Sona's THT Therapy: Solid Tumor Volume Reduction & Immune System Activation

A Novel, 1-2 Punch Against Cancer

August 2024

Forward Looking Statement

This presentation contains forward-looking information under applicable securities law. All information that addresses activities or developments that we expect to occur in the future is forward-looking information. Forward-looking statements are based on the estimates and opinions of management on the date the statements are made.

Such forward-looking statements include, but are not limited to, statements regarding the benefits to accrue to Sona from the future development of Targeted Hyperthermia Therapy and the development of diagnostic devices.

Forward-looking statements are necessarily based upon a number of assumptions or estimates that, while considered reasonable, are subject to known and unknown risks, uncertainties, and other factors which may cause the actual results and future events to differ materially from those expressed or implied by such forward-looking statements, including the risk that Sona may not be able to successfully complete the Giacomantonio study, secure animal and human clinical studies, or develop the envisioned device or therapy, and the risk that equity financing may not be available on the anticipated terms or at all.

Actual results may differ materially from those set forth in this presentation due to risks and uncertainties affecting Sona and its products, including the demand for Sona's therapies and tests which may be adversely affected by introduction or success of competing products, the ability for Sona to successfully develop longer-term applications for its technology and other risks detailed from time to time in Sona's ongoing filings and in its most recent annual information form filed with the Canadian regulatory authorities on SEDAR+ at www.sedarplus.ca.

Readers are cautioned not to place undue reliance on these forward-looking statements and are encouraged to read Sona's continuous disclosure documents which are available on SEDAR+. Such statements should not be regarded as a representation that any of the plans, expectations or intentions will be achieved. Sona takes no responsibility to update forward-looking statements in this presentation except as required by law.

Who we are

Sona's Gold Nanorods ("GNRs")

- **We make highly functional rod-shaped, gold nanoparticles**
  - Shape permits most efficient conversion of light to heat
  - Aspect ratio enables them to be tuned to specific energy wavelengths to enable heating and potentially triggering of conjugated molecules
- **Our nanorods are unique**
  - No toxic surfactants used in their manufacture
  - Sona's nanorods have passed rigorous NCL testing for contaminants

NCL Nanotechnology Characterization Laboratory | NCI Alliance for Nanotechnology in Cancer

Patented, uniquely biocompatible, proprietary gold nanorod technology

* Patent granted in South Korea and pending in North America and Europe
** CTAB: Cetrimonium Bromide

What we do

Targeted Hyperthermia Therapy ("THT")

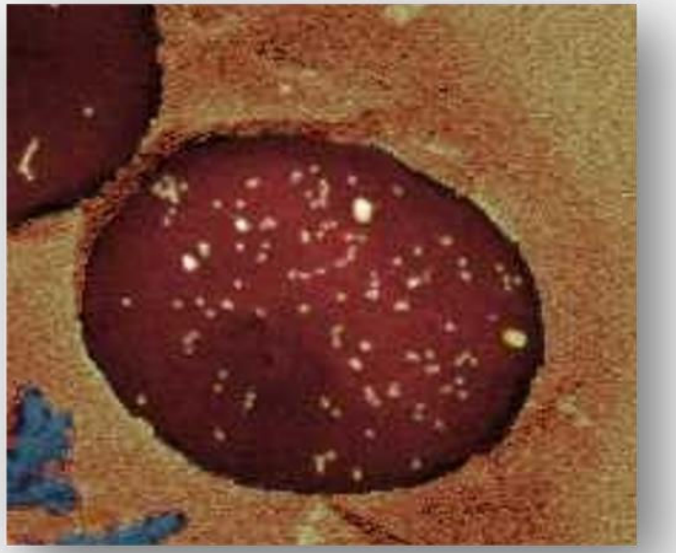
Sona's THT Cancer Therapy:

1. We **inject gold nanorods** into cancer tumors
2. We apply a **near infrared light source**
3. We **heat the nanoparticles** within a specific temperature range
4. This causes **death of tumor cells**

This **also causes neo-antigens to be presented** which **engages the body's innate immune system**

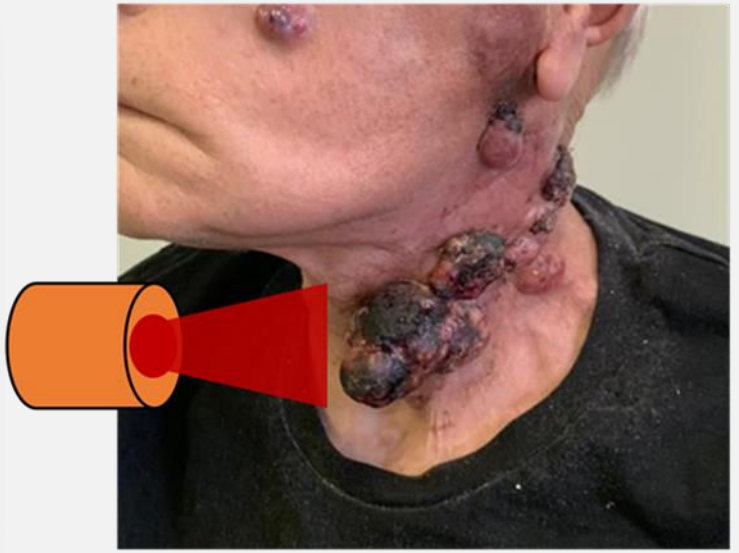
A Two-Step Therapy

1.
Inject Biocompatible Gold Nanorods Intratumorally



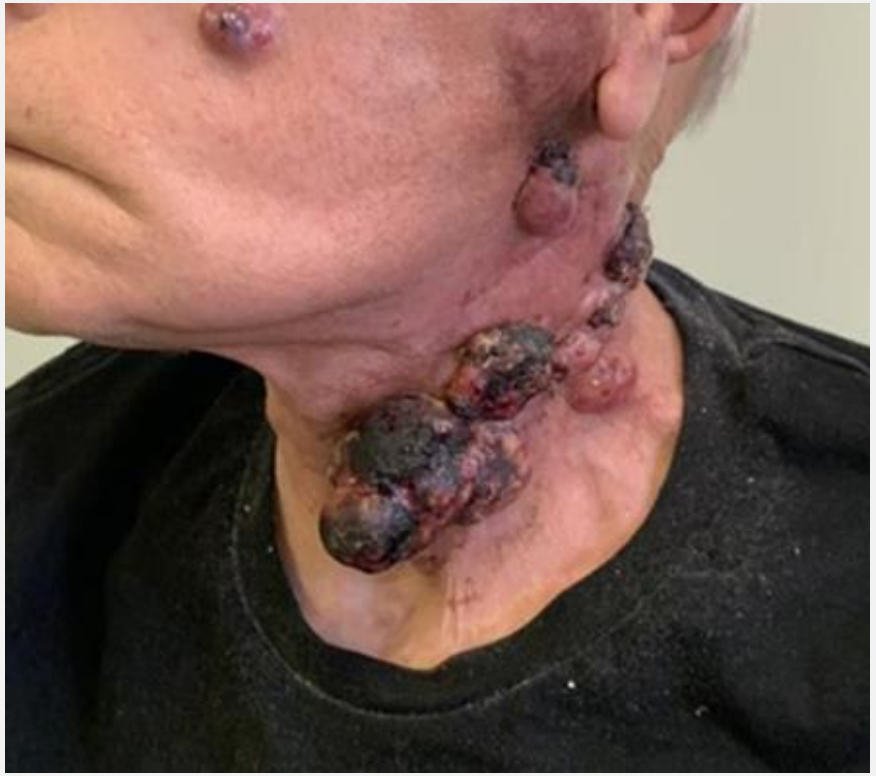
Nanoparticles shown in a red blood cell to show relative scale

