



PERSPECTIVE
THERAPEUTICS

Pb-203/Pb-212 image guided alpha particle therapy for cancer

October 2023

NYSE: CATX

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Forward-looking statements contained in this presentation are made as of this date, and the Company undertakes no duty to update such information whether as a result of new information, future events or otherwise, except as required under applicable law.

Radiopharmaceuticals are a Pillar of Oncology Treatment with Pan-Cancer Opportunities



Molecularly Targeted Radiation

- Radioligands can precisely deliver radiation directly to cancer cells reducing off-target effects
- Proven pillar of cancer treatment
 - Perspective's platform technology is optimized for greater efficacy and fewer side effects



Optimized Patient Selection

- Molecular imaging companion diagnostics enable visualization of the therapeutic target
- Enables the selection of patients who may best respond to therapy
 - Perspective's elementally matched isotopes are paired for imaging and therapy



Monotherapy Activity and Combination Synergies

- Ability for both monotherapy and combination treatments
- Potential synergies with DNA damage response and immune checkpoint inhibitors
 - Perspective's targeted alpha therapy delivers potent and immunostimulatory radiation to tumor



Outpatient Friendly

- Modern medical isotopes enable radiopharmaceuticals to be administered outside of hospitals
- Treatments are easily-accessible globally with several hundred therapeutic locations in the U.S alone
 - Perspective's short half-life isotopes simplify patient administration and waste management



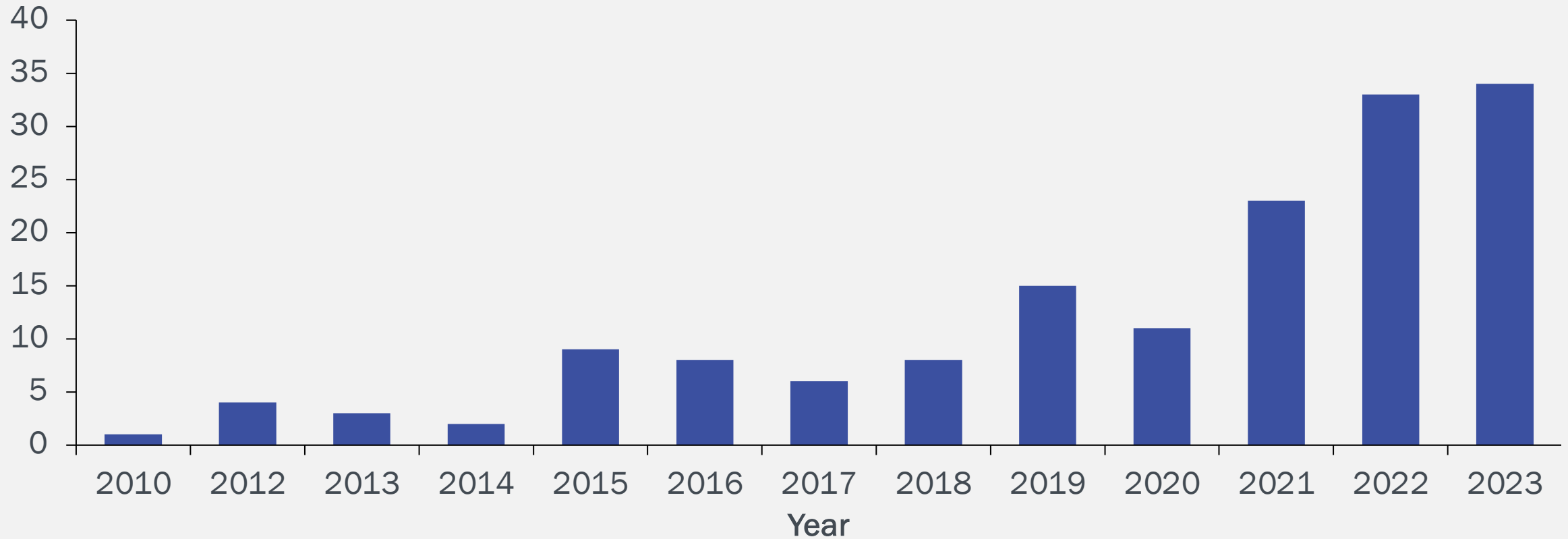
Unique Business Opportunity

- Radiopharmaceutical theranostic product development is highly-specialized and technical
- Greater expertise needed than for standard medicines potentially creating higher barriers to entry
 - Perspective develops patent-protected best-in-class intellectual property

