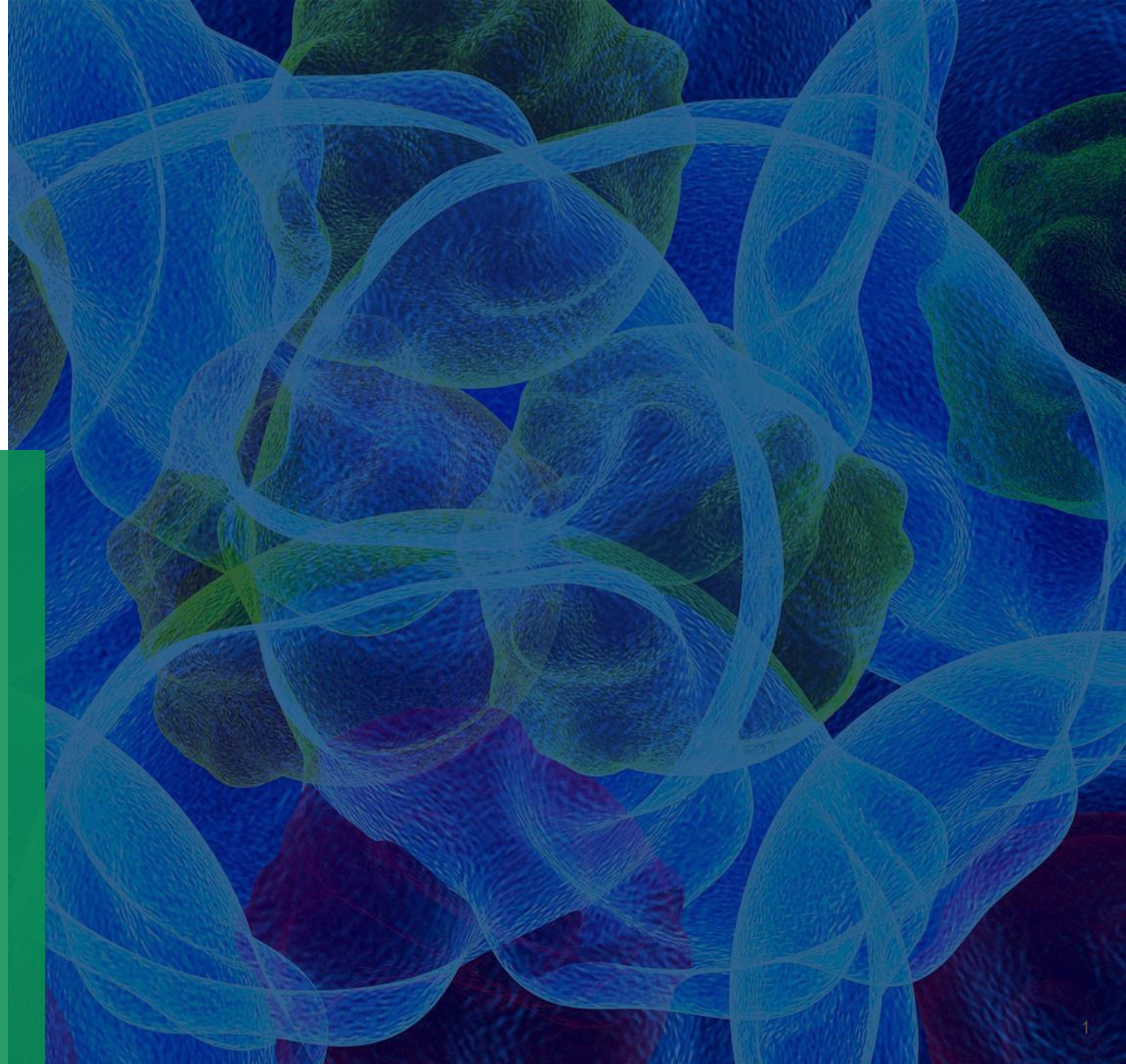
CELLECTAR BIOSCIENCES

Corporate Presentation

April 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)™; 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.

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.

Cellectar: 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

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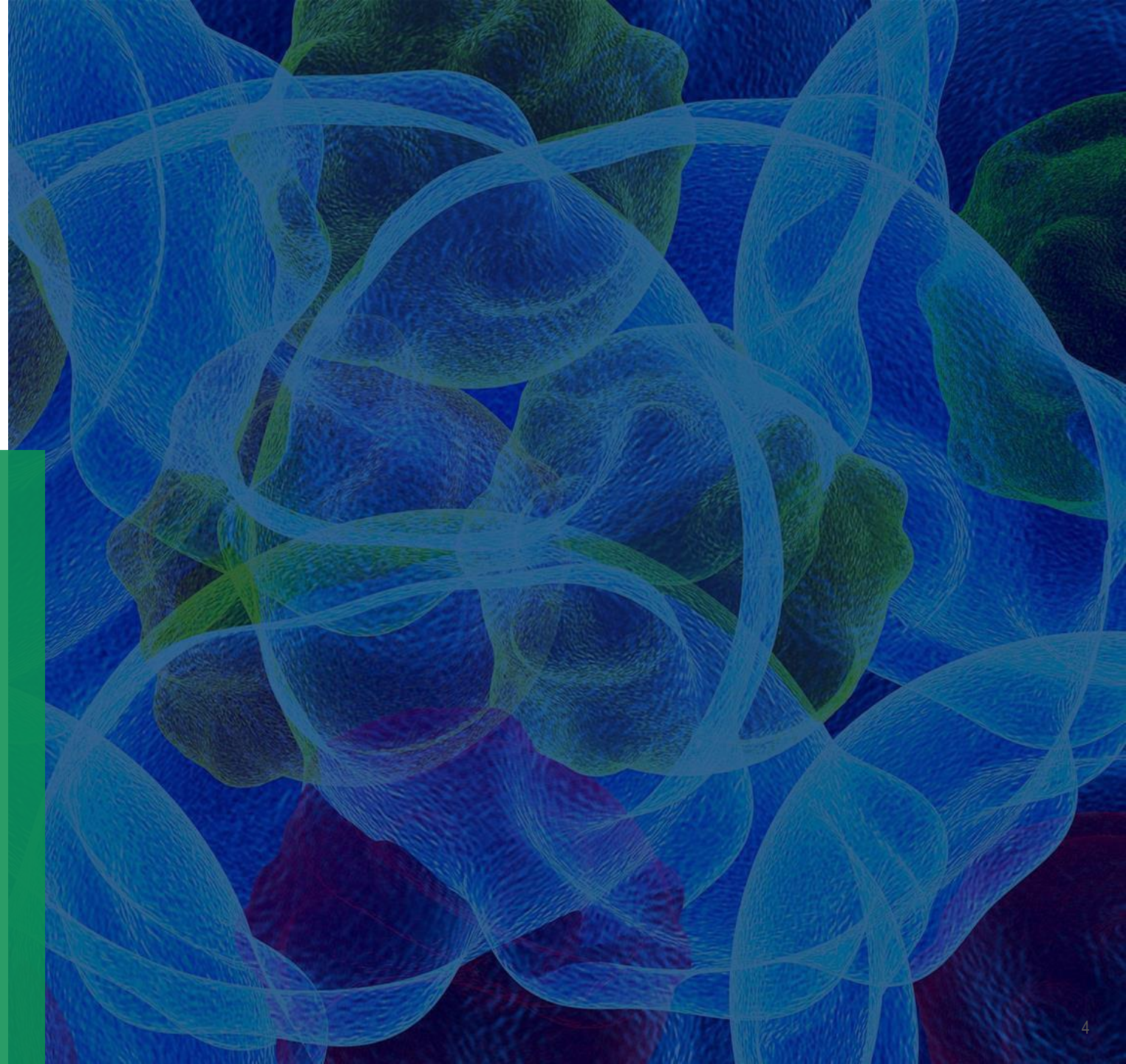
Phospholipid Drug Conjugate (PDC)

Platform & Pipeline



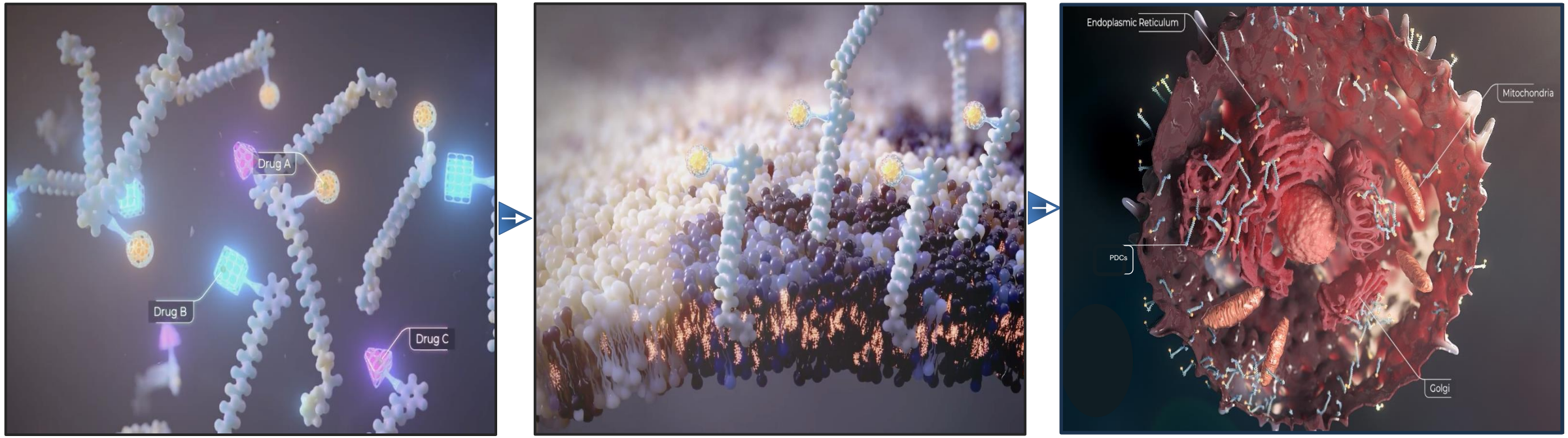
Phospholipid Drug Conjugate Platform (PDC): MOA

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)	✓	✓	✓	✓	✓	✓

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PDC Platform: Pipeline

MOA - Therapeutic Franchises

Franchise Payloads	Conjugates	MOA
Radiotherapeutic (PRC)	**Radio-conjugate** • Targeted delivery of any radioisotope • Alpha and beta emitters • Iopofosine I 131 in a pivotal study	• 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** • Demonstrated *in-vivo* safety and efficacy in multiple animal models • Pico and nanomolar activity	• PLK-1 • Seco-duba • MMAF • Collaboration - undisclosed target
Biologics (PPC)	**Peptide and Nanobody Conjugates** • Targeting intracellular pathways that cannot be targeted with small molecules	• Ribosomal peptide • Protein inhibitors • Collaboration - undisclosed target
Nucleic Acid (POC)	**Oligo Conjugates** • Intracellular delivery of nucleic acids providing knockdown or knock-in gene control in cancer cells	• RNAi-/siRNA • mRNA • cDNA • Collaboration - undisclosed target

Platform Enables Value Creation Across a Broad Range of Therapeutic Modalities

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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	

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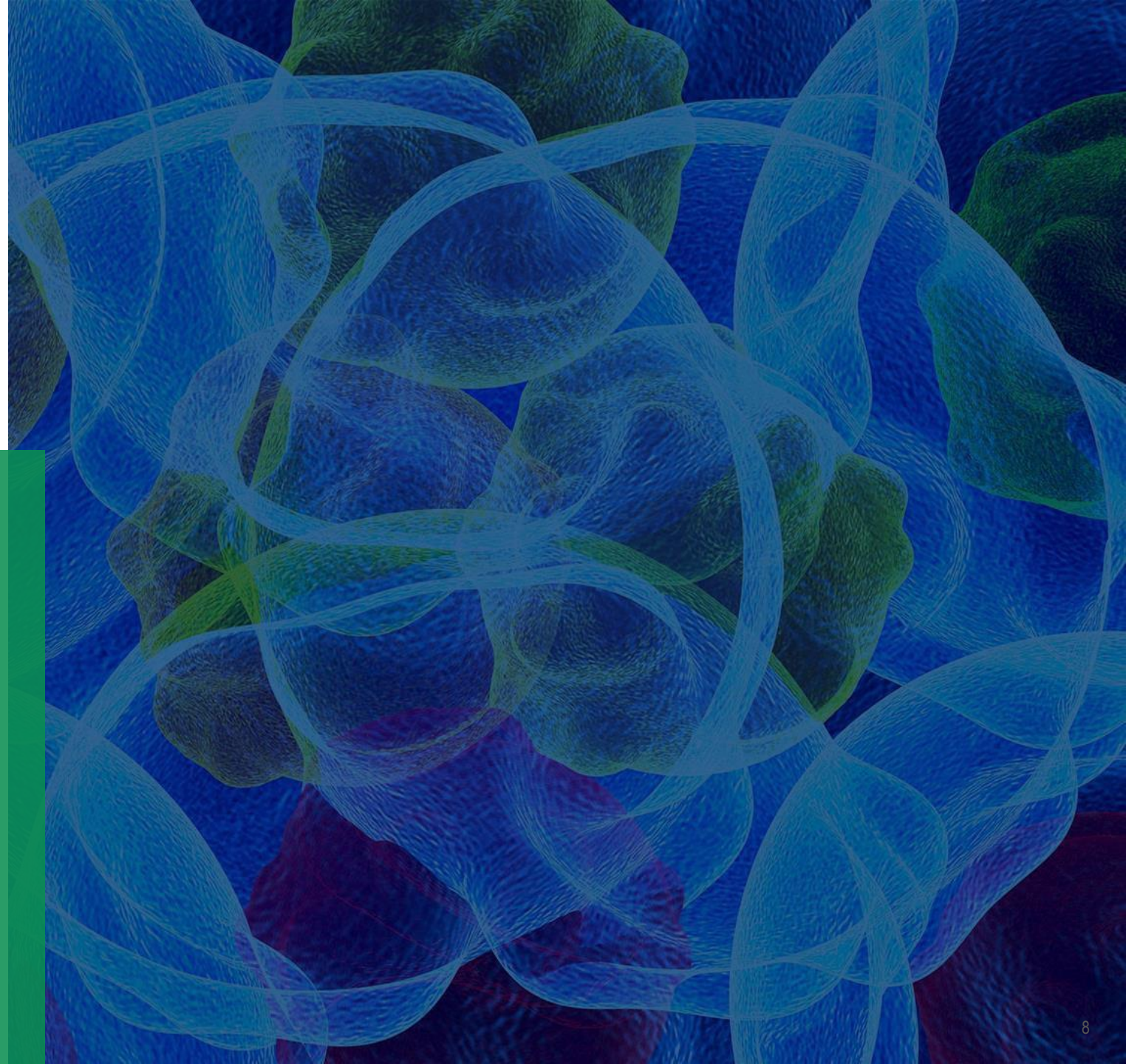
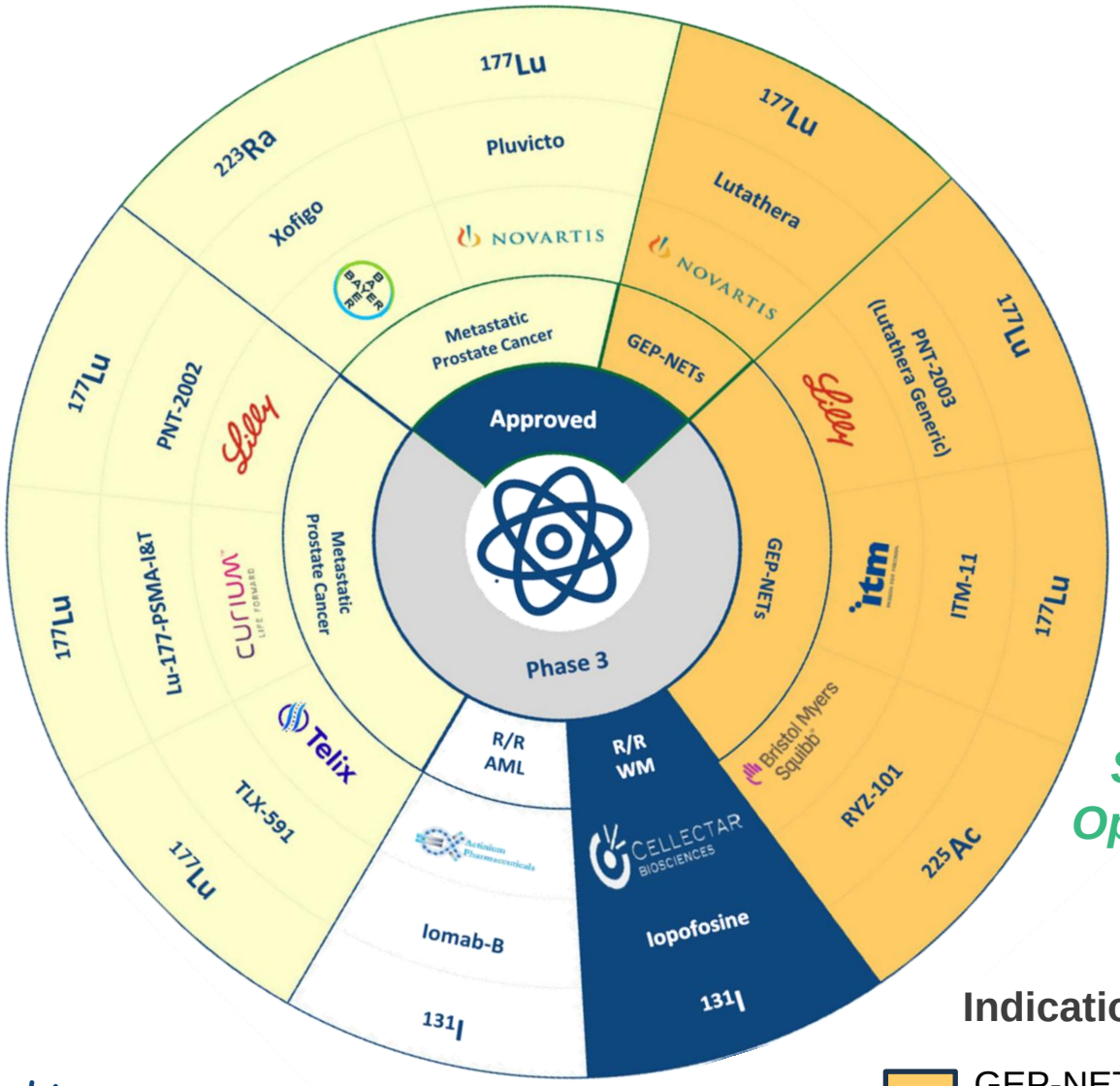
PRC Franchise

