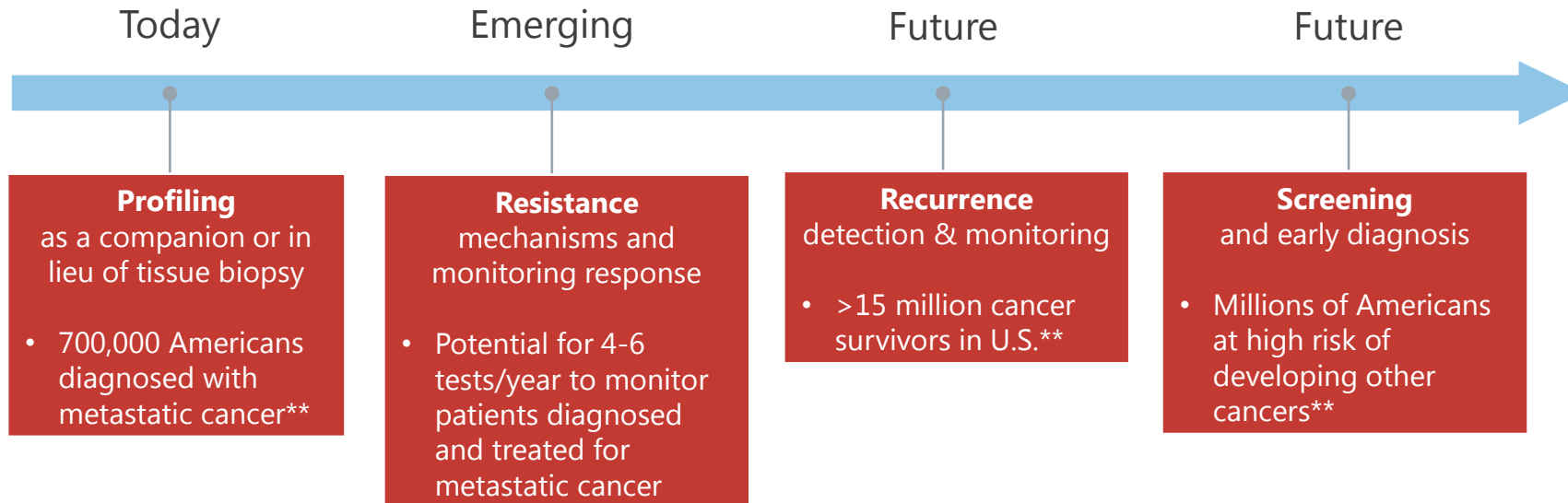
Evolution toward Distributed Business Model

- Actively growing Pathology Partnership (i.e., EmpowerTC™) business
- Target Selector™ kits for both CTC and ctDNA platforms

Liquid Biopsy Market for Oncology



Estimated \$17 billion market by 2023*



Biocept focuses on patients with lung, breast, prostate & colorectal cancers (>45% of all metastatic cancers)**

*International Liquid Biopsy Market Report, Market Research Future, August 18, 2018

**American Cancer Society: Cancer Treatment and Survivorship 2016-2017

Investment Continues to Build in Liquid Biopsy & Cancer Diagnostics

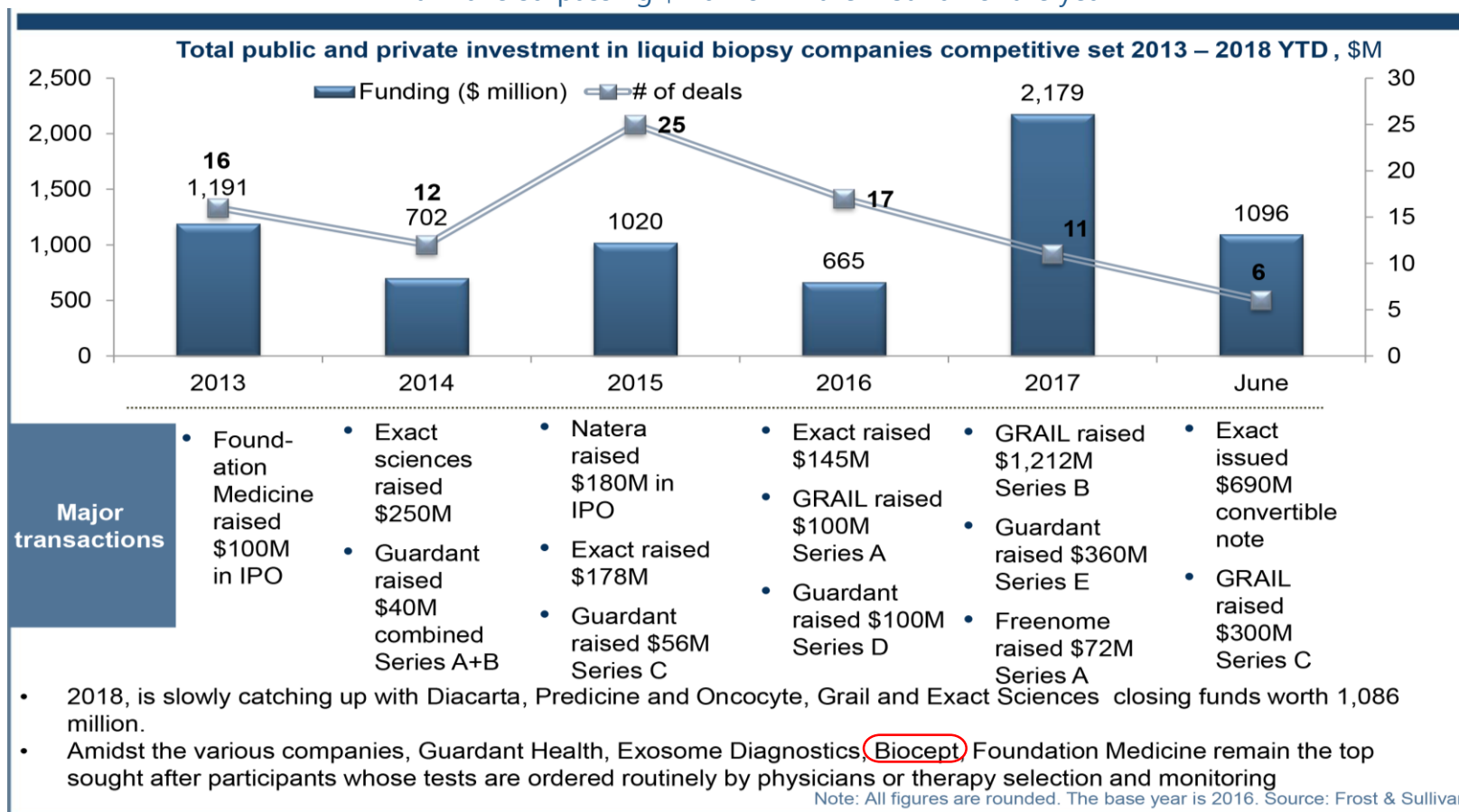
• Strong investor interest in liquid biopsy field

