

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-3

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

Skyline Medical Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or jurisdiction
of incorporation or organization)

33-1007393
(IRS Employer
Identification No.)

**2915 Commers Drive, Suite 900
Eagan, Minnesota 55121
(651) 389-4800**

(Address, including zip code, and telephone number, including
area code, of registrant's principal executive offices)

**Bob Myers, Chief Financial Officer
2915 Commers Drive, Suite 900
Eagan, Minnesota 55121
(651) 389-4800**

(Name, address, including zip code, and telephone number,
including area code, of agent for service)

**Copies to:
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Approximate date of proposed sale to the public: From time to time after the effective date of this Registration Statement.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box:

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See definition of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a smaller reporting company)

Emerging growth company

CALCULATION OF REGISTRATION FEE

| Title of each class of securities to be registered | Amount to be registered ⁽¹⁾ | Proposed maximum offering price per share ⁽²⁾ | Proposed maximum aggregate offering price ⁽²⁾ | Amount of registration fee |
|---|---|---|---|-----------------------------------|
| Common stock, par value \$0.01 per share | 1,857,179 | \$1.235 | \$2,293,616 | \$285.56 |

- (1) There is also being registered hereunder an indeterminate number of additional shares of common stock as shall be issuable pursuant to Rule 416 to prevent dilution resulting from stock splits, stock dividends or similar transactions.
- (2) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457 of the Securities Act based upon a \$1.235 per share average of high and low prices of the registrant's common stock on the Nasdaq Capital Market on December 7, 2017.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. The selling stockholder may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer, solicitation or sale is not permitted.

Subject to completion, dated December __, 2017

PROSPECTUS



SKYLINE MEDICAL INC.

1,857,179 Shares of Common Stock

This prospectus relates to the proposed resale or other disposition from time to time of up to 1,857,179 shares of Skyline Medical Inc. common stock, \$0.01 par value per share, by the selling stockholder identified in this prospectus. Of these shares, up to 1,250,269 are shares of common stock that may be issued upon conversion of our Series C Convertible Preferred Stock held by the selling stockholder and 606,910 are shares issuable upon the exercise of warrants held by the selling stockholder. We are not selling any shares of common stock under this prospectus and will not receive any of the proceeds from the sale or other disposition of common stock by the selling stockholder.

The selling stockholder or its pledgees, assignees or successors-in-interest may offer and sell or otherwise dispose of the shares of common stock described in this prospectus from time to time through public or private transactions at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices. The selling stockholder will bear all commissions and discounts, if any, attributable to the sales of shares. We will bear all other costs, expenses and fees in connection with the registration of the shares. See "Plan of Distribution" beginning on page 8 for more information about how the selling stockholder may sell or dispose of their shares of common stock.

Our common stock is listed on the Nasdaq Capital Market under the symbol "SKLN." On December 7, 2017, the last reported per share price of our common stock on the Nasdaq Capital Market was \$1.24 per share.

Investing in our common stock involves a high degree of risk. Before deciding whether to invest in our securities, you should consider carefully the risks that we have described on page 6 of this prospectus under the caption "Risk Factors" and in the documents incorporated by reference into this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is _____, 2017.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we have filed with the Securities and Exchange Commission (the “SEC”) pursuant to which the selling stockholder named herein may, from time to time, offer and sell or otherwise dispose of the securities covered by this prospectus. You should not assume that the information contained in this prospectus is accurate on any date subsequent to the date set forth on the front cover of this prospectus or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus is delivered or securities are sold or otherwise disposed of on a later date. It is important for you to read and consider all information contained in this prospectus, including the Information Incorporated by Reference herein, in making your investment decision. You should also read and consider the information in the documents to which we have referred you under the captions “Where You Can Find More Information” and “Incorporation of Information by Reference” in this prospectus.

Neither we nor the selling stockholder has authorized any dealer, salesman or other person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus. You should not rely upon any information or representation not contained or incorporated by reference in this prospectus. This prospectus does not constitute an offer to sell or the solicitation of an offer to buy any of our securities other than the securities covered hereby, nor does this prospectus constitute an offer to sell or the solicitation of an offer to buy any securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. Persons who come into possession of this prospectus in jurisdictions outside the United States are required to inform themselves about, and to observe, any restrictions as to the offering and the distribution of this prospectus applicable to those jurisdictions.

We further note that the representations, warranties and covenants made in any agreement that is filed as an exhibit to any document that is incorporated by reference in the prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

Unless the context otherwise requires, references in this prospectus to “Skyline,” the “Company,” “we,” “us,” and “our” refer to Skyline Medical Inc.

PROSPECTUS SUMMARY

The following is a summary of what we believe to be the most important aspects of our business and the offering of our securities under this prospectus. We urge you to read this entire prospectus, including the more detailed financial statements, notes to the financial statements and other information incorporated by reference from our other filings with the SEC. Each of the risk factors could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our securities.

Our Company

Skyline Medical produces a fully automated, patented, FDA-cleared waste fluid disposal system that virtually eliminates staff exposure to blood, irrigation fluid and other potentially infectious fluids found in the healthcare environment. Antiquated manual fluid handling methods that require hand carrying and emptying filled fluid canisters present an exposure risk and potential liability. Skyline Medical's STREAMWAY System fully automates the collection, measurement and disposal of waste fluids and is designed to: 1) reduce overhead costs to hospitals and surgical centers; 2) improve compliance with OSHA and other regulatory agency safety guidelines; 3) improve efficiency in the operating room, and radiology and endoscopy departments, thereby leading to greater profitability; and 4) provide greater environmental stewardship by helping to eliminate the approximately 50 million potentially disease-infected canisters that go into landfills each year in the U.S. Since our inception in 2002, we have invested significant resources into product development. We believe that our success depends upon converting the traditional process of collecting and disposing of infectious fluids from the operating rooms of medical facilities to our wall-mounted Fluid Management System ("SYSTEM") and use of our proprietary cleaning fluid and bifurcated filter.

