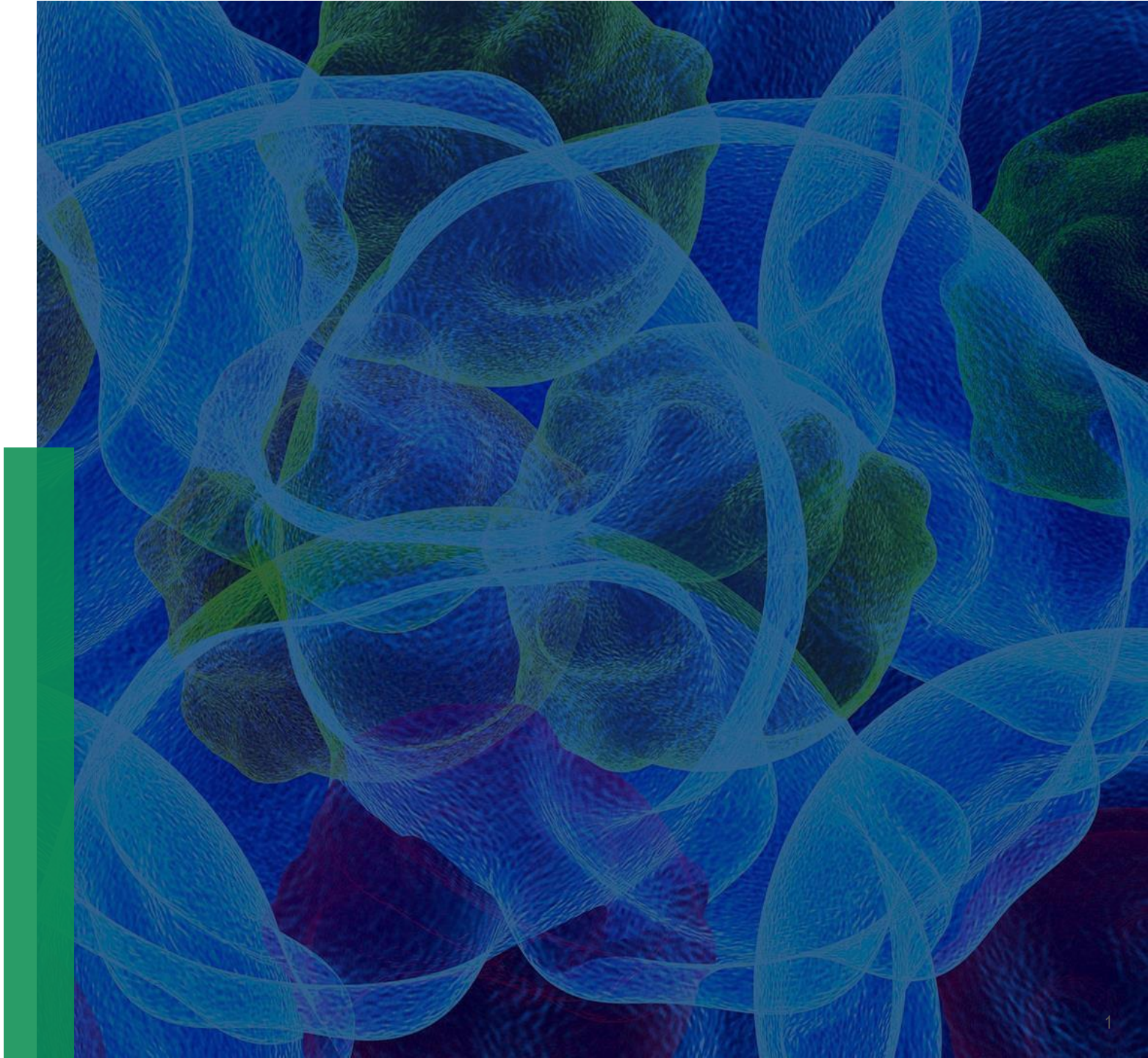




Corporate Presentation

March 2024

NASDAQ: CLRB



Forward Looking Statements and Disclaimers

This presentation contains forward-looking statements. Such statements are valid only as of today and we disclaim any obligation to update this information. These statements are only estimates and predictions and are subject to known and unknown risks and uncertainties that may cause actual future experiences and results to differ materially from the statements made. These statements are based on our current beliefs and expectations as to such future outcomes. Factors that might cause such a material difference include our current views with respect to our business strategy, business plan and research and development activities; the progress of our product development programs, including clinical testing and the timing of commencement and results thereof; our projected operating results, including research and development expenses; our ability to continue development plans for iopofosine I 131 (also known as CLR 131), CLR 1900 series, CLR 2000 series and CLR 12120; our ability to continue development plans for our Phospholipid Drug Conjugates (PDC)TM; our ability to maintain orphan drug designation in the U.S. for iopofosine as a therapeutic for the treatment of multiple myeloma, neuroblastoma, osteosarcoma, rhabdomyosarcoma, Ewing's sarcoma and lymphoplasmacytic lymphoma, and the expected benefits of orphan drug status; any disruptions at our sole supplier of iopofosine; our ability to pursue strategic alternatives; our ability to advance our technologies into product candidates; our enhancement and consumption of current resources along with ability to obtain additional funding; our current view regarding general economic and market conditions, including our competitive strengths; the future impacts of the COVID-19 pandemic on our business, employees, operating results, ability to recruit patients for clinical studies, ability to obtain additional funding, product development programs, research and development programs, suppliers and third-party manufacturers; uncertainty and economic instability resulting from conflicts, military actions, terrorist attacks, natural disasters, public health crises, including the occurrence of a contagious disease or illness such as the COVID-19 pandemic, cyber-attacks and general instability; the future impacts of legislative and regulatory developments in the United States on the pricing and reimbursement of our product candidates; our ability to meet the continued listing standards of Nasdaq; assumptions underlying any of the foregoing; any other statements that address events or developments that we intend or believe will or may occur in the future; as well as our ability to complete enrollment and release top-line data from the WM CLOVER-WaM trial in the second half of 2023, our ability to receive break-through therapy approval and NDA approval for our iopofosine I 131 program and our ability to commercially manufacture and launch our product candidate if we receive regulatory approval. A complete description of risks and uncertainties related to our business is contained in our periodic reports filed with the Securities and Exchange Commission including our Form 10-K for the year ended December 31, 2023, and our Form 10-Q for the quarter ended September 30, 2023.

This presentation includes industry and market data that we obtained from industry publications and journals, third-party studies and surveys, internal company studies and surveys, and other publicly available information. Industry publications and surveys generally state that the information contained therein has been obtained from sources believed to be reliable. Although we believe the industry and market data to be reliable as of the date of this presentation, this information could prove to be inaccurate. Industry and market data could be wrong because of the method by which sources obtained their data and because information cannot always be verified with complete certainty due to the limits on the availability and reliability of raw data, the voluntary nature of the data gathering process, and other limitations and uncertainties. In addition, we do not know all of the assumptions that were used in preparing the forecasts from the sources relied upon or cited therein.

Collectar: Highlights

Discovering and Developing the Next Generation of Drug Conjugates

Proprietary phospholipid ether drug conjugate (PDC) platform with the demonstrated ability to deliver a broad array of therapeutic modalities to target cancers

Iopofosine I 131 achieved primary endpoint in Waldenstrom's macroglobulinemia (WM) CLOVER-WaM pivotal study

Industry-leading phospholipid radiotherapeutic conjugate (PRC) franchise with demonstrated clinical activity in hematologic malignancies

The only radiotherapeutic with "off the shelf" global distribution; logistics provide secure and redundant supply to outpatient setting

Received milestone-based funding of \$44M post CLOVER-WaM top-line data release

Successful WM Pivotal Study Topline Data Supports 2H24 NDA Submission



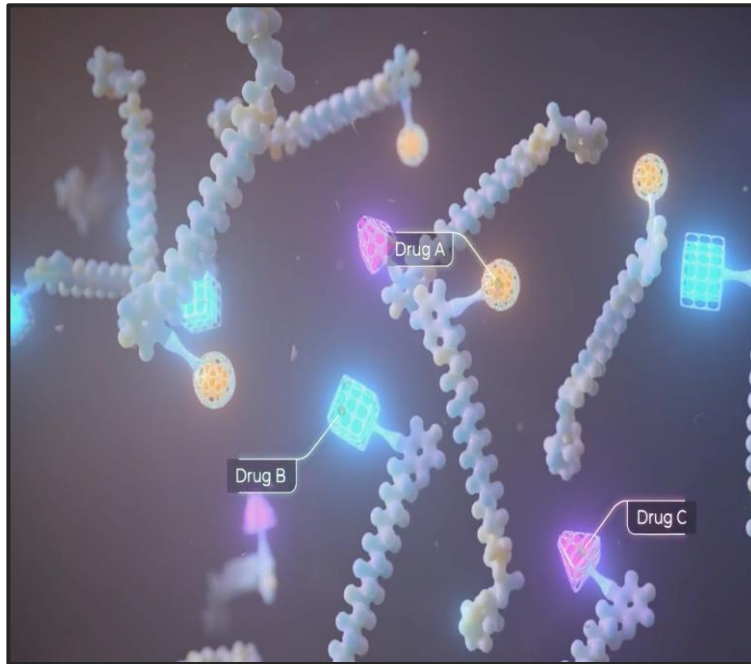
Phospholipid Drug Conjugate (PDC)

Platform & Pipeline

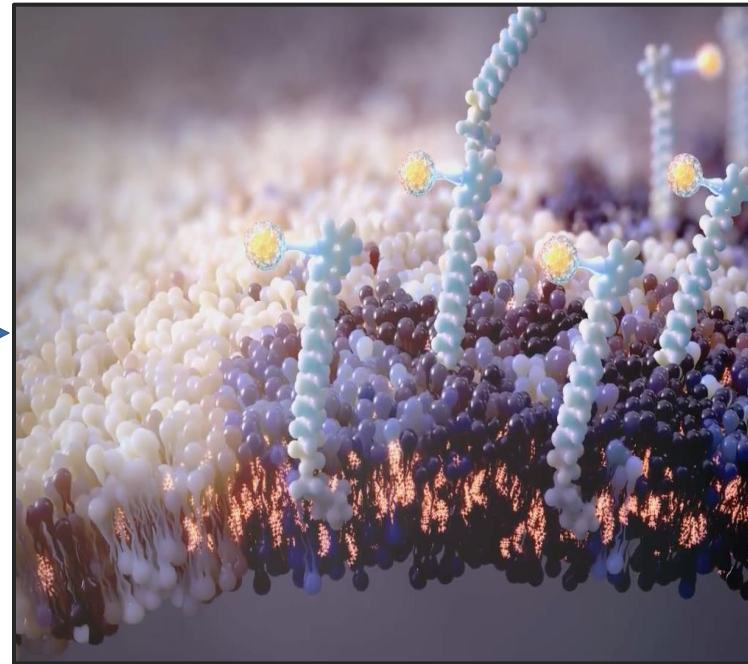
Phospholipid Drug Conjugate Platform (PDC): MOA

Universal Targeting with Diverse Payloads

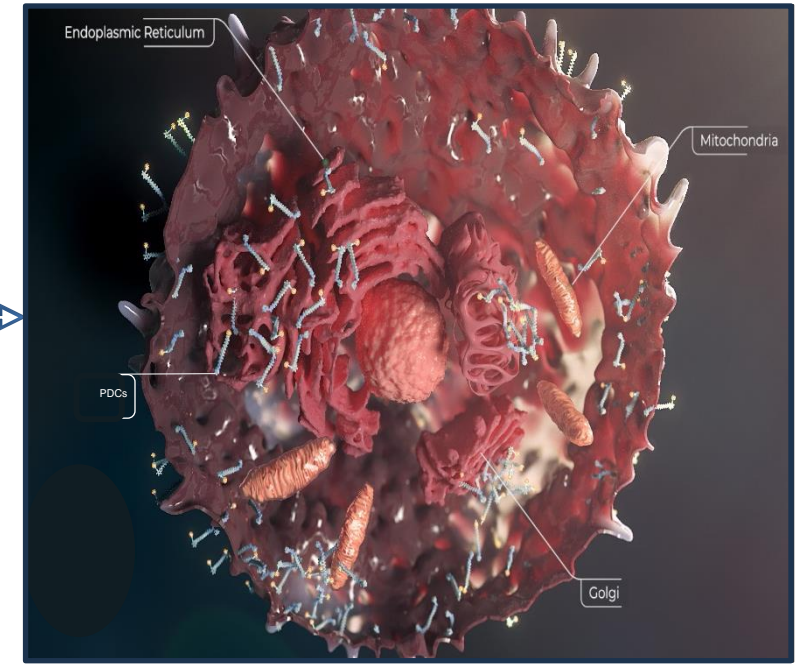
(1) PDC containing desired payload with tumor-targeting phospholipid ether



(2) Specific targeting of lipid raft on cancer cell membrane



(3) Intercellular delivery and release of payload by transmembrane flipping of lipid raft



Profile	Diverse Payload	Pan-cancer Targeting	Cancer specific Target	Rapid Uptake	CNS Penetration	Cytoplasmic Entry
Phospholipid Drug Conjugate ¹ (PDC)	✓	✓	✓	✓	✓	✓

