

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

FORM S-3
REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

Predictive Oncology Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or jurisdiction
of incorporation or organization)

3842

(Primary Standard Industrial
Classification Code Number)

83-4360734

(I.R.S. Employer
Identification No.)

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

(Address and telephone number of registrant's principal executive offices and principal place of business)

Bob Myers

**Chief Financial Officer
Predictive Oncology Inc.
2915 Commers Drive, Suite 900
Eagan, Minnesota 55121
(651) 389-4800**

(Name, address and telephone number of agent for service)

Copy to:

**Martin R. Rosenbaum, Esq.
Maslon LLP
3300 Wells Fargo Center
90 South 7th Street
Minneapolis, Minnesota 55402
Telephone: (612) 672-8200
Facsimile: (612) 672-8397**

Approximate date of commencement of proposed sale to the public: From time to time on or after the effective date of this Registration Statement.

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.

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 the definitions 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

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of Securities Act.

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered	Proposed Maximum Offering Price Per Security	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common stock, \$0.01 par value per share, preferred stock, warrants, debt securities and units(1)	\$20,000,000(2)(3)	(2)	\$20,000,000(2)	\$2,596.00(3)

- (1) The securities being registered hereby may be convertible into or exchangeable or exercisable for other securities of any identified class. In addition to the securities that may be issued directly under this registration statement, there is being registered hereunder such indeterminate aggregate number or amount, as the case may be, of the securities of each identified class as may from time to time be issued upon the conversion, exchange, settlement or exercise of other securities offered hereby. Separate consideration may or may not be received for securities that are issued upon the conversion or exercise of, or in exchange for, other securities or that are issued in units.
- (2) Not specified as to each class of securities to be registered pursuant to General Instruction II.D of a Registration Statement on Form S-3 under the Securities Act of 1933, as amended (the "Securities Act"). The registrant is hereby registering such indeterminate number or amount, as the case may be, of the securities of each identified class as may from time to time be offered at indeterminate prices, with a total aggregate principal amount or initial purchase price not to exceed \$20.0 million. Securities registered hereby may be offered for U.S. dollars or the equivalent thereof in foreign currencies. Securities registered hereby may be sold separately or in combination with other securities registered hereby.
- (3) Paid herewith. Estimated solely for the purpose of computing the registration fee pursuant to Rule 457(o) under the Securities Act, and exclusive of accrued interest, distributions and dividends, if any. The proposed maximum offering price will be determined from time to time in connection with the issuance of the securities registered hereunder.

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.

EXPLANATORY NOTE

This registration statement is intended to be a replacement registration to the Registrant's Form S-3 Registration Statement that became effective on October 4, 2016 (File No. 333-213766) (the "Prior Registration Statement"). Until the effectiveness of this registration statement, the Registrant may make further sales under the Prior Registration Statement pursuant to subparagraphs (a)(5)(ii) and (a)(6) of Rule 415.

The information in this prospectus is not complete and may be changed. We 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 is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS, SUBJECT TO COMPLETION

DATED OCTOBER 3, 2019

\$20,000,000



Predictive Oncology Inc.

Predictive Oncology Inc.

**Common Stock
Preferred Stock
Warrants to Purchase Common Stock or Preferred Stock
Debt Securities
Units**

We may offer from time to time securities described in this prospectus separately or together in any combination. We may offer and sell such securities in one or more offerings with a total aggregate principal amount or initial purchase price not to exceed \$20.0 million. These securities may be convertible into or exchangeable for our other securities. This prospectus provides a general description of these securities. We will provide you with specific information about the offering and terms of these securities in supplements to this prospectus. The prospectus supplement may also add to, update, supplement or clarify information contained in this prospectus. This prospectus may not be used to offer or sell securities unless accompanied by a prospectus supplement.

You should carefully read this prospectus and any applicable prospectus supplement, together with any documents incorporated by reference, before you invest in our common stock.

We may offer and sell these securities on a continuous or delayed basis, at prices and on terms to be determined at the time of any particular offering, directly to purchasers, through agents, dealers or underwriters as designated from time to time, or through a combination of these methods. See "Plan of Distribution." The prospectus supplement for each offering will describe in detail the plan of distribution for that offering and will set forth the names of underwriters, dealers or agents, if any, involved in the offering and any applicable discounts or commissions payable to them. Net proceeds from the sale of the securities also will be set forth in the applicable prospectus supplement.

As of October 2, 2019, the aggregate market value of our outstanding common stock held by non-affiliates, or "public float," was \$19,585,299, based on 31,497,506 shares of outstanding common stock, of which 895,476 shares are held by affiliates, and a per share price of \$0.64, which represents the average of the last bid and ask prices of our common stock on August 9, 2019. During the 12 calendar months prior to and including the date of this prospectus supplement, we have sold our securities pursuant to General Instruction I.B.6 of Form S-3 in the aggregate amount of \$6,513,668.50, as calculated under such General Instruction. Pursuant to such General Instruction, in no event will we sell securities in a public primary offering in reliance on such General Instruction with a value exceeding one-third of our public float in any 12-month period.

Investing in our securities involves a high degree of risk. See “Risk Factors” beginning on page 6 of this prospectus. You should carefully read and consider the risk factors described in the applicable prospectus supplement and in the documents we incorporate by reference before you invest in our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is [•], 2019.

Table of Contents

	<u>Page</u>
About this Prospectus	i
The Company	1
Risk Factors	3
Note Regarding Forward Looking Statements	4
Use of Proceeds	6
Description of Capital Stock	7
Description of Warrants	14
Description of Debt Securities	16
Description of Units	24
Plan of Distribution	25
Legal Matters	27
Experts	27
Where You Can Find More Information	27

ABOUT THIS PROSPECTUS

This prospectus is part of a “shelf” registration statement on Form S-3 that we filed with the Securities and Exchange Commission, referred to as the “SEC,” under the Securities Act of 1933, as amended, referred to as the “Securities Act.” Under this shelf registration statement, we are registering the securities described in this prospectus with a total aggregate principal amount or initial purchase price not to exceed \$50.0 million. We may, from time to time, offer and sell such securities, or any combination of such securities, in one or more offerings.

This prospectus provides you with a general description of the securities we may offer. Each time we offer or sell securities, we will provide you with a prospectus supplement containing specific information about the terms of that offering. The prospectus supplement may also add to, update, supplement or clarify information contained or incorporated by reference, as applicable, in this prospectus. If there is any inconsistency between the information in this prospectus and the information in the prospectus supplement, you should rely on the information in the prospectus supplement. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information concerning us and the securities, you should read the entire registration statement and the additional information described under “Documents Incorporated by Reference” below.

