Titan Medical Inc.

TSX: TMD | Nasdaq: TMDI

Investor Presentation
March 9, 2021

enos™
robotic single access surgery

Forward-looking Statements

This presentation contains “forward-looking statements” within the meaning of applicable Canadian and U.S. securities laws. Such statements reflect the current expectations of management of the Company’s future growth, results of operations, performance and business prospects and opportunities. Wherever possible, words such as “may”, “would”, “could”, “will”, “anticipate”, “believe”, “plan”, “expect”, “intend”, “estimate”, “potential for” and similar expressions have been used to identify these forward-looking statements. These statements reflect management’s current beliefs with respect to future events and are based on information currently available to management. Forward-looking statements involve significant risks, uncertainties and assumptions. Many factors could cause the Company’s actual results, performance or achievements to be materially different from any future results, performance or achievements that may be expressed or implied by such forward-looking statements, including, without limitation, those listed in the “Risk Factors” section of the Company’s Annual Report on Form 20-F for the fiscal year ended December 31, 2019 and the Company’s 2020 annual management’s discussion and analysis (which may be viewed at www.sedar.com and at www.sec.gov). Information contained in this presentation is qualified in its entirety by such public filings. Should one or more of these risks or uncertainties materialize, or should assumptions underlying the forward-looking statements prove incorrect, actual results, performance, or achievements may vary materially from those expressed or implied by the forward-looking statements contained in this presentation. These factors should be considered carefully, and prospective investors should not place undue reliance on the forward-looking statements. Although the forward-looking statements contained in the presentation are based upon what management currently believes to be reasonable assumptions as of the date of this presentation, there is no assurance that actual results, performance or achievements will be consistent with these forward-looking statements. This presentation does not constitute an offer to sell any class of securities of the Company in any jurisdiction. There is no assurance as to the whether hospitals will purchase at any assumed prices. The Company does not forecast what portion of the total addressable market it will be able to capture. The Enos™ robotic single access surgical system has not been cleared or approved for marketing or approved for investigational use by the U.S. Food and Drug Administration or any other regulatory authority in any other jurisdiction. This presentation is provided solely for informational purposes.

The data from the sources referenced in the footnotes on Slide 6 speak as of their original publication dates (and not as of the date of this presentation) and the opinions and market data expressed in those reports are subject to change without notice (including without limitation from the intervening impacts of the COVID-19 pandemic). The reports referenced are third party sources and have not been independently verified by Titan Medical Inc. and their accuracy and completeness and any underlying assumptions for the market estimate and projections contained therein have not been independently verified.

Titan Medical Inc.

Robotic-assisted technologies

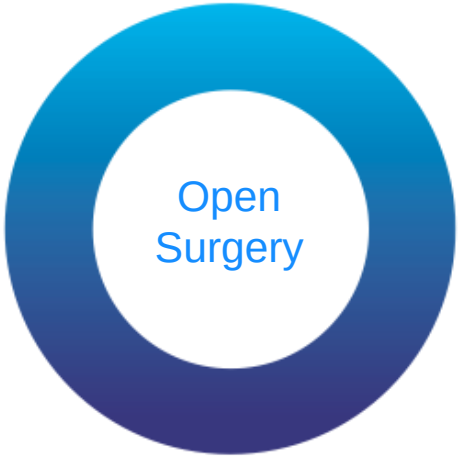
- **Developing a versatile surgical platform intended to perform general abdominal surgeries through a single access point.**
- **Designed to deliver clinical performance, ease of use, operating room efficiency, and hospital economics, with the potential for patient benefits of less trauma and scarring and faster recovery times.**

Company Highlights

Strategic Engagement: Medtronic Development & License Agreements	✓ Leveraging Titan's technology and intellectual property with milestone-based license payments of up to $41 million ✓ First milestones met; $20 million already received ✓ Titan maintains IP rights necessary to independently develop and commercialize its single access robotic technology
Established Multi-purpose Facility in Chapel Hill, North Carolina	✓ Customized facility in robotics technology hub near key product development service providers
Innovation Leader	✓ Expert in-house technical management and engineering talent leading and executing product development ✓ Growing intellectual property portfolio - now over 150 patents awarded or pending