PDC Platform: Pipeline

MOA - Therapeutic Franchises

Franchise Payloads	Conjugates	MOA
Radiotherapeutic (PRC)	Radio-conjugate <ul style="list-style-type: none">Targeted delivery of any radioisotopeAlpha and beta emittersIopofosine I 131 in a pivotal study	<ul style="list-style-type: none">Beta emitter (^{131}I, ^{177}Lu, ^{90}Y, ^{67}Cu, etc.)Alpha emitter (^{211}At, ^{225}Ac, ^{223}Ra, ^{213}Bi, etc.)Additional isotopes (^{153}Gd, ^{67}Ga, Auger, etc.)
Cytotoxic Molecule (PCC)	Small-molecule Conjugates <ul style="list-style-type: none">Demonstrated <i>in-vivo</i> safety and efficacy in multiple animal modelsPico and nanomolar activity	<ul style="list-style-type: none">PLK-1Seco-dubaMMAFOther small molecules
Biologics (PPC)	Peptide and Nanobody Conjugates <ul style="list-style-type: none">Targeting intracellular pathways that cannot be targeted with small molecules	<ul style="list-style-type: none">Ribosomal peptideProtein inhibitors
Nucleic Acid (POC)	Oligo Conjugates <ul style="list-style-type: none">Intracellular delivery of nucleic acids providing knockdown or knock-in gene control in cancer cells	<ul style="list-style-type: none">RNAi-/siRNAmRNAcDNA

Platform Enables Value Creation Across a Broad Range of Therapeutic Modalities

PDC Platform: Expected Pipeline Milestones 2024-2025

		2024		2025	
		1H	2H	1H	2H
Iopofosine I 131 β-emitting radiotherapeutic	Waldenstrom's macroglobulinemia ²	Top Line Data - Jan Updated Q2	NDA Submission	Planned Launch	
	B-Cell Malignancies MM, pCNSL		Ph 2a Enrollment Completed	Initiate Ph 2b	
	Pediatric pHGG	Commence Enrollment	Ph 1b Interim Assessment		Ph 1b Trial Results
CLR 121225 α-emitting radiotherapeutic	Solid Tumor	IND Enabling Studies	IND Filing	Ph 1 Initiation	
PRC (isotope TBD)	Discovery		Development Candidate Identified		
Early Pipeline	Discovery		Development Candidate Identified		
Manufacturing	Iopofosine I 131/ CLR 121225		Establish Iopofosine EU Manufacturing	CLR 121225 GMP Supply	



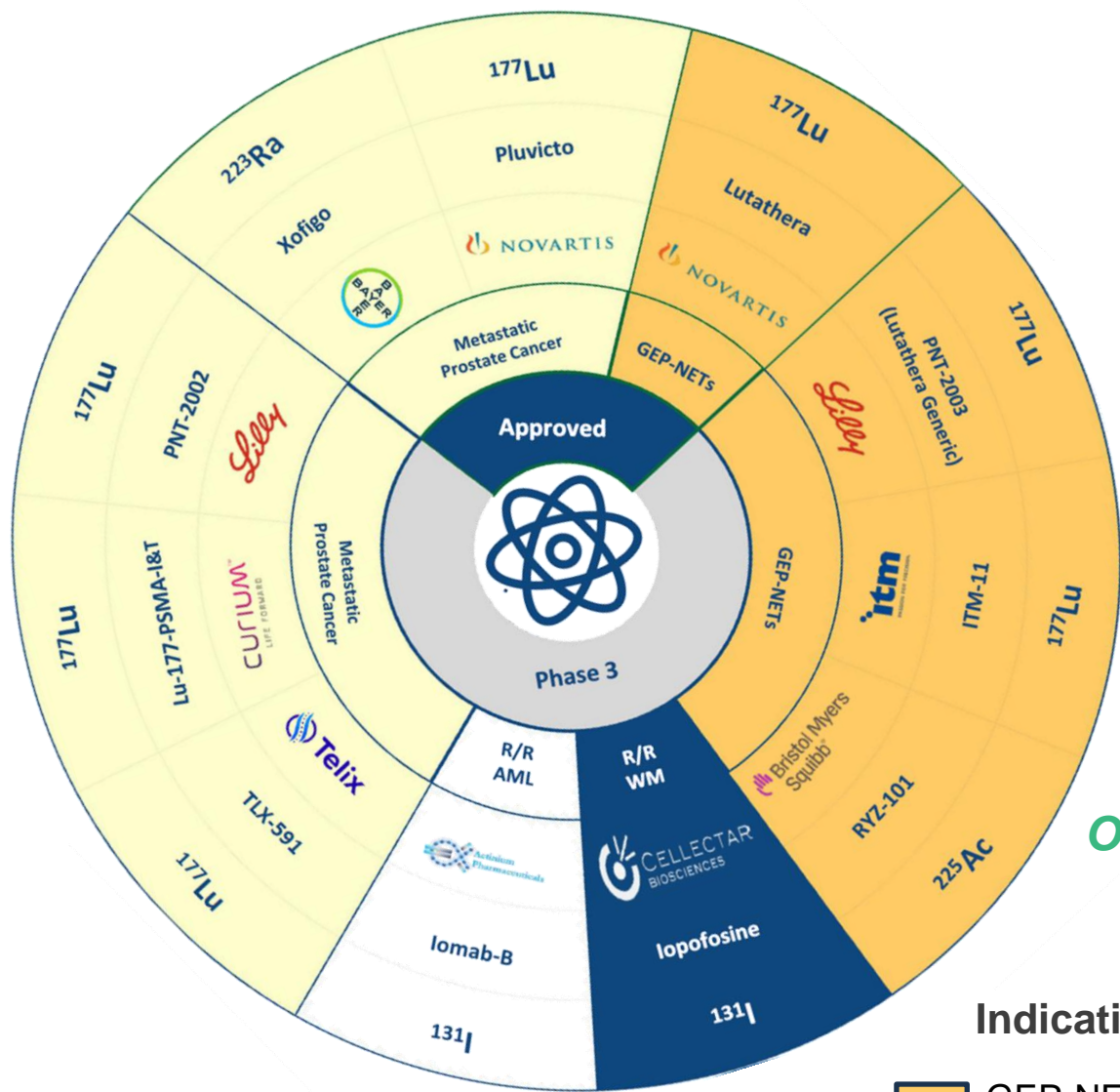
PRC Franchise

Radiotherapy Competitive Landscape



Radiotherapy Competitive Landscape: Approved & Late-Stage Programs

Focus - Metastatic Prostate Cancer (mPC) & Gastroenteropancreatic Neuroendocrine Tumor (GEP-NET)



3 approved products

- 2 mPC
- 1 GEP-NET

8 programs in pivotal studies

- 3 mPC
- 3 GEP-NET
- 1 AML (hospital in-patient care)
- 1 WM (out-patient care)

Significant Product Development and Commercialization Opportunity Exists in Hematologic and Solid Tumor Markets

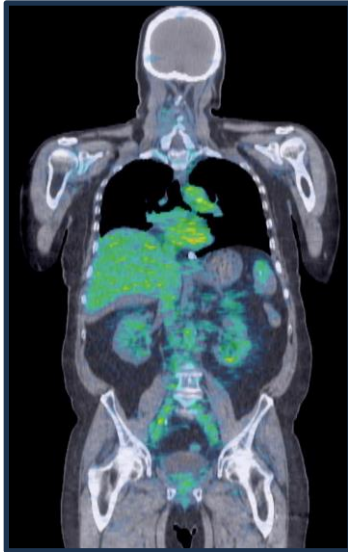
Indication Key

- | | |
|---|---|
| GEP-NETs | WM |
| mPC | AML |

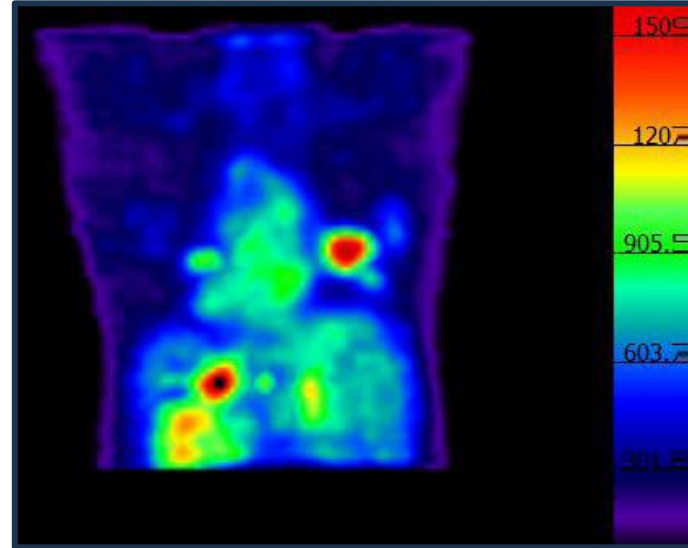
Radiotherapy Competitive Landscape: PRC Unique Attributes

Universal Targeting with Diverse Isotopes Provides Advantages Compared to RLTs

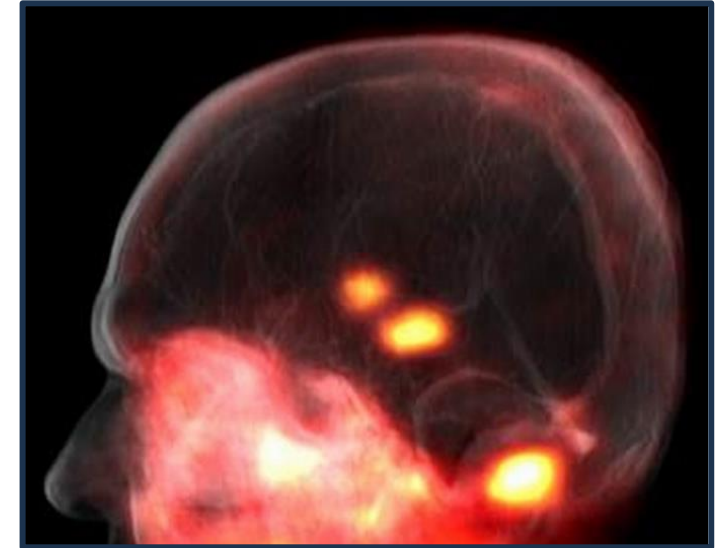
(1) PRC provide preferential distribution and uptake



(2) Significant accumulation of isotope within the primary tumor and metastases



(3) Targeting cancer even in sanctuary compartments



Profile	α , β , and auger	Size of Molecule	Tissue/Tumor Penetration	Stability	Clearance	Resistance Development	Out-patient/No Isolation	Production Costs
PRC	●	●	●	●	●	●	●	●
Radioligand Therapy (RLT)	●	● ●	●	●	●	●	● ●	● ●



PRC Franchise

**Waldenstrom's
macroglobulinemia**
Iopofosine I 131
Clinical



Iopofosine I 131: Global CLOVER-WaM Pivotal Study

FDA Agreed-Upon Design for Approval; Single Arm Registration Study Fully Enrolled

Enrollment Criteria

Treatment and Evaluation Period (1 year)

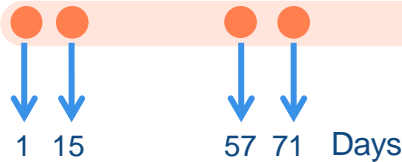
Long Term Safety Follow-up (3 years)

WM Patients who received 2 Prior lines of therapy, including failed or suboptimal response to BTKi
n=50

Endpoints:
Major Response Rate

Key Secondaries:
DoR, TFR, ORR

← Response Assessment Window →



15 mCi/m² per dose

- 4 doses over two cycles (71 days)
- Active evaluation period for up to 12 months from initial dose

MRR Primary Endpoint of 20% Achieves Statistical Significance

Iopofosine I 131: Global CLOVER-WaM Pivotal Study

Patient Characteristics as of January 3, 2024

Patient Characteristics	All Patients ⁹
Patients dosed in mITT, n	45
Median age, y (range)	71 (50-88)
Sex, n (%)	
Male	33 (73.3)
Female	12 (26.7)
IPSSWM score (%)	
Low	11 (24.0)
Medium	10 (22.0)
High	9 (20.0)
Unknown	15 (33.0)
Median IgM, mdl (range)	2185 (388 – 7400)
Extramedullary Disease, mm ³ (range)	1716 (67 – 17185)

Patient Characteristics	All Patients
Median Prior Lines of Therapy (range)	4 (2-14)
Prior Treatment/Refractory n (%)	
BTKi	36 (80.0)/18 (50.0)
Rituximab	41 (91.1)/18 (40.0)
Chemotherapy	36 (80.0)/TBD
Dual Refractory (BTKi & Rituximab)	12 (26.7)
Genotype (%)	
MYD88 WT / Mut (n=44)	13 (29.5) / 31 (70.5)
CXCR4 WT / Mut (n=35)	32 (91.4) / 3 (8.6)
P53 WT/Mut (n=33)	31 (93.9) / 2 (6.1)