• Growing investments over time (Frost & Sullivan)

• >\$2 billion invested in 2017

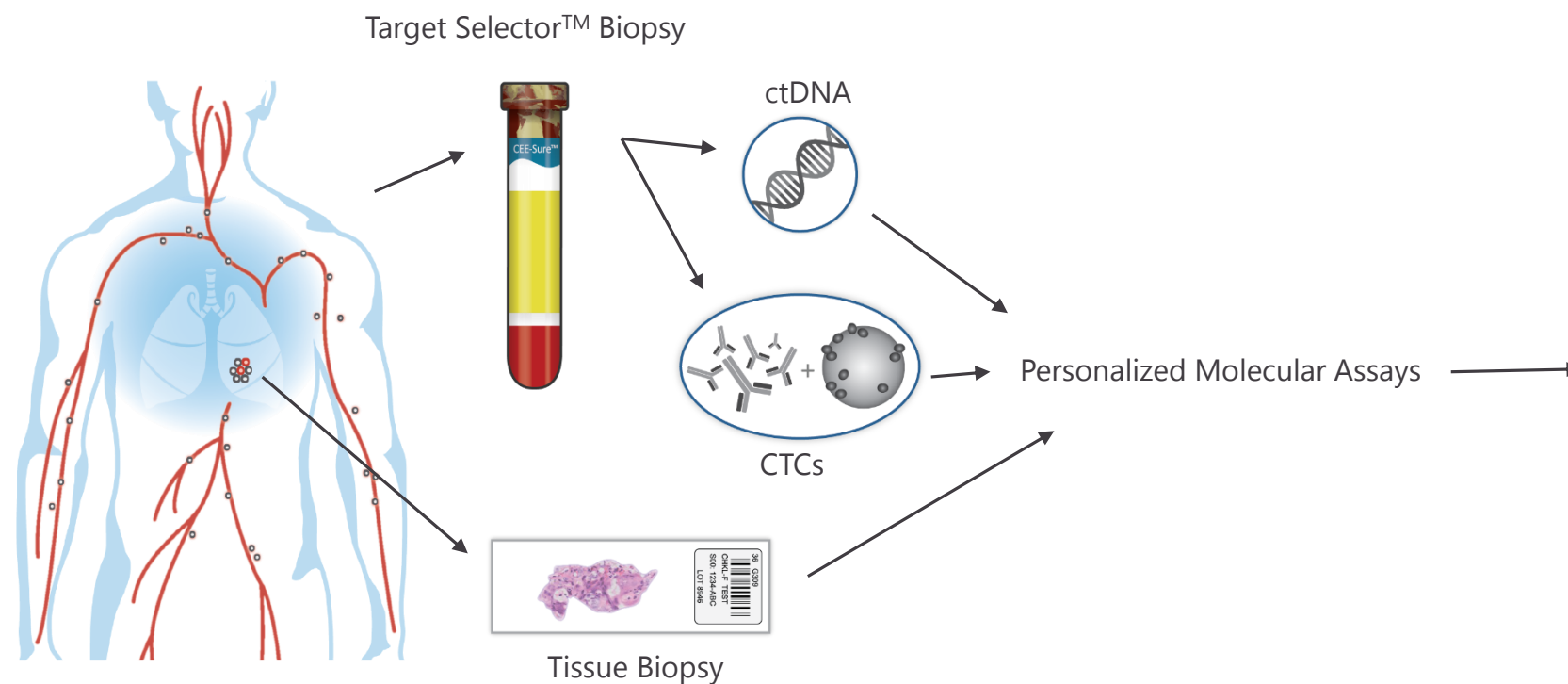
Market Landscape – Investments

Investor interest based on overall capital raised has remained strong with 2018 surpassing \$1 billion in the first half of the year



Precision Treatment

Molecular Profiling Cancer Biomarkers



Identification of Molecular Biomarkers Required to Qualify Patients for Targeted Therapy

