Empowering Immuno-Oncology Therapies By Stimulating the Immune System:
A Novel 1-2 Punch Against Cancer

April 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.

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Using Proprietary, Uniquely Biocompatible Nanotechnology for a More Effective *and* Gentler Cancer Therapy That Enables Immunology

Sona's Proprietary Technology

- Patented*, biocompatible, proprietary ***gold nanorod*** manufacturing technology

Used to Develop:

Therapies

- Developing 'Targeted Hyperthermia Therapy' to eliminate tumors with minimal systemic toxicity

Diagnostics

- Developer of novel lateral flow assay rapid tests for concussions and animal disease

Which then would be licensed to commercialization partners

Sona's Gold Nanorod Advantages

Uniquely Biocompatible:

- Sona surfactant uses no toxic CTAB **
- Equally as effective at heat transfer as CTAB-based GNRs
- Potentially more suitable for use in the body: stable, inert and biocompatible

Functional:

- Gold nanorods provide the most efficient thermal conversion
- Variety of lengths and widths to optimize surface area
- Aspect ratio control permits tuning to specific wave lengths
- Long shelf life and stable surface properties

Validated :

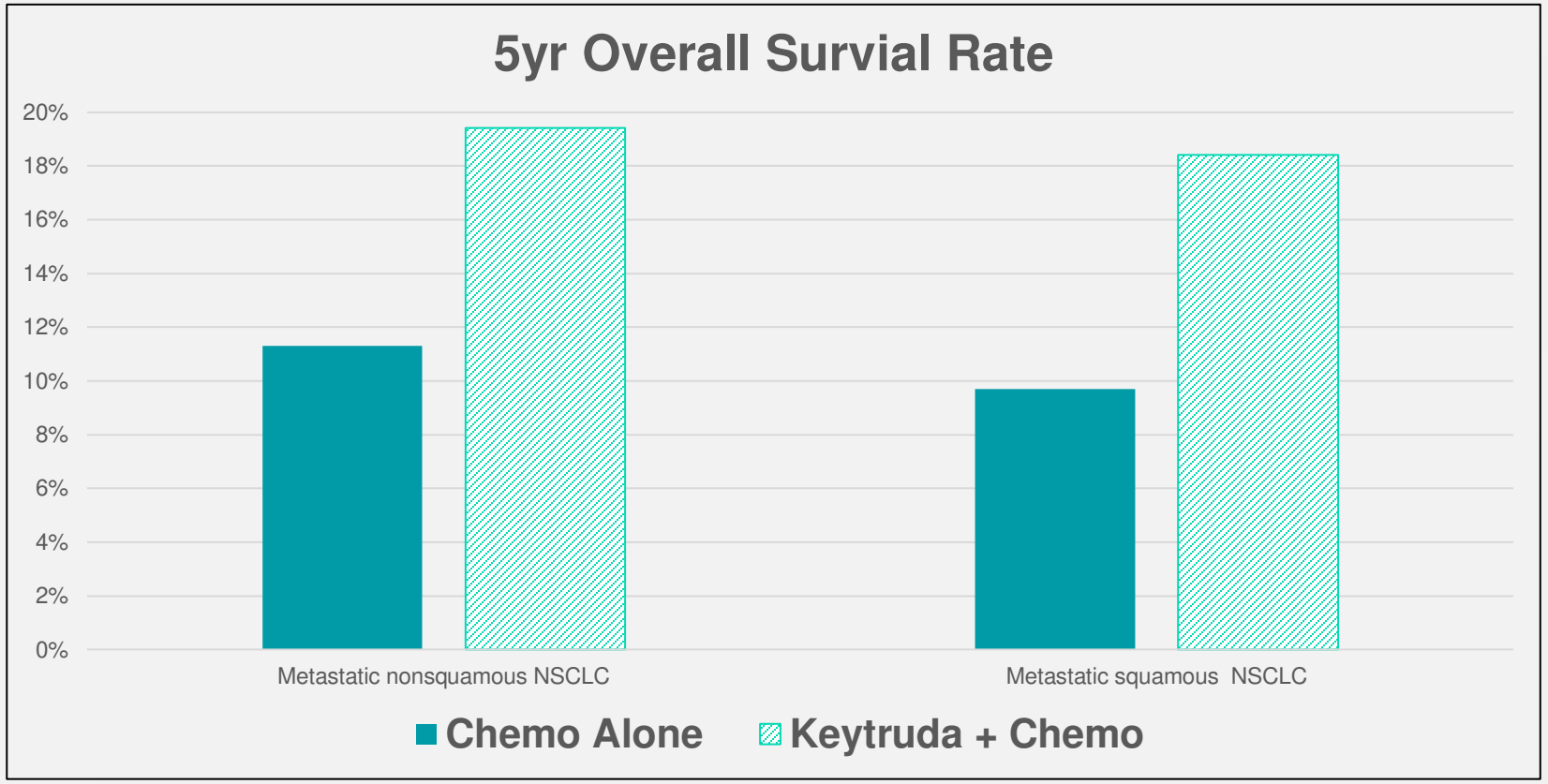
- NCL was established by the FDA & NCI to accelerate the progress of nanomedicine by providing testing and characterization of nanoparticles.
  - Neither endotoxins nor microbial contamination were detected in seven rounds of NCL analysis