Iopofosine I 131: Global CLOVER-WaM Pivotal Study Efficacy Results

Study Achieves Primary Endpoint

61%

Major Response
Rate

75.6%

Overall Response
Rate

100%

Disease Control
Rate

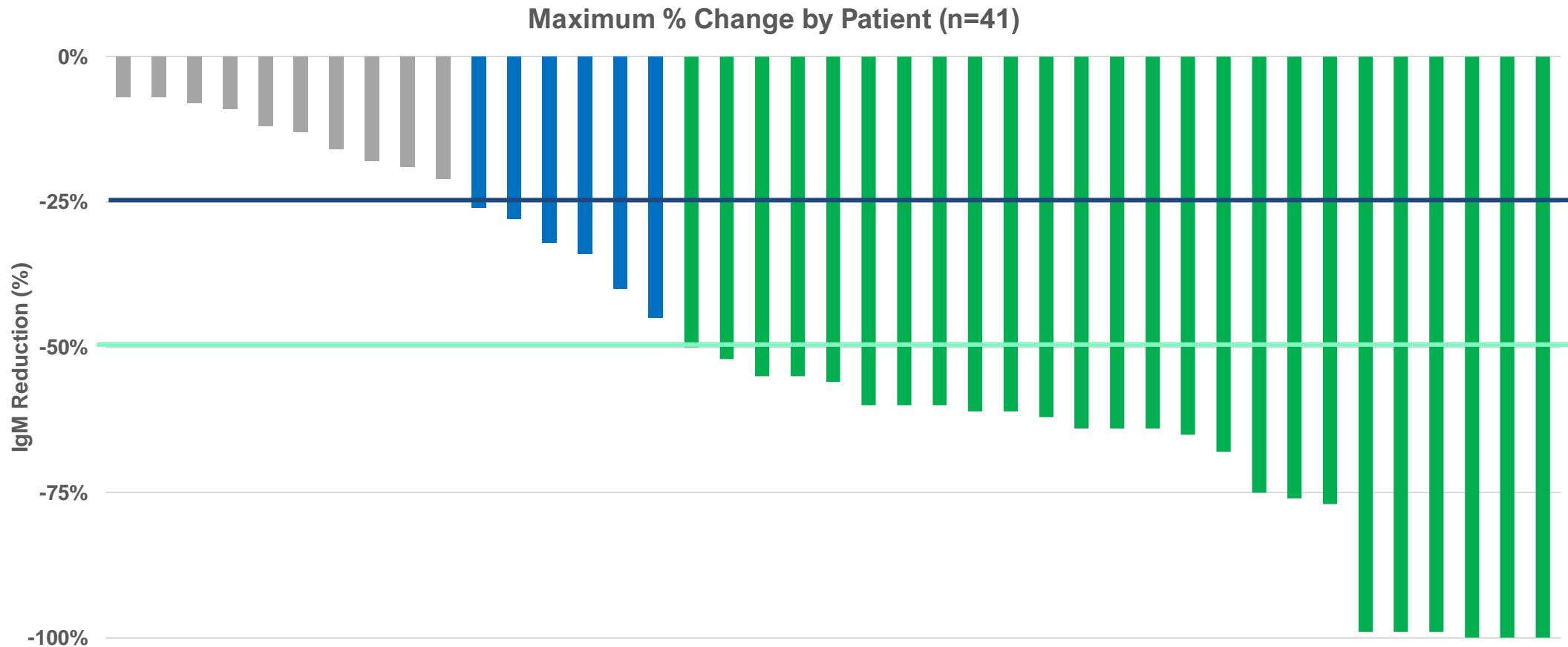
Iopofosine I 131 Potential to be the Standard of Care in r/r WM

- 7.3% Complete Response Rate (CR)
- mDoR and mPFS not reached with median follow-up of 8 months
- High rate of response across key WM genotypes; potentially disease-modifying

61% MRR More Than Three Times the Protocol Statistical Hurdle of 20%

Iopofosine I 131: Global CLOVER-WaM Pivotal Study

Best Response by Patient – 100% of Evaluable Patients Experienced IgM Reduction



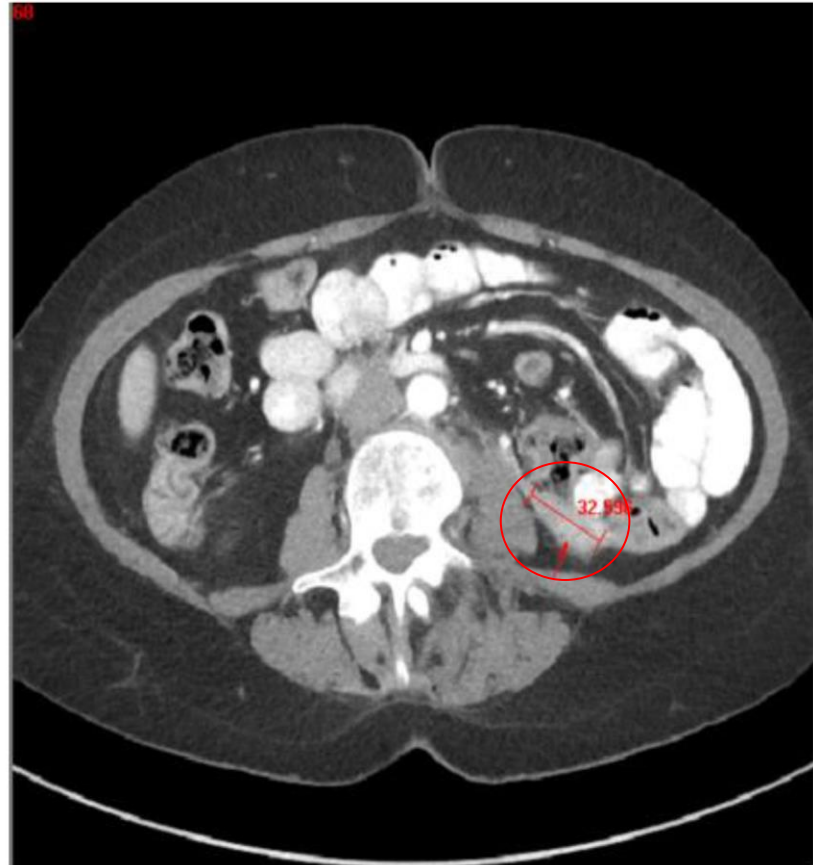
Deep Responses in Heavily Pretreated Multi-Class Refractory Population May Result in Prolonged Progression-Free Survival

Iopofosine I 131: Global CLOVER-WaM Pivotal Study

Activity in Patients with Extramedullary Disease



Day 1 Tumor Size
660mm²



Day 28 Tumor Size
160mm²



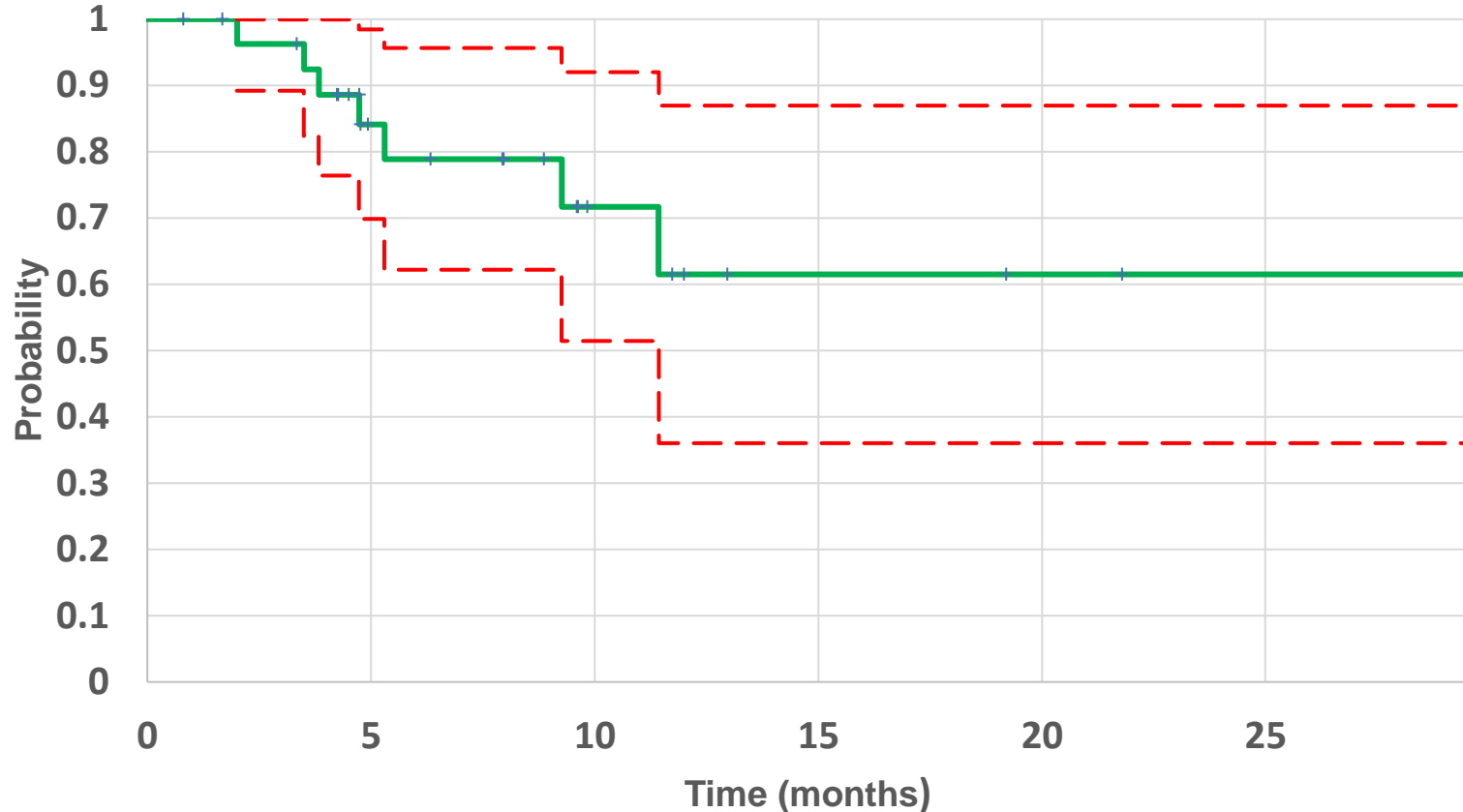
Day 57 Tumor Size
0mm²

Iopofosine Disease-Modifying Property Evidenced by Complete Removal of Bulky Tumors

Iopofosine I 131: Global CLOVER-WaM Pivotal Study

Kaplan-Meier Analysis of Duration of Response (DoR)

Duration of Response Distribution Function (n=30)



- Median Duration of Response (DoR) not reached based upon data cutoff date
- Confidence interval supports minimum DoR of 11.4 months
- Maximum ongoing response is >30 months

Based on Published Data, Deeper Responses Provide Greater Duration of Response

Iopofosine I 131: Global CLOVER-WaM Pivotal Study Safety Results

Evaluable mITT n=45

0%

Treatment related
discontinuations

0%

Treatment related
deaths

0%

Clinically significant
bleeding

Treatment-Emergent Adverse Events (≥10%)

Preferred Term	Overall n (%)	Grade 3 n (%)	Grade 4 n (%)
Thrombocytopenia	33 (73)	5 (11)	20 (44)
Lymphocyte Count Decreased	5 (11)	4 (9)	1 (2)
Decreased White Blood Cell Count	13 (29)	4 (9)	5 (11)
Anemia	19 (42)	10 (22)	2 (4)
Neutropenia	25 (56)	2 (4)	15 (33)
Fatigue	8 (18)	1 (2)	-
Nausea	7 (16)	1 (2)	-
Dyspnoea	5 (11)	1 (2)	-

- All patients recovered from cytopenias
- Onset and recovery of cytopenias are predictable and manageable
- No treatment-related cardiovascular, CNS, renal or hepatic adverse events

Iopofosine I 131: Global CLOVER-WaM Pivotal Study Summary

- To date, the first and largest WM post-second-line study, including both BTKi and dual refractory patients
- 61% MRR in 41 evaluable patients; 18 of first 25 patients (72%) achieved MRR with the benefit of additional follow-up time
- Fixed course of treatment with only 4 doses provides a favorable safety profile with no treatment-related discontinuations

