

TELA BIO: ADVANCING SOFT TISSUE RECONSTRUCTION

August 2020

Nasdaq: TELA

Forward Looking Statements

This presentation contains forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. All statements other than statements of historical facts contained in this document, including but not limited to statements regarding possible or assumed future results of operations, business strategies, development plans, regulatory activities, market opportunity competitive position, potential growth opportunities, and the effects of competition, are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that may cause TELA Bio, Inc.'s (the "Company") actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "expect," "plan," "aim," "anticipate," "could," "intend," "target," "project," "contemplate," "believe," "estimate," "predict," "potential" or "continue" or the negative of these terms or other similar expressions. The forward-looking statements in this presentation are only predictions. The Company has based these forward-looking statements largely on its current expectations and projections about future events and financial trends that it believes may affect the Company's business, financial condition and results of operations. These forward-looking statements speak only as of the date of this presentation and are subject to a number of risks, uncertainties and assumptions, some of which cannot be predicted or quantified and some of which are beyond the Company's control, including, among others: the impact to the Company's business of the ongoing COVID-19 pandemic, including any impact on the Company's ability to market its products, demand for the Company's products due to deferral of procedures using the Company's products or disruption in the Company's supply chain, the Company's ability to achieve or sustain profitability, the Company's ability to gain market acceptance for the Company's products and to accurately forecast and meet customer demand, the Company's ability to compete successfully, the Company's ability to enhance the Company's product offerings, development and manufacturing problems, capacity constraints or delays in production of the Company's products, maintenance of coverage and adequate reimbursement for procedures using the Company's products, product defects or failures. These and other risks and uncertainties are described more fully in the "Risk Factors" section and elsewhere in the Company's filings with the Securities and Exchange Commission and available at www.sec.gov. You should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in the Company's forward-looking statements may not be achieved or occur, and actual results could differ materially from those projected in the forward-looking statements. Moreover, the Company operates in a dynamic industry and economy. New risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risk factors and uncertainties that the Company may face. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

TELA Bio Snapshot

*A commercial stage medical technology company marketing a new category of tissue reinforcement materials to address unmet needs in **soft tissue reconstruction***

- Differentiated portfolio of advanced reinforced tissue matrices addressing **hernia repair, abdominal wall reconstruction and plastic and reconstructive surgery**
- Headquartered: Malvern, Pennsylvania