Products. The STREAMWAY SYSTEM suctions surgical waste fluid from the patient using standard surgical tubing. The waste fluid passes through our proprietary disposable filters and into our device. The STREAMWAY SYSTEM maintains continuous suction to the procedural field at all times. A simple, easy to use Human Interface Display screen guides the user through the simple set up process, ensuring that a safe vacuum level is identified and set by the user for each procedure and additionally guides them through the cleaning process.

In contrast to competitive products, the wall-mounted SYSTEM does not take up any operating room floor space and it does not require the use of any external canisters or handling by operating room personnel. It does require a dedicated system in each operating room where it is to be used. The SYSTEM is the only known direct-to-drain system that is wall-mounted and designed to collect, measure and dispose of, surgical waste. Other systems on the market are portable, meaning that they are rolled to the bedside for the surgical case and then rolled to a cleaning area, after the surgery is complete, and use canisters, which still require processing or require a secondary device (such as a docking station) to dispose of the fluid in the sanitary sewer after it has been collected. They are essentially powered canisters.

The SYSTEM may be installed on or in the wall during new construction or renovation or installed in a current operating room by connecting the device to the hospital's existing sanitary sewer drain and wall suction systems. With new construction or renovation, the system will be placed in the wall and the incremental costs are minimal, limited to connectors to the hospital drain and suction systems (which systems are already required in an operating room), the construction of a frame to hold the SYSTEM in position, and minimal labor.

The Skyline disposables are a critical component of our business model. The disposables consist of a proprietary, pre-measured amount of cleaning solution in a plastic bottle that attaches to the SYSTEM. The disposables also include a 2-port bifurcated single use in-line filter. The proprietary cleaning solution, placed in the specially designed holder, is attached and recommended to be used following each surgical procedure. Due to the nature of the fluids and particles removed during surgical procedures, the SYSTEM is recommended to be cleaned following each use. The disposables have the "razor blade business model" characteristic with an ongoing stream of revenue for every SYSTEM unit installed, and revenues from the sale of the disposables are expected to be significantly higher over time than the revenues from the sale of the unit. Our disposable, bifurcated filter is designed specifically for use only on our SYSTEM. The filter is used only once per procedure followed by immediate disposal. Our operation instructions and warranty require that a Skyline filter is used for every procedure. We have exclusive distribution rights to the disposable fluid and facilitate the use of only our fluid for cleaning following procedures by incorporating a special container to connect the fluid to the connector on the SYSTEM. We will also tie the fluid usage, which we will keep track of with the SYSTEM software, to the product warranty.

Marketing and Sales Distribution. We currently have a Vice President of Sales, one in house sales person and five regional sales managers to sell the STREAMWAY SYSTEM. We have signed two independent contractors, and will continue to sign more, to further represent the Company across the country and in Canada in the fourth quarter and fiscal 2018. We have been issued our Medical Device Establishment License permitting the Company to sell the STREAMWAY SYSTEM and disposables across the 13 provinces of Canada. In March 2017, the Company completed its first sale of a STREAMWAY SYSTEM to a customer in Ontario. In June 2017, we received notice that our STREAMWAY SYSTEM has met all requirements and can now be affixed with the CE mark and marketed in 32 European countries. We have signed a contract with a special consultant to hire distributors throughout Europe and Canada to sell the STREAMWAY SYSTEM. During the fourth quarter, we have executed contracts with three international distributors. Quadromed, is a Canadian distributor who will represent us throughout the entire Canadian country over the next two years, with annual automatic renewals. MediBridge Sarl, is a Swiss distributor representing us in Switzerland entirely over the next two years, with annual automatic renewals. Device Technologies Australia PTY LTD, is an Australian distributor representing us throughout Australia, New Zealand, Fiji and the Pacific Islands over the next five years with annual automatic renewals.

We have also reached a short-term exclusive agreement with Alliant Healthcare, a major provider of medical device products to the federal government. Alliant Healthcare is a CVE verified SDVOSB (Service-Disabled Veteran-Owned Small Business). The agreement is for ninety days (July 1 – September 30, 2017), with an optional ninety-day renewal term (October 1 – December 31, 2017, the government's first fiscal quarter) upon agreement of both parties. We have signed a three-year contract with Alliant effective November 1, 2017 ending October 31, 2020, with annual automatic renewals thereafter.

Corporate Strategy. Our strategy is focused on expansion within our core product and market segments, while utilizing a progressive approach to manufacturing and marketing to ensure maximum flexibility and profitability.

Our strategy is to:

- Develop a complete line of wall-mounted fluid evacuation systems for use in hospital operating rooms, radiological rooms and free standing surgery centers as well as clinics and physicians' offices.
- Provide products that greatly reduce healthcare worker and patient exposure to harmful materials present in infectious fluids and that contribute to an adverse working environment.
- Provide a hybrid sales force utilizing direct salespersons, manufacturing representatives and distributors.
- Continue to utilize operating room consultants, builders and architects as referrals to hospitals and day surgery centers.

Our strategies may also include:

- Partnering with leading GOP's (Group Purchasing Organizations) to gain access to the majority of hospital systems in the United States.
- Employing a lean operating structure, while utilizing the latest trends and technologies in manufacturing and marketing, to achieve both market share growth and projected profitability.
- Providing a leasing program and/or "pay per use" program as alternatives to purchasing.
- Providing service contracts to establish an additional revenue stream.
- Utilizing the manufacturing experience of our management team to develop sources of supply and manufacturing to reduce costs while still obtaining excellent quality. While cost is not a major consideration in the roll-out of leading edge products, we believe that being a low-cost provider will be important long term.

· Offering an innovative warranty program that is contingent on the exclusive use of our disposables to enhance the success of our after-market disposable products.

Strategic Relationships and Transactions. The Company is seeking to broaden its business and from time to time considers acquisitions of companies and strategic partnerships and investments.