2.
Shine NIR Light Tuned to 850nm on Tumor

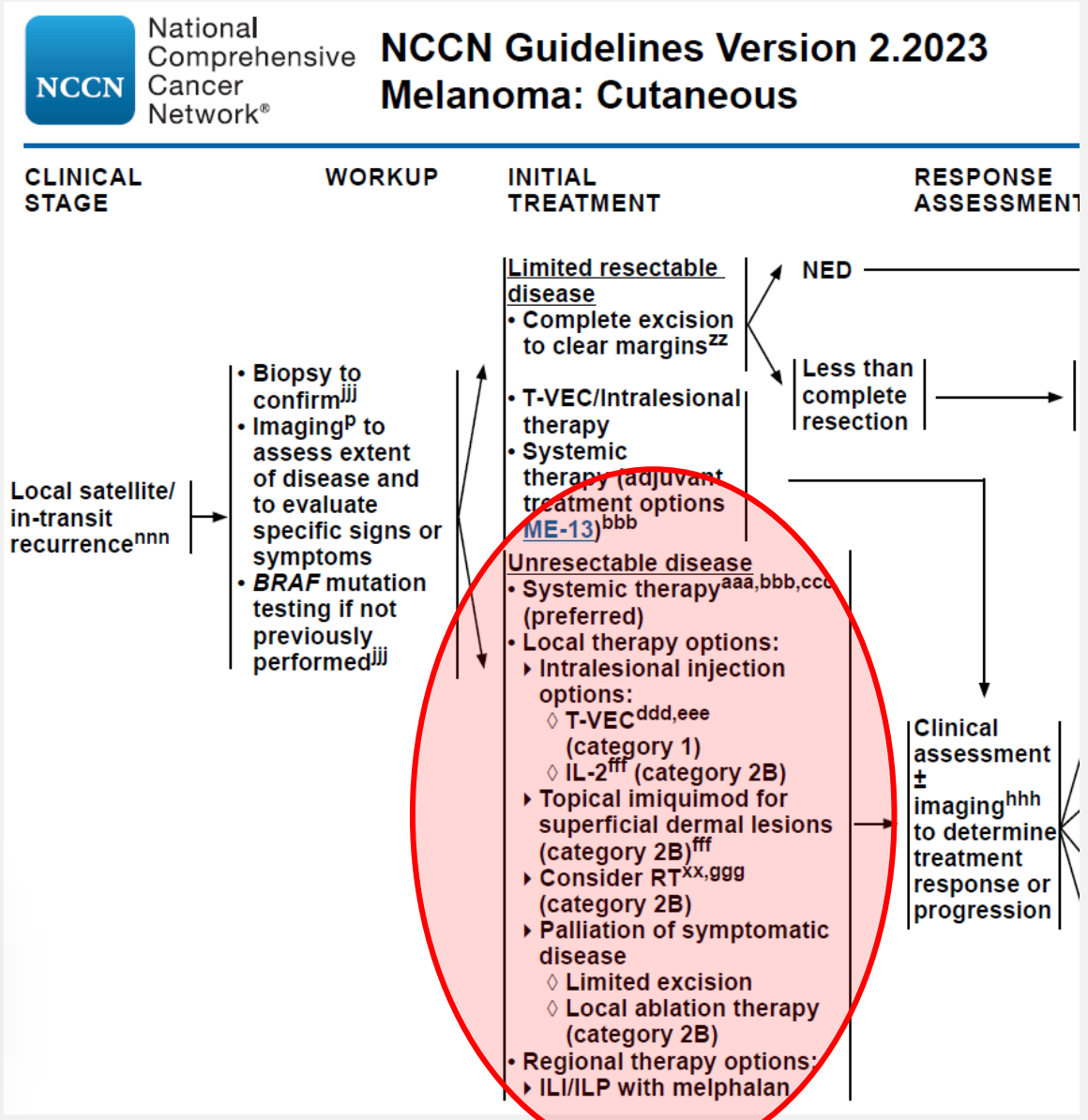


Near infrared light applied to GNR saturated tumor

The Problem: Late Stage, Unresectable Melanoma, For Which Too Often Nothing Else Works