***Positive Top-Line Data Achieved CLOVER-WaM Primary Study Endpoint;
NDA Submission on Track for 2H24***



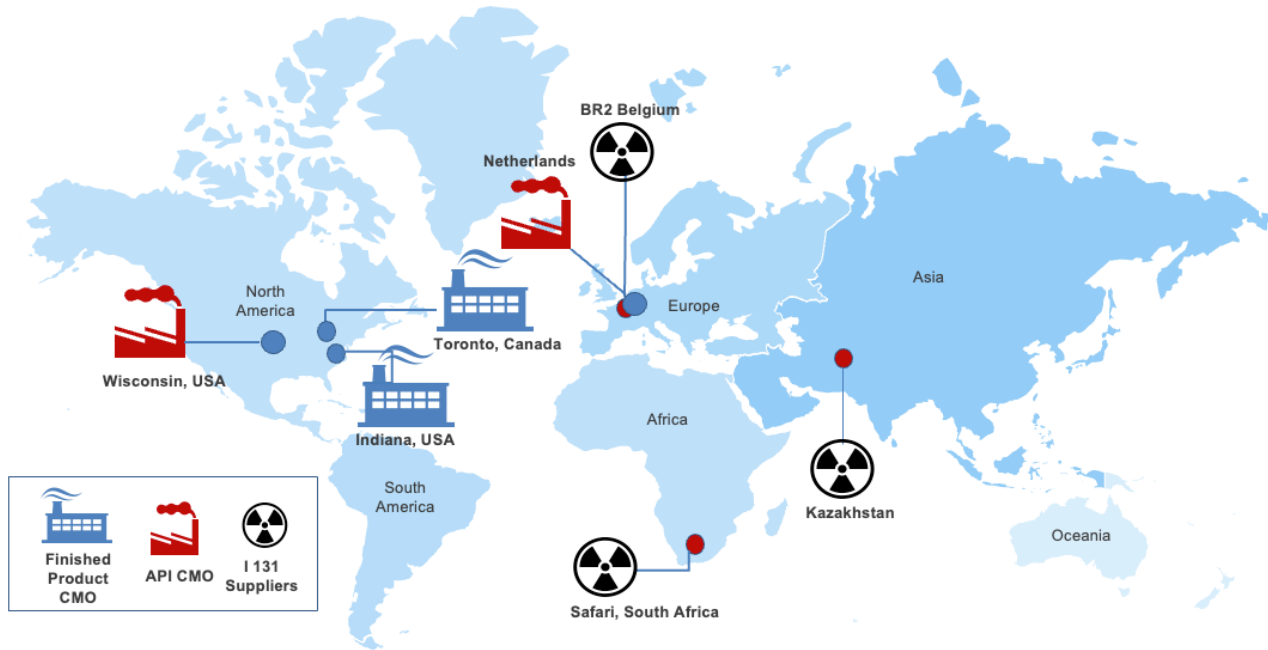
PRC Franchise

**Waldenstrom's
macroglobulinemia**
Iopofosine I 131
Commercial



Iopofosine I 131: Manufacturing & Supply Chain

Multi-Sourced Network Supports Secure and Uninterrupted Supply



Designed to Simplify & Enhance User Experience

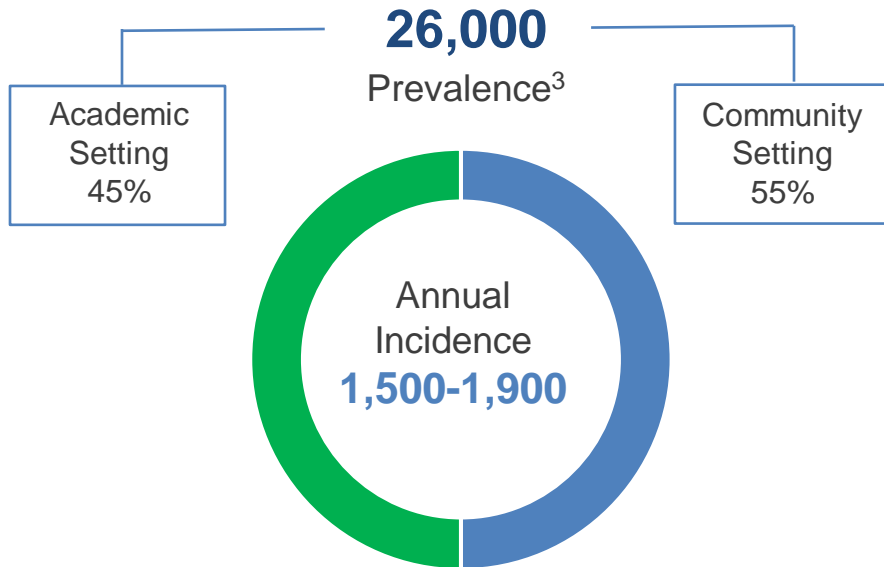
- Redundancy provides seamless & secure supply
- Manufacturing process increases yields and batch sizes
- CDMOs provide overlapping regional supply centers
- Global distribution within 72 hours
 - No cold chain logistics
 - Stored at room temperature
- Optimized formulation provides “off-the-shelf” convenience
 - Industry-leading shelf-life optimizes treatment scheduling
 - Shipped ready to use - no dosimetry required

The First “Off the Shelf” Radiotherapeutic with 17+ Day Storage Life

Iopofosine I 131: WM U.S. Market Opportunity

Concentrated, Prevalent Patient Population with High Unmet Clinical Need

Estimated Market Size



Patients are concentrated geographically in large community and academic accounts⁴

~80% of WM patients located in 15 states⁵

Patient Treatment Journey

81% of patients under care in the last year are currently receiving active treatment⁴

~**80%** of patients will receive 3rd line treatment⁴

~**50%** of 3rd line patients not receiving treatment likely to consider new treatment options⁴

Unmet Need - No Approved Treatments

4-12% Major Response Rates (MRR) RWD beyond 2nd line therapy⁶

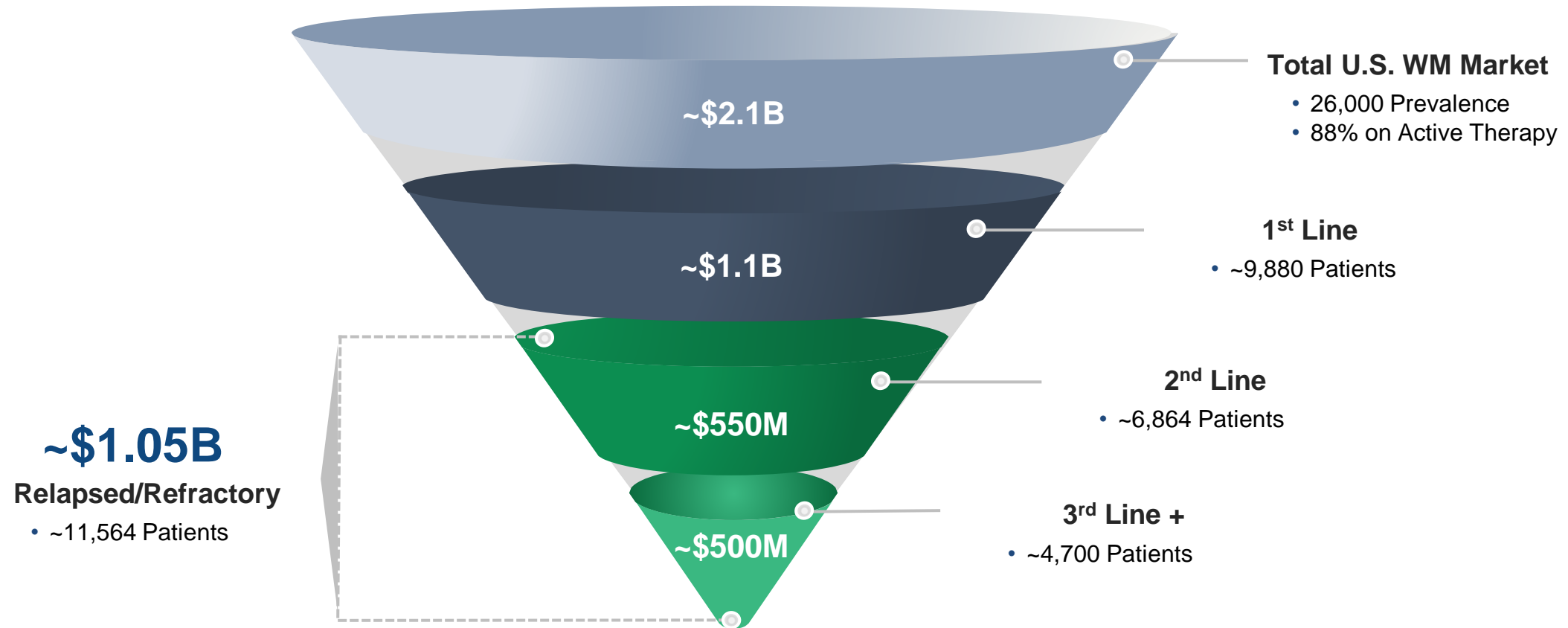
0% CRs reported with single-agent BTKi therapy¹

Continuous therapy may increase non-compliance, toxicity and financial burden

Significant Opportunity to Improve and Expand Treatment in a Substantial, Concentrated WM Market

Iopofosine I 131: U.S. Waldenström's Macroglobulinemia Market

Total Market Value Estimated at ~\$2.1B⁷



Iopofosine's Clinical Outcomes and Differentiated Profile Provide Opportunity to Address High Unmet Need and Capture Significant Market Share

Iopofosine I 131: U.S. WM Shares By Line of Therapy

No Established Standard of Care Across All Lines of Therapy⁸

>60%

Non-FDA approved drug share across all lines of therapy

52%

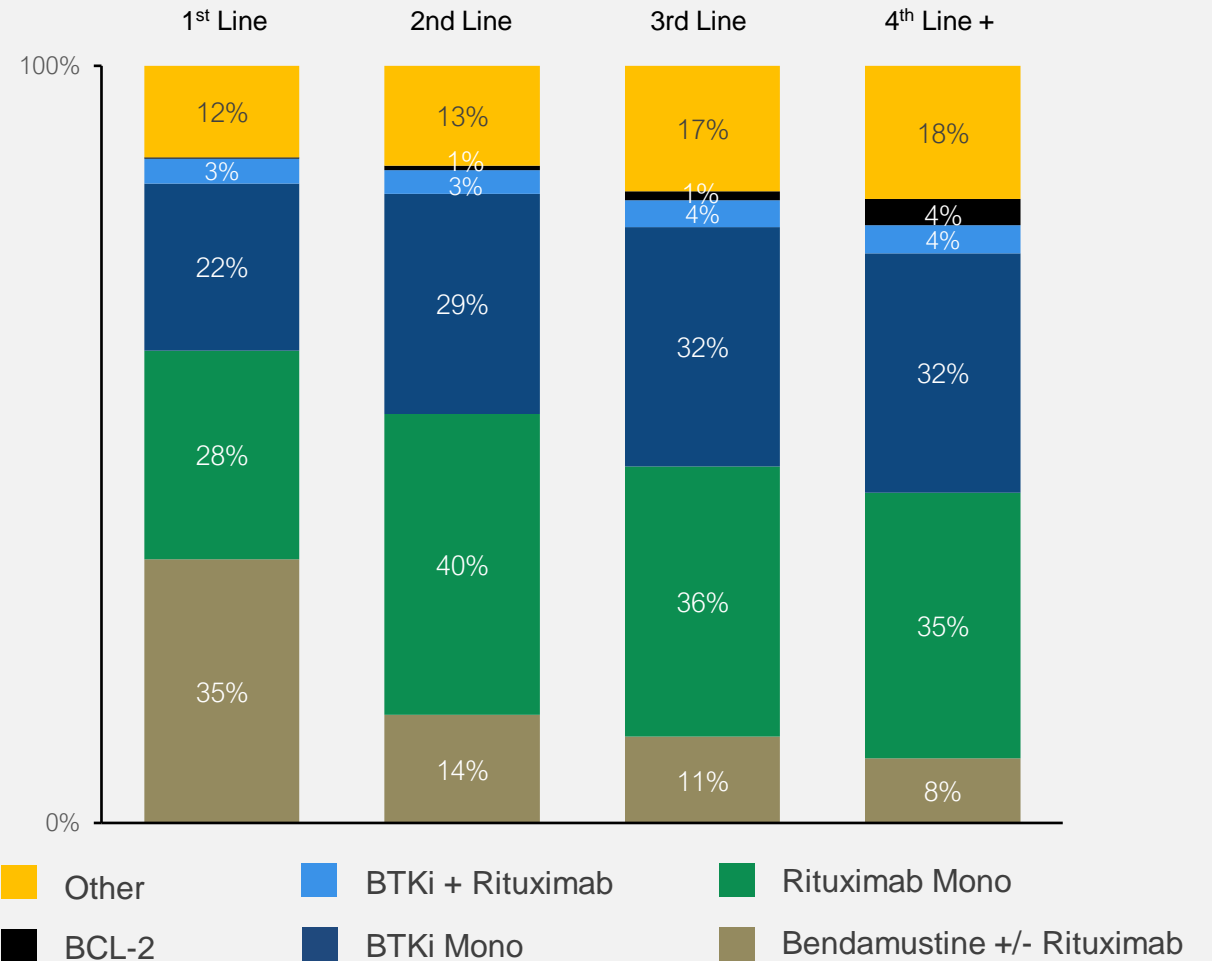
3rd line BTKi patients received a BTKi in 2nd line

1-4%

BCL2 inhibitor utilization across all lines of treatment

Clear Unmet Need Provides Potential to Capture Significant Market Share with a Differentiated Product Profile

Market Shares by Line of Therapy



Iopofosine I 131: Commercial Opportunity

Four Favorable WM Market Characteristics



Unmet Need

- Addressable market of ~11,564 r/r patients, ~4700 patients beyond 2nd line therapy; Annual 3rd line incidence ~988 patients³
- 4-12% MRRs RWD beyond 2nd line therapy
- Currently, no approved fixed course of therapy for r/r WM



Highly Concentrated

- 10% of account group universe represents ~70% of WM opportunity⁶
- ~80% of patients located in 15 states⁶
- Large community network practices treat the majority WM patients in the community setting⁶



Limited Competition

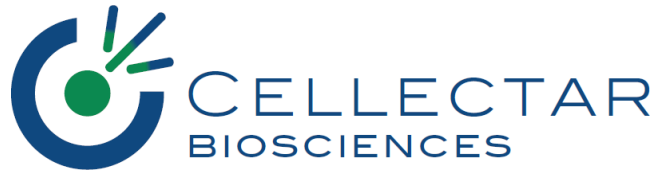
- >60% Non-FDA approved drug share across all lines of therapy⁶
- No active promotion or share of voice in WM
- Low utilization of non-BTKi therapies beyond 2nd line therapy



Value Capture

- 61% MRR in a heavily pretreated population, regardless of patient characteristics
- Fixed therapy – 4 doses given on Day 1, 15, 57 & 71
- Novel MOA different from BTKi MOA

Iopofosine's Strong Pivotal Data Along With a Concentrated WM Market, Provides Opportunity to Deploy a Targeted Commercial Team with an Investment of ~\$25M



PRC Franchise

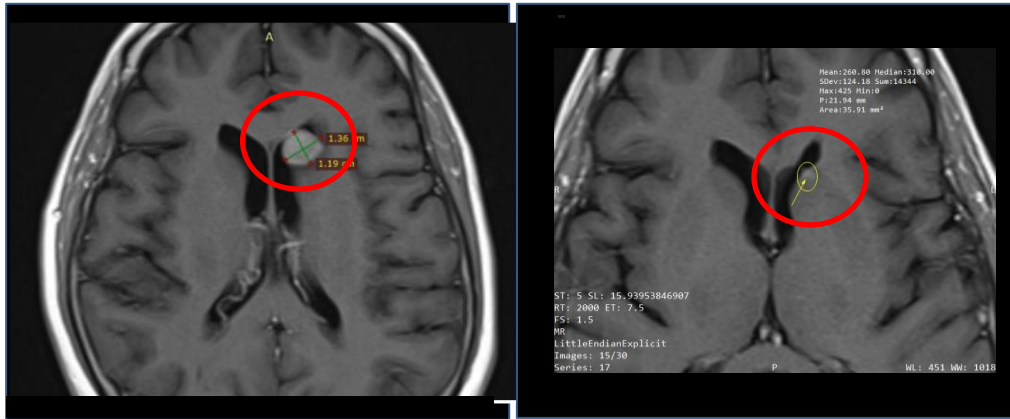
**Hematologic and Solid Tumors
Beyond WM**