Growth of Radiopharmaceuticals – Pub Med Search

Theranostics and Theragnostics

Publications



Targeted α -Particle Radiotherapy

A New Class of
Oncology Therapeutics



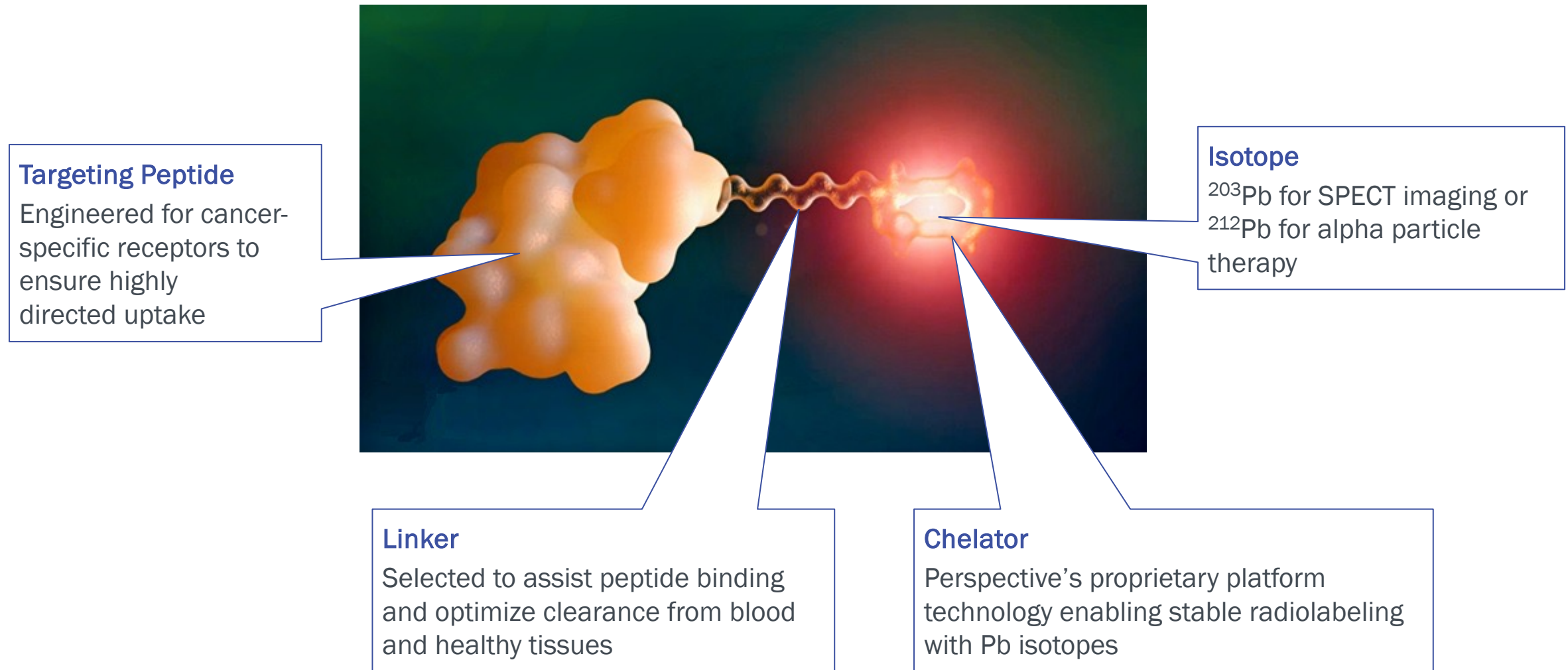
Growth of Targeted Alpha Therapy – Pub Med Search

Targeted Alpha Particle Therapy

Publications



Perspective's Radiopharmaceutical Optimization Process



Why peptides? Peptides are ideal ligands for radiopharmaceutical therapy

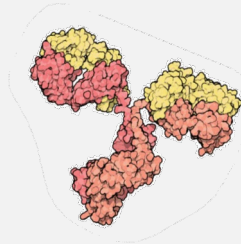
Monoclonal antibodies

Kinetics

Tumor penetration:	Low
Clearance:	Hepatobiliary (liver)
Biological $\frac{1}{2}$ Life:	Long
Target affinity:	High
Accumulation time:	Extended
Stability:	Questionable

Production

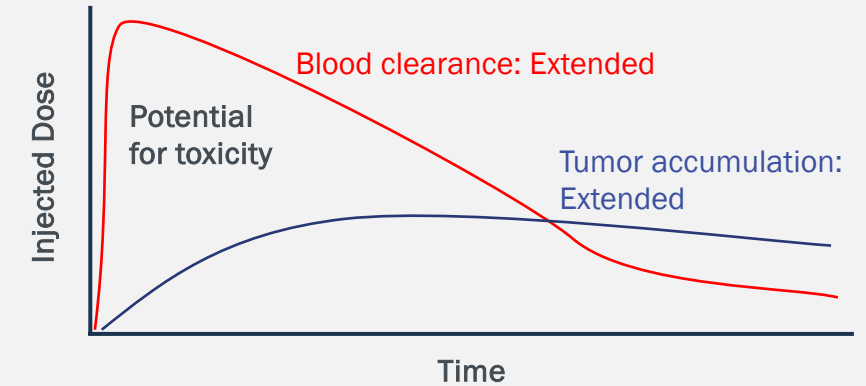
Manufacturing:	Complex biological
CoGs:	High



← 10 nanometers →

mAb Size: 150 kDa

mAb Kinetics



Peptides

Kinetics

Tumor penetration:	High
Clearance:	Renal (kidneys)
Biological $\frac{1}{2}$ Life:	Short
Target affinity:	High
Accumulation time:	Rapid
Stability:	Excellent

