



# Pulse Biosciences

(Nasdaq : PLSE)

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A **novel bioelectric medicine** company bringing to market their **proprietary** CellFX™ System, utilizing groundbreaking Nano-Pulse Stimulation™ (NPS™) technology



# Forward-looking statements

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This presentation and accompanying oral presentation by Pulse Biosciences, Inc., contain estimates and forward-looking statements as of December 4, 2019 including, among others, statements regarding Pulse Biosciences' future business plans, products, commercial applications, clinical trials, regulatory processes and pathways, markets for its technologies, and other future events.

You should not place undue reliance on forward-looking statements, as they involve known and unknown risks and uncertainties that are, in some cases, beyond the Company's control and could cause actual results to differ materially from the information expressed or implied. Factors that could materially affect actual results are described in detail in the Company's recent Securities and Exchange Commission filings.

Pulse Biosciences undertakes no obligation to revise or update forward-looking statements to reflect future events or circumstances.

The background of the slide is a deep blue, featuring several glowing, translucent biological structures. In the upper center, there is a spherical cell-like structure with a bright purple nucleus and internal green and blue filaments. To the right, a larger, more complex structure is visible, showing a network of white, thread-like fibers and various organelles, including blue, bean-shaped mitochondria. The overall aesthetic is scientific and futuristic.

# Our Mission

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To build a **viable company** that designs, produces, and commercializes Nano-Pulse Stimulation technology to improve and extend the lives of patients.



# Proprietary Technology meets High Value Clinical Applications



## Proprietary Platform

NPST<sup>™</sup> has a **broadly applicable cell targeting mechanism** that effectively addresses **multiple treatments targets** in **commercially significant** areas of unmet clinical need



### Excellent Clinical Data

Clinical studies have demonstrated **excellent safety and efficacy** in difficult-to-treat dermatologic conditions



### Near-term Commercial

Preparing for **commercial launch** in aesthetic dermatology — **a significant commercial opportunity leveraging unique utilization-based business model**



### Future Applications

Versatile technology and delivery system **platform** enables ready access to additional applications in areas of **high patient demand**



### Strong Team

Proven management team and board of directors, experienced in building **valuable companies with significant shareholder returns**

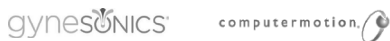


# Pulse Biosciences – Proven Leadership

Founded on technology and intellectual property, and advanced into the clinic toward commercialization by a proven and experienced multidisciplinary team.

## Management Team

**Darrin Uecker**  
President & Chief Executive Officer



**Edward Ebbers**  
EVP & GM, Dermatology



**Sandra Gardiner**  
EVP & Chief Financial Officer



## Board of Directors

**Bob Duggan, Chairman**



**Maky Zanganeh, D.D.S.**



**Mitch Levinson**



**Thomas Fogarty, M.D.**



**Kenneth Clark**



**Manmeet Soni**





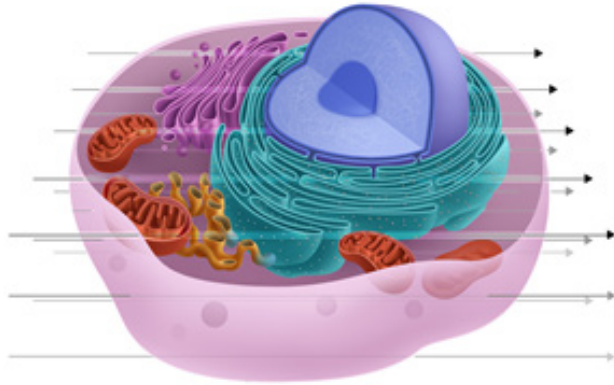
A microscopic view of cells with glowing internal structures, primarily in shades of blue and purple. The background is a deep blue. In the upper center, there is a cell with a prominent purple nucleus and glowing blue cytoplasm. To the right, a larger cell is shown in cross-section, revealing intricate internal structures like mitochondria and a network of fine, glowing filaments. A small, isolated glowing sphere is visible in the middle left.