~\$2B U.S Market Opportunity¹

Innovative Products

Improve Clinical Outcomes

Reduce Overall Costs of Care

OviTex: ~\$1.5 Billion Annual U.S. Total Addressable Hernia Market Opportunity

Complex, Moderate
Ventral / Abdominal Wall
Reconstruction

~\$350 million US market⁽¹⁾

~58,000 total procedures per year

Simple Ventral Hernia
Repair

~\$500 million US market⁽¹⁾

~326,000 total procedures per year

Inguinal Hernia Repair

~\$650 million US market⁽¹⁾

~711,000 total procedures per year

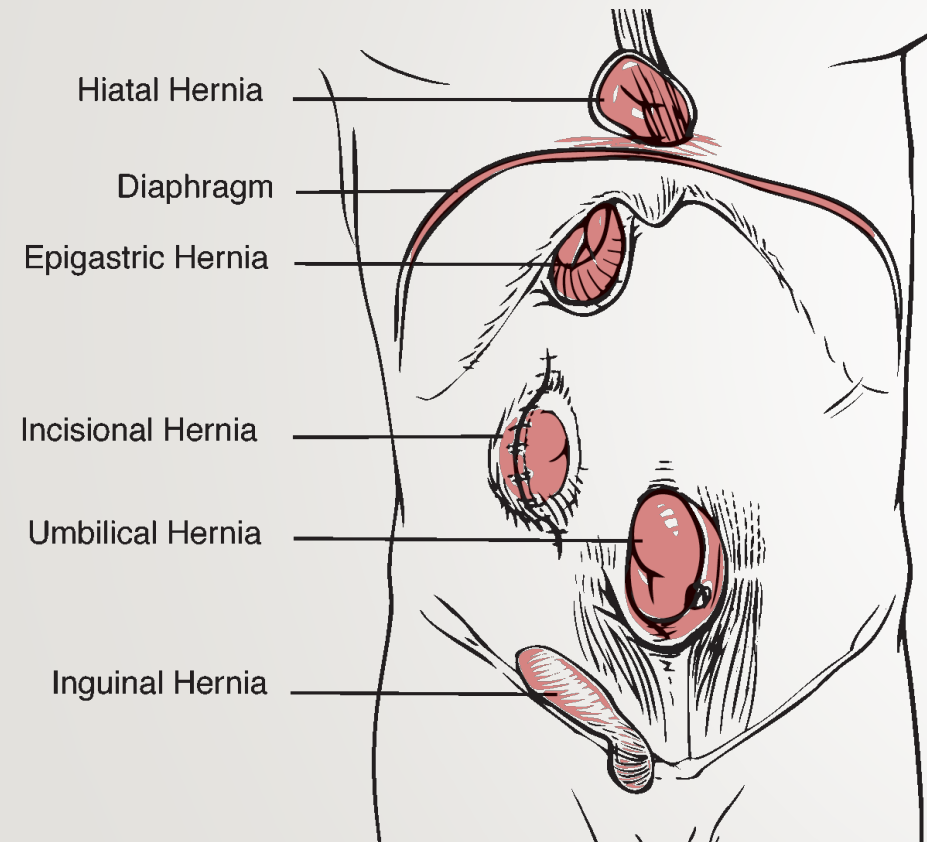
Hiatal Hernia Repair

~\$40 million US market⁽¹⁾

~40,000 total procedures per year

OviTex
~\$1.5 Billion TAM
Opportunity

Hernias Occur Throughout the Abdomen



What is a hernia?

- Occurs when an internal part of the body pushes through a weakness or hole in the muscle or surrounding tissue
- Natural occurring weakness
- Weakness from previous surgical incision
- Likelihood of developing a hernia increases with age & obesity

Treating a hernia

- Surgical repair of a hernia with a reinforcing material (mesh) is standard of care
- ~90% of hernia patients receive a mesh repair¹
- Mesh intended to reinforce the defect and provide long-term support

Ventral Hernia: Complex Patient Population

Ventral Hernia Complexity

| SIMPLE | MODERATE | COMPLEX |
|--|--|---|
| <ul style="list-style-type: none">• CDC Wound Class I (clean)• Healthier patients - no co-morbidities• Primary hernia repair | <ul style="list-style-type: none">• CDC Wound Class II (clean-contaminated)• Patient co-morbidities (i.e. obesity, diabetes, COPD)• May have prior hernia repair failure | <ul style="list-style-type: none">• CDC Wound Class III (contaminated) & IV (infected)• Large defects• Infected synthetic mesh removals• Multiple prior hernia repair failures |

Objective is to give patient the best repair the first time to prevent the simple patient from becoming the complex

Current Ventral Hernia Treatment Options: No Perfect Product

| PERMANENT SYNTHETIC MESH | RESORBABLE SYNTHETIC MESH | BIOLOGIC MESH |
|--|---|---|
| <div><div> Ventralight™</div><div> ProGrip™</div><div> Parietex™</div><div> PROCEED®</div></div> | <div><p><i>Natural Repair Products</i></p><div><div> PHASIX™ Mesh</div><div> GORE® BIO-A®</div></div></div> | <div><div> Strattice™</div><div> Gentrix®</div><div> SurgiMend®</div><div> XenMatrix™</div></div> |

Simple Ventral Hernia

Inguinal Hernia

Complex, Moderate Ventral Repair / Abdominal Wall Reconstruction

Hiatal Hernia Repair

Limitations of Reconstruction Materials Used in Hernia Repair

PERMANENT SYNTHETIC MESH

- Persistent inflammatory response
- Encapsulation of implant
- Chronic post operative pain
- Scar tissue / lack of remodeling
- Mesh infections
- Significant costs of re-operation
- Organ erosion or perforation
- 6,000 related U.S. lawsuits
- **Danish Hernia Database: ~17% reintervention at five years¹**

RESORBABLE SYNTHETIC MESH

- Inflammatory response until absorbed
- Encapsulation of implant or until absorbed
- Scar tissue / lack of remodeling
- Mesh infection until resorbed
- Organ erosion or perforation
- Lack of mid-term and long-term reinforcement
- **Recurrence rate of 12% at 18-months follow-up²**

BIOLOGIC MATRICES

- Lack of strength or durability
- Prone to laxity and stretching
- Difficulty in surgeon handling
- Difficult using in robotic surgery / LAP
- High costs
- **RICH study: recurrence rates of 22% and 33% at 12-months and 24-months follow-up, respectively³**

Our Solution: New Category of Tissue Reinforcement Materials

Purposefully Designed Biologic & Polymer Solutions for Specific Clinical Needs

Biologic Tissue
derived from sheep

Polymer Fibers

Innovative Textile Engineering

Polymer fibers
interwoven through
layers of biologic
material in unique
embroidered patterns



Hernia & Ab Wall
Reconstruction

Plastic
Reconstruction

Surgeon Collaboration

High Quality Biologic Material Drives Technology Platform

TELA maintains a definitive license agreement with Aroa BioSurgery for the use of ovine rumen