Biocept
Completing the Answer™

OncoCEE-BR™ Circulating Tumor Cell (CTC) Test

18110 Nancy Ridge Drive, Suite 100, San Diego, CA 92121
Client Service: 858-333-1729 FAX: 858-333-1701 • www.biocept.com

| PATIENT INFORMATION | | CLIENT INFORMATION | |
|---------------------|--|---------------------|--|
| Patient Name: | Patient, JaneD 1234 | Ordering Physician: | Sam Smith, MD |
| Patient ID#: | C10004 | Order Location: | Dana-Farber Cancer Institute |
| Address: | 400 Brookline Avenue Boston, MA 02215 | Address: | 400 Brookline Avenue Boston, MA 02215 |
| Date of Birth: | 12/13/1918 | Account Number: | 00000101 |
| Sex: | F | Phone: | 617-655-5555 |
| | | Fax: | 617-655-5555 |

| SPECIMEN INFORMATION | |
|----------------------|-------------------|
| Accession #: | DFW-0010 |
| Client Account #: | 1218-KX-KX |
| Specimen Type: | Peripheral |
| Waiver (Yes): | 18 |
| Collected Date: | 5/7/2014 6:30 PM |
| Received Date/Time: | 1/9/2014 9:45 AM |
| Reported Date/Time: | 5/8/2014 12:31 PM |
| Test(s) Ordered: | HER2 OncoCEE-BR™ |

| RESULTS | |
|------------|--------------------------|
| Diagnosis: | History of Breast Cancer |
| CTCs: | Present |
| HER2: | Amplified (Positive) |

RESULTS: Blue light image, Green light image, Red light image

SUPPORTING DATA:

Enumeration of Circulating Tumor Cells by OncoCEE™, 179
HER2 Analysis of CTCs by OncoCEE™, 180 Amplified (Positive)

| Parameter | Value |
|---------------------------------------|-------|
| Number of CTCs | 180 |
| Number of CTCs, HER2 amplified | 179 |
| Number of CTCs, HER2 amplified (CTCs) | 179 |
| Number of CTCs, HER2 amplified (CTCs) | 179 |

CTCs were detected in peripheral blood submitted to test by OncoCEE™. FISH analysis for HER2 showed evidence of HER2 amplification.

Clinical investigators believe that presence of circulating tumor cells (CTCs) is an indicator of metastasis. Metastasis is a complex multiple process that includes epithelial-mesenchymal transition (EMT), in which tumor cells are characterized by loss of cell adhesion, expression of E-cadherin, acquisition of mesenchymal markers, increased cell motility, and invasiveness. OncoCEE™ is recognized as an important predictive and prognostic factor in breast cancer (2). HER2 status is predictive of a patient's response to HER2 targeted agents such as (Herceptin and trastuzumab).

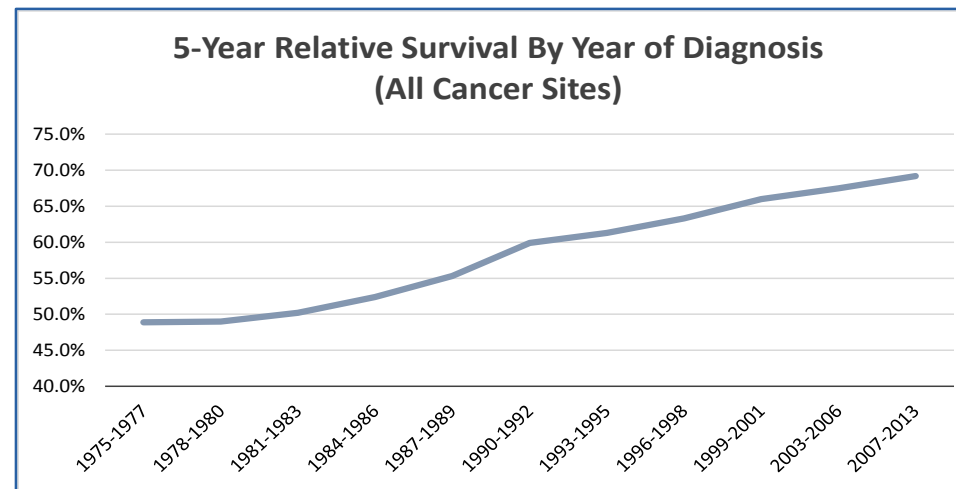
Laboratory Director: Sam Smith, MD, FACMG, PPSC (BCP)
CLIA ID Number: m0000000000

Accession #: DFW-0010
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Precision Treatment Improved Outcomes

