

Non-Radiation Breakthrough in Breast Cancer Treatment



senoguard.com Seal Beach, CA

Highlights

- 1 An alternative to radiation after lumpectomy that avoids pain, fatigue, clinical and cosmetic damage.
- 2 \$1.2M from National Science Foundation: proved effectiveness. 2nd grant awarded to do FDA submission
- 3 Affordable & accessible, avoids RT toxicities, offers a better option. Done at time of lumpectomy
- 4 Experienced team with 100+ years in advancing women's healthcare with innovative medical devices.
- 5 Eliminates up to 6 weeks of daily treatments at radiation center that may require long distances
- 6 Allows proper treatment for 28% of patients unable to get RT due to distance, cost, or no time off.
- 7 Allows breast cancer treatment to be done at community hospitals where most women prefer treatment.
- 8 Allows lumpectomy to be performed globally in countries where mastectomy is currently only choice

Featured Investor



Elizabeth Dowling

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Invested \$5,000

"We are motivated to invest in SenoGuard by the potential for being part of the next advance in early-stage breast cancer treatment. Giving women the option of a one-time freezing treatment post lumpectomy vs. weeks of damaging irradiation seems like a much better option to us. In addition, expanding treatment options for breast cancer patients who may not have access to or be able to afford current treatment is important. The fact that this technology has the backing of two National Science Foundation (NSF) grants, is impressive. Along with the NSF, we think the SenoGuard technology should be explored further and we look forward to our investment being used to help women with breast cancer suffer less."

Team



Diana Tucker CEO & Founder

Implemented disruptive technologies at corporate healthcare companies such as JNJ & AMO, as well as early-stage privately held companies that changed paradigms and became standard of care. Executed new breast cancer molecular testing that's now standard.

[linkedin.com](#)



Dan Wittenberger Chief Technology Officer

Medical device/cryoablation engineer with over 30 years experience and 94 issued U.S. patents. Designed and launched several novel cryo-energy medical devices. Considered to be one of few experts globally in advanced cryoablation for medical devices.



Robb Finnemore CFO

25+ years experience as a financial professional, including roles in public accounting, global investment banking and leadership roles in both early stage and middle-market life sciences ventures.



Darius Francescatti, MD Chief Medical Officer

Associate Professor Surgery Rush University as professor of breast cancer surgery Chief clinical advisor for several breast cancer start-ups. Former Medical Director of Sanarus, Advisor to Xofig and Kubtec; all successful start-ups in breast cancer space.



John Baust VP R&D

Pioneer in cryomedicine with 75+ patents and 100+ publications. Founder of CPSI Biotech and co-developer of several novel cryoablation systems. President-Elect of the Society for Cryobiology, with experience across biotech, R&D, and FDA processes.

Non-Radiation Breast Cancer Treatment



After a lumpectomy, radiation is administered daily for up to 6 weeks in order to kill any remaining cancer cells that may cause a recurrence. SenoGuard is developing a new way to protect against breast cancer recurrence that does not use radiation fraught with toxicities. Instead of radiating any unseen cancer cells, SenoGuard freezes them to death (literally) in one sitting at the same time as the lumpectomy.

- Breast Cancer is the Most Common Cancer
- Most Expensive Cancer to Treat
- Current treatment has toxic side effects and is not available to 28% of patients

Breast Cancer Huge Problem

Key Challenges

- More young women diagnosed
- Detrimental to careers, families, society
- Treatment toxicities intolerable
- Demand for improved breast cancer treatments

In a market research study* of US women, 28% of those who would qualify for a lumpectomy, chose mastectomy instead. This is because only centers with radiation oncologists and their team with special equipment can deliver radiation; unlike a non-radiation procedure where every hospital has the capability. Unless the patient lives close to a radiation center, can take time off work for almost 6 weeks, can afford to stay in a hotel if they don't live close enough to travel, and has the ability to pay, can they accept a lumpectomy with radiation. The SenoGuard procedure is done at the same time as the breast surgery, by the surgeon, and does not require any---much less many--follow up treatments.

