

Investor Presentation

September 2023

Nasdaq: BIOC

www.biocept.com



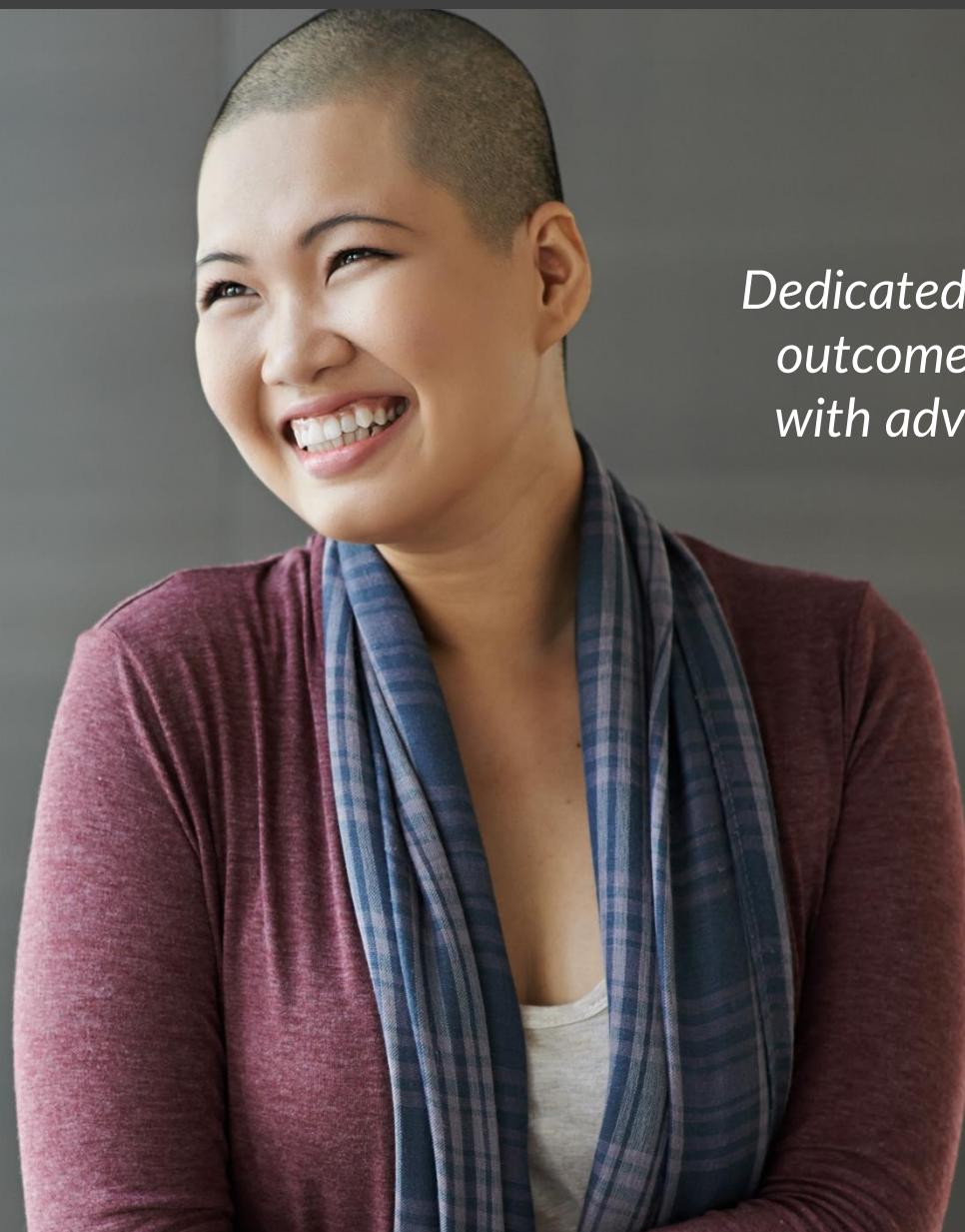
Forward-Looking Statements

This presentation contains forward-looking statements that are based upon current expectations or beliefs, as well as a number of assumptions about future events. Although Biocept, Inc. (the “Company”) believes that the expectations reflected in the forward-looking statements and the assumptions upon which they are based are reasonable, the Company can give no assurance that such expectations and assumptions will prove to be correct. Forward-looking statements are generally identifiable by the use of words like “may,” “will,” “should,” “could,” “expect,” “anticipate,” “estimate,” “believe,” “intend,” “goal,” or “project,” or the negative of these words or other variations on these words or comparable terminology. To the extent that statements in this presentation are not strictly historical, including, without limitation, statements regarding the potential benefits of and market opportunities for CNSide™; matters related to the FORESEE trial; development and other timelines and the ability of the Company to meet those timelines; the potential adoption of CNSide™ by physicians; potential indications for CNSide™ beyond leptomeningeal metastasis; the ability to protect the Company's intellectual property rights; and other statements that are not historical fact, such statements are forward-looking, and are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. You are cautioned not to put undue reliance on these forward-looking statements, as these statements are subject to numerous risks and uncertainties, including risks related to the Company's business, market risks, the Company's need for additional capital, and the risk that its products and services may not perform as expected. These and other factors are described in greater detail under the “Risk Factors” heading of the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2023, filed with the Securities and Exchange Commission (SEC) on May 10, 2023 and in our Quarterly Report on Form 10-Q for the quarter ended June 30, 2023, being filed with the SEC on August 14, 2023. The effects of such risks and uncertainties could cause actual results to differ materially from the forward-looking statements contained in this presentation. The Company assumes no obligation to update these forward-looking statements whether as a result of any new information, future events, changed circumstances or otherwise, except as required by law.

