TELA BIO® INC
SURGICAL RECONSTRUCTION COMPANY

Advancing Soft Tissue Reconstruction

Investor Presentation

August 2021

Forward Looking Statements

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TELA BIO™ INC
SURGICAL RECONSTRUCTION COMPANY

Redefining soft tissue reconstruction with a differentiated category of tissue reinforcement materials

- ~$2B U.S Market Opportunity[1]
  in hernia repair, abdominal wall reconstruction and plastic and reconstructive surgery
- Innovative Products
- Compelling Clinical Evidence
- Products Offer Attractive Value Proposition for Hospitals

[1] Management estimate. $2B total equals $1.5B hernia & abdominal wall reconstruction and $0.5B plastic reconstructive surgery.

Creating Advanced Biologic Materials

Purposefully designed to address shortcomings & unmet clinical needs

Novel Biologic Tissue
(derived from sheep)

+

Polymer Fibers
(permanent or resorbable)

Innovative Textile Engineering

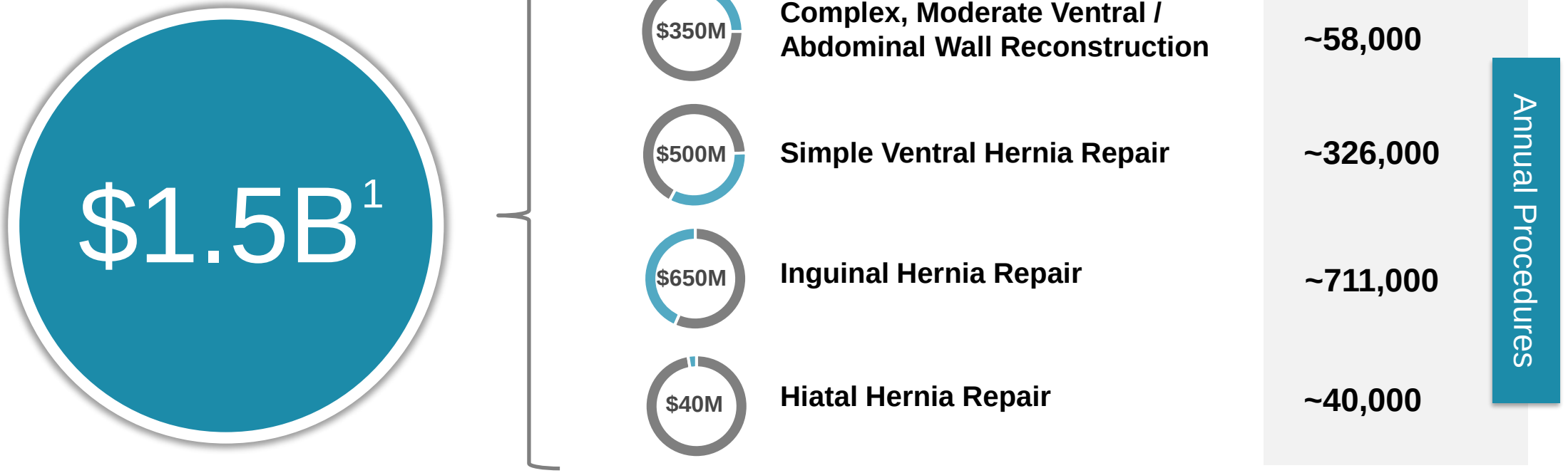
Hernia & Ab Wall Reconstruction

Plastic Reconstruction

Issued patents protect underlying biologic tissue and product design

TELA BIO INC SURGICAL RECONSTRUCTION COMPANY

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



Source: Millennium Research Group Reports, IMS Health Data

[1]Management estimate. Market size based volume weighted average selling price for OviTex

