UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 6-K

REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16 UNDER THE SECURITIES EXCHANGE ACT OF 1934

For the month of March, 2021.

Commission File Number: 001-38524

Titan Medical Inc.

(Exact Name of Registrant as Specified in Charter)

155 University Avenue, Suite 750 Toronto, Ontario M5H 3B7 Canada

| (Address of principal executive offices) |
|---|
| Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F. Form 20-F □ Form 40-F ⊠ |
| Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): |
| Note: Regulation S-T Rule 101(b)(1) only permits the submission in paper of a Form 6-K if submitted solely to provide an attached annual report to security holders. |
| Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): |
| Note: Regulation S-T Rule 101(b)(7) only permits the submission in paper of a Form 6-K if submitted to furnish a report or other document that the registrant foreign private issuer must furnish and make public under the laws of the jurisdiction in which the registrant is incorporated, domiciled or legally organized (the registrant's "home country"), or under the rules of the home country exchange on which the registrant's securities are traded, as long as the report or other document is not a press release, is not required to be and has not been distributed to the registrant's security holders, and, if discussing a material event, has already been the subject of a Form 6-K submission or other Commission filing on EDGAR. |
| |

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

TITAN MEDICAL INC. (Registrant)

Date: March 16, 2021

By: /s/ Monique L. Delorme
Name: Monique L. Delorme
Title: Chief Financial Officer

EXHIBIT INDEX

99.1Press Release dated March 9, 202199.2Press Release dated March 10, 2021

Titan Medical Issues Corporate Update

Large market opportunity, strong corporate foundation, innovative robotic-assisted technology

Clinical studies expected to commence in 2022

TORONTO--(BUSINESS WIRE)--March 9, 2021--Titan Medical Inc. ("Titan" or the "Company") (TSX: TMD) (Nasdaq: TMDI), a medical device company focused on the design and development of surgical technologies for robotic single access surgery, today announced a corporate update in conjunction with its presentation at the H.C. Wainwright Global Life Sciences Conference. David McNally, President, CEO and Chairman of Titan Medical, will provide an overview of the Company and its EnosTM robotic single access surgical system at the conference, which is available for on-demand access on Titan Medical's website under the "Investors" section.

"We are pleased to further detail our corporate strategy and the market opportunity for our Enos surgical system. The achievements to date position Titan for success in attaining our vision for robotic-assisted surgery that may allow patients less trauma, shorter hospitalization time, less scarring, faster recovery times and reduced post-operative pain," said David McNally. "With a strong cash position and expert in-house technical talent, the advanced development of the Enos surgical system is at full intensity. We plan to continue executing on our corporate milestones with the objectives of completing product development in 2021 and human clinical studies in 2022."

Corporate highlights, including those found in the presentation are included below.

Market Opportunity:

- Based on independent research, the total addressable US surgical robotics market could reach \$18 billion¹ with up to six million addressable procedures annually, and gynecologic surgery representing about \$1 billion in market potential, in the US alone.² Titan intends to initially pursue gynecologic surgical indications with the Enos system.
- The current robotic surgery market appears to be underpenetrated due in part to costs associated with existing robotic surgical systems. The Enos surgical system is being developed to allow hospitals to benefit from increased procedure throughput and reduced post-operative hospitalization of patients.
- Surgical procedures have evolved from open surgery with the growth of minimally invasive surgery, and further with the evolution in robotic assisted surgery.
 Current robotic assisted surgical systems are primarily comprised of multi-port systems, typically involving three instruments and a camera, and each requiring a separate incision. With single port, or single access, robotic surgery, the number and size of incisions, or access points, is further reduced. The Enos surgical system is a robotic surgical system designed for single access surgery.
- Reducing the number of incisions to a single access point may potentially reduce the trauma, complications, scarring, healing time, and use of post-operative pain medications associated with surgery. This may especially be relevant in the context of a post-COVID-19 environment.

Titan Medical's Enos Surgical System:

- Through an aperture of approximately 25-millimeter diameter, the Enos robotic single access surgical system is designed to provide:
 - Two multi-articulating instruments with fluid "snake-like" movement engineered to generate the forces necessary for performing complex surgical
 tasks, including suturing, and built with an open architecture to accommodate a variety of end-effectors and to adapt to future surgical tools and
 technologies
 - A dual-view 3D and 2D endoscopic high-definition vision system, each supporting independent integrated illumination.
- An easy to maneuver ergonomic surgeon workstation has been designed with embedded software for simulation training and surgeon overlays for providing interoperative feedback.
- A compact single-arm patient cart provides for fast set-up and unencumbered assistance by operating room staff.
- The complete surgical system of a surgeon workstation, patient cart, instrument and accessories is designed to deliver operating room efficiency and positive hospital economics.
- While the initial indication for use is expected to be benign gynecologic surgery, preclinical evidence suggests that the system may ultimately have application in other subspecialties, including urologic, colorectal and general surgery.⁴
- An expanding intellectual property portfolio presently comprises over 150 U.S. and international patents issued or pending. Titan's intellectual property stems from several years of innovation in robotic assisted surgery covering technologies from hand controllers, to multi-articulating instruments, to unique software functionality including interoperative feedback. A select portion of the intellectual property portfolio and associated technologies have been licensed to global medical device leader Medtronic plc in exchange for license fees, with the Company retaining world-wide rights to commercialize the technologies for use with the Enos surgical system. The Company continues to build on and seek additional avenues for leveraging and/or expanding its intellectual property portfolio.

Corporate Resources:

- As of January 31, 2021, the Company had pro forma cash and cash equivalents of approximately \$65.5 million when including proceeds of over \$30 million in equity financings and \$10 million in warrant exercises in January and February 2021.
- In 2020, the Company generated \$20 million in license revenue from its development and license agreements with Medtronic.