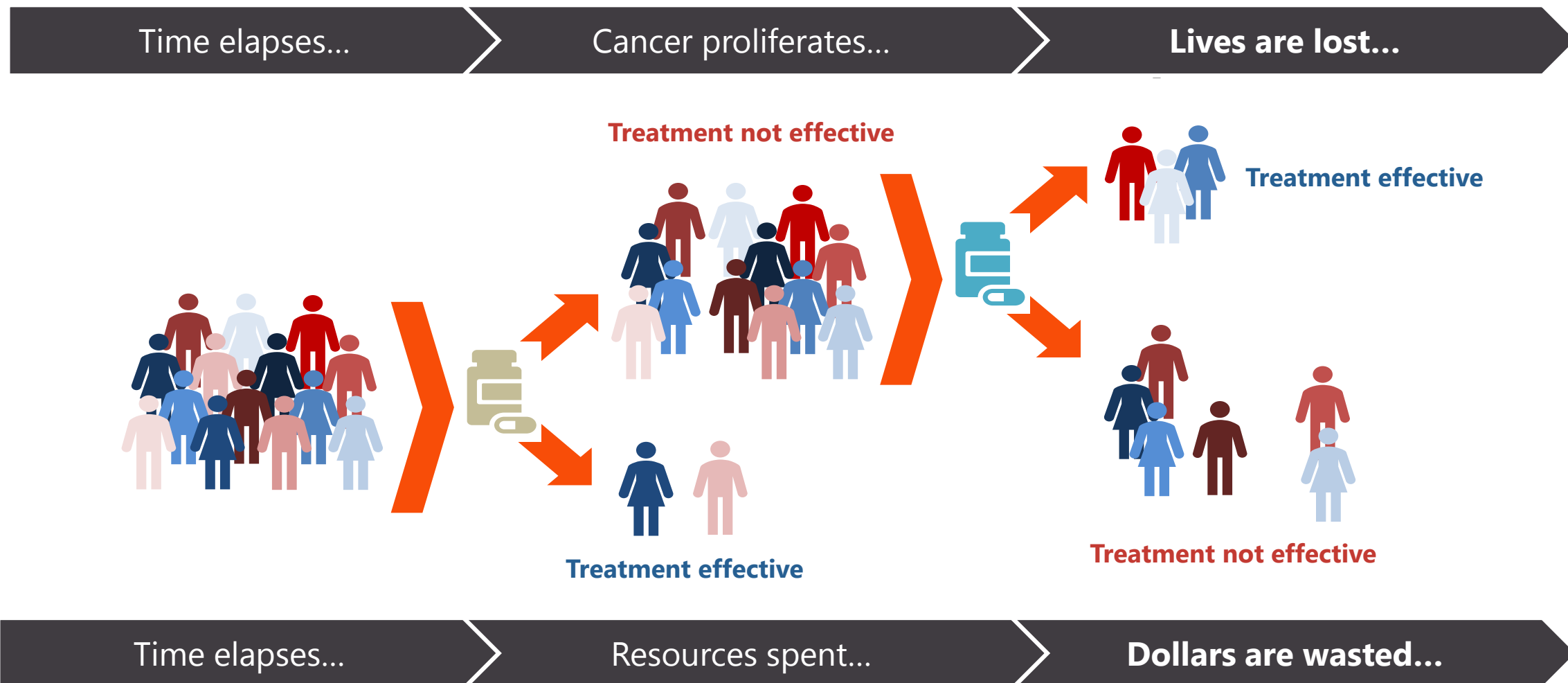


Source: SEER Cancer Statistics Review 1975-2013
cancer.gov



*NCI Cancer Statistics 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 Complete The Answer

| | Advantages | Disadvantages | Cost |
|------------------------------------|---|---|-----------------------------|
| Traditional Surgical Biopsy | <ul style="list-style-type: none"> ▪ Required for diagnosis ▪ Considered standard of care ▪ Source of cancer (histology) ▪ Results for all known oncogenic alterations ▪ Analysis of whole cells | <ul style="list-style-type: none"> ▪ Invasive – not appropriate for monitoring ▪ Risk of adverse events ▪ Expensive ▪ Often inadequate for complete molecular profiling ▪ Only 57% of tissue biopsies have sufficient tissue for analysis ▪ Can take as much as 30 days for results ▪ Heterogeneity of tumor can lead to false negatives ▪ Does not account for evolving cancer over time – snapshot view | \$15,000 to \$45,000 |

Differentiated Product Offerings Among Liquid Biopsy Providers



| Company | CTCs / Whole Cells | ctDNA / DNA Fragments | Menu - Multiple Cancer Types | Proprietary Collection Tube | Pathology Partnership Strategy |
|---------------------------|--------------------|-----------------------|------------------------------|-----------------------------|--------------------------------|
| Biocept (BIOC) | ✓ | ✓ | ✓ | ✓ | ✓ |
| Guardant Health (GH) | | ✓ | ✓ | | |
| Foundation Medicine (FMI) | | ✓ | ✓ | | |
| Epic Sciences (private) | ✓ | | ✓ | | |
| Biodesix (private) | | ✓ | | | |

High Sensitivity

- Combined results from CTCs and ctDNA from single blood sample
- Industry-leading sensitivity – delivers high concordance with tissue
- Addresses challenges of tumor heterogeneity

Actionable Results

- Results for all types of oncogenic alterations including SNVs, Indels, Fusions, CNVs, and Protein Expression
- Target markets – medical oncology, naturopathic medicine, urology, and pathology

Rapid, Non-Invasive, Cost Effective

- Turnaround in 3-7 days enables targeted and immuno-therapy options
- Reimbursement advantages – pay for individual/ actionable alterations
- Non-invasive - appropriate for both profiling and monitoring
- **Cost - \$1,200 per test on average**