Radiotherapy Competitive Landscape



Radiotherapy Competitive Landscape: Approved & Late-Stage Programs

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



Indication Key

GEP-NETs | WM | mPC | AML

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

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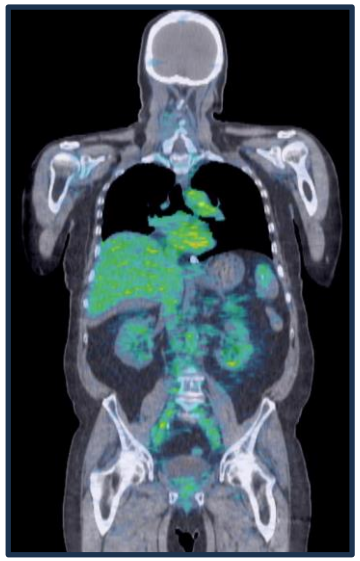
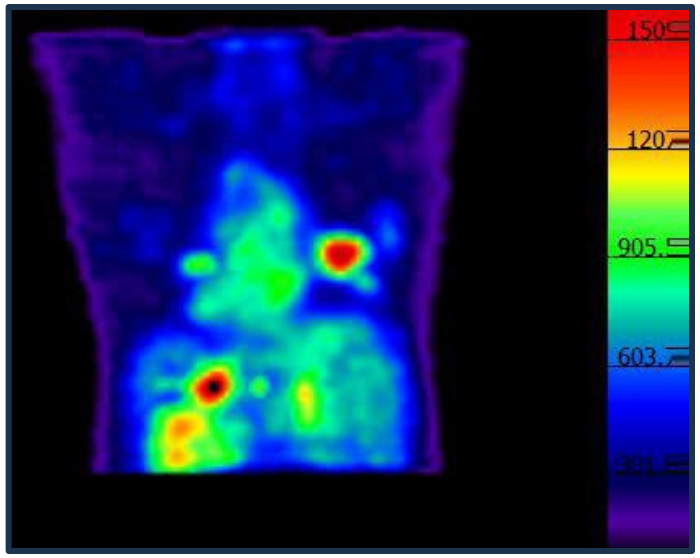
Radiotherapy Competitive Landscape: PRC Unique Attributes

Universal Targeting with Diverse Isotopes Provides Advantages Compared to RLTs

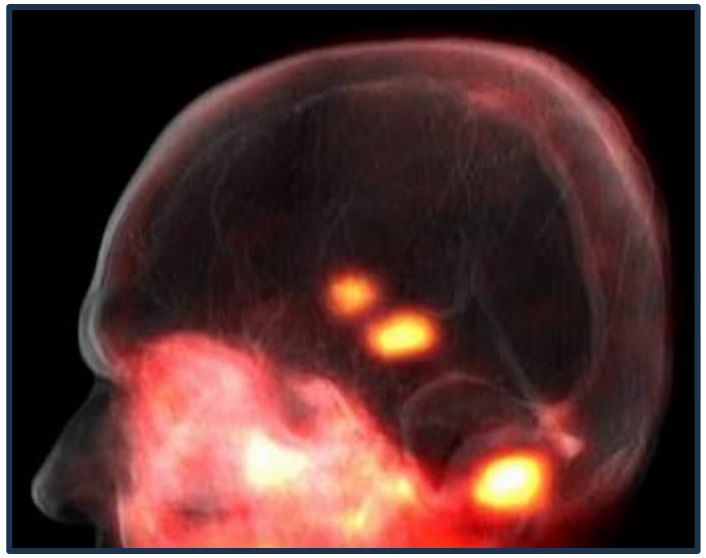
(1) PRC provide preferential distribution and uptake



(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)	🟢	🟢🟡	🟡	🔴	🟡	🟡	🔴🟡	🔴🟡

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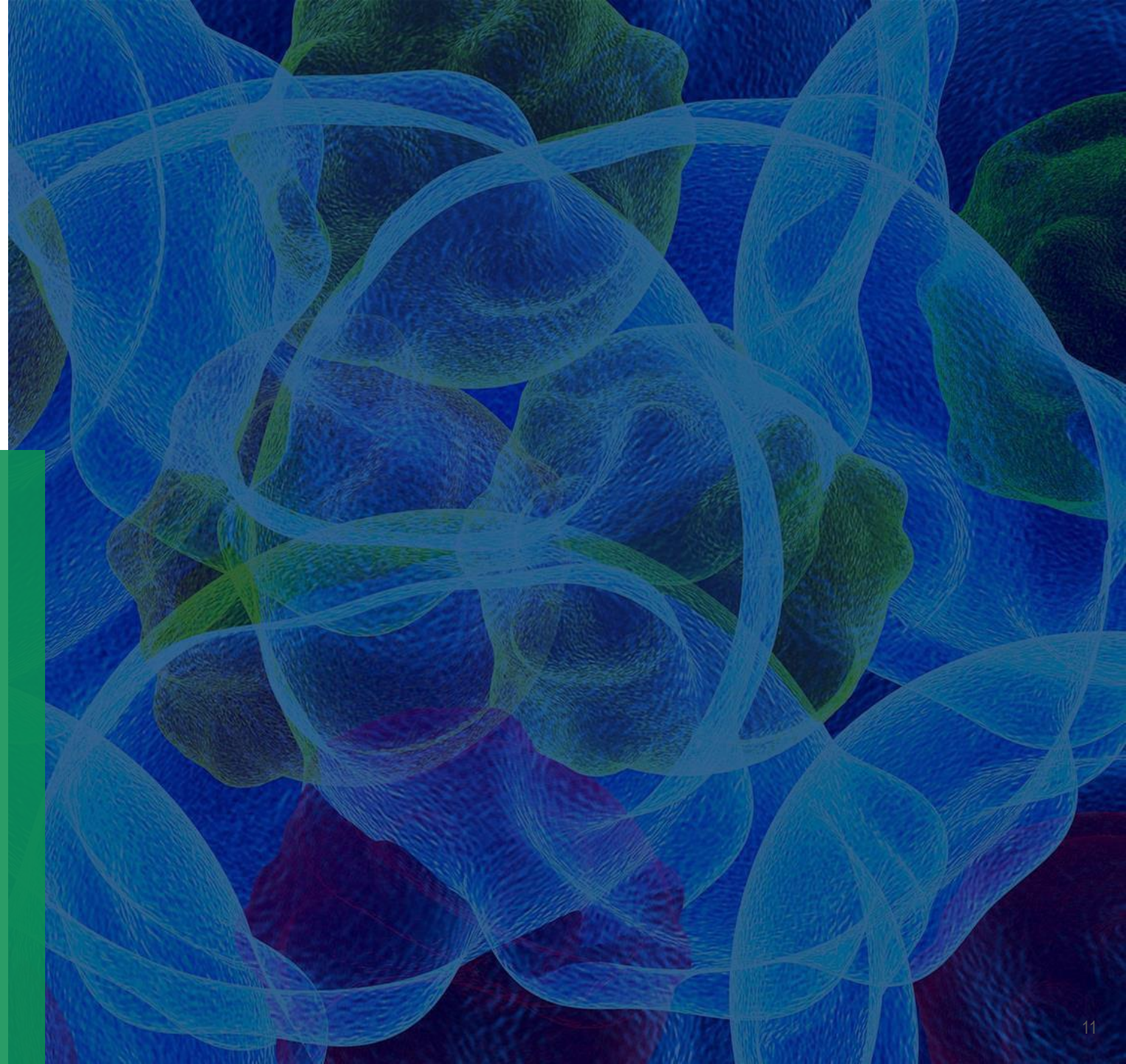
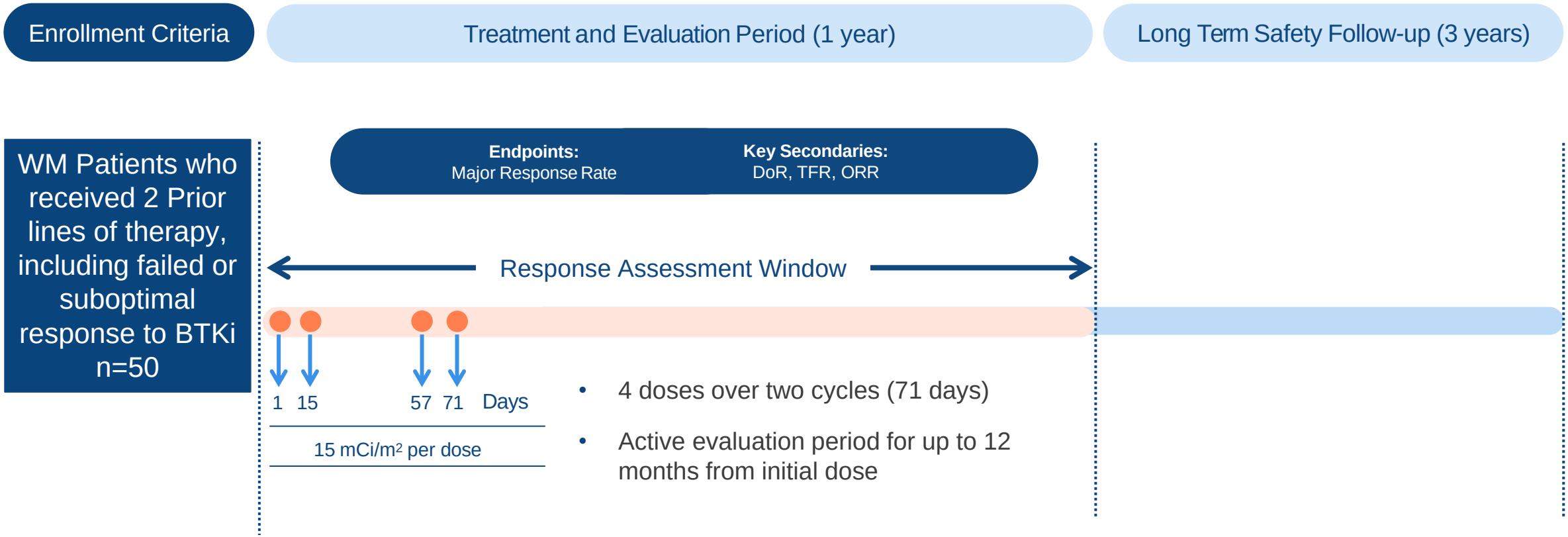
PRC Franchise

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



MRR Primary Endpoint of 20% Achieves Statistical Significance[3]

Iopofosine I 131: Global CLOVER-WaM Pivotal Study

Patient Characteristics as of January 3, 2024

Patient Characteristics	All Patients[4]
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**)

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Most Refractory WM Patient Population Ever Studied in Clinical Trials

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

Study Achieves Primary Endpoint

61%	**75.6%**	**100%**
Major Response Rate	Overall Response Rate	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%

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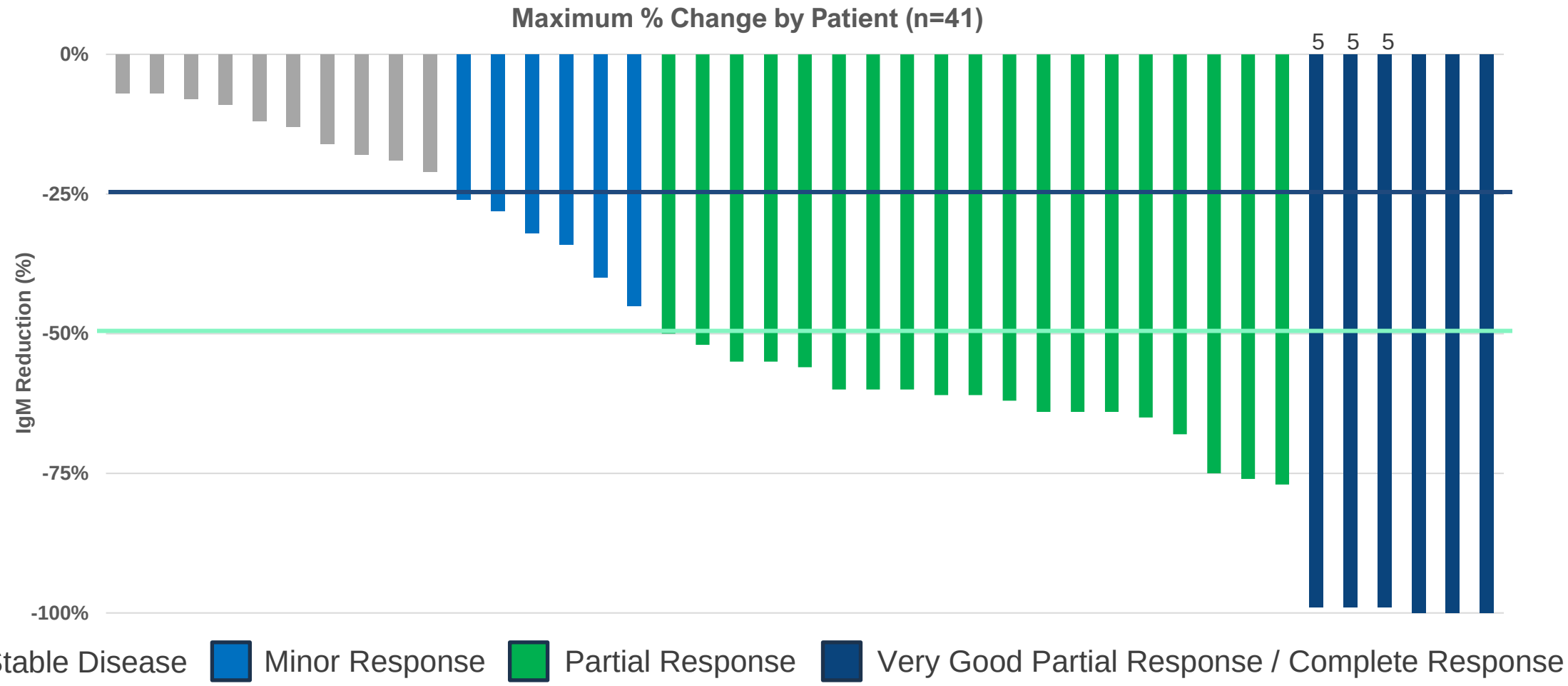
Iopofosine I 131: Global CLOVER-WaM Pivotal Study