Iopofosine I 131



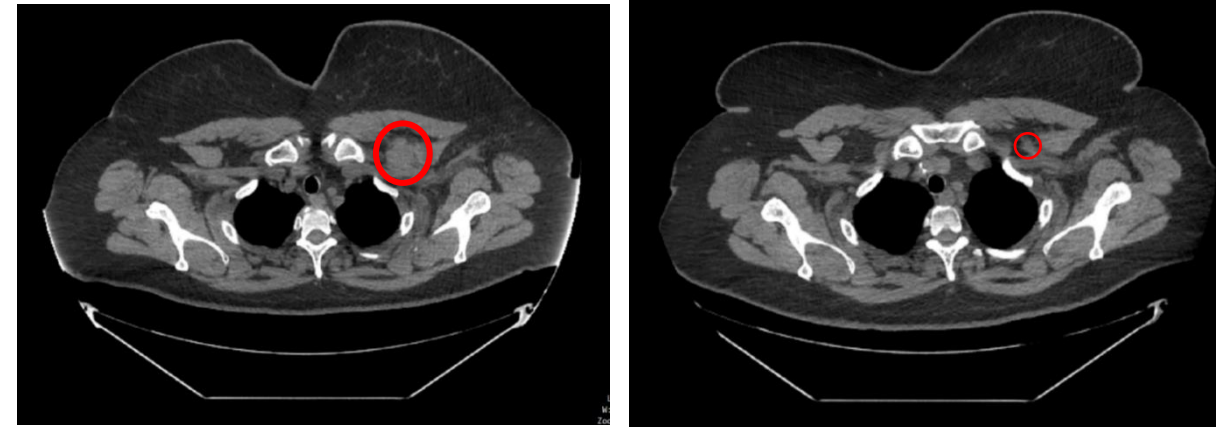
Iopofosine I 131: Activity Beyond Waldenstrom's macroglobulinemia