Investment Highlights

- Pioneering proprietary CNSide™ assay using **cerebrospinal fluid (CSF)** to test for cancer involvement in the central nervous system (CNS)
- Pursuing CNSide **standard-of-care** status to support broader adoption and higher reimbursement
 - Conducting FDA registered **FORESEE** clinical trial at leading academic centers (NCT05414123, clinicaltrials.gov)
 - Data publication in peer-reviewed journals
- Initial **U.S. market opportunity of \$1.2B**
- **30 of 64 NCI designated cancer centers** have used CNSide to date
- Target **biopharma partner** collaborations using CNSide assay to support therapeutics clinical trials

Dedicated to improving outcomes for patients with advanced cancer

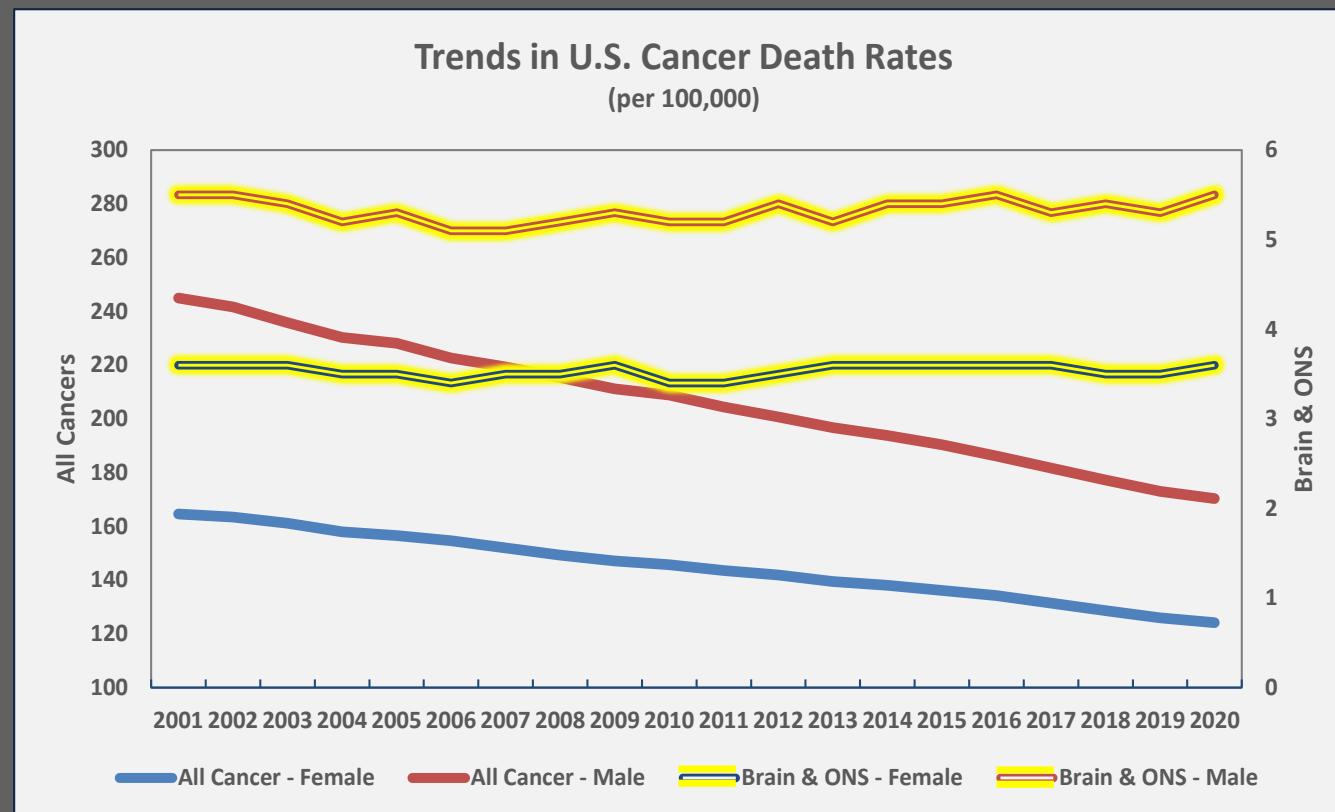


Neuro-Oncology

Market Overview

Recent Trends in U.S. Deaths Due to Cancer

- Cancer deaths in aggregate declined >25% from 2000 to 2019 due to improved screening, diagnosis and prevention, lower smoking rates, and improved treatments
- Deaths due to cancer of the brain and other nervous system (ONS) have unfortunately remained stable
- Metastasis accounts for 90% of all solid tumor cancer mortality¹



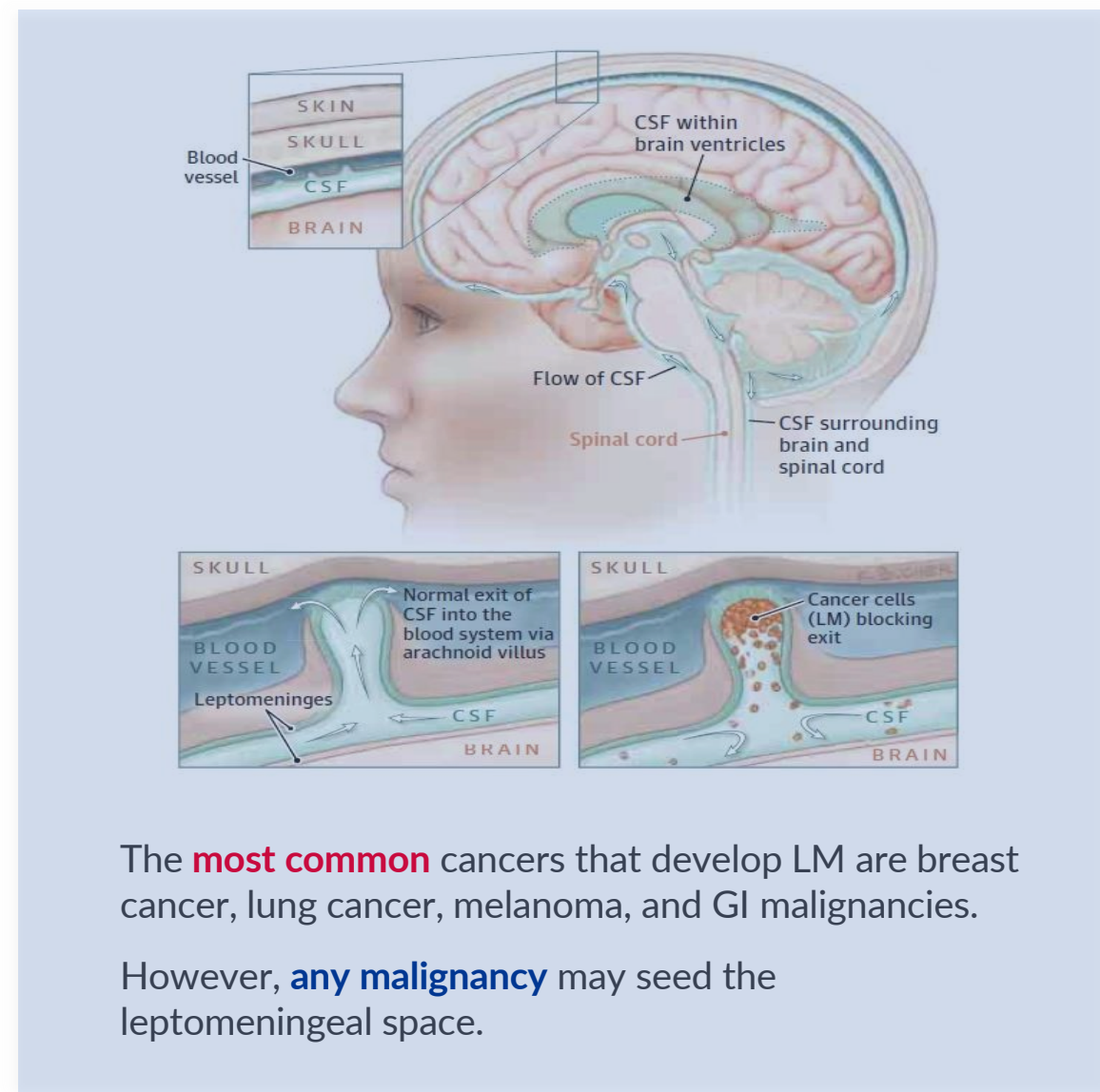
1. Taftaf, R. et al. Nature Communications 12, 4867 (2021).