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

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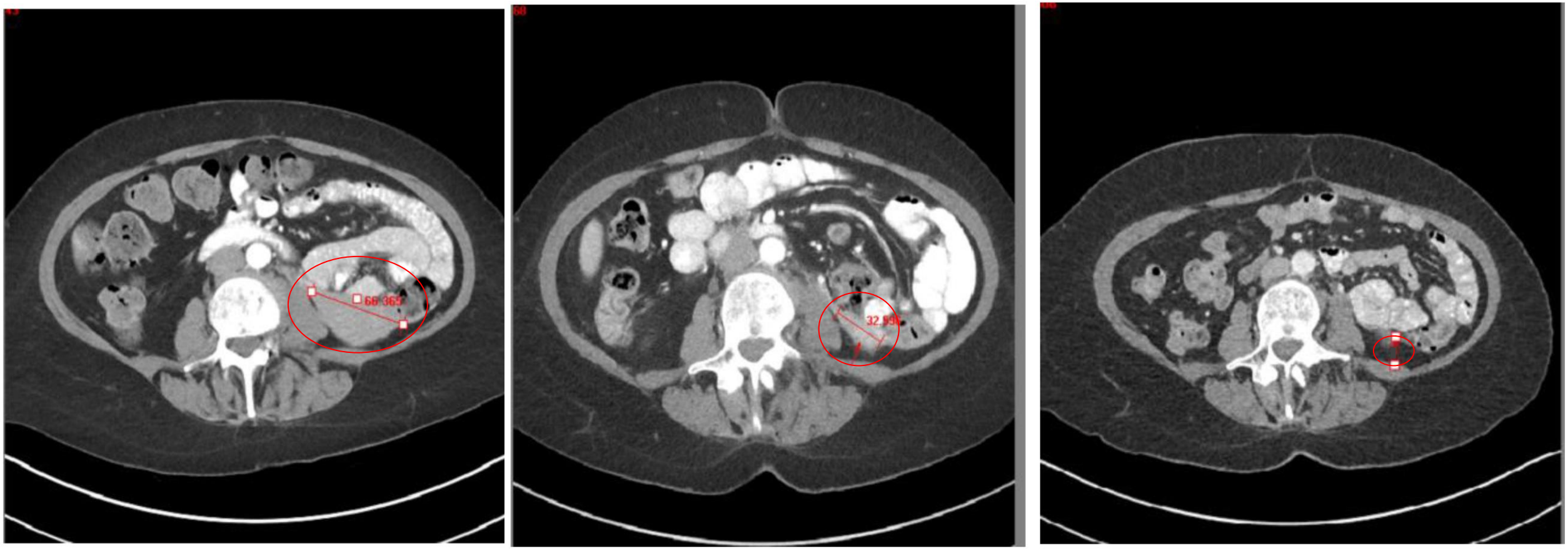
Iopofosine I 131: Global CLOVER-WaM Pivotal Study

Activity in Patients with Lymph Node Involvement



Day 1 Tumor Size
660mm^2

Day 28 Tumor Size
160mm^2

Day 57 Tumor Size
0mm^2

Iopofosine Disease-Modifying Property Evidenced by Complete Resolution of Bulky Lymph Node Tumors

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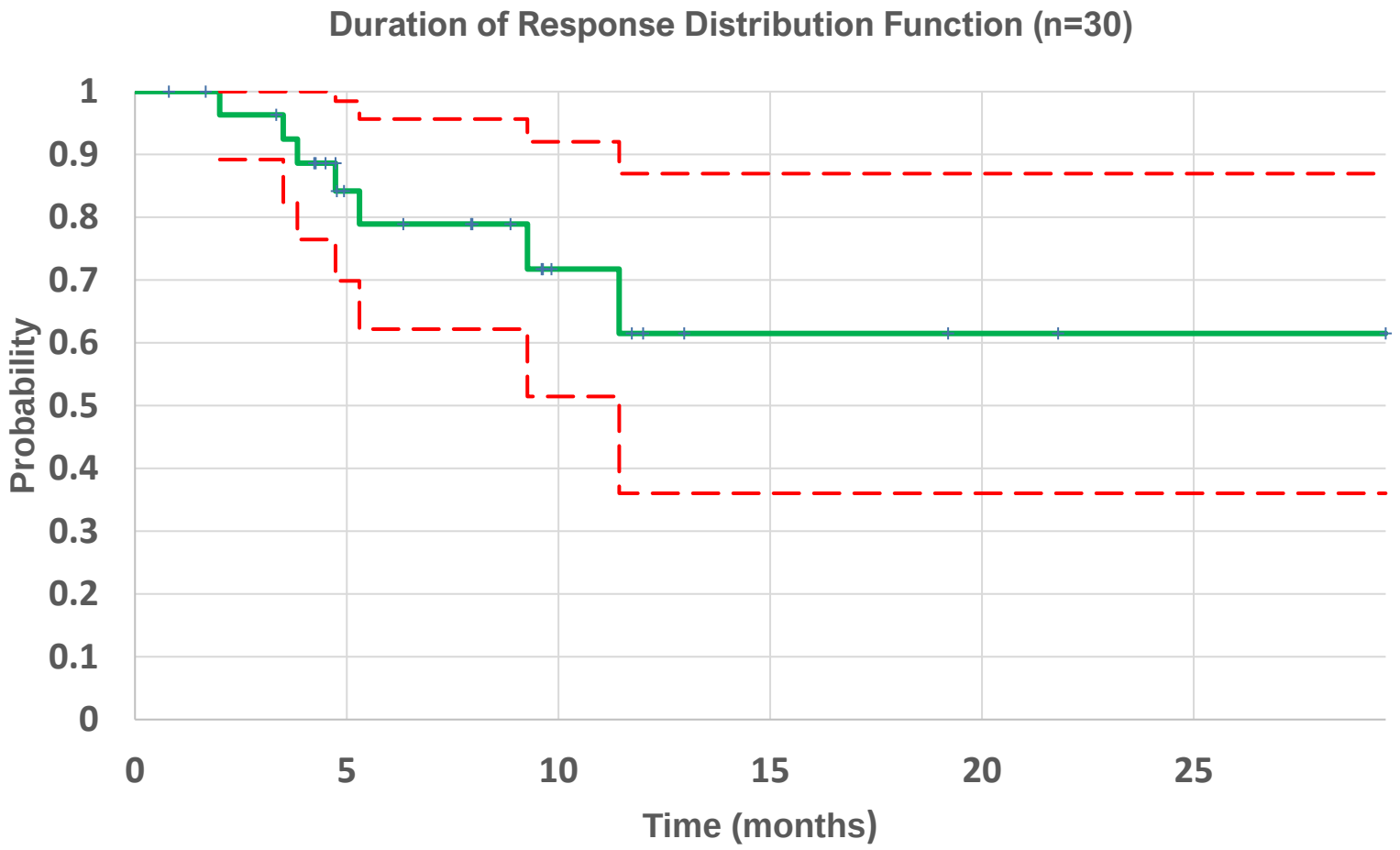
Iopofosine I 131: Global CLOVER-WaM Pivotal Study

Kaplan-Meier Analysis of Duration of Response (DoR)



- 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

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

Evaluable mITT n=45

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

Observed Cytopenias Consistent with Treatment of Hematologic Malignancies

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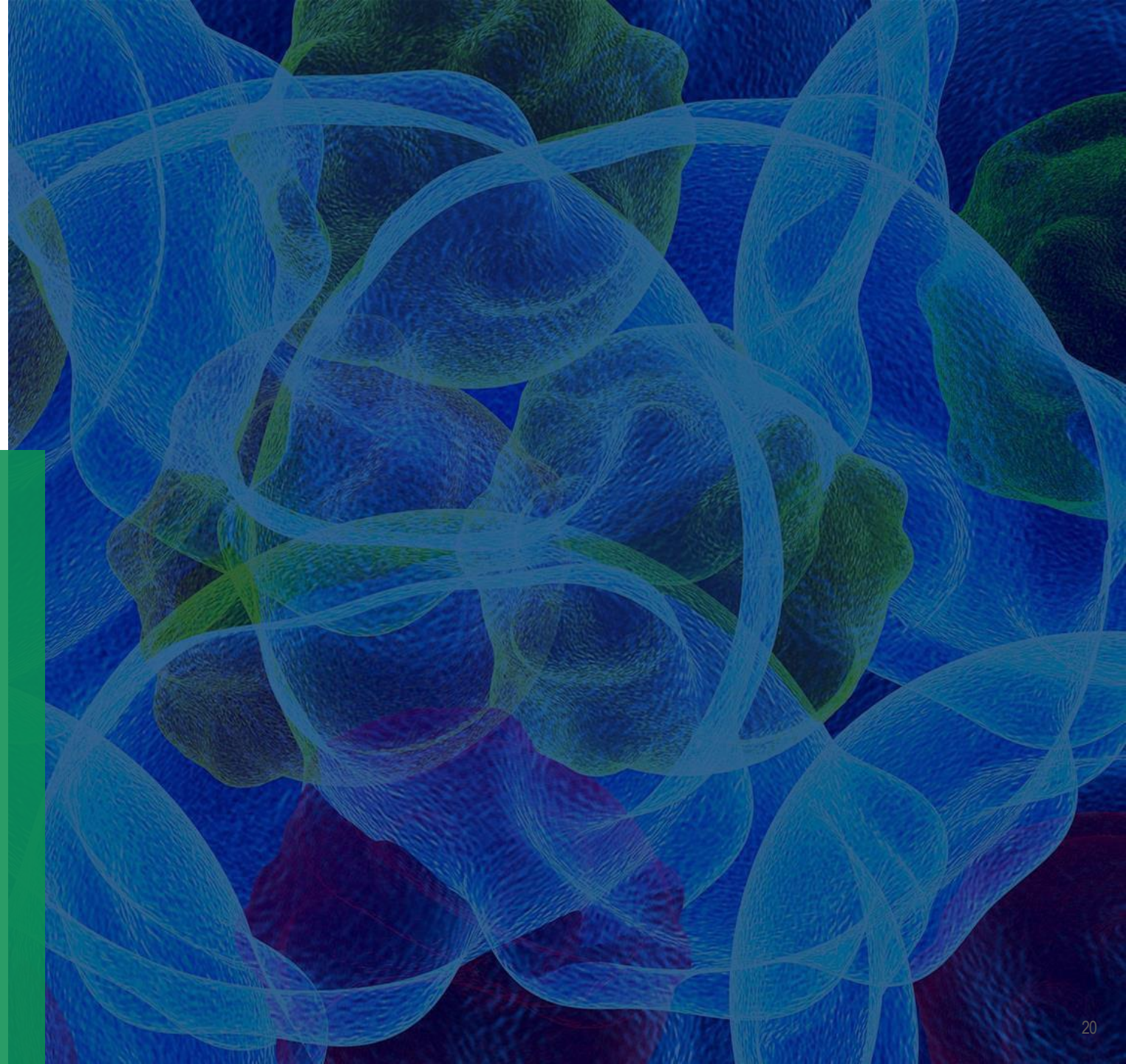
Iopofosine I 131: Global CLOVER-WaM Pivotal Study Summary

- 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

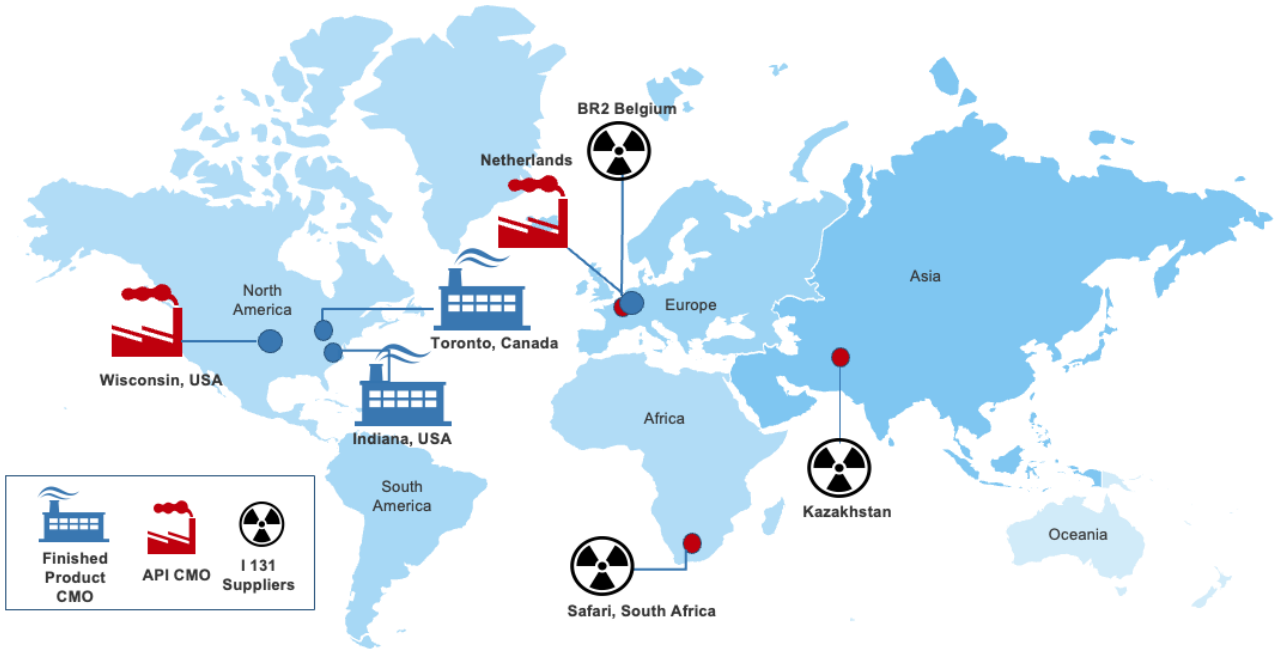
PRC Franchise

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

- FDA and EMA approved CDMOs provide overlapping and redundant supply
  - Delivers seamless & secure supply
  - Easy tech transfer
- Manufacturing process increases yields and batch sizes
  - Current >200 doses/week
  - Expandable to >1000 doses/week; no increase in infrastructure required
  - Ease of transferability provides rapid increase in supply
- Global distribution within 72 hours
  - Shipped and stored at room temperature; no cold chain
- Optimized formulation provides “off-the-shelf” convenience
  - Industry-leading shelf-life optimizes treatment scheduling
  - Shipped ready to use - no dosimetry required

Only Radiotherapeutic with 17+ Day Shelf-Life

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Iopofosine I 131: WM U.S. Market Opportunity

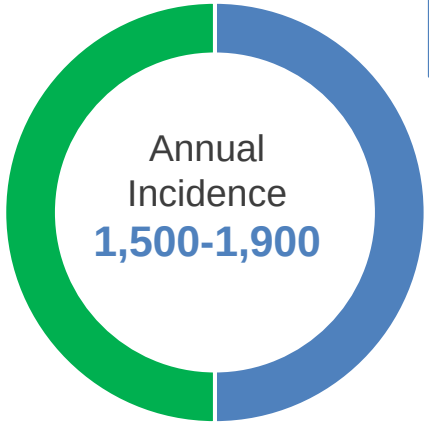
Concentrated, Prevalent Patient Population with High Unmet Clinical Need

Estimated Market Size

26,000
Prevalence[6]

Academic Setting 45%

Community Setting 55%



Patients are concentrated geographically in large community and academic accounts[7]

~80% of WM patients located in 15 states[8]

Patient Treatment Journey

81% of patients under care in the last year are currently receiving active treatment[7]

~80% of patients will receive 3rd line treatment[7]

~50% of 3rd line patients not receiving treatment likely to consider new treatment options[7]

Unmet Need - No Approved Treatments

4-12% Major Response Rates (MRR) RWD beyond 2nd line therapy[9]

0% CRs reported with single-agent BTKi therapy[1]