Unless the context requires otherwise or unless otherwise indicated, all references to “Predictive,” “Skyline Medical,” “Company,” “we,” “our,” or “us” refer collectively to Predictive Oncology Inc.

You should rely only on the information contained or incorporated by reference, as applicable, in this prospectus, any prospectus supplement, or other offering materials related to an offering of securities described in this prospectus. We have not authorized anyone to provide you with different or additional information. If anyone provides you with different or additional information, you should not rely on it.

You should not assume that the information contained or incorporated by reference, as applicable, in this prospectus, any prospectus supplement, or other offering materials related to an offering of securities described in this prospectus is accurate as of any date other than the date of that document. Neither the delivery of this prospectus, any prospectus supplement or other offering materials related to an offering of securities described in this prospectus, nor any distribution of securities pursuant to this prospectus, any such prospectus supplement, or other offering materials shall, under any circumstances, create any implication that there has been no change in the information set forth or incorporated by reference, as applicable, in this prospectus, any such prospectus supplement or other offering materials since the date of each such document. Our business, financial condition, results of operations and prospects may have changed since those dates.

This prospectus does not constitute, and any prospectus supplement or other offering materials related to an offering of securities described in this prospectus will not constitute, an offer to sell, or a solicitation of an offer to purchase, the offered securities in any jurisdiction to or from any person to whom or from whom it is unlawful to make such offer or solicitation in such jurisdiction.

THE COMPANY

This summary contains basic information about us. You should read the entire prospectus carefully, especially the risks of investing in our securities discussed under “Risk Factors.” Some of the statements contained in this prospectus supplement, including statements under this summary and “Risk Factors” are forward-looking statements and may involve a number of risks and uncertainties. We note that our actual results and future events may differ significantly based upon a number of factors. You should not put undue reliance on the forward-looking statements in this document, which speak only as of the date on the cover of this prospectus. References to “we,” “our,” “us,” the “Company,” or “Predictive” refer to Predictive Oncology Inc., a Delaware corporation.

Business Overview

Predictive Oncology Inc. (NASDAQ: POAI) operates in two business areas: first, applying artificial intelligence to personalized medicine and drug discovery to provide personalized medicine solutions for patients and clinicians as well as clients in the pharmaceutical, diagnostic, and biotech industries, and second, production of the FDA-approved STREAMWAY® System for automated, direct-to-drain medical fluid disposal.

Predictive’s medicine business is committed to improving the effectiveness of cancer therapy using the power of artificial intelligence (AI) applied to rich data disease databases. This business launched with Predictive’s acquisition of 25% of the capital stock of Helomics Holding Corporation (“Helomics”), a precision medicine company and integrated clinical contract research organization whose mission is to improve patient care by partnering with pharmaceutical, diagnostic, and academic organizations to bring innovative clinical products and technologies to the marketplace. In addition to its proprietary precision diagnostics for oncology, Helomics offers boutique Contract Research Organization (CRO) services that leverage their patient-derived tumor models, coupled to a wide range of multi-omics assays (genomics, proteomics and biochemical), and a proprietary bioinformatics platform (D-CHIP) to provide a tailored solution to its client’s specific needs.

Predictive has also formed a subsidiary, TumorGenesis, to pursue a new rapid approach to growing tumors in the laboratory, which essentially “fools” the cancer cells into thinking they are still growing inside the patient. Predictive and Helomics have also announced a proposed joint venture with GLG Pharma 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 growth strategy in this business includes securing new partnerships and considering acquisitions in the precision medicine space.

On October 26, 2018, Predictive entered into an Amended and Restated Agreement and Plan of Merger (the “Merger Agreement”) with Helomics Acquisition, Inc., a wholly owned subsidiary of the Company (“Merger Sub”), and Helomics. The Merger Agreement contemplated a forward triangular merger whereby Helomics would merge with and into Merger Sub, with Merger Sub surviving the Merger as a wholly-owned operating subsidiary of Predictive (the “Merger”). The Merger was completed on April 4, 2019 and provided the Company, as the sole owner of Helomics, with full access to Helomics’ suite of AI, precision diagnostic and integrated CRO capabilities, which improve patient care and advance the development of innovative clinical products and technologies for the treatment of cancers.

Sold through the Skyline Medical business of Predictive Oncology, The STREAMWAY System 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.

For more information regarding Predictive’s businesses, please carefully consider the information contained 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 such information as well as other information we include or incorporate by reference in this prospectus.

Planned Special Stockholders Meeting

On September 30, 2019, the Company filed a definitive proxy statement with the SEC with respect to a special meeting of the Corporation's stockholders to be held on October 23, 2019 for the following purposes: (1) to approve an amendment of the Company's certificate of incorporation to effect a reverse stock split of the outstanding shares of its common stock at a ratio of not less than one-for-two (1:2) and not more than one-for-fifteen (1:15) (the "Reverse Split Proposal"); (2) to approve, pursuant to Nasdaq Listing Rule 5635, the issuance of shares of common stock of the Company in excess of applicable share caps upon conversion of the outstanding shares of Series E Stock; (3) to approve, pursuant to Nasdaq Listing Rule 5635, the issuance of shares of common stock of the Company pursuant to a contemplated equity line of credit arrangement of up to \$15.0 million, when and if negotiated with a specific investor; and (4) to approve a proposal to adjourn the Special Meeting, if necessary, to solicit additional proxies for approval of the preceding proposals, in the event that there are not sufficient votes at the time of the special meeting to approve any such proposal. The purpose of the Reverse Split Proposal is to give the Board the ability to prevent our stock from being delisted from The Nasdaq Stock Market LLC ("Nasdaq"). As described in a Current Report on Form 8-K filed on May 17, 2019, we must regain compliance with Nasdaq's minimum bid price requirement no later than November 11, 2019, and we believe it is likely that the reverse stock split will be necessary to assure compliance with such requirement.

Risks

We are subject to a number of risks. You should read the "Risk Factors" section of this prospectus beginning on page 6 for a discussion of factors to consider carefully before deciding to invest in shares of our common stock.

Corporate Information

We were originally incorporated on April 23, 2002 in Minnesota as BioDrain Medical, Inc. Effective August 6, 2013, BioDrain Medical, Inc. changed its name to Skyline Medical Inc. Pursuant to an Agreement and Plan of Merger effective December 16, 2013, Skyline Medical Inc. merged with and into a Delaware corporation with the same name that was its wholly-owned subsidiary, with such Delaware corporation as the surviving corporation of the merger. On August 31, 2015, Skyline Medical Inc. completed a successful offering and concurrent uplisting to The NASDAQ Capital Market. On February 1, 2018, Skyline Medical Inc. filed with the Secretary of State of Delaware a Certificate of Amendment to the Certificate of Incorporation to change its corporate name from Skyline Medical Inc. to "Precision Therapeutics Inc." On June 10, 2019, Precision Therapeutics Inc. filed with the Secretary of State of Delaware a Certificate of Amendment to the Certificate of Incorporation to change its corporate name from Precision Therapeutics Inc. to "Predictive Oncology Inc." Because of this change, the Company's common stock traded under the new ticker symbol "POAI," effective June 13, 2019. Skyline Medical remains as a division of Predictive and principally manufactures the STREAMWAY System.