Leptomeningeal Metastases (LM)

- Cancer cells in the subarachnoid space/CSF
- Solid and Hematologic malignancies
- Symptoms:
 - High intracranial pressure and/or spinal cord compression
 - Cranial nerve symptoms
 - Spinal cord and nerve root involvement causing extremity weakness, paresthesia and/or pain

Frequency of LM by Solid Tumor Type¹⁻⁴

Breast cancer	12-35%
Lung cancer	10-26%
Melanoma	5 - 25%
Gastrointestinal	4 - 14%
Unknown Primary	1-7%



The **most common** cancers that develop LM are breast cancer, lung cancer, melanoma, and GI malignancies.

However, **any malignancy** may seed the leptomeningeal space.

Leptomeningeal Metastasis Unmet Clinical Needs

Underdiagnosed⁵⁻⁸

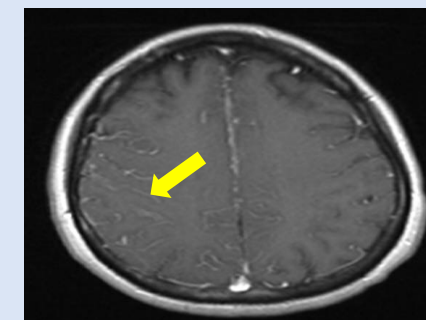
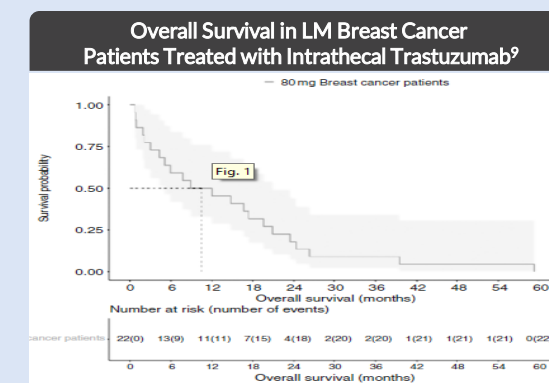
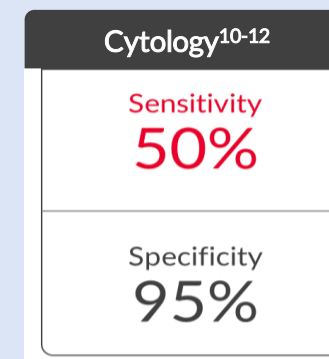
- ▶ Cytology: low sensitivity (a negative result could be a false negative)
- ▶ MRI: low specificity (does not specify cause of abnormality)

Undertreated¹⁻⁵

- ▶ Overall Survival untreated/chemotherapy 1-4 mo
- ▶ Median OS with IT Trastuzumab 10.5 mo

Unmeasured¹⁰⁻¹²

- ▶ Cytology result is qualitative
- ▶ MRI and clinical evaluation are often non-specific
- ▶ No objective method to measure treatment response



1. Batool A. Leptomeningeal Carcinomatosis. StatPearls; 2022.

2. J Neurooncol. 2013 Sep;114(2):229-35.

3. J Thorac Oncol. 2012 Feb;7(2):382-5.

4. Ann Oncol. 2020 Oct;31(10):1397-1404.

5. Int J Cancer. 2015 Jan 1;136(1):162-71.

6 Arq Neuropsiquiatr. 2013 Sep;71(9B):677-80.

7. Semin Oncol. 2009 Aug;36(4 Suppl 2):S35-45.

8. Neurology. 1979 Oct;29(10):1369-75.

9. Neuro-Oncology. 2022 Aug. 2022 Aug 10;noac195. doi:

10.1093/neuonc/noac195. Epub ahead of print. PMID: 35948282.

10. Neuro Oncol. 2019 May 6;21(5):648-658.

11. J Clin Oncol. 2019 May;37(15_suppl):e13546-e13546

12. Neuro-Oncology Advances. 2020 Aug;2(2):iii7

Leptomeningeal Metastasis - Solid Tumor Incidence



3-8% of solid tumor patients will be diagnosed with LM during the course of their illness¹⁻³

20% of cancer patients demonstrated LM at autopsy⁴⁻⁸

40% of patients positive for LM at autopsy had negative CSF cytology prior to death^{4,5}

On average, LM is detected **3.5X** more frequently at autopsy than it is diagnosed clinically

2022 Independent Market Research – U.S.

CNSide TAM (# of patients/year)	Literature Sources	Market Research
Diagnosis TAM parenchymal brain metastases (rule out LM)	112,000	101,800
Treatment/Monitoring TAM parenchymal brain metastases	59,400	54,000
Diagnosis TAM LM	41,100	56,700
Treatment/Monitoring TAM LM	21,800	30,100
TOTAL ANNUAL INCIDENCE	234,300	242,600