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

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

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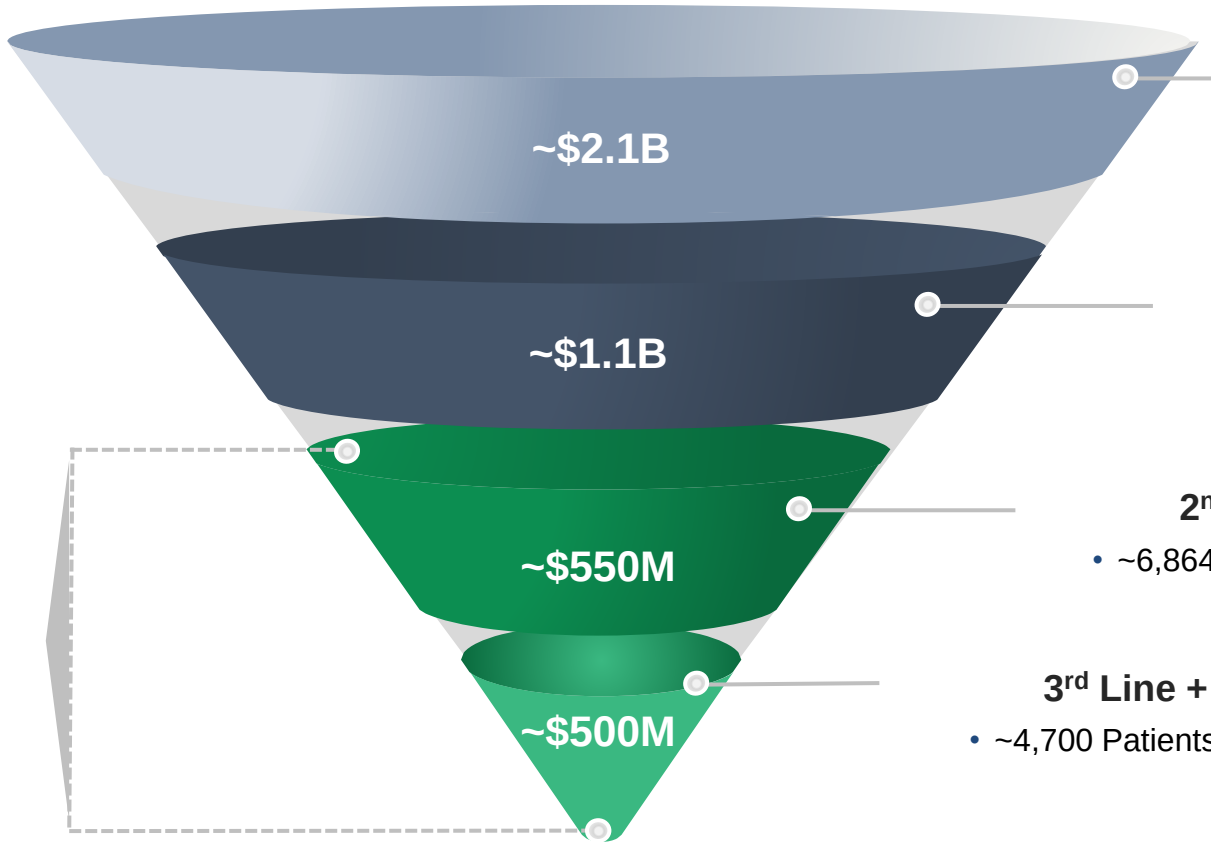
Iopofosine I 131: U.S. Waldenstrom's Macroglobulinemia Market

Total Market Value Estimated at ~$2.1B[10]



Total U.S. WM Market
- 26,000 Prevalence
- 88% on Active Therapy

1st Line
- ~9,880 Patients

2nd Line
- ~6,864 Patients

3rd Line +
- ~4,700 Patients

~$1.05B

Relapsed/Refractory
- ~11,564 Patients

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

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

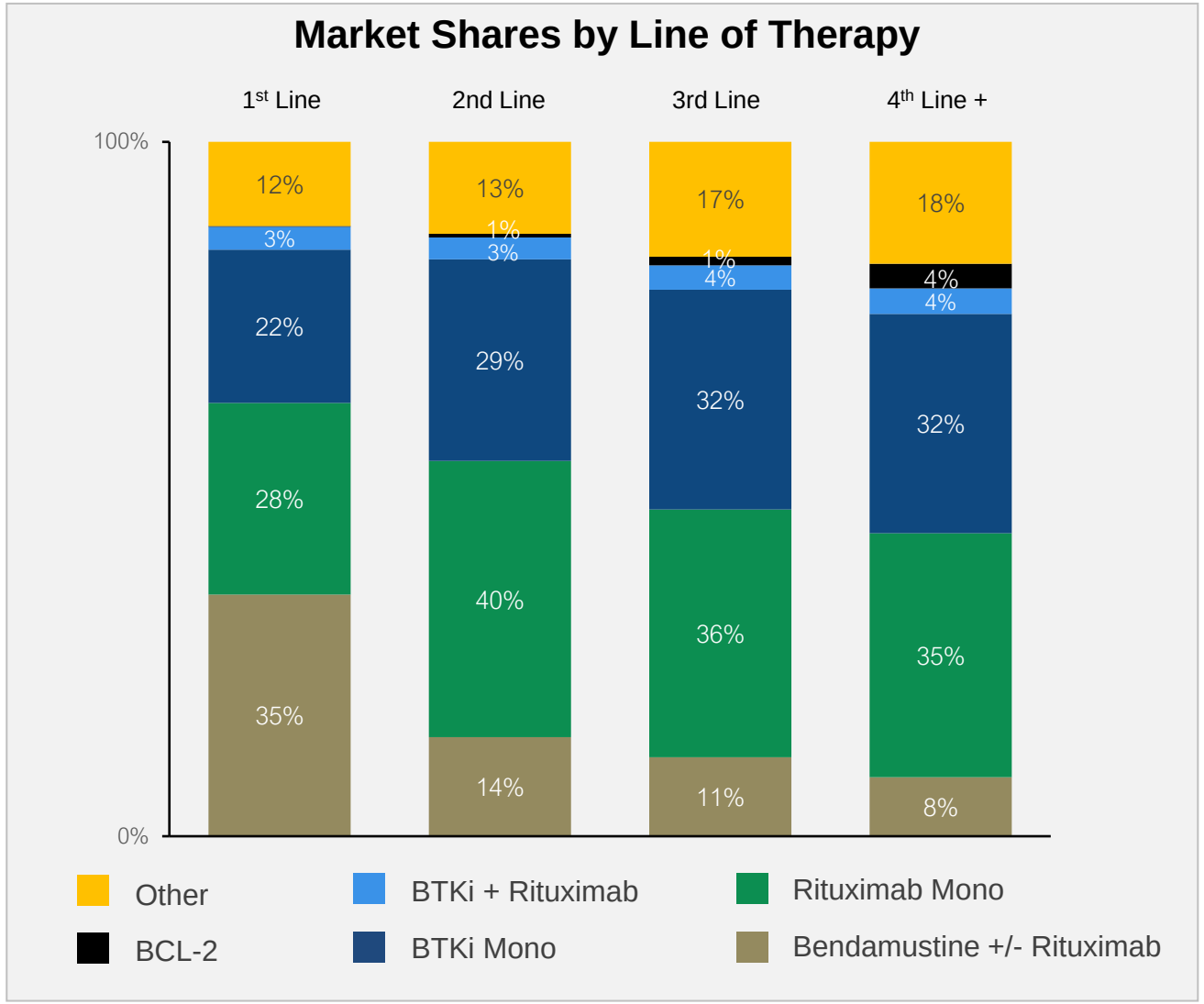
No Established Standard of Care Across All Lines of Therapy[4]

>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



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Iopofosine I 131: Commercial Opportunity

Four Favorable WM Market Characteristics

Unmet Need

- Addressable market of ~11,564 r/r patients, ~4,700 patients beyond 2nd line therapy; Annual 3rd line incidence ~988 patients[6]
- 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 opportunity[9]
- ~80% of patients located in 15 states[9]
- Large community network practices treat the majority WM patients in the community setting[9]

Limited Competition

- >60% Non-FDA approved drug share across all lines of therapy[9]
- No active promotion or share of voice in WM
- Low utilization of non-BTKi therapies beyond 2nd line therapy

Value Capture

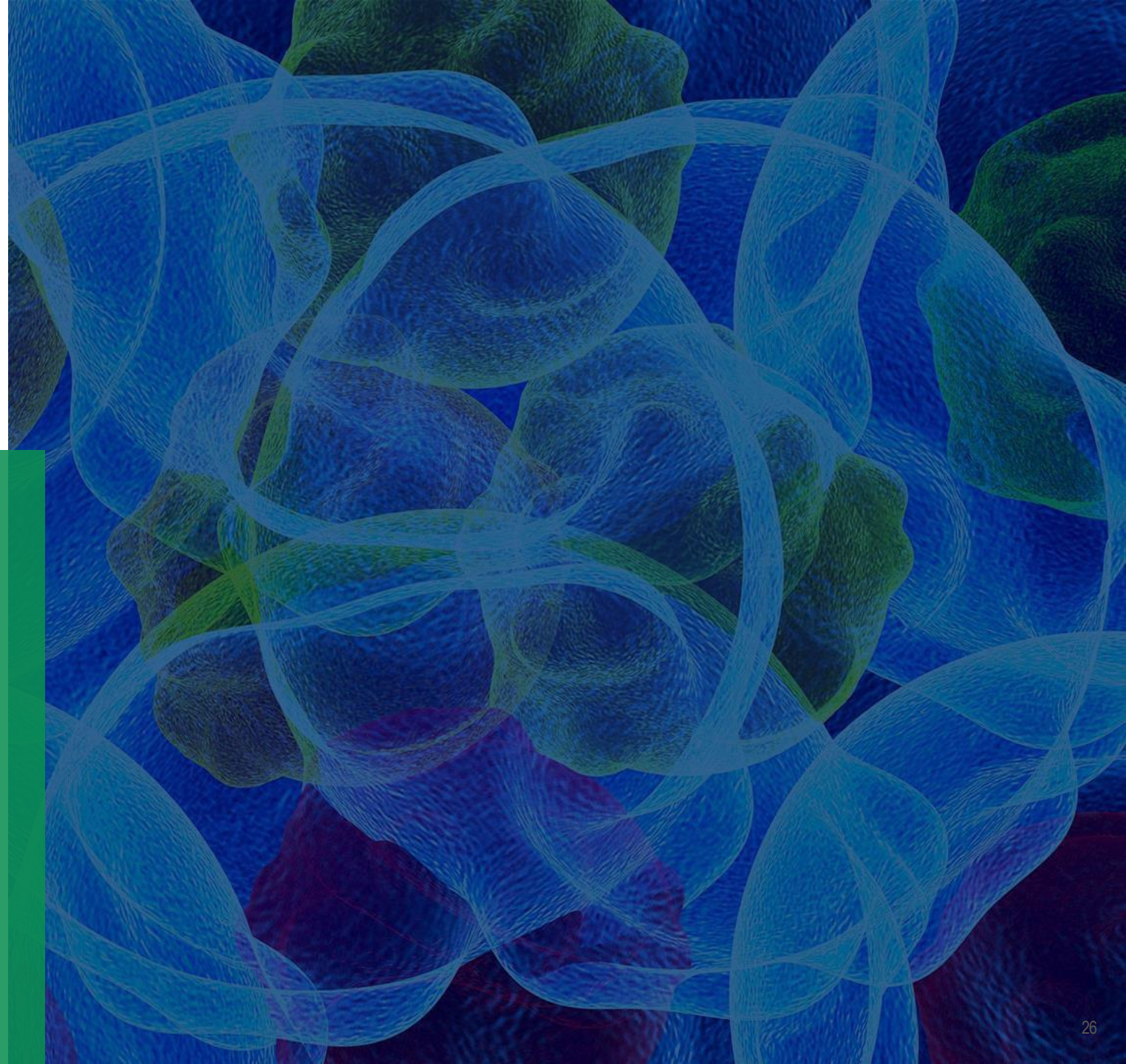
- 61% MRR in a heavily pretreated population, regardless of patient characteristics
- Fixed therapy – 4 doses given on Day 1,15, 57 & 71
- Novel MOA different from BTKi MOA

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

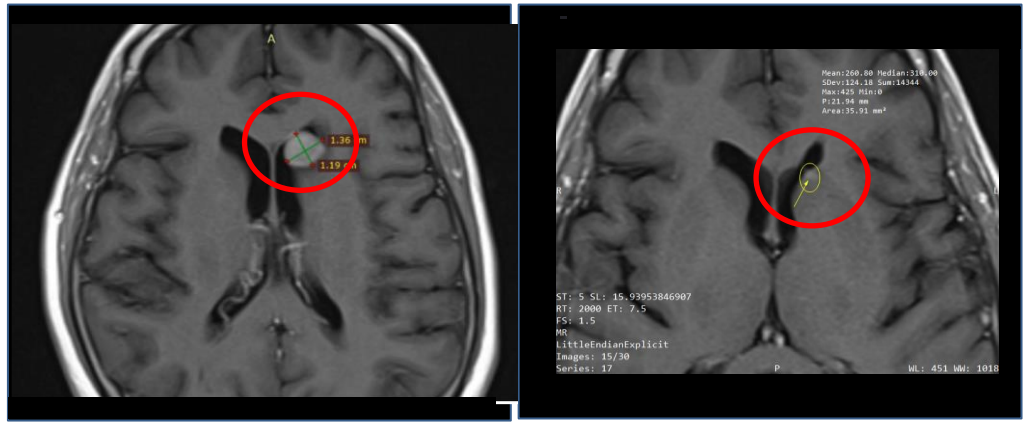
Hematologic and Solid Tumors Beyond WM

Iopofosine I 131



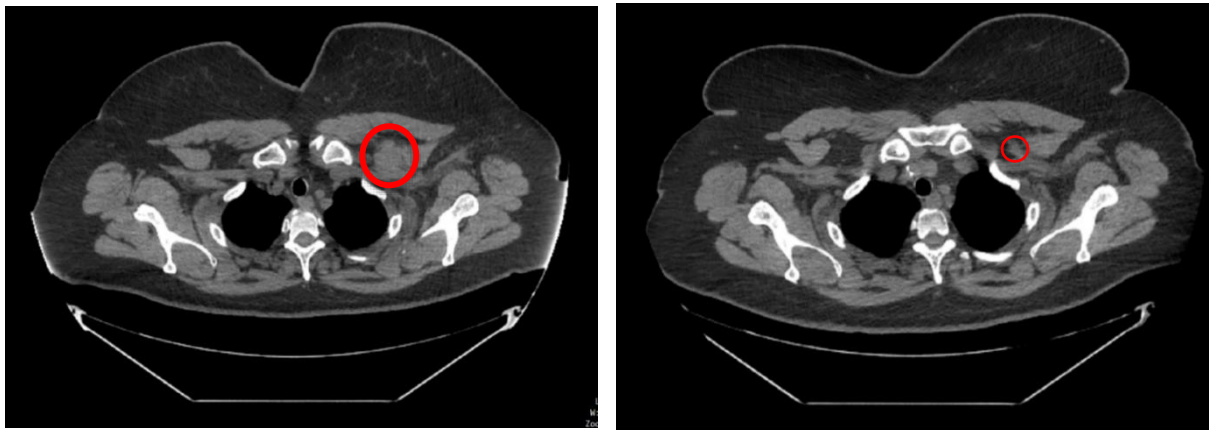
Iopofosine I 131: Activity Beyond Waldenstrom's macroglobulinemia