On August 9, 2017, the Company entered into an Agreement and Plan of Merger (the “Merger Agreement”) with Skyline Cyto Acquisition, Inc. and CytoBioscience, Inc. (“CytoBioscience”). CytoBioscience creates and manufactures devices used in human cell research focused on new therapeutic drug development and has a well-known scientific and technical staff, collaborative partnerships with leading pharmaceutical companies and strategic alliances with key groups and academic institutions. The Merger Agreement contemplated a reverse triangular merger with CytoBioscience becoming a wholly owned operating subsidiary of the Company (the “Merger”). In November 2017, the Company and CytoBioscience announced that they terminated the Merger Agreement to focus on structuring a proposed joint venture to market CytoBioscience’s personalized research services

In November 2017, the Company announced a proposed joint venture with Helomics Corporation, a precision diagnostic company and integrated clinical contract research organization, to use the Helomics D-CHIP™ platform to develop new approaches for personalized cancer diagnosis and care. This partnership between the two companies is expected to provide Skyline with opportunities to generate revenues from additional markets. Skyline Medical will own 51% of the joint venture, with Helomics owning the remaining 49%.

In November 2017, the Company, Helomics Corporation and GLG Pharma, a company developing precision medicines that target the Signal Transducer and Activator of Transcription factor 3 (“p-STAT3 and STAT3”) pathway, jointly announced a strategic partnership among these three companies, focused on using their combined technologies to bring personalized medicines and testing to ovarian and breast cancer patients, especially those who present with ascites fluid (over one-third of patients). The partnership brings GLG’s new Cell Capture, Culture and Screening system to help isolate samples of ascites fluids from patients that may contain cancer stem cells, cancer cells and other cells together with the Skyline-Helomics. The partnership will build on Skyline’s STREAMWAY System to add a collection system for ascites fluids based on GLG’s Capture, Culture and Screening system, that pathologists can then process and send to Helomics for further evaluation in using Helomics’ ChemoFx® diagnostic platform. Together with a combination of STAT3 inhibitors from GLG, the partnership is expected to create new revenue streams to be shared between the Skyline-Helomics venture and GLG.

Financial Condition and Results of Operations. Since inception, we have been unprofitable. We incurred net losses of approximately \$1.0 million and \$4.9 million for the three and nine months ended September 30, 2017, and \$1.1 million and \$5.8 million for the three and nine months ended September 30, 2016, respectively. As of September 30, 2017, and September 30, 2016, we had an accumulated deficit of approximately \$51.9 million and \$47.0 million, respectively.

We received approval from the FDA in April 2009 to commence sales and marketing activities of the STREAMWAY SYSTEM and shipped the first system in 2009. However, there was no significant revenue prior to 2011, primarily due to lack of funds to build and ship the product. In the first quarter of 2014, the Company commenced sales of an updated version of the STREAMWAY SYSTEM, which provides several enhancements to the existing product line including a more intuitive and easier to navigate control screen, data storage capabilities, and additional inlet ports on the filters, among other improvements. This updated version utilizes improved technology, including the capability for continuous flow and continuous suctioning, as covered by our provisional patent application filed in 2013 and our non-provisional patent application filed in January 2014. We have sold one hundred three STREAMWAY units to date.

We expect the revenue for STREAMWAY SYSTEM units to increase significantly at such time as significantly more hospitals approve the use of the units for their applications and place orders for billable units. We also expect an increase in trial-based units. Trial basis units are either installed in or hung on the hospital room wall. The unit is connected to the hospital plumbing and sewer systems, as well as, the hospital vacuum system. The unit remains on the customer site for 2 – 4 weeks, as contracted, at no cost to the customer. However, the customer does purchase the disposable products (cleaning fluid and filters) necessary to effectively operate the units. Once the trial period has expired, the unit is either returned to the Company or purchased by the customer. If purchased, at that time, the Company invoices the customer based upon a contracted price negotiated prior to the trial.

Ability to Continue as a Going Concern

We have suffered recurring losses from operations and have a stockholders' deficit. Although we have been able to fund our current working capital requirements, principally through debt and equity financing, there is no assurance that we will be able to do so in the future. These factors raise substantial doubt about our ability to continue as a going concern. As a result of the above factors, our independent registered public accounting firm has indicated in their audit opinion, contained in our financial statements included in this prospectus that they have serious doubts about our ability to continue as a going concern.

Description of the Private Placement

On November 28, 2017, we entered into a securities purchase agreement (the "Securities Purchase Agreement") and related documentation with the selling stockholder, governing an offering by the Company of a newly created series of preferred stock designated as "Series C Convertible Preferred Stock" (the "Series C Stock"). The closing of the offering also occurred on November 28, 2017 (the "Closing Date"). Pursuant to the Securities Purchase Agreement, the selling stockholder purchased 1,213,819 shares of Series C Stock (the "Series C Shares") at a purchase price of \$1.071 per Series C Share, together with a warrant (the "Warrant") to purchase up to 606,910 shares of common stock. The Warrant has an exercise price of \$1.26 per share, subject to adjustment, has a five and one-half year term and is exercisable commencing six months following the date of issuance. The Warrant contains "blocker" provisions restricting the holders' ability to exercise if the issuance of shares upon exercise would result in the holder beneficially owning in excess of 4.99% or 9.99% of our common stock. Total gross proceeds to us from the offering were \$1.3 million, before deducting offering expenses. The rights, preferences, powers, restrictions and limitations of the Series C Stock are set forth in the Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock (the "Certificate of Designation"), which has been incorporated by reference as an exhibit to the registration statement of which this prospectus is a part. See "Where You Can Find More Information" and "Incorporation of Certain Information by Reference."