Refractory Primary CNS Lymphoma



Complete Response

Refractory Diffuse Large B Cell Lymphoma

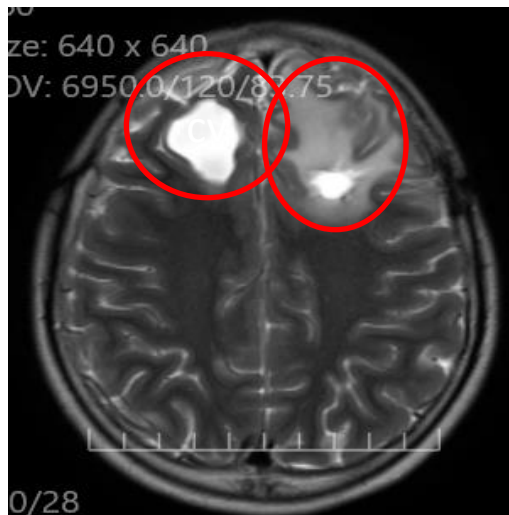


30% ORR with 10% CRR

HEMATOLOGIC

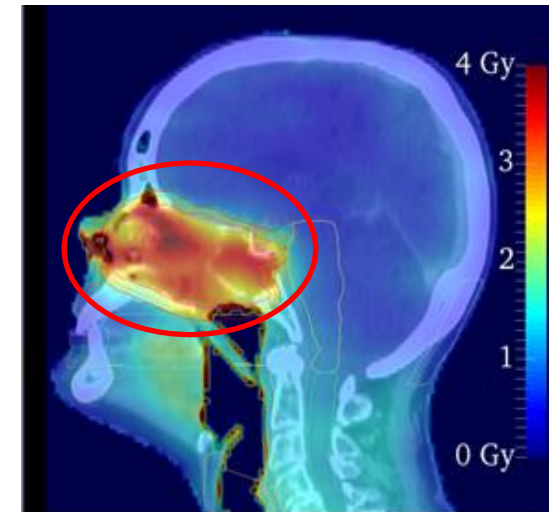
SOLID TUMOR

Relapsed Pediatric High-Grade Glioma



Extended PFS

Recurrent Squamous Cell Carcinoma Head & Neck

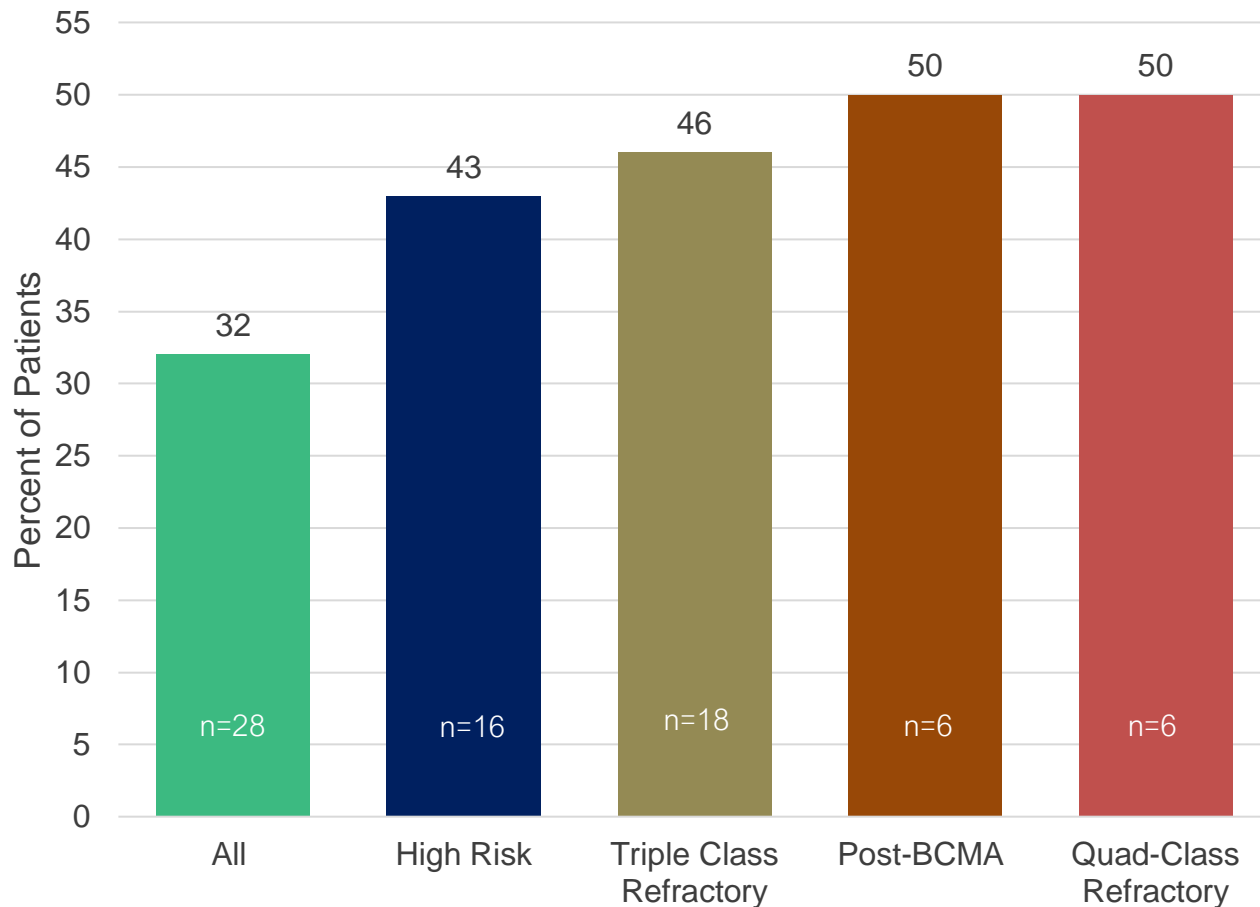


73% ORR with 64% CRR

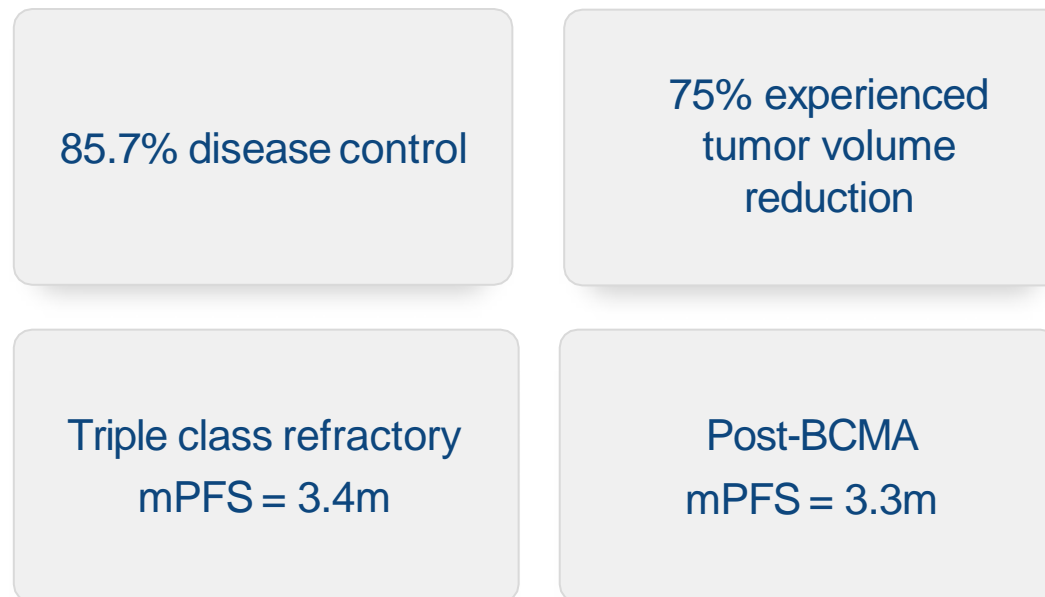
ACROSS BBB SYSTEMIC

Iopofosine I 131: Phase 2a r/r Multiple Myeloma Subset Analyses

Response Rate



Additional Clinical Benefits



Patient Subset Response Rates Range from 43-50%



PRC Franchise

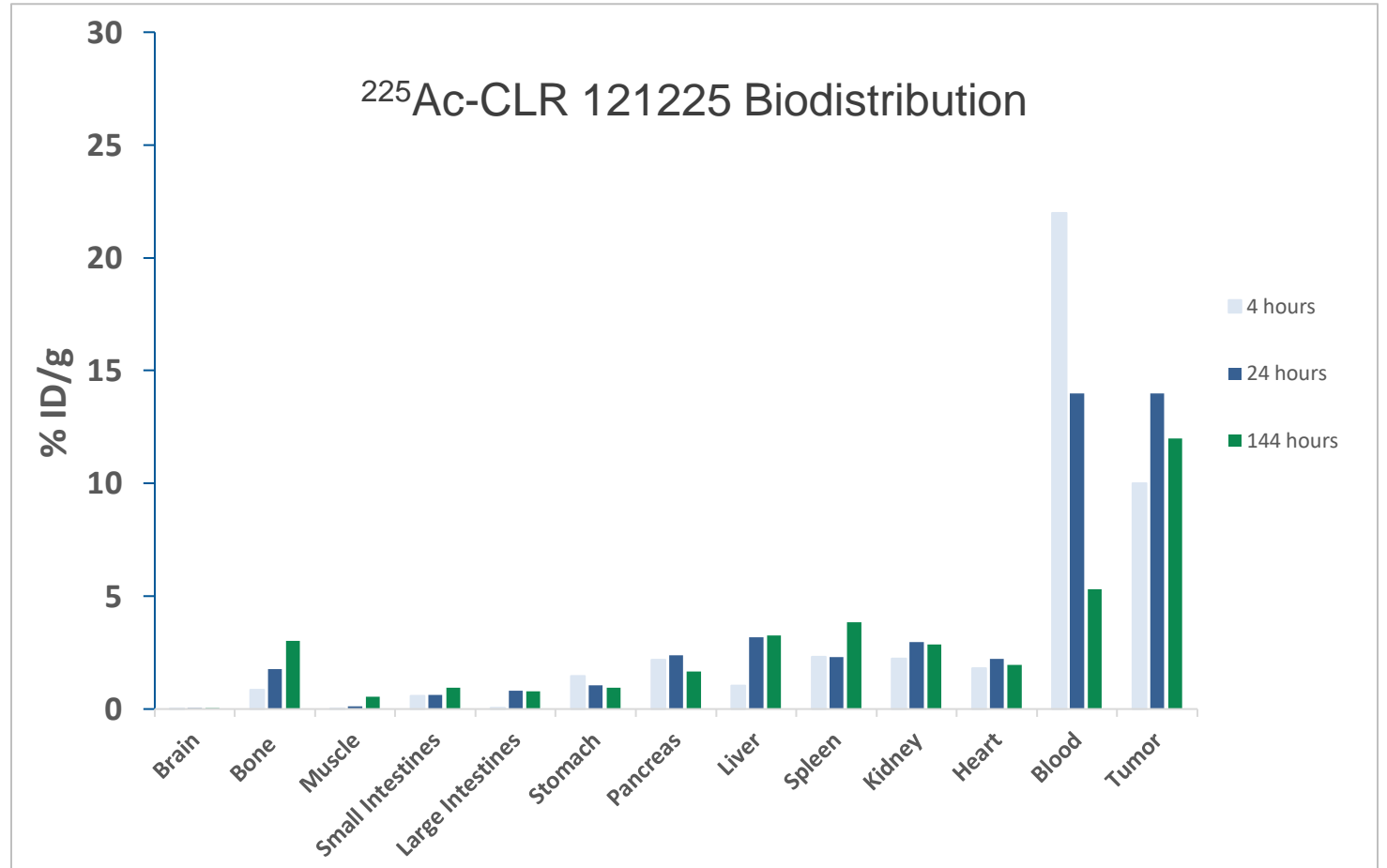
α -Emitter
Solid Tumor



PRC Franchise: CLR 121225 A Novel Alpha Emitter

^{225}Ac -CLR 121225 Improved Biodistribution Characteristics

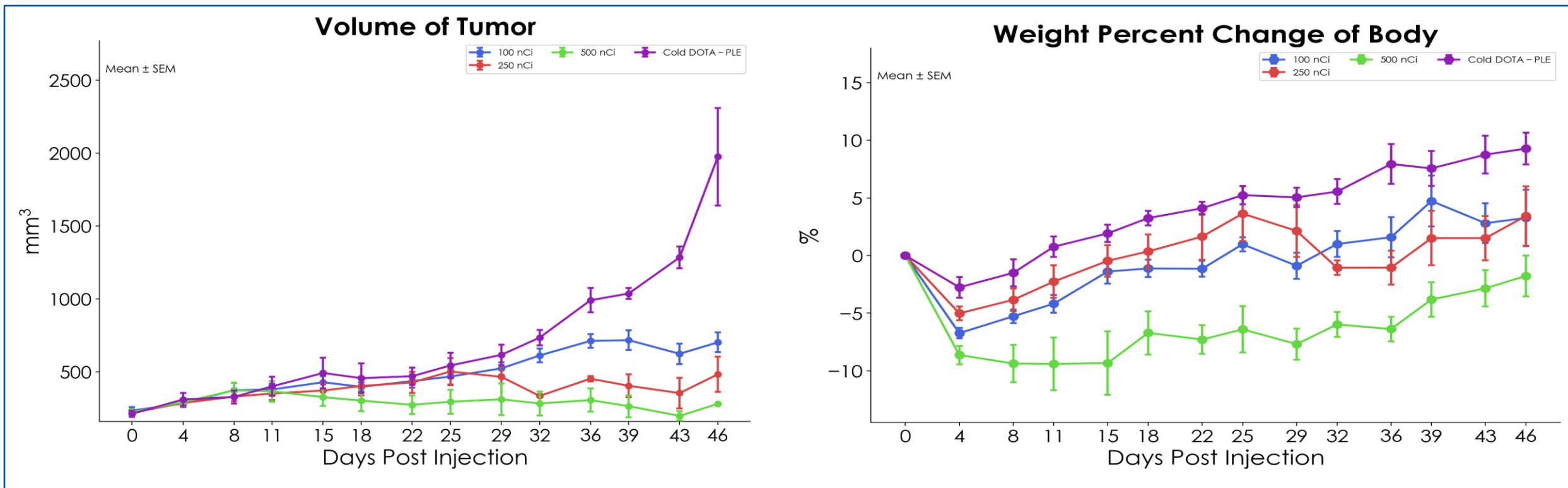
- Extended area under the curve (AUC) provides improved tumor accumulation over time
- Sustained tumor retention
- No clinically significant retention in off-target organs



CLR 121225 Demonstrates Favorable Pharmacokinetic Properties

PRC Franchise: CLR 121225 A Novel Alpha Emitter

^{225}Ac -CLR 121225 Preclinical Activity in Pancreatic Cancer (BxPC3)

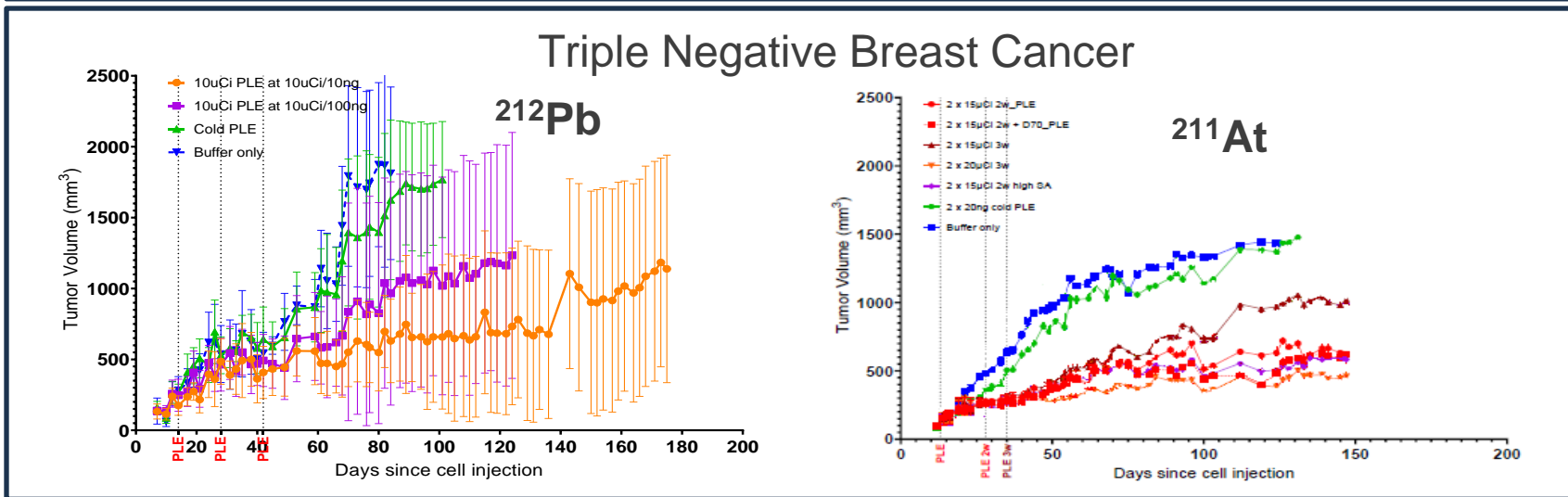
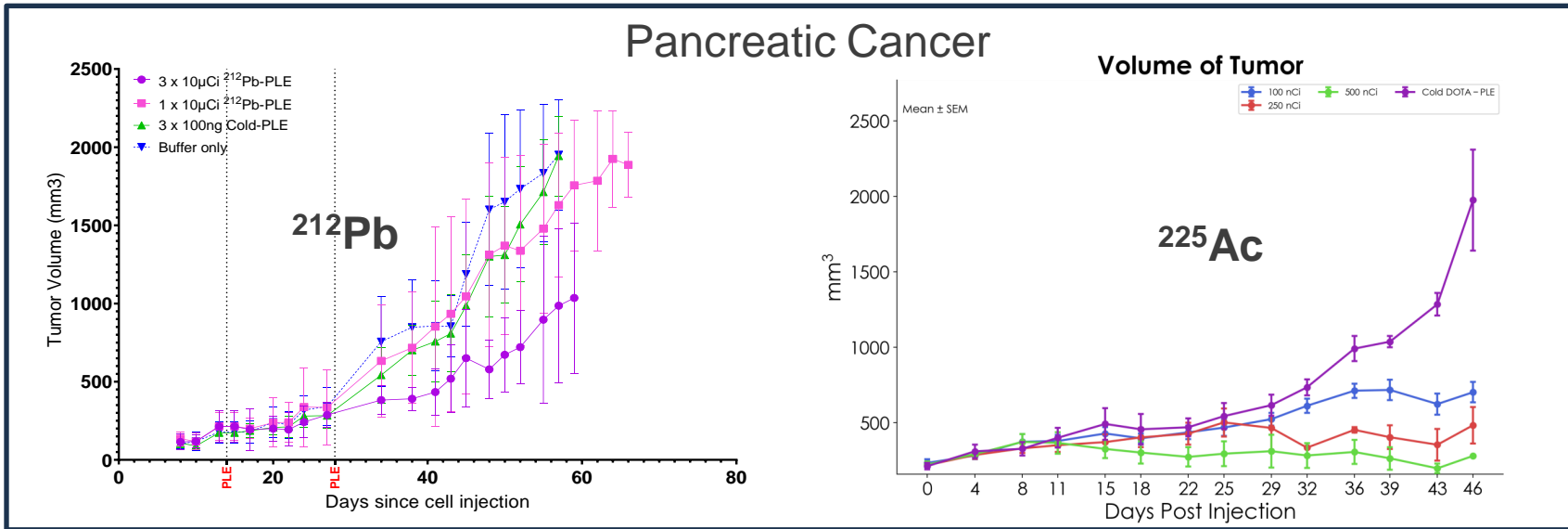


- Refractory pancreatic cancer animal model; Day 0 tumor volume ~250 mm³; treatment dose on Day 15
- Compelling anti-tumor activity at all dose levels; 100 nCi, 250 nCi, and 500 nCi by single tail vein injection on Day 1
- All dose levels were well tolerated, with no end organ toxicities observed

**PRC Franchise Enables Targeting of a Broad Range of Solid Tumors
with Alpha Emitters in Areas of High Unmet Need**

PRC Franchise: Capacity to Deliver Any Alpha Emitter

The Right Isotope for the Right Tumor - ^{212}Pb (Lead), ^{225}Ac (Actinium), ^{211}At (Astatine), or Others



- Unique advantage to rapidly shift isotope with the same molecule
 - Accelerated development timelines
- Allows optimal isotope selection; pairing physical properties of isotope with tumor biology and microenvironment
 - Optimization of efficacy and tolerability
- Activity demonstrated with all isotopes tested
 - Consistent isotope tissue distribution



Financials

Capitalization



Financial Summary

Cash position as of December 31, 2023 (millions)	\$9.6M
Capitalization as of January 31, 2024	
Common Stock Outstanding	30,452,042
Reserved for Issuance:	
Convertible Series D Preferred Stock (111.111 shares)	111,111
Convertible Series E-2 Preferred Stock (319.76 shares)	3,513,846
Convertible Series E-3 Preferred Stock (918.00 shares)	5,764,521
Warrants:	
2023 Tranche B: \$4.7775 strike; expire 10 trading days after NDA approval	7,179,487
2022 Common: \$1.96 strike; expire October 2027	4,201,044
Other: various terms	1,149,381
Stock Options	2,351,901
Fully Diluted Shares as of January 31, 2024	54,723,333

\$44M in Milestone-Based Proceeds Received in January 2024

Collectar Biosciences: 2024 Corporate Focus

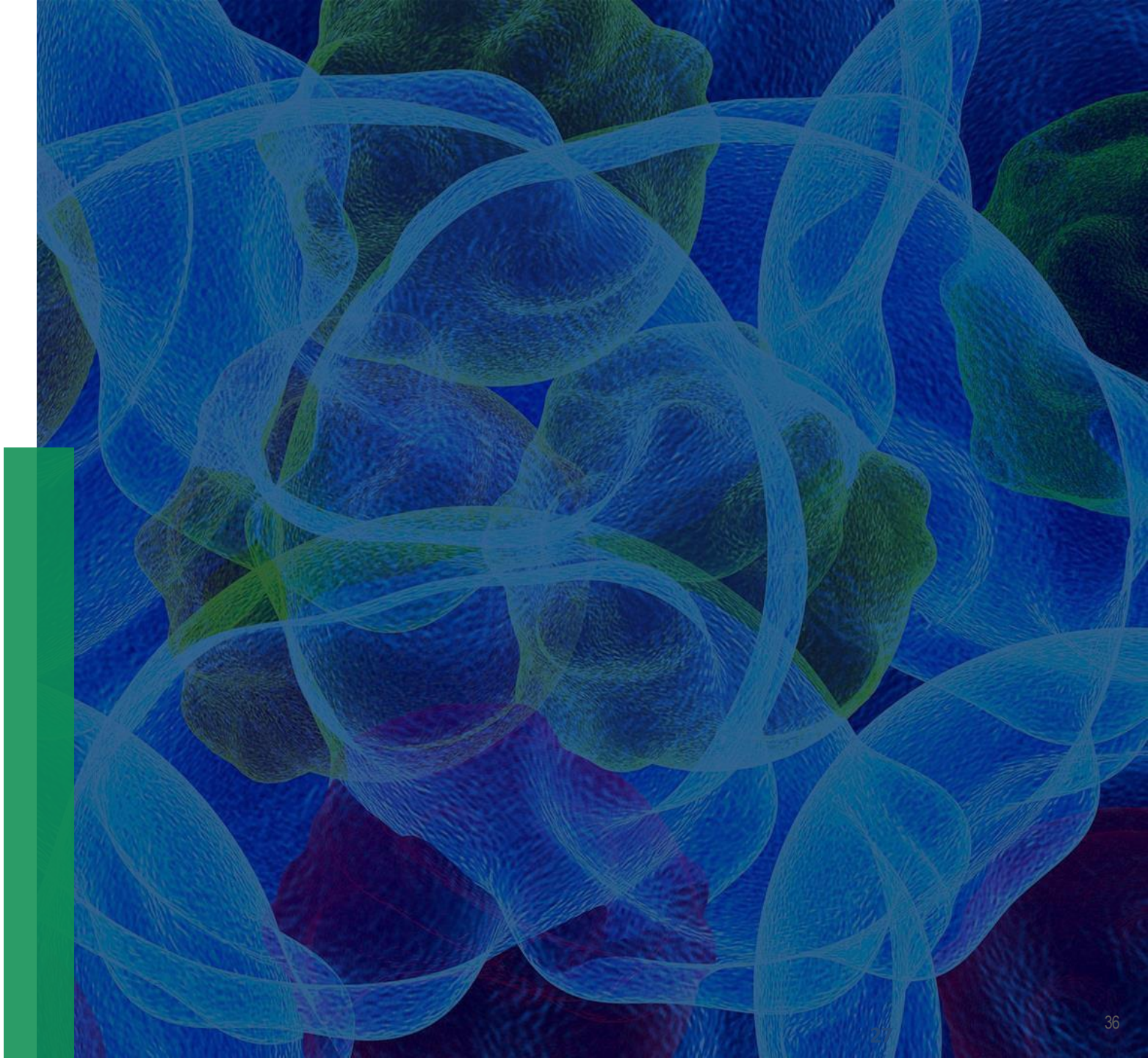
Objectives for Value Creation

- Complete final data analysis and submit NDA 2H24 for iopofosine approval as a first-in-class, novel therapy in r/r WM
- Prepare for iopofosine commercialization, which represents a strong revenue capture opportunity in a concentrated market
- Advance iopofosine development across CNS malignancies, pediatric solid tumors, B-cell and plasma cell neoplasms
- Accelerate alpha emitter program to focus on areas of high preclinical activity and unmet need