Refractory Primary CNS lymphoma



Complete Response

Refractory Diffuse Large B Cell lymphoma

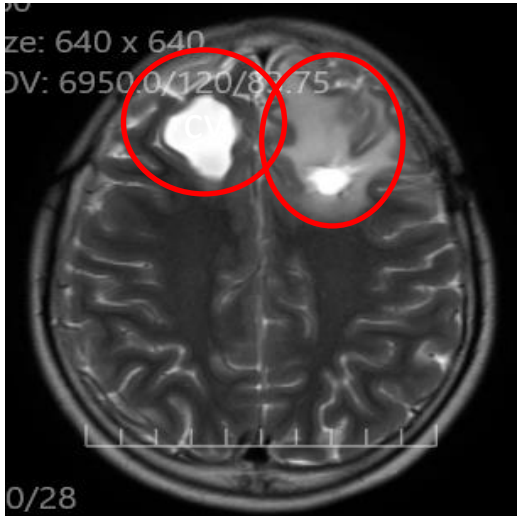


30% ORR with 10% CRR

HEMATOLOGIC

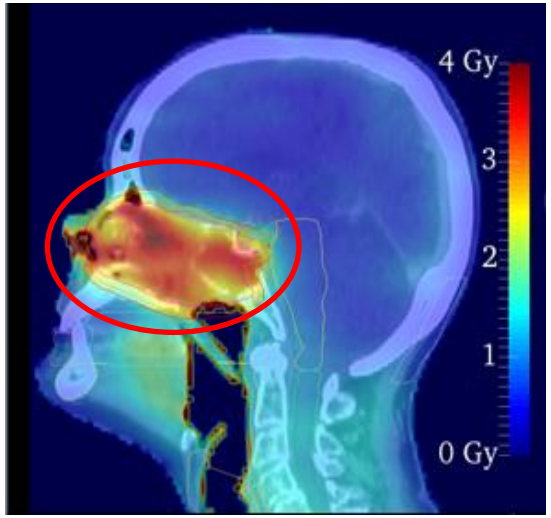
SOLID TUMOR

Relapsed Pediatric High-Grade Glioma



Extended PFS

Recurrent Squamous Cell Carcinoma Head & Neck



73% ORR with 64% CRR

ACROSS BBB

SYSTEMIC

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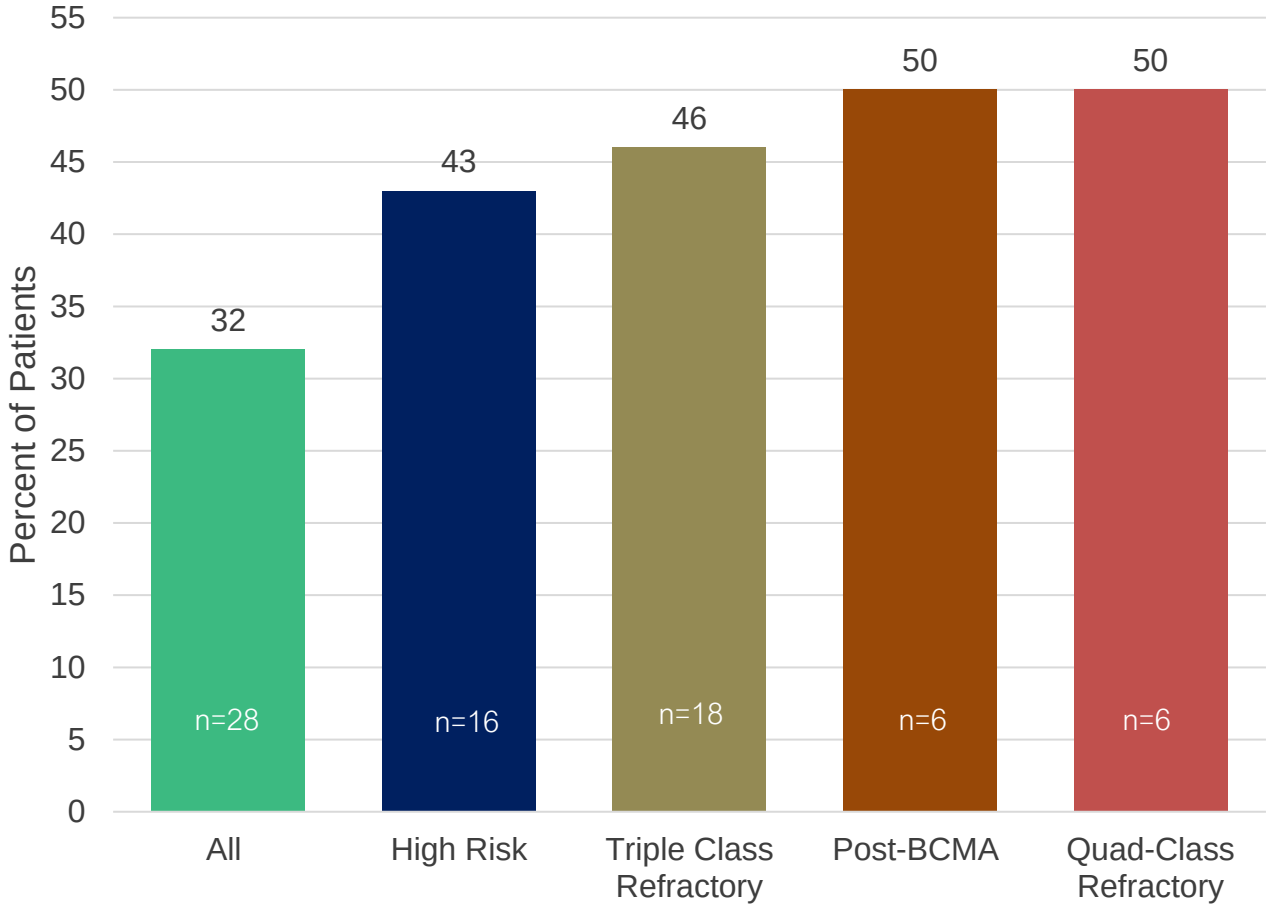
Iopofosine I 131: Phase 2a r/r Multiple Myeloma Subset Analyses

Response Rate



Additional Clinical Benefits

85.7% disease control

75% experienced tumor volume reduction

Triple class refractory
mPFS = 3.4m

Post-BCMA
mPFS = 3.3m

Upon WM Approval – MM NCCN Compendia Submission Planned

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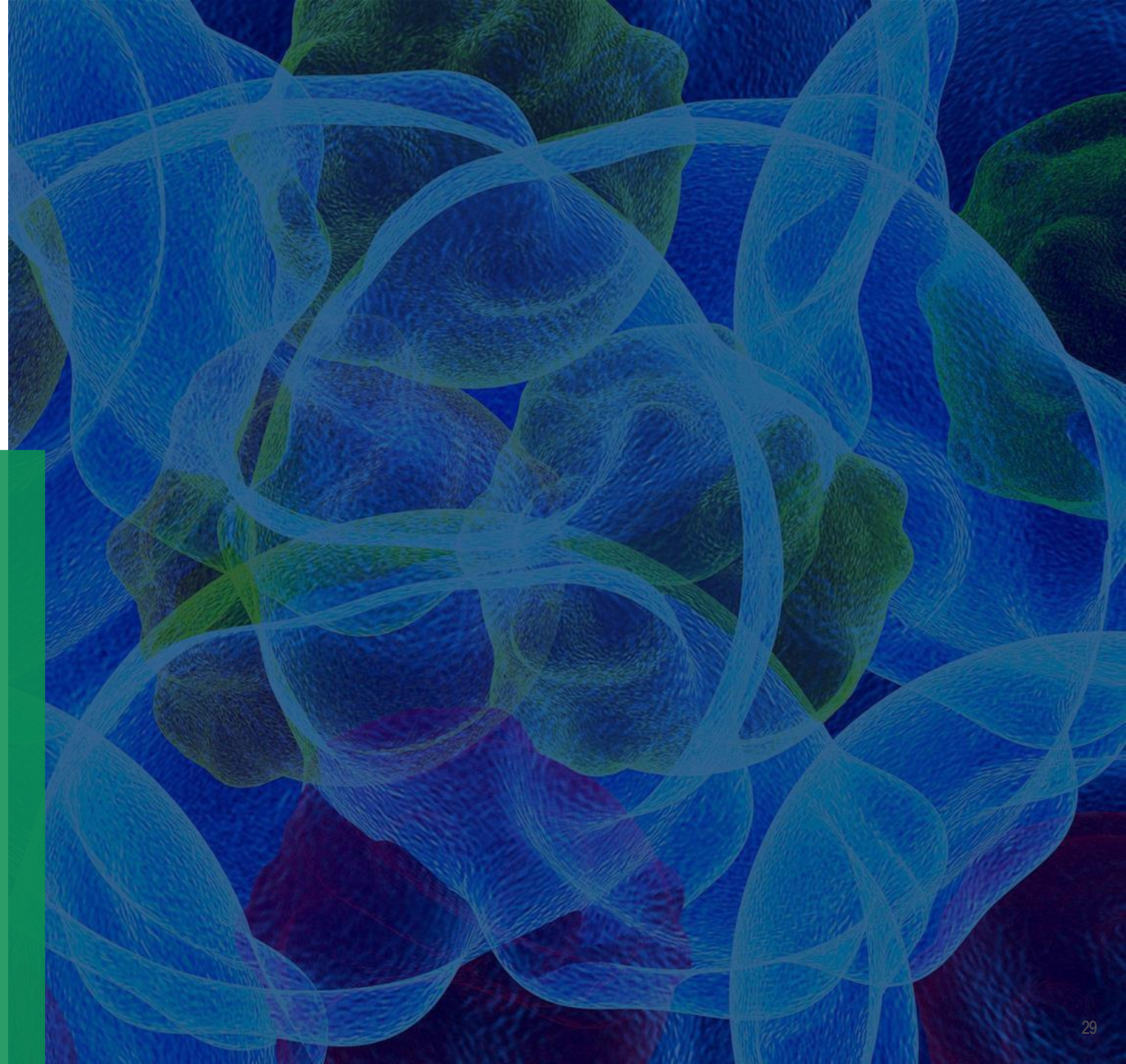
PRC Franchise

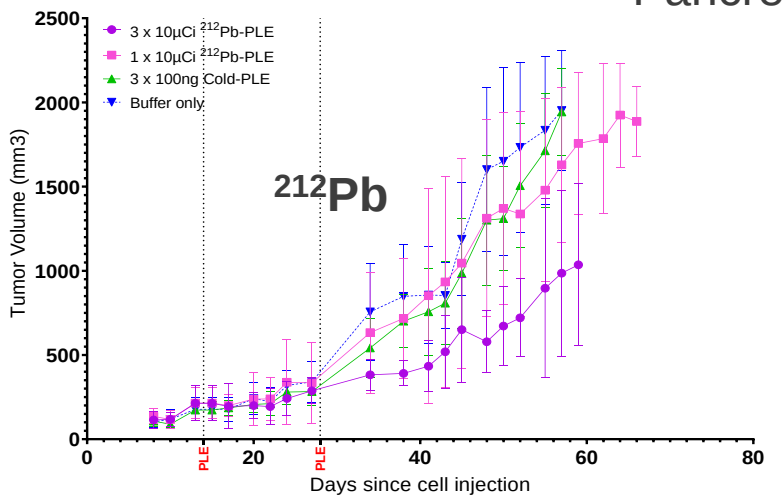
α-Emitter
Solid Tumor

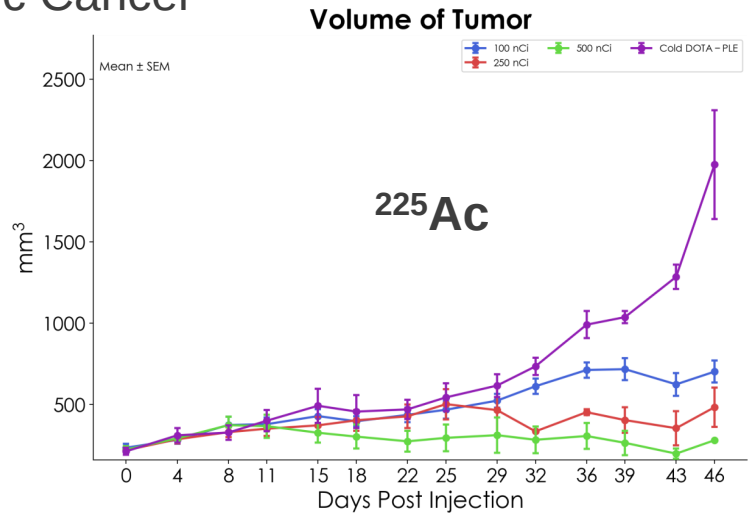


PRC Franchise: Capacity to Deliver Any Alpha Emitter

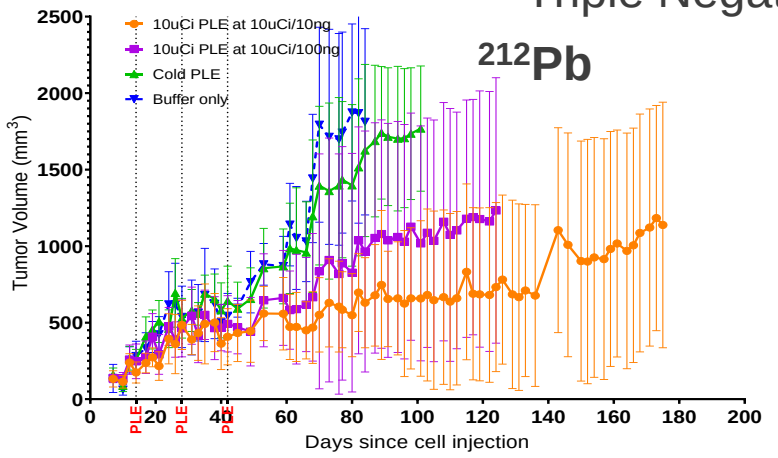
The Right Isotope for the Right Tumor - ^{212}Pb (Lead), ^{225}Ac (Actinium), ^{211}At (Astatine), or Others

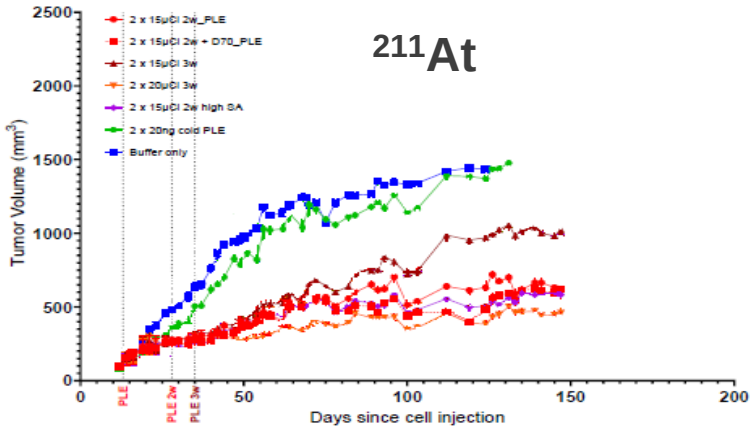
Pancreatic Cancer





Triple Negative Breast Cancer





- 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

PRC Franchise Capable of Producing Numerous Optimized Radiotherapies

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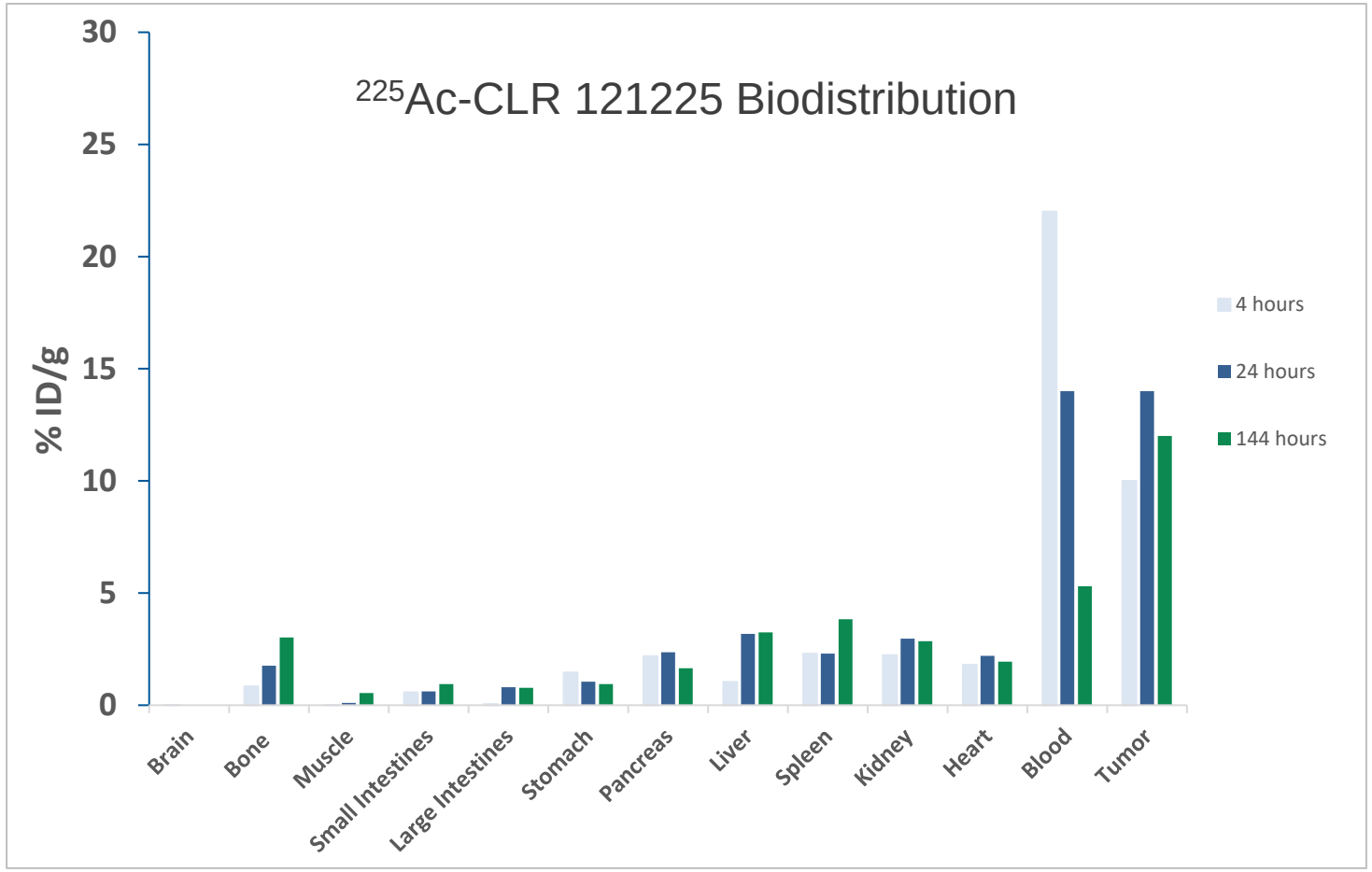
PRC Franchise: CLR 121225 A Novel Alpha Emitter