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**NPS** Technology —unique mechanism  
of action creates opportunity in  
**multiple applications**



# The Mechanism of NPS Technology

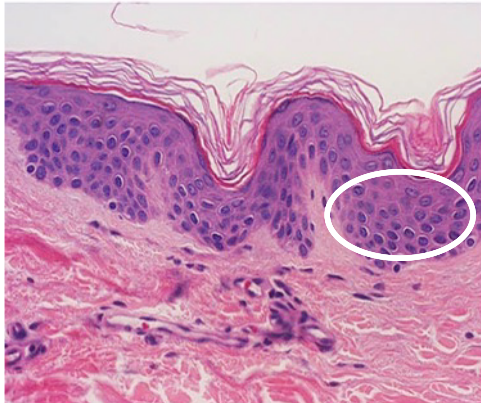


- **Non-thermal** modality that delivers nano-second duration pulses of electrical energy
- Energy pulses penetrate the cell membrane and **disrupt internal cellular function**, leading to cell death
- **Eliminates targeted cells** while sparing adjacent non-cellular tissue



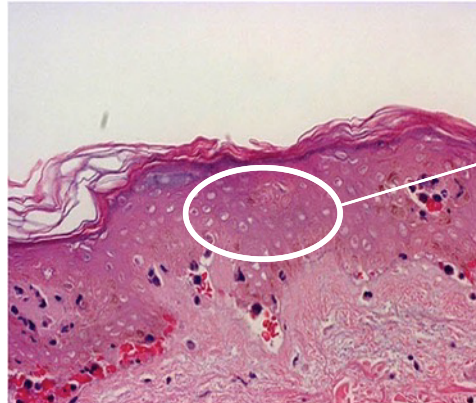
# Demonstrated Mechanism of NPS for Superficial Lesions

## Safe, Precise Targeting & Elimination of Treated Cells



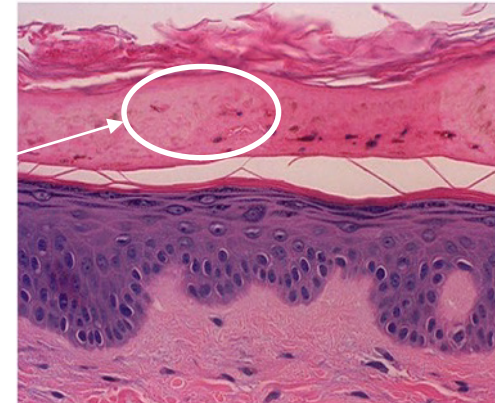
Healthy Skin

- Healthy epidermal cells with dark nuclei



One (1) day post-treatment

- Cells in treated epidermis are nonviable (ghost cells)
- Cell membranes and surrounding non-cellular tissue are intact



Seven (7) days post-treatment

- Healthy epidermis emerges below
- Treated epidermal layer peels away



The single most prevalent skin lesion appearing as brown, black or light tan growths generally associated with aging and presenting on the face, chest, shoulders and back.

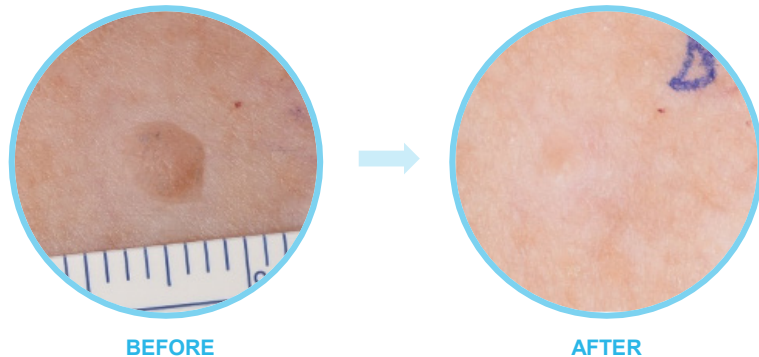
## 10M Immediately Addressable<sup>(1)</sup>

- Estimated patients entering aesthetic clinics today:  
~80 Patients/week per clinic, 6 lesions average per patient
- 60% of patients are untreated
- Current treatments lack acceptable cosmetic outcome