Production

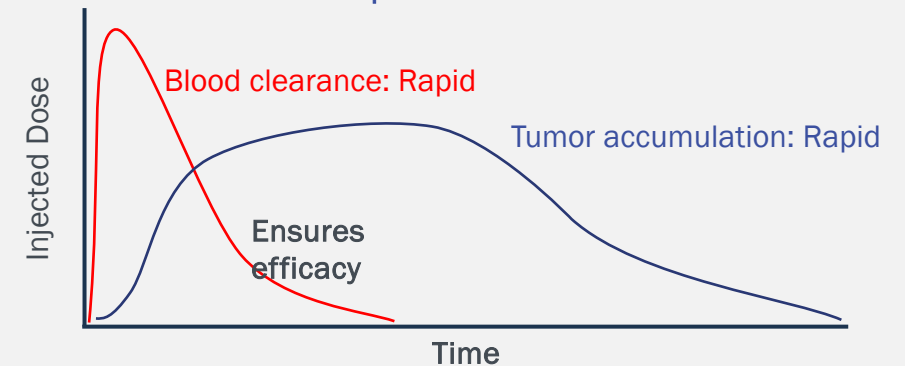
Manufacturing:	Synthetic
CoGs:	Very low



← 10 nanometers →

Peptide Size: 1.5 kDa

Peptide Kinetics



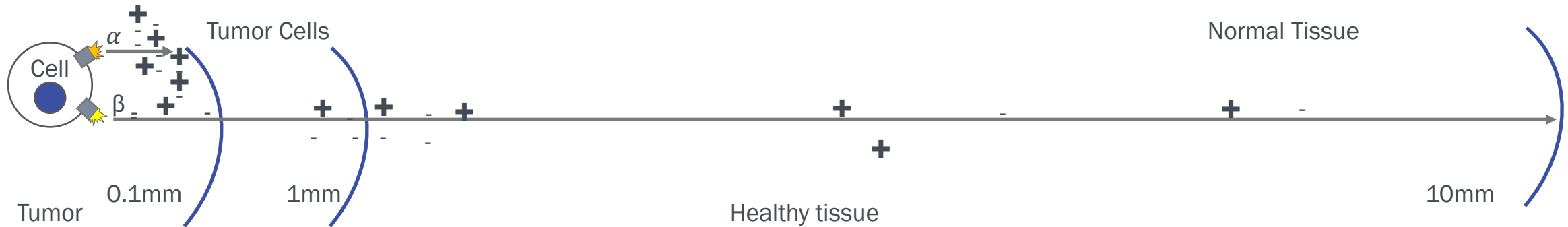
Why Lead-212 (^{212}Pb)? Optimal therapeutic isotope for peptide-based radiopharmaceuticals

Greater Therapeutic Energy Expected to Improve Outcome with Better Safety

	Iodine (^{131}I)	Lutetium (^{177}Lu)	Actinium (^{225}Ac)	Lead (^{212}Pb)	Implication ¹
Emission Profile	Beta	Beta	Alpha	Alpha	Potent
Half Life	8 days	6.7 days	10 days	0.46 days	Rapid Clearance
Off Target Toxicity Risk	Very high	Low	High	Low	Best
Supply	High	Low	Low	High	Abundant
Cost of Production	Low	High	High	Low	High margin

Alpha particle range (up to 3 cell diameters)

Beta range (up to 200 cell diameters)




The destructive energy of an alpha particle is deposited within several cell diameters. A beta particle spreads its lower energy over a longer range


¹ Company estimates and assumptions based on current literature and known physical constants


Lead (Pb): The Ideal Theranostic Isotope


Ideal Theranostic Requirements


 Ideal agreement between imaging and therapeutic compounds


 Readily available isotope

 Ideal chelator

 Rapid clearance from blood

 High tumor retention @24 hours

 Short $t_{1/2}$ gives rapid effect while minimizing environmental impact

 No unsafe daughter isotopes

Solutions: ^{203}Pb & ^{212}Pb & Perspective Chelator

^{203}Pb and ^{212}Pb matched pair

Generator produced/chemistry processing

Proprietary chelator carries 0 net charge

Conjugation to small peptides

High and sustained binding

Low hospital and patient impact for radiation safety

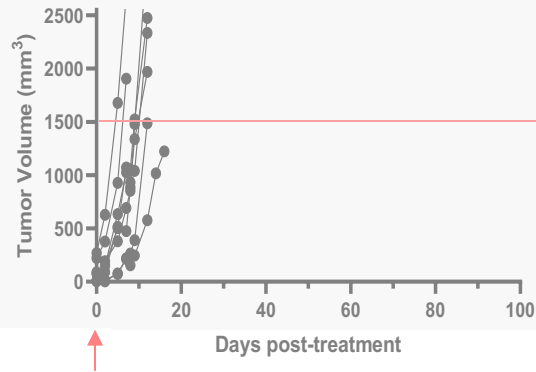
Decays to cold Pb

Why Pb-212? Potent targeted alpha particle therapy

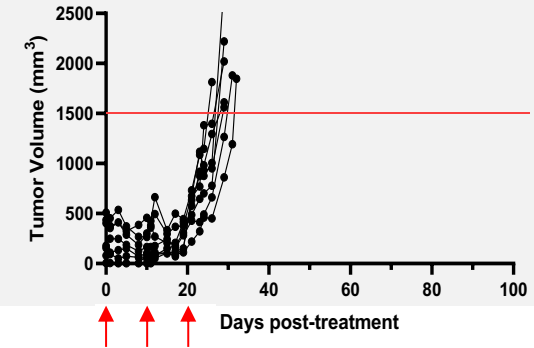
VMT- α -NET shows improvements vs Standard of Care [^{177}Lu]DOTATATE

↑ Drug Administered

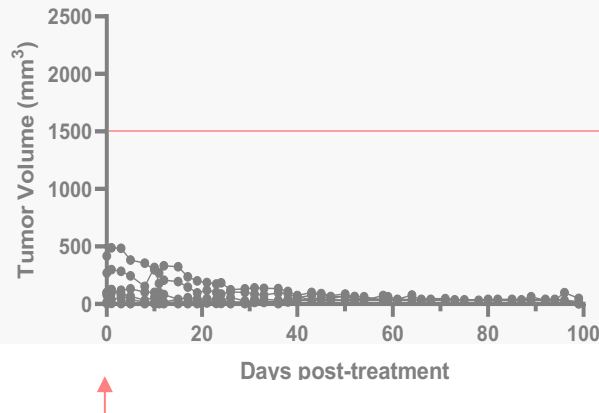
Vehicle



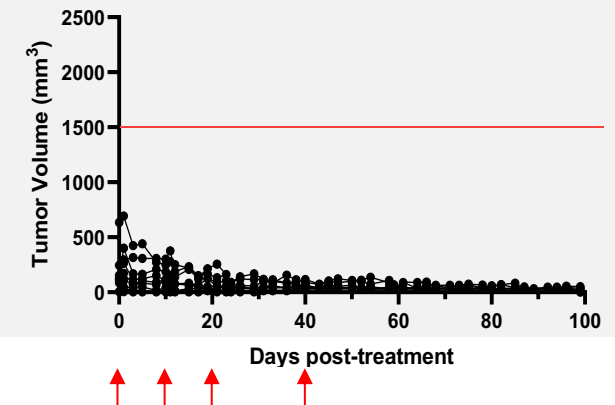
[^{177}Lu] DOTATATE (3 x 500 μCi)