^{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

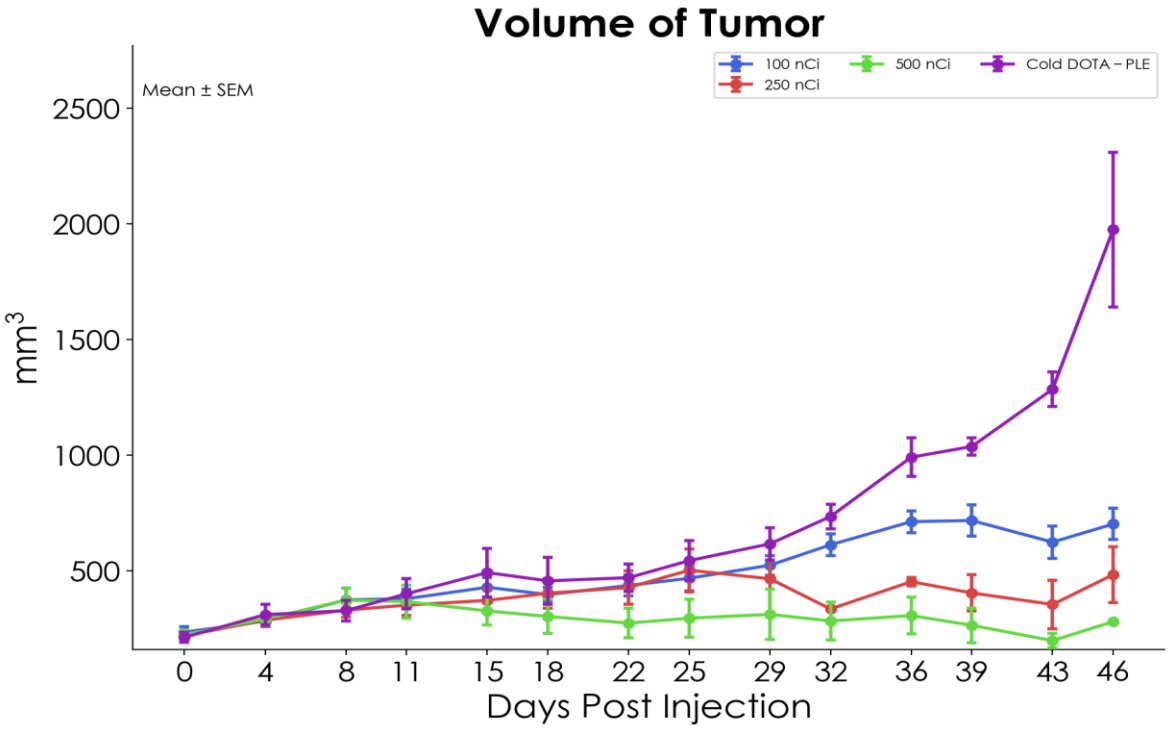


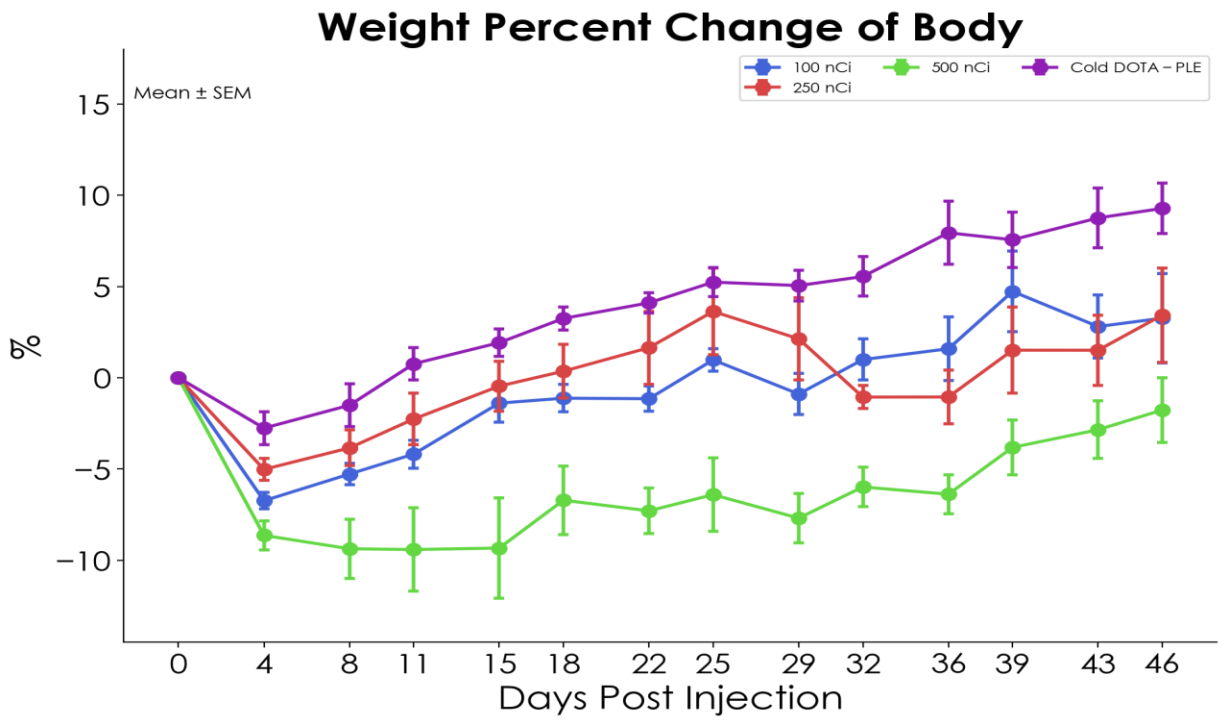
CLR 121225 Demonstrates Favorable Pharmacokinetic Properties

CELLECTAR BIOSCIENCES

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 mm^3; 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

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PRC Franchise: CLR 121225 A Novel Alpha Emitter

^{225}Ac-CLR 121225 Preclinical Program

- Compound demonstrates excellent biodistribution
- CLR 121225 validated activity in multiple types of solid cancer and at all doses
  - Pancreatic cancer
  - Triple negative breast cancer
  - Colorectal cancer
- CLR 121225 has been shown to be well tolerated
- Consistent isotope distribution throughout tumor allows for more effective treatment
- Next steps:
  - Dosing optimization
  - Complete IND enabling studies
  - Prioritize initial tumor type for Phase 1 based upon preclinical results

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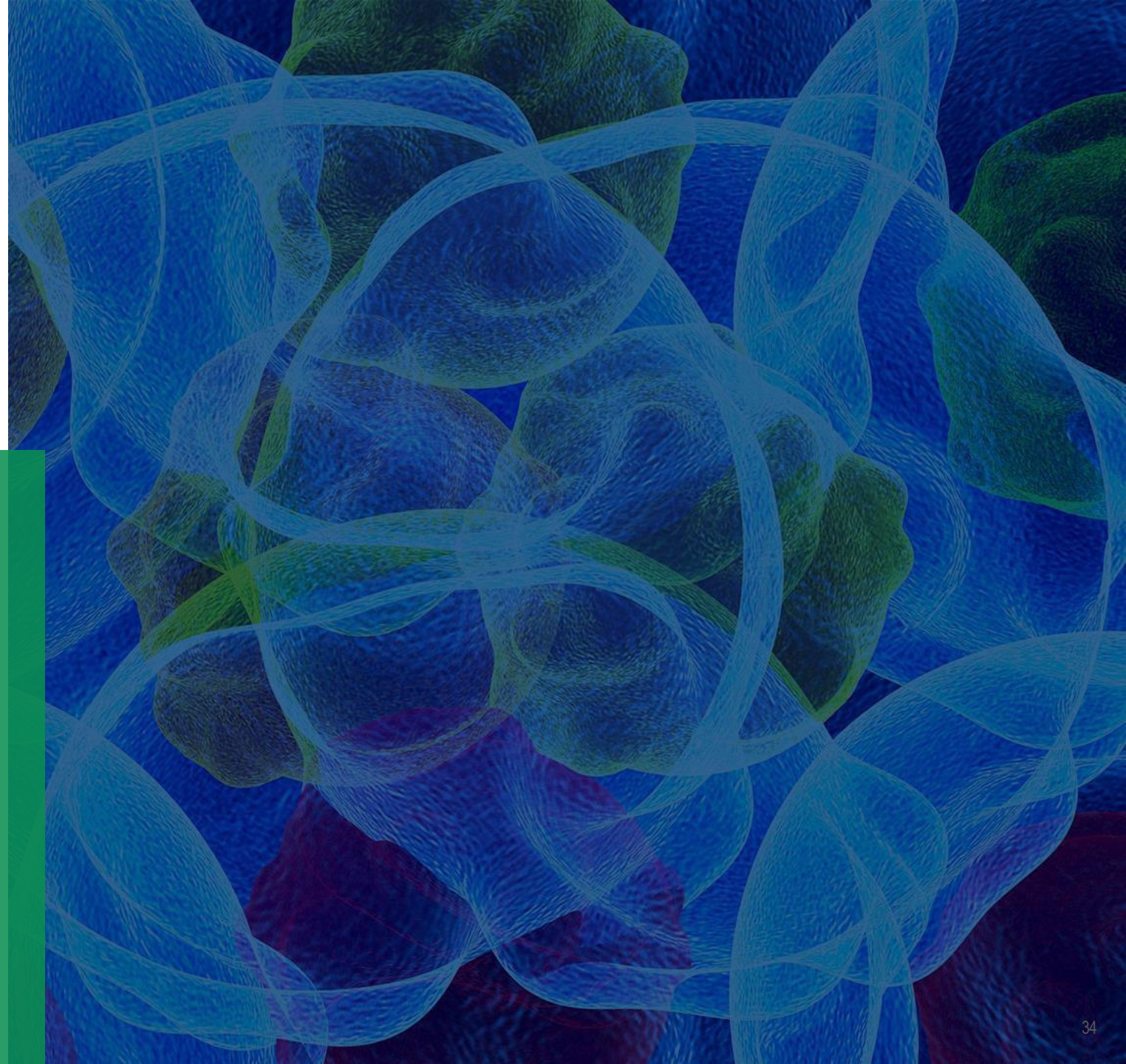


Financials

Capitalization

Financial Summary

Cash position as of December 31, 2023 (millions)	**$9.6M**
Proceeds Received in January/February 2024	$43.9M
Proforma cash (millions)	**$53.5M**
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**

