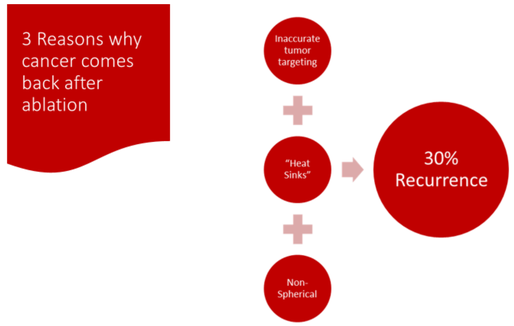
Theromics Inc: Harnessing the power of thermal energy to prevent post-procedural tumor recurrence in Interventional Oncology

Introduction

- Interventional Oncology, is the new 4th pillar of cancer care.
- Tumor ablation, the main modality of I/O, kills cancer via heat and is a minimally invasive, outpatient, and painless cancer treatment
- We have developed a biopolymer gel platform technology that makes ablation more effective

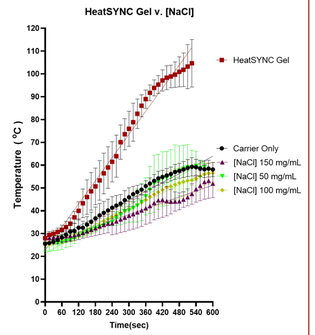
Problem

- Cancer returns in nearly 1/3 of ablation procedures
- Recurrence occurs within six months in certain organs



Technology

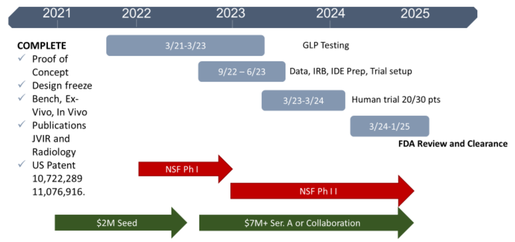
- Protein-based biopolymer gel
- FDA Cl. II Medical Device
- Injectable use with all ablation systems



Milestones and Deliverables

- ✓ Proof of Concept
- ✓ Design freeze
- ✓ Bench, Ex- Vivo, In Vivo
- ✓ Publications JVIR and Radiology Journal
- ✓ US Patents 10,722,289 11,076,916 11,497,544
- ✓ First batch manufacturing
- ✓ FDA review
- ✓ $3M funding & SBIR grants

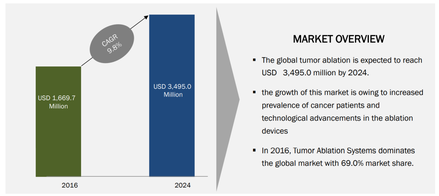
Timeline for Ablation Application



Competitive Analysis

- Novel concept - no "thermal accelerants."
  - Needle placement technologies, AI, Robotics
  - Physician technique

Features	*HeatSYNC™ gel*	*CAS-One™*	*Medtronic Emprint™ System*	*Precision Directional™*	*Ethicon Neuwave System*
Lung	✓	✓	✓	✓	✓
Liver	✓	✓	✓	✓	✓
Other organs	✓	✓	—	—	—
Bone	✓	✓	—	—	—
Microwave	✓	✓	✓	✓	✓
Radiofrequency	✓	✓	—	—	—
Irr Electroporation (IRE)	✓	✓	—	—	—
Capital Equipment	—	✓	✓	✓	✓
Cost	$	$$$$	$$$$	$$	$$$$
Set-UpTime	—	✓	✓	✓	✓



HeatSYNC™ gel platform

"Theromics has developed the first injectable biopolymer gel to make Image-Guided Thermal Ablation (IGTA) a more effective cancer treatment by augmenting thermal energy transfer in human tissue."

- 50% more ablation in ½ the time
- Stays positioned via viscosity
- Large molecule = heat source
- System agnostic – MWV, RF, IRE

Additional Applications

Phase I – Enhanced effectiveness of Image Guided Thermal Ablation procedures = $1B

Phase II - Loco-Regional controlled delivery of drugs and immunotherapy without systemic side effects = $6B

Phase III - Stimulate immune response via energy abscopal effect and follow with immunotherapies = $25B

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