Currently no alternative once NCCN recommended treatments fail

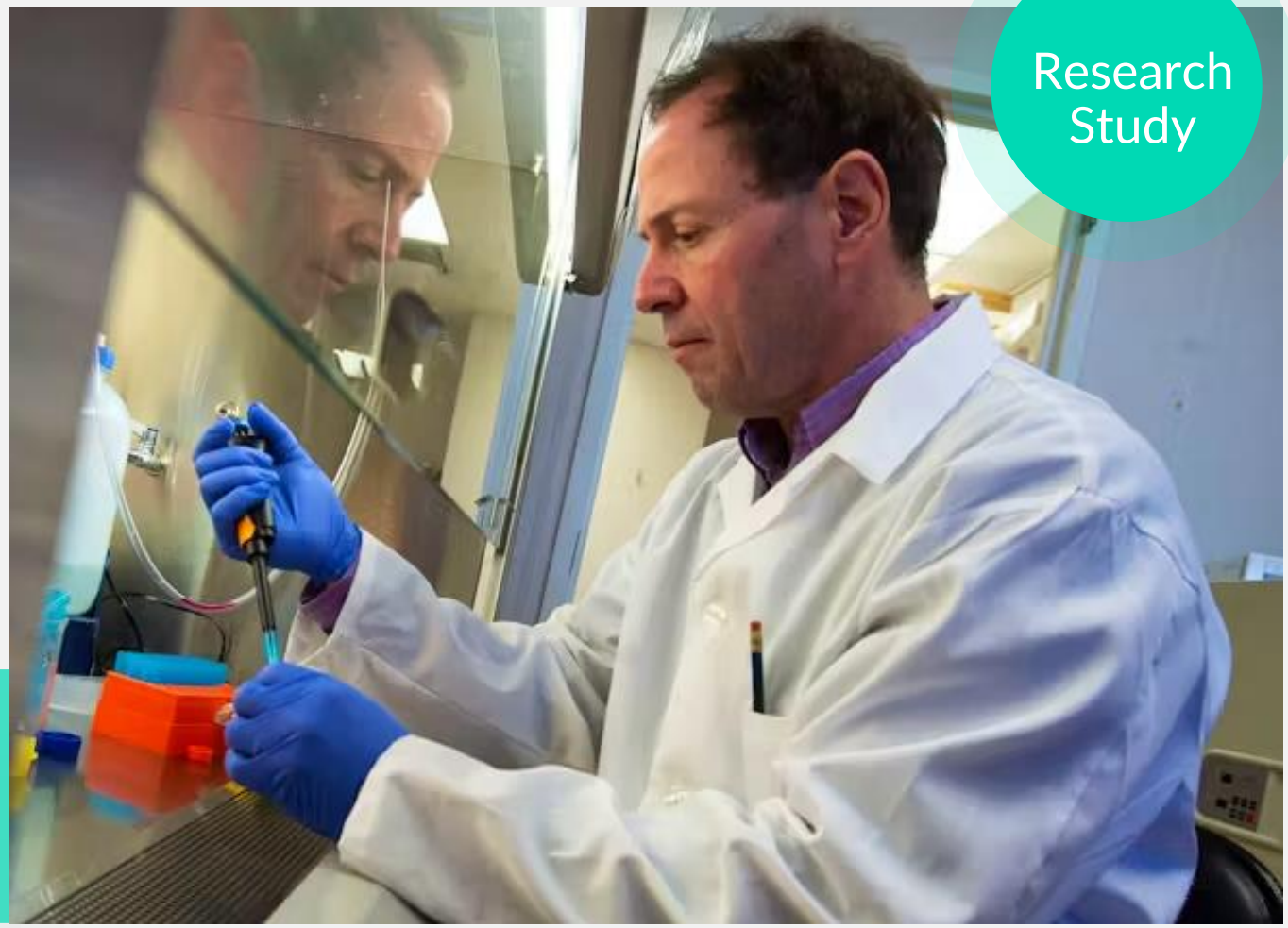


Note 1. Initial algorithm for the management of locally advanced melanoma. AJCC indicates American Joint Committee on Cancer; IIIB, in-transit and/or satellite metastasis without lymph node involvement; IIIC, in-transit and/or satellite metastasis with lymph node involvement; GM-CSF pl, treatment with perilesional injection of granulocyte-macrophage colony-stimulating factor; Il-2 il, treatment with intralesional injection of interleukin 2; M1, TNM corresponding to the presence of distant metastasis; PET, positron emission tomography; PET-CT positron emission tomography combined with computed tomography images.

What we have done so far

Dalhousie Preclinical Efficacy Study

*Recent Preclinical Study Shows THT's Strong Efficacy in Melanoma and Triple Negative Breast Cancer, With Pronounced **Abscopal Effect***



Principal Investigator:
Dr. Carman Giacomantonio MD, MSc., FRCSC (Cav.)

Professor, Faculty of Medicine, Dalhousie University
Surgical Oncologist / General Surgeon, QEII HSC

What we have done so far

Dalhousie Preclinical Efficacy Study – Key Questions

Efficacy study of the THT with melanoma and triple negative breast cancer

- In each case, two cancer tumors were was implanted on either side of a mouse.
- Only tumors on one side of the mouse were treated.
- Natural tumor growth was also measured in untreated, control mice.

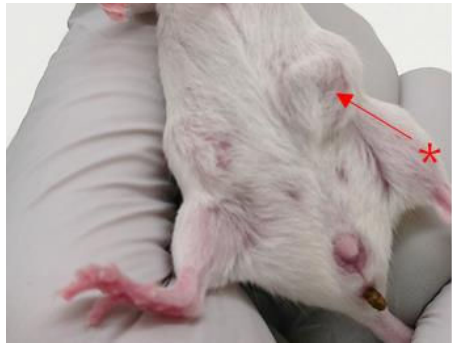
1. Does a single THT application shrink tumors on its own?
2. Do two applications of THT shrink tumors on their own?
3. Does THT create an immunogenic response? Ie. change the immune system
4. Does THT make a standard immunotherapy work better?
5. Can THT create an abscopal effect whereby distant, untreated tumors shrink?

What we have done so far

Initial Treatment Results

Results of initial treatment alone show:

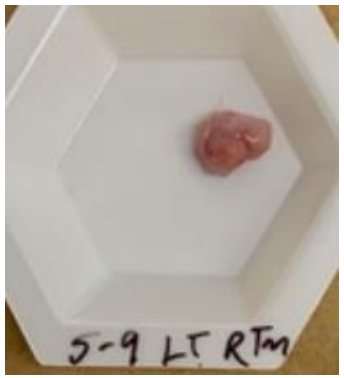
- one treatment reduced the primary tumor by an average of **approximately 80%**
- cancer tumors can grow back after the first treatment