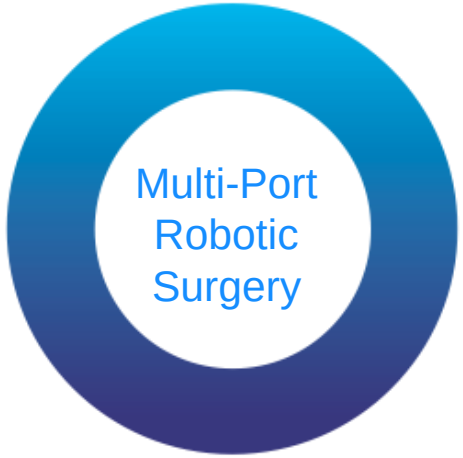
Evolution of Abdominal Surgery

Driving improved patient outcomes

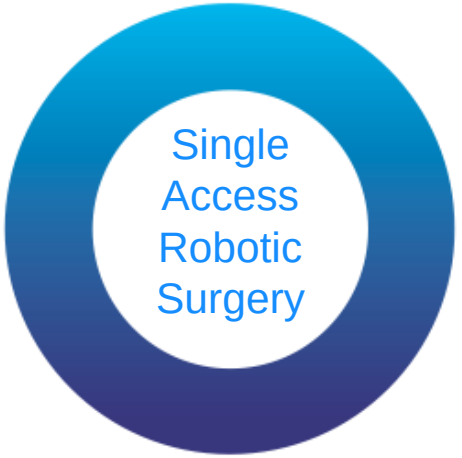


- Open surgery offers broad application
- Requires significant hospitalization and recovery times
- Risk of adverse events

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



- Robotic surgery further expands on MIS benefits
- Technology remains expensive with procedural and operational limitations
- Requires multiples access points, which may extend recovery time



- 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 through a single incision or natural orifice to reduce hospitalization time and improve patient outcomes**

Addressable Market

- US surgical robotics market may potentially reach **$18 billion**[1] in future years, with up to 6 million addressable procedures:
  - $13 billion in procedures revenue
  - $ 3 billion in service revenue
  - $ 1.9 billion annual capital equipment upgrade revenue
- Titan's initial target is **benign gynecologic surgery**, representing a **~$1 billion** market segment based on internal revenue estimates of $1,500* per procedure:
  - Abdominal Hysterectomy: 306,000 procedures per year in U.S.[2]
  - Salpingo-Oophorectomy and Oophorectomy: 315,000 procedures per year in U.S.[2]
  - Endometriosis[3]:
    - Underdiagnosed, affect about 5 million U.S. women (mostly commonly in their 30s/40s)
    - Surgery usually chosen for severe symptoms
    - May be performed in outpatient surgery setting

(1) Source: Bank of America Merrill Lynch: Intuitive Surgical: Tide still rising…a fresh, detailed look at the US TAM for surgical robotics, published 12 August 2019
(2) Source: Life Science Intelligence Report LSI-PV-US1753SU, published 2017
(3) Source: A Fact Sheet From the Office on Women's Health, Depart of Health & Human Services, USA, www.womenshealth.gov