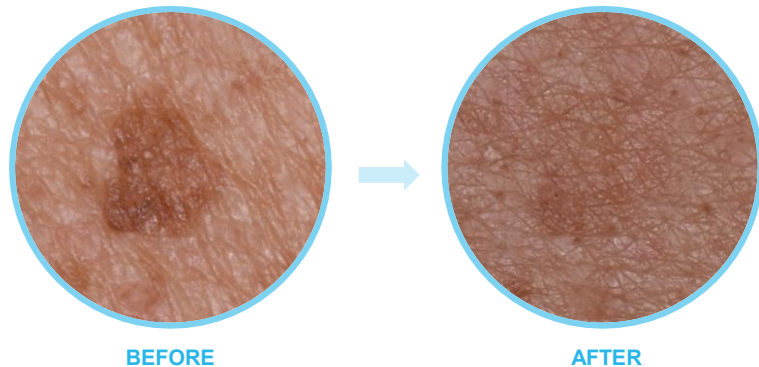
## 82% Efficacy Rate

- Clear or Mostly Clear with single treatment
- 174 SK's treated in 58 patients
- Patient preferred – 78% satisfaction rate

Cleared Raised SK at 106-day follow-up

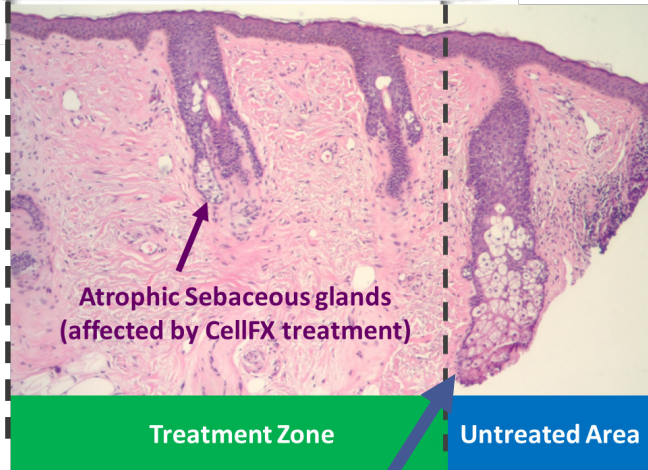


Cleared Macular SK at 60-day follow-up

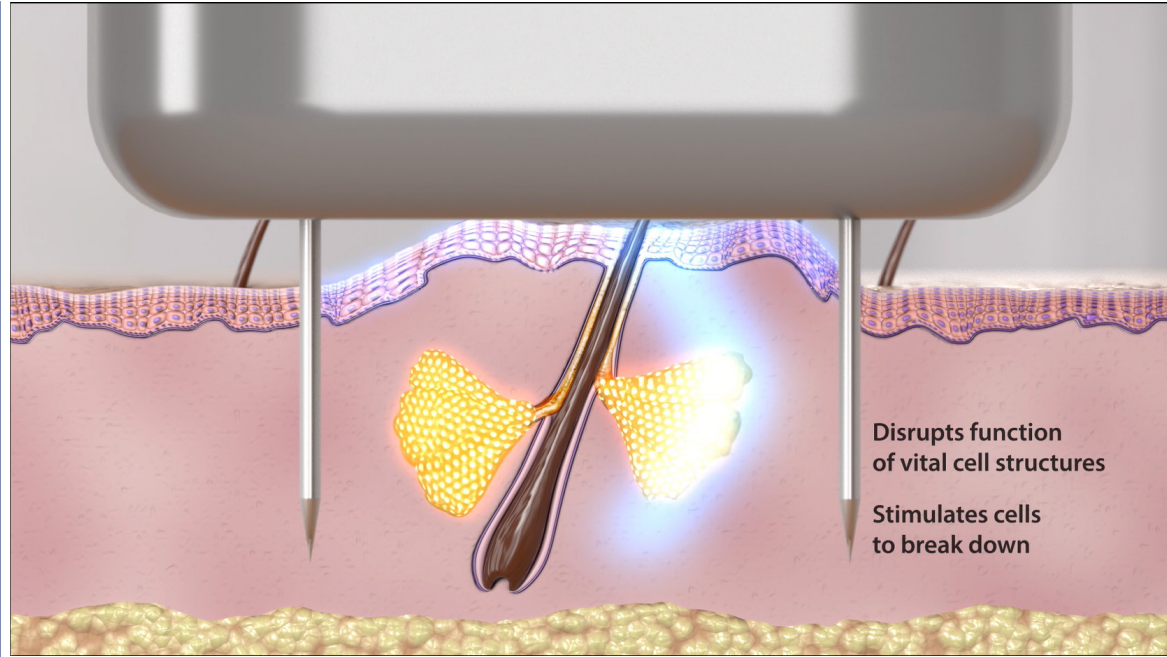


# CellFX™ Cell Selective Effects Deeper in the Dermis

## CellFX Treatment Zone



Normal Sebaceous Glands  
Outside Treatment Zone are  
Not Affected



# CellFX™ in Dermatology—Sebaceous Hyperplasia (SH)

Small oily, shiny lesions usually 2-4 millimeters in diameter presenting on the face as a result of enlarged sebaceous glands deep in the skin.

