



# Focal Medical

Energy assisted drug transport for targeting  
inoperable and resistant tumors



# Our Mission

**Local**, energy-based drug delivery

Effectively target **resistant** tumors

Decrease **toxicity**

Improve patient **outcomes**



# Our Status

**Now:** IND-cleared first-in-human pancreatic cancer clinical trial

**Soon:** oral cavity cancer and melanoma products to IND stage

# Our Ask

**\$10MM investment**

# Cancer Treatment Failures

“In the coming year, we’re expecting to hit a bleak milestone — for the first time new cases of cancer in the US are expected to cross the 2-million mark, with over 611,000 deaths”<sup>1</sup>

“Multidrug resistance (MDR) is responsible for over 90% of deaths in cancer patients receiving traditional chemotherapeutics or novel targeted drugs.”<sup>2</sup>

“Cancer drugs...fail for two reasons. They are too toxic for patients to safely take, or patients can safely take them, but they don't actually shrink a patient's tumor”<sup>3</sup>

Resistant cancers are the leading cause of cancer death

**Focal Medical delivers existing and new drugs using more directed, more effective, and less toxic methods**



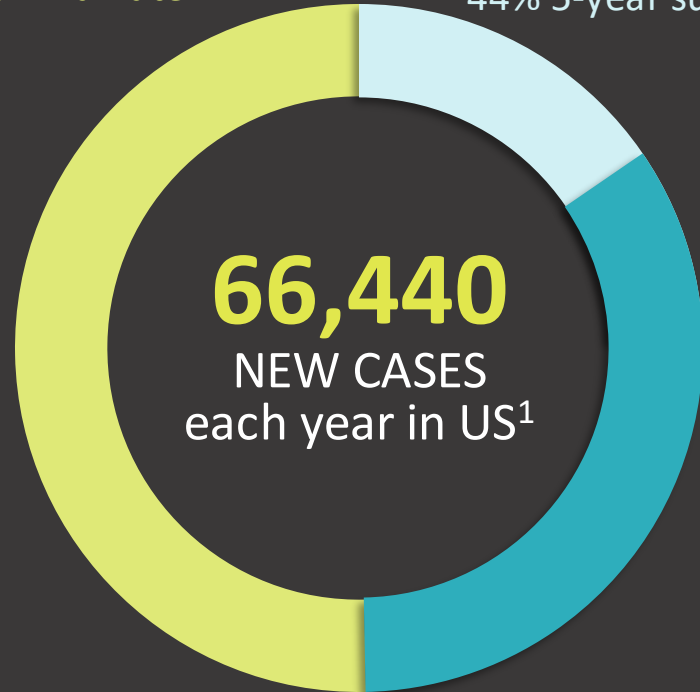
1. “2024—First Year the US Expects More than 2M New Cases of Cancer”, Sonya Collins, American Cancer Society, January 17, 2024.
2. Bukowski K, Kciuk M, Kontek R. [Mechanisms of Multidrug Resistance in Cancer Chemotherapy](#). Int J Mol Sci. 2020 May 2;21(9):3233.
3. “[Yale-led Research Explains Why Many Cancer Drugs Fail During Clinical Trial Testing](#)”, Jason Sheltzer, PhD – Yale Cancer Center, October 20, 2023.

# Pancreatic Cancer

Current survival by stage<sup>1</sup>

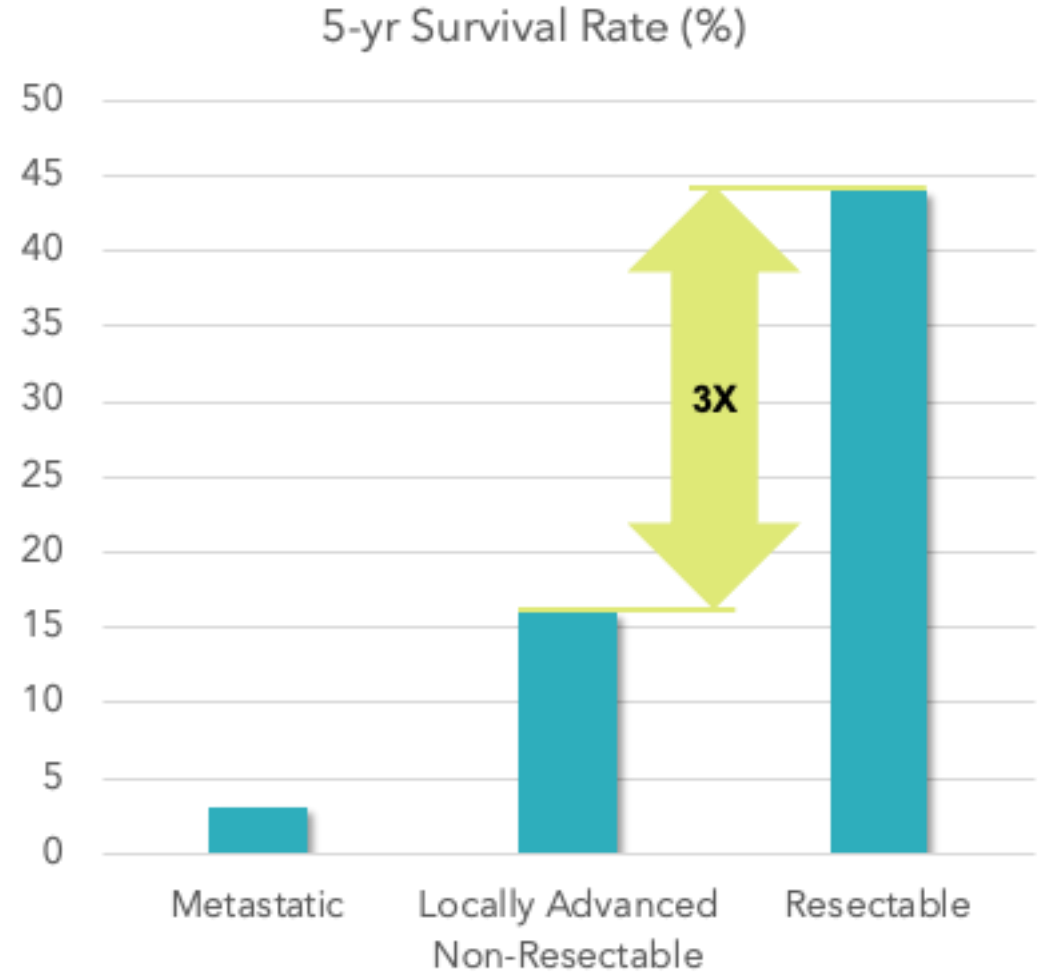
**31,000** metastatic cases  
3% 5-year survival rate

**9,300** resectable cases  
44% 5-year survival rate



**21,700** Locally advanced non-resectable cases  
16% 5-year survival rate  
**(Target Market)**

## Getting People to Surgery Game Changer

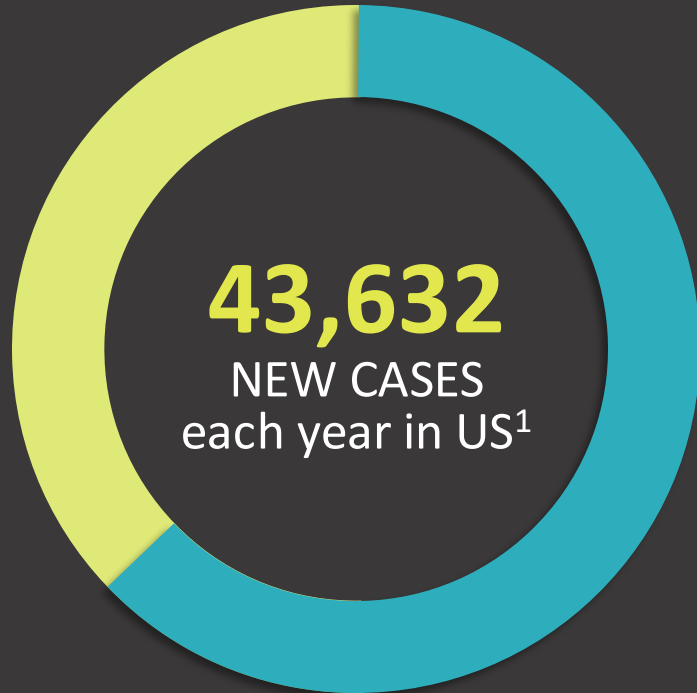


1. American Cancer Society, Cancer Facts & Figures 2024. Atlanta: American Cancer Society; 2024

# Oral Cavity Cancer

Current survival by stage<sup>2</sup>

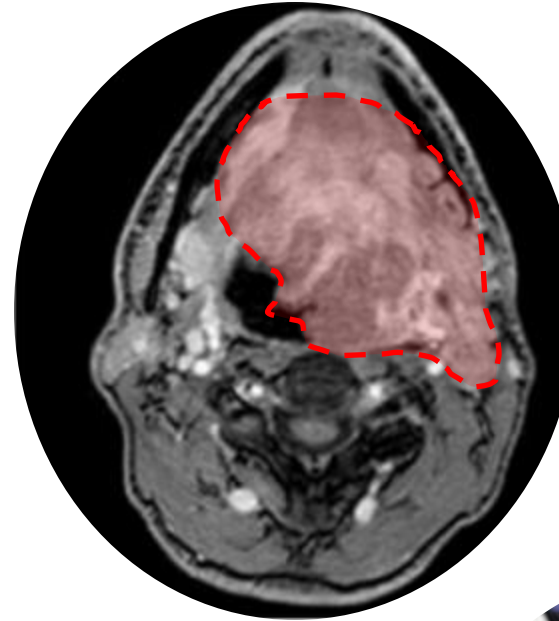
17,452 Resectable cases<sup>1</sup>  
61% 5-year survival Rate