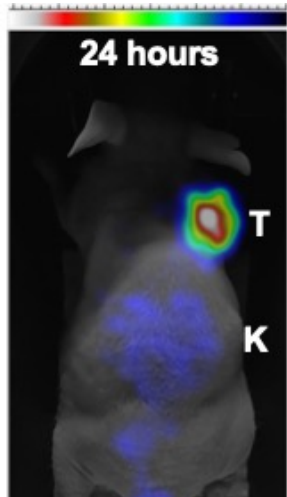
[^{212}Pb] VMT- α -NET (120 μCi)



[^{212}Pb] VMT- α -NET (4X30 μCi)

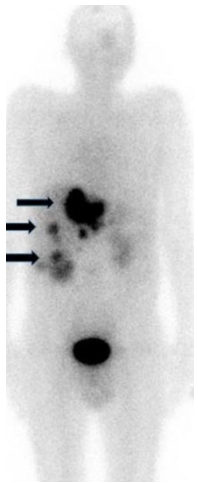


Why Pb?: Elementally Matched Pb-203 and Pb-212

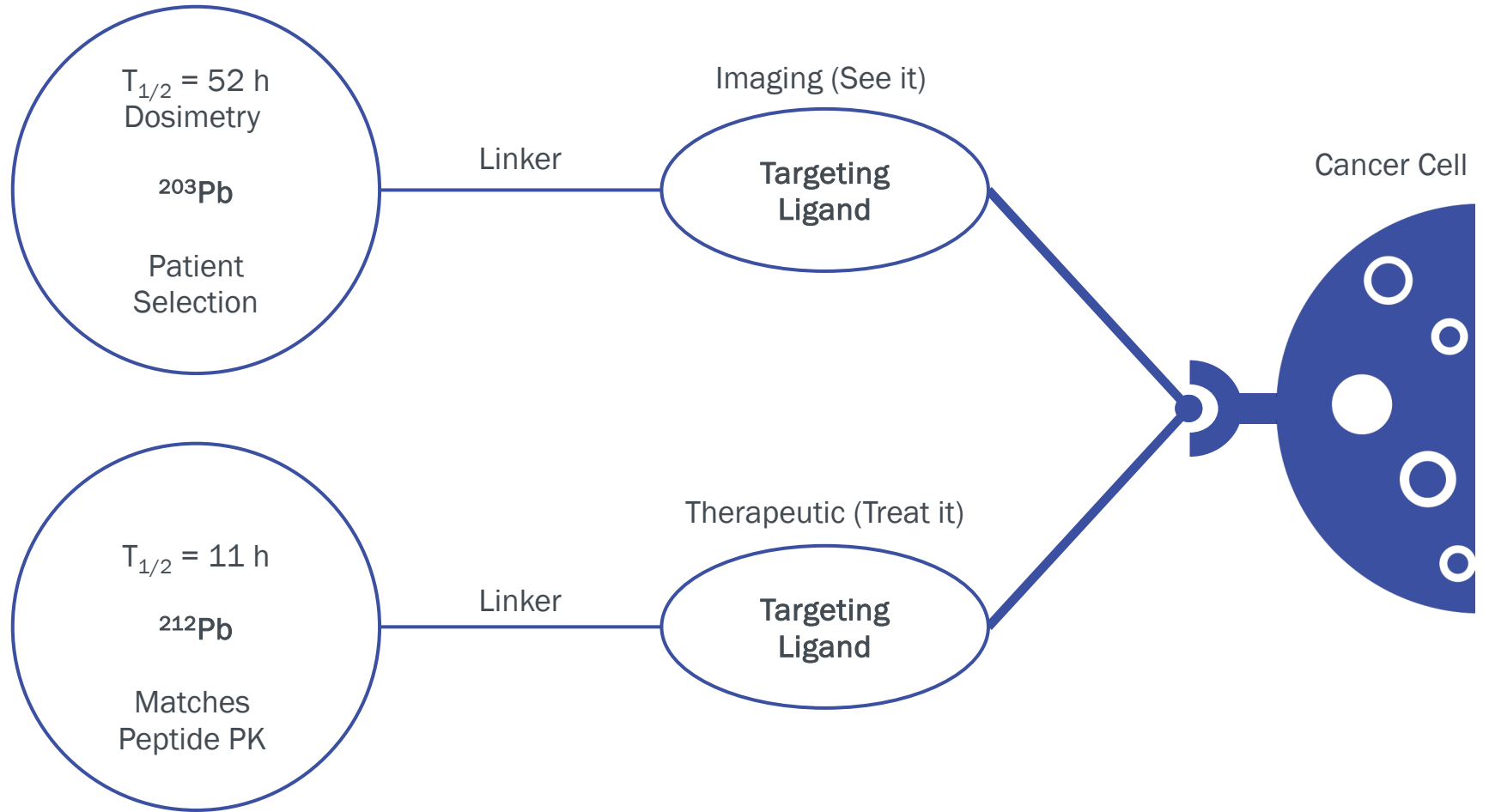


24 hours

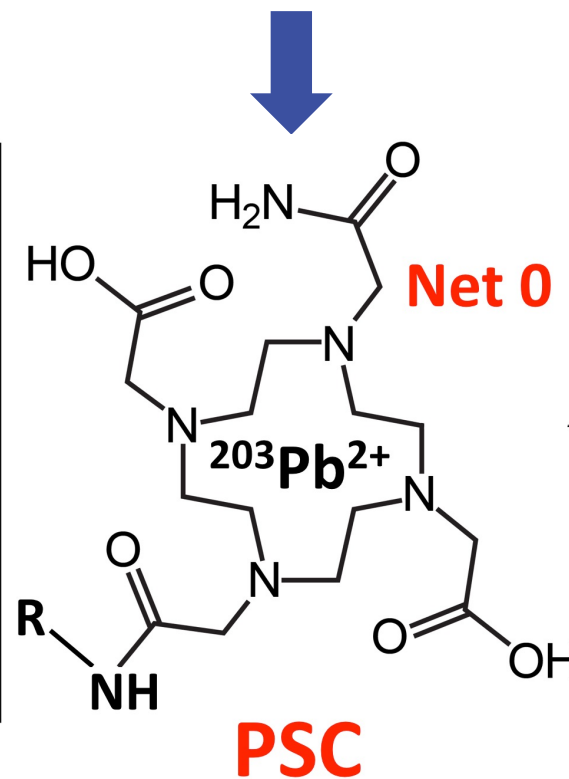
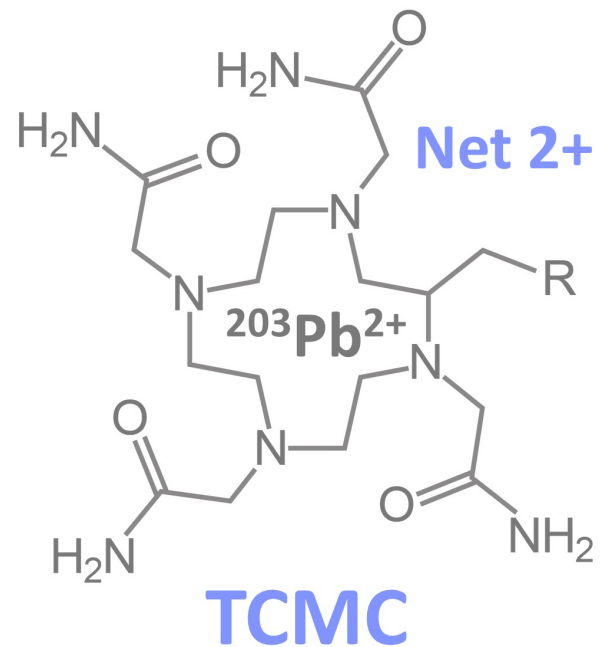
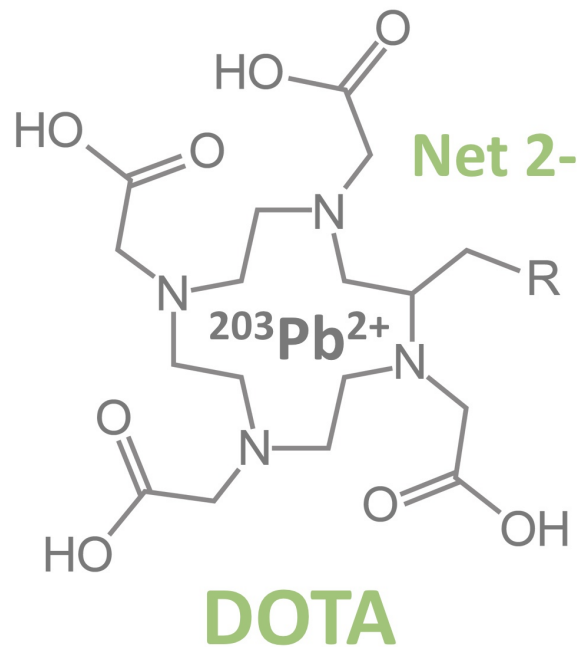
^{203}Pb is an imaging surrogate



^{203}Pb can be used to establish ^{212}Pb pharmacokinetics



Chelator Optimized for $^{212/203}\text{Pb}$



Improves:
radiolabeling
renal clearance
receptor binding
internalization

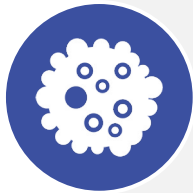
Commercially Available

Proprietary Perspective IP

Generic chelators leave formal charge at chelator/radiometal coupling (Positive or negative)