## 5M Immediately Addressable<sup>(1)</sup>

- Estimated patients entering target aesthetic clinics today:  
~40 Patients/week per clinic, 6 lesions average per patient
- 65% of patients are untreated
- Unmet need: no acceptable standard of care

## 99.5% Efficacy Rate

- Clear or Mostly Clear – 90% single treatment
- 222 SH lesions treated in 72 patients
- Very safe and tolerable – 77% satisfaction rate

Cleared SH at 60-day follow-up



Benign skin growths that are caused by human papillomavirus (HPV) and can appear anywhere on the body. Up to one-third of non-genital warts become **recalcitrant**, which means they persist following several months of conventional treatment.

## 4.5M Immediately Addressable<sup>(1)</sup>

- Estimated patients entering aesthetic clinics today:  
~30 Patients/week per clinic, 3 warts average per patient
- Approximately 90% receive some method of treatment
- Difficult to permanently clear warts

### Feasibility Study

## 61% Rate of Complete Clearance in Recalcitrant Warts

- Majority of patients in study failed previous modalities
- 71% of completely cleared warts achieved with single treatment session
- Based on strong feasibility study results, large pivotal study is underway

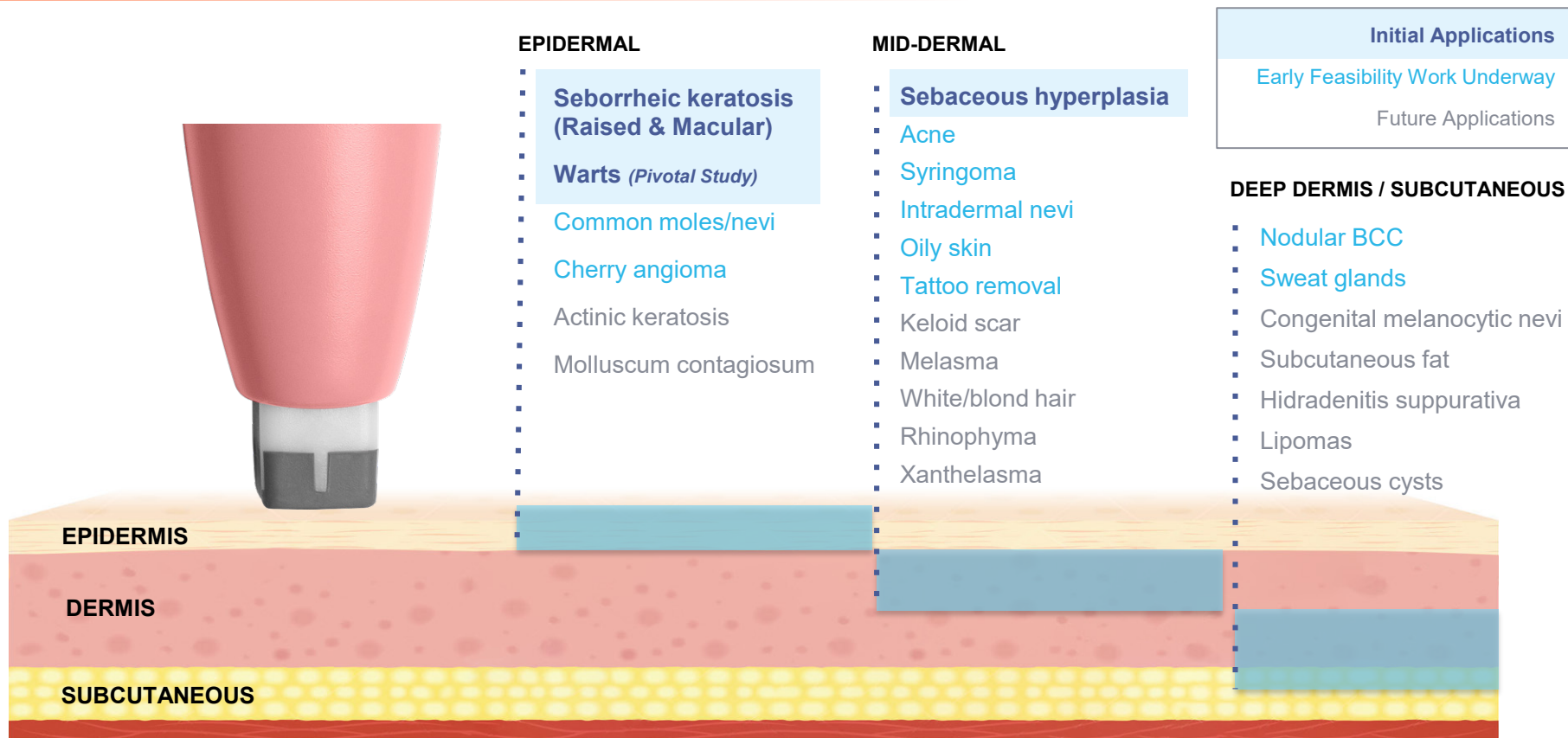
Cleared Wart at 60-day follow-up



BEFORE

AFTER

# CellFX™ System – Platform for Multiple Applications



**Caution:** Applications have yet not been cleared by the FDA

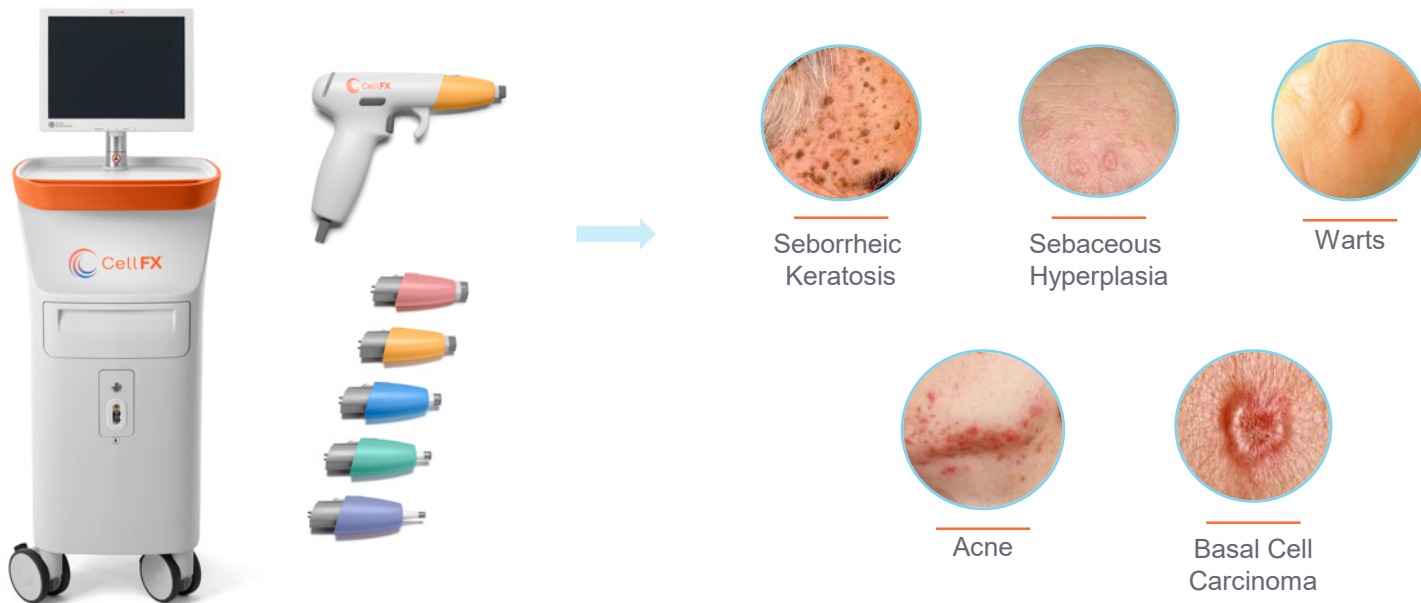


# CellFX System

Our proprietary platform for delivering  
Nano-Pulse Stimulation technology  
targeting the Aesthetic Procedure Market