THANK YOU

NASDAQ: CLRБ



Experienced Management



James Caruso

President, CEO and Director



Jarrod Longcor

Chief Operating Officer



Chad Kolean

Chief Financial Officer



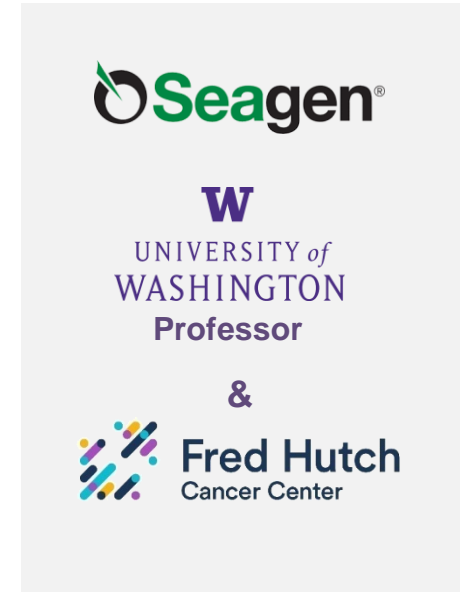
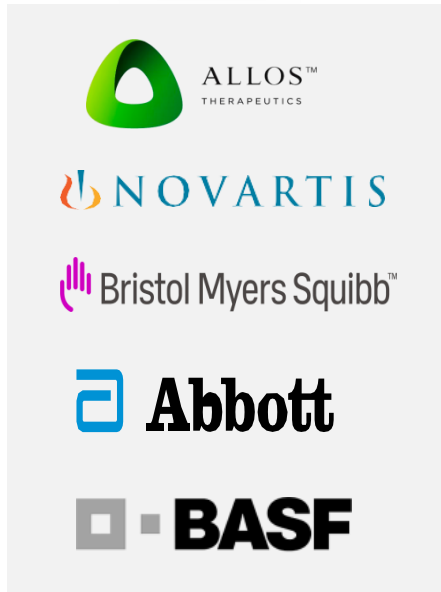
Shane Lea

Chief Commercial Officer



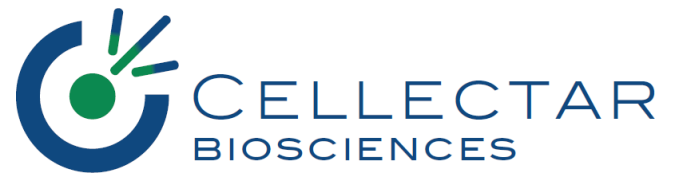
Andrei Shustov

SVP, Medical



Footnotes

1. Data on file
2. The expected timing of potential FDA approval is subject to risks and uncertainties beyond our control. There is no guarantee that the top-line data will support our NDA submission or that the FDA will approve iopofosine I 131 for commercial use. Even if we receive FDA approval, we may not be able to successfully commercialize iopofosine I 131.
3. Putnam Market Sizing 2023
4. Putnam Quantitative Research 1Q 2023 (n=102 MDs); Putnam Analysis and WM Advisory Boards
5. Komodo Claims Data
6. Real-world data - large community oncology network
7. Market Value utilizes third-party market sizing and company claims data for share, treatment counts and normalizes for branded pricing
8. Internal claims analysis for Waldenstrom's macroglobulinemia (January 2019-October 2023 Move to footnotes and number
9. Data still in collection
10. Puregmaa Khongorzul, Cai Jia Ling, Farhan Ullah Khan, Awais Ullah Ihsan, Juan Zhang; Antibody–Drug Conjugates: A Comprehensive Review. Mol Cancer Res 1 January 2020; 18 (1): 3-19. <https://doi.org/10.1158/1541-7786.MCR-19-0582>
11. Perera, ND., et al. Prognostic Impact of Depth of Response in Patients with Waldenstrom Macroglobulinemia Treated with Fixed Duration Chemoimmunotherapy. ASCO 2021



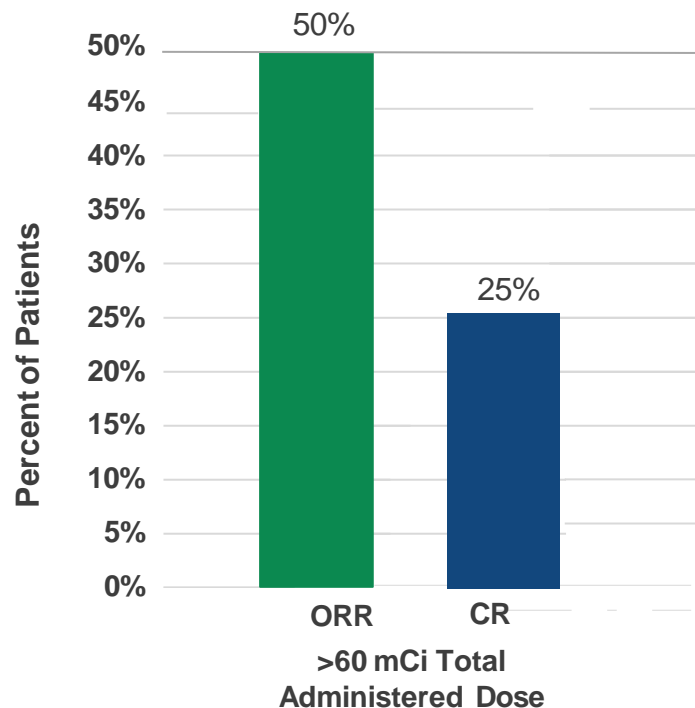
Appendix

Iopofosine I 131: Phase 2a r/r B-NHL

~60% of Patients Multi-drug Refractory

Phase 2 NHL Response Rates

(n=19)



Non-Hodgkin's Lymphoma

Key Clinical Endpoints

50% ORR in NHL
Median 3rd Line

25% Complete
Response Rate

71.4% Clinical
Benefit Rate

Median tumor volume
reduction of >25%

Patients Receiving ≥ 60 mCi TAD Achieved 50% ORR

Iopofosine I 131: pCNS Lymphoma Phase 2a Study

Activity in Hematologic Malignancies Across the Blood Brain Barrier

Screening Visit
~12 x 14mm



Final Visit
No Viable Tumor



Patient Characteristics and Dose:

- 61-year-old female presented with multi-relapsed CNS tumor
- Dosing Day 1, 15, 57 and 71

Outcome:

- 93% tumor volume reduction at day 43
- Progression-free survival 17.1 months (ongoing)
- Duration of response 15.4 months (ongoing)

Complete Response Achieved with No Evidence of Viable Tumor



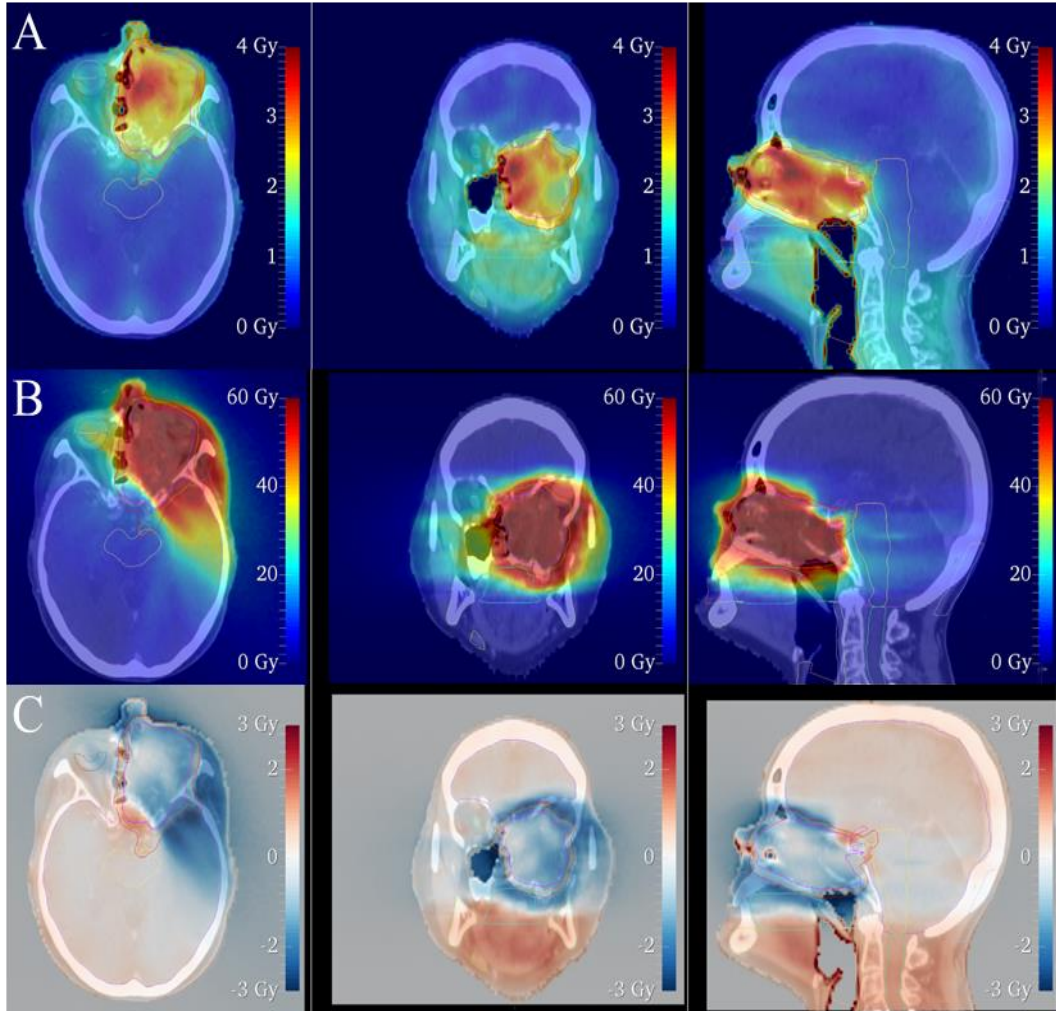
PRC Franchise

Adult and Pediatric Solid Tumors
Iopofosine I 131



Iopofosine I 131: Phase 1 Study in Squamous Cell Carcinoma Head & Neck

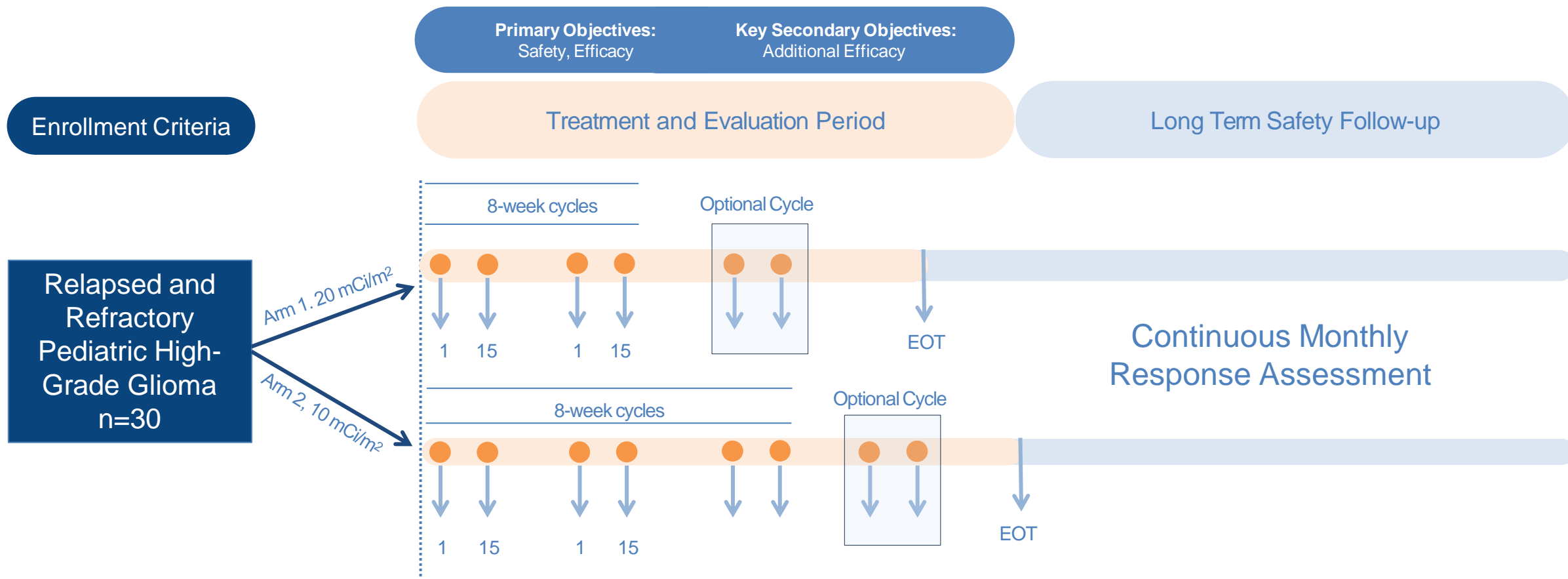
NCI-SPORE Grant Funded Study in Adults in Combination with External Beam Radiation



- Two doses of iopofosine at 15 mCi/m² resulted in a tumor-absorbed dose of ~3-5 Gy
- Twelve patients treated (11 evaluable)
 - Overall response rate = 73% (8 of 11)
 - Complete response rate = 64% (7 of 11)
 - 12-month overall survival = 67%
- Local tissue was spared external beam radiation doses from 0.5-2 Gy
- Most frequent adverse events were cytopenias consistent with previously reported data
- Study demonstrated potential to combine iopofosine with external beam for solid tumors

