

**Prospectus Supplement
(To the Prospectus dated September 8, 2014)**

SKYLINE MEDICAL, INC.

78,709,975 shares of common stock

This Prospectus Supplement supplements and amends the prospectus dated September 8, 2014, which we refer to as the "Prospectus." The Prospectus covers the resale by certain selling stockholders of up to 78,709,975 shares of our common stock, \$.01 par value, including 15,807,692 shares issuable upon conversion of our preferred stock, 423,560 shares to be issued as dividends on shares of preferred stock, 36,047,701 shares issuable upon the conversion of convertible promissory notes, and 26,431,022 shares issuable upon the exercise of warrants. We will not receive any of the proceeds from the sale of the common stock by the selling stockholders. However, we will receive the proceeds of any cash exercise of the warrants, and the conversion of any notes will reduce the outstanding principal and/or interest amount of certain indebtedness. Any proceeds received from the exercise of the warrants will be used for working capital and general corporate purposes.

This Prospectus Supplement is filed for the purpose of including in the Prospectus our Current Report on Form 8-K filed with the Securities and Exchange Commission on October 7, 2014, a copy of which is attached. The information set forth on the attachment supplements and amends the information contained in the Prospectus.

This Prospectus Supplement should be read in conjunction with, and is to be delivered with, the Prospectus and is qualified by reference to the Prospectus except to the extent that the information in this Prospectus Supplement supersedes the information contained in the Prospectus.

Our securities are not listed on any national securities exchange. Our common stock is currently quoted on the OTCQB marketplace under the symbol "SKLN.QB." The last reported per share price for our common stock was \$0.1099, as quoted by the OTCQB marketplace on October 8, 2014.

INVESTING IN OUR COMMON STOCK INVOLVES A HIGH DEGREE OF RISK. SEE "RISK FACTORS" BEGINNING ON PAGE 3 OF THE 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 Supplement is October 9, 2014.

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

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of the
Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): October 1, 2014

Skyline Medical Inc.
(Exact name of Registrant as Specified in its Charter)

Delaware
(State or Other Jurisdiction of Incorporation)

000-54361
(Commission File Number)

33-1007393
(IRS Employer Identification No.)

2915 Commers Drive, Suite 900
Eagan, Minnesota 55121
(Address of Principal Executive Offices and Zip Code)

(651) 389-4800
(Registrant's telephone number, including area code)

N/A
(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.

(b) On October 1, 2014, Dr. Amon Dreyfuss resigned as a director of Skyline Medical Inc.

SIGNATURES

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 hereunto duly authorized.

Date: October 7, 2014

SKYLINE MEDICAL INC.

By: /s/ Josh Komberg
Josh Komberg
President and Chief Executive Officer