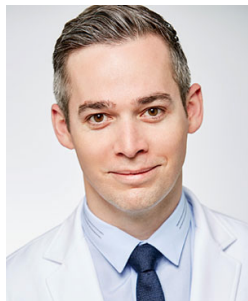
# CellFX™ System – Expanding Apps and Growing Utilization



Deliver high value applications to improve the lives of patients  
that generate value-based revenue for physician and Pulse Biosciences





# Target Physicians and Patients Are Focused on Aesthetic Procedures



## Aesthetic Physicians

- Focused on aesthetic procedures which are typically cash-pay, elective
- Frequent purchaser of capital equipment
- Large portion of revenues derived from aesthetic procedures
- Business and marketing savvy with focus on growing practice by offering the latest technologies
- Entire clinic is well-trained and well-versed in educating patients and promoting procedures

	Condition	Patient volume*
	Sebaceous Hyperplasia	42 per week
	Seborrheic Keratosis	84 per week
	Warts (non-genital)	37 per week



## Aesthetic Patient Veterans

- “Aesthetic veterans” who are active in visiting skin specialists for various cosmetic procedures several times a year
- Willing to invest in procedures to look their very best to maintain confidence, continue looking young, and improve self-esteem
- Seek advice from their skin specialist on latest treatments options
- Typically female, age 40 – 65

# CellFX™ MD Franchise Based on Expanding Utilization Over Time

## Compelling Short-term Economics



### Initial Investment

\$45,000



### 3 Patients / Week

Avg. Lesions per Patient

5 / patient

MD Revenue per Patient

\$900-1200\*



### < Four Month

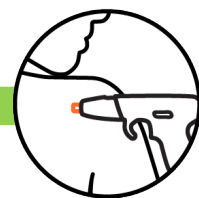
Return on Investment

## Long-term Practice Franchise



### Avg. 10 Patients / Week

- 10 x 15 minute treatment session (3 hrs)
- Benign Lesion, SH, SK, & Warts
- Room for growth with additional apps



### Avg. 5 Lesions per Patient

Net MD Rev per lesion  
\$150-200



### Gross Profit

~\$400,000 / Year

\*Average revenue per patient of \$1050 used in ROI calculation yields \$63K revenue in < four months