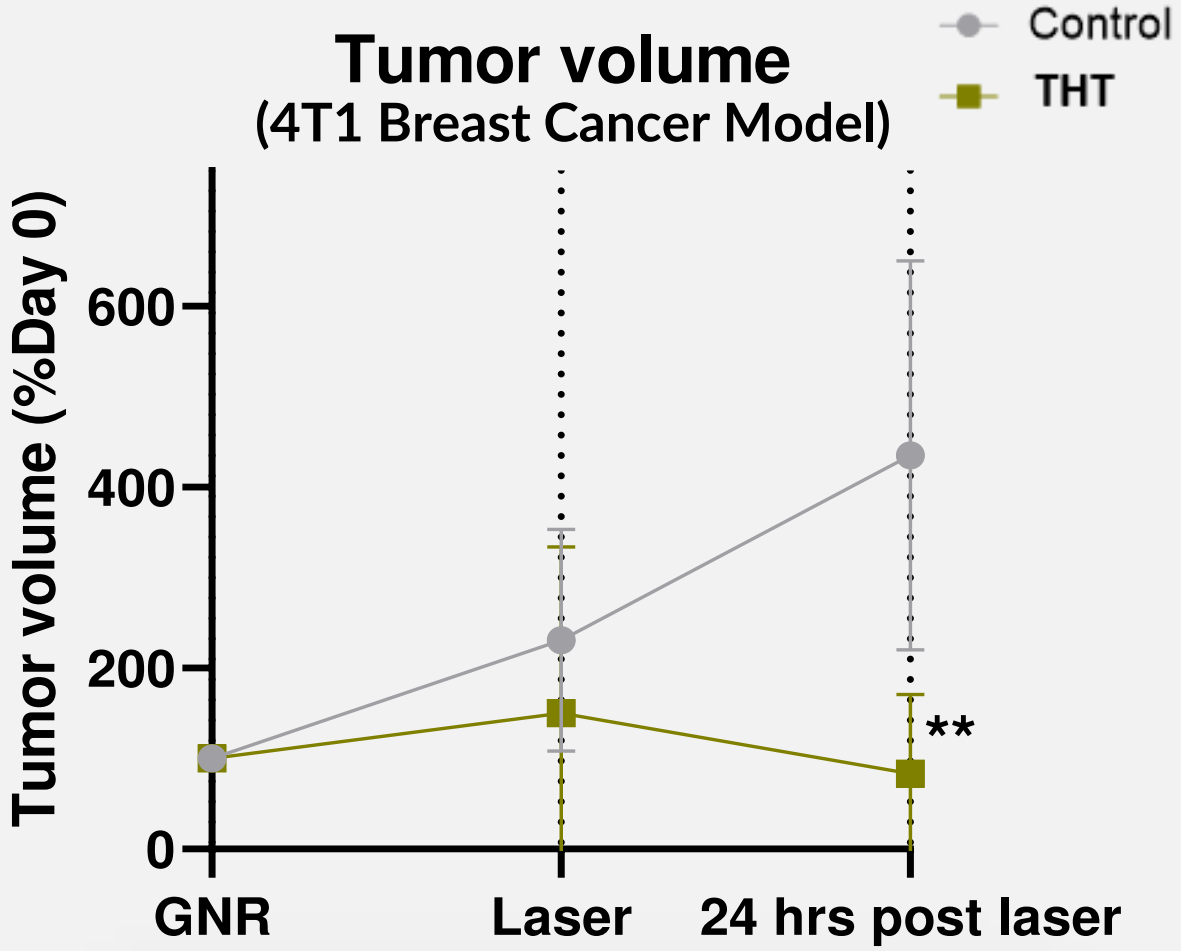


Control

THT

* = treated tumor





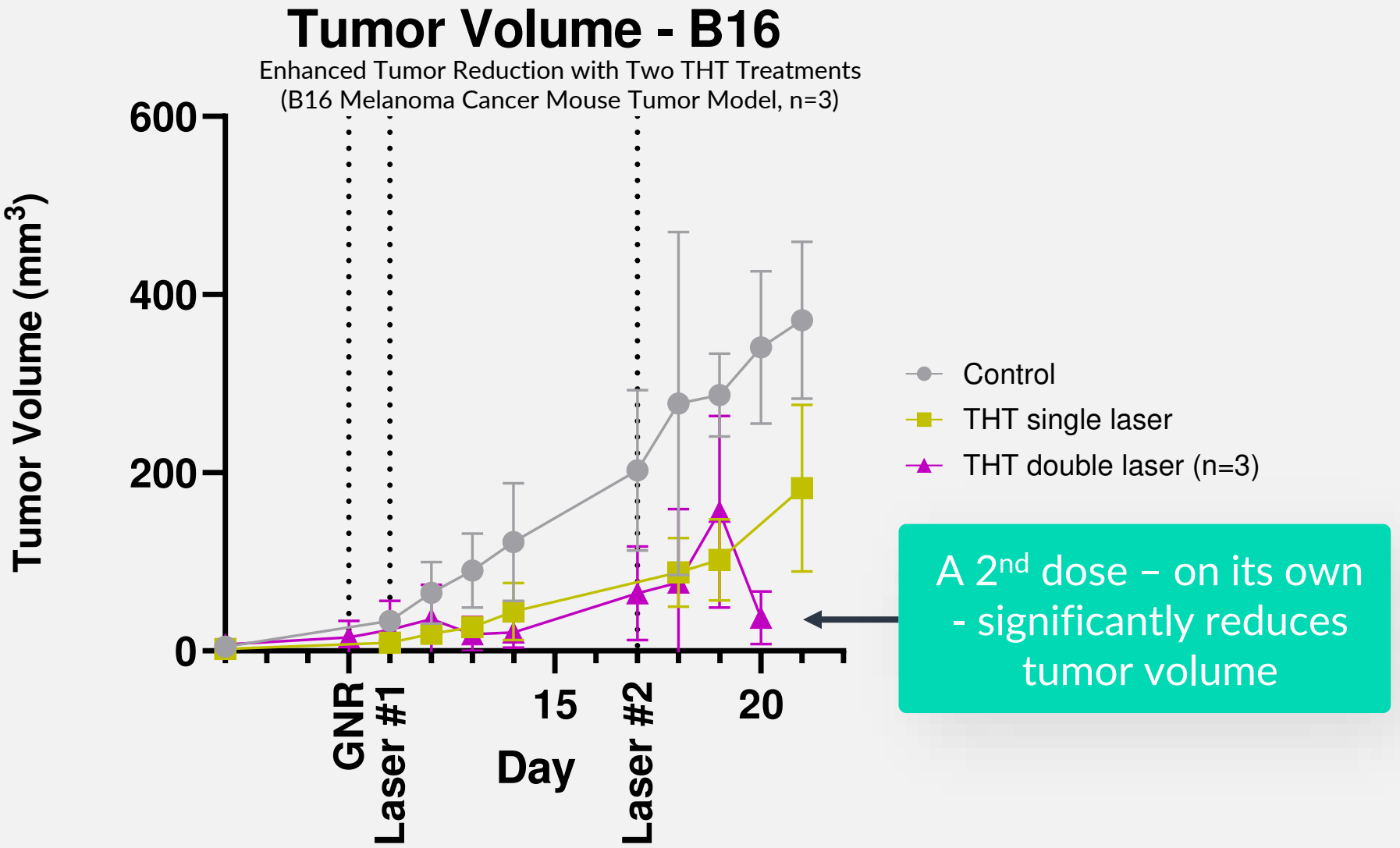
Single treatment shrunk all tumors

Source: The Giacomantonio Immuno-Oncology Research Group at Dalhousie University

What we have done so far

The Effects of Multiple THT Treatments

- The **first treatment reduces the primary tumor by approximately 80%**
- **Follow up treatments cause further significant size reduction of** the tumor



A 2nd dose – on its own - significantly reduces tumor volume

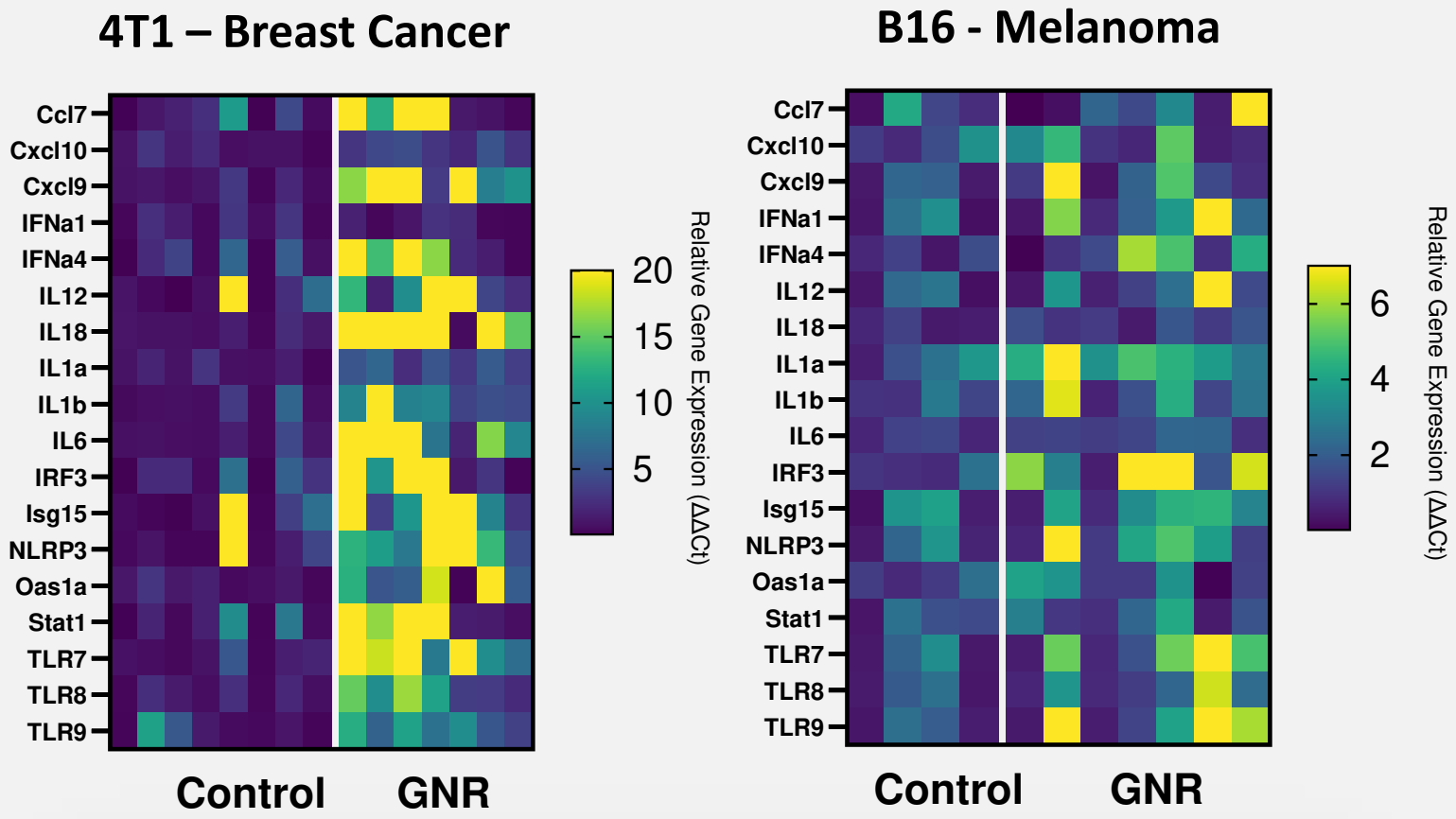
Source: The Giacomantonio Immuno-Oncology Research Group at Dalhousie University

What we have done so far

A Single THT Treatment Triggered A Systemic, Immune Response

- Nanoparticle facilitated hypothermia inside tumor causes neo-antigen presentment, enabling innate immune system to engage to attack the cancer.