Pursuant to the Securities Purchase Agreement, and subject to certain exceptions, we agreed that we will not issue any equity security or any equity-linked or related security for a period of 45 days from the date that the Registration Statement (as defined below) is declared effective, and we have agreed not to enter into Variable Rate transactions (as such term is defined in the Securities Purchase Agreement) for a period of 12 months from the date that the Registration Statement is declared effective. In addition, we granted the selling stockholder the right to participate in up to one-third of the aggregate offering amount of a future series D preferred stock or similar round of Company financing. Further, as long as the selling stockholder holds outstanding Series C Shares with a stated value of at least \$250,000, we have agreed not to issue debt securities or any shares of preferred stock that are senior to or pari passu with the Series C Stock without the consent of the holders of a majority of the outstanding Series C Shares, except for issuances pursuant to acquisitions, joint ventures, license arrangements, leasing arrangements and other similar transactions.

In connection with the Offering and pursuant to a registration rights agreement (the "Registration Rights Agreement"), the Company has agreed to file a "resale" registration statement (the "Registration Statement") covering all of the shares of common stock issuable upon conversion of the Series C Shares (the "Conversion Shares") and upon exercise of the Warrant (the "Warrant Shares") by the 15th calendar day after the Closing Date (the "Filing Deadline") and cause the Registration Statement to be declared effective by the earlier of the 45th calendar day after the Closing Date and the 5th business day after we are notified by the SEC that the Registration Statement will not be reviewed or will not be subject to further review (the "Effectiveness Deadline"). The registration statement of which this prospectus is a part is that Registration Statement.

If (i) we fail to file the Registration Statement on or before the Filing Deadline (a "Filing Failure") or cause the Registration Statement to be declared effective on or before the Effectiveness Deadline (an "Effectiveness Failure"), (ii) we fail to maintain the effectiveness of the Registration Statement (a "Maintenance Failure"), or (iii) a Registration Statement covering the resale of the Conversion Shares and Warrant Shares is not effective and we fail to file current public information with the SEC that permits resales of such securities without restriction under Rule 144, then we be required to pay the holder of such securities an amount in cash or stock, for each month (or portion of a month) in which such delay shall occur, equal to one-and-one-half percent (1.5%) of the Investor's total committed purchase price for Series C Shares pursuant to the Securities Purchase Agreement until the applicable failure has been cured or, if earlier, until the Conversion Shares and Warrant Shares are sold or are otherwise can be sold pursuant to Rule 144 without any restrictions. Notwithstanding the foregoing, we will not be required to make more than six (6) payments (each in an amount equal to one-and-one-half percent (1.5%) of the selling stockholder's total committed purchase price for Series C Shares) as a result of a Filing Failure, an Effectiveness Failure or a Maintenance Failure.

The foregoing descriptions of each of the Securities Purchase Agreement, the Warrant and the Registration Rights Agreement are not complete and are qualified in their entirety by reference to the Securities Purchase Agreement, the Warrant and the Registration Rights Agreement, each of which has been incorporated by reference as an exhibit to the registration statement of which this prospectus is a part. See “Where You Can Find More Information” and “Incorporation of Certain Information by Reference.”

Corporate Information

Our address is 2915 Commers Drive, Suite 900, Eagan, Minnesota 55121. Our telephone number is (651) 389-4800, and our website address is www.skylinemedical.com. Our website address is www.skylinemedical.com. The information contained on, or that can be accessed through, our website is not part of this prospectus.

Risk Factors

Our business is subject to numerous risks. For a discussion of the risks you should consider before purchasing shares of our common stock, see “Risk Factors” on page 6 of this prospectus.

The Offering

This prospectus relates to the resale or other disposition from time to time of up to 1,857,179 shares of our common stock, of which up to 1,250,269 are shares of common stock that may be issued upon conversion of our Series C Convertible Preferred Stock held by the selling stockholder and 606,910 are shares issuable upon the exercise of warrants held by the selling stockholder, or its pledgees, assignees or successors-in-interest. See “Selling Stockholder” and “Plan of Distribution.”

The selling stockholder may offer to sell the shares being offered in this prospectus at fixed prices, at prevailing market prices at the time of sale, at varying prices or at negotiated prices. Our common stock is listed on the Nasdaq Capital Market under the symbol “SKLN.”

We have agreed to register the offer and sale of the common stock to satisfy registration rights we have granted to the selling stockholder. We will not receive any proceeds from the sale of the securities by the selling stockholder.

RISK FACTORS

Please carefully consider the risk factors described in our periodic reports filed with the SEC, which are incorporated by reference in this prospectus. Before making an investment decision, you should carefully consider these risks as well as other information we include or incorporate by reference in this prospectus. Additional risks and uncertainties not presently known to us or that we deem currently immaterial may also impair our business operations or adversely affect our results of operations or financial condition.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains, and the documents incorporated by reference herein and in any prospectus supplement hereto may contain, forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). These statements relate to future events or to our future financial performance and involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. Specific factors that might cause actual results to differ from our expectations or may affect the value of the common stock, include, but are not limited to those discussed in this prospectus under the caption “Risk Factors” above as well as the risk factors contained in our filings with the SEC that are incorporated by reference in this prospectus.

In some cases, you can identify forward-looking statements by terms such as “may,” “will,” “should,” “could,” “would,” “expects,” “plans,” “anticipates,” “believes,” “estimates,” “projects,” “predicts,” “potential” and similar expressions intended to identify forward-looking statements. These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. Given these uncertainties, you should not place undue reliance on these forward-looking statements.

Further, any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update any forward-looking statement or statements to reflect events or circumstances after the date on which such statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of shares of our common stock in this offering. The selling stockholder will receive all of the proceeds from this offering.

SELLING STOCKHOLDER

The shares of common stock being offered by the selling stockholder are those issuable to the selling stockholder upon conversion of our Series C Convertible Preferred Stock and those issuable upon the exercise of warrants. For additional information regarding the issuances of our Series C Convertible Preferred Stock and warrants to the selling stockholder, and the relationship between the selling stockholder and us, see “Prospectus Summary—Description of the Private Placement” above. We are registering the shares of common stock in order to permit the selling stockholder to offer the shares for resale from time to time.