- Aroa has two issued patents protecting the use of ovine rumen for use as a source of extracellular matrix
- Exclusive license in North America and Europe for hernia repair, abdominal wall and breast reconstruction
- Ovine rumen is high quality biologic source material, sourced from New Zealand and subject to strict quality controls
 - Plentiful supply – ~27 million sheep in New Zealand
 - Low cost of goods
 - Homogenous, intact, minimally processed material – lends itself to be a good building block for fabrication into medical devices
- Aroa recently completed its IPO and is listed on the ASX (ticker: ARX.AX)

TELA

- Product development, commercial strategy & execution and clinical data generation
- Revenue sharing agreement based on net sales;
TELA retains 73% of net sales

Aroa BioSurgery

- Manufacturing and supply of product
- Aroa receives 27% of net sales

Our Solution: A New Category of Soft Tissue Reinforcement Materials

Improve Performance Over Existing Reconstruction Materials

- Designed in close collaboration with more than 100 surgeons
- Products designed with over 95% biologic material (<5% polymer/synthetic content)
- Benefits of both biologic materials and polymer materials
- Supports range of surgical techniques

Improved Biologic Response

- Reduced foreign body inflammatory response
- Improved outcomes of soft tissue reconstructions
- Enhanced remodeling of soft tissue and rate of healing

Lower Upfront Costs

- Customers realize ~20% to 40% cost-savings over leading biologic materials and resorbable synthetic mesh
- Provides benefits of advanced biologic repair to more patients

OviTex: a New Approach to Soft Tissue Reconstruction for Hernia Repair and Abdominal Wall Reconstruction

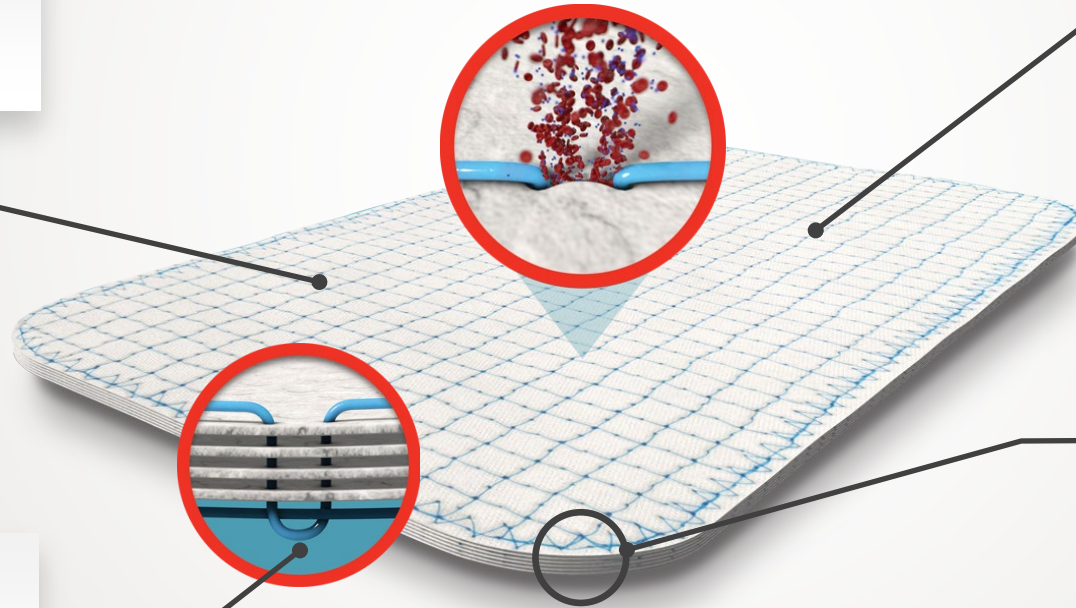
An innovative reinforced tissue matrix designed to reduce stretch compared to biologic matrices and long-term complications experienced with resorbable and permanent synthetic meshes

Unique permeable design
facilitates rapid fluid transfer and movement of cells through the device

Lockstitch embroidery pattern
creates a ripstop effect and prevents unraveling when cut

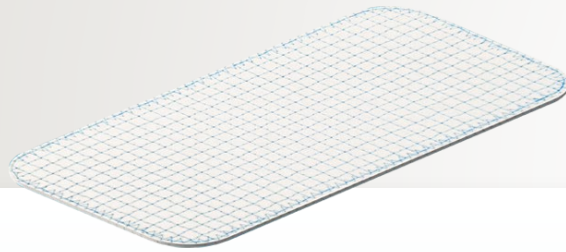
Interwoven polymer for added strength and improved handling

Layers of biologic material
enable functional tissue remodeling



Comprehensive Portfolio for a Range of Hernia Types & Surgical Techniques

Each configuration is available with either permanent (polypropylene) polymer or resorbable (polyglycolic acid) polymer reinforcing the same biologic material.