Ventral Hernia Patients Range in Complexity

Ventral Hernia Complexity

SIMPLE	MODERATE	COMPLEX
• CDC Wound Class I (clean) • Healthier patients - no co-morbidities • Primary hernia repair	• CDC Wound Class II (clean-contaminated) • Patient co-morbidities (i.e., obesity, diabetes, COPD) • May have prior hernia repair failure	• CDC Wound Class III (contaminated) & IV (infected) • Large defects • Infected synthetic mesh removals • Multiple prior hernia repair failures

Objective: provide patients the best repair the first time to prevent the simple patient from becoming the complex

Current Ventral Hernia Treatment Options: No Perfect Product

Natural Repair Products

	PERMANENT SYNTHETIC MESH	RESORBABLE SYNTHETIC MESH	BIOLOGIC MESH
	BARD Parietex™ Medtronic ProGrip™ + Ventralight™ Johnson & Johnson PROCEED®	BARD PHASIX™ Mesh GORE® BIO-A®	LifeCell Strattice™ INTEGRA SurgiMend® ACell Gentrix® BARD XenMatrix™
LIMITATIONS	▫ 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	▫ Inflammatory response until absorbed ▫ Encapsulation of implant or contraction until absorbed ▫ Scar tissue / lack of remodeling ▫ Mesh infection until resorbed ▫ Organ erosion or perforation ▫ Lack of mid-term and long-term reinforcement	▫ Lack of strength or durability ▫ Prone to laxity and stretching ▫ Challenges to surgeon handling ▫ Difficult to use in laparoscopic or robotic surgery ▫ High costs
	Simple Ventral Hernia **Inguinal Hernia**	**Complex, Moderate Ventral Repair / Abdominal Wall Reconstruction** **Hiatal Hernia Repair**	

TELA BIO INC SURGICAL RECONSTRUCTION COMPANY

Growing Need for Alternative to Permanent Synthetic Mesh

59% of surgeons agree that use of permanent synthetic mesh puts patients at long-term risk of complications[1]

1 in 5 Hernia patients have voiced concern over use of permanent synthetic mesh in the past 12 months, according to surgeons[1]

~15K Lawsuits against permanent synthetic meshes estimated to be assembled across the U.S.[2]

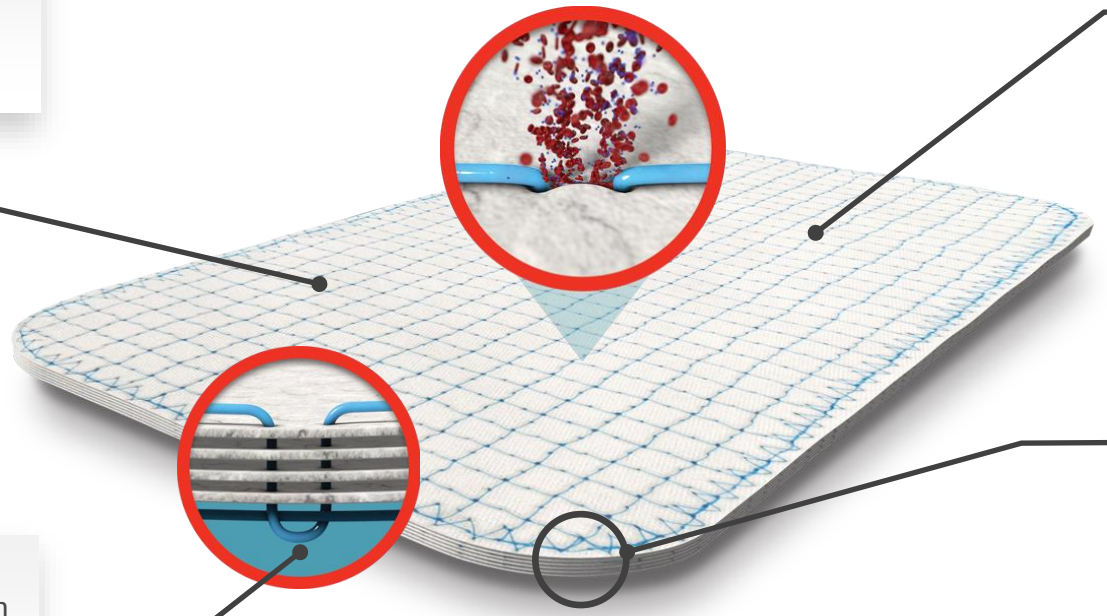
[1] Hernia and Abdominal Surgeries Survey (Oct 2020).
[2] www.drugwatch.com (October 2020)