- **The abscopal effect is seen when treatment of one tumor causes the immune system to proactively attack distant, untreated tumors.** Researchers worldwide have attempted to duplicate the abscopal effect with limited lasting success.



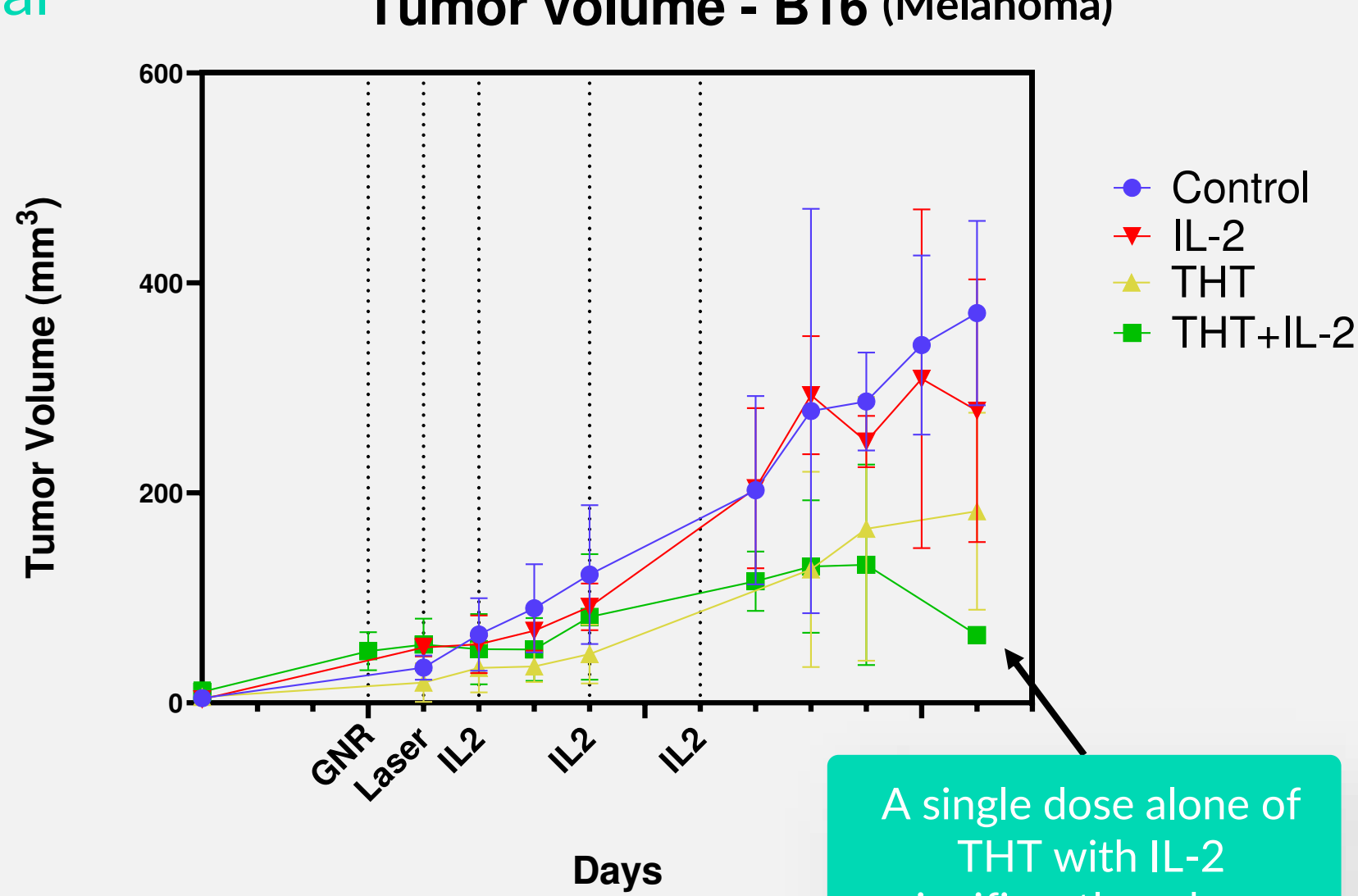
"These key gene expression data are indicative of a lasting activation of the immune system and support the existence of an abscopal effect."
Dr. Carman Giacomantonio, Principal Investigator

Source: The Giacomantonio Immuno-Oncology Research Group at Dalhousie University

What we have done so far

THT Combined With IL-2

- IL-2 is a standard immunotherapeutic drug used to treat cancer.
- IL-2 and other checkpoint inhibitors can have a significant positive effect on cancer patients when they work. **Their response rates, however, are low, with up to 80% of patients seeing little benefit.**
- When THT is **combined with IL-2 we have seen a dramatic increases in tumor size reduction and an abscopal effect.**
- While these results are early-stage, they suggest that **Sona's THT therapy could play a significant role in improving the overall efficacy of existing immunotherapeutic drugs, such as Keytruda**.