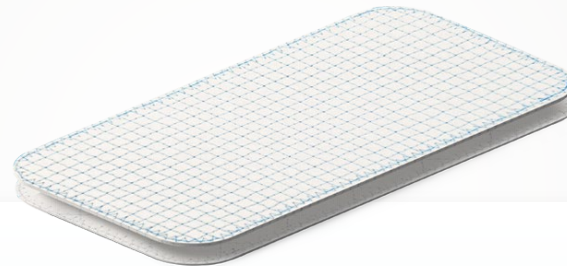


OviTex

4-layer device, not intended for intraperitoneal placement

Strength*: +

Common Procedures: Moderate ventral hernia (pre-peritoneal placement), inguinal hernia, hiatal hernia

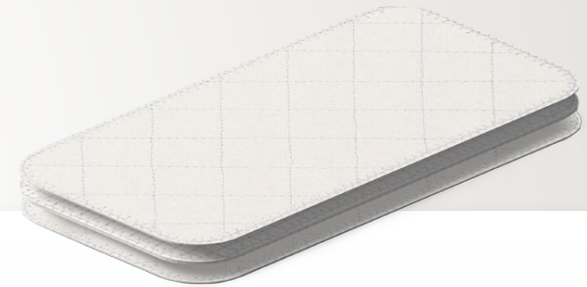


OviTex 1S

6-layer device, with “smooth side” suitable for intraperitoneal placement

Strength*: ++

Common Procedures: Moderate to complex ventral hernia



OviTex 2S

8-layer device, with 2 “smooth sides” suitable for intraperitoneal placement

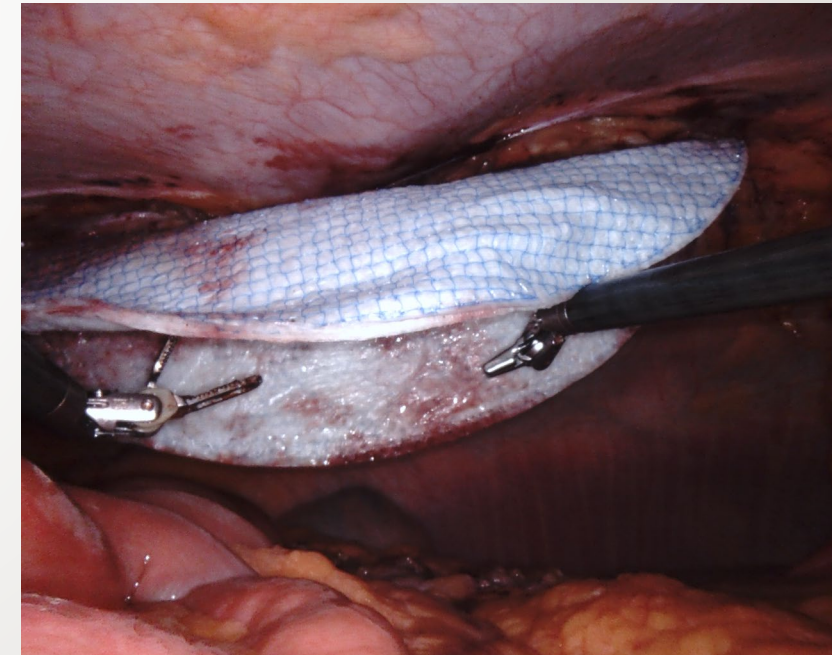
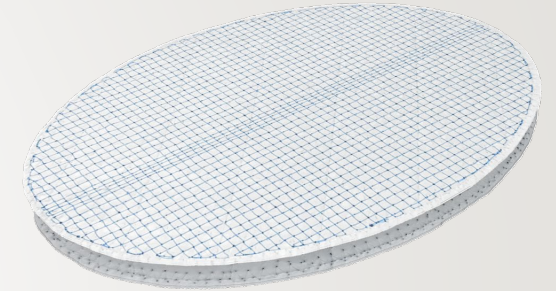
Strength*: +++

Common Procedures: Complex ventral hernia and abdominal wall reconstruction and can be used for bridging

CONFIGURATION

OviTex LPR for Laparoscopic & Robotic-Assisted Repair

- OviTex LPR is specifically tailored for robotic-assisted hernia surgical repairs
- Significant increase in robotic hernia repairs in last few years
- Robotic-assisted hernia repair provides the benefits of laparoscopic repair
- Designed for improved surgical handling, access, and primary closure of hernia
- Designed for use with a trocar
- 4 total SKUs available, following commercial introduction of 3 additional SKUs in December 2019
- Products expected to be used most frequently in simple-moderate ventral hernia patients



Disruptive Technology Supported by a Compelling Body of Clinical Evidence



92 Adult Patient, Prospective, Single Arm, Multicenter BRAVO Study

- 0 (0%) hernia recurrence in first 20 patients at 24-months
- 1 (2%) hernia recurrence in first 57 patients at 12-months