NCL Nanotechnology Characterization Laboratory | NCI Alliance for Nanotechnology in Cancer

- NCL joined as part of Sona's team in its recent FDA 'Pre-sub' meeting

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

Immuno-Oncology ("IO") Therapies With Chemo Can *Vastly* Improve Survival Rates Vs. Chemo Alone



In a recent Merck study, their blockbuster IO product Keytruda **increased five-year survival rates by ~81%**

Named '**Breakthrough of the Year**' in 2013 by Science journal, immunotherapy enables the immune system to fight cancer itself

IO therapy, however, only works in ~21% of tumors/patients

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

IO Success Can Be Constrained If The Tumor Antigens Presented Are Too Weak To Elicit A Strong Immune Response

Sources of Immunotherapy Resistance

1. Weak tumor antigen or loss of tumor-antigen expression
2. Upregulation of immune-checkpoint molecules (immune fatigue)
3. Activation of alternative signaling pathways
4. Immunoediting

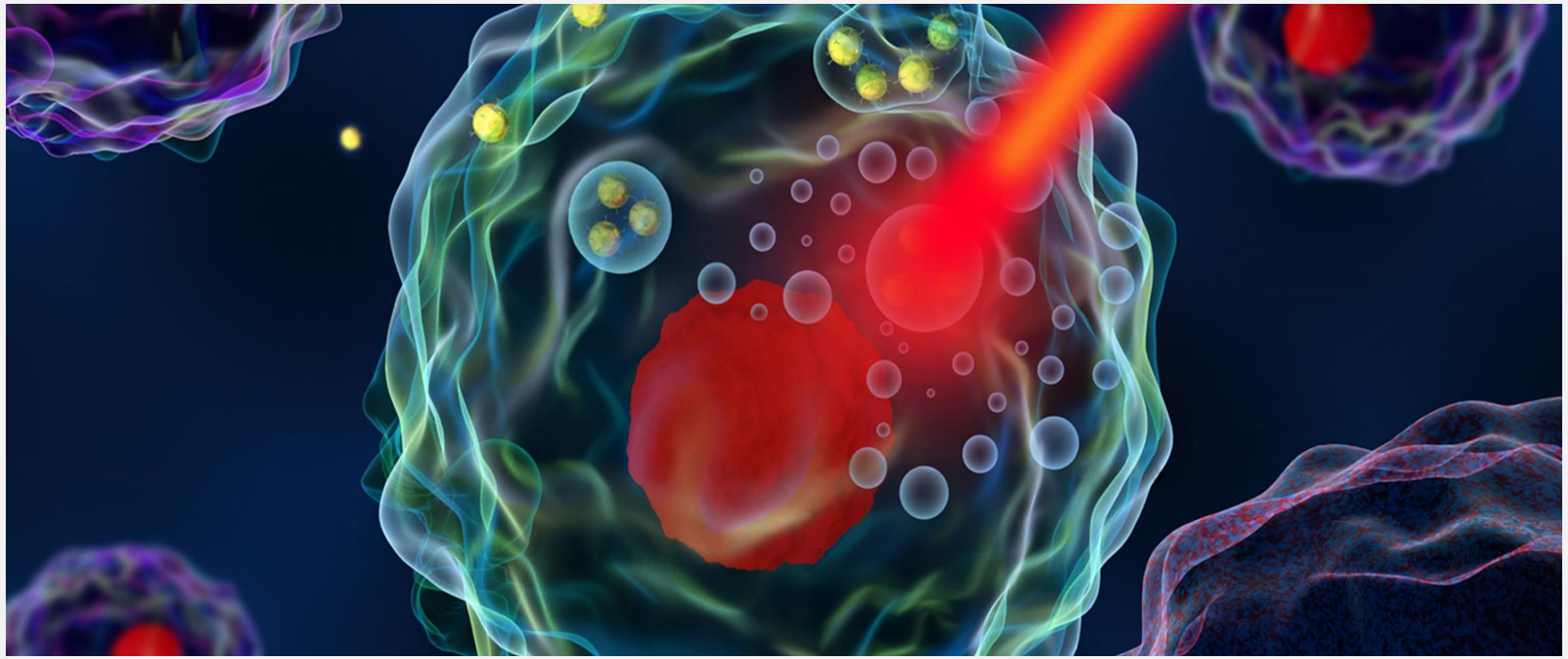
More of a good thing isn't necessarily better:

Addressing a weak antigen tumor microenvironment with stronger/more IO drugs risks triggering autoimmunity and toxicity

Revealing fresh tumor antigens would spark and activate the innate immune system

Source: Cancer Resistance to Immunotherapy: Comprehensive Insights with Future Perspectives Sawsan Sudqi Said and Wisam Nabeel Ibrahim, in Pharmaceutics, April 2023

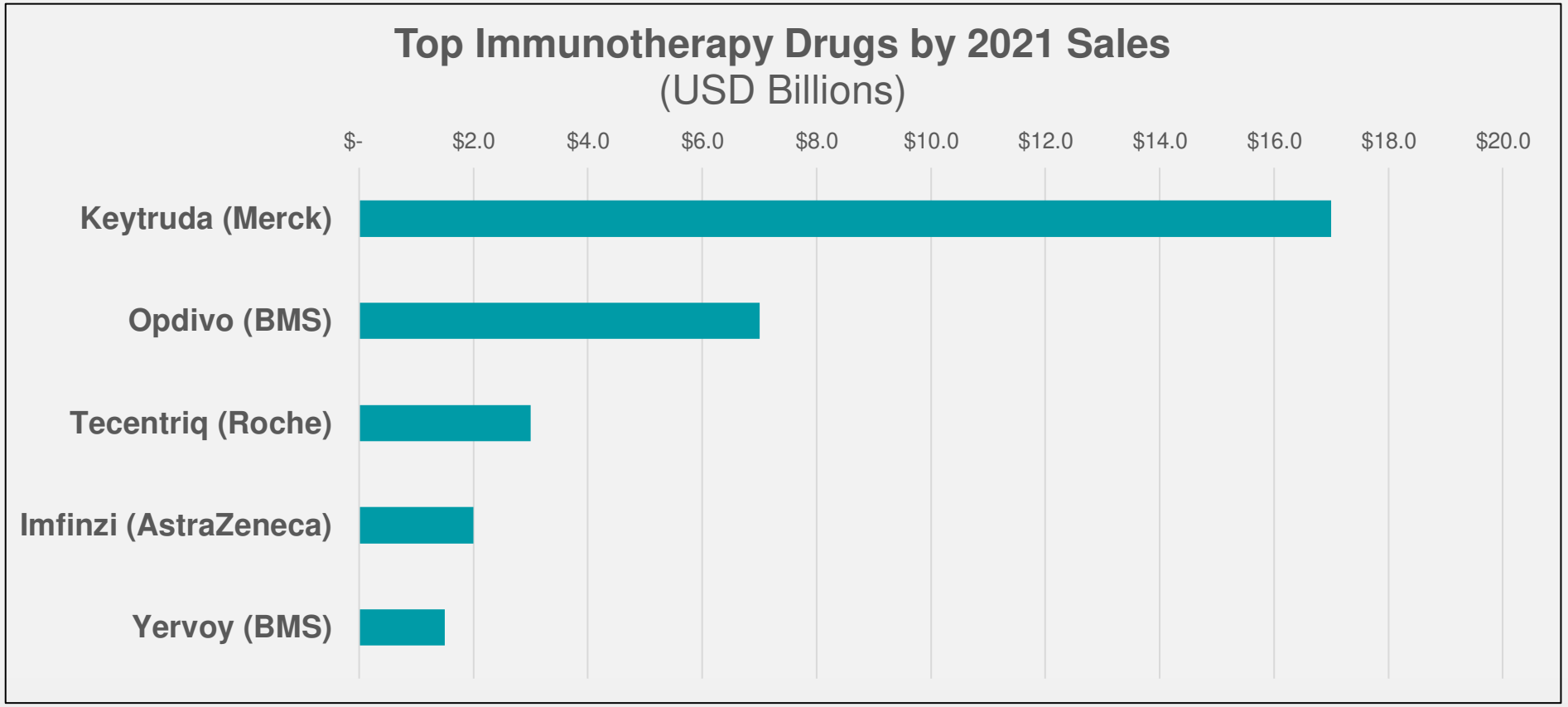
Many Unexposed Antigens Exist in Tumors But How Can We Cause Them to be Presented to the Immune System?