A single dose alone of THT with IL-2 significantly reduces tumor size

Source: The Giacomantonio Immuno-Oncology Research Group at Dalhousie University

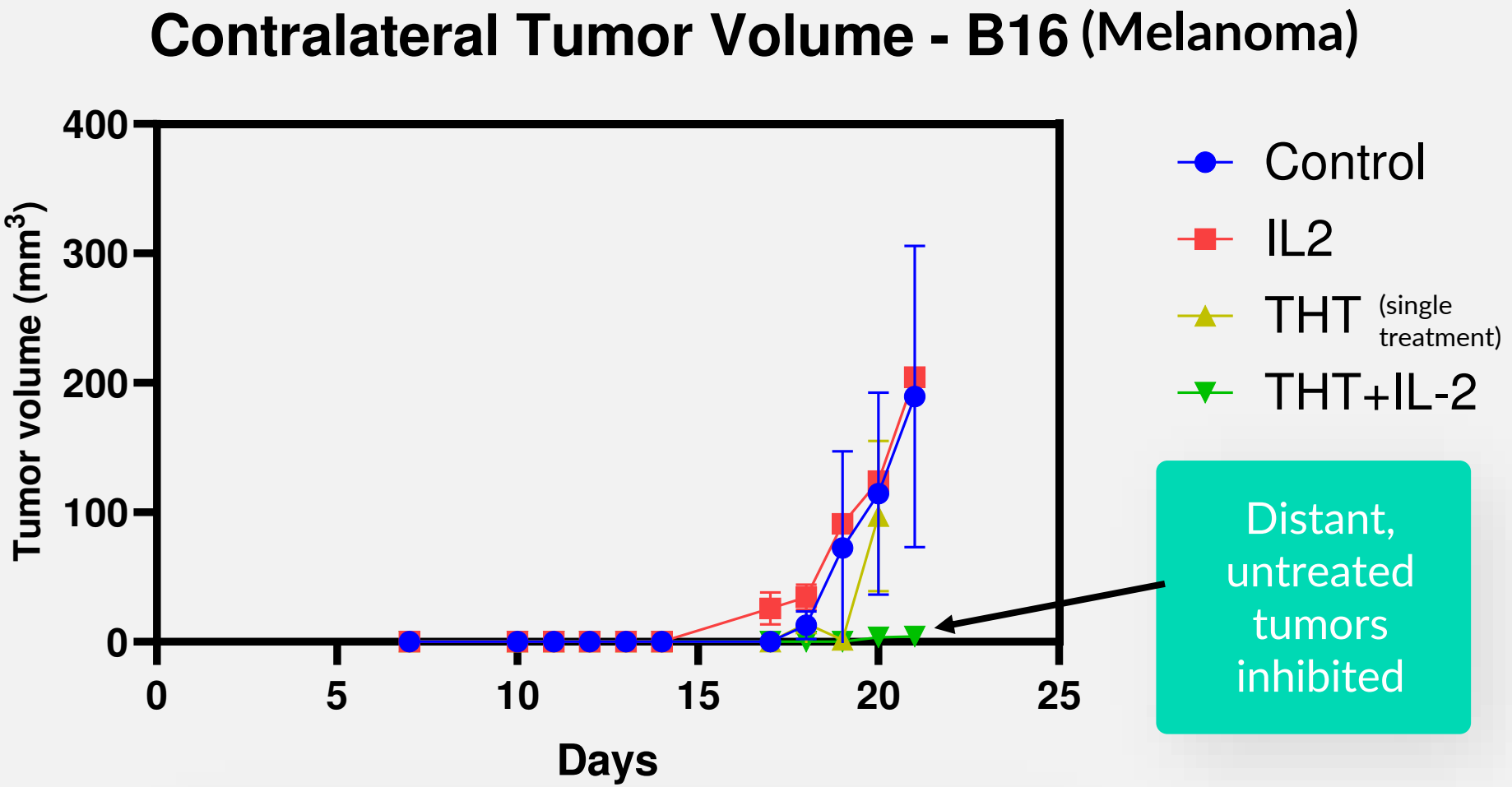
What we have done so far

THT Showed A Vaccine-like Effect

In mice with one tumor treated with THT and IL-2, an abscopal effect was seen whereby distant, untreated tumors shrunk.

Further, newly implanted tumors did not grow, providing for a vaccine-like effect.

Biomarker data suggests that this immunity **is lasting** and can provide for **future protection** to the mouse.



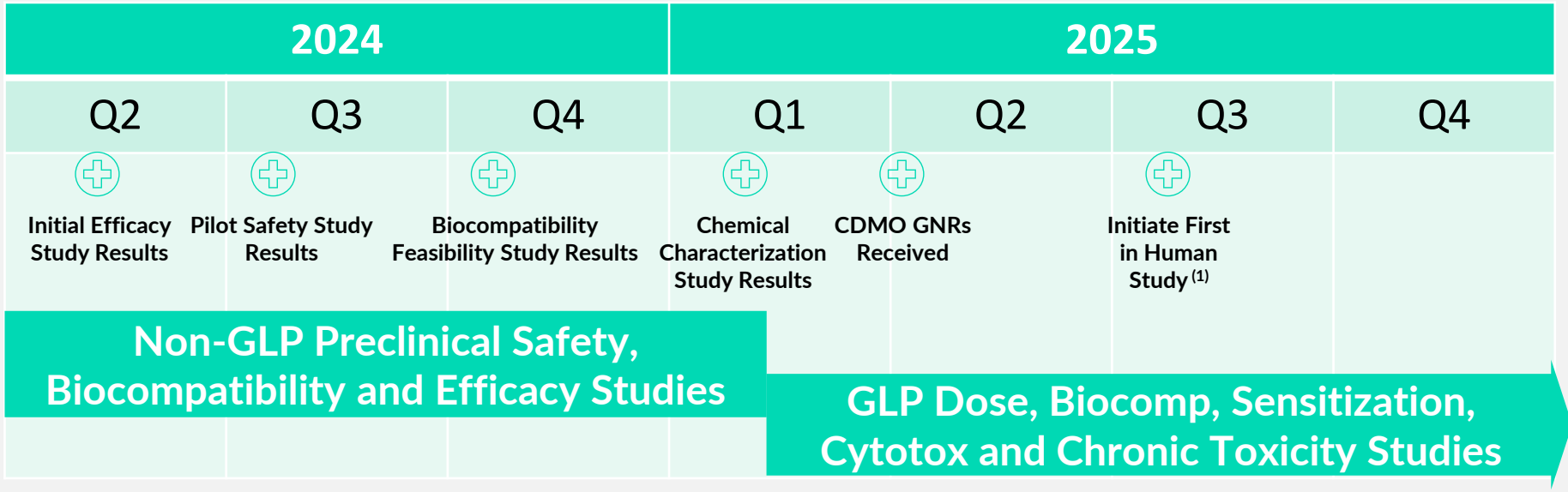
*"This type of abscopal effect is **rare and highly sought after in cancer treatment protocols**."*
Dr. Carman Giacomantonio

What we need to do from here

FDA-vetted Development Milestones for THT Safety Studies

Based on the substantial success the company has achieved in its preclinical studies, **Sona's near-term objectives will focus on four areas:**

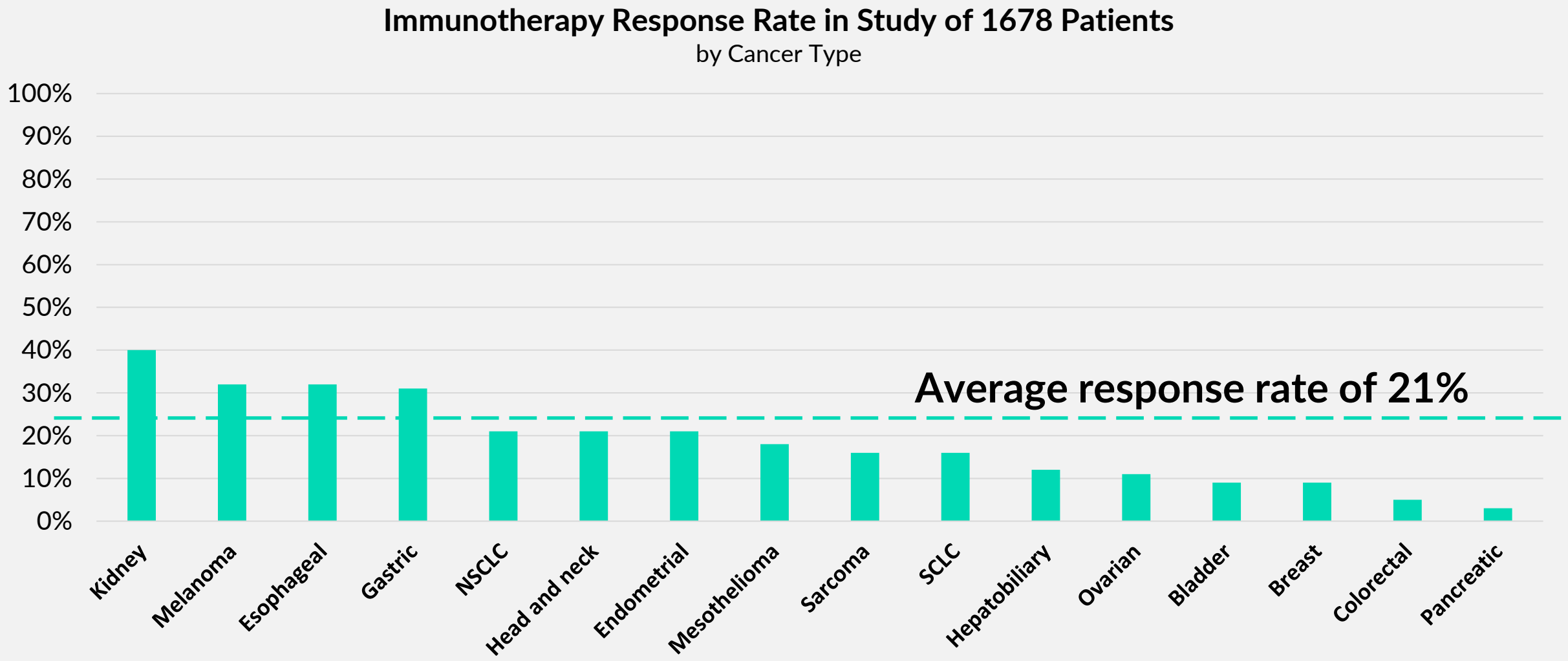
- **Complete final analysis**, **publish in medical journal and peer review** the Dalhousie study.
- Complete **animal safety studies and** determine **best practice and optimal use of the THT therapy.**
- **Engage a GMP** (Good Manufacturing Process) **manufacturing partner** to produce medical grade nanoparticles.
- Initiate a **first in-human trial.**



Goal for 'first-in-human' study in 2025

Note: 1) Assumes overseas first-in-human studies using non-GMP materials.