14 clinical publications

- Strong clinical efficacy and low complication rates in range of hernias
- Recent poster presentations at MISS conference highlighting use of OviTex products in robotic repair

More than 200 Non-Human Primates

- OviTex demonstrates more rapid tissue integration and revascularization compared to biologic matrices and lower inflammatory response and better functional tissue remodeling compared to permanent and resorbable synthetic mesh

Continue to build clinical evidence

- Plan to initiate a post-market study of OviTex in robotic-assisted hernia repair surgery



Multiple Future Analyses of BRAVO Data Planned for 2020


BRAVO Study is fully enrolled (n=91) and characterizes OviTex performance in moderate-to-complex ventral hernia patients

| Q1 2020 | Q2 2020 | Q3 2020 | Q4 2020 |
|---|---------|---------|---|
| <ul style="list-style-type: none">• 20-patients at 24-months• 57-patients at 12-months• 84-patients at 3-months | | | <ul style="list-style-type: none">• ~75 patients at 12-months• ~50-patients at 24-months |




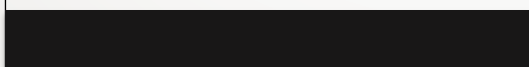

- Primary focus is hernia recurrence rate at each time point
 - Additional information on surgical site occurrence rate will also be analyzed
- Study design allows for robotic, laparoscopic and open implantation of OviTex 1S, allowing for sub-analyses by surgical technique
- Data will be submitted to medical journals and for presentation at key medical conferences throughout the year

OviTex BRAVO Study Shows Low Recurrence Rate at 12 and 24-months

OviTex BRAVO Study

| Product Name | Tissue Reinforcement Material | Hernia Recurrence Rate | Number of Hernia Recurrence | Number of Patients who Completed Follow-up | Follow-up Period in Months |
|--------------|-------------------------------|--|-----------------------------|--|----------------------------|
| OviTex | Reinforced Tissue Matrix |  2% | 1 | 57 | 12 |
| OviTex | Reinforced Tissue Matrix | 0% | 0 | 20 | 24 |

Results from Post-Market Clinical Studies of Competitive Materials

| Product Name | Tissue Reinforcement Material | Hernia Recurrence Rate ¹ | Number of Hernia Recurrence ¹ | Number of Patients who Completed Follow-up ¹ | Follow-up Period in Months |
|--------------|-------------------------------|--|--|---|----------------------------|
| Phasix | Resorbable Synthetic Mesh |  5% | 5 | 95 | 12 |
| Phasix | Resorbable Synthetic Mesh |  12% | 11 | 95 | 18 |
| Phasix | Resorbable Synthetic Mesh |  23% | 19 | 82 | 36 |
| Strattice | Biologic Matrix |  22% | 15 | 69 | 12 |
| Strattice | Biologic Matrix |  33% | 22 | 67 | 24 |

We believe Plastic and Reconstructive Surgery Represents a Significant Market Opportunity

- Use of biologic matrices validated by growing clinical literature
- Biologics provide the following clinical benefits:
 - Ability to define shape and position
 - Soft tissue reinforcement
 - Improvement of tissue quality
 - Aids in defining the pocket and allows for more immediate tissue expansion
 - Reduced inflammatory response
- Existing biologics are costly, prone to excessive stretch over time, and difficult for surgeons to handle