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

RISK FACTORS

An investment in our securities involves a number of risks. Before deciding to invest in our securities, you should carefully consider the risks described below and discussed under the section captioned “Risk Factors” contained in our Annual Report on Form 10-K for the year ended December 31, 2018 and our Quarterly Report on Form 10-Q for the quarter ended June 30, 2019, which are incorporated by reference in this prospectus, together with the other information in this prospectus, the information and documents incorporated by reference herein, and in any prospectus supplement or free writing prospectus that we have authorized for use in connection with an offering. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment. The risks described in the documents referenced above are not the only ones that we face. Additional risks not presently known to us or that we currently deem immaterial may also affect our business.

NOTE REGARDING FORWARD-LOOKING STATEMENTS

Some of the statements made in this prospectus and the accompanying prospectus supplement are “forward-looking statements” that indicate certain risks and uncertainties related to the Company, many of which are beyond the Company’s control. The Company’s actual results could differ materially and adversely from those anticipated in such forward-looking statements as a result of certain factors, including those set forth below and elsewhere in this report. Important factors that may cause actual results to differ from projections include:

- The Company will not be able to continue operating without additional financing;
- Current negative operating cash flows;
- The terms of any further financing, which may be highly dilutive and may include onerous terms;
- Risks related to the recent Merger with Helomics; possible failure to realize anticipated benefits of the Merger; costs associated with the Merger may be higher than expected; the Merger may result in the disruption of the Company’s and Helomics’ existing businesses; and distraction of management and diversion of resources; delay in completion of the merger may significantly reduce the expected benefits;
- Risks related to the Company’s proposed joint ventures, including the need to negotiate the definitive agreements for the joint ventures; possible failure to realize anticipated benefits of the joint ventures; and costs of providing funding to the joint ventures
- Current negative operating cash flows, as well as the impact on our cash levels of advances to our strategic partners and possible future advances to such organizations or others;
- The terms of any further financing, which may be highly dilutive and may include onerous terms;
- Risk that we will be unable to protect our intellectual property or claims that we are infringing on others’ intellectual property;
- The impact of competition, the obtaining and maintenance of any necessary regulatory clearances applicable to applications of the Company’s technology;
- Inability to raise sufficient additional capital to operate our business;
- Risk that we never become profitable if our product is not accepted by potential customers;
- Possible impact of government regulation and scrutiny;
- Unexpected costs and operating deficits, and lower than expected sales and revenues, if any;
- Adverse economic conditions;
- Adverse results of any legal proceedings;
- The volatility of our operating results and financial condition;
- Inability to attract or retain qualified senior management personnel, including sales and marketing personnel;
- The potential delisting of our common stock from The Nasdaq Capital Market if we do not continue to meet applicable listing standards; and
- Other specific risks that may be alluded to in this prospectus or documents incorporated herein.

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. We discuss many of these risks in greater detail under the heading “Risk Factors” beginning on page S-7 of this prospectus supplement and in our SEC filings. Also, these forward-looking statements represent our estimates and assumptions only as of the date of the document containing the applicable statement.

You should read this prospectus, the documents we have filed with the SEC that are incorporated by reference and any free writing prospectus that we have authorized for use in connection with this offering completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in the foregoing documents by these cautionary statements.

Information regarding market and industry statistics contained in this prospectus is included based on information available to the Company that it believes is accurate. It is generally based on academic and other publications that are not produced for purposes of securities offerings or economic analysis. The Company has not reviewed or included data from all sources, and the Company cannot assure potential investors of the accuracy or completeness of the data included in this prospectus supplement and the accompanying prospectus. Forecasts and other forward-looking information obtained from these sources are subject to the same qualifications and the additional uncertainties accompanying any estimates of future market size, revenue and market acceptance of products and services. The Company has no obligation to update forward-looking information to reflect actual results or changes in assumptions or other factors that could affect those statements.

USE OF PROCEEDS

Unless otherwise indicated in the prospectus supplement, we intend to use the net proceeds from the sale of securities offered by the prospectus for general corporate purposes and working capital requirements. We may also use a portion of the net proceeds to:

- make capital expenditures,
- license or acquire intellectual property or technologies to incorporate into our products, or
- fund possible investments in and acquisitions of complementary businesses, partnerships, minority investments.

We have not determined the amounts we plan to spend on the areas listed above or the timing of these expenditures. As a result, our management will have broad discretion to allocate the net proceeds of the offerings. We have no current plans, commitments or agreements with respect to any acquisition as of the date of this prospectus.

DESCRIPTION OF CAPITAL STOCK

The following description summarizes the material terms of our capital stock. This summary is, however, subject to the provisions of our certificate of incorporation and bylaws. For greater detail about our capital stock, please refer to our certificate of incorporation and bylaws. For information about matters to be considered at a special stockholders meeting on October 23, 2019, which will affect our capital stock, see “The Company – Planned Special Stockholders Meeting.”

General

We are authorized to issue 100,000,000 shares of common stock, par value \$0.01 per share, and 20,000,000 shares of preferred stock, of which 2,300,000 shares are authorized as Series B Convertible Preferred Stock, par value \$0.01 per share, 3,500,000 shares are authorized as Series D Convertible Preferred Stock, par value \$0.01 per share and 350 shares are authorized as Series E Convertible Preferred Stock, par value \$0.01 per share.

Common Stock

As of September 27, 2019, we had 31,497,506 shares of common stock outstanding held by approximately 165 stockholders of record.

The holders of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders, provided that no proxy shall be voted if executed more than three years prior to the date of the stockholders’ meeting except if such proxy provides for a longer period. Holders of our common stock do not have cumulative voting rights.

The holders of common stock are entitled to receive ratably any dividends that may be declared from time to time by our board of directors out of funds legally available for that purpose. In the event of our liquidation, dissolution or winding up, the holders of common stock are entitled to share ratably in all assets remaining after payment of liabilities. The common stock has no preemptive or conversion rights or other subscription rights and there are no redemption provisions applicable to our common stock. All outstanding shares of common stock are fully paid and non-assessable, and the shares of common stock offered hereby will be fully paid and not liable for further call or assessment.