OviTex Reinforced Tissue Matrix: a More Natural Hernia Repair™

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



Layers of biologic material enable functional tissue remodeling

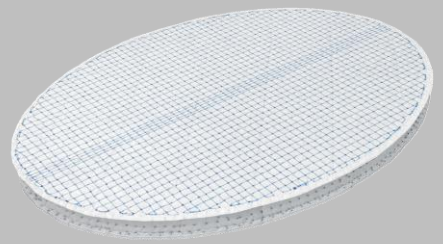
Interwoven polymer for added strength and improved handling

TELA BIO INC SURGICAL RECONSTRUCTION COMPANY

OviTex LPR for Laparoscopic & Robotic Hernia Repair

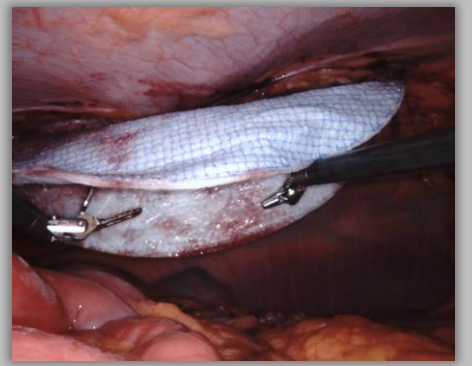
Increase in Robotic-Assisted Hernia Repair

- Surgeons have adopted robotic-assisted techniques, primarily for inguinal & simple ventral Hernia repair, due to perceived patient and technique benefits
- Legacy biologic products are difficult to use minimally invasively (MIS) due to their thickness and handling properties



Our Solution: OviTex LPR

Tailored OviTex product designed for improved handling in MIS techniques and trocar accessibility



Compelling Clinical Evidence

18 Presentations / Publications — Ventral Hernia

- Low hernia recurrence
- Low rate of surgical site occurrences & infections (SSO/SSI)
- Ease of use

5 Presentations / Publications — Inguinal Hernia

- Low hernia recurrence
- Low incidence of chronic post-operative pain
- Low SSO / SSI
- Ease of use

4 Presentations / Publications — Hiatal Hernia

- Low hernia recurrence
- Compatibility with MIS approaches

BRAVO Study

- Multi-center, prospective study with 92 patients enrolled
- Moderate-to-complex ventral hernia patients
- Patient follow-up at 3, 12 & 24-months
- Additional data readout expected upon study completion by the end of 2021

OviTex supported by data from
~500 hernia patients across multiple hernia types

OviTex PRS: ~$500 Million Annual U.S. Plastic & Reconstructive Surgery Market Opportunity

Surgeons use products to reinforce soft tissue during various reconstructive surgeries, including:

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

Market dominated by human acellular dermal matrices (HADMs)