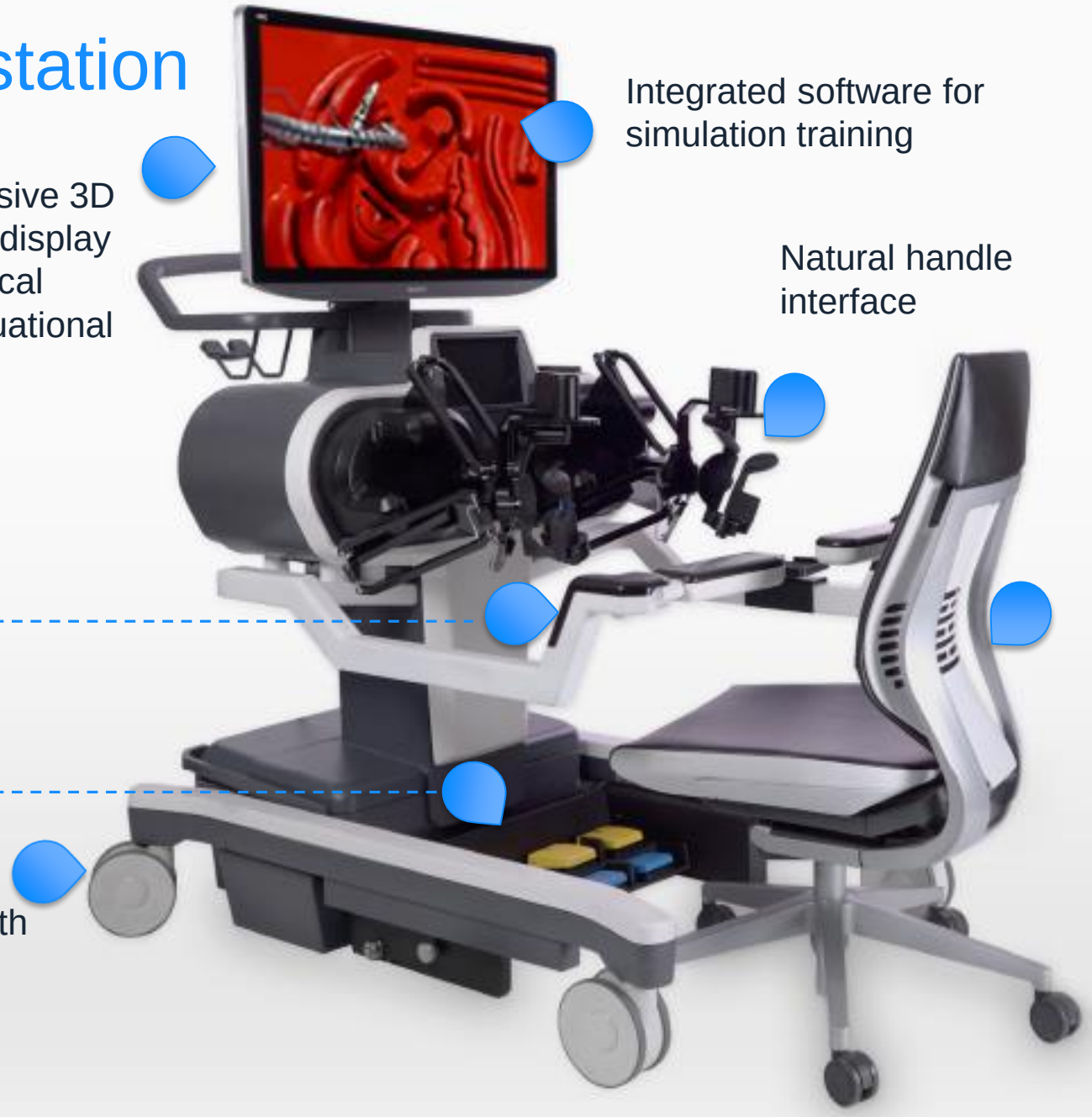
*** The Company does not forecast what portion of the total addressable market it will be able to capture or the revenues it will generate from any such portion**

Enos™ System Overview

The Enos™ robotic single access surgical system has not been cleared or approved by the U.S. Food and Drug Administration or any other regulatory authority in any other jurisdiction.