Seemingly small changes can have a big impact – power of Pb-203 as a surrogate

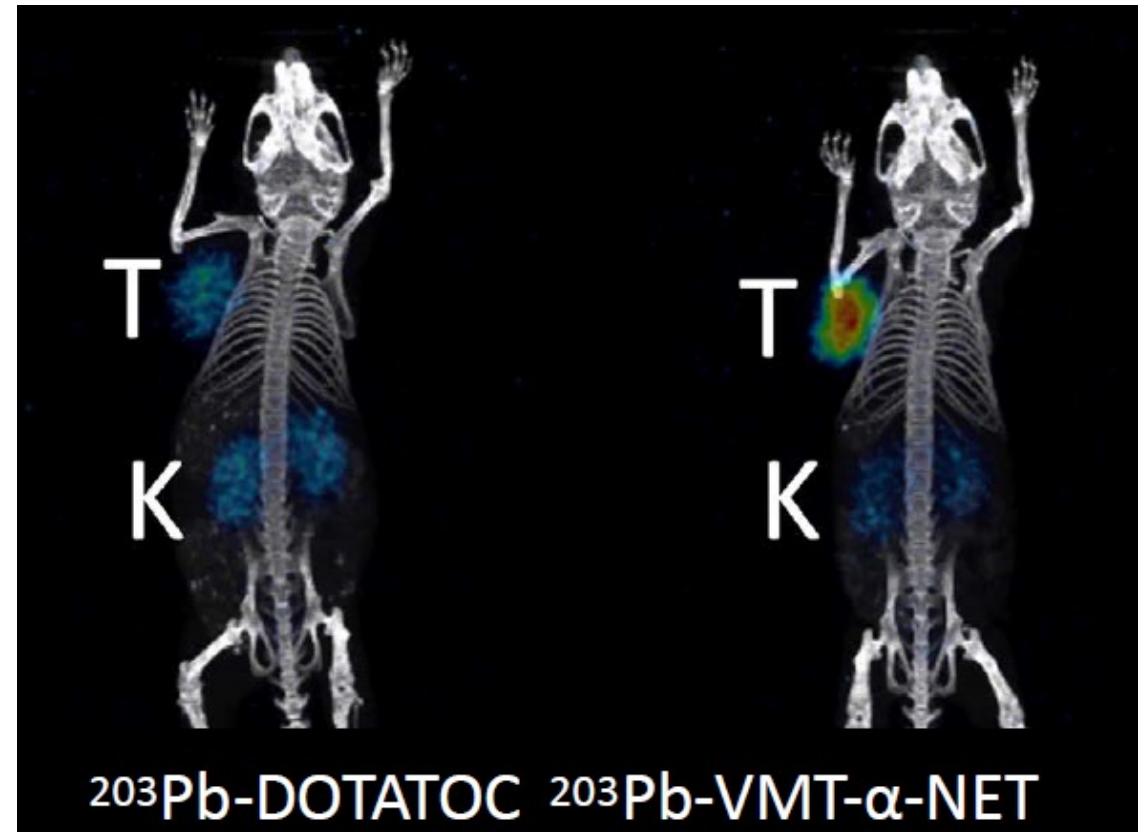
Key Takeaways



SSTR2 tumor model demonstrates superiority of VMT- α -NET to generic compounds



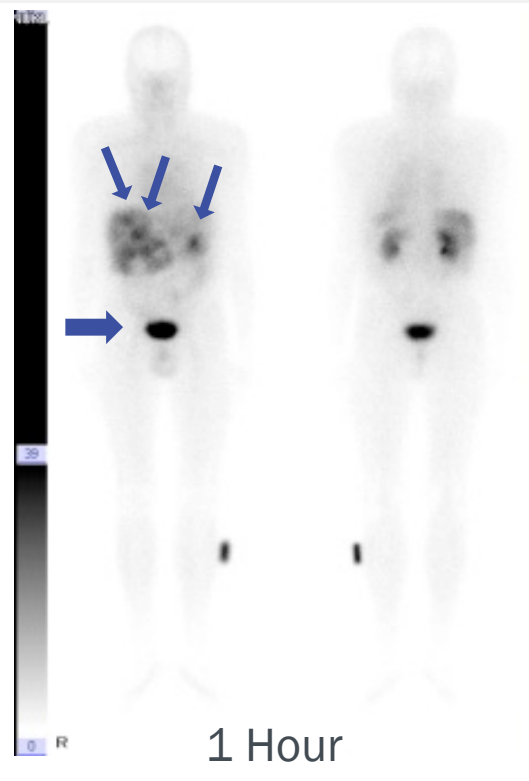
8-fold improved tumor uptake with decreased kidney retention in pre-clinical studies



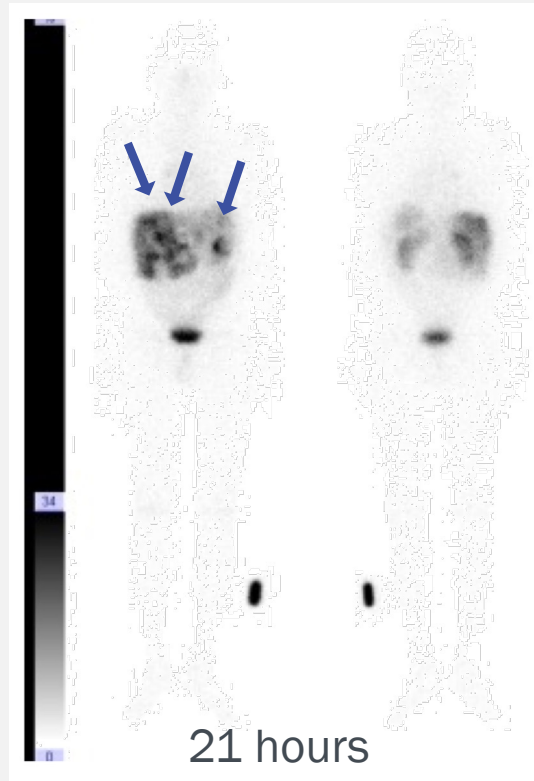
Perspective's proprietary technology increases tumor uptake and retention, whilst minimizing off-target toxicity

^{203}Pb SPECT Imaging Reveals Favorable VMT- α -NET Properties

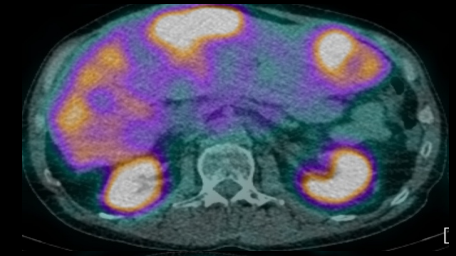
Rapid Tumor Targeting and Renal Clearance



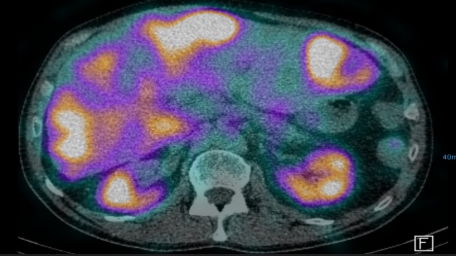
High Tumor Retention



**1.5 hrs
SPECT/CT**



**22 hrs
SPECT/CT**

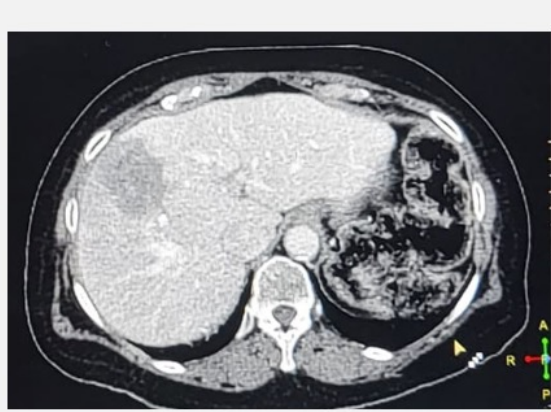
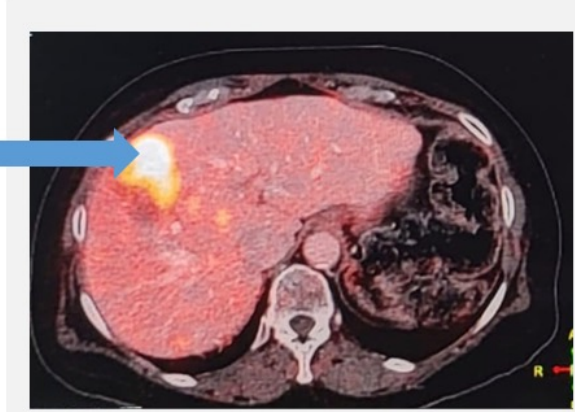