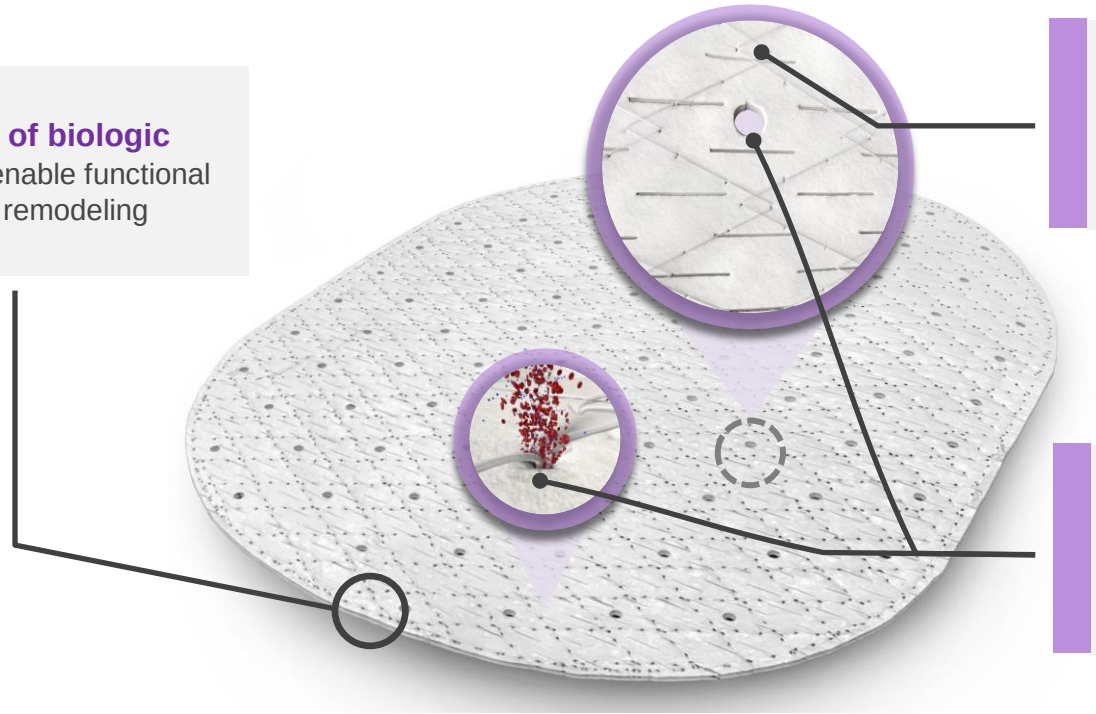
- Prone to high degree of stretch
- Expensive, putting pressure on hospital systems
- Often experience supply shortages, particularly when large pieces of material are required

[1] Management estimate. Market size based on sales of current biologics

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

Layers of biologic material enable functional tissue remodeling



Corner-lock diamond embroidery pattern allows the product to stretch while maintaining its shape

Fenestrations and slits facilitate fluid management, allow for rapid cellular infiltration, and create a directional bias to the stretch