Heating cancer cells gently causes them to die by apoptosis which causes the release of neo-antigens

Sona's therapy primes the tumor microenvironment to present neo-antigens, thereby enabling immunotherapy to work better

The U.S. Market for Immuno-Oncology Therapy Drugs For Solid Cancers Is Worth $31 Billion



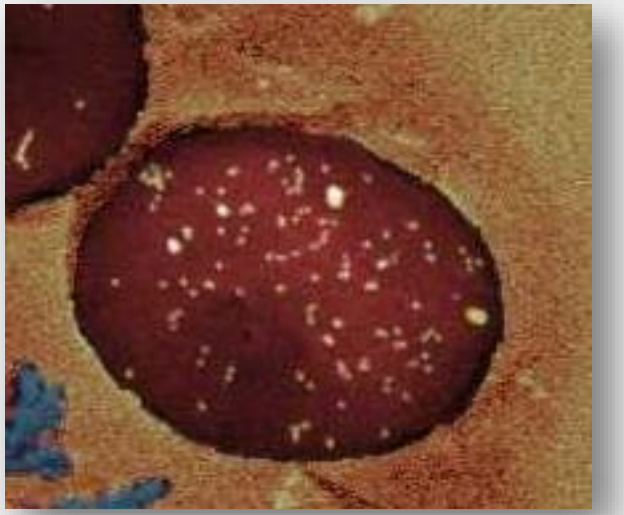
Raising response rates, even marginally, could result in billions in market share for the partner

Sources:
https://www.statista.com/statistics/1269401/revenues-of-keytruda/
https://www.globaldata.com/data-insights/healthcare/the-global-drug-sales-of-opdivo-1127420/
https://www.globaldata.com/data-insights/healthcare/the-global-drug-sales-of-tecentriq-1127456/
https://www.astrazeneca.com/content/dam/az/PDF/2021/full-year/Full-year-2021-results-announcement.pdf
https://www.precisionmedicineonline.com/business-news/bms-posts-strong-q4-precision-oncology-products-sales#:~:text=Opdivo%20revenues%20in%202022%20were,from%20%242.03%20billion%20in%202021.

Sona's Targeted Hyperthermia Therapy (THT) Applies NIR Light to Nanorod-Saturated Tumors To Heat Them From the Inside Out, Gently