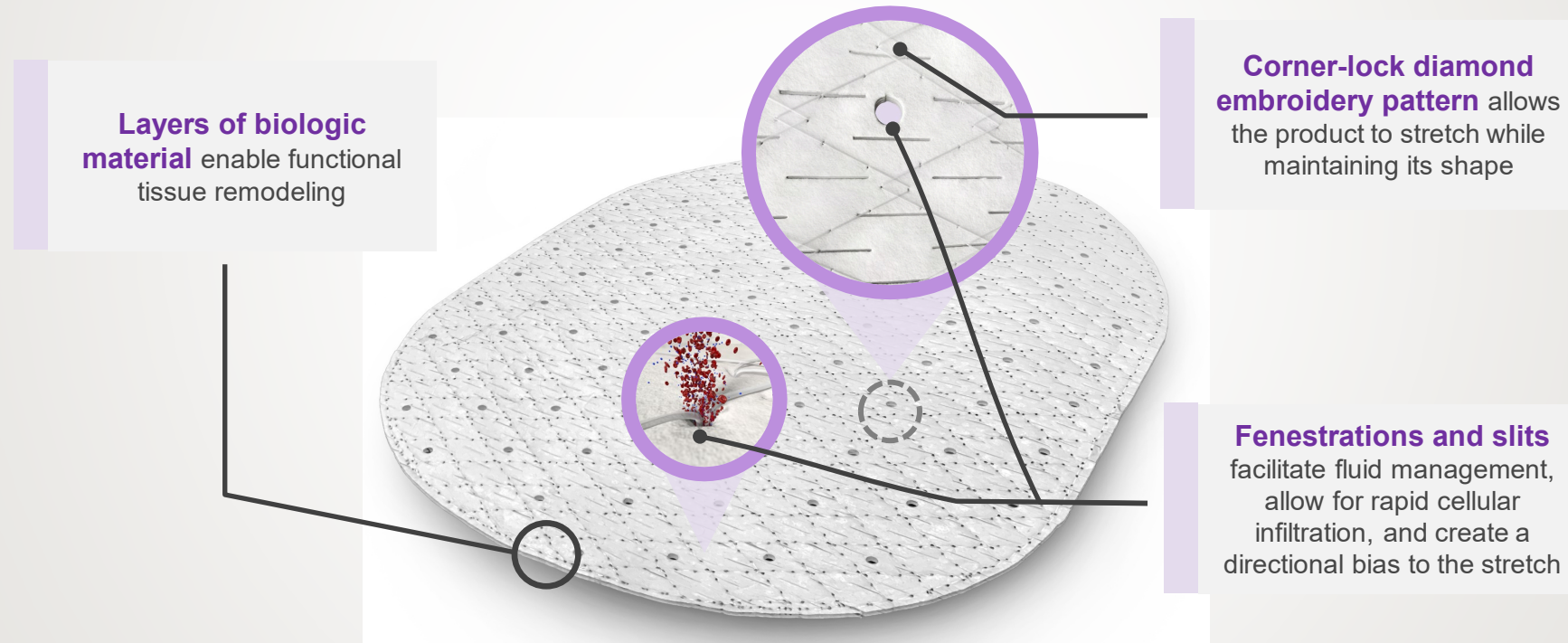
**~\$500 Million Annual
U.S. Market Opportunity**

Uses

- Breast reconstruction
- Head and neck surgery
- Chest wall reconstruction
- Pelvic reconstruction
- Extremities reconstruction

OviTex PRS: Purposely Designed for Plastic and Reconstructive Surgery

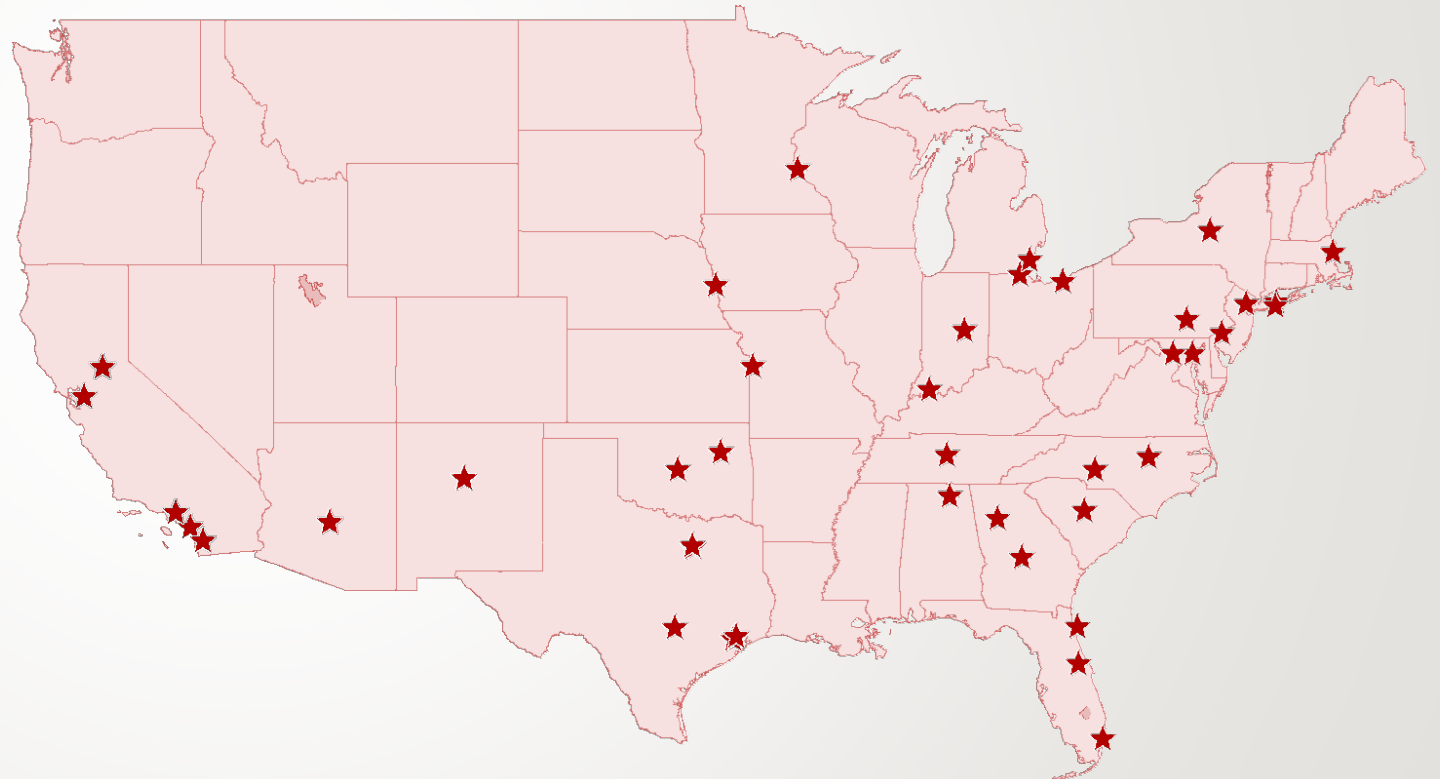
An innovative reinforced tissue matrix designed to improve outcomes by facilitating fluid management and controlling degree and direction of stretch