For LM:
**Diagnosis and
Therapy Selection**

**Total Segment:
\$160M**

For PBM:
**Diagnosis and
Therapy Selection**

**Total Segment:
\$287M**

For LM:
**Therapy Response,
Disease Monitoring**

**Total Segment:
\$255M**

For PBM:
**Therapy Response,
Disease Monitoring**

**Total Segment:
\$457M**

**Aggregate TAM for Diagnosis, Profiling,
and Monitoring in LM and PBM:**

**Total Market:
\$1.2B**

CNSide

Assay Technology, Attributes, and Data



First commercially available method to objectively measure tumor status & therapy response in the CNS

- Intended to determine the presence, quantity, and characterization of malignant cells in CSF
- Currently performed primarily for suspicion of or diagnosis for LM

CLIA-Validated Test for **Metastatic Carcinomas***

- ✓ Sensitivity: 92%
- ✓ Specificity: 95%

CNSide is also validated for metastatic melanomas



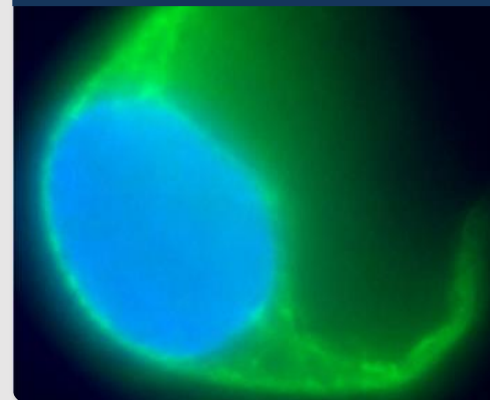
CNSide Addresses LM Unmet Clinical Needs

Diagnosis and detection of LM can be improved using cell capture technology

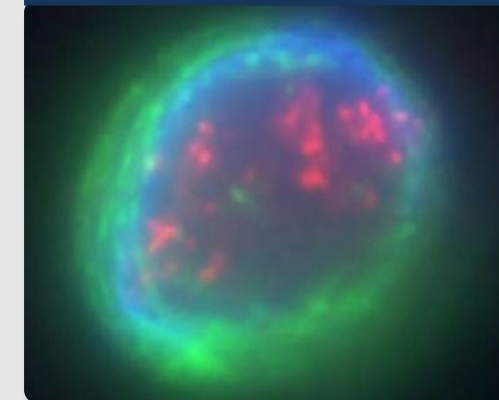
Therapeutic **biomarker assessment** can be informed by multiplexing cellular and molecular assays on single samples and guide therapy selection

Quantifying results for longitudinal observations allows for disease progression **monitoring**