The following table sets forth:

- the selling stockholder and other information regarding the beneficial ownership of the shares of common stock by the selling stockholder;
- the number of shares of common stock beneficially owned by the selling stockholder as of December 7, 2017, assuming the conversion of the Series C Convertible Preferred Stock held by the selling stockholder on that date and the exercise of warrants held by the selling stockholder on that date, without regard to any limitations on exercises prior to the sale of the shares covered by this prospectus;
- the number of shares that may be offered by the selling stockholder pursuant to this prospectus;
- the number of shares to be beneficially owned by the selling stockholder and its affiliates following the sale of any shares covered by this prospectus; and
- the percentage of our issued and outstanding common stock to be beneficially owned by the selling stockholder and its affiliates following the sale of all shares covered by this prospectus.

The selling stockholder may sell all, some or none of their shares in this offering. See “Plan of Distribution.”

| Selling Stockholder | Shares Beneficially Owned Before Offering ⁽¹⁾ | Total Shares Offered By Selling Stockholder | Shares Beneficially Owned After Offering ^{(1) (2)} | Percentage of Beneficial Ownership After Offering ^{(1) (2)} |
|-------------------------------------|---|--|--|---|
| Esousa Holdings, LLC ⁽³⁾ | 1,213,819 ⁽⁴⁾ | 1,857,179 ⁽⁵⁾ | 0 | * |

* Less than 1%

- (1) Beneficial ownership is determined in accordance with SEC rules, beneficial ownership includes any shares as to which the stockholder has sole or shared voting power or investment power, and also any shares which the stockholder has the right to acquire within 60 days of the date hereof, whether through the exercise or conversion of any stock option, convertible security, warrant or other right. The indication herein that shares are beneficially owned is not an admission on the part of the stockholder that he, she or it is a direct or indirect beneficial owner of those shares.
- (2) Assumes sales of all shares offered under this prospectus by the selling stockholder.
- (3) Rachel Glicksman is the Managing Member of Esousa Holdings, LLC and may be deemed to be a beneficial owner of the securities held by the selling stockholder. Rachel Glicksman disclaims beneficial ownership of such securities.
- (4) Includes 1,213,819 shares of our common stock issuable upon conversion of 1,213,819 shares of our Series C Convertible Preferred Stock held by the selling stockholder. Each share of Series C Convertible Preferred Stock is convertible into one share of common stock, subject to conversion rate adjustments in the event the closing bid price of our common stock on the day prior to the effective date of this Registration Statement is lower than \$1.26. However, the number of shares of common stock issuable upon conversion of Series C Convertible Preferred Stock held by the selling stockholder may not exceed 1,250,269. The calculation of beneficial ownership in this table does not take into account any such conversion rate adjustment. The shares of Series C Convertible Preferred Stock and the warrant held by the selling stockholder contain “blocker” provisions that limits the holder’s ability convert such shares and exercise the warrant to the extent that such conversion or exercise would cause its beneficial ownership in the Company to exceed either 4.99% or 9.99% of the Company’s then outstanding shares. The calculation of beneficial ownership in this table does not take into account the effect of such “blocker” provisions.

- (5) Includes up to 1,857,179 shares of our common stock, of which up to 1,250,269 are shares of common stock that may be issued upon conversion of our Series C Convertible Preferred Stock held by the selling stockholder and 606,910 are shares issuable upon the exercise of warrants held by the selling stockholder.

PLAN OF DISTRIBUTION

We are registering the shares of common stock issuable to the selling stockholder upon conversion of our Series C Convertible Preferred Stock held by the selling stockholder and exercise or exchange of warrants held by the selling stockholder to permit the resale of these shares of common stock by the holders of the common stock, the Series C Convertible Preferred Stock and warrants from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the selling stockholder of the shares of common stock. We will bear all fees and expenses incident to our obligation to register the shares of common stock.

The selling stockholder may sell all or a portion of the shares of common stock held by them and offered hereby from time to time directly or through one or more underwriters, broker-dealers or agents. If the shares of common stock are sold through underwriters or broker-dealers, the selling stockholder will be responsible for underwriting discounts or commissions or agent's commissions. The shares of common stock may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale or at negotiated prices. These sales may be effected in transactions, which may involve crosses or block transactions, pursuant to one or more of the following methods:

- on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;
- in the over-the-counter market;
- in transactions otherwise than on these exchanges or systems or in the over-the-counter market;
- through the writing or settlement of options, whether such options are listed on an options exchange or otherwise;
- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales made after the date the Registration Statement is declared effective by the SEC;
- broker-dealers may agree with a selling securityholder to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The selling stockholder may also sell shares of common stock under Rule 144 promulgated under the Securities Act of 1933, as amended, if available, rather than under this prospectus. In addition, the selling stockholder may transfer the shares of common stock by other means not described in this prospectus. If the selling stockholder effects such transactions by selling shares of common stock to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the selling stockholder or commissions from purchasers of the shares of common stock for whom they may act as agent or to whom they may sell as principal (which discounts, concessions or commissions as to particular underwriters, broker-dealers or agents may be in excess of those customary in the types of transactions involved). The selling stockholder may also loan or pledge shares of common stock to broker-dealers that in turn may sell such shares.

The selling stockholder may pledge or grant a security interest in some or all of the Series C Preferred Shares, warrants or shares of common stock owned by it and, if the selling stockholder defaults in the performance of its secured obligations, the pledgees or secured parties may offer and sell the shares of common stock from time to time pursuant to this prospectus or any amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending, if necessary, the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholder also may transfer and donate the shares of common stock in other circumstances in which case the pledgees, assignees or successors-in-interest will be the selling beneficial owners for purposes of this prospectus.

To the extent required by the Securities Act and the rules and regulations thereunder, the selling stockholder and any broker-dealer participating in the distribution of the shares of common stock may be deemed to be “underwriters” within the meaning of the Securities Act, and any commission paid, or any discounts or concessions allowed to, any such broker-dealer may be deemed to be underwriting commissions or discounts under the Securities Act. At the time a particular offering of the shares of common stock is made, a prospectus supplement, if required, will be distributed, which will set forth the aggregate amount of shares of common stock being offered and the terms of the offering, including the name or names of any broker-dealers or agents, any discounts, commissions and other terms constituting compensation from the selling stockholder and any discounts, commissions or concessions allowed or re-allowed or paid to broker-dealers.