Iopofosine I 131: Phase 1B Study in Pediatric High-Grade Gliomas

NCI-Grant Funded Study in Children and Young Adults with Aggressive Brain Cancer



Exploiting PRC's Ability to Cross the Blood Brain Barrier

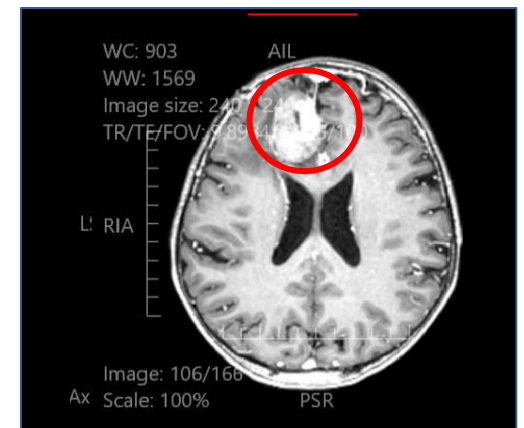
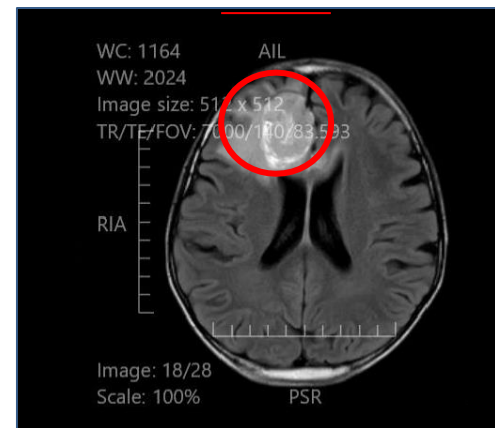
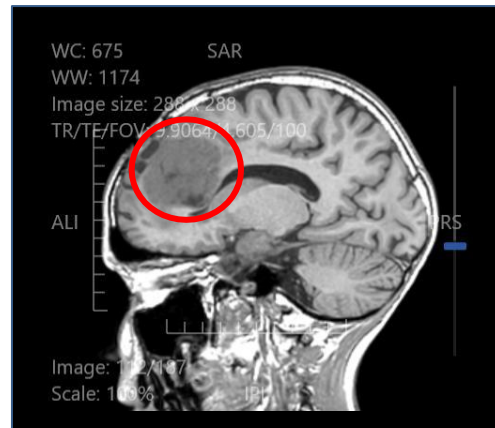
Iopofosine I 131: CNS Tumor - Refractory Ependymoma Pediatric Patient

Activity in Solid Tumor Across the Blood Brain Barrier



Patient Characteristics and Dose:

- 13-year-old male with relapsed disease after 4 prior lines of therapy
- 165 mCi total dose administered



Results:

- Tumor volume reduction observed - stable disease
- Progression Free Survival (PFS) = 5.1 months

**Enrollment Initiated in Phase 1b Pediatric HGG Study;
Supported by NCI-SBIR \$2M Grant**



PCC, POC, PPC Franchises

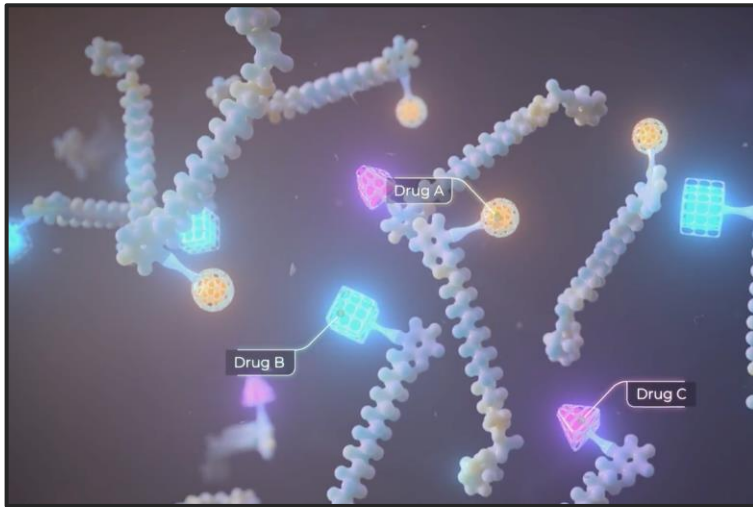
**Small Molecule Cytotoxins,
Oligonucleotides and Peptides**



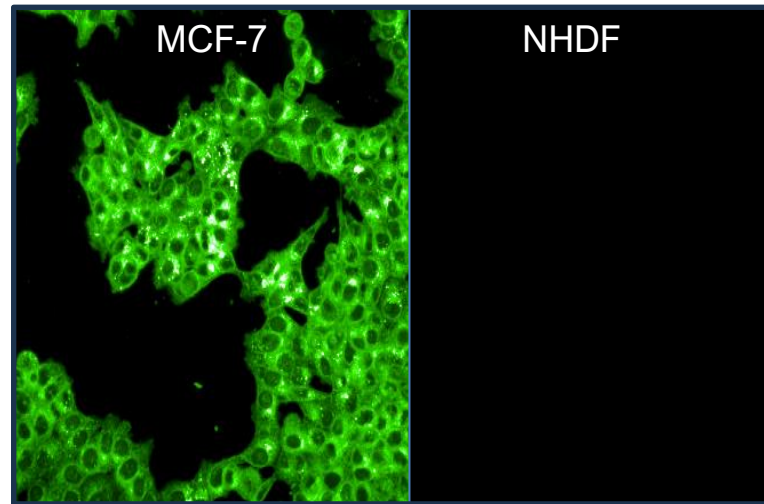
PCC, POC & PPC Franchise: Unique Attributes

Universal Targeting with Diverse Payloads Provides Advantages Compared to ADCs

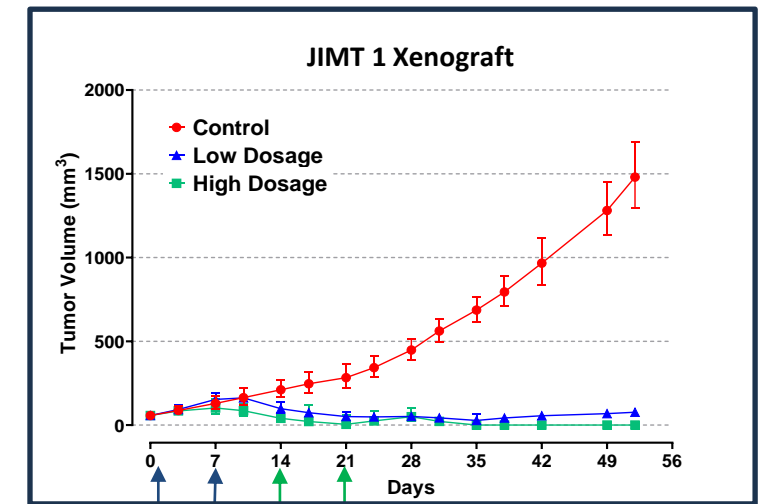
(1) PDC containing small molecules, oligos or peptide payloads



(2) Specific and rapid delivery to tumor cells *in vitro* and *in vivo*



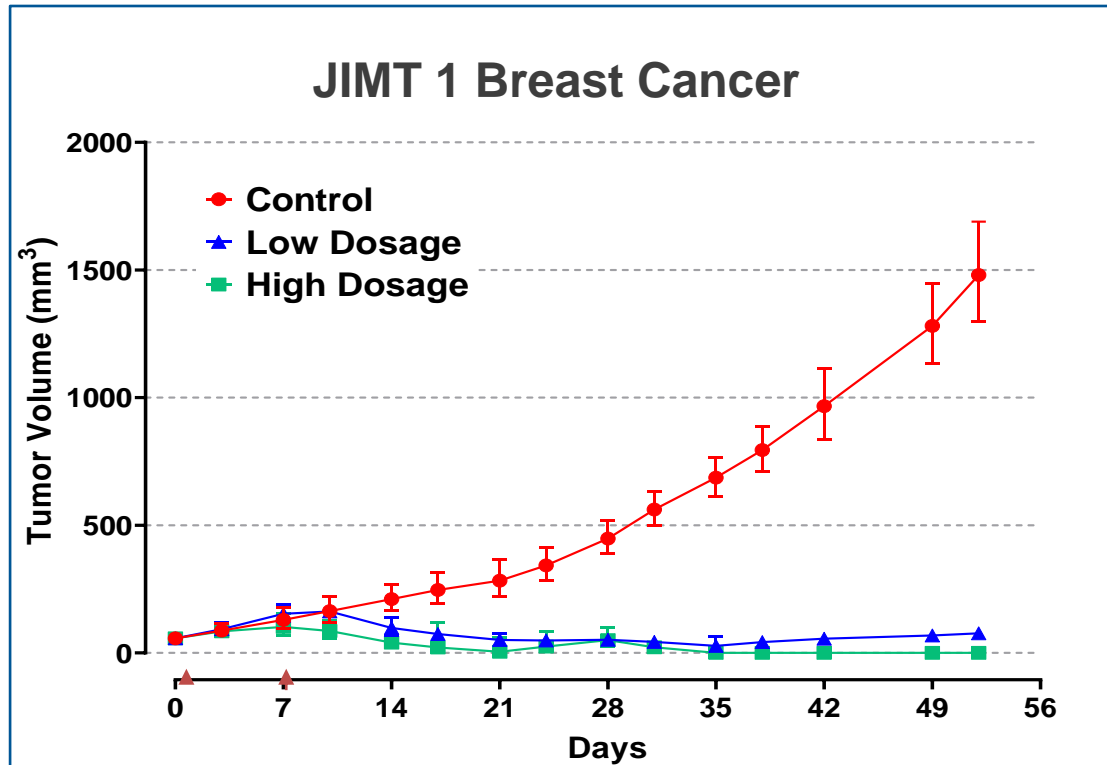
(3) *In vivo* efficacy with each therapeutic modality



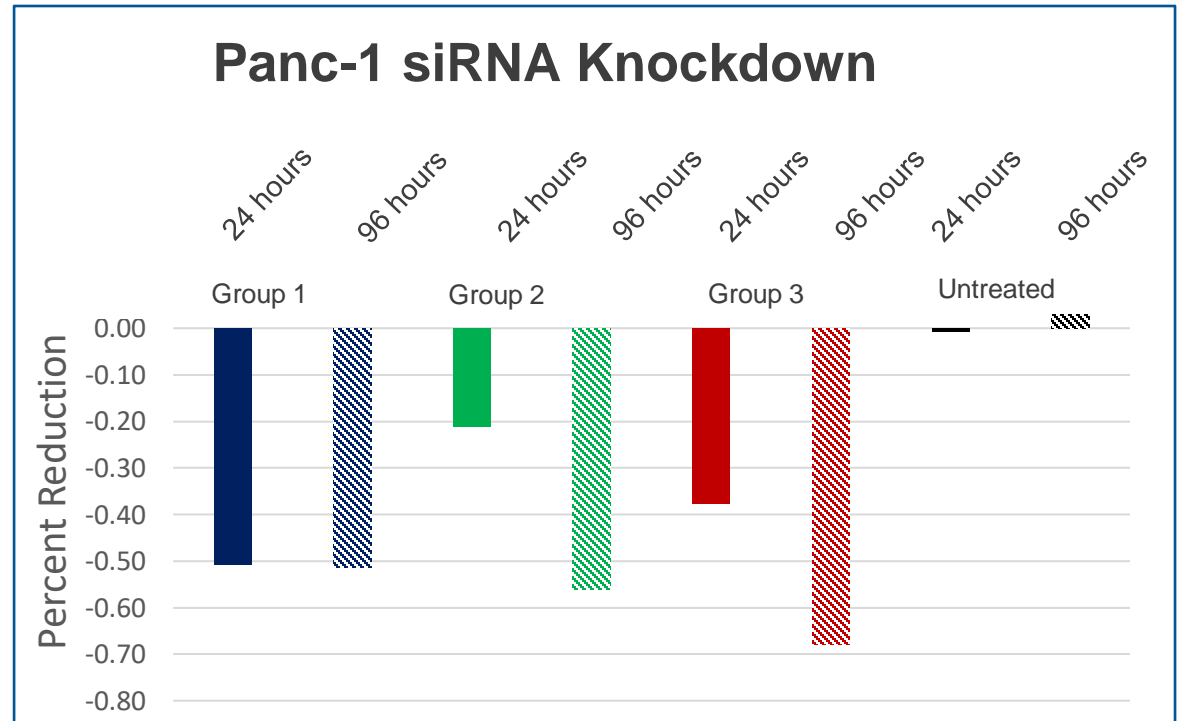
Profile	Diverse Linkers & Payloads	Addressable Targets	Size of Molecules	Rapid Tumor Internalization	Resistance Development	Cytoplasmic Delivery
PCC, POC & PPC	●	●	●	●	●	●
Antibody Drug Conjugate (ADC) ¹⁰	●	●	●	●	●	●

PCC, POC & PPC Franchise: Payloads Beyond PRC's

Small Molecule Cytotoxins, Oligonucleotides and Peptides



Payload 2	A549	MCF-7	Capan-2
IC ₅₀ (μM)	<0.003	<0.003	0.019
EC ₅₀ (μM)	<0.003	<0.003	0.020
Minimum % viability	0	0	0



- Small molecule cytotoxic payloads demonstrate potent *in vitro* & *in vivo* activity enabling therapeutic effects across various tumor models
- Oligo payload demonstrates significant target gene knockdown following single tail vein injection
- All payloads demonstrated favorable tolerance