



Overview Presentation

TSX: TMD | Nasdaq: TMDI

July 2020

Forward-looking Statements

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Titan Medical Overview

Focused on robotic-assisted technologies; developing a versatile single-port surgical platform intended to perform general abdominal surgeries.

Designed with the goal of improving clinical performance, ease-of-use, operating room efficiency and hospital economics.



Recent 2020 Developments

Medtronic Development & License Agreements

- ✓ Leveraging Titan's technology and intellectual property with license payments up to \$41 million, provided certain milestones are achieved; \$10 million already received
- ✓ Titan maintains IP rights necessary to independently develop and commercialize its single-port robotic technology

Established U.S. Subsidiary (Titan Medical USA Inc.) in Chapel Hill, North Carolina

- ✓ Purpose-built space in robotics technology hub near key product development service providers serves as U.S. operational headquarters
- ✓ Titan Medical Inc. will remain Canadian domiciled

Product Development

- ✓ Titan is recruiting technical management and engineering talent to lead and execute product development in concert with service providers



Titan Medical USA Inc. – Chapel Hill, NC



Evolution of Surgical Care

Open Surgery

- Open surgery offers broad application
- Requires significant hospital stay and recovery time
- Risk of adverse events

Minimally Invasive Surgery

- Minimally Invasive Surgery (MIS) has been increasing over the past 25 years
- Reduced hospitalization time
- Reduced risk of adverse events
- Requires highly skilled surgeons

Multi-Port Robotic Surgery

- Robotic surgery further expands upon the benefits of MIS
- Technology remains expensive with procedural and operational limitations

Single-Port Robotic Surgery

- Application of da Vinci® Single-Site in GYN and general surgery showed early promise
- da Vinci SP® single port robotic system received FDA clearance for urology in 2018, ENT in 2019
- **Titan Medical plans to deliver robotic visualization, precision and dexterity with triangulation through a single incision**



Today's Robotic Surgery Environment

Robotic technology was introduced to mitigate the risks of MIS, reduce variations in procedural efficiency and improve consistency of patient outcomes.

Benefits

- Increased Dexterity
- Improved Visualization (3D)
- Improved Ergonomics

Titan's single-port robotic system is being developed to offer the benefits of multi-articulated surgery through a single point of entry in order to reduce trauma.

Technology Differentiation

Engineered for Simplicity and Efficiency



Single-Incision

With a single incision made around the umbilicus, the result could potentially be near-scarless surgery



Small Footprint

Enhanced mobility and ease-of-use may lead to quicker deployment in multiple ORs and higher utilization



Multi-Articulating

Reusable multi-articulating instruments are designed for optimal triangulation and economical device performance



Open Display

3D high-definition display implemented to provide the balance of surgical immersion and situational awareness in the OR



Ergonomic Workstation

Highly ergonomic workstation with natural handle interface designed to enable comfortable surgical posture, even during long procedures



Purposeful Design

Designed from the ground up with the intent of improving:

Clinical Capabilities

OR Efficiency

Hospital Economics

System Overview

- Versatile single-port robotic surgery solution
- Expected smaller OR footprint than multi-port systems
- Designed to overcome multi-port robotic surgery limitations
- Engineered for performance, efficiency and cost-effectiveness
- Expected to provide access to underserved market segments, such as ambulatory surgery centers



Workstation



Integrated software for simulation training

Natural multi-articulated handle interface

Open, unobtrusive 3D high-definition display

Multi-configurable elbow rest and foot pedal positioning

Ergonomically focused design

Easily maneuverable with swiveling easy-gliding coasters

Patient Cart

Easy to load and unload instruments through detachable camera insertion tube with integrated 2D high-definition camera

Single-port enables swift multi-quadrant positioning

Minimal cable management in OR

Single-arm configuration with no external moving parts facilitates simple setup and assistant-friendly surgery

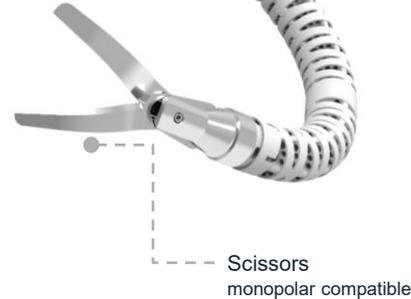
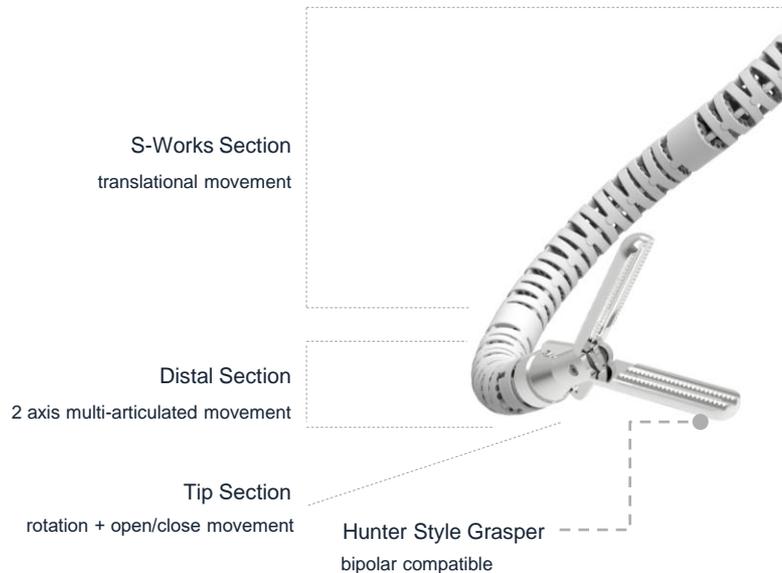
Instruments and steerable 3D high-definition camera delivered through camera insertion tube of 25 mm diameter