23,998 Locally recurrent cases<sup>1</sup>  
15% 5-year survival rate  
(Target Market)

## Canine Oral Cavity Cancer

### Translatable Preclinical Model



High-Risk, Locally Advanced Human Squamous Cell Carcinoma<sup>3</sup>



Locally Advanced Squamous Cell Carcinoma in a Canine Model



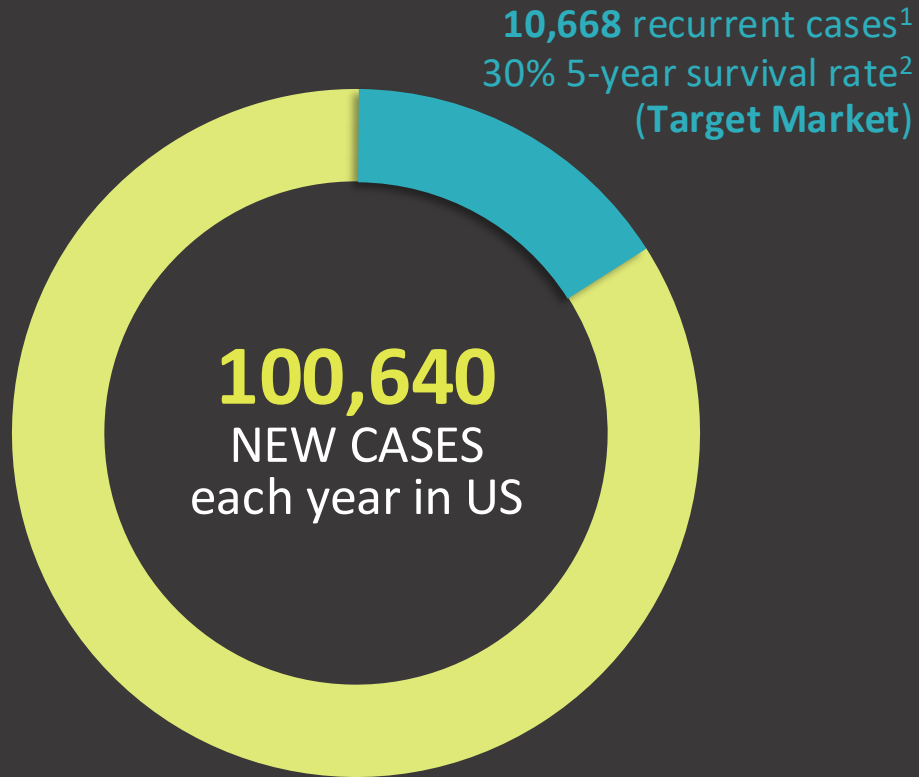
1. SEER Incidence Data, November 2023 Submission (1975-2021)

2. Management of Locally Advanced Oral Cancers. Oral Oncology, Volume 105, June 2020

3. Therapeutic Intensification and Induction Chemotherapy for High-Risk Locally Advanced Squamous Cell Carcinoma. Curr. Treat. Options in Oncol. (2019) 20: 2

# Melanoma

Current survival by stage



89,972 Non-recurrent treatable cases<sup>1</sup>  
94% 5-year survival Rate<sup>2</sup>

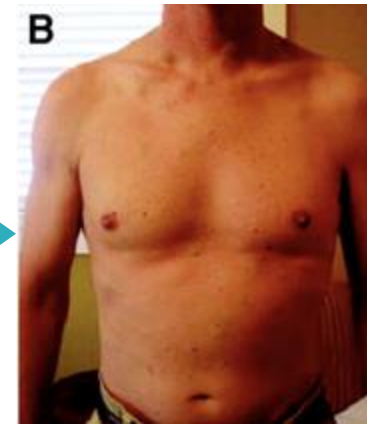


1. Stage-Specific Risk of Recurrence and Death From Melanoma in Denmark, 2008-2021. JAMA Dermatol. 2023;159(11):1213-1222.  
2. Cancer Stat Facts: Melanoma of the Skin.  
3. Dissecting Therapeutic Resistance to RAF Inhibition in Melanoma by Tumor Genomic Profiling. Journal of Clinical Oncology, Volume 29, Number 22, August 2011.