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

TELA BIO SURGICAL RECONSTRUCTION COMPANY

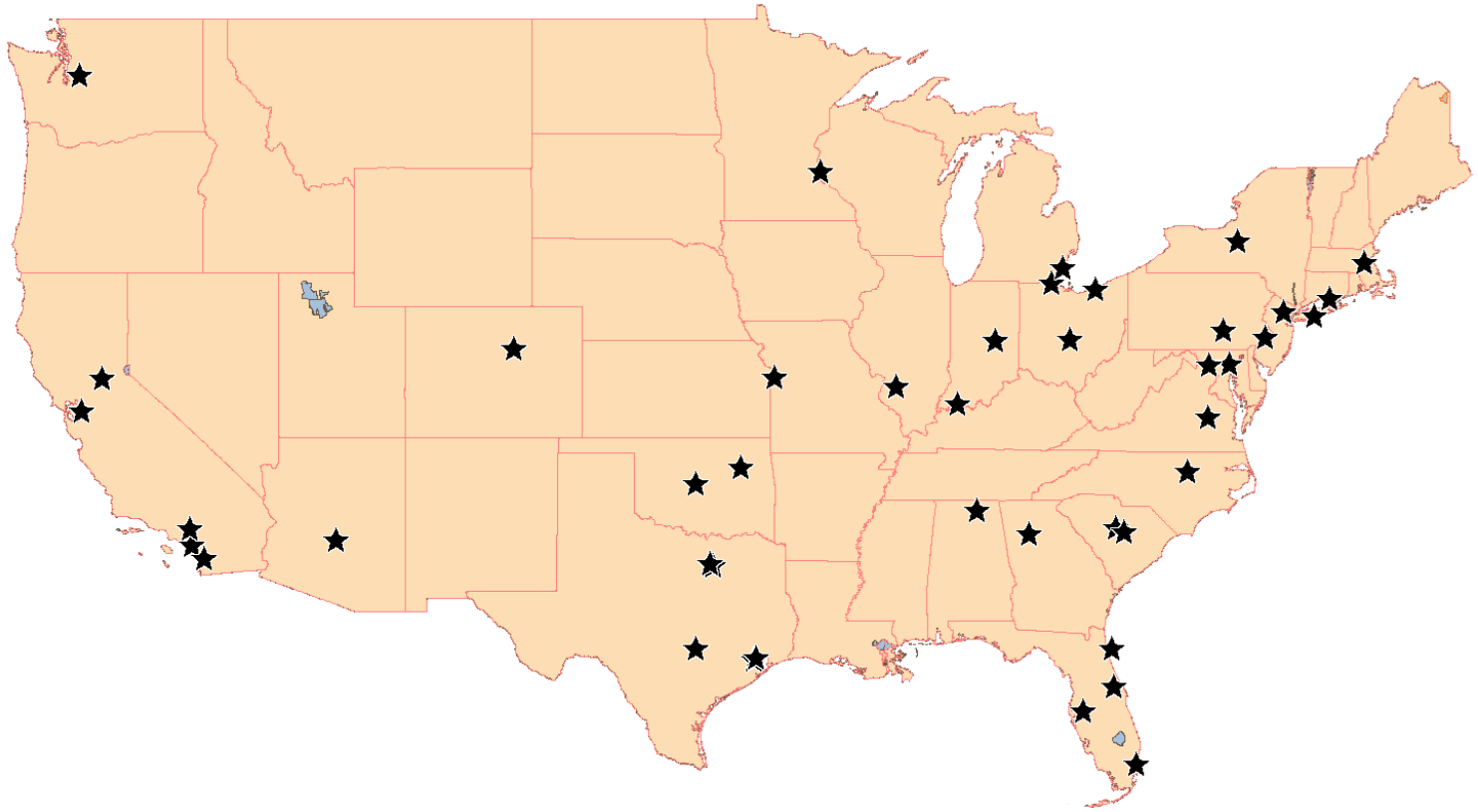
Commercial Organization

45 sales territories as of June 30, 2021

- OR-based Account Managers call on General, Plastic Recon, Colorectal & Trauma surgeons
- Carry full OviTex & OviTex PRS portfolios

6 sales regions

- Plan to scale existing regions until each region has ~8 territories
- Supported by Clinical Development and Strategic Customer Relations teams



Growth Strategy

INCREASE ADOPTION

- Promote broader awareness of OviTex & OviTex PRS products
- Employ virtual sales & marketing programs, including TELA LIVE
- Drive market awareness of risks of permanent synthetic mesh use
- Publish BRAVO clinical data

COMMERCIAL EXECUTION

- Scale direct sales force
- Drive account manager productivity
- Increase utilization within health systems under GPO contracts
- Secure additional contracts with high-potential IDNs and GPOs