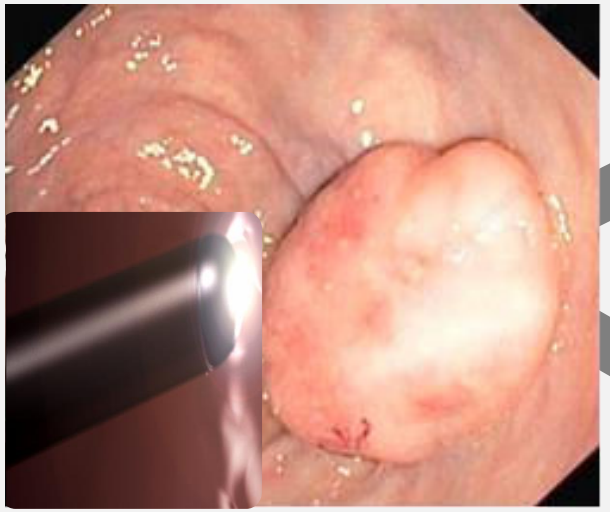
A Two Device System

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

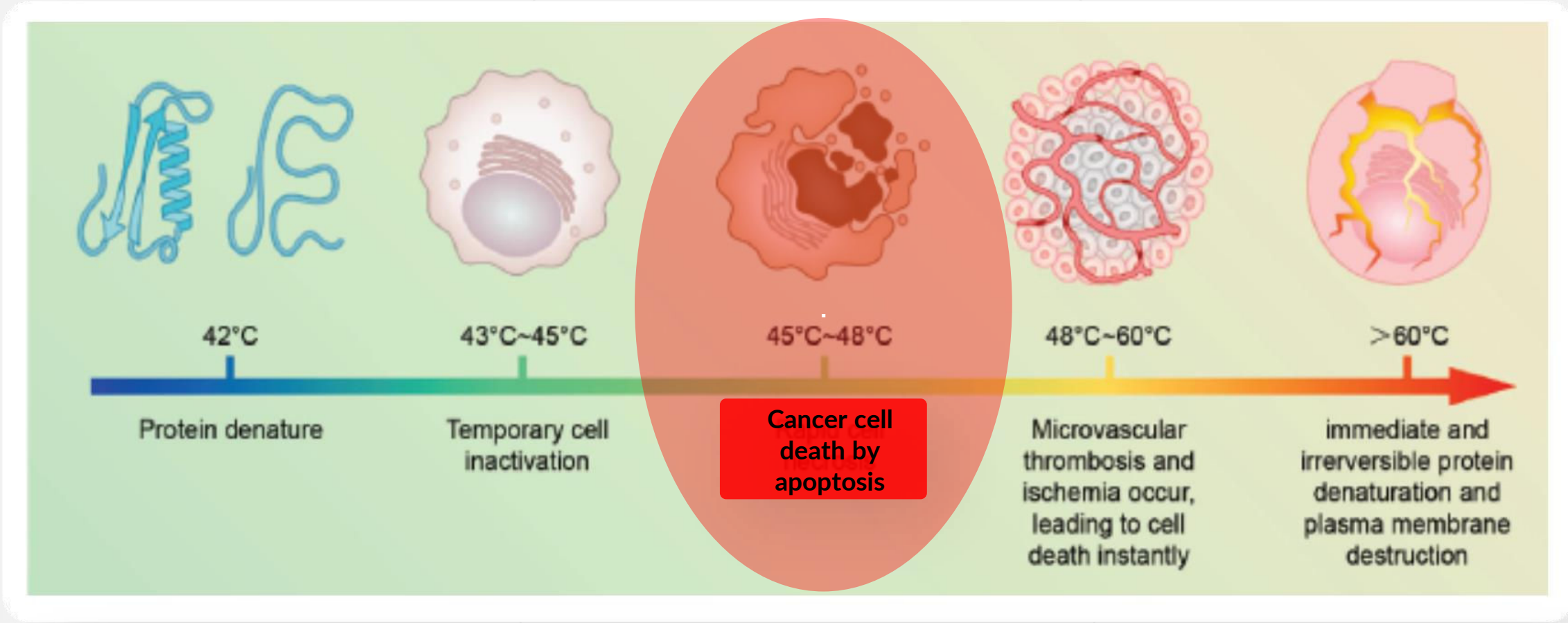
Delivering a 1-2 Punch:

1. Heat causes cancer cell apoptosis, shrinking tumors

2. Apoptotic cell death releases intact neoantigens, awakening the innate immune system

THT heats the tumor cells gently, shrinking it and causes the exposure of intact tumor-specific neo-antigens

THT's 'Hyperthermia' Approach Heats Tumors to 41-48 °C – Enough to Kill Cancer Cells, But Not Enough to Harm Healthy Cells



Apoptosis: A type of cell death in which a series of molecular steps in a cell lead to its death. This is one method the body uses to get rid of unneeded or abnormal cells. The process of apoptosis may be blocked in cancer cells. Also called ***programmed cell death***.

Sources: Adapted from Jiachen Li et al., "Nanoparticles-based phototherapy systems for cancer treatment: Current status and clinical potential," Bioactive Materials 23 (2023), pp. 471 - 507.
https://www.cancer.gov/publications/dictionaries/cancer-terms/def/apoptosis

While Cancer Cell Death by Apoptosis Can Be Stimulated In a Variety of Ways, Sona's THT Therapy is Efficient and Selective in its Treatment

Rationale for Sona's Targeted Hyperthermia Therapy (THT)

- Gold nanorods (GNRs) are the most efficient gold nanoparticles at converting light energy into heat potentially minimizing therapy times
- Sona's GNRs are uniquely manufactured without toxins, making them an inherently safe and therefore desirable heat generating agent, in vivo
- THT limits healthy cell damage and promotes apoptosis, rather than necrosis by generating moderate hyperthermia instead of high-temperature ablation

Leverages the innate immune system without 'cutting, burning or poisoning'

Sona's THT Therapy is Proprietary And Will Benefit From IP Protection

Sona's Four Sources of IP Advantage

Patents:

- **Method for Manufacture of Biocompatible Gold Nanorods**
  - Issued: South Korea; Pending: PCT, USA, Canada, EU, China.
- **Photothermal NIR LED Light Device**
  - Issued on Dec. 11, 2014, as US patent #10,064,940
- **Photothermal Near-Infrared Laser Light Device**
  - U.S. Provisional Patent Application No. 63/562461, filed Mar. 7, 2024
- **Gold Nanoparticle Conjugates and Uses Thereof**
  - US patent #9,175,015 filed Aug. 22, 2008
- **Further provisional patent work underway**

Two Device System:

- Once approved by regulators, Sona's light device may not be used with 3rd party GNPs
- Once approved by regulators, Sona's GNRs may not be used with 3rd party light device
- Use of one with a substitute for the other would also void warranties

All restrict off-label use

Time Advantage:

- Moving quickly to maintain Sona's lead to be the first to be approved by regulators

Trade Secrets:

- Techniques for delivery of GNRs in vivo and application of the non-thermal energy
- Protocols for immunotherapy agent combinations

THT Concept is Backed By Science; Now Relies On Preclinical Development Work to Advance

Previously Done/Approved:

- ✓ Heat used to kill cancer cells
- ✓ Photothermal treatment using infrared light devices
- ✓ FDA has approved nano particles for injection into humans(1)
- ✓ THT efficacy and safety in small animals demonstrated in peer reviewed scientific journal

Sona To Do:

1. Deliver infrared light device that can monitor temperature in real time
2. Preclinical studies to demonstrate safety and efficacy, optimal dosage and treatment duration
3. Develop THT-IO combination therapy protocols
4. Enhance production to meet regulatory requirements
5. Develop intellectual property protection
6. Secure first-in-human efficacy trial

Sona's development plan leverages significant prior third-party research

Notes: 1) Aurolase, MagForce and Cytimmune have all received approval to conduct clinical trials for injection of nanoparticles in humans

Sona's Development of THT Has Benefited From The Guidance Of A Panel Of Leading Physicians In The U.S. And Multiple FDA Interactions

Stakeholder Engagement

EXCITE International Panel Members:

- Three surgical oncologists from leading U.S. cancer centres
- Four physicians representing different U.S. payer organizations

FDA Pre-IDE Submission Correspondence and Meeting #1:

- Commented on THT pre-clinical development plan
- Responded to questions on target Indications of Use and safety considerations

Sona Has Engineered the Right 'Gene Pool' to Develop Its Cancer Therapy

Board

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

Walter Strapps PhD
Director
- CEO 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

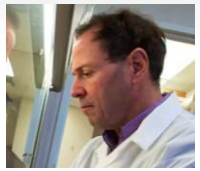
Len Pagliaro, PhD
Chief Scientific Officer
- Developer of Targeted Hyperthermia Therapy

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. Carman Giacomantonio
- Surgical oncologist & researcher

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

Building the Safety and Efficacy Data Required by Regulators for a 'First in Human' Pivotal Phase 1 Clinical Study

Research Study

Current Efficacy Study at Dalhousie University:

Evaluation of Sona Nanotech's Gold Nanoparticle-Mediated Photothermal Therapy in Combination with Intralesional Immune Modulation as a Novel Immuno-Oncology Combination Strategy for Colorectal, Skin and Breast Cancers

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

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

DALHOUSIE UNIVERSITY

sona nanotech

Research Study Background – Premises

Research Study

Cancer cells are inherently susceptible to therapeutic hyperthermic therapy (THT) stress

Sona's GNRs can be activated in precise anatomic locations to cause THT induced damage to cancer cells

Immunotherapy is the leading-edge in cancer treatment, but alone has demonstrated a limited response rate

Can THT cause a synergistic effect as part of an immunomodulation strategy?

Research Study Background – Metrics of Success

Research Study

Success Will Be Assessed By The Extent To Which:

Tumor Shrinkage

- THT causes tumor volume reduction in mouse models of:
  - Melanoma
  - Breast cancer
  - Rectal cancer

Enhanced Immune Response

- Use of THT with certain immunotherapies is additive or even synergistic

Abscopal Effects are Observed

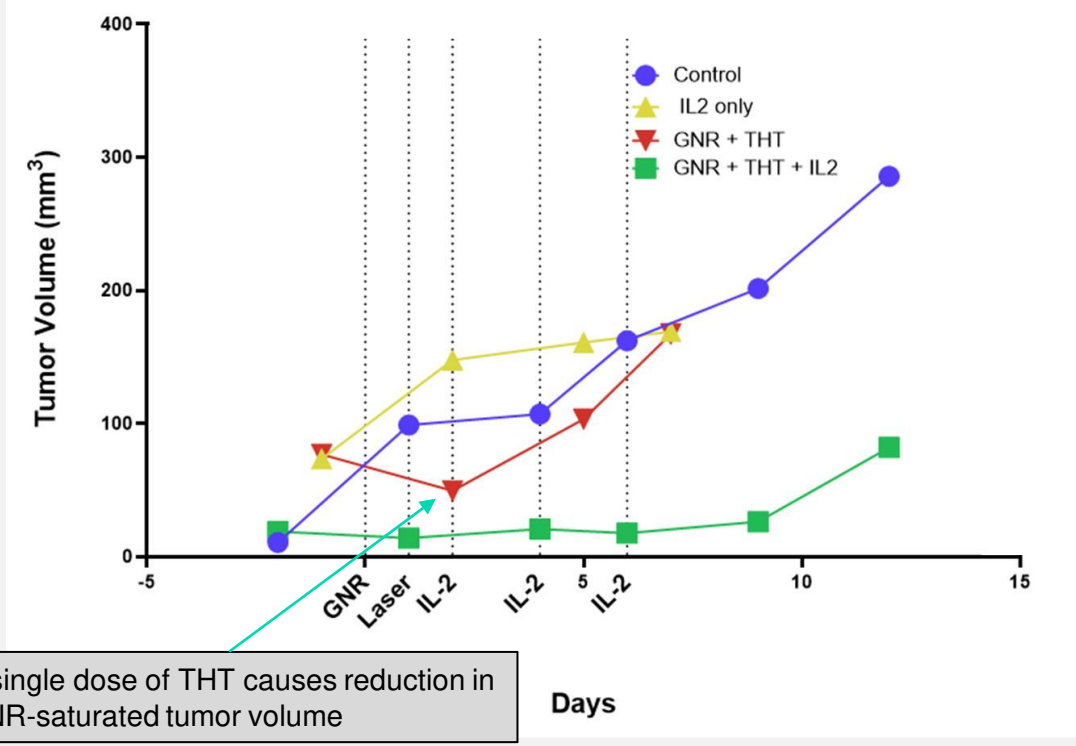
- Immune responses created in remote tumors without directly treating them