Expanded commercial launch in June 2020 following limited launch initiated in 2019

Commercial Organization

- 41 sales territories at June 30, 2020
- OR-based Account Managers call on General, Plastic Recon, Colorectal & Trauma surgeons
- Carry full OviTex & OviTex PRS portfolio
- 6 sales regions
- Plan to scale existing regions until each region has ~8 territories
- Territories supported by Clinical Development and Strategic Customer Relations teams



Focused on Driving Utilization within Accessed Accounts



Contracts in place with multiple national and regional Group Purchasing Organizations (GPOs)



Current GPO contracts provide access to ~1,900 hospitals across the U.S., estimated to perform over ~135,000 addressable soft tissue reconstruction procedures per year¹

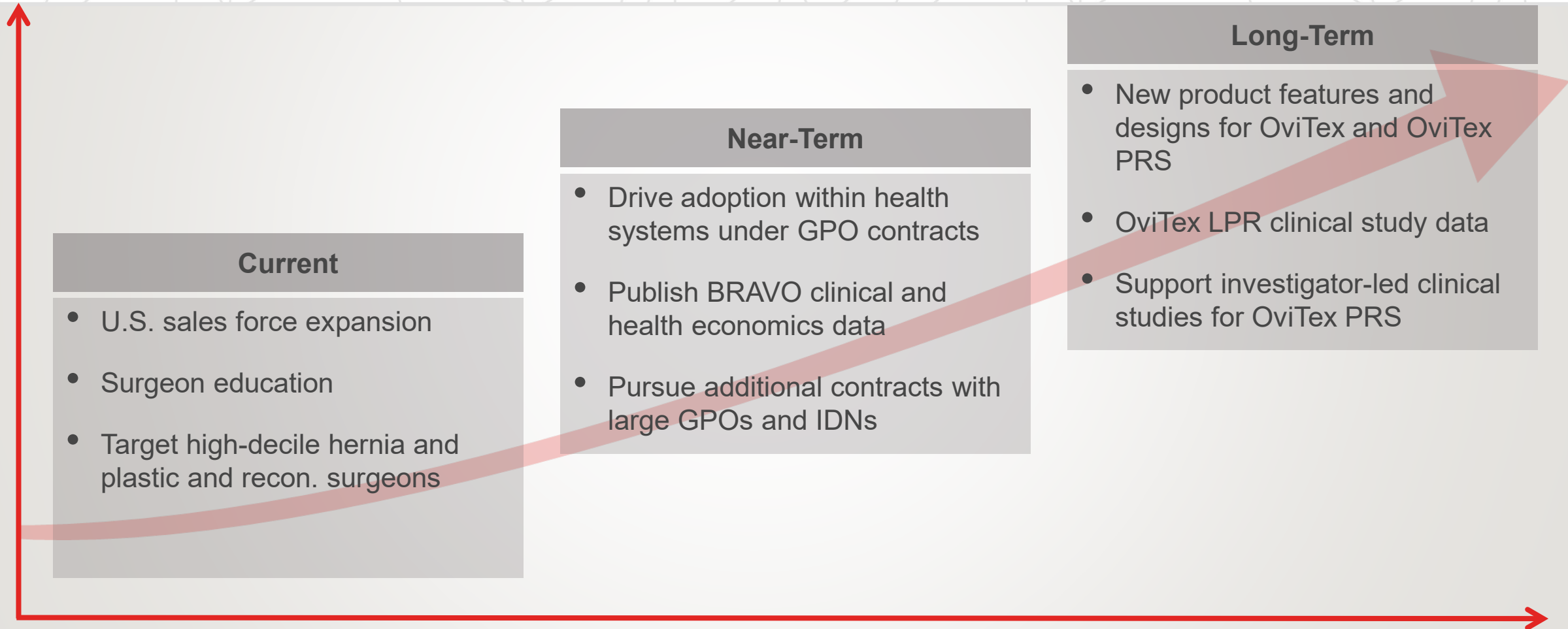


Data-driven, targeted implementation strategy



Account Manager hiring for new territories focused on areas with high concentrations of accessed accounts