## Attacking Drug-Resistant Cells Essential for Addressing **Recurrence**



Treatment with  
vemurafenib over  
15 weeks<sup>3</sup>



Drug-resistant  
recurrence in  
8 weeks<sup>3</sup>

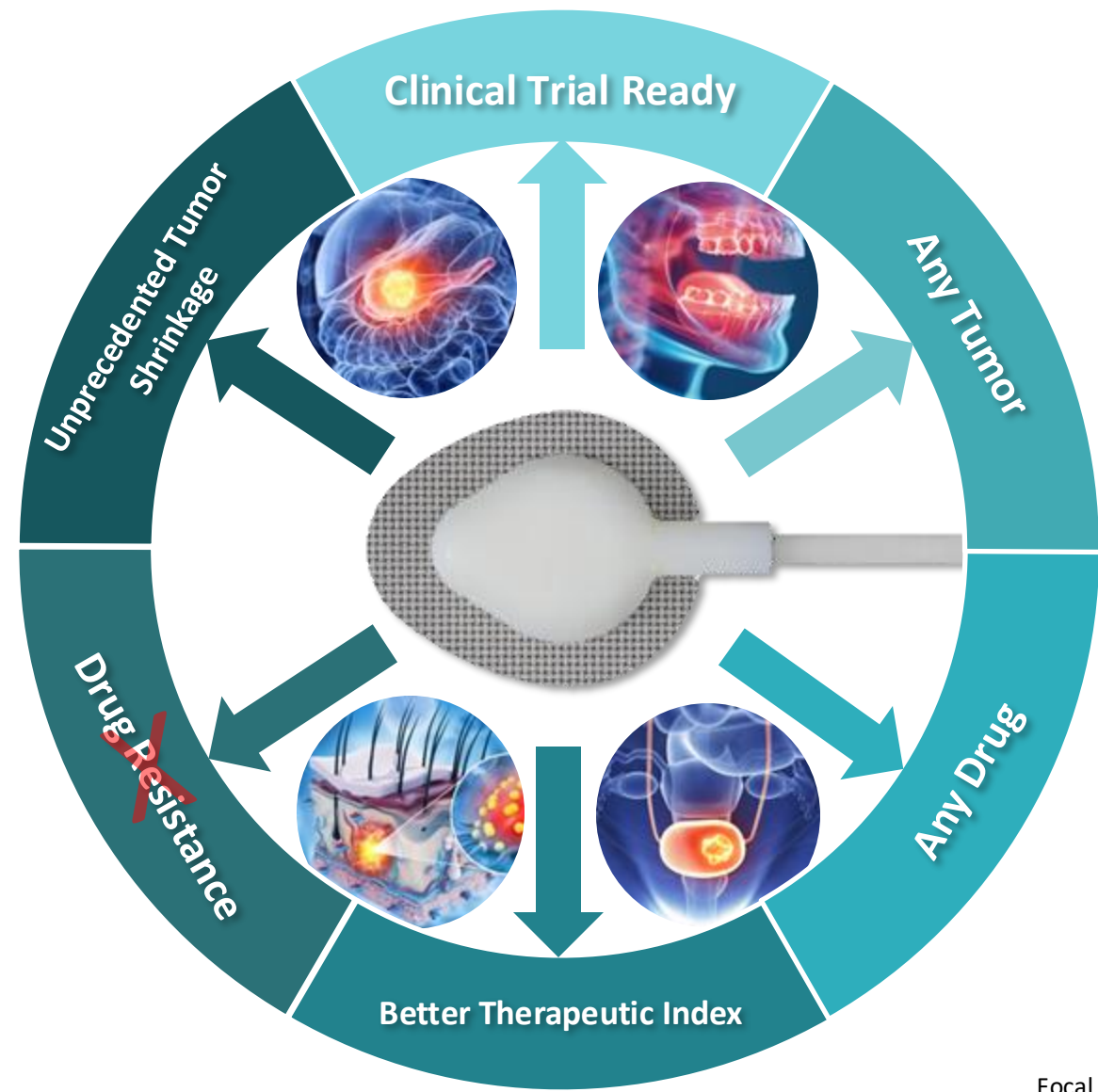


# A True Technology Platform: one device – many targets

FDA-cleared IND

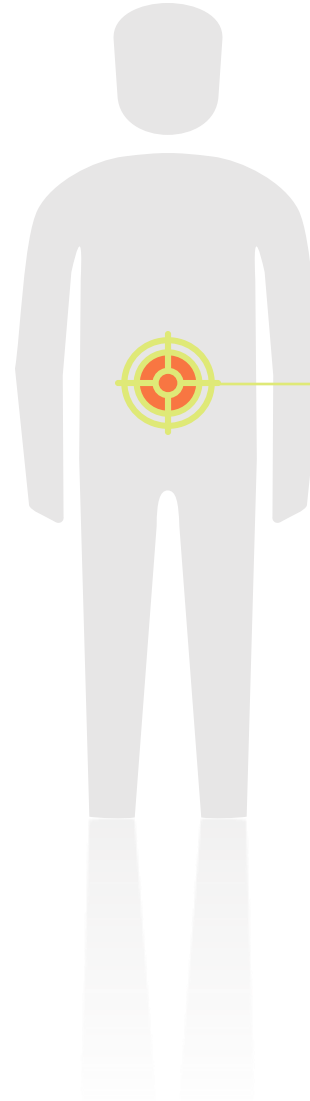
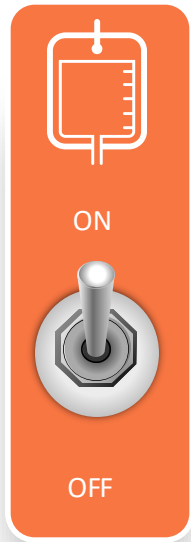
Compatible with approved drugs