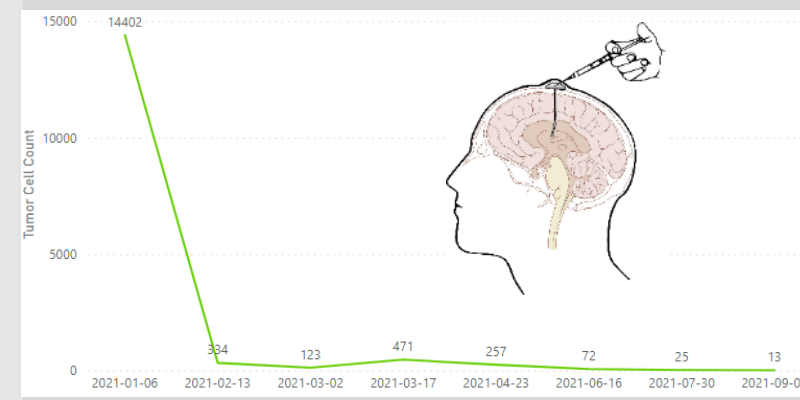
Is there TUMOR



Is there TARGET



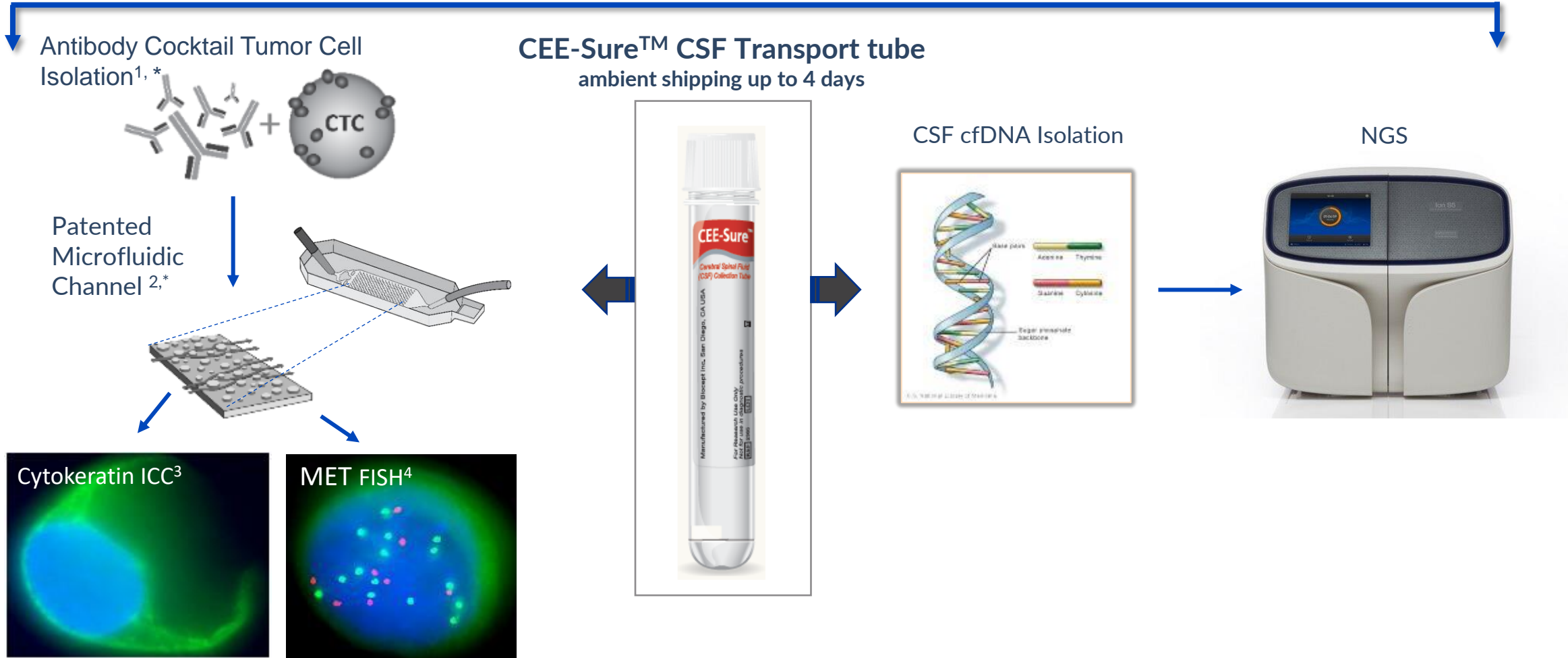
Is there TREND



Overview of the CNSide Technology

Tumor Cell Detection Workflow

cfDNA Detection Workflow



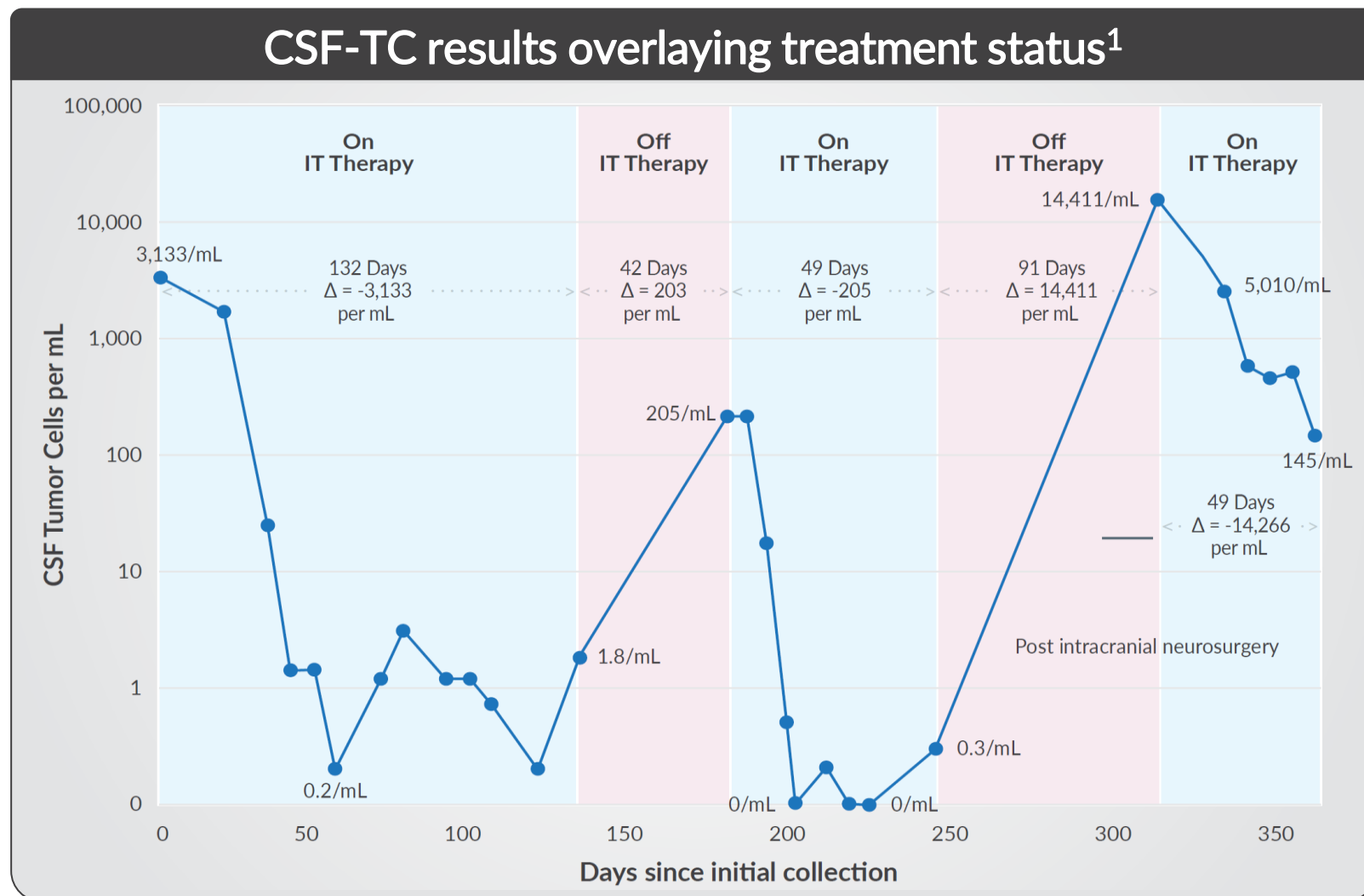
Biocept IP Portfolio – 41 Patents Issued Worldwide

<p>Family 1 MicroChannel for CSF-TC Capture</p> <ul style="list-style-type: none"> ▶ Recovery of Rare Cells using Microchannel ▶ Device for Cell Separation & Analysis 	<p>Issued in US (3), China (3), EU PTO, Hong Kong (3), Japan, S. Korea, Canada</p>	<p>Expire 2025-2027</p>
<p>Family 2 CTC Capture With Antibody Cocktail</p> <ul style="list-style-type: none"> ▶ Subfamily 1 – Devices & Methods of Cell Capture Analysis ▶ Subfamily 2 – Method and Reagents for Signal Amplification 	<p>Sub 1) Issued in US (3), Australia (2), Canada, China, EU PTO (2), Hong Kong, Japan (4)</p> <p>Sub 2) Issued in US, Canada, China, EU PTO, Hong Kong, Japan</p>	<p>Expire 2030-2031</p>
<p>Family 3 Collection Tube</p> <ul style="list-style-type: none"> ▶ Use of DU for Anti-Clumping of Biological Sample 	<p>1) Issued in US</p>	<p>Expire 2031</p>