Except for directors, who are elected by receiving the highest number of affirmative votes of the shares entitled to be voted for them, or as otherwise required by Delaware law, and subject to the rights of the holders of preferred stock then outstanding (if any), all stockholder action is taken by the vote of a majority of the issued and outstanding shares of common stock present at a meeting of stockholders at which a quorum consisting of a majority of the issued and outstanding shares of common stock is present in person or proxy. In the absence of a quorum for the transaction of business, any meeting may be adjourned from time to time. The stockholders present at a duly called or held meeting may continue to do business until adjournment, notwithstanding the withdrawal of enough stockholders to leave less than a quorum. Our Chairman of the Board or, in his absence, any other director designated from time to time by the board of directors, shall preside at all meetings of stockholders.

Preferred Stock

Our Board of Directors has the authority, without action by our stockholders, to designate and issue up to 20,000,000 shares of preferred stock in one or more series or classes and to designate the rights, preferences and privileges of each series or class, which may be greater than the rights of our common stock. The Board’s authority to issue preferred stock without stockholder approval could make it more difficult for a third party to acquire control of our company, and could discourage such attempt.

Series B Convertible Preferred Stock Outstanding

In connection with an offering of units that closed on August 31, 2015, we issued as part of the units 1,895,010 shares of Series B Convertible Preferred Stock pursuant to a Certificate of Designation approved by our Board.

The Series B Convertible Preferred Stock separated from the other securities included within the units as of February 29, 2016 and are currently convertible. Only 79,246 shares of Series B Convertible Preferred Stock remain outstanding as of October 2, 2019.

Each share of Series B Convertible Preferred Stock is convertible into one share of common stock. The number of shares of common stock issuable upon conversion of the Series B Convertible Preferred Stock is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our common stock.

Upon the occurrence of a "Fundamental Transaction", each share of Series B Convertible Preferred Stock shall be automatically converted into one share of common stock of the Company, subject to the beneficial ownership limitation discussed in the next paragraph. A "Fundamental Transaction" means that (i) the Company shall, directly or indirectly, in one or more related transactions, (1) consolidate or merge with or into (whether or not the Company is the surviving corporation) any other person unless the shareholders of the Company immediately prior to such consolidation or merger continue to hold more than 50% of the outstanding shares of voting stock after such consolidation or merger, or (2) sell, lease, license, assign, transfer, convey or otherwise dispose of all or substantially all of the properties and assets of the Company and its subsidiaries, taken as a whole, to any other person, or (3) allow any other person to make a purchase, tender or exchange offer that is accepted by the holders of more than 50% of the outstanding shares of voting stock of the Company (not including any shares of voting stock of the Company held by the person or persons making or party to, or associated or affiliated with the persons making or party to, such purchase, tender or exchange offer), or (4) consummate a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with any other person whereby such other person acquires more than 50% of the outstanding shares of voting stock of the Company (not including any shares of voting stock of the Company held by the other person or other persons making or party to, or associated or affiliated with the other persons making or party to, such stock or share purchase agreement or other business combination), or (ii) any "person" or "group" (as these terms are used for purposes of Sections 13(d) and 14(d) of the Exchange Act and the rules and regulations promulgated thereunder), other than a Permitted Holder, is or shall become the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of 50% of the aggregate ordinary voting power represented by issued and outstanding voting stock of the Company. The term Permitted Holders means Josh Kornberg, Atlantic Partners Alliance and SOK Partners, LLC and each of their respective affiliates.

The Series B Convertible Preferred Stock is not be convertible by the holder of such preferred stock to the extent (and only to the extent) that the holder or any of its affiliates would beneficially own in excess of 4.99% of the common stock of the Company. For purposes of the limitation described in this paragraph, beneficial ownership and all determinations and calculations are determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder.

The Series B Convertible Preferred Stock has no voting rights, except that the holders of shares of a majority of the Series B Convertible Preferred Stock will be required to effect or validate any amendment, alteration or repeal of any of the provisions of the Certificate of Designation that materially adversely affects the powers, preferences or special rights of the Series B Convertible Preferred Stock, whether by merger or consolidation or otherwise; *provided, however*, that (i) in the event of an amendment to terms of the Series B Convertible Preferred Stock, including by merger or consolidation, so long as the Series B Convertible Preferred Stock remains outstanding with the terms thereof materially unchanged, or the Series B Convertible Preferred Stock is converted into, preference securities of the surviving entity, or its ultimate parent, with such powers, preferences or special rights that are, in the good faith determination of the Board of the Company, taken as a whole, not materially less favorable to the holders of the Series B Convertible Preferred Stock than the powers, preferences or special rights of the Series B Convertible Preferred Stock in effect prior to such amendment or the occurrence of such event, taken as a whole, then such amendment or the occurrence of such event will not be deemed to materially and adversely affect such powers, preferences or special rights of the Series B Convertible Preferred Stock and (ii) the authorization, establishment or issuance by the Corporation of any other series of preferred stock with powers, preferences or special rights that are senior to or on a parity with the Series B Preferred Stock, including, but not limited to, powers, preferences or special rights with respect to dividends, distributions or liquidation preferences, shall not be deemed to materially and adversely affect the power, preferences or special rights of the Series B Preferred Stock, and in the case of either clause (i) or (ii), the holders shall not have any voting rights with respect thereto, *and provided further that*, (iii) prior to the date that is the six month anniversary of the Issuance Date, no amendment, alteration or repeal of any of the provisions of this Certificate of Designation shall be made that affects the powers, preferences or special rights of the Series B Preferred Stock in any manner, whether by merger or consolidation or otherwise. An amendment to the terms of the Series B Convertible Preferred Stock only requires the vote of the holders of Series B Convertible Preferred Stock.

With respect to payment of dividends and distribution of assets upon liquidation or dissolution or winding up of the Company, the Series B Convertible Preferred Stock shall rank equal to the common stock of the Company. No sinking fund has been established for the retirement or redemption of the Series B Convertible Preferred Stock. As such, the Series B Convertible Preferred Stock is not subject to any restriction on the repurchase or redemption of shares by the Company due to an arrearage in the payment of dividends or sinking fund installments.

The Series B Convertible Preferred Stock also has no liquidation rights or preemption rights, and there are no special classifications of our Board related to the Series B Convertible Preferred Stock.

The shares of common stock issuable upon conversion of the Series B Convertible Preferred Stock have been duly authorized, validly issued and fully paid and are non-assessable. We have authorized and reserved at least that number of shares of common stock equal to the number of shares of common stock issuable upon conversion of all outstanding Series B Convertible Preferred Stock.

THE HOLDER OF SERIES B CONVERTIBLE PREFERRED STOCK DO NOT POSSESS ANY RIGHTS AS A STOCKHOLDER UNDER THE SHARES OF SERIES B CONVERTIBLE PREFERRED STOCK UNTIL THE HOLDER CONVERTS THE SHARES OF SERIES B CONVERTIBLE PREFERRED STOCK.