- Versatile single access robotic surgery solution
- Designed to overcome multi-port robotic surgery limitations
- Smaller operating room footprint than multi-port systems
- Engineered for performance, efficiency and cost-effectiveness
- Expected to provide a solution for underserved market segments

Enos™ Workstation



Integrated software for simulation training

Open, unobtrusive 3D high-definition display balances surgical immersion, situational awareness

Natural handle interface

Multi-configurable elbow rest and foot pedal positioning

Ergonomically-focused design to enhance comfort and reduce fatigue

Easily maneuverable with swiveling easy-gliding coasters

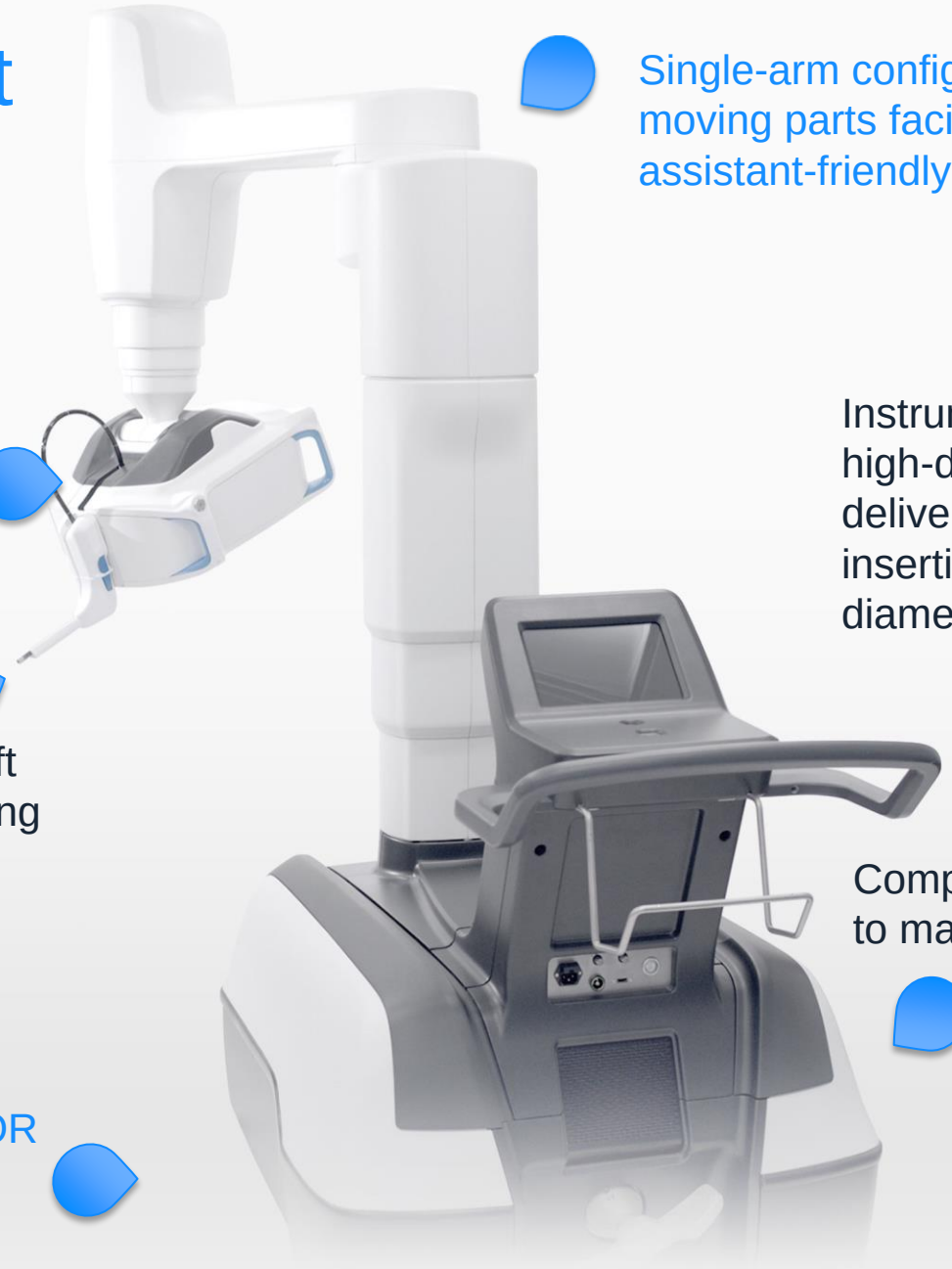
Enos™ Patient Cart

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

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

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

Single-port enables swift multi-quadrant positioning

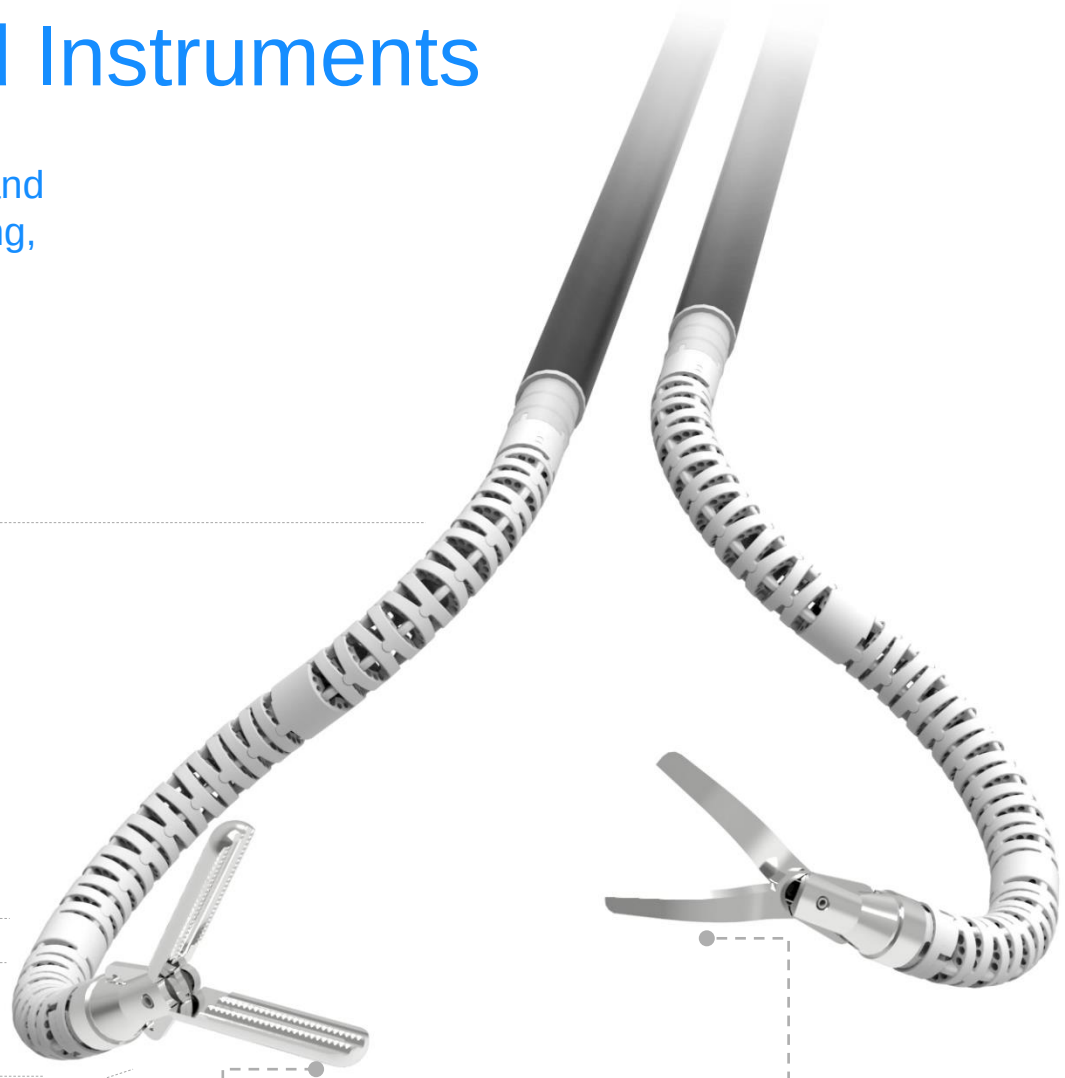


Compact, rollers enable mobility to maneuver and position

Minimal cable management in OR

Multi-Articulated Instruments

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



S-Works Section
translational movement

Distal Section
2 axis multi-articulated movement

Tip Section
rotation + open/close movement

Hunter Style Grasper
bipolar compatible

Scissors
monopolar compatible

Maryland Grasper
bipolar compatible

Hook
monopolar compatible

Needle Driver

Traditional Grasper

Open architecture for adaptation of future end effectors and functionality

Intellectual Property

A unique single access 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.