Small and large animal model studies

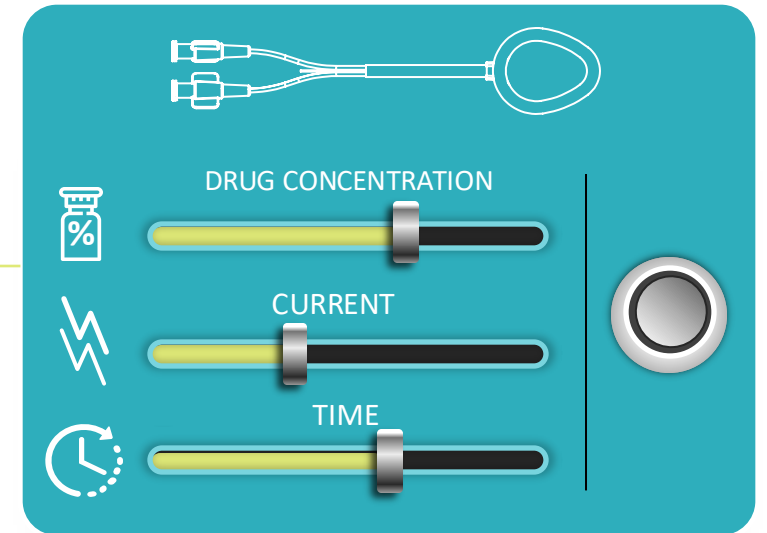


# IOP Precision Delivery Targets the Tumor

## SYSTEMIC DELIVERY



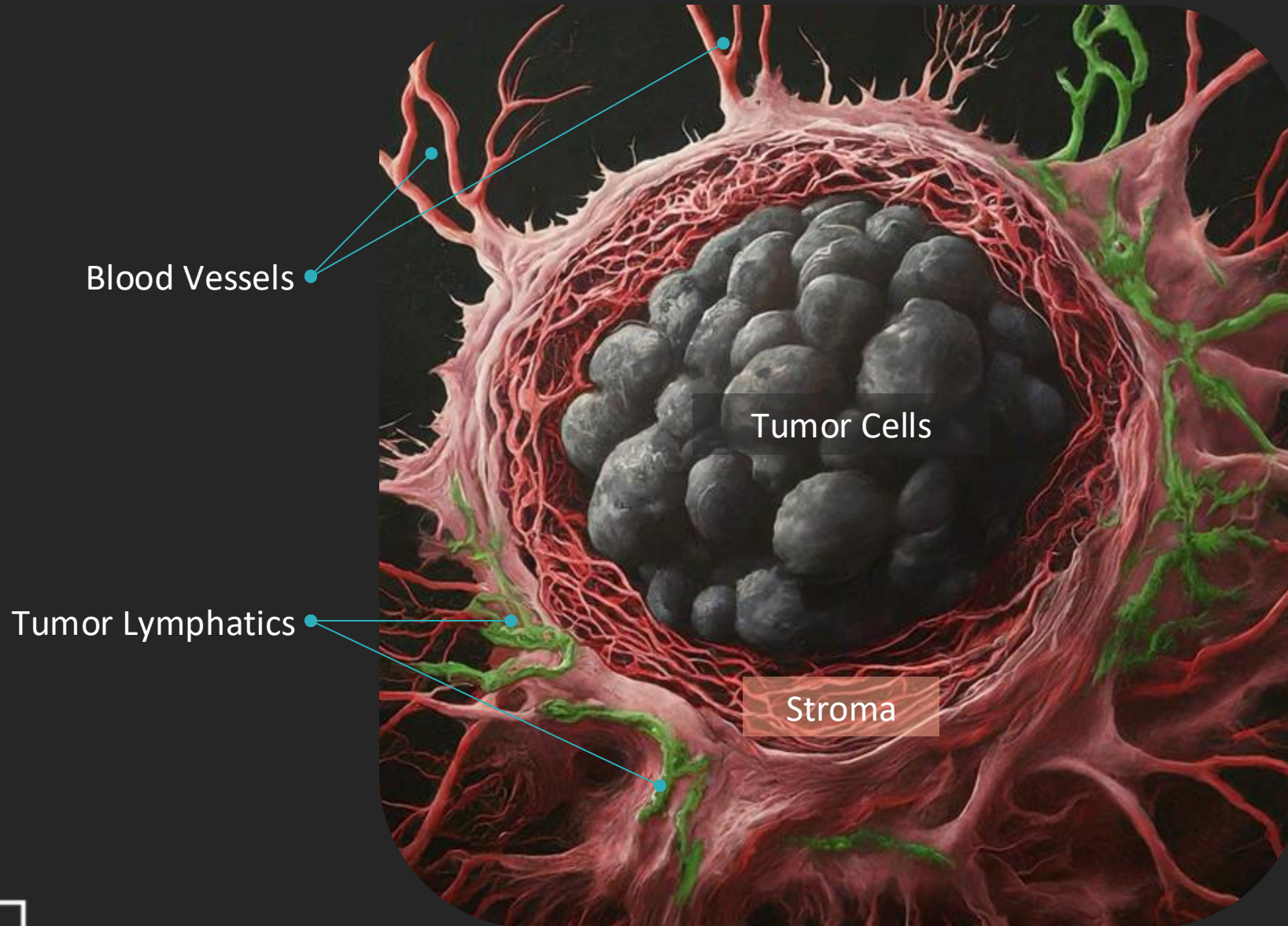
## IONTOPHORESIS



- ✓ More effective
- ✓ Fewer side effects
- ✓ Customized Dosing and Delivery



# Iontophoresis Overcomes Extrinsic Chemotherapy Resistance

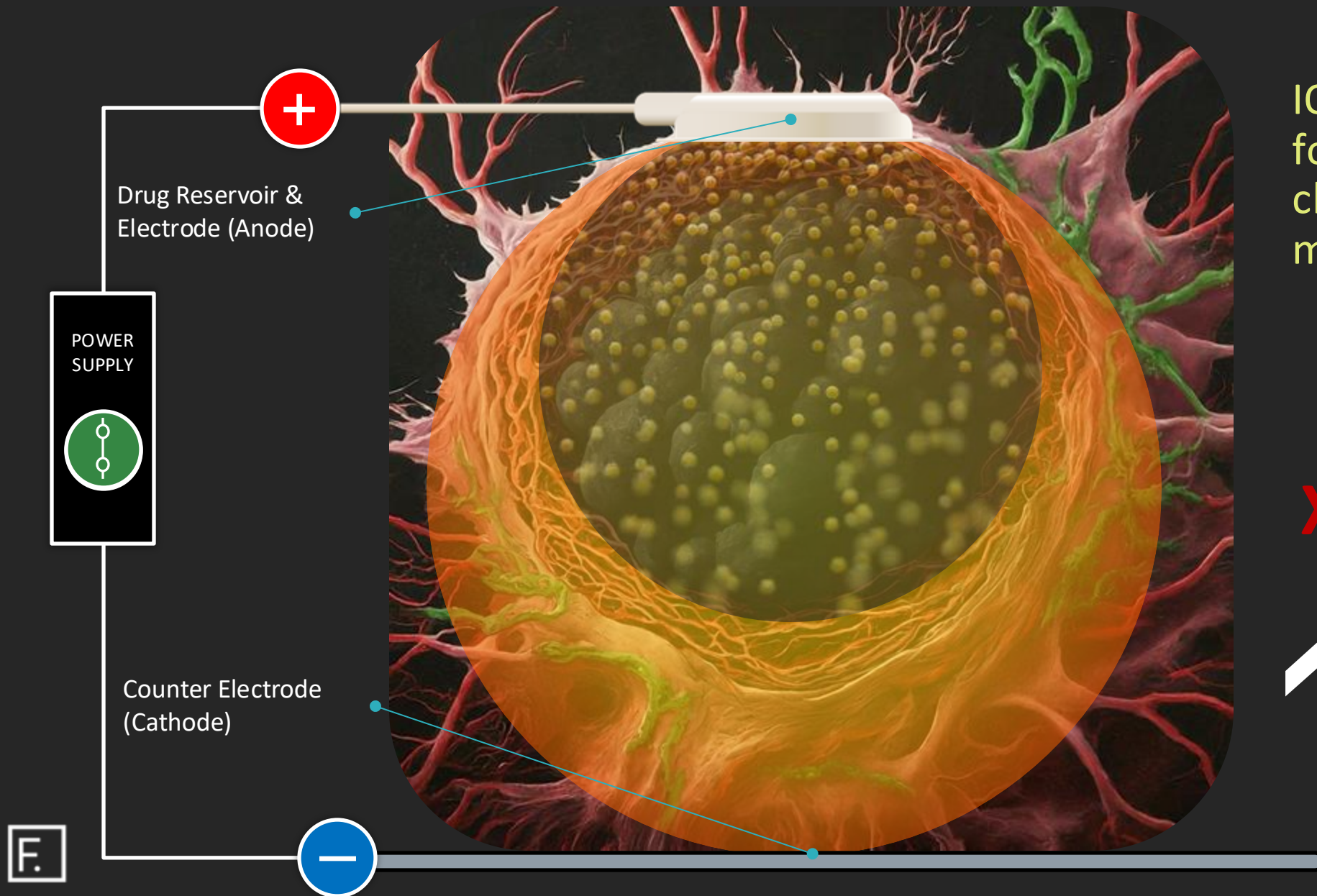


Fortress of surrounding cells prevent drug delivery

⤴ Increased intra-tumoral pressure

⤵ Decreased drug delivery

# IOP System Reaches Deep to Shrink Tumors

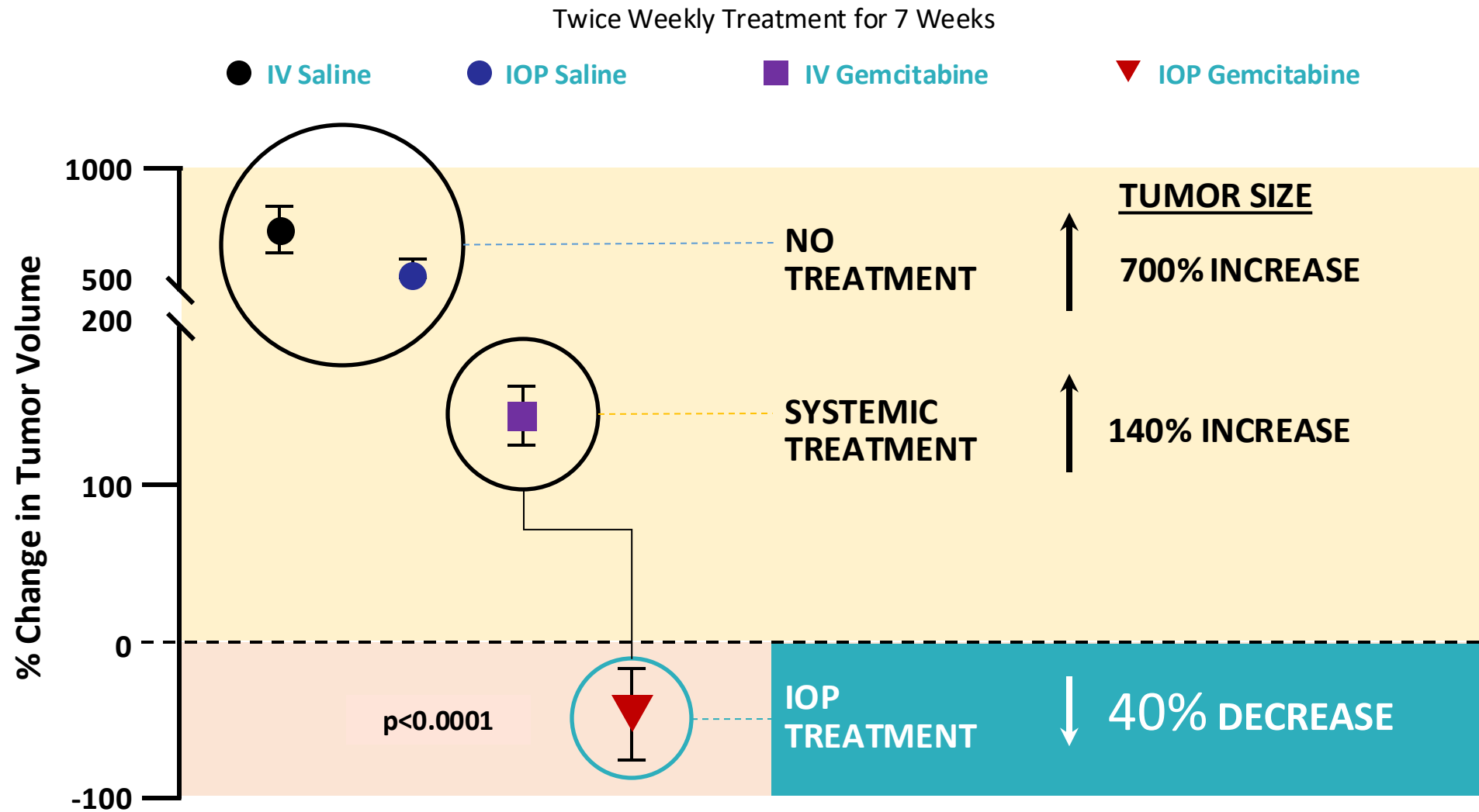


IOP overwhelms that fortress, delivering chemotherapy where it's most effective

**X** Overcomes intra-tumoral pressure

**^** Increases drug delivery

# Dramatic Tumor Reduction in Orthotopic PDX<sup>1</sup> Murine Model<sup>2</sup>



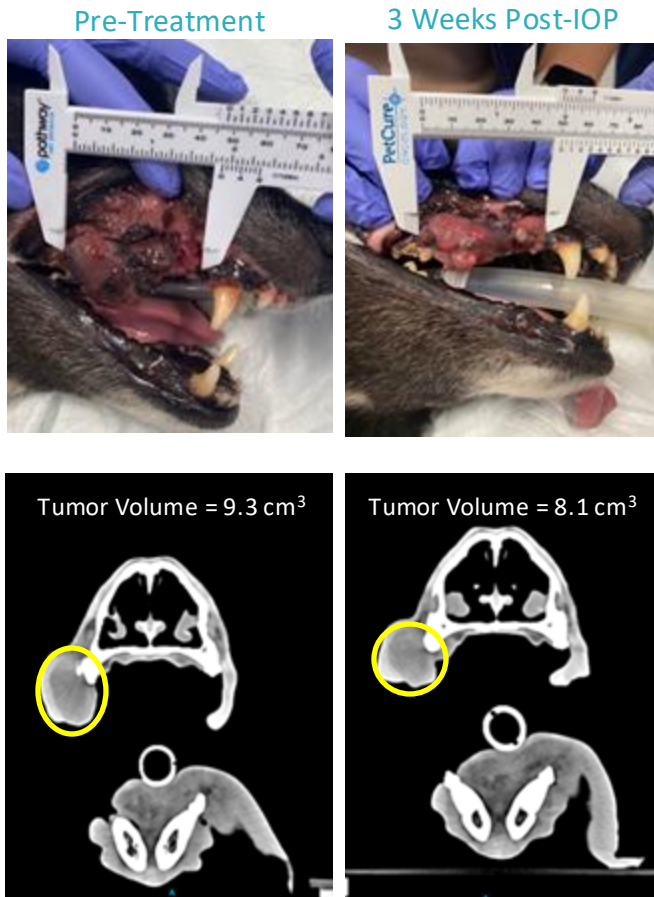
1. PDX = patient-derived xenograft  
2. Local iontophoretic administration of cytotoxic therapies to solid tumors, Byrne JD et al. Sci Transl Med. 2015 Feb 4;7(273)