# CellFX™ Cloud: Unique Competitive Advantages







# U.S. Target Market Geographies Favor Promotional Efficiencies

**80%**

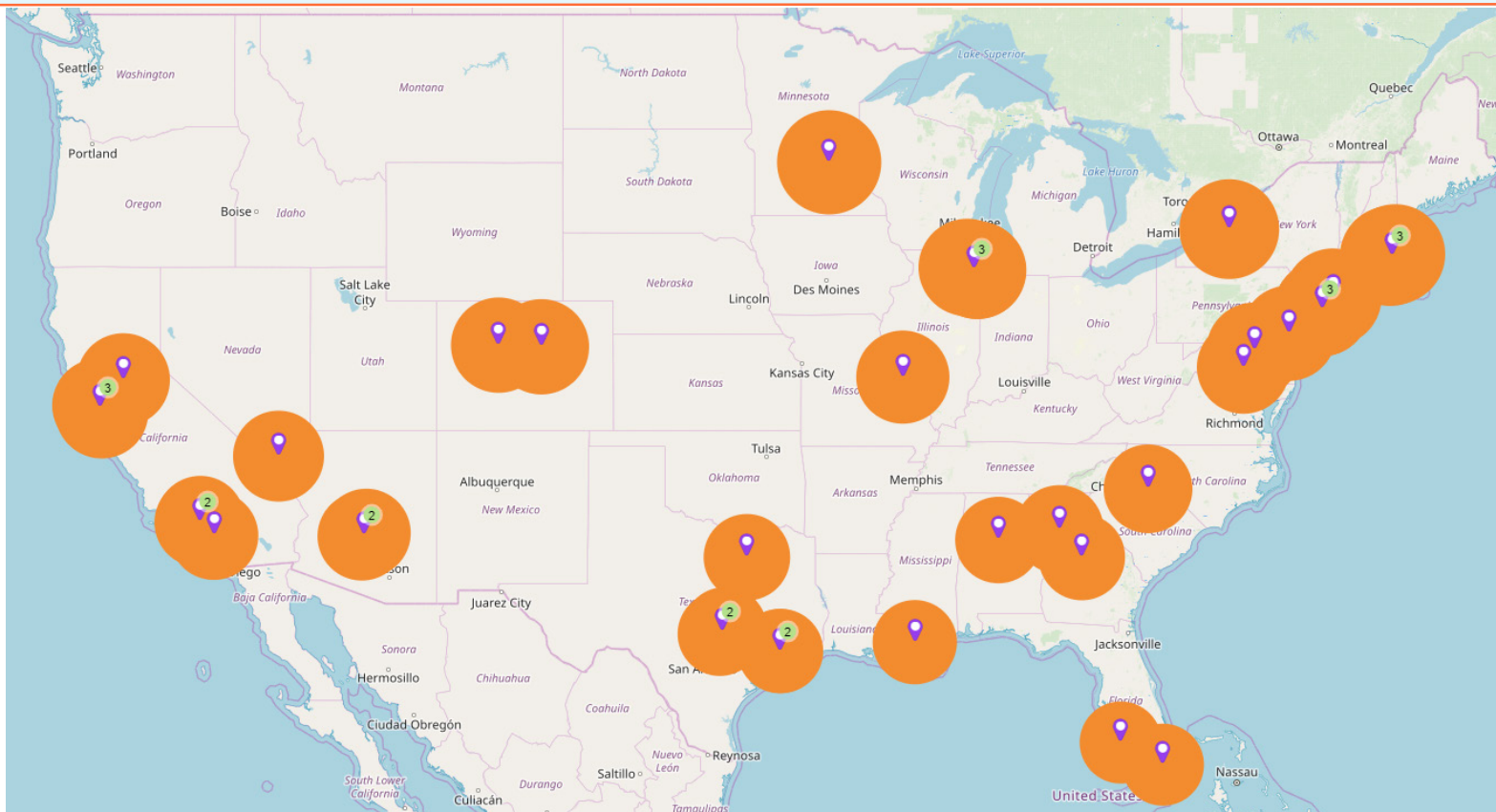
of target early  
adopter physicians

located within  
100-mile radius of the  
40 controlled launch  
participants selected  
for controlled launch