71 U.S. & International Patents Issued*

86 Applications Pending*

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

* Current as of the date of this presentation based on information available to the Company. Official figures based on records with worldwide patents offices may differ.

Pre-clinical Procedures

45 Procedures Performed to Date (live porcine studies unless indicated; excludes 15 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
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   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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4 Division of GI/MIS, The Oregon Clinic, Portland, OR, USA

Financial Highlights (millions)

	Pro Forma (1)	Unaudited	Audited	Audited
	1/31/21	1/31/21	12/31/20	12/31/19
Cash, cash equivalents	$ 65.5	$ 42.5	$ 25.5	$ 0.8
Total current assets	$ 66.9	$ 43.9	$ 26.9	$ 1.7
Short-term debt	$ 1.9	$ 1.9	$ 1.9	$ 0.0
Other current liabilities(2)	$ 7.7	$ 7.7	$ 4.7	$11.4
Working capital(2)	$ 57.3	$ 34.3	$ 20.3	$(9.7)

(1) including gross proceeds of $23 million from financing which closed February 24, 2021
(2) excluding non-cash warrant liability

2021-2022 Value Creation Milestones

- **Complete Enos™ Product Development and Tooling for Manufacturing**
  - Software verification and validation
  - Manufacturing of instruments and camera systems in-house
  - Production of workstations and patient carts for clinical studies
- **Expand IP Portfolio**
- **Execute Medtronic Milestones**
  - Associated license payments of $21 million
- **Verify System Performance**