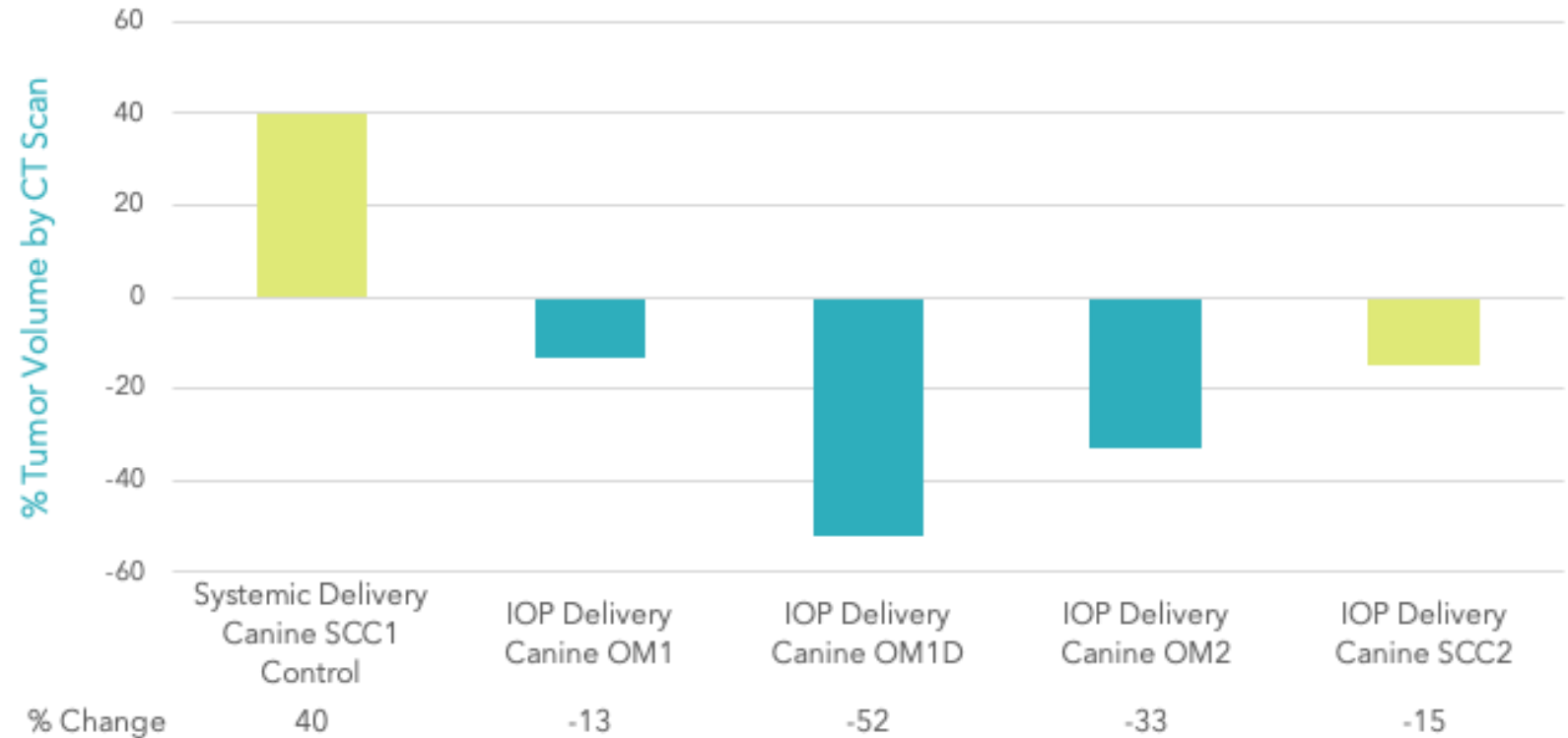
# Dramatic Tumor Reduction after Single IOP Carboplatin Treatment

## Advanced Oral Melanoma and Oral Squamous Cell Carcinoma

### Single IOP Delivery Canine OM1



### 21 Days Post Primary Treatment



OM = Oral Melanoma ; SCC = Squamous Cell Carcinoma

Canine OM1D is a secondary tumor that was not directly treated and indicates an abscopal effect

# Pipeline & Target Market Overview

Indication	5 Year Survival <sup>1</sup>	TAM	Discovery	Preclinical	Phase I	Phase II	Phase III	Launch
Locally advanced, unresectable pancreatic cancer	< 5%	\$650MM	<b>IND Cleared. Initiating Phase 1b Study</b> Tumor volume reduction in PDX pancreatic tumor model, safety and tolerability in 2 large animal models					
Resistant squamous cell carcinoma and oral melanoma	32%	\$720MM	<b>Pilot animal study complete</b> Safety, tolerability, tumor volume reduction in large animal spontaneous oral tumor model					
Resistant skin melanoma	35%	\$320MM	<b>Pilot animal study complete</b> Safety, tolerability, tumor volume reduction in large animal spontaneous oral tumor model					



1. Surveillance, Epidemiology, and End Results (SEER) Program Populations (1969-2022) National Cancer Institute, DCCPS, Surveillance Research Program, released March 2024.

# \$10MM Investment Deliverables

Indication	5 Year Survival <sup>1</sup>	Invest	Discovery	Preclinical	Phase I	Phase II	Phase III	Launch
Locally advanced, unresectable pancreatic cancer	< 5%	\$6MM	<b>IND Cleared. Initiating Phase 1b Study</b> Tumor volume reduction in PDX pancreatic tumor model, safety and tolerability in 2 large animal models		<b>Phase 1B Study Data Obtained</b>			
Resistant squamous cell carcinoma and oral melanoma	32%	\$2MM <sup>2</sup>	<b>Pilot animal study complete</b> Safety, tolerability, tumor volume reduction in large animal spontaneous oral tumor model		<b>IND Filed for Clinical Study</b>			
Resistant skin melanoma	35%	\$2MM <sup>2</sup>	<b>Pilot animal study complete</b> Safety, tolerability, tumor volume reduction in large animal spontaneous oral tumor model		<b>IND Filed for Clinical Study</b>			



1. Surveillance, Epidemiology, and End Results (SEER) Program Populations (1969-2022) National Cancer Institute, DCCPS, Surveillance Research Program, released March 2024.

2. Additional funds will be pursued through grant applications for these indications

# Ready To Go: Phase 1B Pancreatic Cancer Clinical Trial

## Phase 1B Trial (\$6MM)

- **10 patients with locally advanced non-resectable disease**
- 2 cohorts under dose escalation design
- **Primary Endpoints:** safety and tolerability
- **Secondary Endpoints:** tumor regression and resectability

### Timing:

- PI and primary clinical site on board and ready for IRB submission
- Top line report available in 2 years

### Key Assessment Criteria:

- Adverse Events, Serious Adverse Events
  - a) drug-related;
  - b) device related
- Safety Data
  - a) electrocardiogram
  - b) blood chemistry / hematology
  - c) plasma PK Blood biomarkers (exploratory)
- CT Imaging
- % of patients that become eligible for surgical removal of tumor
- Local Progression Free Survival

# Fast to Follow: Phase 2/3 Clinical Trial

Phase 1B Trial  
(\$6MM)

Phase 2/3 Trial  
(\$35-\$50MM)

- **50 to 75 patients** with locally advanced non- resectable disease
- **Primary Endpoints:** Overall survival (1 year)
- **Secondary Endpoints:** Safety, tolerability, resectability



# Experienced Board and Executive Team



**Joe DeSimone, PhD**  
**Founder & Board member**

Sanjiv Sam Gambhir Professor of Translational Medicine and Chemical Engineering, Stanford University

Founder, Carbon Inc.  
Valued over \$2.4 billion

Recipient, Presidential National Medal of Technology & Innovation



**Jen Jen Yeh, MD**  
**Founder & Board member**

Professor and Vice-Chair Surgical Research, Lineberger Cancer Center, UNC Chapel Hill

Principal Investigator, NCI Specialized Programs in Research Excellence

Developer, single sample classifier licensed to GeneCentric Therapeutics

Developer, CTC marker, licensed to Biofluidica



**Nesson Bermingham, PhD**  
**Board member**

Operating Partner at Khosla Ventures

Founder, President, and CEO at Intellia Therapeutics

Founder & Board Member, Liberate Bio

Founder & Executive Chair, Korro Bio



**Tony Voiers**  
**CEO**

Developer of 13 products (8X PMA and 5X 510k devices)