Data Shows Synergistic Effect of Combining Sona's THT and Standard Immunotherapy Agent IL-2

Research Study

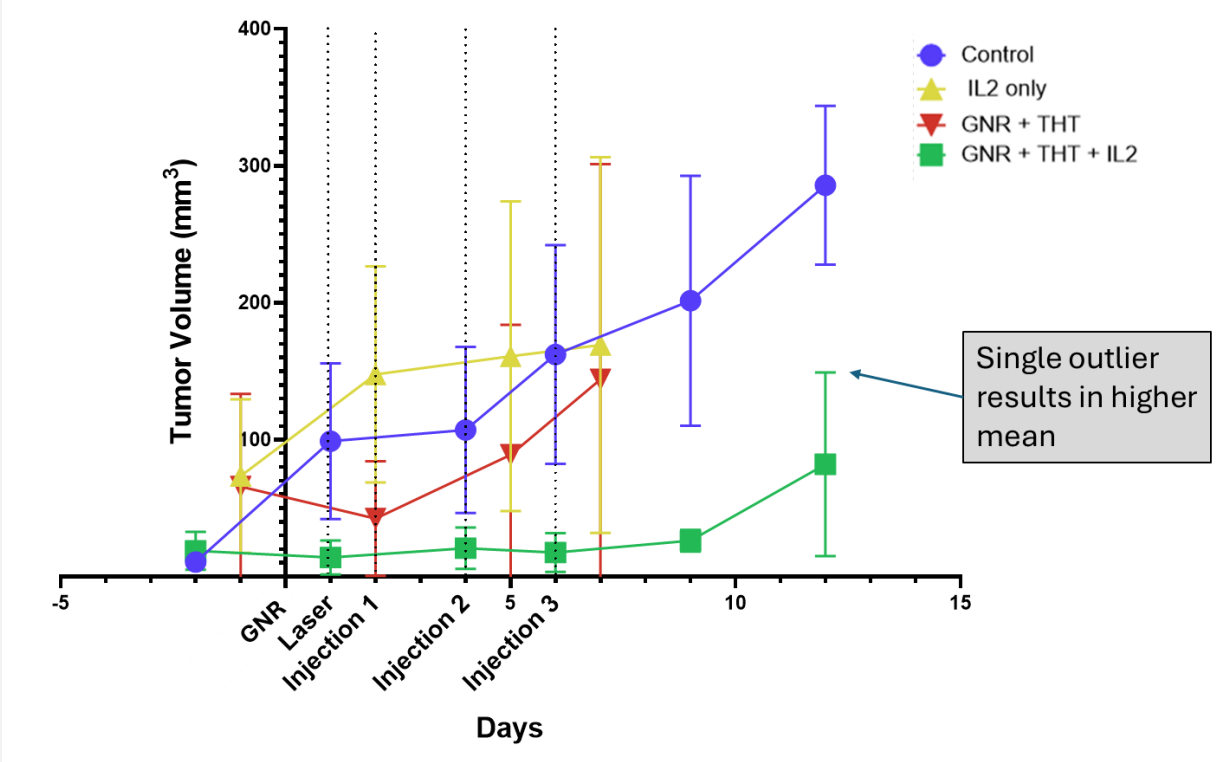
Research Study Background – Initial Results
(Triple Negative Breast Cancer Mouse Tumor Model, n=6)

Tumor Volume
(without error bars)



A single dose of THT causes reduction in GNR-saturated tumor volume

Tumor Volume
(with error bars)