  - Independent laboratory testing
  - Surgeon engagement in preclinical studies
  - Human factors evaluation
- **Submit Investigational Device Exemption (IDE) application to FDA**
- **Conduct IDE Clinical Studies**
  - Engage surgeons and sites, enroll patients
  - Complete surgeries and patient follow-up
  - Compile data for FDA marketing authorization application

Investment Highlights

Novel Clinical Paradigm	✓ Multi-articulated instrument triangulation through a single incision or natural orifice to reduce trauma and improve patient outcomes
Promising Physician Feedback	✓ Tested by US and EU surgeons from 4 surgical disciplines in 60 preclinical studies, resulting in peer-reviewed abstract presentations and a published manuscript
Robust IP Portfolio	✓ Growing portfolio of more than 150 global patents and applications ✓ Validated by Medtronic Development & License Agreements
Disruptive Technology	✓ Projected savings on capital equipment, service and procedure costs ✓ Potentially offering faster patient recovery times, less trauma and scarring, shorter hospital stays, and reduced use of pain medications
Favorable Market Dynamics	✓ Currently underpenetrated abdominal surgery market due to complexity and costs associated with existing robotic surgical systems ✓ Hospital objectives to increase procedure throughput and reduce hospital stays, especially in post-COVID-19 environment
Strong Balance Sheet	✓ Sufficient cash on hand for projected two years of runway, assuming remaining Medtronic milestones are met in 2021

Thank You

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www.titanmedicalinc.com