Health Plan Access Continues to Expand with Third-Party Contracts



- 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

Biocept Growth Drivers

Broad Technology Expertise

- CTC Analysis
- ctDNA Testing
- NGS Panels

New Customer Markets

- Urology
- AND Protocol
- Integrative Oncology
- Pathology Partnerships

New Clinical Application

- Monitoring for Disease Progression and Treatment Efficacy

Monetizing Intellectual Property

- CEE Sure Blood Collection Tubes
- Molecular Test Kits

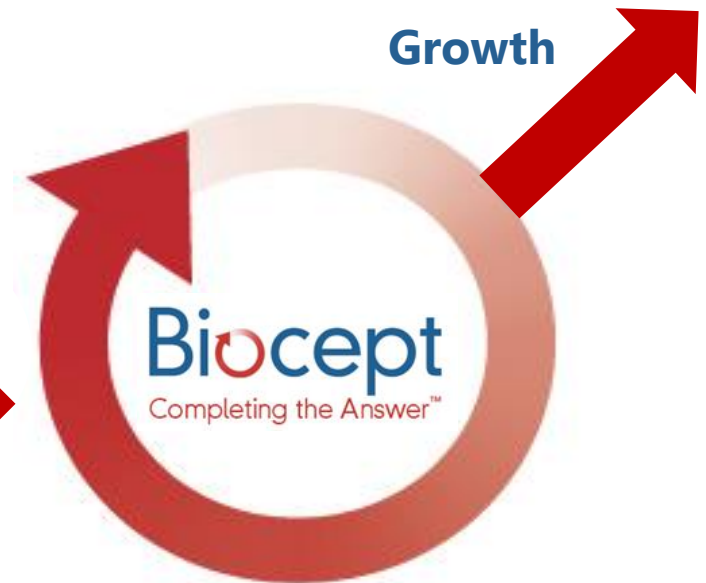
Monetizing Database

- >20,000 Patients
- Approximately 90K Tests Performed

Single Cell Analysis

- Pharma
- Drug Discovery

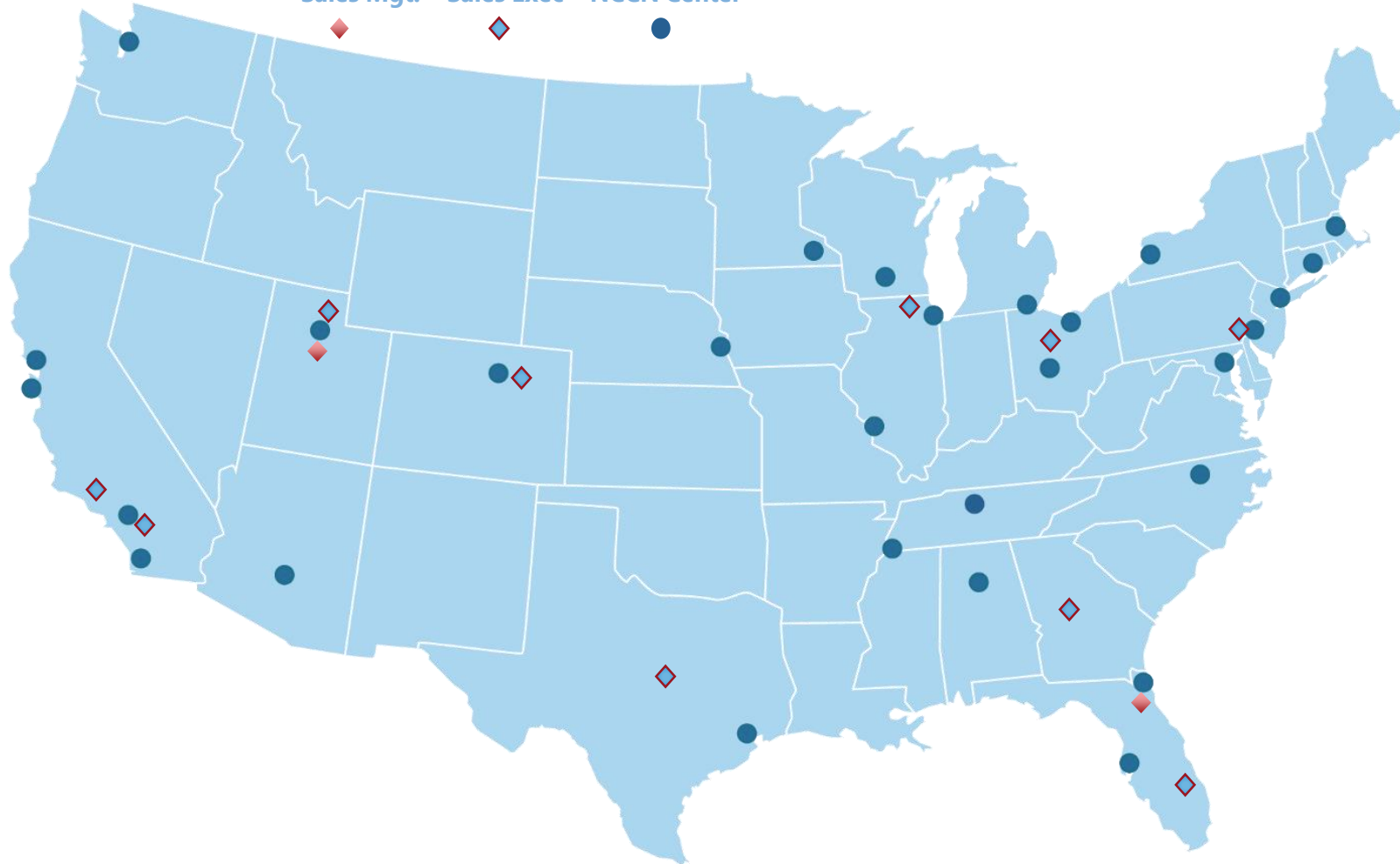
Growth



Team Liquid - New "Biocept Blood"

Current Salesforce Coverage

Sales Mgt. Sales Exec NCCN Center



New skill sets:

- Small-company Growth Focus
- Deep Market Knowledge
- Urology
- Breast Cancer Focus
- Naturopathic Medicine
- Pathology Partnerships
- Contracting and CMS coverage

New "Biocept Blood":

- Managed Care
- Marketing
- Sales and Sales Management
- Field Product Managers

10 Clinical Biomarker Specialists (CBS) in the field & 2 Sales Managers

Profiling at Diagnosis or Recurrence: “AND” Campaign – Bringing Liquid Biopsy into the Standard of Care

Biocept
Completing the Answer™

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

Biocept
Completing the Answer™

Profiling at Diagnosis and Recurrence: Real-World Lung Cancer Treatment Initiative with Allegheny Health Network