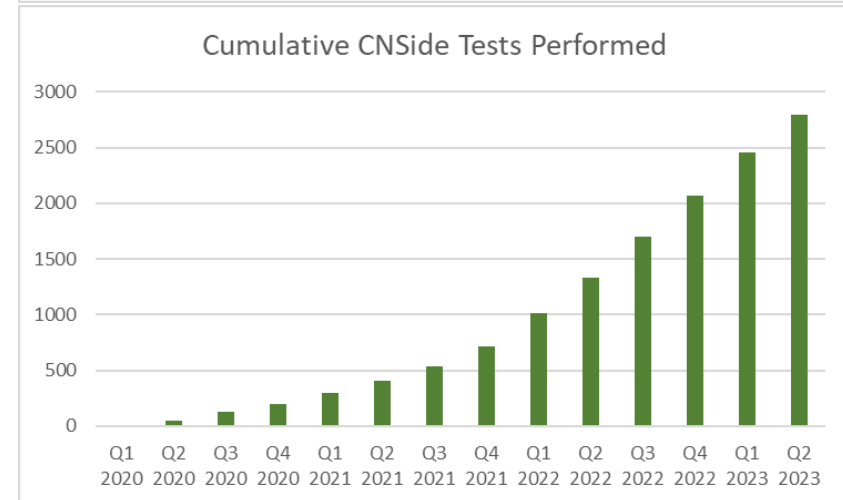
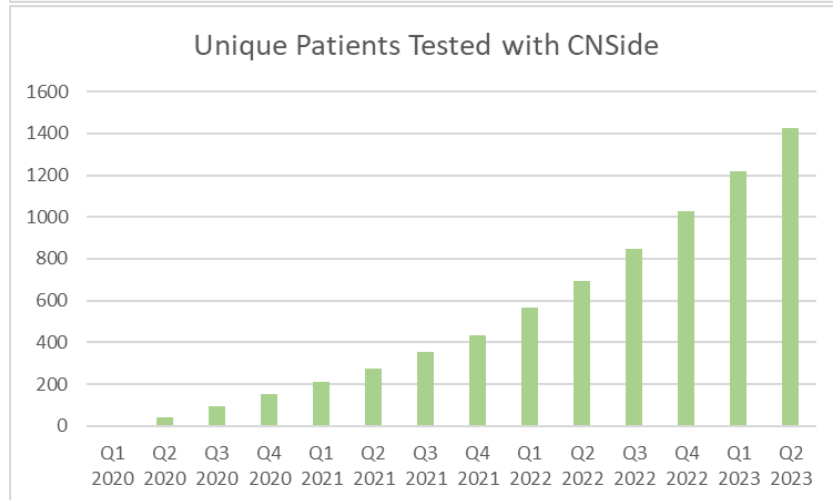
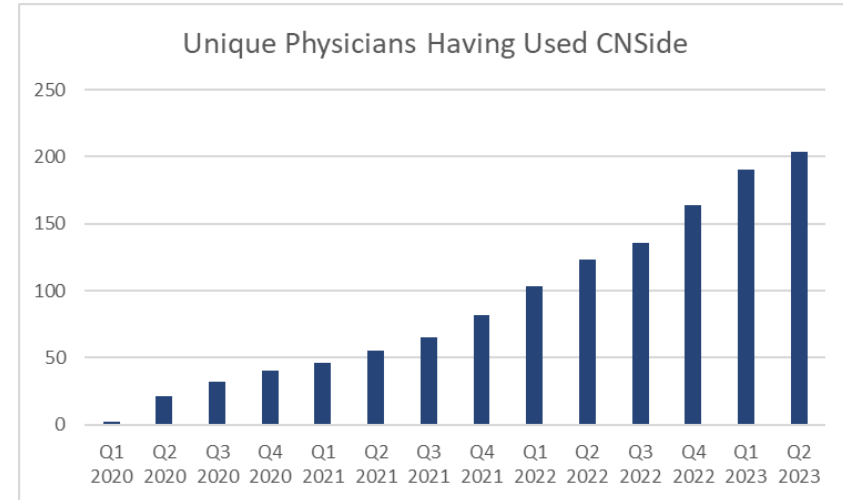
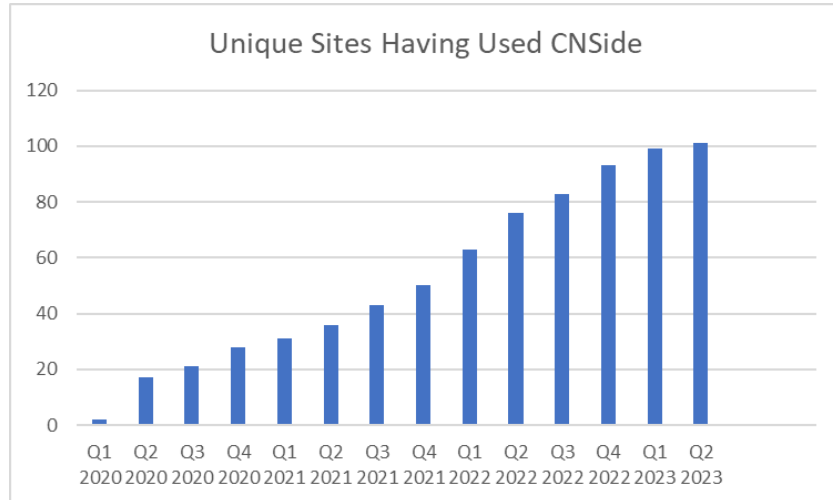
Disease Diagnosing & Monitoring Using CNSide Cell Detection

- ▶ Dr. Sharma (AAN 2022)
- ▶ Breast cancer patient
 - 38 unique specimens time points
 - Volume = 7 ± 3.36 mL

Longitudinal data reporting is part of the standard CNSide report for each patient test



Promising Early Adoption of CNSide by the Overall Community



Primary Focus - Achieve CNSide Standard-of-Care Status

- Show clinical validation for adoption into National Comprehensive Cancer Network® (NCCN®) guidelines as standard of care through dual strategy
 - FORESEE clinical trial in Leptomeningeal Metastases (LM)
 - Longitudinal therapy response monitoring study
 - Comparing CNSide to current standard of care (CSF Cytology, Clinical Evaluation and Imaging)
 - Publication of clinical data supporting validation in peer-reviewed journals
 - Five manuscripts underway including data from real-world treatment of patients with breast and lung cancer and LM involvement