CEO, Novocor Medical

Director of R&D, Closure Medical sold to J&J - \$410 million

25 years medical device management



**William Daunch, PhD**  
**CTO**

Sr. Director of R&D, Allergan: development of soft tissue reconstruction and combination therapeutic delivery systems

Critical product launches supporting a \$400 million technology portfolio at Ethicon

22 years medical and combination device development; 13 Regulatory submissions



**Nancy Sacco, PhD**  
**VP, Clinical Development**

Chief Development Officer, Hexima

Executive Director; Astellas Pharma (Xtandi)

AveXis (ZolgenSMA)

25 years pharmaceutical & gene therapy development experience



# Proposed Financing

- \$10MM in Series A-2 securities of Focal Medical in a private placement with Accredited Investors
  - Operations for 27 months (end of 2026)
  - Complete Phase Ib clinical trial of IOP gem for pancreatic cancer
  - Complete IND submission resistant oral cavity cancer
  - Complete IND submission in resistant skin melanoma

## Deliverables to mid 2026

### Pancreatic Cancer

Phase 1b clinical trial of IOP gemcitabine in pancreatic cancer

- Safety and tolerability
- Evidence of activity in target patient population
- 1-2 centers: ~10 patients
- Dose escalation: 1/week to 2/week Tx
- Pathway to phase 2/3

### Resistant Oral Cavity Cancer

IND preparation

- Complete oral delivery device design
- Additional KOL interviews
- Pre-IND FDA meeting
- Non-clinical safety & tolerability studies
- Additional efficacy Studies
- Clinical study design

### Resistant Skin Melanoma

IND preparation

- Complete skin delivery device design
- Additional KOL interviews
- Pre-IND FDA meeting
- Non-clinical safety & tolerability studies
- Additional efficacy Studies
- Clinical study design



# Shareholdings (Fully Diluted)

<b>Stockholders (post Series A)</b>	<b># of shares</b>	<b>%</b>
Common stock holders	420,000	14%
Khosla Ventures	1,175,998	40%
Spectrum Financial	323,076	11%
Piedmont Capital Partners	400,000	14%
Other preferred	144,086	5%
Stock options (fully diluted)	470,372	16%
<b>Total</b>	<b>2,933,532</b>	<b>100%</b>

<b>Share class</b>	<b>Authorized shares</b>	<b>Outstanding</b>	<b>Ownership</b>	<b>Fully diluted</b>	<b>Ownership</b>	<b>Amount raised</b>
Common	3,420,000	420,000	17.16%	420,000	14.32%	\$420
Series Seed Preferred	380,000	380,000	15.53%	380,000	12.95%	\$273,011
Series Seed 1 Preferred	164,086	148,606	6.07%	148,606	5.07%	\$599,997
Series A Preferred	1,822,151	1,499,074	61.25%	1,499,074	51.10%	\$11,599,985
W Warrants				15,480	0.53%	\$0
Shares outstanding under 2016 Stock Incentive Plan	470,372			432,053	14.73%	
Shares available under 2016 Stock Incentive Plan				38,319	1.31%	
<b>Total</b>		<b>2,447,680</b>	<b>100.00%</b>	<b>2,933,532</b>	<b>100.00%</b>	<b>\$12,473,413</b>



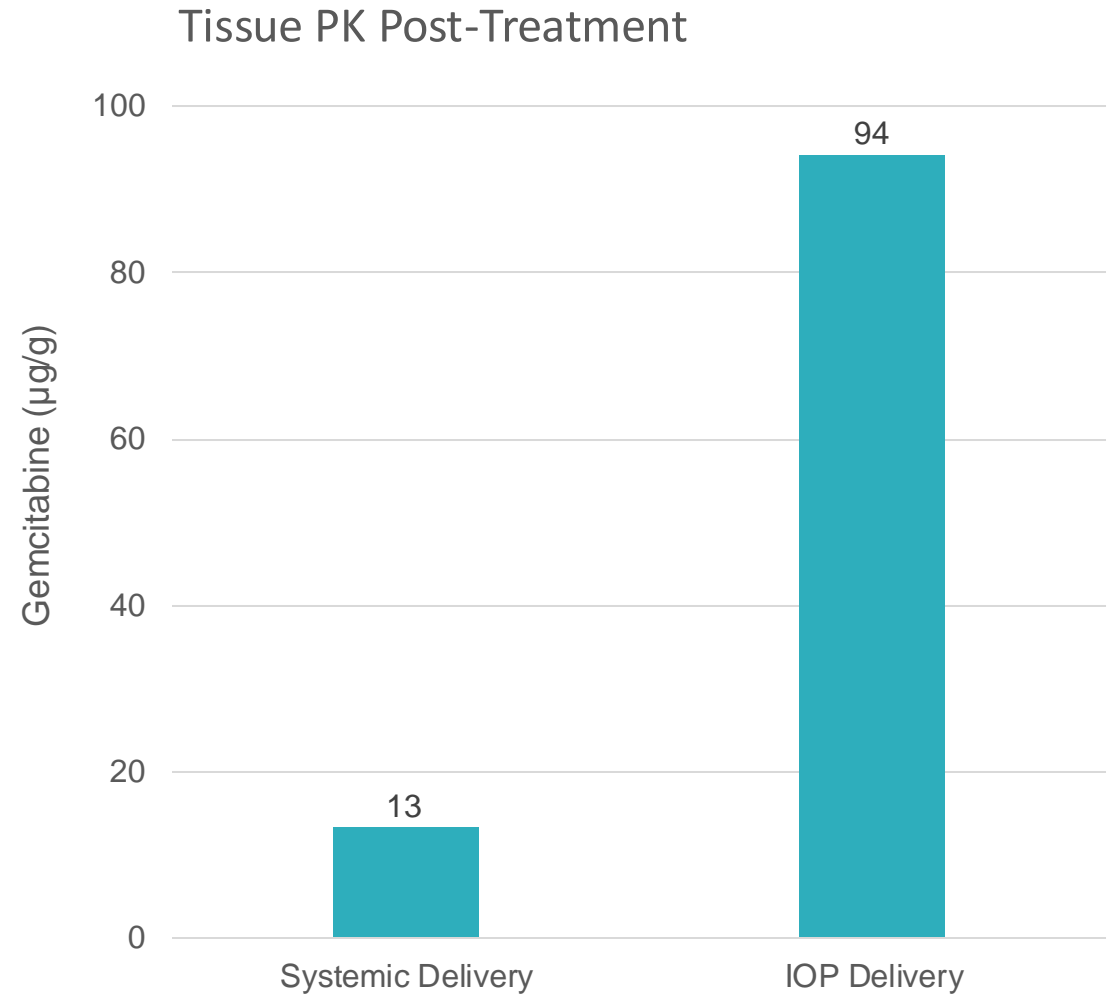
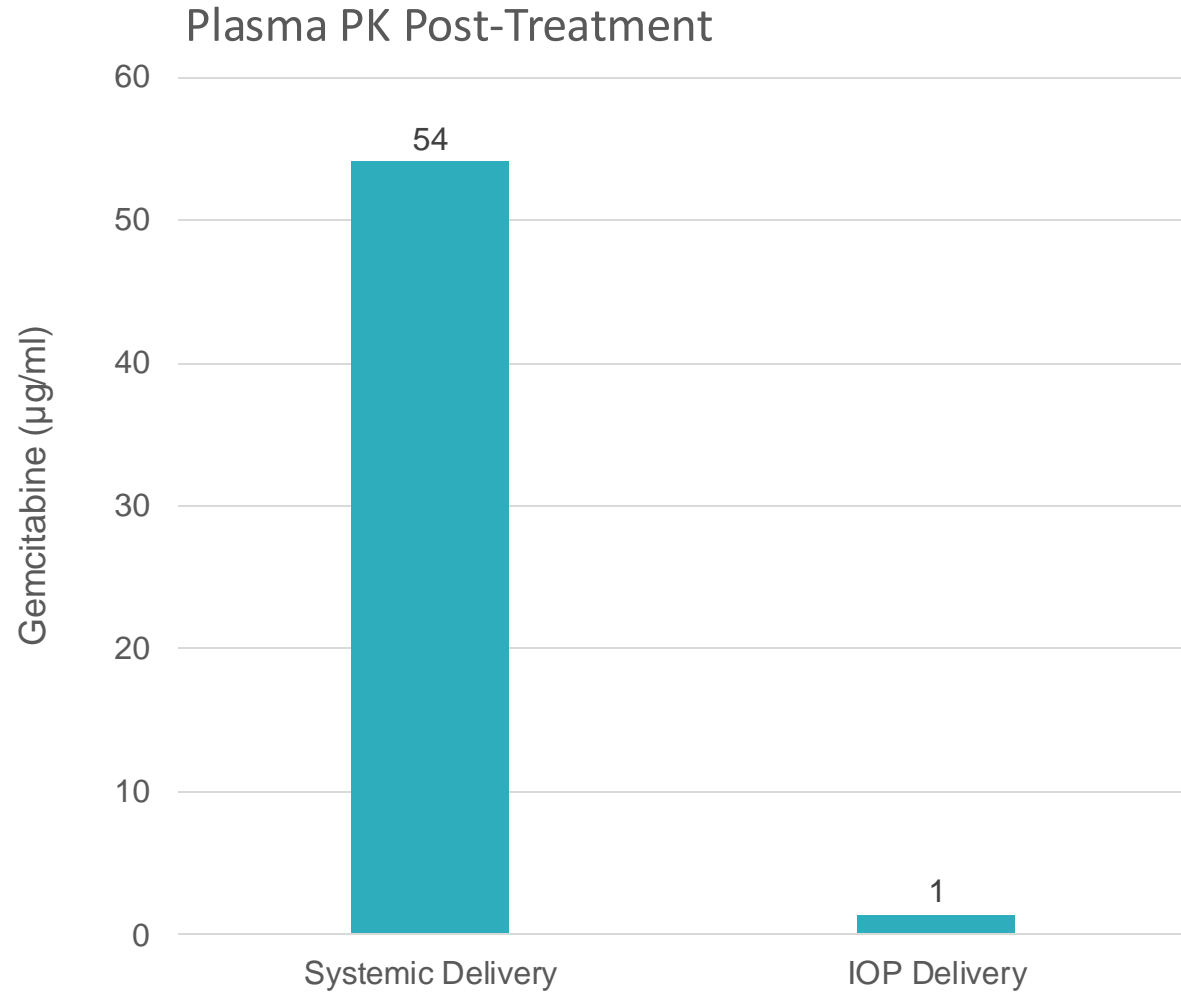
# Reasons to Invest