- Tumors visible within 1 hour, high intensity above background
- Unbound drug in bladder within 1 hour, low renal retention

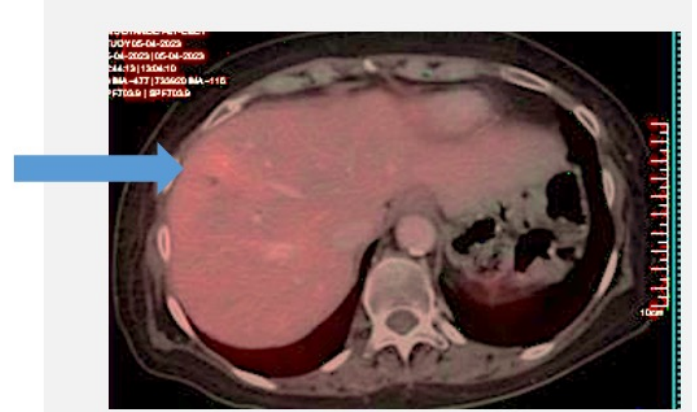
Patient 1: Metastatic NET Pancreas with Adrenal Crisis

– Significant response after single dose, almost complete response after 3 doses of $[^{212}\text{Pb}]\text{VMT-}\alpha\text{-NET}$

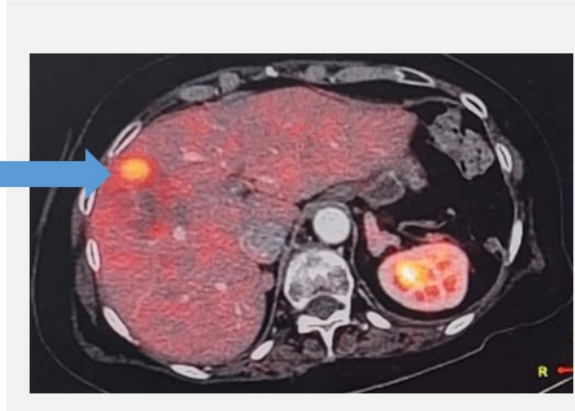
Tumor Before Treatment



Tumor After 3 Doses



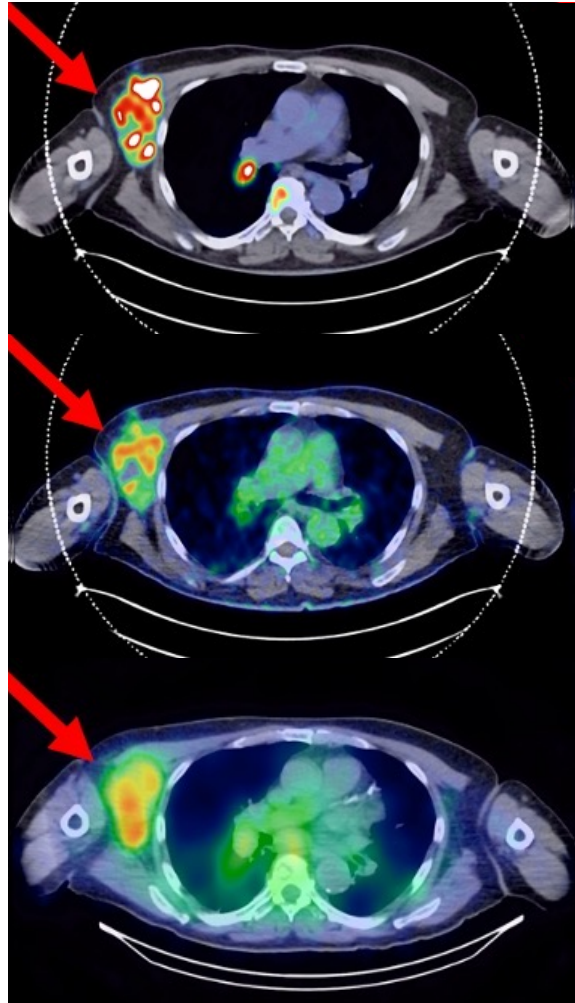
Tumor After 1 Dose



S.ACTH – 790 pg/ml

S.ACTH – 96 pg/ml

VMT01 Currently In Phase 1/2a Studies – Pb-212 Therapy for Metastatic Melanoma



Key Facts





-  Targeting melanocortin 1 receptor (MC1R)
-  Preclinical combination data (published) resulted in \$2M NIH SBIR Grant
-  Results from completed Phase 1 imaging study presented in Q2 2023
Study was conducted at the Mayo Clinic Rochester
-  Open IND for Therapeutic Trial with first patient treated
Pending Orphan Drug Designation and Fast Track Application

Image: Top panel - PET/CT cross section of a metastatic melanoma patient using FDG;
middle panel - PET/CT of the same patient with VMT02; lower panel - SPECT/CT of same patient with VMT01