**4.6M**

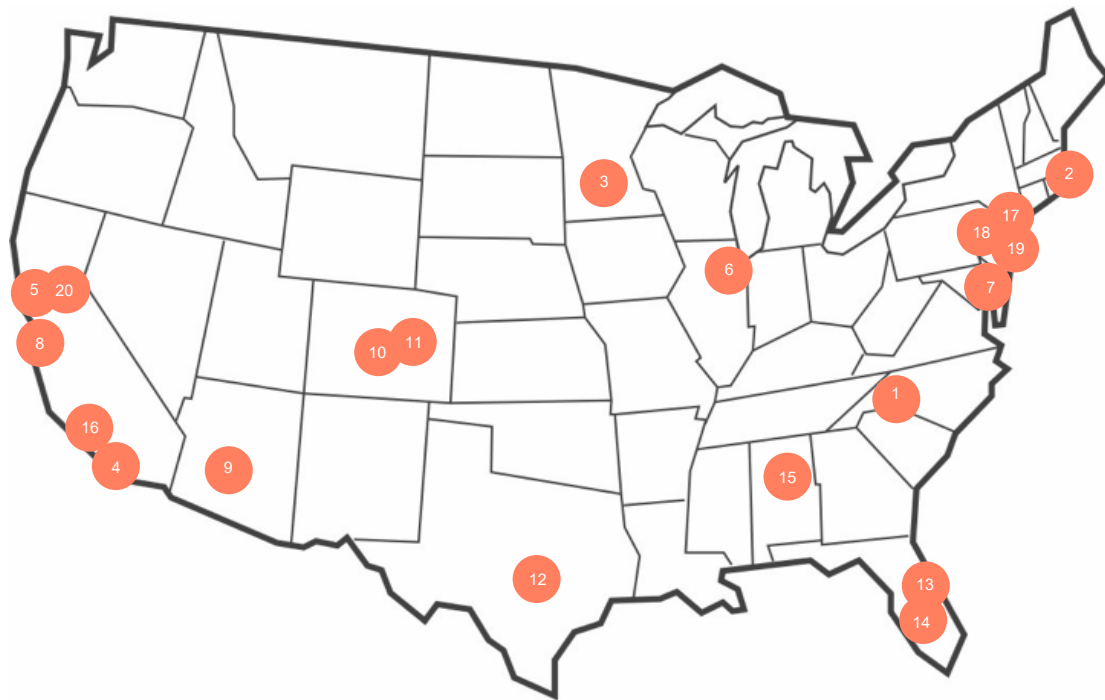
average population

located within 100-  
mile radius of the 40  
controlled launch  
participants selected  
for controlled launch





# CellFX™ Clinical Study Sites / KOLs Across the U.S.



- 1 Dr. Gilly Munavalli, Charlotte, NC
- 2 Dr. Tom Rohrer, Chestnut Hill, MA
- 3 Dr. Brian Zelickson, Edina, MN
- 4 Dr. Vic Ross / Scripps, San Diego, CA
- 5 Dr. Suzanne Kilmer, Sacramento, CA
- 6 Dr. Carolyn Jacob, Chicago, IL
- 7 Dr. Elizabeth Tanzi, Chase, MD
- 8 Dr. James Newman, San Mateo, CA
- 9 Dr. Brenda LaTowsky, Scottsdale, AZ
- 10 Dr. Lauren Bonati, Edwards, CO
- 11 Dr. Joel Cohen, Centennial CO
- 12 Dr. Ted Lain, Austin TX
- 13 Dr. Mark Nestor, Aventura, FL
- 14 Dr. Jeremy Green, Coral Gables FL
- 15 Dr. Chris Harmon, Birmingham, AL
- 16 Dr. Ava Shamban, Los Angeles, CA
- 17 Dr. Lesley Loss, Rochester, NY
- 18 Dr. Roy Geronemus, New York, NY
- 19 Dr. Bruce Katz, New York, NY
- 20 Dr. David Kaufman, Folsom, CA



- **510(k) Submission for the CellFX System**

Treatment of dermatologic benign lesions *including sebaceous hyperplasia and seborrheic keratosis*

- **Submitted:** February 22, 2019
- **Additional Information (AI) Letter from FDA:** April 30, 2019
- **Current Status:**
  - We responded to the AI letter in Q3 and received two additional questions.
  - Based on discussion with FDA the submission was put on hold again to allow time for FDA to review responses to the additional questions.
  - Subject to further communication with FDA, we are expecting resolution by the end of 2019 and are planning for a clearance.



As of November 2019

**95 issued  
patents  
globally  
owned  
& licensed**

Additional 93 patent applications pending worldwide

## A Robust Intellectual Property Portfolio

### Multipronged Patent Strategy

- Pioneering IP for the use of nanosecond pulses in biology
- Covering methods and tools for the application of nanosecond pulses in biology
- Pioneering IP and continued development of IP with focus on skin-based applications
- Continued development and patent filings covering systems, applications, and methods of combining nanosecond pulsing with other biological technologies and agents

## Financial Position (in thousands)

- No debt
- Working capital \$31.9MM
- Quarterly cash usage

Q1'2019 \$ 6.8MM

Q2'2019 \$10.2MM

Q3'2019 \$ 8.1MM

Sep 30, 2019

Cash, cash equivalents & investments	\$	34,498
Prepays & other assets		3,082
Property, plant and equipment		2,428
Goodwill & intangibles		7,504
Right of use assets		1,190
<b>Total assets</b>	<b>\$</b>	<b>48,702</b>

Accounts payables & accrued liabilities	\$	3,870
Lease liability		3,851
Debt		-
Stockholders' equity		40,981
<b>Total liabilities &amp; stockholders' equity</b>	<b>\$</b>	<b>48,702</b>

Shares outstanding 20,788



# Near-Term Milestones



## ✓ Commercialization of the CellFX System

- FDA Clearance
- Buildout Commercial Team and Infrastructure
- Commence CellFX Controlled Launch

## ✓ Expand Pipeline of Clinical Applications

- Warts Pivotal Study
- Expanded BCC Feasibility Studies
- Additional Dermatology Application Studies

# Thank You

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