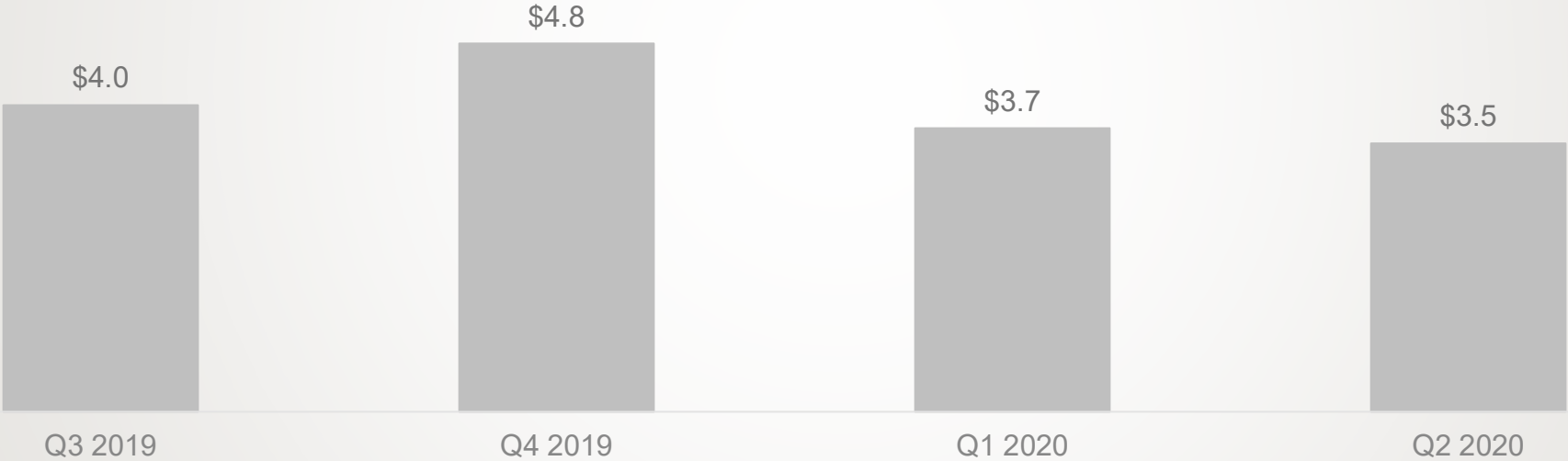
Growth Strategy



Revenue Growth

Quarterly Results

(\$ millions)



| | | | | |
|------------|-----|------|-----|----|
| Y/Y Growth | 80% | 100% | 13% | 6% |
|------------|-----|------|-----|----|

Q1 2020 quarterly revenue impacted by COVID-19 pandemic beginning mid-March 2020 and continued throughout Q2 2020

Statement of Operations

| | Three months Ended June 30 | |
|-----------------------------------|----------------------------|----------------|
| | 2020 | 2019 |
| Revenue | \$3.5 | \$3.3 |
| Cost of revenue | 1.3 | 1.3 |
| Amortization of Intangible Assets | 0.1 | 0.1 |
| Gross profit | \$2.1 | \$1.9 |
| <i>Gross margin</i> | <i>59%</i> | <i>58%</i> |
| Operating expenses: | | |
| Selling and Marketing | 4.1 | 3.9 |
| General and Administrative | 2.2 | 1.2 |
| Research and Development | 1.0 | 1.1 |
| Total operating expenses | 7.3 | 6.2 |
| Loss from operations | (\$5.2) | (\$4.3) |
| Other (expense) income, net | (0.9) | (1.0) |
| Net loss | (\$6.1) | (\$5.3) |

- Revenue increased 6% over prior year period
- Total cash and cash equivalents at June 30, 2020 were \$85.5 million

Q2 2020 revenue impacted by COVID-19 pandemic

Investment Highlights



Advanced reinforced tissue matrix portfolio supported by compelling clinical evidence



Focused on ~\$2.0 billion annual U.S. total addressable markets



Well-defined high-decile surgeon customers targeted by growing direct sales force



Long-term supply agreement that provides pricing flexibility—cost savings to healthcare systems



Established DRG-based reimbursement pathway for hernia repair



Recent product launches in growing categories: robotic hernia surgery + plastic and reconstructive surgery



Broad intellectual property portfolio



Industry leading executive team with proven track record