Immunotherapy Drug Response Rates Are Low. What Could Be The Impact On Lives If THT Improved Response Rates ***By Even 10%?***



Note: Patients treated with anti–programmed cell death 1 or programmed cell death ligand-1 immunotherapy
Sources: CA A Cancer J Clinicians, Volume: 73, Issue: 1, Pages: 17-48, First published: 12 January 2023, DOI: (10.3322/caac.21763)
Response Rates to Anti–PD-1 Immunotherapy in Microsatellite-Stable Solid Tumors With 10 or More Mutations per Megabase Cristina Valero, MD, PhD,[1] et al

Sona Has Engineered the Right Team to Develop Its THT Cancer Therapy

Board

Mark Lievonen
Chairman
- Led vaccine maker Sanofi-Pasteur to a billion-dollar value

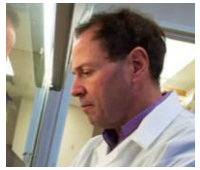
Walter Strapps PhD
Director
- CSO of Khosla Ventures CRISPR/Cas13 biotech

Neil Fraser
Director
- Led Medtronic Canada for ~20 years

Jim Megann
Director
- 25 years of experience in capital markets

Management

David Regan, MBA
Chief Executive Officer
- Capital markets professional
- Former strategy consultant



Dr. Carman Giacomantonio
Chief Medical Officer
- Surgical oncologist & researcher

Len Pagliaro, PhD
Chief Scientific Officer
- Developer of Targeted Hyperthermia Therapy

Kulbir Singh, PhD
Head of R&D
- Co-Developer of CTAB-free gold nanorods

Darren Rowles, MBA
Head of Diagnostics
- 17 years' experience with nanoparticle diagnostics

Robert Randall, CPA
Chief Financial Officer
- Extensive public company experience

Advisors

Dr. Catherine J. Murphy
- Inventor of gold nanorods

Dr. Gerry Marangoni
- Co-developer of CTAB-free gold nanorods

Glenn Kanner, B.Eng., MBA
- Medical device product development consultant

Investment Summary

- Unique, patented and vetted platform technology
- Elegant and powerful therapy – simple and strong immune system activator
- Compelling pre-clinical efficacy data in two cancer models (third pending)
- FDA vetted plan for studies with credible, international partners to get to human trial
- Experienced team and connected board
- Significant market – with no current alternative

Capitalization Table

Market Capitalization

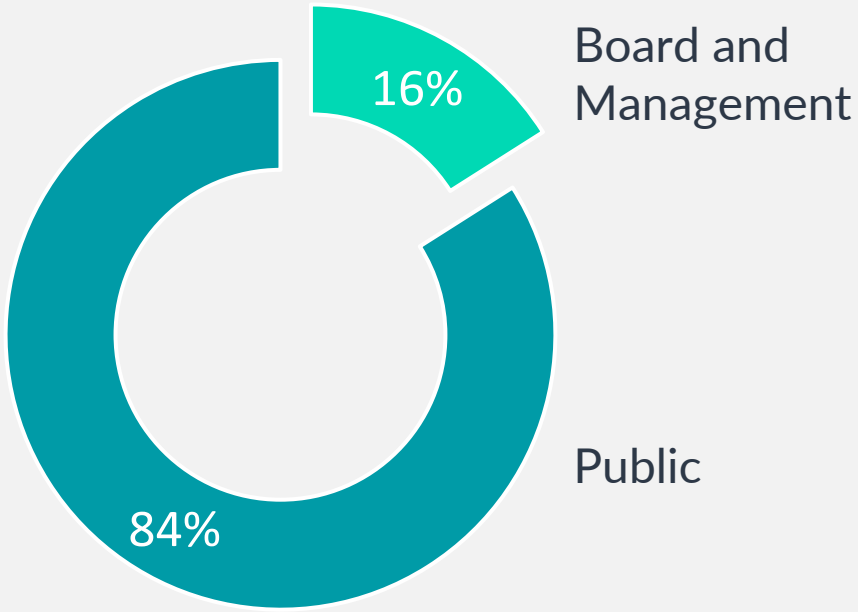
Share Price	C$0.30
Market Cap.	C$30M
52 Week High/Low	$0.56/$0.135

Capital Structure

Issued & Outstanding	99M
Options	6.0M
Warrants	3.1M

As of July 2, 2024

Ownership



Recent News

Sona Nanotech Announces Filing of Provisional Patent Application

MARCH 18, 2024

Sona Nanotech Updates on Dalhousie Efficacy Study and New NCL Results

MARCH 25, 2024

Sona Nanotech Secures Grant Funding to Support Intellectual Property Strategy and Development

APRIL 8, 2024

Sona Nanotech Provides Interim Results of Dalhousie Efficacy Study

APRIL 12, 2024

Sona's Cancer Therapy Creates a Systemic Immune Response in Murine Breast Cancer Model

APRIL 29, 2024

Sona Appoints Chief Medical Officer and Files Provisional Conjugation Patent

MAY 21, 2024

Sona's Therapy Shows Significant Preclinical Efficacy in Second Cancer

JUNE 20, 2024

Sona's Cancer Therapy Triggers Abscopal Effect, Eliminating Distant Tumors In Preclinical Melanoma Study

JUNE 26, 2024

Thank you

David Regan

CEO

Sona Nanotech Inc.