Cellectar Biosciences: 2024 Corporate Focus

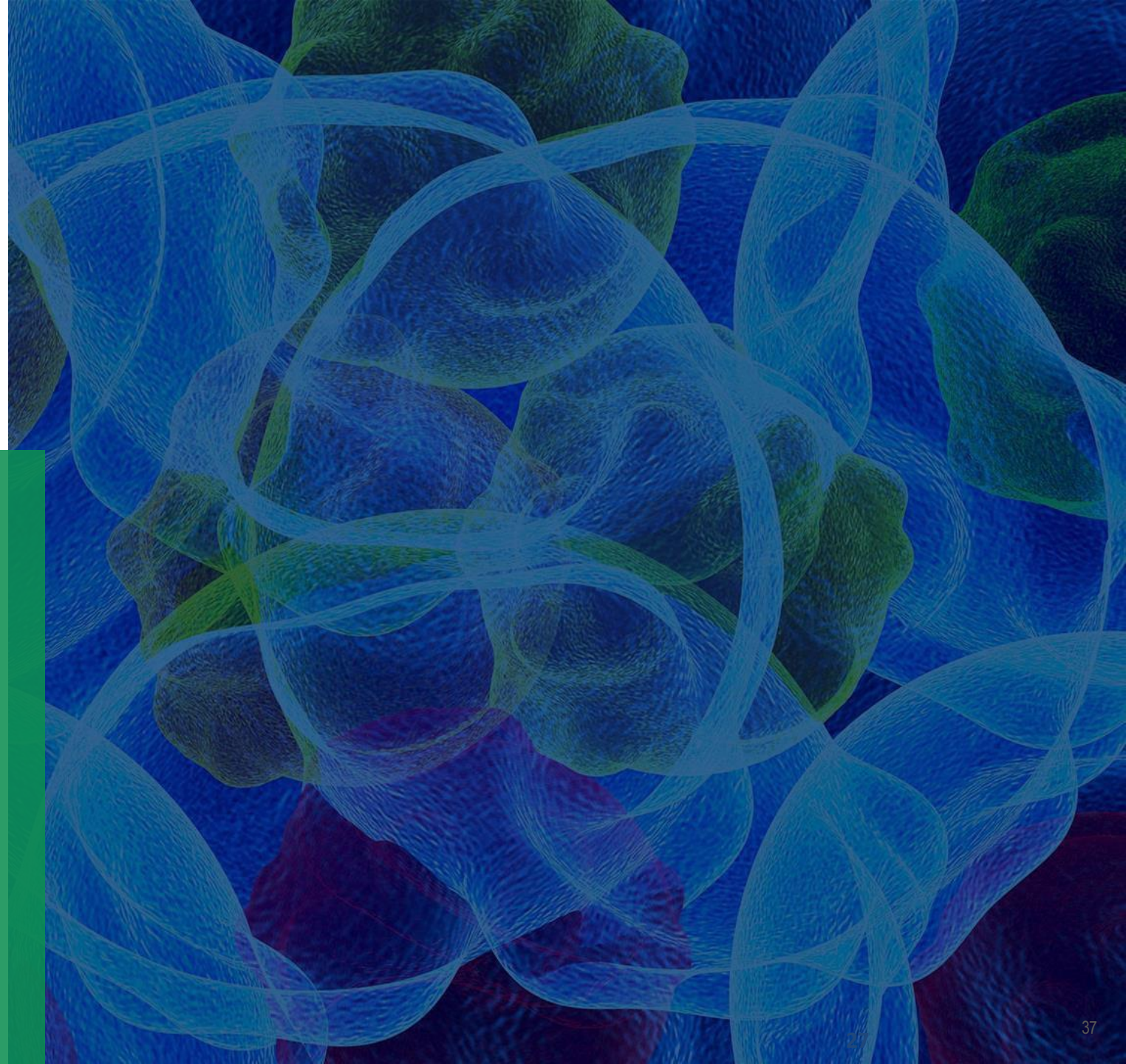
Objectives for Value Creation

- 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

CELLECTAR BIOSCIENCES

THANK YOU

NASDAQ: CLRB



Experienced Management

James Caruso

President, CEO and Director

ALLOS THERAPEUTICS
NOVARTIS
Bristol Myers Squibb
Abbott
BASF

Jarrod Longcor

Chief Operating Officer

AVILLION
Melinta THERAPEUTICS
ADVANCIS PHARMACEUTICAL CORP

Chad Kolean

Chief Financial Officer

VIVEX BIOLOGICS
PIONEER SURGICAL
TITAN SPINE

Shane Lea

Chief Commercial Officer

Bristol Myers Squibb
Celgene
ALLOS THERAPEUTICS
sanofi aventis
NOVARTIS

Andrei Shustov

SVP, Medical

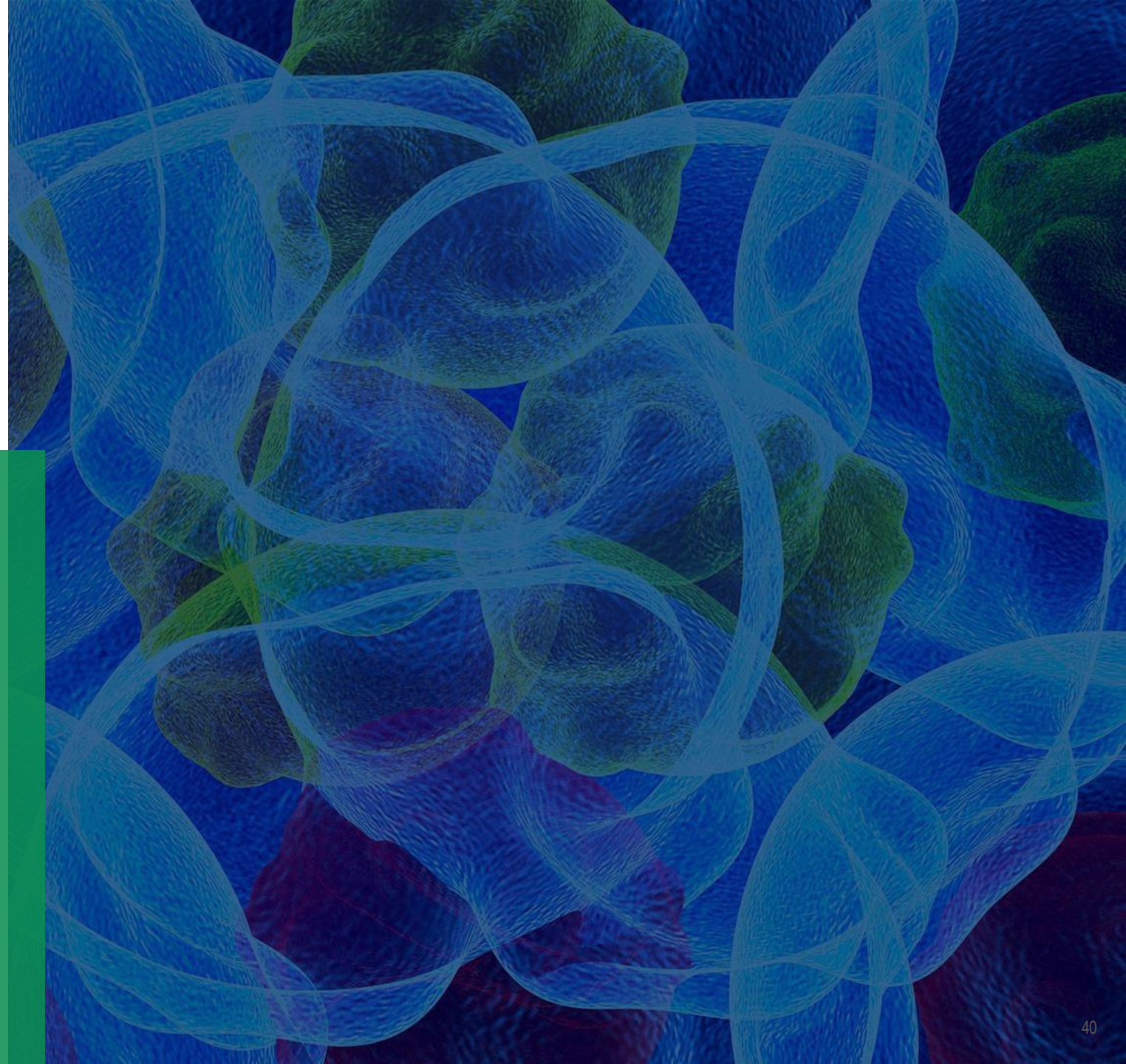
Seagen
UNIVERSITY of WASHINGTON
Professor
&
Fred Hutch Cancer Center

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 date 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. The null hypothesis assumes a placebo effect of 10% combined with a 10% exclusion rate. This provides a null hypothesis of 20%. Said another way if the lower bound of the two tail test using 95% confidence interval is greater than 20% the null hypothesis which states that there is no benefit with treatment with iopofosine is rejected and the alternative hypothesis is acceptance – there is a statistical benefit of treating with iopofosine in this patient population. The primary endpoint will be analyzed using a 95% two-sided confidence interval calculated by the Clopper-Pearson method.
4. Internal claims analysis for Waldenstrom's macroglobulinemia (January 2019-October 2023 Move to footnotes and number
5. Confirmatory tests pending to reach CR definition
6. Putnam Market Sizing 2023
7. Putnam Quantitative Research 1Q 2023 (n=102 MDs); Putnam Analysis and WM Advisory Boards
8. Komodo Claims Data
9. Real-world data - large community oncology network
10. Market Value utilizes third-party market sizing and company claims data for share, treatment counts and normalizes for branded pricing
11. 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

CELLECTAR BIOSCIENCES

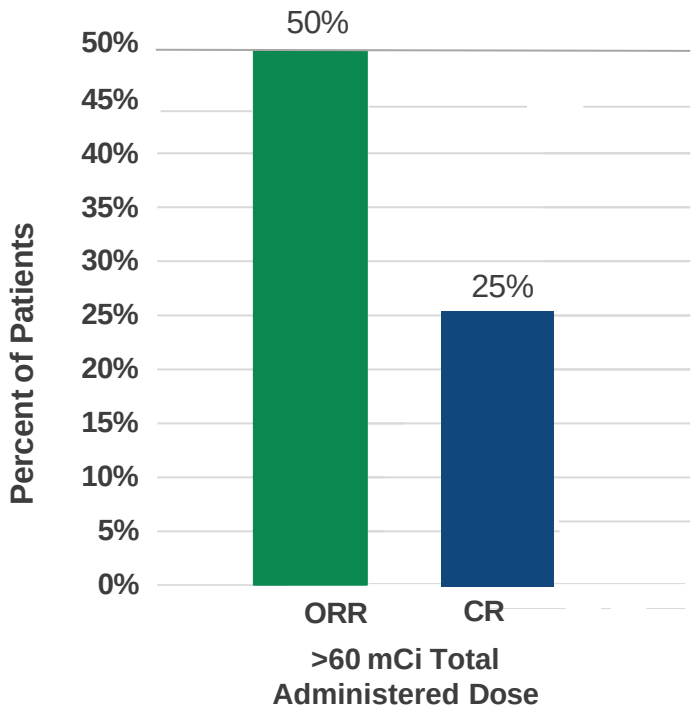
Appendix



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

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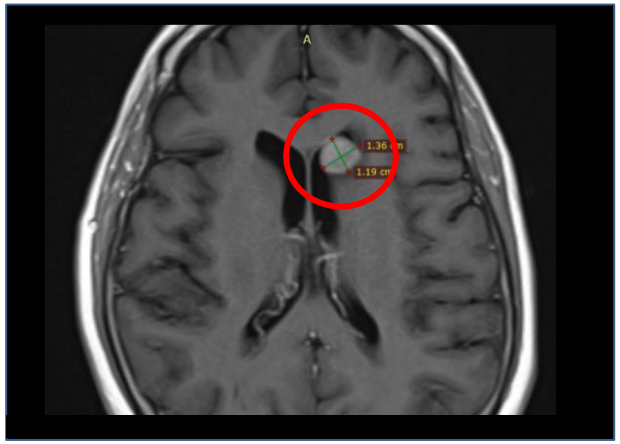
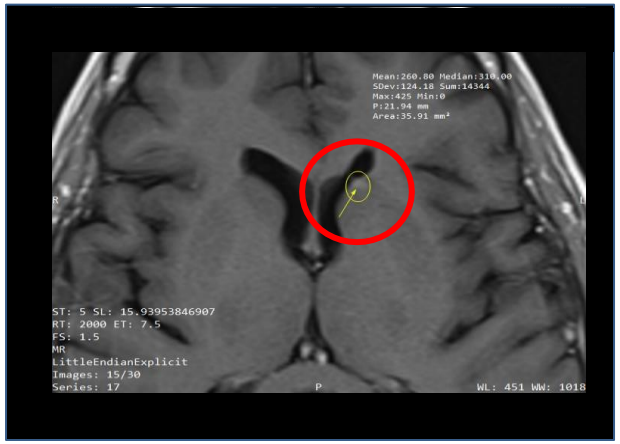
Iopofosine I 131: pCNS Lymphoma Phase 2a Study

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:

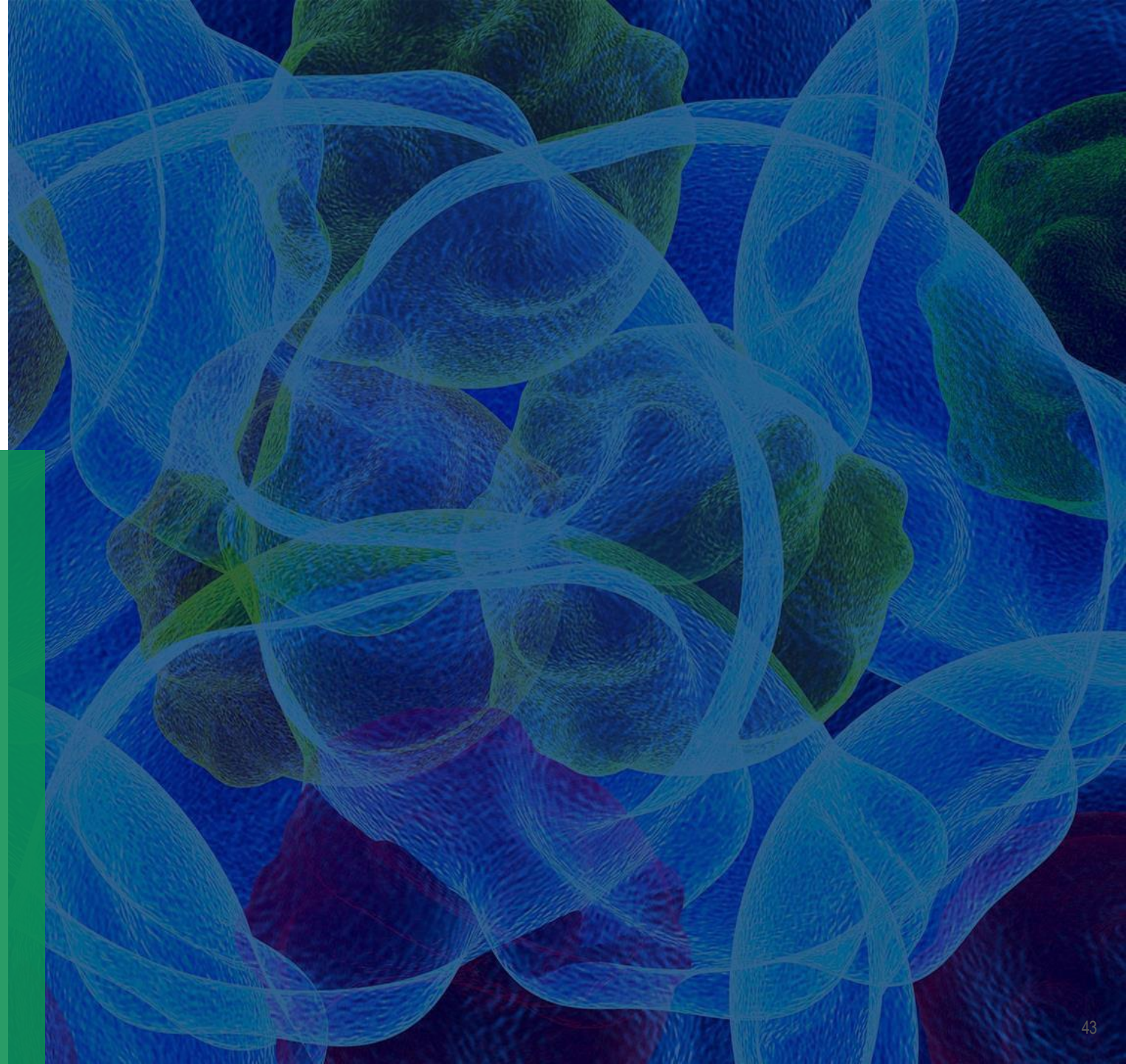
- 93% tumor volume reduction at day 43
- Progression-free survival 17.1 months (ongoing)
- Duration of response 15.4 months (ongoing)

Complete Response Achieved with No Evidence of Viable Tumor

CELLECTAR BIOSCIENCES

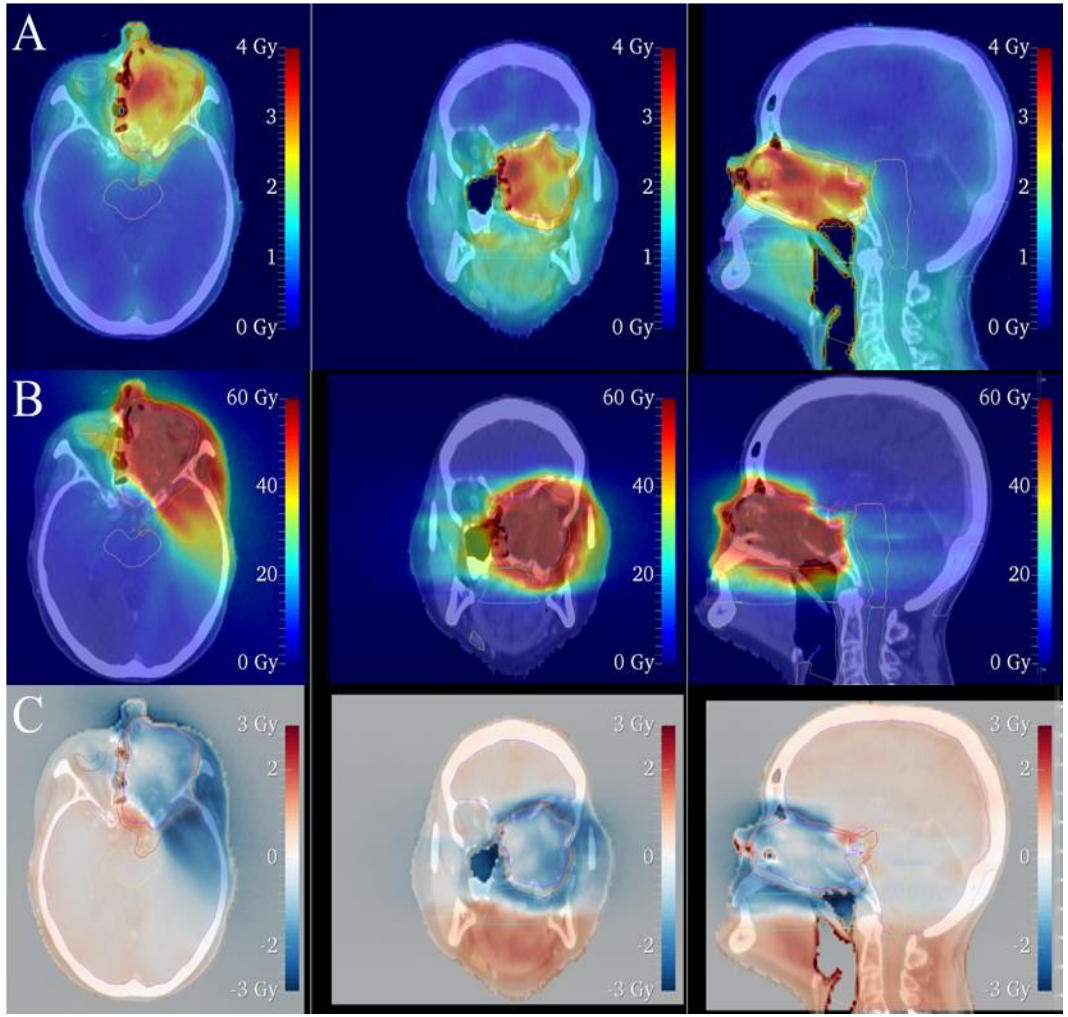
PRC Franchise

Adult and Pediatric Solid Tumors
Iopofosine I 131



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

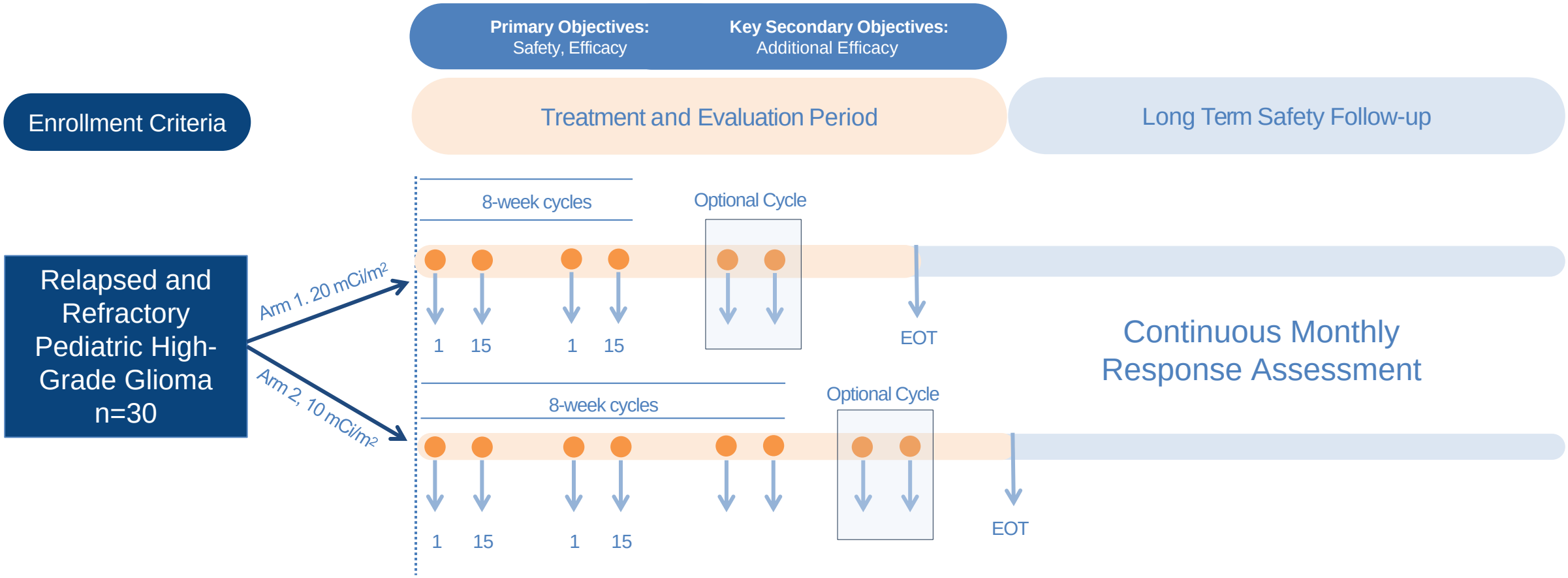
NCI-SPORE Grant Funded Study in Adults in Combination with External Beam Radiation