Under the securities laws of some states, the shares of common stock may be sold in such states only through registered or licensed brokers or dealers. In addition, in some states the shares of common stock may not be sold unless such shares have been registered or qualified for sale in such state or an exemption from registration or qualification is available and is complied with.

There can be no assurance that the selling stockholder will sell any or all of the shares of common stock registered pursuant to the registration statement, of which this prospectus forms a part.

The selling stockholder and any other person participating in such distribution will be subject to applicable provisions of the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder, including, without limitation, to the extent applicable, Regulation M of the Exchange Act, which may limit the timing of purchases and sales of any of the shares of common stock by the selling stockholder and any other participating person. To the extent applicable, Regulation M may also restrict the ability of any person engaged in the distribution of the shares of common stock to engage in market-making activities with respect to the shares of common stock. All of the foregoing may affect the marketability of the shares of common stock and the ability of any person or entity to engage in market-making activities with respect to the shares of common stock.

We will pay all expenses of the registration of the shares of common stock pursuant to the registration rights agreement, estimated to be \$40,000 in total, including, without limitation, SEC filing fees and expenses of compliance with state securities or “blue sky” laws; provided, however, the selling stockholder will pay all underwriting discounts and selling commissions, if any. We will indemnify the selling stockholder against liabilities, including some liabilities under the Securities Act in accordance with the registration rights agreements or the selling stockholder will be entitled to contribution. We may be indemnified by the selling stockholder against civil liabilities, including liabilities under the Securities Act that may arise from any written information furnished to us by the selling stockholder specifically for use in this prospectus, in accordance with the related registration rights agreements or we may be entitled to contribution.

Once sold under the registration statement, of which this prospectus forms a part, the shares of common stock will be freely tradable in the hands of persons other than our affiliates.

LEGAL MATTERS

The validity of the common stock offered by this prospectus will be passed upon by Maslon LLP, Minneapolis, Minnesota.

EXPERTS

The financial statements of the Company as of December 31, 2016 and 2015 and for each of the two years in the period ended December 31, 2016 incorporated by reference in this prospectus and the registration statement have been so incorporated in reliance on the reports of Olsen Thielen & Co., Ltd, an independent registered public accounting firm, incorporated herein by reference, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, and file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy these reports, proxy statements and other information at the SEC's public reference facilities at 100 F Street, N.E., Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference facilities. SEC filings are also available at the SEC's web site at <http://www.sec.gov>.

This prospectus is only part of a registration statement on Form S-3 that we have filed with the SEC under the Securities Act and therefore omits certain information contained in the registration statement. We have also filed exhibits and schedules with the registration statement that are excluded from this prospectus, and you should refer to the applicable exhibit or schedule for a complete description of any statement referring to any contract or other document. You may inspect a copy of the registration statement, including the exhibits and schedules, without charge, at the public reference room or obtain a copy from the SEC upon payment of the fees prescribed by the SEC.

We also maintain a website at www.skylinemedical.com, through which you can access our SEC filings. The information set forth on, or accessible from, our website is not part of this prospectus.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" information that we file with them. Incorporation by reference allows us to disclose important information to you by referring you to those other documents. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. This prospectus omits certain information contained in the registration statement, as permitted by the SEC. You should refer to the registration statement and any prospectus supplement filed hereafter, including the exhibits, for further information about us and the securities we may offer pursuant to this prospectus. Statements in this prospectus regarding the provisions of certain documents filed with, or incorporated by reference in, the registration statement are not necessarily complete and each statement is qualified in all respects by that reference. Copies of all or any part of the registration statement, including the documents incorporated by reference or the exhibits, may be obtained upon payment of the prescribed rates at the offices of the SEC listed above in "Where You Can Find More Information." The documents we are incorporating by reference are:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2016, filed on March 15, 2017;
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2017, June 30, 2017 and September 30, 2017, filed on May 15, 2017, August 14, 2017 and November 14, 2017, respectively;

- our Current Reports on Form 8-K filed on (i) January 19, 2017, (ii) January 27, 2017, (iii) January 31, 2017, (iv) February 22, 2017, (v) June 22, 2017, (vi) August 2, 2017, (vii) August 10, 2017, (viii) August 11, 2017, (ix) August 15, 2017, (x) September 12, 2017, (xi) November 9, 2017, (xii) November 24, 2017, and (xiii) November 29, 2019; and
- The description of our common stock under the caption “Description of Securities – Common Stock” in Amendment No. 1 to our registration statement on Form S-4 filed on March 25, 2016.

We also incorporate by reference any future filings (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items unless such Form 8-K expressly provides to the contrary) made with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, including those made after the date of the initial filing of the registration statement of which this prospectus is a part and prior to effectiveness of such registration statement, until we file a post-effective amendment that indicates the termination of the offering of the securities made by this prospectus and will become a part of this prospectus from the respective dates that such documents are filed with the SEC. Any statement contained herein or in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes hereof or of the related prospectus supplement to the extent that a statement contained herein or in any other subsequently filed document which is also incorporated or deemed to be incorporated herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, a copy of any or all of the information that has been incorporated by reference in this prospectus but not delivered with this prospectus. You may request a copy of this information at no cost, by writing or telephoning us at the following address or telephone number:

Skyline Medical Inc.
Attention: Corporate Secretary
2915 Commers Drive, Suite 900
Eagan, Minnesota 55121
(651) 389-4800

You should rely only on information contained in, or incorporated by reference into, this prospectus and any prospectus supplement. We have not authorized anyone to provide you with information different from that contained in this prospectus or incorporated by reference in this prospectus. We are not making offers to sell the securities in any jurisdiction in which such an offer or solicitation is not authorized or in which the person making such offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make such offer or solicitation.