See ID# NCT05414123 @ ClinicalTrials.gov

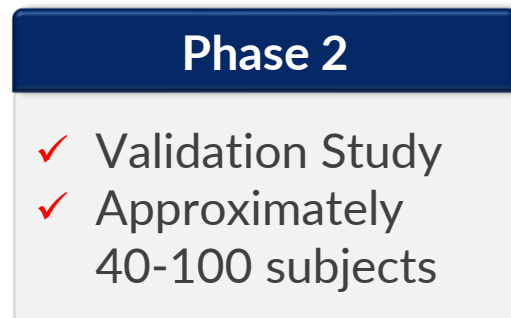
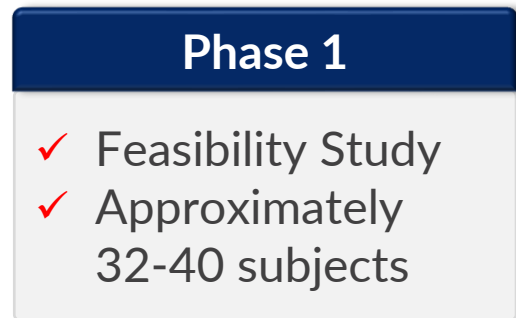
FORESEE Clinical Trial

A Prospective, Multi-Institution Study Led by Northwestern University

Biocept's Clinical Trial - FORESEE Study (NCT05414123)

Objectives:

- To determine the impact of CNSide in managing Leptomeningeal Metastasis in patients with Breast or NSCLC
- Assess correlation of CSF Tumor cells with clinical response
- Assess Sensitivity, Specificity, NPV and PPV compared to Cytology
- Study design:



Now Enrolling

FORESEE Enrollment at Leading Academic Institutions

Enrollment as of August 22, 2023			
Site Name	Enrolled	On-Study	Visits
UT Southwestern	11	11	27
Northwestern University Feinberg School of Medicine	8	5	9
Stanford University	10	5	9
University of Washington	4	4	5
UCSD (recently activated)	-	-	-
Total	33	25	50

Plans to activate additional clinical trial sites

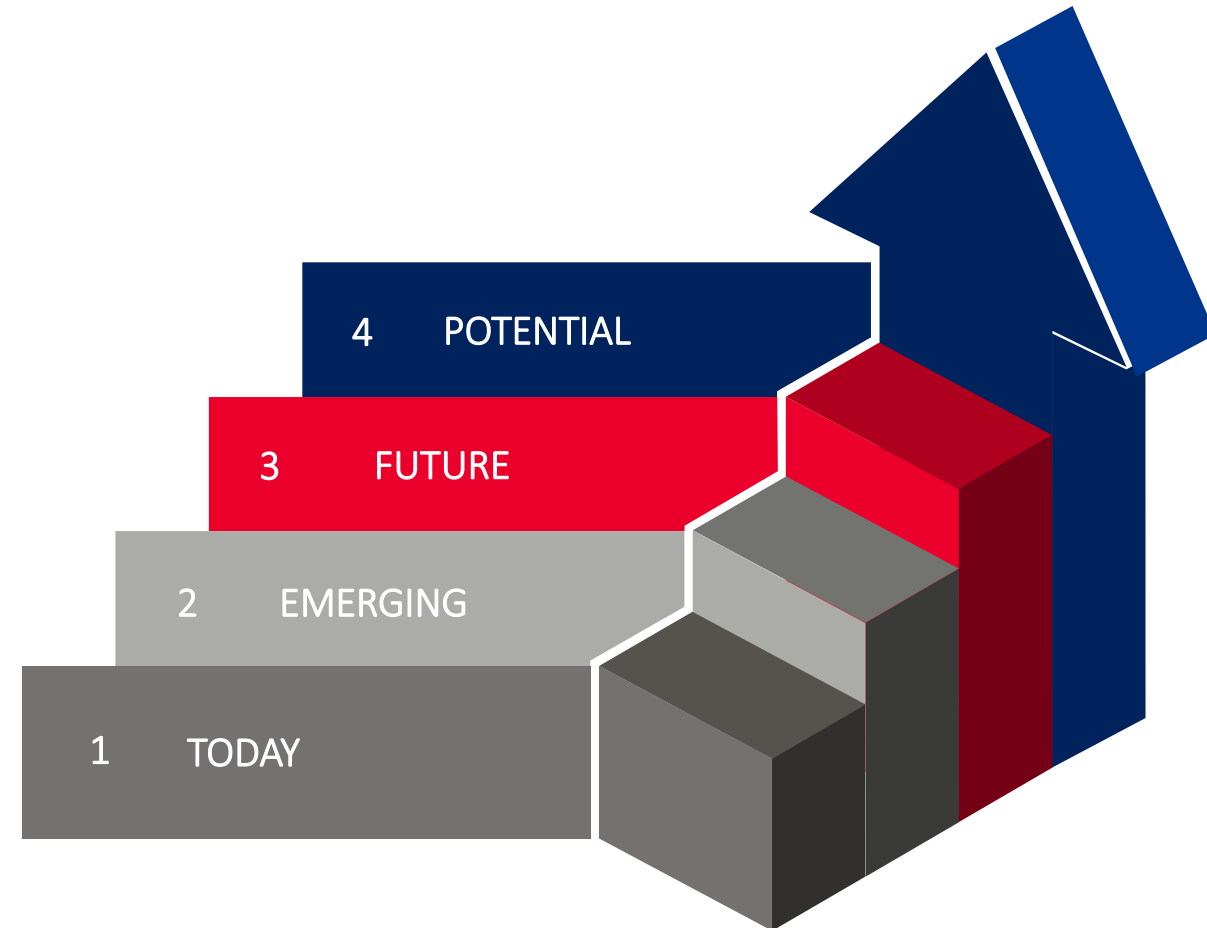
The Opportunity

Building shareholder value with CNSide

Biocept Platform for the CSF Liquid Biopsy Market

Opening New Windows for CNS Disease Management

- 1 Leptomeningeal Metastasis**
 - Establish CSF beachhead in area with critical unmet needs
 - Significantly advance patient care and management
 - >200,000 with CNS involvement¹
- 2 PBM & Gliomas**
 - Expand to other neuro-oncology indications
 - Parenchymal brain metastases
 - Primary brain tumors
- 3 Brain Metastases Prevention / Staging**
 - Enable earlier detection
 - Assess high-risk primary solid tumors associated with metastases earlier using CNSide
 - Establish clinical evidence of utility
- 4 Other neurological diseases**
 - CSF analysis as a window into other CNS disease processes²
 - Especially where cellular process are involved
 - Potential for neurodegenerative disease benefits



1. <https://www.cancernetwork.com/view/management-brain-metastases>
<https://www.cancer.gov/about-cancer/understanding/statistics>