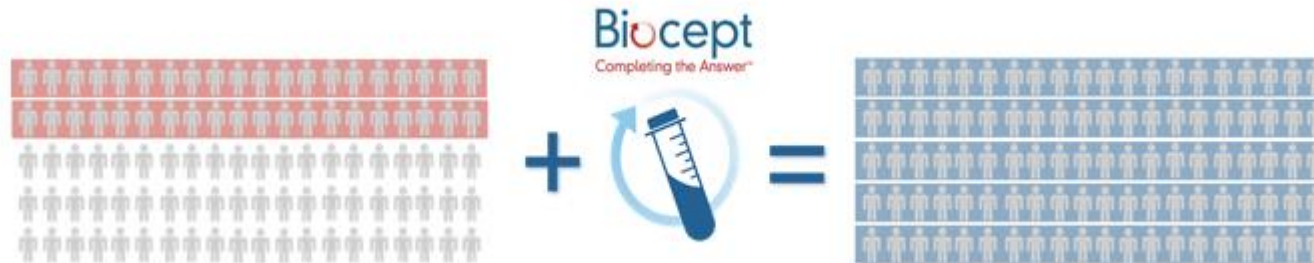


40% not tested for guideline tests

27% of patients not enough tissue



QI Project – Test all newly diagnosed and patients progressing with Tissue and Liquid



Hypothesis – 100% of patients, Increase detection of biomarkers, Improve outcomes, Reduce Costs

Highmark Health's VITAL Innovation Program testing benefits of Biocept's liquid biopsy platform for improving outcomes and lowering costs of treatment for patients with non-small cell lung cancer

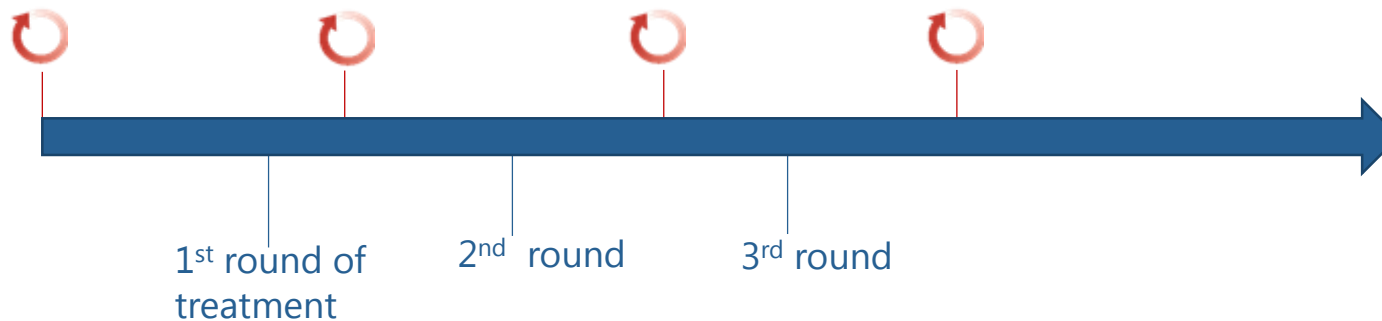
Allegheny Health Network's Cancer Institute spearheading the evaluation

<https://www.highmarkhealth.org/hmk/newsroom/pr/pressreleases.shtml>

Monitoring for Progression or Response

- Specialty Areas of Focus:
 - Urology—Prostate Cancer
 - Breast Oncology
 - Integrative Oncology and Naturopathic Medicine
- Clinical Application for Monitoring:
 - Recurrence
 - Disease Progression
 - Therapy Effectiveness and Resistance

Order Biocept



Profiling and Monitoring: EmpowerTC™-Pathology Partnership



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.

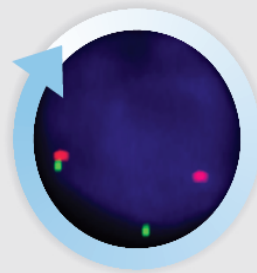
Biocept offers specialized tests for approved NCCN biomarkers, including targeted therapy **AND** immunotherapy markers.

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

Biocept, Inc.

5810 Nancy Ridge Drive, San Diego, CA 92121

www.biocept.com



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MKTG-0036-02

Commercial Collaborations



- 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 (i.e., Empower TC™)

Thermo Fisher Scientific Agreement



- Launched Target Selector™ NGS Lung and Breast Panels mid-2019 under collaboration with Thermo Fisher
- Collaboration focused on offering 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
- Initially targeting oncology clinics and hospitals, as well as the pharmaceutical industry to provide diagnostic testing services for drug development, clinical trial support, and companion diagnostics (CDx)
- Biocept and Thermo Fisher to jointly pursue various commercial opportunities

- Prognos, Inc.
 - Leader in predicting disease by applying artificial intelligence to clinical lab diagnostics
 - Maintains a registry of over 20 billion medical records to help its pharmaceutical clients ensure the right patients receive the right therapies
 - Investors include top-tier funds and strategic partners including Merck Global Health Innovation fund
- The field of oncology-focused targeted therapeutics is driven by big data
- Biocept's clinical experience data base for liquid biopsy is a potentially valuable asset
- Partnership enables Biocept's data monetization strategy
 - Biocept's de-identified patient records are integrated into Prognos registry through their proprietary interface software
 - Prognos markets data to biopharma clients

Biocept IP Portfolio – 37 Patents Issued Worldwide

Family 1

MicroChannel for CTC Capture

- Patent 1 – Recovery of Rare Cells using Microchannel
- Patent 2 – Device for Cell Separation

1) Issued in U.S. (2), China (3), Korea, France, Germany, Great Britain, Italy, Spain, Hong Kong (3), Japan, and Canada

- Pending in Australia

2) Issued in U.S.

