

**Ticker symbol**

TMD (TSX Venture)

Share price (Sept. 13, 2010)

\$0.68

Cash (June 30, 2010)

\$3.0 million +

Current burn rate

~\$175,000/month

Shares outstanding

42,372,347 (49,025,710* FD)

*(FD includes an additional 3,742,363 options and 2,911,000 warrants (@ \$.48 expires June 23, 2011).***Market value (Sept. 13, 2010)**

\$28,813,195

Management ownership

23%

Recent Operating Highlights**Aug 2010:** Appointed Dr. John R. Valvo to Medical Advisory Board**Jul 2010:** Signed an MOU with Rochester General Hospital (high volume robotic surgical center)**Jun 2010:** Joseph Talarico is appointed Senior Vice President, Business Development (formerly with Intuitive Surgical)**Apr 2010:** KUKA Robotics' Lightweight Robot to be integrated with Amadeus**Mar 2010:** Appointed Stephen D. Randall CFO**Feb 2010:** Received initial industrial grants through NRC-IRAP**Dec 2009:** Launched Phase C, aimed at developing a clinical-grade Amadeus system to be ready for testing and the regulatory approvals process**Dec 2009:** Completed a private placement offering resulting in the issue of 5,822,000 units for gross proceeds of \$2,328,800**Nov 2009:** Entered into an agreement with CAE Healthcare to develop Amadeus**Company Profile**

Titan Medical Inc. (Titan) is a Canadian public company focused on the development and commercialization of robotic surgical technologies. The Company is currently developing Amadeus™, a next generation 4-armed robotic surgical system, with the objective of enabling surgeons to remotely manipulate surgical instruments. Robotic surgery has developed over the past 10 years into a proven and growing method of treatment. The global robotic surgical market size is currently estimated to be over \$5 billion annually with potential for placement of 6,000 robotic surgical systems. The Company is researching and developing innovative technologies to empower surgeons to use robots in the operating room of the future.

Investment Highlights

- Innovative and potential disruptive technology positioned to revolutionize robotic surgery
- Large robotic surgery market opportunity estimated at \$5 billion annually with numerous untapped surgical areas
- Attractive razor/razorblade business model
- Strong IP portfolio with 3 issued U.S. patents on ancillary robotic technology and 6 U.S. core patents in examination process in the areas of instrumentation, hand controller and console interface
- World-class development partnerships

Amadeus Technology Value Proposition**Improved robotic arm flexibility**

Snakelike arms enable obstacle avoidance in the body, give multiple approach paths to a surgical target, and free the arms from fulcrum constraints at the body port site. As a result, more surgical procedures can be addressed safely and less invasively.

Force feedback (Haptics)

Allows surgeons to feel how hard they are pulling on tissues, sutures, or other structures. Helps to minimize tissue damage and patient recovery time.

Communications (Telesurgery)

Amadeus is designed to operate on an internet protocol, connecting surgeons and patients over distance and making remote surgeries a reality.

Superior vision system

1080p 3D HD vision will allow surgeons to see anatomy with better resolution than ever before. Key blood vessels or other vital structures will be easily identified, thereby increasing safety.

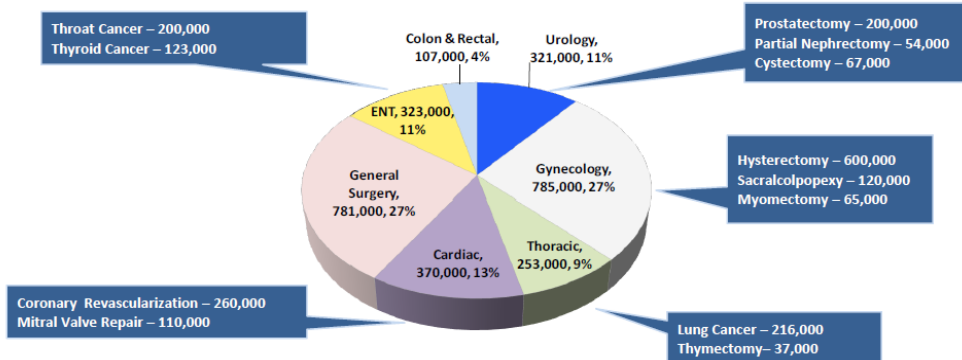
Simulation

Will ensure quicker and efficient procedure training.

Development Partners

Large Addressable Market

2.9 million newly diagnosed cases each year



- Over 2.0 million surgeries are performed annually worldwide
 - ✓ 200,000 of surgeries are currently done robotically
 - ✓ Prostatectomy (89,000) and hysterectomy (69,000) represent 80% of those surgeries
- Urology and Gynecology will be a key market focus at first
- Titan's technological advantages will play a bigger part in ENT (Ear, Nose & Throat) and Thoracic fields (throat and thyroid cancer)

Source: American Cancer Society

Management Team

Craig Leon, MBA
Chief Executive Officer

- CFO & COO, Redwood Asset Management, 2003-2009
- Genex Biotechnology Corp. (GNBT: Nasdaq), 2000-2003
- Co-Founder, MiFund.com, 1999-2000

Reiza Rayman, MD, PhD
President

- Clinical research in robotic surgery since 1998
- Collaborated in world's first endoscopic robotic coronary artery bypass (1999)
- North America's first surgical telementoring
- Obtained \$30M grant for robotic surgery
- Author and co-author of more than 20 publications on robotic surgery

Stephen D. Randall, CGA
Chief Financial Officer

- Served as an auditor, CFO, corporate controller and accountant for several public and private companies and government organizations
- Experience in tax planning/compliance, M&A, IT & operations

Joe Talarico, JD
VP Business Development

- Various positions with Intuitive Surgical Inc., including Area Training Director, Clinical Sales Manager, Area Sales Manager and Clinical Sales Representative (2004-2009)
- Territory Manager for U.S. Surgical Corporation training and selling laparoscopic equipment (2003-2004)

Thomas Cliche, MSEE
Manager, Engineering

- 10 years experience in R&D, operations, new product management, engineering
- Positions held with Stryker Medical and M2S Electronics

Medical Advisors

Douglas Boyd, MD

- Completed world's first robotic beating heart cardiac bypass surgery
- Director of Robotics & Professor of cardiothoracic surgery at UC Davis

Garth H. Ballantyne, MD

- Leading laparoscopic surgeon
- In 1997 appointed Professor of Surgery & Director of Minimally Invasive & Telerobotic Surgery at Hackensack University Medical Center

Bill Cohn, MD

- More than 40 patents, including devices to operate on a beating heart
- In 2000, named Distinguished Inventor of the Year by IPOA

Bob Kiaii, MD

- Research activity includes robotic-assisted cardiac surgery, harvesting of arterial conduits for MIS and robotic cardiac surgery

John R. Valvo, MD

- Chair of Robotic Surgery at Rochester General Hospital in Rochester NY
- Has performed over 600 robotic prostatectomies

Contact Information

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Except for historical information contained herein, the statements in this fact sheet are forward looking. A fuller discussion of Titan Medical's risks and uncertainties is available in the "Risk Factors" section of the Company's Annual Information Form dated April 9, 2010 (which may be viewed at www.sedar.com).