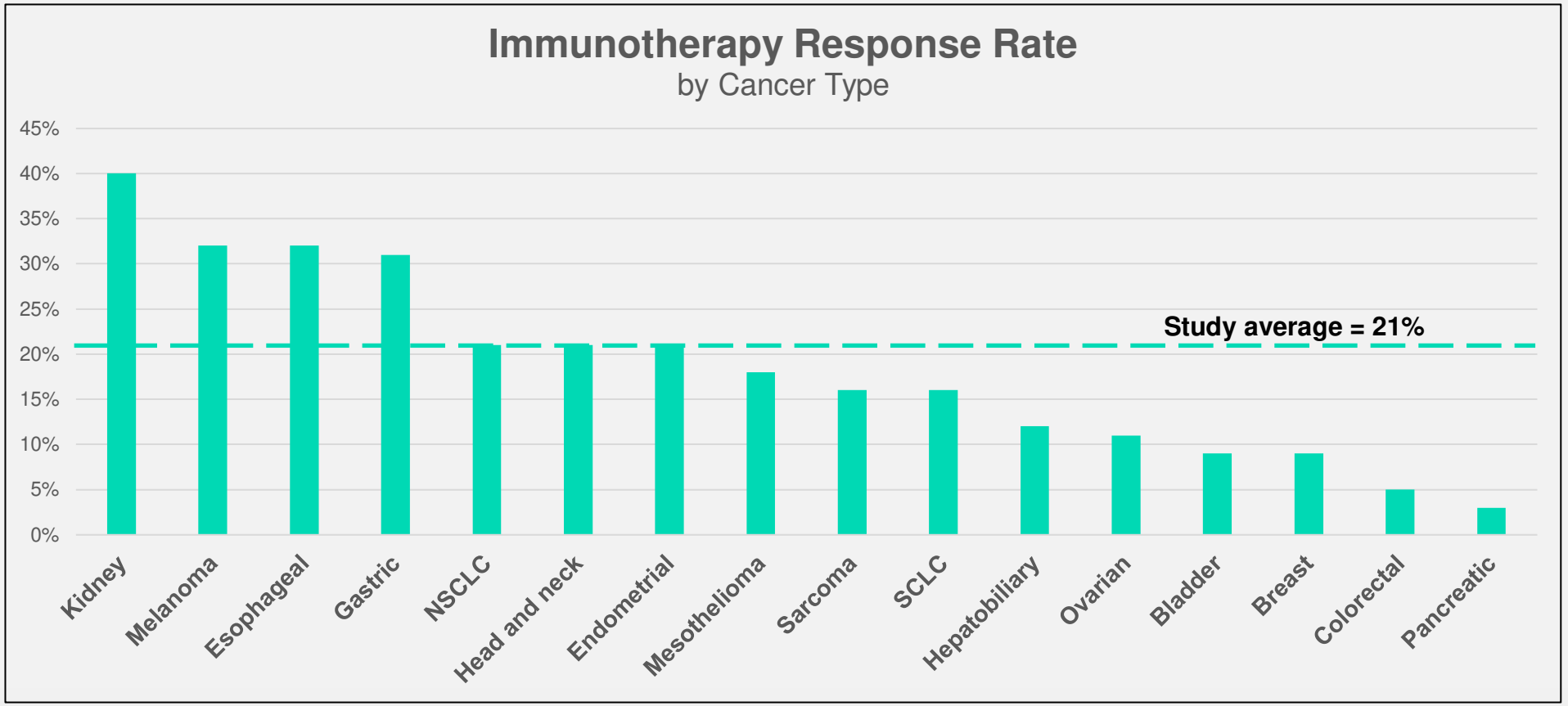
Single outlier results in higher mean

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

Moving Quickly Towards Pre-clinical Studies and Regulatory Filings

1. Selection of pre-clinical study partners, plans and initial safety study results — Done
   - Utilizing pre-existing research & advisory groups to conduct studies in the most cost-effective ways
2. Panel of leading EXCITE International expert advisors from top U.S. institutions and 'payors' to provide guidance — Done
   - To ensure that Sona's product development is in line with what surgical oncologists are looking for, prior to FDA submission
3. First FDA pre-submission meeting — Done
   - Received written and verbal feedback from FDA in February, validating Sona's current approach
4. Gold nanorod GMP manufacturing partner selection — Done
5. Efficacy study results — In progress
   - Currently measuring Sona's technology effectiveness in mice for melanoma, colorectal and breast cancer
6. Initiate Safety Feasibility and Biocompatibility non-GLP studies — Pending
7. Initiate regulator required GMP manufacture of gold nanorods — Pending
8. **First-in-human studies** (subject to regulatory approval)
   - **Company exploring opportunities to accelerate human efficacy studies, once safety established**

Improving Immuno-Oncology Drug Response Rates Could Substantially Decrease Mortality Rates



…And offer greater hope to the two million people expected to be diagnosed with cancer each year

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

Thank you

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