Future Company Milestones:

- Under an ongoing development and license agreement with Medtronic and with the satisfaction of certain milestones thereunder, the Company expects to generate \$21 million in additional license revenue in 2021.
- With its Enos surgical system, over the next two years the Company plans to complete product development and tooling for initial manufacturing, apply for an
 Investigational Device Exemption from the U.S. FDA, and once approved, conduct human clinical studies compiling data to prepare for FDA marketing
 authorization application.

For full financial information, including a detailed milestone table, please see the Company's consolidated financial statements and annual management's discussion and analysis for the year ended December 31, 2020 and December 31, 2019, which may be viewed at www.sedar.com and at www.sec.gov.

Sources

- 1. 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. Life Science Intelligence Report LSI-PV-US1753SU, published 2017
- 3. A Fact Sheet from the Office on Women's Health, Depart of Health & Human Services, USA, www.womenshealth.gov
- 4. See preclinical studies, peer-reviewed abstracts and published manuscript referenced on pages 12-14 of Titan Medical Overview dated March 9, 2021, which can be accessed on the Company's website, www.titanmedicalinc.com.

About Titan

Titan Medical Inc., a medical device company headquartered in Toronto, is focused on developing robotic assisted technologies for application in single access surgery. The EnosTM system, by Titan Medical, is being developed with dual 3D and 2D high-definition vision systems, multi-articulating instruments, and an ergonomic surgeon workstation. With the Enos system, Titan intends to initially pursue gynecologic surgical indications.

Certain of Titan's robotic assisted surgical technologies and related intellectual property have been licensed to Medtronic plc, while retaining world-wide rights to commercialize the technologies for use with the Enos system.

Enos™ is a trademark of Titan Medical Inc.

For more information, visit www.titanmedicalinc.com.

Forward-Looking Statements

This news release contains "forward-looking statements" within the meaning of applicable Canadian and U.S. securities laws, which 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, including references to: the Company being focused on the design and development of surgical technologies for robotic single access surgery; the large market opportunity for the Company; that clinical studies are expected to commence in 2022; that David McNally will provide an overview of the Company and its Enos robotic single access surgical system at the H.C. Wainwright Global Life Sciences Conference; that the achievements to date position Titan for success in attaining its vision for robotic-assisted surgery that may allow patients less trauma, shorter hospitalization time, less scarring, faster recovery times and reduced post-operative pain; that the Company continues executing on its corporate milestones with the objectives of completing product development in 2021 and human clinical studies in 2022; that the total addressable US surgical robotics market could reach \$18 billion with up to six million addressable procedures annually; that gynecologic surgery represents about \$1 billion in market potential; that the Enos surgical system is being developed to allow hospitals to benefit from increased procedure throughput and reduced post-operative hospitalization of patients; that reducing the number of incisions to a single access point may potentially reduce the trauma, complications, scarring, healing time, and use of post-operative pain medications associated with surgery, which may especially be relevant in the context of a post-COVID-19 environment; that preclinical evidence suggests that the system may ultimately have application in other subspecialties, including urologic, colorectal and general surgery; that the Company expects to generate \$21 million in additional license revenue in 2021; the Company continues to build on and seek additional avenues for leveraging and/or expanding its intellectual property portfolio; that the Company plans to complete product development and tooling for initial manufacturing, apply for an Investigational Device Exemption from the U.S. FDA, and once approved, conduct human clinical studies compiling data to prepare for FDA marketing authorization application; that the Enos system is being developed with dual 3D and 2D high-definition vision systems, multi-articulating instruments, and an ergonomic surgeon workstation; Titan's intention to initially pursue gynecologic surgical indications with the Enos system; the license of certain of Titan's robotic assisted surgical technologies and related intellectual property to Medtronic ple, while retaining world-wide rights to commercialize the technologies for use with the Enos system. These statements reflect management's current beliefs, and are based on information currently available to management. Forward-looking statements involve significant risks, uncertainties and assumptions. Many factors could cause 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). 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 news release. 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 news release are based upon what management currently believes to be reasonable assumptions, the Company cannot assure prospective investors that actual results, performance or achievements will be consistent with these forward-looking statements. Except as required by law, the Company expressly disclaims any intention or obligation to update or revise any forward-looking statements whether as a result of new information, future events or otherwise.

Market Research Reporting

The data from the sources referenced in the footnotes speak as of their original publication dates (and not as of the date of this news release) 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.

Contact

Monique L. Delorme Chief Financial Officer +1-416-548-7522 investors@titanmedicalinc.com

Titan Medical to Participate in Upcoming Investor Conferences

TORONTO--(BUSINESS WIRE)--March 10, 2021--Titan Medical Inc. ("Titan" or the "Company") (TSX: TMD) (Nasdaq: TMDI), a medical device company focused on the design and development of surgical technologies for robotic single access surgery, today announced that, David McNally, President, CEO and Chairman and Monique Delorme, CFO of Titan Medical, will participate in two upcoming virtual investor conferences.

On March 16, 2021, Titan Medical will lead a day of one-on-one meetings with investors at the 33rd Annual ROTH Conference.

On March 17, 2021 at 2:30 p.m. ET, Titan Medical will participate in a fireside chat providing an overview of the Company and its EnosTM robotic single access surgical system at the Oppenheimer 31st Annual Healthcare Conference. A link to the live discussion and the replay will be available on the Company's website www.titanmedicalinc.com under the "Investors" section. The conference also includes a day of one-on-one meetings with investors.

About Titan Medical

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