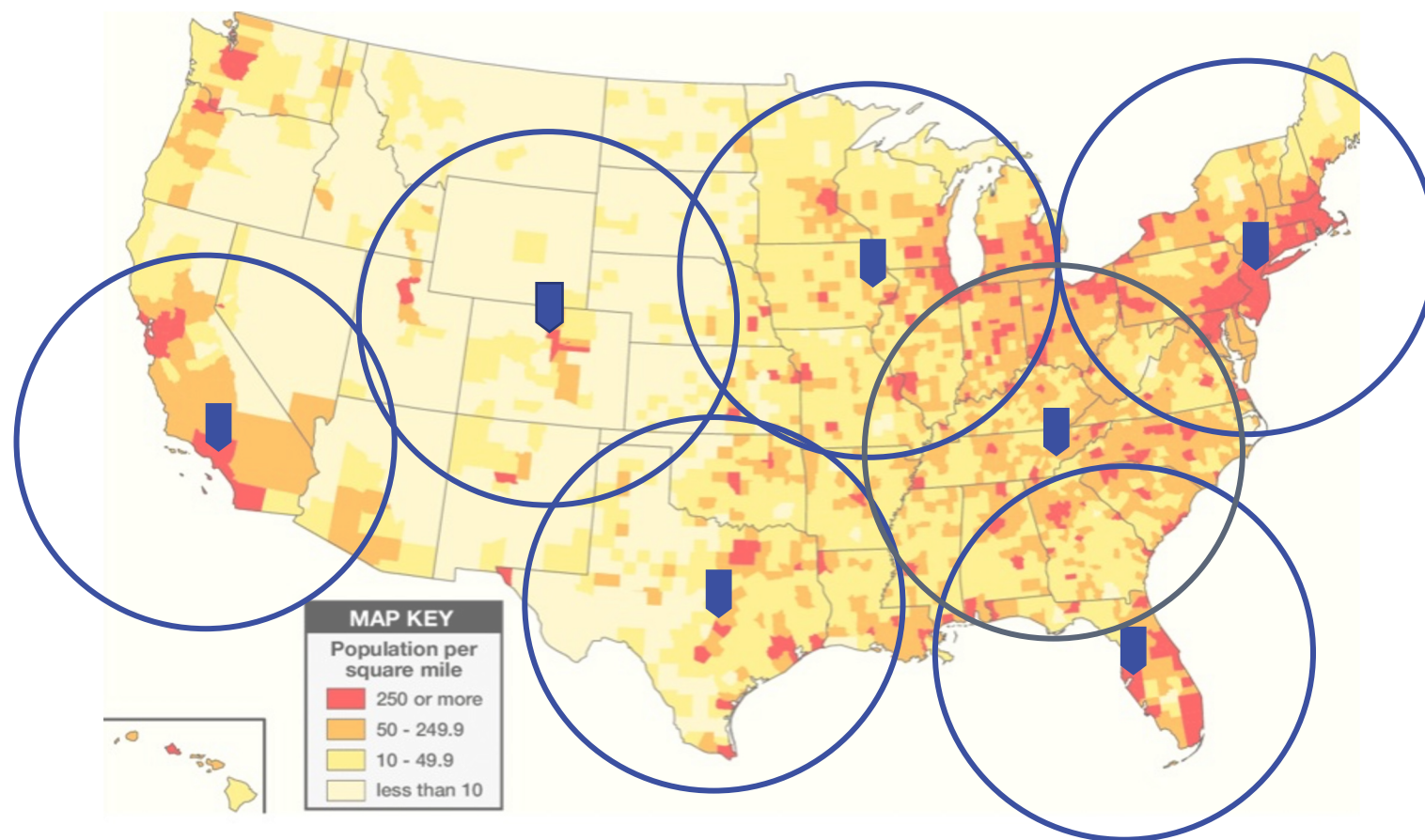
Discovery Platform Gives Broad Proprietary Pipeline

Program	Indication	Discovery	Human Clinical Imaging	First in Human Therapy	Phase 1/2	Phase 3
VMT- α -NET	Neuroendocrine cancer					
	Pheochromocytomas, paragangliomas					
	Small cell lung cancer					
VMT-01	Melanoma (MC1R)					
VMT-02 (PET agent)	Melanoma (imaging of MC1R)					
Program 3 (Novel peptide)	Multiple solid tumors					
Program 4 (Novel small molecule)	Prostate					
Program 5 (Novel peptide)	Prostate, Breast					
Other Programs	Solid and hematological tumors					

Commercialization of ^{212}Pb -labeled Finished Radiopharmaceuticals

Location	Radius 11 hr – 400 miles
Coralville, IA	51 m
New York, NY	75 m
Los Angeles, CA	46 m
Austin, TX	32 m
Atlanta, GA	57 m
Central Florida, FL	25 m

- Top 6 sites cover nearly 300 million people within a one half-life (11 hr) delivery radius¹
- Products can also be driven further or flown as necessary



Circles represent one half-life (11 hr) distribution radii for representative facilities

¹ Company estimates

Company Highlights

Radiopharmaceutical company focused on pan-cancer opportunities with a 2nd generation α -emitter platform

Two clinical-stage programs in addition to a robust pre-clinical pipeline

- VMT- α -NET – First in human trial ongoing for neuroendocrine tumors
- VMT-01 – Targeting the melanocortin 1 receptor (MC1R) for melanoma

Proprietary chelator-based peptide targeting platform provides engine for pipeline expansion

^{203}Pb – ^{212}Pb dual isotope theranostic approach enables enhanced patient selection for trials / treatment

Multiple near-term data readouts:

- 3Q23: VMT- α -NET investigator-directed trial, 10 patient series results
- 4Q23: VMT01 Phase 1 monotherapy dose escalation in advanced melanoma preliminary readout
- 4Q23: VMT- α -NET dose escalation in PRRT-naïve NETs preliminary readout
- 1Q24: Pipeline expansion with proof-of-concept human imaging data

In-house, vertically integrated ^{212}Pb isotope supply simplifies manufacturing and can leverage existing radiopharmacy logistics for broad distribution

Thank you!