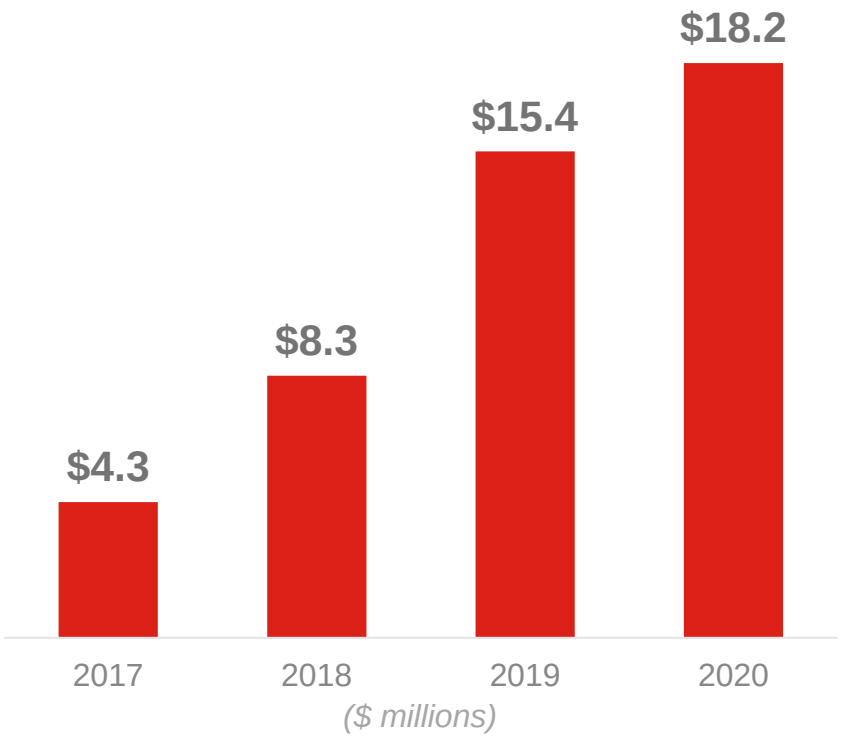
MARKET EXPANSION

- Launch new product features and designs for OviTex and OviTex PRS
- Initiate robotic hernia post-market study
- Support investigator-led clinical studies for OviTex PRS

Delivering Revenue Growth

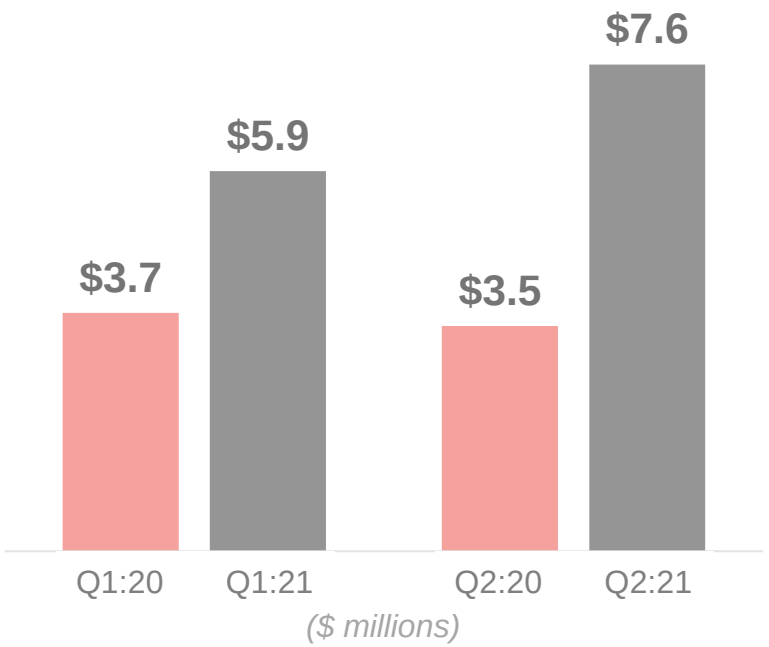
Annual Revenue

Revenue CAGR: 62%



Quarter Revenue

YTD Revenue Growth: 86%



Q2 2021 Performance

- Revenue growth of 116% year over year, up 29% from Q1:21
- Cash and Cash equivalents (as of June 30, 2021): $60.3M
- Robotic and MIS hernia procedures represent over 50% of all OviTex hernia procedures

Investment Highlights

- Advanced reinforced tissue matrix portfolio supported by compelling clinical evidence
- Focused on ~$2.0 billion annual U.S. total addressable markets
- Driving commercial adoption with targeted direct-sales approach
- Recent product launches in growing markets: robotic hernia surgery + plastic and reconstructive surgery
- Broad intellectual property portfolio
- Established DRG-based reimbursement pathway for hernia repair
- Industry leading executive team with proven track record