Compact, rollers enable mobility to maneuver and position



Multi-Articulated Instruments

Variety of multi-use instruments and end effectors for grasping, suturing, cutting and coagulation



Dissector
bipolar compatible



Hook
monopolar compatible



Needle Driver



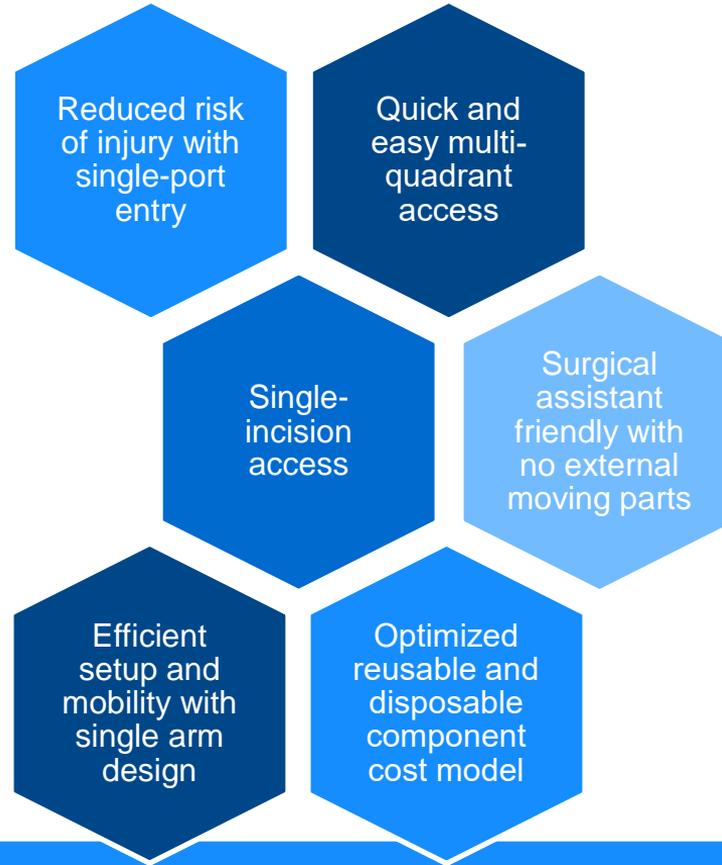
Traditional Grasper



Open architecture for adaptation of future end effectors and functionality

Single-port surgery
with enhanced robotic
technology

Optimal Patient Care



Titan Medical's single-port surgical system is designed to provide surgeons with multi-articulated instruments in a triangulated configuration through a single incision.



Intellectual Property

A unique single-port robotic surgery system that is differentiated by its patented multi-articulating instruments, user interface and ergonomic features.

Differentiated and innovative design provides a strong position on freedom to operate.

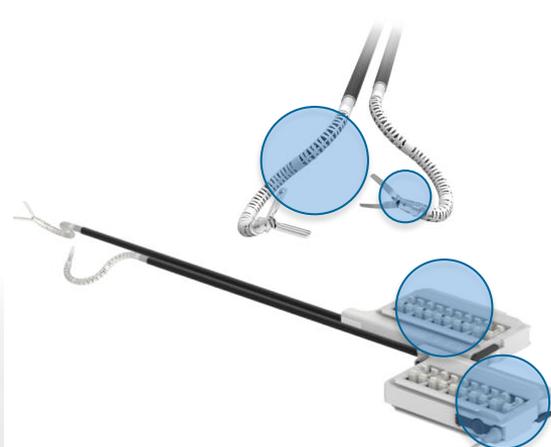
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U.S. & International
Patents Issued

85

Applications Pending

Areas of Titan Medical's single-port robotic surgical system covered by patents or pending applications:



Clinical Procedures

45 Procedures Performed to Date (Live porcine studies unless indicated; Excludes GLP)

- GYN and GYN-ONC (8 procedures at Columbia University and Florida Hospital)
 - Radical Hysterectomy with Bilateral Salpingo Oophorectomy and Bilateral Pelvic / Para-Aortic Node Dissection
 - Simple Hysterectomy with Bilateral Salpingo Oophorectomy and Bilateral Pelvic Node Dissection
 - Simple Hysterectomy with Bilateral Salpingo Oophorectomy
- Urology (19 procedures at IHU Strasbourg and Florida Hospital)
 - Hemi-Nephrectomy and Partial Nephrectomy
 - Prostatectomy (Human Cadaver)
 - Pyeloplasty
 - Ureteral-Bladder Anastomosis
- General Surgery (14 procedures at IHU Strasbourg and Florida Hospital)
 - Cholecystectomy (1 Human Cadaver, 5 Live Porcine)
 - Nissen Fundoplication (1 Human Cadaver, 3 Live Porcine)
 - Esophagectomy (Human Cadaver)
 - Gastrectomy
 - Splenectomy
- Colorectal (4 procedures at Florida Hospital)
 - Colectomy
 - Low Anterior Resection



Peer-reviewed Abstracts

- 1. Multi-disciplinary applications of a new robotic platform** by Barbara Seeliger, MD and Lee Swanstrom, MD (IHU Strasbourg)
Accepted and presented at Society of American Gastrointestinal and Endoscopic Surgeons Meeting, Seattle, WA, April 2018
- 2. Single-port prostatectomy using SPORT Surgical System** by Eric Barret, MD (IMM, France)
Accepted and presented at EAU Section of Urology Technology Meeting, Modena, Italy, May 2018
- 3. Multispecialty single port robotic technology applied in the live animal model: proof of concept** by Travis Rogers, MD, Eduardo Parra Davila, MD, Vipul Patel, MD (all from Florida Hospital), Ricardo Estape, MD (South Miami GOG) and Armando Melani, MD (IRCAD Brazil)
Accepted and presented as a poster at Society of Robotic Surgery Meeting, Stockholm, Sweden, June 2018
- 4. Feasibility of single-port partial nephrectomy using SPORT surgical system** by Eric Barret, MD (IMM, France)
Accepted and presented as a poster at Society of Robotic Surgery Meeting, Stockholm, Sweden, June 2018
- 5. Single-port robotic partial and hemi nephrectomy using a novel single port robotic platform** by Sebastien Crouzet, MD (University of Lyon, France) and Barbara Seeliger, MD (IHU Strasbourg)
Accepted and presented at EAU Robotic Urology Section Meeting, Marseille, France, September 2018
- 6. Reverse Objective Structured Assessment of Technical Skills (Reverse-OSATS) as a means of measuring the capability of the Titan Medical SPORT Surgical System on core surgical principles** by Chetna Arora, MD, Arnold P. Advincula, MD (both from Columbia University Medical Center) and William B. Burke, MD (Stony Brook Cancer Center)
Accepted and presented at Society of European Robotic Gynecologic Surgeons Meeting, Milan, Italy, September 2018
- 7. Multispecialty single port robotic technology applied in the live animal model: proof of concept** by Travis Rogers, MD, Eduardo Parra Davila, MD, Vipul Patel, MD (all from Florida Hospital), Ricardo Estape, MD (South Miami GOG) and Armando Melani, MD (IRCAD Brazil)
Accepted and presented at World Congress of Endourology Meeting, Paris, France, September 2018
- 8. Feasibility of single-port partial nephrectomy using SPORT surgical system** by Eric Barret, MD (IMM, France)
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- 9. Reverse Objective Structured Assessment of Technical Skills (Reverse-OSATS) as a means of measuring the capability of the Titan Medical SPORT Surgical System on core surgical principles** by Chetna Arora, MD, Arnold P. Advincula, MD (both from Columbia University Medical Center) and William B. Burke, MD (Stony Brook Cancer Center)
Accepted and presented at American Association of Gynecologic Laparoscopists Global Congress, Las Vegas, NV, November 2018



Published Manuscript

Surgical Endoscopy

Enabling single-site laparoscopy: the SPORT platform

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Initial Clinical Focus

Target Procure: Benign Gynecologic Surgery

- Potential to reduce trauma and scarring, and offers possibility of faster recovery for an engaged patient population
- Ability to produce positive patient outcomes in relatively low-risk benign procedures
- Viable alternative to other single-port approaches based on gynecologic surgeon feedback from preclinical studies
- Attractive procedure volumes performed in outpatient as well as inpatient settings, favoring smaller footprint and lower-cost model
- Clarity of regulatory pathway

Target Market: United States

- With an initial U.S. focus, an ability to efficiently provide comprehensive product training and support to facilitate early product adoption and consistent, successful outcomes



Highlights

Novel Clinical Paradigm	✓ Multi-articulated instrument triangulation through a single incision
Promising Physician Feedback	✓ Tested by U.S. and EU surgeons from 4 surgical disciplines ✓ 45 preclinical studies prior to 15 GLP studies in 2019 ✓ 9 peer-reviewed abstract presentations and 1 published manuscript
Robust IP Portfolio	✓ 140 global patents and applications
Disruptive Technology	✓ Projected savings on capital equipment, service and procedure costs
Favorable Market Dynamics	✓ Underpenetrated market due to size, complexity and costs associated with existing robotic surgical systems ✓ Applicable to multiple minimally invasive procedures, some that may be performed in ambulatory surgery centers





Thank You

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