2. Busse et al, *Brain Behav Immun Health*; V.14;2021 Jul



The Team

Leadership Team

Antonino Morales, CPA Director, President and CEO	<ul style="list-style-type: none"> • Broad leadership experience in the US and Latin America with Fortune 100 and early-stage start-up companies • 25 years of senior leadership roles including Business Head for Citibank Latin America • Senior executive/consulting roles with Bank of America, Arthur Andersen, McDonald's, and Mazda • Co-founder for multiple PE and Venture backed start-up companies
Philippe Marchand, PhD COO	<ul style="list-style-type: none"> • 20+ years experience in oncology diagnostics and biopharma/biotech • Proven operations and technology track record as an executive • Extensive experience in rare cell isolation and related analysis technologies
Darrell Taylor, JD CLO & CCO	<ul style="list-style-type: none"> • 20+ years of extensive legal expertise focusing on healthcare transactional, regulatory, and compliance matters • 15+ years on the provider side at LabCorp of America and other clinical and research laboratories • Formerly with global law firm DLA Piper and in-house at Abbott Labs, AbbVie, and Sorrento Therapeutics
Nathan Sweed, MD Medical Director	<ul style="list-style-type: none"> • Graduate of UT Health San Antonio Medical School • Post graduate training in anatomic & clinical pathology • Focused on medical & patient education as well as novel & innovative diagnostic methods
Rob Walsh VP, Controller	<ul style="list-style-type: none"> • Extensive accounting and finance experience in the biotech and life science space • Six years with PwC's Health Industries practice and one year at CFGI, an accounting advisory firm • Received Bachelor of Science and Master of Science in Accounting from the University of Rhode Island
Barbara Blouw, PhD VP Clinical Development	<ul style="list-style-type: none"> • 15 years combined pharma and biotechnology experience • Published scientist with experience in multiple clinical collaborations • Trained at USCD and Sanford Burnham Prebys Medical Research Institute



Board of Visionaries & Scientific Influencers

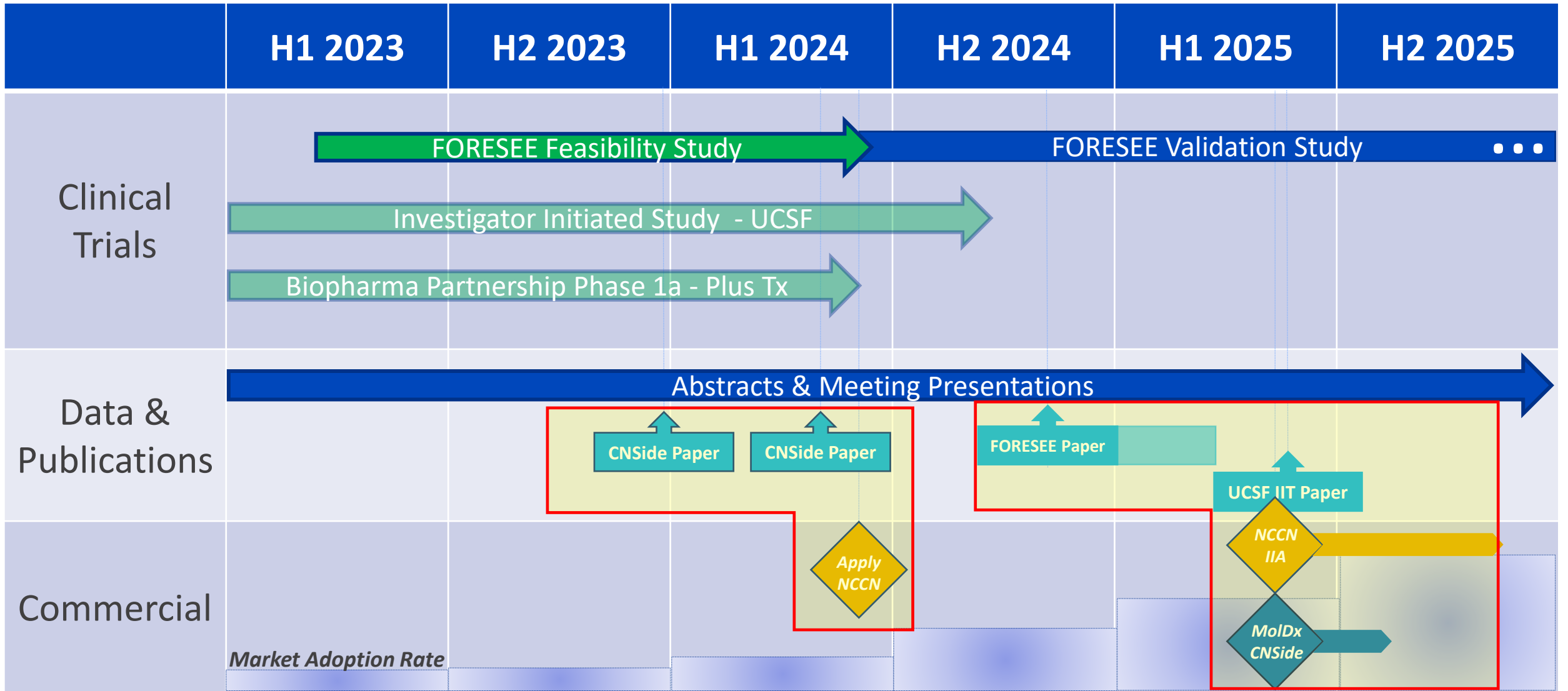
Board of Directors

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- **Marsha A. Chandler, PhD**
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Director, Chair Compensation Committee

Lead Clinical Advisors

- **Santosh Kesari, MD, PhD**
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- **Priya Kumthekar, MD**
Associate Professor of Neurology (Neuro Oncology) and Medicine (Hematology and Oncology)
Northwestern Medicine
Feinberg School of Medicine
Chicago, IL
- **Seema Nagpal, MD**
Clinical Associate Professor (Neurology & Neurological Sciences)
Stanford Medicine
Stanford University
Stanford, CA

Timeline to NCCN Guidelines → LM Indication



Investment Highlights

- Commercializing CNSide assay to test for cancer involvement in CNS; initial U.S. market opportunity of \$1.2B
- Pursuing CNSide standard of care status to support broader adoption and higher reimbursement
- Targeting collaborations with biopharma partners using CNSide assay to support therapeutics clinical trials

Dedicated to improving outcomes for patients with advanced cancer.