Expire
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 U.S. (2), Australia, France, Germany, Great Britain, Spain, Italy, Hong Kong, Japan (3), and China

- Pending in Canada

2) Issued in U.S, EU, Canada, Japan, and China

- Pending in Hong Kong –Korea

Expire
2030

Family 3

Collection Tube

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

1) Issued in U.S.

Expire
2031

Family 4

Switch Blockers for ctDNA Analysis

Patent 1 – Methods for Detecting Nucleic Acid Sequence Variants

1) Issued in U.S. Australia, China, France, Germany, Italy, Great Britain, Belgium, Ireland, Japan and Switzerland

- Pending in Hong Kong – Korea – Brazil – Canada

Expire
2033

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

Our Team Has a Deep & Successful History of Commercializing Innovation

Michael Nall

President & CEO

- 25+ years in healthcare sales, marketing and commercial operations
- 16 years in cancer diagnostics and genomics
- Most recently General Manager N. American Sales and Marketing for Clariant — a GE Healthcare Company



Tim Kennedy

CFO, SVP of Operations

- 30+ years of financial experience, 25+ years in the clinical diagnostics industry
- Instrumental in 2.1B restructuring of Millennium Health, a privately-held urine drug lab
- 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



Edwin Hendrick

SVP, Chief Commercial Officer

- 25+ years of experience in diagnostic sales, marketing and commercialization
- Successfully introduced and commercialized tests from GenomeDx, US Labs, Plus Diagnostics and Ventana
- Reimbursement and Payor expertise



Lyle Arnold, Ph.D.

SVP, Chief Scientific Officer

- 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
- 47 issued US and more than 140 issued and pending patents worldwide



Veena Singh, MD

Sr. Medical Director

- Board certified AP/CP and Molecular Pathology, UCSD, Cedars Sinai trained
- Numerous publications, serves on CAP committees
- Most recently Medical Director – bioTheragnostics



Michael Terry

SVP, Corporate Development

- 25+ years commercial leadership experience in molecular diagnostics and med-tech companies
- Former GE Healthcare executive, certified in Six Sigma
- Recent experience in liquid biopsy field; EVP commercial operations at both Sequenom and Trovagene



Biocept is Guided by a Board of Visionaries & Scientific Influencers

Board of Directors

David F. Hale

Chairman

Bruce E. Gerhardt, CPA

Director, Member Audit Committee

M. Faye Wilson, CPA, MBA

Lead Independent Director, Chair Audit Committee, Member Compensation Committee, Member Nominating and Governance Committee

Ivor Royston, MD

Director, Chair – Science and Technology Committee, Member Nominating and Governance Committee

Marsha A. Chandler, PhD

Director, Chair - Nominating and Governance Committee, Member Science and Technology Committee

Bruce A. Huebner

Director, Chair – Compensation Committee, Member – Science and Technology Committee, Member – Audit Committee

Michael W. Nall

Director, President & CEO

Clinical Advisory Board

Lee Schwartzberg, MD

Chief, Division of Hematology Oncology; Professor of Medicine, University of Tennessee

David Carbone, MD

Director, James Thoracic Center, James Cancer Hospital and Solove Research Institute, Ohio State University

Jenny Chang, MD

Director, Methodist Hospital Cancer Center, Houston, Texas

Michael Kosty, MD

Scripps Clinic Torrey Pines, San Diego, California

Edgardo Santos, MD

Medical Director, Lynn Cancer Institute, Boca Raton, Florida

Melissa Johnson, MD

Medical Oncologist, Nashville, Tennessee

Fred Hirsch, MD, PhD

CEO, Int'l Assoc. of Study of Lung Cancer; Professor of Medicine, University of Colorado

Santosh Kesari, MD, PhD

Chair, Dept. of Translational Neuro-oncology and Neurotherapeutics, John Wayne Cancer Institute, Santa Monica, California

Scientific Advisory Board

David Rimm, MD, PhD

Professor of Pathology and Medicine (Oncology) Yale University School of Medicine