There is no established public trading market for our Series B Convertible Preferred Stock, and we do not expect a market to develop. We do not intend to apply to list Series B Convertible Preferred Stock on any securities exchange. Without an active market, the liquidity of the Series B Convertible Preferred Stock will be limited.

Series D Convertible Preferred Stock

On April 4, 2019, Predictive designated a series of preferred stock as “Series D Convertible Preferred Stock” with 3,500,000 shares, which were issued in connection with the business combination of Helomics Acquisition, Inc., a wholly-owned subsidiary of Predictive, with Helomics Holding Corporation in accordance with the terms of the Amended and Restated Agreement and Plan of Merger, dated as of October 26, 2018 that was effective April 4, 2019. The holders of Precision Series D Convertible Preferred Stock are not entitled to vote on the election of directors or most other matters presented to stockholders. Such holders have the right to vote on limited matters specified in the Certificate of Designation including, generally, effecting or validating any amendment, alteration or repeal of any of the provisions of the Certificate of Designation that materially and adversely affects the powers, preferences or special rights of the Series D Convertible Preferred Stock. Each share of Series D Convertible Preferred Stock is subject to automatic conversion, whereby each such share converts automatically on a 1:1 basis into a share of Predictive Common Stock upon the earlier of (i) the consummation of any fundamental transaction (e.g., a consolidation or merger, the sale or lease of all or substantially all of the assets of Precision or the purchase, tender or exchange offer of more than 50% of the outstanding shares of voting stock of Precision) or (ii) April 4, 2020.

The automatic conversion of Series D Convertible Preferred Stock is subject to certain beneficial ownership limitations, such that Precision will not affect any conversion of shares of Series D Convertible Preferred Stock into shares of Precision Common Stock to the extent that, after giving effect to such conversion, the holder of shares of Series D Convertible Preferred Stock, together with such holder’s affiliates, would beneficially own in excess of 4.99% of the number of shares of Precision Common Stock outstanding immediately after giving effect to the issuance of such conversion shares upon conversion by the applicable holder.

With respect to the payment of dividends and distribution of assets upon liquidation or dissolution or winding up of Precision, whether voluntary or involuntary, the Series D Convertible Preferred Stock shall rank equal to Precision Common Stock on an as-converted basis.

Series E Convertible Preferred Stock

On June 13, 2019, the Company authorized 350 shares (“Series E Shares”) of Series E Convertible Preferred Stock (“Series E Stock”). There are 256 Series E Shares outstanding as of October 2, 2019, and the Company does not intend to issue any further Series E Shares. Each Series E Share has a liquidation value of \$10,000. Upon liquidation, dissolution or winding up of the Corporation, the Series E Shares shall rank senior to the Series B Preferred Stock, Series D Preferred Stock and common stock. The Series E Shares shall not have dividend rights, and therefore no dividends will accrue on the Series E Shares.

Commencing on December 13, 2019 (six months after the date of first issuance), each Series E Share will be convertible into 0.056857% of the Company’s issued and outstanding shares of common stock immediately prior to conversion (rounded down to the nearest whole share), subject to the limitations below. On the date that is twelve months after the Final Closing (as defined in the Certificate), the Company has the option to automatically convert the Series E Shares into shares of the Company’s common stock, upon the same terms as the optional conversion, subject to the limitations below.

Notwithstanding the foregoing, if the total number of shares issuable upon conversion of all Series E Shares exceeds 19.9% of the Company’s issued and outstanding common stock immediately prior to the Initial Closing (the “Nasdaq Share Cap”) (such excess, the “Excess Conversion Shares”), then (i) only the portion of any Series E Share will be converted that results in the issuance of 0.056857% of the NASDAQ Share Cap (rounded down to the nearest whole share), and (ii) the portion of such Series E Share that would otherwise remain outstanding as a fractional share will be redeemed by the Company with funds legally available therefor, for a price equal to the market price of the common stock on the conversion date multiplied by 0.056857% of the Excess Conversion Shares. The limitation in this paragraph will not apply if the Company obtains stockholder approval to issue the Excess Conversion Shares as required by the Nasdaq’s Marketplace Rules.

Further, if on the date of any conversion, the total number of conversion shares issuable to a converting Holder would result in such Holder beneficially owning in excess of 19.9% of the number of shares of Common Stock outstanding immediately after giving effect to the issuance of such shares of Common Stock (the “Individual Holder Share Cap”) (such excess, the “Individual Excess Conversion Shares”), then the Company shall deliver, in lieu of any Individual Excess Conversion Shares, an amount of cash per Individual Excess Conversion Share equal to the market price of the Common Stock on the Conversion Date, unless stockholder approval is obtained as required by the Nasdaq’s Marketplace Rules.

The Company may redeem the Series E Stock on 10 days’ notice at 130% of the face value. Prior to redemption, the holders may convert their shares upon the same terms as the optional conversion.

In the event of a change of control of the Company (meaning an acquisition of 30% or more of the Company’s issued common shares by a single party/parties acting in concert) before the first anniversary of the Final Closing, the Company may compel holders to exercise the conversion rights of the Series E Share(s) at a time of Company’s choosing, upon the same terms as the optional conversion.

The Series E Shares will vote with the common stock as a single class on all matters submitted to a vote of stockholders of the Corporation other than any proposal to approve the issuance of the Excess Conversion Shares or any Individual Excess Conversion Shares. The Series E Shares will vote on an as-converted to common stock basis, taking into account the conversion limitations resulting from the Nasdaq Share Cap and the Individual Holder Share Cap, if and as applicable; however, the number of votes per Series E Share will not exceed 15,625.

One of More New Series of Preferred Stock

The following description of preferred stock and the description of the terms of any particular series of preferred stock that we choose to issue hereunder and that will be set forth in the related prospectus supplement are not complete. These descriptions are qualified in their entirety by reference to the certificate of designation relating to that series. The rights, preferences, privileges and restrictions of the preferred stock of each series will be fixed by the certificate of designation relating to that series.

The board of directors has the authority, without stockholder approval, subject to limitations prescribed by law, to provide for the issuance of the shares of preferred stock in one or more series, and by filing a certificate pursuant to the applicable law of the State of Delaware, to establish from time to time the number of shares to be included in each such series, and to fix the designation, powers, preferences and rights of the shares of each series and the qualifications, limitations or restrictions, including, but not limited to, the following:

- the number of shares constituting that series;
- dividend rights and rates;
- voting rights;
- conversion terms;
- rights and terms of redemption (including sinking fund provisions); and
- rights of the series in the event of liquidation, dissolution or winding up.