1	Numerous hard-to-treat tumors leave <b>patients with no treatment options and no hope for recovery</b>	LAST HOPE
2	<b>New oncology treatments</b> take 10+ years to bring to market and face substantial risk along the way resulting in a <b>90% attrition rate</b> .	LOWER RISK
3	Focal Medical's IOP drug delivery system is <b>clinically ready system for treating cancer right now!</b>	CLINICALLY READY
4	<b>We are nimble!</b> Focal Medical's IOP platform is highly adaptable meaning <b>rapid advancement of INDs for two new indications</b>	NIMBLE
5	<b>We are experienced</b> with a world-class team of oncologists, researchers, and medical product development experts.	EXPERIENCED



# Supplementary Slides

# Canine Model: Target 7X Higher Gemcitabine Negligible Systemic Spillover<sup>1</sup>

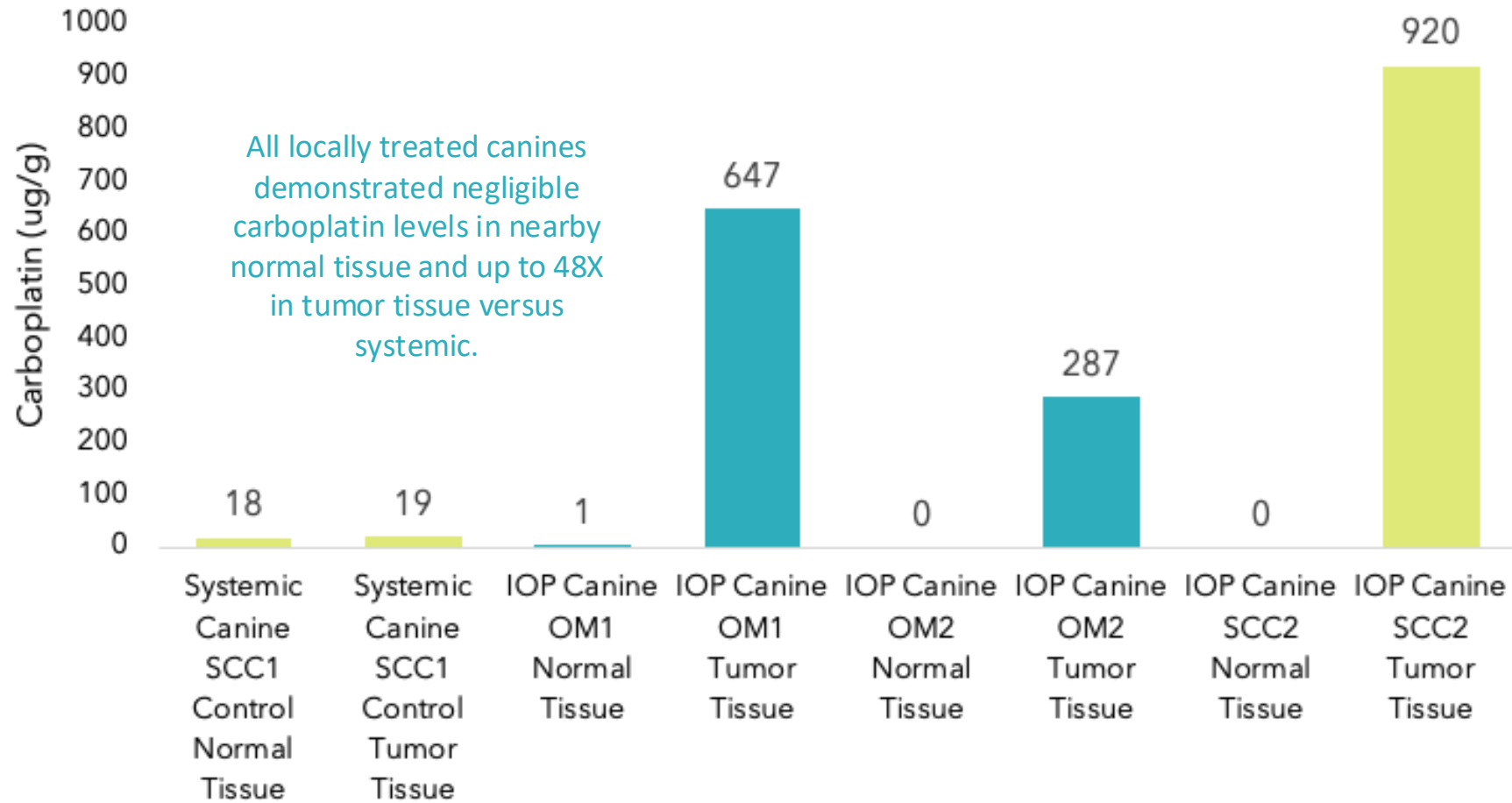


1. [Local iontophoretic administration of cytotoxic therapies to solid tumors](#), Byrne JD et al. Sci Transl Med. 2015 Feb 4;7(273)