Marileila Garcia, PhD

Professor, University of Colorado Division of Medical Oncology

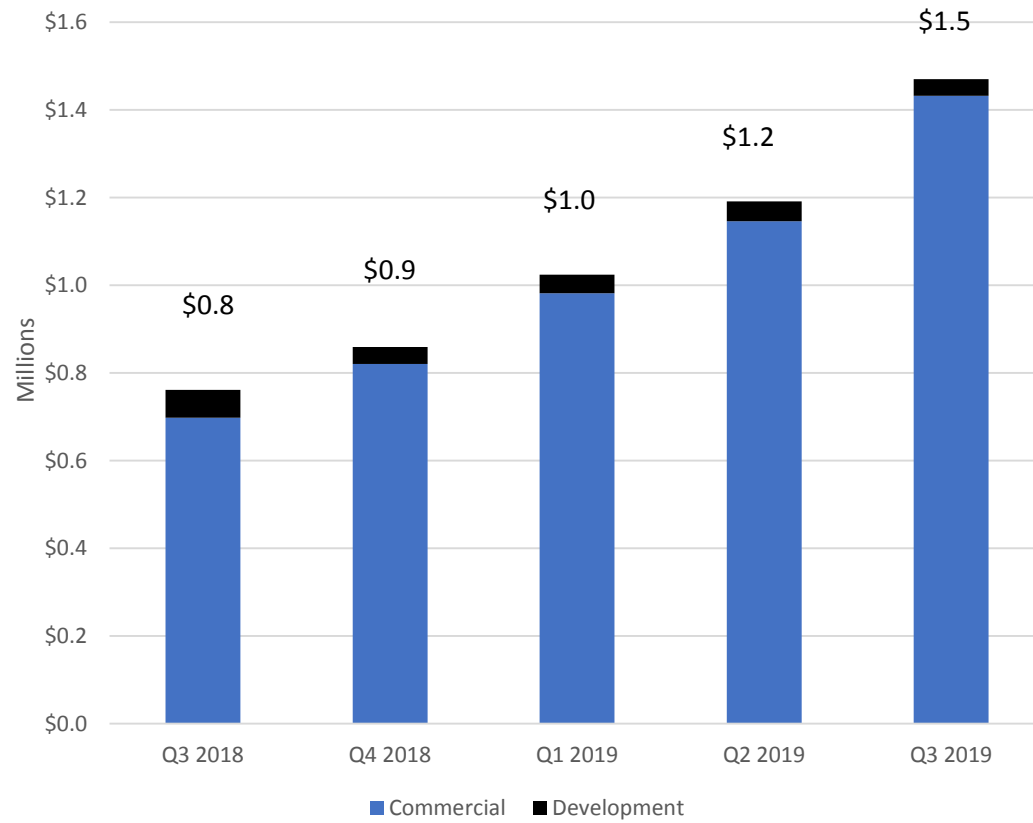
David Berz, MD, PhD

Beverly Hills Cancer Center
Chief Medical Officer – Valkyrie Pharmaceuticals
Beverly Hills, California

Deploying Capital To Fuel Growth

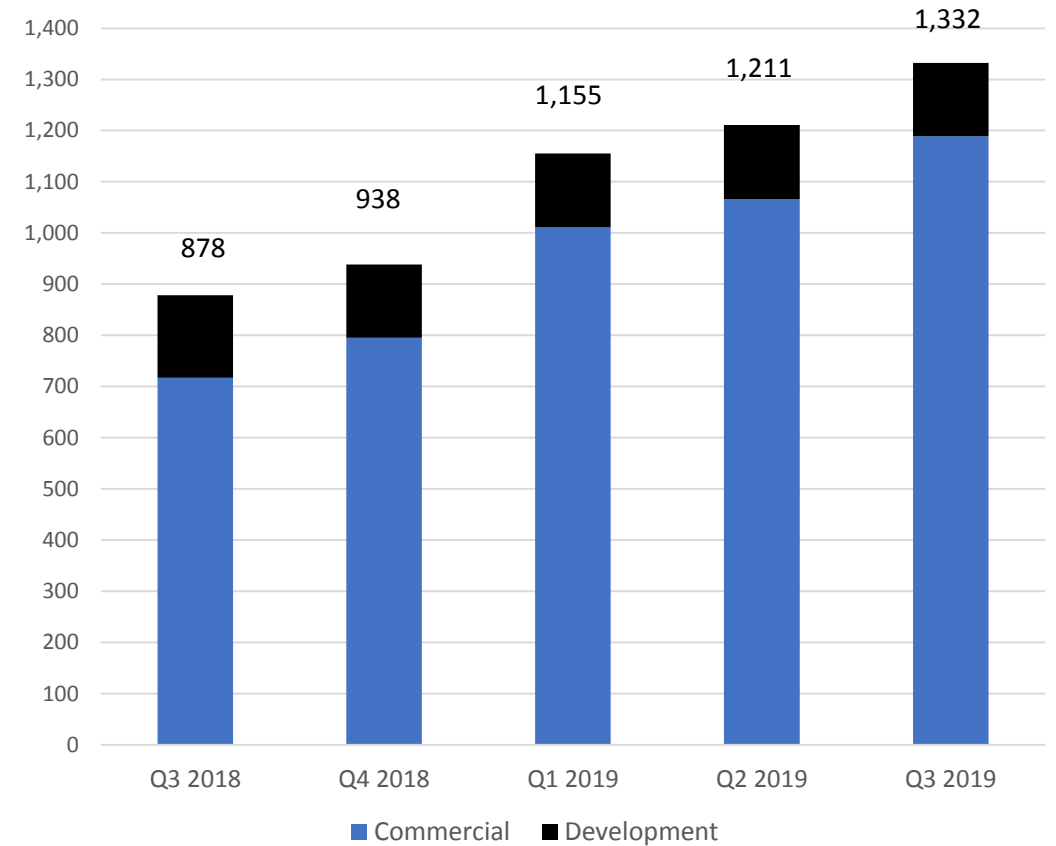
Five Consecutive Quarters of Growth

Quarterly Commercial Revenue



Cumulative Total Sample Volume in Excess of 20,000

Quarterly Billable Samples



Corporate Priorities

- ✓ Increase market penetration into emerging liquid biopsy segment with a focus on urology, breast, and lung cancer treatment segments and Biocept's proprietary EmpowerTC™ strategy
- ✓ Grow sales of Target Selector™ liquid biopsy kits and CEE-Sure™ blood collection tubes
- ✓ Monetize data through artificial intelligence (AI) from over 20,000 patient samples
- ✓ Execute on launch of Target Selector™ NGS Panels under Thermo Fisher Collaboration
- ✓ Enter into additional strategic commercial and technology partnerships – Global and U.S.
- ✓ Sign new third-party health plan agreements and expand relationship with BCBS
- ✓ Publish clinical case studies
- ✓ Launch additional oncology biomarker assays

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