All shares of preferred stock offered hereby will, when issued, be fully paid and nonassessable and will not have any preemptive or similar rights. Our board of directors could authorize the issuance of shares of preferred stock with terms and conditions that could have the effect of discouraging a takeover or other transaction that might involve a premium price for holders of the shares or which holders might believe to be in their best interests.

We will set forth in a prospectus supplement relating to the series of preferred stock being offered the following items:

- the title and stated value of the preferred stock;
- the number of shares of the preferred stock offered, the liquidation preference per share and the offering price of the preferred stock;
- the dividend rate(s), period(s) and/or payment date(s) or method(s) of calculation applicable to the preferred stock;
- whether dividends are cumulative or non-cumulative and, if cumulative, the date from which dividends on the preferred stock will accumulate;
- the procedures for any auction and remarketing, if any, for the preferred stock;

- the provisions for a sinking fund, if any, for the preferred stock;
- the provision for redemption, if applicable, of the preferred stock;
- any listing of the preferred stock on any securities exchange;
- the terms and conditions, if applicable, upon which the preferred stock will be convertible into common stock, including the conversion price (or manner of calculation) and conversion period;
- voting rights, if any, of the preferred stock;
- a discussion of any material and/or special United States federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights upon the liquidation, dissolution or winding up of our affairs;
- any limitations on issuance of any class or series of preferred stock ranking senior to or on a parity with the class or series of preferred stock as to dividend rights and rights upon liquidation, dissolution or winding up of our affairs; and
- any other specific terms, preferences, rights, limitations or restrictions of the preferred stock.

The transfer agent and registrar for any series of preferred stock will be set forth in the applicable prospectus supplement.

Anti-Takeover Provisions

Delaware Law

We are subject to Section 203 of the Delaware General Corporation Law. This provision generally prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date the stockholder became an interested stockholder, unless:

- prior to such date, the board of directors approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding those shares owned by persons who are directors and also officers and by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to such date, the business combination is approved by the board of directors and authorized at an annual meeting or special meeting of stockholders and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an “interested stockholder” as any entity or person beneficially owning 15% or more of the outstanding voting stock of a corporation, or an affiliate or associate of the corporation and was the owner of 15% or more of the outstanding voting stock of a corporation at any time within three years prior to the time of determination of interested stockholder status; and any entity or person affiliated with or controlling or controlled by such entity or person.

These statutory provisions could delay or frustrate the removal of incumbent directors or a change in control of our company. They could also discourage, impede, or prevent a merger, tender offer, or proxy contest, even if such event would be favorable to the interests of stockholders. In addition, note that while Delaware law permits companies to opt out of its business combination statute, our Certificate of Incorporation does not include this opt-out provision.

Certificate of Incorporation and Bylaws

Our current Certificate of Incorporation authorizes the issuance of “blank check” preferred stock that could be issued by our Board of Directors to defend against a takeover attempt. See “Preferred Stock” above.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Corporate Stock Transfer, Inc.

Listing

The shares of our common stock are listed on The NASDAQ Capital Market under the symbol “POAI.” On October 2, 2019, the last reported sale price per share for our common stock as reported by The NASDAQ Capital Market was \$0.50.

DESCRIPTION OF WARRANTS

We may issue warrants for the purchase of our common stock or preferred stock, or a combination thereof. Warrants may be issued independently or together with our debt securities, preferred stock or common stock and may be attached to or separate from any offered securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a bank or trust company, as warrant agent. The warrant agent will act solely as our agent in connection with the warrants. The warrant agent will not have any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants. This description is a summary of the certain provisions of the units, and does not purport to be complete and is subject to, and qualified in its entirety by reference to, the provisions of the warrant agreement that will be filed with the SEC in connection with an offering of the warrants. The particular terms of any units offered by us will be described in the applicable prospectus supplement. To the extent the terms of the warrants described in the prospectus supplement differ from the terms set forth in this summary, the terms described in the prospectus supplement will supersede the terms described below.

The prospectus supplement relating to a particular series of warrants to purchase our common stock or preferred stock will describe the terms of the warrants, including the following:

- the title of the warrants;
- the offering price for the warrants, if any;
- the aggregate number of warrants;
- the designation and terms of the common stock or preferred stock that may be purchased upon exercise of the warrants;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each security;
- if applicable, the date from and after which the warrants and any securities issued with the warrants will be separately transferable;
- the number of shares of common stock or preferred stock that may be purchased upon exercise of a warrant and the exercise price for the warrants;
- the dates on which the right to exercise the warrants shall commence and expire;
- if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;
- the currency or currency units in which the offering price, if any, and the exercise price are payable;
- if applicable, a discussion of material U.S. federal income tax considerations;
- the antidilution provisions of the warrants, if any;
- the redemption or call provisions, if any, applicable to the warrants;
- any provisions with respect to holder's right to require us to repurchase the warrants upon a change in control or similar event; and
- any additional terms of the warrants, including procedures, and limitations relating to the exchange, exercise and settlement of the warrants.

Holders of equity warrants will not be entitled:

- to vote, consent or receive dividends;
- receive notice as stockholders with respect to any meeting of stockholders for the election of our directors or any other matter; or
- exercise any rights as stockholders of the Company.

DESCRIPTION OF DEBT SECURITIES

This description is a summary of the material provisions of the debt securities and the related indenture. We urge you to read the form of indenture filed as an exhibit to the registration statement of which this prospectus is a part because the indenture, and not this description, governs your rights as a holder of debt securities. References in this prospectus to an “indenture” refer to the particular indenture under which we may issue a series of debt securities.

General

The terms of each series of debt securities will be established by or pursuant to a resolution of our board of directors and set forth or determined in the manner provided in an officers’ certificate or by a supplemental indenture. Debt securities may be issued in separate series without limitation as to aggregate principal amount. We may specify a maximum aggregate principal amount for the debt securities of any series. The particular terms of each series of debt securities will be described in a prospectus supplement relating to such series, including any pricing supplement. The prospectus supplement will set forth specific terms relating to some or all of the following:

- the offering price;
- the title;
- any limit on the aggregate principal amount;
- the person who shall be entitled to receive interest, if other than the record holder on the record date;
- the date the principal will be payable;
- the interest rate, if any, the date interest will accrue, the interest payment dates and the regular record dates;
- the place where payments may be made;
- any mandatory or optional redemption provisions;
- if applicable, the method for determining how the principal, premium, if any, or interest will be calculated by reference to an index or formula;
- if other than U.S. currency, the currency or currency units in which principal, premium, if any, or interest will be payable and whether we or the holder may elect payment to be made in a different currency;
- the portion of the principal amount that will be payable upon acceleration of stated maturity, if other than the entire principal amount;
- any defeasance provisions if different from those described below under “Satisfaction and Discharge; Defeasance”;
- any conversion or exchange provisions;
- any obligation to redeem or purchase the debt securities pursuant to a sinking fund;
- whether the debt securities will be issuable in the form of a global security;
- any subordination provisions, if different from those described below under “Subordination”;
- any deletions of, or changes or additions to, the events of default or covenants; and
- any other specific terms of such debt securities.