Lumpectomy, Radiation Therapy (RT) to Prevent Recurrence

Issues with Radiation

- High Cost
- Not all hospitals have RT capability
- Difficult to access rurally
- Permanent clinical & cosmetic issues

- 28% of US patients cannot access
- 33% of patients who start RT do not complete treatment
- 17% increased risk of recurrence when RT is not completed

The Solution: IntraOperative CryoAblation Therapy (IOCT)

- Performed at end of lumpectomy
- No radiation & specialists required
- No cosmetic or clinical damage
- Eliminates RT toxicities
- Less than 50% of the cost of RT

Bridges the disparity in access with an alternative to radiation therapy

Pressurized Subcooled Nitrogen CryoGenerator

SenoGuard's technology

Over \$2.0B Global Market Opportunity

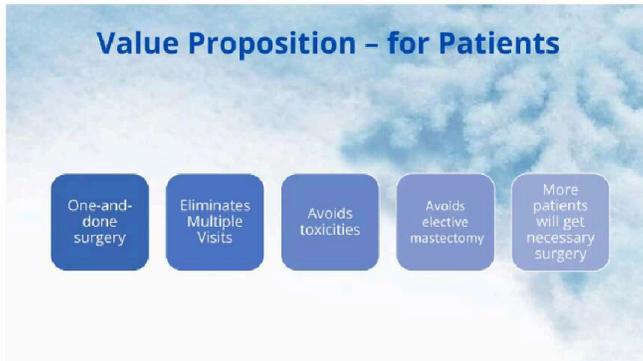
Source: GLOBOCAN 2020
<https://gco.iarc.fr/>
 * Asia = Less China

Value Proposition - for Surgeons

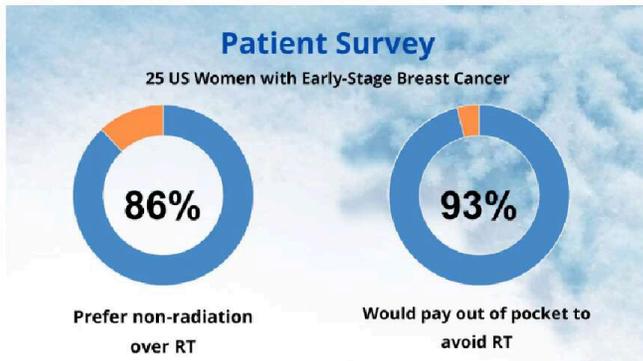
- Increased patient
- Increases patient
- Broadens services
- Increases throughput
- Confidence of 100% patient



Breast cancer surgeons want to perform this procedure because they will know that the patient completed their RT therapy; unlike the 33% who do not complete their radiation treatments and then have a 17% chance of recurrence. Surgeons who perform the SenoGuard procedure will also attract more patients, increasing their patient satisfaction and patient volume.



Patients will be able to avoid the hassle, fatigue, and pain associated with radiation therapy. Recently at a pickleball court, a player told me that her sister--after two radiation treatments--told her that she "would rather die from the breast cancer than have any more radiation treatments".



The motivation to avoid radiation is so strong that 93% of patients would pay out of pocket to have a non-radiation procedure.

In addition, there are cosmetic changes to the breast such as a different texture, color, volume and sometimes nipple direction. Patients have claimed that it is very difficult to get a bra that fits both breasts correctly.



The team is comprised of experts in their field with prior experience bringing innovative paradigm-shifting products to market. The team is using the same PR firm they have in the past that provided a 5X return in 2.5 years in spite of the fact that the new product being promoted actually depleted income from the physicians.

SenoGuard has already achieved proof of concept in animal studies, supported by a National Science Foundation grant. A second grant of \$1M was awarded by the National Science Foundation to finalize the design, perform human specimen testing, and submit an application to the FDA for 510k clearance. Immediately following the acceptance of the 510k submission, a Breakthrough Technology Exemption will be submitted. Breakthrough Technology Exemptions allow the company to expedite both FDA clearance as well as obtaining reimbursement

codes.

With these parameters met, commercialization is possible within 24-36 months of funding.

Same Treatment for 25 Years: *It's Time to Improve*

- *Billions in funding for breast cancer*
 - 85% goes to a minority of breast cancer types
 - Most goes to pharmaceutical research
- *Surgical Care for majority remains unchanged*
 - Lumpectomy + Radiation for past 25 years
 - Radiation not available for many patients
- *Time to advance Care for ALL women*

Received Phase 2 NSF Grant \$1M non-dilutive

Use of Funds

Awarded 2nd NSF Grant

Need \$100K to access NSF Grant

Probe Final Design & Connector

In vivo Animal studies

Submit \$10k without Clinicals

SenoGuard is seeking \$1,235,000 to add to their second National Science Foundation grant of \$1M in order to test the final design prototype for FDA submission. We ask for your support of \$100 or more to achieve this goal of advancing breast cancer treatment for all women globally.

SENO*GUARD™

- *Huge unmet need*
- *Disparity in care*
- *Proven science*
- *Avoids side effects from radiation*
- *Significant treatment cost reductions*
- *Experienced team*

Diana Tucker, CEO diana@senoguard.com

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Downloads

- 📄 National Comprehensive Breast Cancer Consortium meeting poster presentationFeb 2024
- 📄 National Comprehensive Breast Cancer Consortium meeting poster presentation