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the fees and expenses, other than underwriting compensation, payable in connection with the registration of securities hereunder. All amounts are estimates except for the SEC registration fee.

| | |
|------------------------------|---------------------|
| SEC Registration Fee | \$ 285.56 |
| Legal Fees and Expenses | \$ 20,000.00 |
| Accounting Fees and Expenses | \$ 10,000.00 |
| Miscellaneous | \$ 9,714.44 |
| Total | <u>\$ 40,000.00</u> |

Item 15. Indemnification of Directors and Officers.

We are a Delaware corporation and certain provisions of the Delaware Statutes and our bylaws provide for indemnification of our officers and directors against liabilities that they may incur in such capacities. A summary of the circumstances in which indemnification is provided is discussed below, but this description is qualified in its entirety by reference to our bylaws and to the statutory provisions.

Section 145 of the Delaware General Corporation Law provides for, under certain circumstances, the indemnification of our officers, directors, employees and agents against liabilities that they may incur in such capacities. A summary of the circumstances in which such indemnification provided for is contained herein, but that description is qualified in its entirety by reference to the relevant Section of the Delaware General Corporation Law.

In general, the statute provides that any director, officer, employee or agent of a corporation may be indemnified against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement, actually and reasonably incurred in a proceeding (including any civil, criminal, administrative or investigative proceeding) to which the individual was a party by reason of such status. Such indemnity may be provided if the indemnified person's actions resulting in the liabilities: (i) were taken in good faith; (ii) were reasonably believed to have been in or not opposed to our best interest; and (iii) with respect to any criminal action, such person had no reasonable cause to believe the actions were unlawful. Unless ordered by a court, indemnification generally may be awarded only after a determination of independent members of the Board of Directors or a committee thereof, by independent legal counsel or by vote of the stockholders that the applicable standard of conduct was met by the individual to be indemnified.

The statutory provisions further provide that to the extent a director, officer, employee or agent is wholly successful on the merits or otherwise in defense of any proceeding to which he was a party, he is entitled to receive indemnification against expenses, including attorneys' fees, actually and reasonably incurred in connection with the proceeding.

Indemnification in connection with a proceeding by or in the right of the Company in which the director, officer, employee or agent is successful is permitted only with respect to expenses, including attorneys' fees actually and reasonably incurred in connection with the defense. In such actions, the person to be indemnified must have acted in good faith, in a manner believed to have been in our best interest and must not have been adjudged liable to us unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability, in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expense which the Court of Chancery or such other court shall deem proper. Indemnification is otherwise prohibited in connection with a proceeding brought on behalf of the Company in which a director is adjudged liable to us, or in connection with any proceeding charging improper personal benefit to the director in which the director is adjudged liable for receipt of an improper personal benefit.

Delaware law authorizes us to reimburse or pay reasonable expenses incurred by a director, officer, employee or agent in connection with a proceeding in advance of a final disposition of the matter. Such advances of expenses are permitted if the person furnishes to us a written agreement to repay such advances if it is determined that he is not entitled to be indemnified by us.

The statutory section cited above further specifies that any provisions for indemnification of or advances for expenses does not exclude other rights under our certificate of incorporation, corporate bylaws, resolutions of our stockholders or disinterested directors, or otherwise. These indemnification provisions continue for a person who has ceased to be a director, officer, employee or agent of the corporation and inure to the benefit of the heirs, executors and administrators of such persons.

The statutory provision cited above also grants the power to the Company to purchase and maintain insurance policies that protect any director, officer, employee or agent against any liability asserted against or incurred by him in such capacity arising out of his status as such. Such policies may provide for indemnification whether or not the corporation would otherwise have the power to provide for it.

Article 8 of our certificate of incorporation provides that we shall indemnify our directors and officers to the fullest extent permitted by the Delaware General Corporation Law.

We have purchased directors' and officers' liability insurance in order to limit the exposure to liability for indemnification of directors and officers, including liabilities under the Securities Act of 1933.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted for our directors, officers, and controlling persons pursuant to the foregoing provisions or otherwise, we have been advised that in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

Item 16. Exhibits.

The exhibits to this registration statement are listed in the Exhibit Index to this registration statement, which Exhibit Index is hereby incorporated by reference.

Item 17. Undertakings.

(a) The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that the undertakings set forth in paragraphs (1)(i), (1)(ii) and (1)(iii) above do not apply if the registration statement is on Form S-3 or Form F-3 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement or is contained in a form of prospectus filed pursuant to Rule 424(b) that is a part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(6) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(7) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Minneapolis, State of Minnesota, on December 8, 2017.

SKYLINE MEDICAL INC.

By: /s/ Bob Myers
Bob Myers, Chief Financial Officer

POWER OF ATTORNEY

Each person whose signature to this registration statement appears below hereby constitutes and appoints Carl Schwartz and Bob Myers, signing singly as his or her true and lawful attorney-in-fact and agent, with full power of substitution, to sign on his behalf individually and in the capacity stated below and to perform any acts necessary to be done in order to file all amendments to this registration statement and any and all instruments or documents filed as part of or in connection with this registration statement or the amendments thereto and each of the undersigned does hereby ratify and confirm all that said attorney-in-fact and agent, or his substitutes, shall do or cause to be done by virtue hereof. The undersigned also grants to said attorney-in-fact, full power and authority to do and perform any and all acts necessary or incidental to the performance and execution of the powers herein expressly granted. This Power of Attorney shall remain in effect until revoked in writing by the undersigned.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated:

| <u>Name</u> | <u>Title</u> | <u>Date</u> |
|---|--|------------------|
| <u>/s/ Carl Schwartz</u> Carl Schwartz | Chief Executive Officer (principal executive officer) and Director | December 8, 2017 |
| <u>/s/ Bob Myers</u> Bob Myers | Chief Financial Officer (principal financial and accounting officer) | December 8, 2017 |
| <u>/s/ J. Melville Engle</u> J. Melville Engle | Director | December 8, 2017 |
| <u>/s/ Richard L. Gabriel</u> Richard L. Gabriel | Director | December 8, 2017 |
| <u>/s/ Timothy A. Krochuk</u> Timothy A. Krochuk | Director | December 8, 2017 |
| <u>/s/ Thomas J. McGoldrick</u> Thomas J. McGoldrick | Director | December 8, 2017 |
| <u>/s/ Andrew P. Reding</u> Andrew P. Reding | Director | December 8, 2017 |