Unless otherwise specified in the prospectus supplement, the debt securities will be registered debt securities. Debt securities may be sold at a substantial discount below their stated principal amount, bearing no interest or interest at a rate which at the time of issuance is below market rates.

Exchange and Transfer

Debt securities may be transferred or exchanged at the office of the security registrar or at the office of any transfer agent designated by us.

We will not impose a service charge for any transfer or exchange, but we may require holders to pay any tax or other governmental charges associated with any transfer or exchange.

In the event of any potential redemption of debt securities of any series, we will not be required to:

- issue, register the transfer of, or exchange, any debt security of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption and ending at the close of business on the day of the mailing; or
- register the transfer of or exchange any debt security of that series selected for redemption, in whole or in part, except the unredeemed portion being redeemed in part.

We may initially appoint the trustee as the security registrar. Any transfer agent, in addition to the security registrar, initially designated by us will be named in the prospectus supplement. We may designate additional transfer agents or change transfer agents or change the office of the transfer agent. However, we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

Global Securities

The debt securities of any series may be represented, in whole or in part, by one or more global securities. Each global security will:

- be registered in the name of a depositary that we will identify in a prospectus supplement;
- be deposited with the depositary or nominee or custodian; and
- bear any required legends.

No global security may be exchanged in whole or in part for debt securities registered in the name of any person other than the depositary or any nominee unless:

- the depositary has notified us that it is unwilling or unable to continue as depositary or has ceased to be qualified to act as depositary;
- an event of default is continuing; or
- the Company executes and delivers to the trustee an officers' certificate stating that the global security is exchangeable.

As long as the depositary, or its nominee, is the registered owner of a global security, the depositary or nominee will be considered the sole owner and holder of the debt securities represented by the global security for all purposes under the indenture. Except in the above limited circumstances, owners of beneficial interests in a global security:

- will not be entitled to have the debt securities registered in their names;
- will not be entitled to physical delivery of certificated debt securities; and
- will not be considered to be holders of those debt securities under the indentures.

Payments on a global security will be made to the depository or its nominee as the holder of the global security. Some jurisdictions have laws that require that certain purchasers of securities take physical delivery of such securities in definitive form. These laws may impair the ability to transfer beneficial interests in a global security.

Institutions that have accounts with the depository or its nominee are referred to as “participants.” Ownership of beneficial interests in a global security will be limited to participants and to persons that may hold beneficial interests through participants. The depository will credit, on its book-entry registration and transfer system, the respective principal amounts of debt securities represented by the global security to the accounts of its participants.

Ownership of beneficial interests in a global security will be shown on and effected through records maintained by the depository, with respect to participants’ interests, or any participant, with respect to interests of persons held by participants on their behalf.

Payments, transfers and exchanges relating to beneficial interests in a global security will be subject to policies and procedures of the depository.

The depository policies and procedures may change from time to time. Neither we nor the trustee will have any responsibility or liability for the depository’s or any participant’s records with respect to beneficial interests in a global security.

Payment and Paying Agent

The provisions of this paragraph will apply to the debt securities unless otherwise indicated in the prospectus supplement. Payment of interest on a debt security on any interest payment date will be made to the person in whose name the debt security is registered at the close of business on the regular record date. Payment on debt securities of a particular series will be payable at the office of a paying agent or paying agents designated by us. However, at our option, we may pay interest by mailing a check to the record holder. The corporate trust office will be designated as our sole paying agent.

We may also name any other paying agents in the prospectus supplement. We may designate additional paying agents, change paying agents or change the office of any paying agent. However, we will be required to maintain a paying agent in each place of payment for the debt securities of a particular series.

All moneys paid by us to a paying agent for payment on any debt security which remain unclaimed at the end of two years after such payment was due will be repaid to us. Thereafter, the holder may look only to us for such payment.

Consolidation, Merger and Sale of Assets

Except as otherwise set forth in the prospectus supplement, we may not consolidate with or merge into any other person, in a transaction in which we are not the surviving corporation, or convey, transfer or lease our properties and assets substantially as an entirety to, any person, unless:

- the successor, if any, is a U.S. corporation, limited liability company, partnership, trust or other entity;
- the successor assumes our obligations on the debt securities and under the indenture;
- immediately after giving effect to the transaction, no default or event of default shall have occurred and be continuing; and
- certain other conditions are met.

Events of Default

Unless we inform you otherwise in the prospectus supplement, the indenture will define an event of default with respect to any series of debt securities as one or more of the following events:

- (1) failure to pay principal of or any premium on any debt security of that series when due;
- (2) failure to pay any interest on any debt security of that series for 30 days when due;
- (3) failure to deposit any sinking fund payment when due;
- (4) failure to perform any other covenant in the indenture continued for 90 days after being given the notice required in the indenture;
- (5) our bankruptcy, insolvency or reorganization; and
- (6) any other event of default specified in the prospectus supplement.

An event of default of one series of debt securities is not necessarily an event of default for any other series of debt securities.

If an event of default, other than an event of default described in clause (5) above, shall occur and be continuing, either the trustee or the holders of at least 25% in aggregate principal amount of the outstanding securities of that series may declare the principal amount of the debt securities of that series to be due and payable immediately.

If an event of default described in clause (5) above shall occur, the principal amount of all the debt securities of that series will automatically become immediately due and payable. Any payment by us on subordinated debt securities following any such acceleration will be subject to the subordination provisions described below under "Subordinated Debt Securities."

After acceleration the holders of a majority in aggregate principal amount of the outstanding securities of that series may, under certain circumstances, rescind and annul such acceleration if all events of default, other than the non-payment of accelerated principal, or other specified amount, have been cured or waived.

Other than the duty to act with the required care during an event of default, the trustee will not be obligated to exercise any of its rights or powers at the request of the holders unless the holders shall have offered to the trustee reasonable indemnity. Generally, the holders of a majority in aggregate principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee.

A holder will not have any right to institute any proceeding under the indentures, or for the appointment of a receiver or a trustee, or for any other remedy under the indentures, unless:

- (1) the holder has previously given to the trustee written notice of a continuing event of default with respect to the debt securities of that series;
- (2) the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series have made a written request and have offered reasonable indemnity to the trustee to institute the proceeding; and
- (3) the trustee has failed to institute the proceeding and has not received direction inconsistent with the original request from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series within 90 days after the original request.