# Canine Oral Tumor Tissue 16-48X Higher Carboplatin

Post-Treatment PK Tissue Results: Systemic Versus IOP Treated Canines

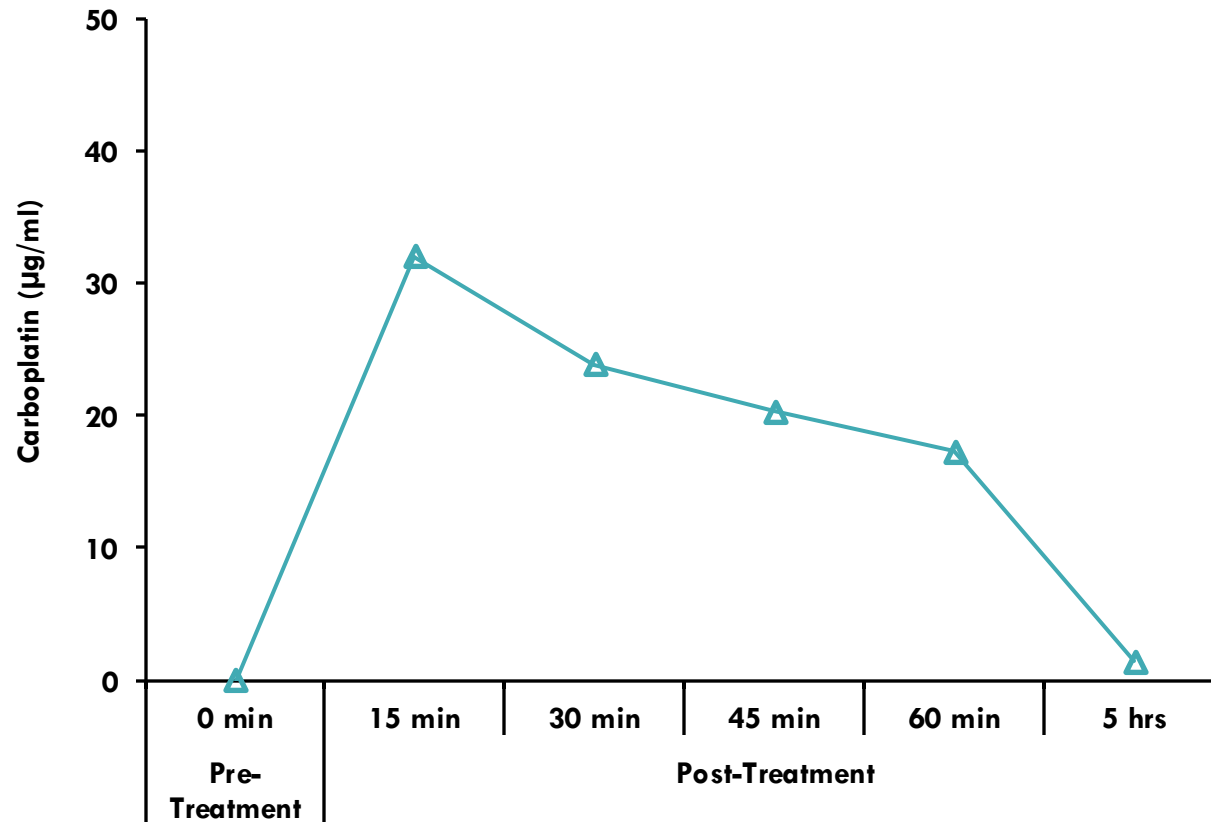


OM = Oral Melanoma ; SCC = Squamous Cell Carcinoma

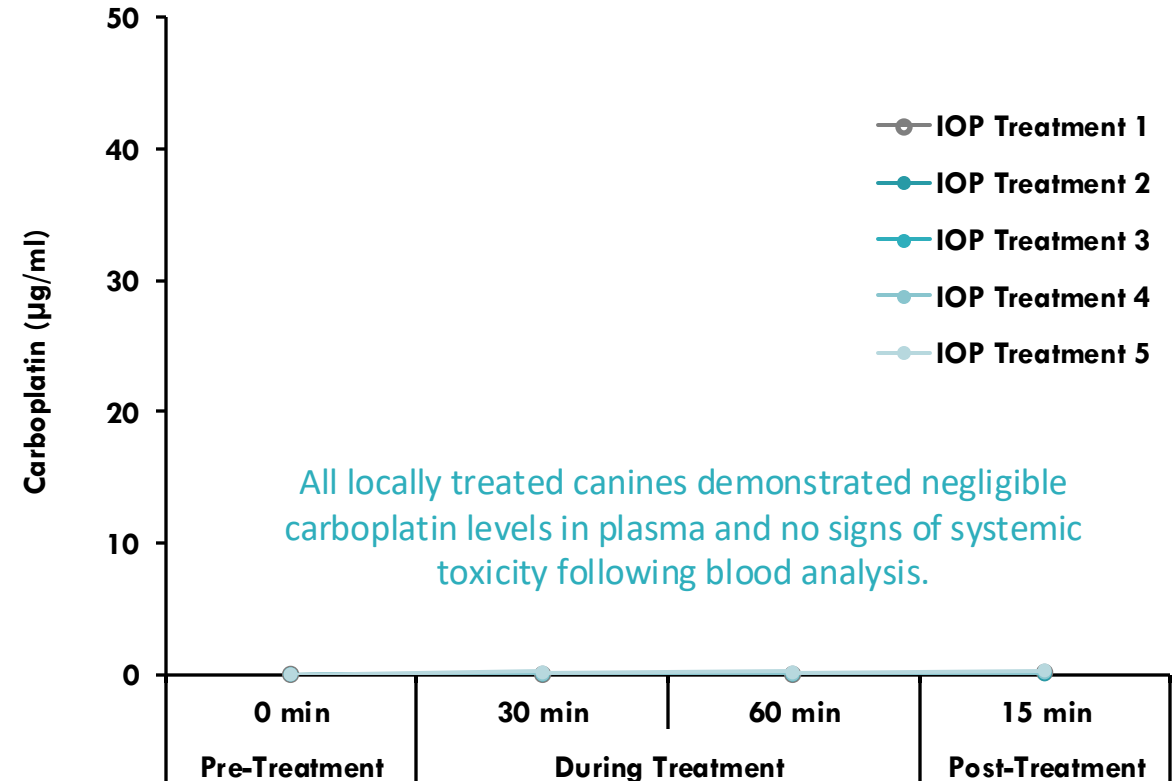


# Negligible Plasma Levels of IOP Carboplatin vs Systemic Treatment

### Plasma PK Post-Treatment — Systemic























### Plasma PK Post-Treatment — IOP





# Active IOP Delivery is Superior to Passive

		IOP	Drug-Eluting	Intra-Arterial	IT Injection
<p><b>Active IOP:</b></p> <p>Energy driven transport that does not rely on the circulatory system</p> <p>Crosses the protective barriers of the tumor</p> <p>Therapy precisely where it is needed and nowhere else</p> <p>Gets more active drug directly to the tumor</p>	Reduces systemic toxicity				
	Enhances penetration				
	Crosses barriers				
	Overcomes drug resistance				
	Demonstrated tumor volume reduction				
		Energy Driven Transport	Passive Diffusion		



# Exciting Value Proposition Across Multiple Indications

Indication	Addressable Market (cases)	Potential ASP <sup>1</sup>	Market opportunity
Locally advanced unresectable pancreatic cancer	21,700	\$30,000	\$ 651,000,000
Recurrent oral cavity cancer	23,998	\$30,000	\$ 719,940,000
Recurrent melanoma	10,668	\$30,000	\$ 320,040,000
Total opportunity			\$1,690,980,000



1. ASP modeled here is at the low end of the expected range

# Phase 1b Clinical Trial Details

## Population:

- Patients with non-metastatic, unresectable pancreatic adenocarcinoma

## Open Label:

Gemcitabine via ACT-IOP-003 Device

## Key Objectives:

- Safety and Tolerability post-implantation
- PK (plasma Gem, dFdU, V-GEM)
- Pharmacogenomic data (per ICF)
- Biomarkers (exploratory)

## Key Assessments:

- AEs, SAEs
  - a) drug-related;
  - b) device related
- Safety data—ECG, Blood chemistry / hematology, plasma PK
- Blood biomarkers (exploratory)
- CT Imaging
- Overall Survival

## Two Cohorts

### Cohort 1:

- (5 pts), 1 Tx / week, 8 weeks

### Cohort 2:

- (5 pts), 2 Tx / week, 8 weeks

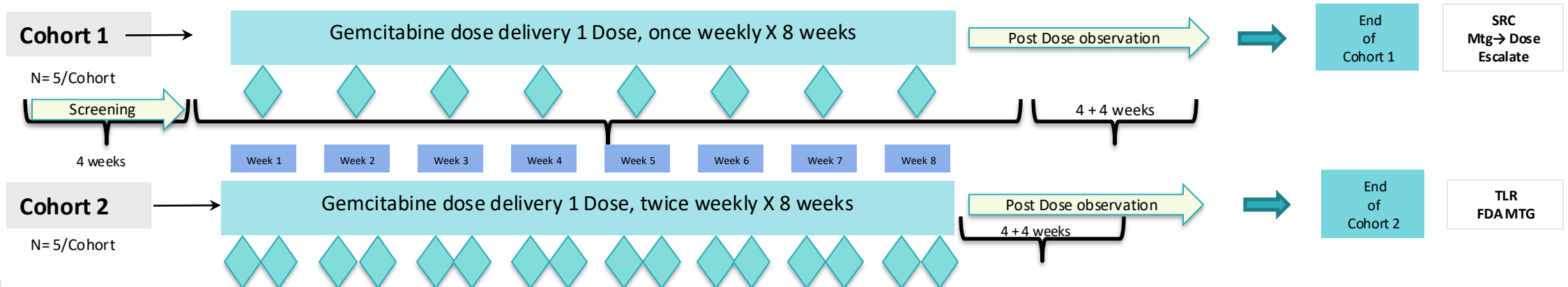
## Key Milestones:

### 1st patient in:

- 6 months from funding

### Top line report:

- 18 months from 1<sup>st</sup> patient in



# Intellectual Property: Strong and Getting Stronger

Broad granted international patents. An ongoing program of filings, supplemented by Orphan Drug, know-how and other market exclusivity mechanisms



Patents on internal drug delivery using iontophoresis



Patents on internal drug delivery using iontophoresis in combination with radiation



Continuations and new filings on patents in prosecution covering enhancements and improvements