EXHIBIT INDEX

| <u>Exhibit No.</u> | <u>Description</u> |
|------------------------------|--|
| <u>3.1</u> | Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the Current report on Form 8-K filed December 19, 2013) |
| <u>3.2</u> | Certificate of Amendment to Certificate of Incorporation to effect reverse stock split and reduction in authorized share capital filed with the Delaware Secretary of State on October 20, 2014 (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on October 24, 2014) |
| <u>3.3</u> | Certificate of Amendment to Certificate of Incorporation regarding increase in share capital, filed with the Delaware Secretary of State on July 24, 2015 (incorporated by reference to Appendix A to our Information Statement on Schedule 14C filed on June 30, 2015) |
| <u>3.4</u> | Certificate of Amendment to Certificate of Incorporation to increase authorized share capital, filed with the Delaware Secretary of State on September 16, 2016 (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on September 16, 2016) |
| <u>3.5</u> | Certificate of Amendment to Certificate of Incorporation to effect reverse stock split and reduction in authorized share capital, filed with the Delaware Secretary of State on October 26, 2016 (incorporation by reference to Exhibit 3.7 to the Current Report on Form 8-K filed on October 27, 2016) |
| <u>3.6</u> | Certificate of Amendment to Certificate of Incorporation regarding increase in share capital, filed with the Delaware Secretary of State on January 26, 2017 (incorporation by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on January 27, 2017) |
| <u>3.7</u> | Form of Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock (incorporated by reference to Exhibit 3.6 to the Registration Statement on Form S-1 (File No. 333-198962) filed on August 20, 2015) |
| <u>3.8</u> | Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on November 29, 2017) |
| <u>3.9</u> | Amended and Restated Bylaws (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed January 27, 2016) |
| <u>4.1</u> | Form of Investor Warrant (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K filed on November 29, 2017) |
| <u>5.1*</u> | Opinion of Maslon LLP as to the validity of the securities being registered |
| <u>10.1</u> | Securities Purchase Agreement dated November 28, 2017 (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on November 29, 2017) |
| <u>10.2</u> | Registration Rights Agreement dated November 28, 2017 (incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed on November 29, 2017) |
| <u>23.1*</u> | Consent of Olsen Thielen & Co., Ltd. |
| <u>23.2*</u> | Consent of Maslon LLP (included as part of Exhibit 5.1) |
| <u>24.1*</u> | Power of Attorney (included on signature page hereto) |

* Filed herewith

[MASLON LLP LETTERHEAD]

December 8, 2017

Skyline Medical Inc.
2915 Commers Drive, Suite 900
Eagan, Minnesota 55121

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel for Skyline Medical Inc., a Delaware corporation (the "*Company*"), in connection with registration on the Company's Registration Statement on Form S-3 (Registration Statement No. 333-_____) (the "*Registration Statement*"), under the Securities Act of 1933 (the "*Act*"), of the resale by the selling stockholder named therein (the "*Selling Stockholder*") of an aggregate of 1,857,179 shares (the "*Shares*") of the Company's common stock, \$.01 par value, including (i) 1,250,269 shares (the "*Preferred Conversion Shares*") issuable upon the conversion of the Company's Series C Convertible Preferred Stock (the "*Preferred Stock*") held by the Selling Stockholder, and (ii) 606,910 shares (the "*Warrant Shares*") issuable upon the exercise of warrants held by the Selling Stockholder (the "*Warrants*").

This opinion is being furnished in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Act.

In arriving at the opinion expressed below, we have examined originals, or copies certified or otherwise identified to our satisfaction as being true and complete copies of the originals, of such documents, corporate records, certificates of officers of the Company and of public officials and other instruments as we have deemed necessary or advisable to enable us to render the opinions set forth below. In our examination, we have assumed without independent investigation the genuineness of all signatures, the legal capacity and competency of all natural persons, the authenticity of all documents submitted to us as originals and the conformity to original documents of all documents submitted to us as copies.

We express no opinion herein as to the laws of any state or jurisdiction other than the General Corporation Law of the State of Delaware (including the statutory provisions and all applicable judicial decisions interpreting those laws) and the federal laws of the United States of America.

Based upon the following and upon the representations and information provided by the Company, we hereby advise you that, in our opinion:

1. The Preferred Conversion Shares have been duly authorized and the Preferred Conversion Shares, when issued upon conversion of the Preferred Stock in accordance with the terms of the Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock (the "*Certificate of Designation*") upon the satisfaction of conditions set forth therein, will be validly issued, fully paid and nonassessable; and
 2. The Warrant Shares have been duly authorized and the Warrant Shares, when issued upon exercise of the Warrants in accordance with the terms of the Warrants upon the satisfaction of conditions set forth therein, will be validly issued, fully paid and nonassessable.
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We hereby consent to the filing of this opinion as an exhibit to the Registration Statement, and to the reference to our firm under the heading "Legal Matters" in the prospectus comprising a part of the Registration Statement. This opinion is expressed as of the date hereof unless otherwise expressly stated, and we disclaim any undertaking to advise you of any subsequent changes in the facts stated or assumed herein or of any subsequent changes in applicable laws.

Very truly yours,

/s/ MASLON LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-3 of our report dated March 15, 2017, on the financial statements of Skyline Medical Inc., which appears in the Annual Report on Form 10-K of Skyline Medical Inc. for the year ended December 31, 2016, and to the reference to our firm under the heading “Experts” in the Prospectus.

Olsen Thielen & Co., Ltd.

/s/ Olsen Thielen & Co., Ltd.

St. Paul, Minnesota
December 8, 2017