- Two doses of iopofosine at 15 mCi/m^2 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

CELLECTAR BIOSCIENCES

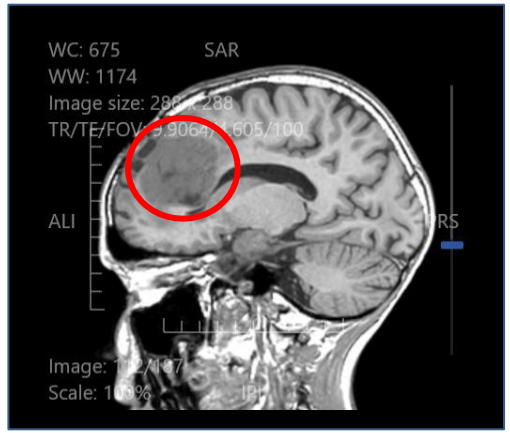
Iopofosine I 131: CNS Tumor - Refractory Ependymoma Pediatric Patient

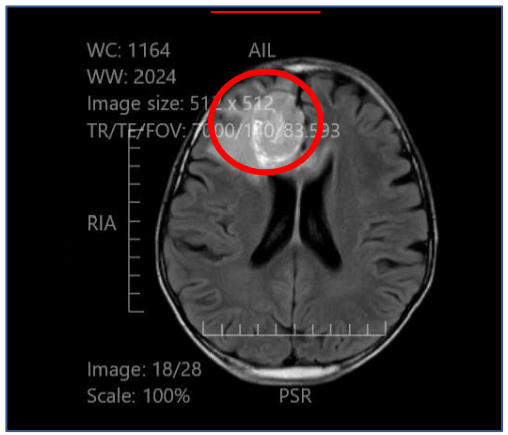
Activity in Solid Tumor Across the Blood Brain Barrier

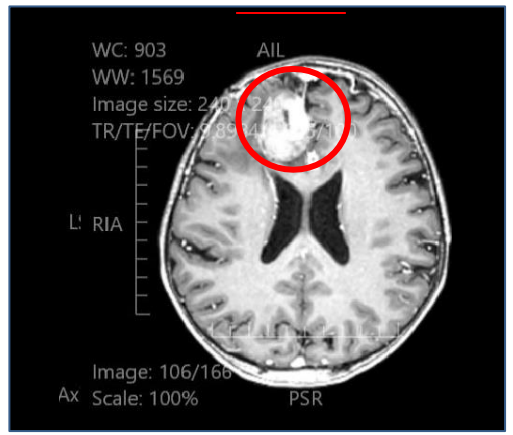
Patient Characteristics and Dose:

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

At Screening → **Day 21** → **Day 42**







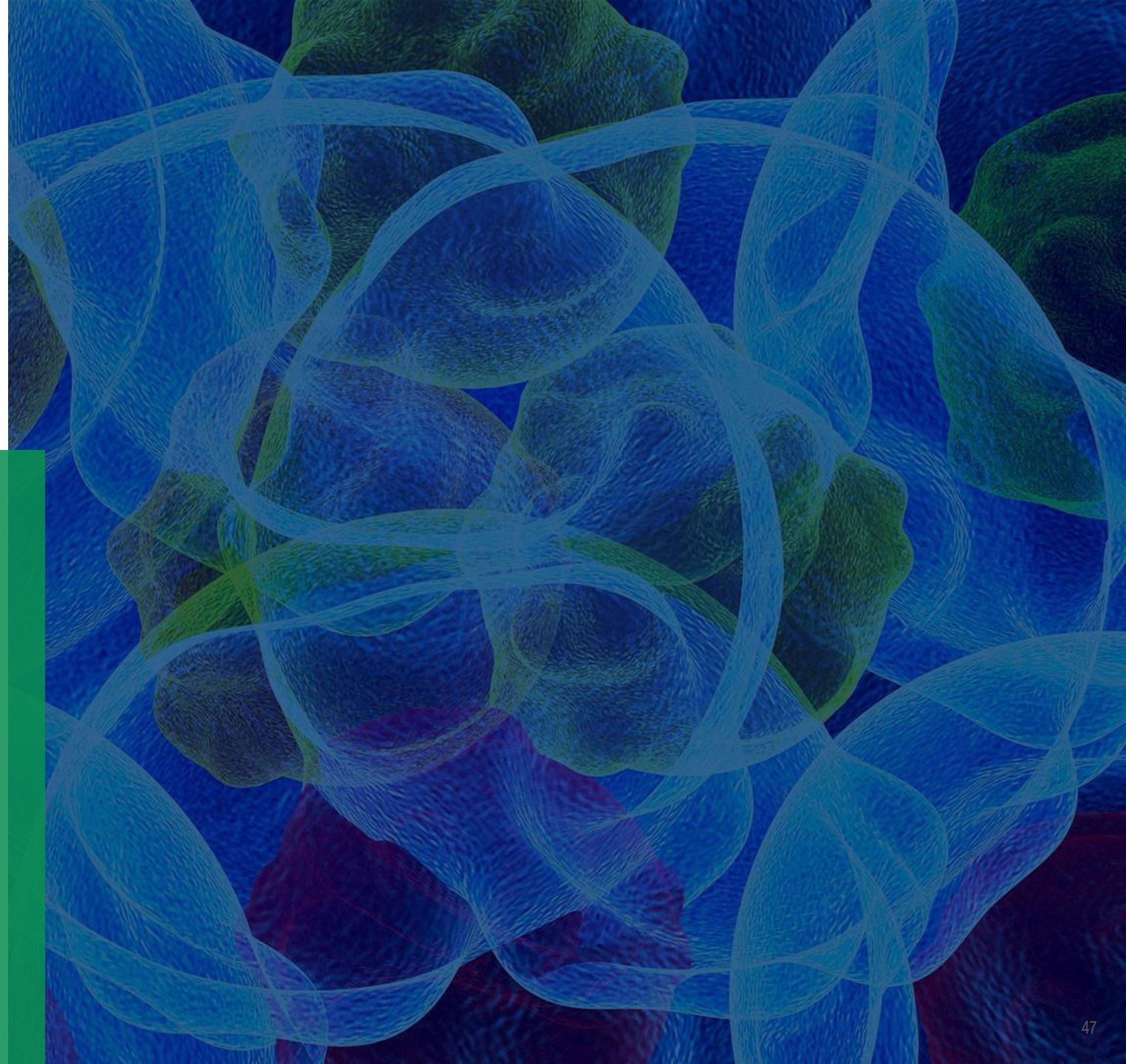
Results:

- 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

CELLECTAR BIOSCIENCES

CELLECTAR BIOSCIENCES



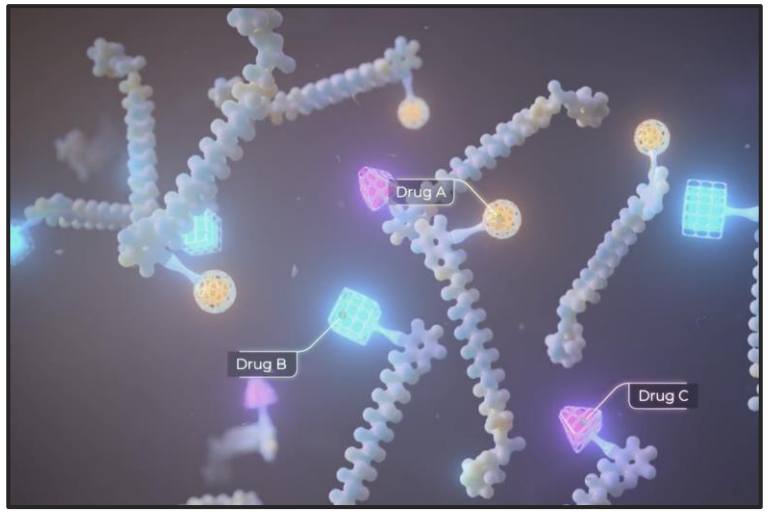
PCC, POC, PPC Franchises

Small Molecule Cytotoxins, Oligonucleotides and Peptides

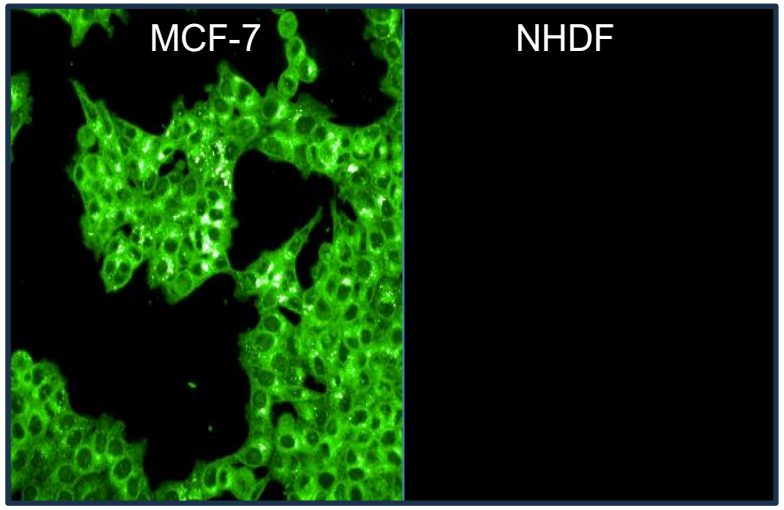
PCC, POC & PPC Franchise: Unique Attributes

Universal Targeting with Diverse Payloads Provides Advantages Compared to ADCs

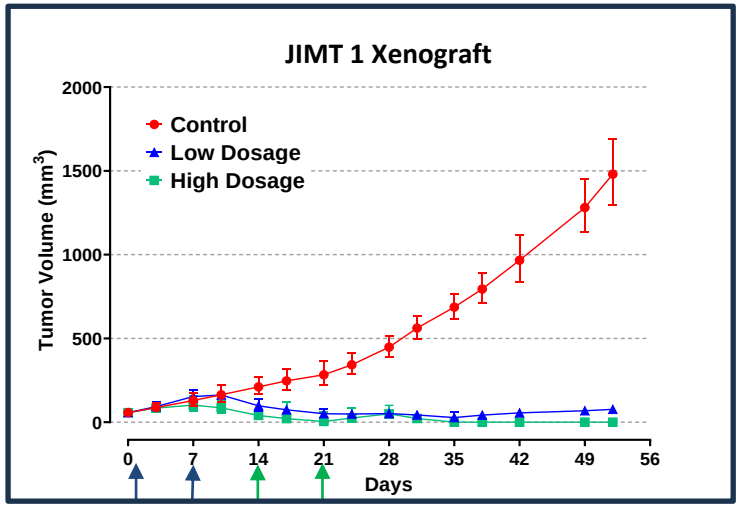
(1) PDC containing small molecules, oligos or peptide payloads



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



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



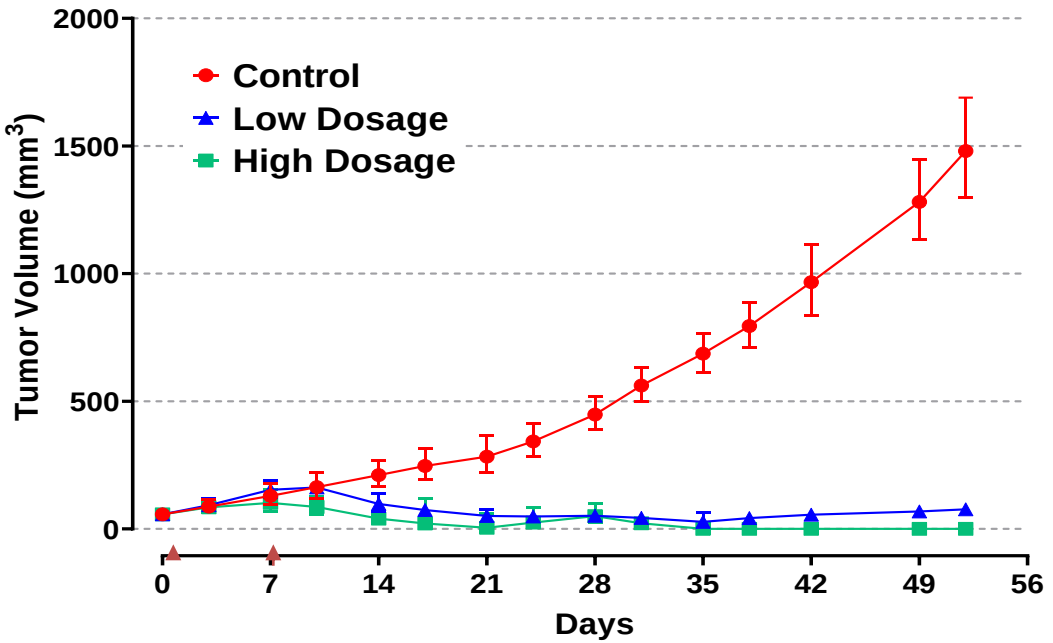
Profile	Diverse Linkers & Payloads	Addressable Targets	Size of Molecules	Rapid Tumor Internalization	Resistance Development	Cytoplasmic Delivery
PCC, POC & PPC	●	●	●	●	●	●
Antibody Drug Conjugate (ADC)[11]	●	●	●	●	●	●

CELLECTAR BIOSCIENCES

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

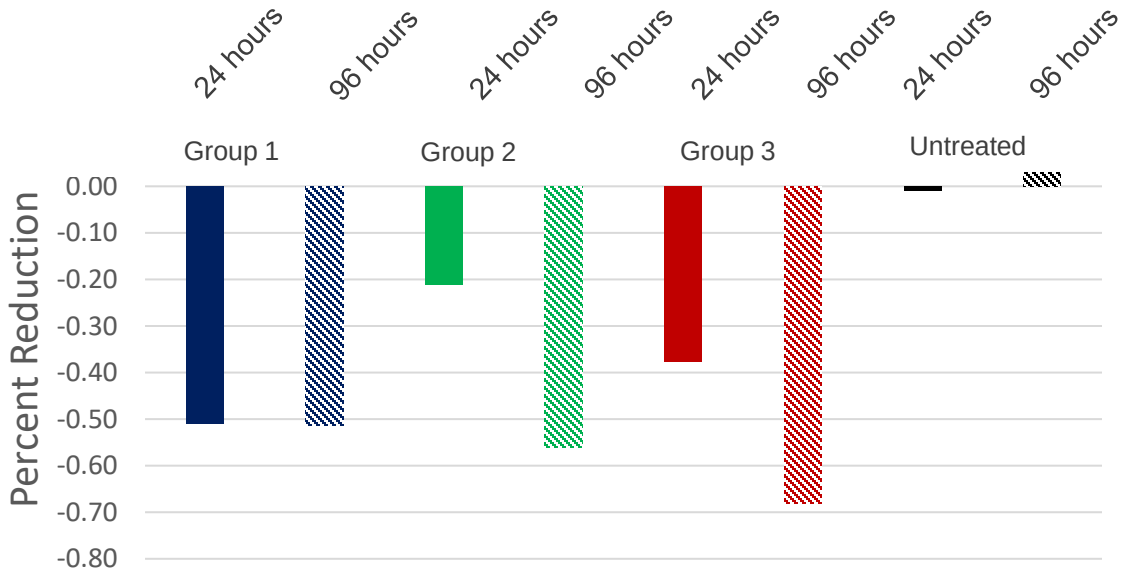
Small Molecule Cytotoxins, Oligonucleotides and Peptides

JIMT 1 Breast Cancer



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

Panc-1 siRNA Knockdown



- 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

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