CSE: **SONA** | OTCQB: **SNANF**

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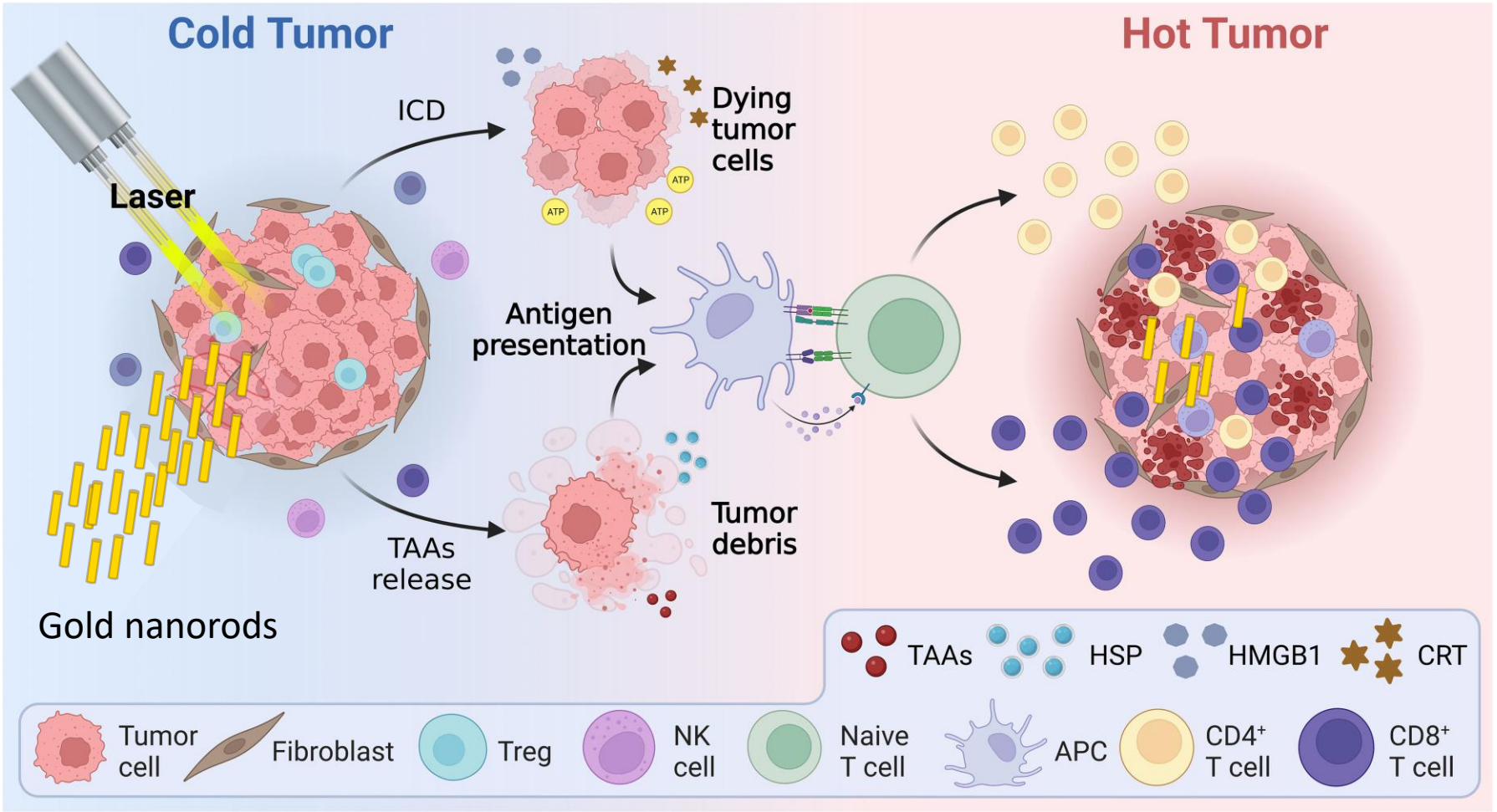
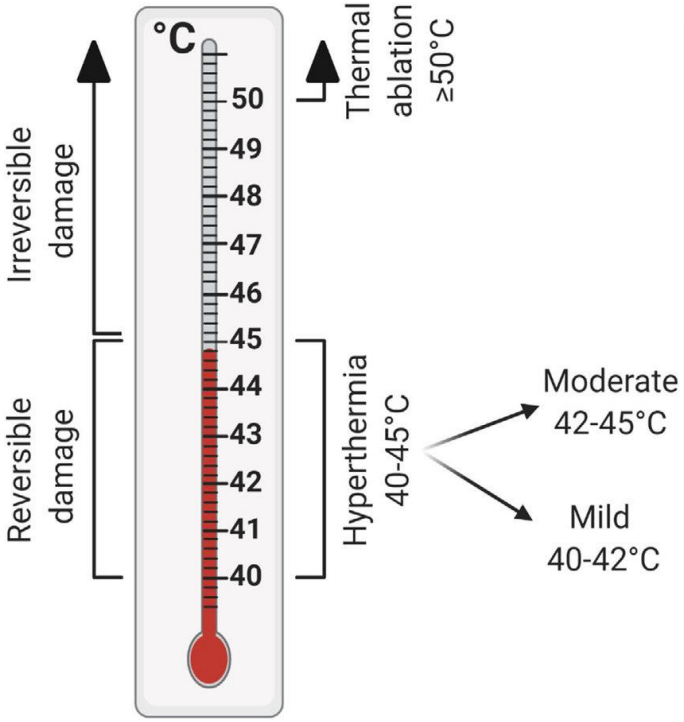
Appendix

Hyperthermia Triggers Antigen Presentation To The Immune System



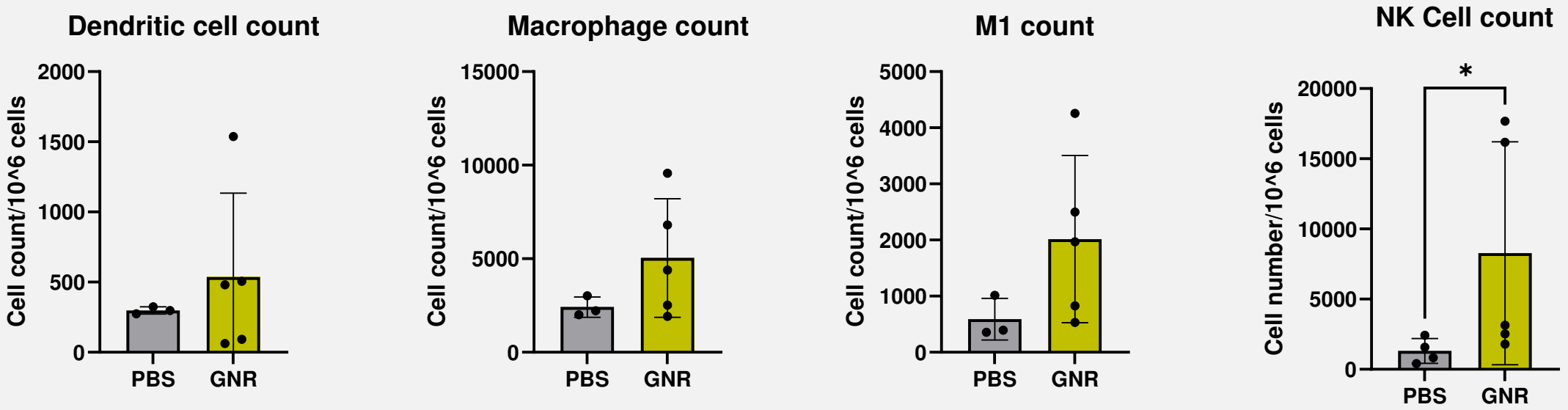


Adapted from Pharmaceutics 13(8):1147

What we have done so far

Key Immune System Indicators

B16 Melanoma Model Study Data



Biomarker data support THT success in enhancing the immune system's ability to attack cancer

THT + Immunotherapeutic Drug Potentiates an Immune Response

THT shrinks tumors and increases survival in animal models. Sona's new preclinical studies now establish that:

1. **THT stimulates the innate immune system**
   - *Priming it to help fight the cancer*

2. **THT upregulates gene expression of inflammatory response pathways**
   - *Indicating longevity of the physiological changes*

3. **THT + immunotherapeutic drugs can result in an abscopal effect – reduction of untreated tumors**
   - *Providing for a 'vaccine effect' whereby new tumors don't 'take'*

Summary Of Dalhousie University Study Findings

- GNR-induced hyperthermia triggers STING/innate immune response, reducing tumor volume drastically.
- Combination with intratumoral IL-2 therapy leads to:
  - durable tumor reduction
  - more CD8+ infiltration
  - increased CD8+ memory subsets, and
  - higher PD-1 expression on CD8+ T cells.
- An abscopal effect is observed on non-treated contralateral tumors with combination therapy.