Holders may, however, sue to enforce the payment of principal or interest on any debt security on or after the due date without following the procedures listed in (1) through (3) above.

Modification and Waiver

Except as provided in the next two succeeding paragraphs, the applicable trustee and we may make modifications and amendments to the indentures (including, without limitation, through consents obtained in connection with a tender offer or exchange offer for, outstanding securities) and may waive any existing default or event of default (including, without limitation, through consents obtained in connection with a tender offer or exchange offer for, outstanding securities) with the consent of the holders of a majority in aggregate principal amount of the outstanding securities of each series affected by the modification or amendment.

However, neither we nor the trustee may make any amendment or waiver without the consent of the holder of each outstanding security of that series affected by the amendment or waiver if such amendment or waiver would, among other things:

- change the amount of securities whose holders must consent to an amendment, supplement or waiver;
- change the stated maturity of any debt security;
- reduce the principal on any debt security or reduce the amount of, or postpone the date fixed for, the payment of any sinking fund;
- reduce the principal of an original issue discount security on acceleration of maturity;
- reduce the rate of interest or extend the time for payment of interest on any debt security;
- make a principal or interest payment on any debt security in any currency other than that stated in the debt security;
- impair the right to enforce any payment after the stated maturity or redemption date;
- waive any default or event of default in payment of the principal of, premium or interest on any debt security (except certain rescissions of acceleration); or
- waive a redemption payment or modify any of the redemption provisions of any debt security;

Notwithstanding the preceding, without the consent of any holder of outstanding securities, we and the trustee may amend or supplement the indentures:

- to provide for the issuance of and establish the form and terms and conditions of debt securities of any series as permitted by the indenture;
- to provide for uncertificated securities in addition to or in place of certificated securities;
- to provide for the assumption of our obligations to holders of any debt security in the case of a merger, consolidation, transfer or sale of all or substantially all of our assets;
- to make any change that does not adversely affect the legal rights under the indenture of any such holder;
- to comply with requirements of the Commission in order to effect or maintain the qualification of an indenture under the Trust Indenture Act; or
- to evidence and provide for the acceptance of appointment by a successor trustee with respect to the debt securities of one or more series and to add to or change any of the provisions of the indenture as shall be necessary to provide for or facilitate the administration of the trusts by more than one Trustee.

The consent of holders is not necessary under the indentures to approve the particular form of any proposed amendment. It is sufficient if such consent approves the substance of the proposed amendment.

Satisfaction and Discharge; Defeasance

We may be discharged from our obligations on the debt securities of any series that have matured or will mature or be redeemed within one year if we deposit with the trustee enough cash to pay all the principal, interest and any premium due to the stated maturity date or redemption date of the debt securities.

Each indenture contains a provision that permits us to elect:

- to be discharged from all of our obligations, subject to limited exceptions, with respect to any series of debt securities then outstanding; and/or
- to be released from our obligations under the following covenants and from the consequences of an event of default resulting from a breach of certain covenants, including covenants as to payment of taxes and maintenance of corporate existence.

To make either of the above elections, we must deposit in trust with the trustee enough money to pay in full the principal and interest on the debt securities. This amount may be made in cash and/or U.S. government obligations. As a condition to either of the above elections, we must deliver to the trustee an opinion of counsel that the holders of the debt securities will not recognize income, gain or loss for federal income tax purposes as a result of the action.

If any of the above events occurs, the holders of the debt securities of the series will not be entitled to the benefits of the indenture, except for the rights of holders to receive payments on debt securities or the registration of transfer and exchange of debt securities and replacement of lost, stolen or mutilated debt securities.

Notices

Notices to holders will be given by mail to the addresses of the holders in the security register.

Governing Law

The indentures and the debt securities will be governed by, and construed under, the law of the State of New York.

Regarding the Trustee

The indenture limits the right of the trustee, should it become a creditor of us, to obtain payment of claims or secure its claims.

The trustee is permitted to engage in certain other transactions. However, if the trustee acquires any conflicting interest, and there is a default under the debt securities of any series for which they are trustee, the trustee must eliminate the conflict or resign.

Subordination

Payment on subordinated debt securities will, to the extent provided in the indenture, be subordinated in right of payment to the prior payment in full of all of our senior indebtedness (except that holders of the notes may receive and retain (i) permitted junior securities and (ii) payments made from the trust described under "Satisfaction and Discharge; Defeasance"). Any subordinated debt securities also are effectively subordinated to all debt and other liabilities, including lease obligations, if any.

Upon any distribution of our assets upon any dissolution, winding up, liquidation or reorganization, the payment of the principal of and interest on subordinated debt securities will be subordinated in right of payment to the prior payment in full in cash or other payment satisfactory to the holders of senior indebtedness. In the event of any acceleration of subordinated debt securities because of an event of default, the holders of any senior indebtedness would be entitled to payment in full in cash or other payment satisfactory to such holders of all senior indebtedness obligations before the holders of subordinated debt securities are entitled to receive any payment or distribution, except for certain payments made by the trust described under "Satisfaction and Discharge; Defeasance." The indenture requires us or the trustee to promptly notify holders of designated senior indebtedness if payment of subordinated debt securities is accelerated because of an event of default.

We may not make any payment on subordinated debt securities, including upon redemption at the option of the holder of any subordinated debt securities or at our option, if:

- a default in the payment of the principal, premium, if any, interest, rent or other obligations in respect of designated senior indebtedness occurs and is continuing beyond any applicable period of grace (called a “payment default”); or
- a default other than a payment default on any designated senior indebtedness occurs and is continuing that permits holders of designated senior indebtedness to accelerate its maturity, and the trustee receives notice of such default (called a “payment blockage notice) from us or any other person permitted to give such notice under the indenture (called a “non-payment default”).

If the trustee or any holder of the notes receives any payment or distribution of our assets in contravention of the subordination provisions on subordinated debt securities before all senior indebtedness is paid in full in cash, property or securities, including by way of set-off, or other payment satisfactory to holders of senior indebtedness, then such payment or distribution will be held in trust for the benefit of holders of senior indebtedness or their representatives to the extent necessary to make payment in full in cash or payment satisfactory to the holders of senior indebtedness of all unpaid senior indebtedness.

In the event of our bankruptcy, dissolution or reorganization, holders of senior indebtedness may receive more, ratably, and holders of subordinated debt securities may receive less, ratably, than our other creditors (including our trade creditors). This subordination will not prevent the occurrence of any event of default under the indenture.

We are not prohibited from incurring debt, including senior indebtedness, under the indenture. We may from time to time incur additional debt, including senior indebtedness.

We are obligated to pay reasonable compensation to the trustee and to indemnify the trustee against certain losses, liabilities or expenses incurred by the trustee in connection with its duties under the indenture. The trustee’s claims for these payments will generally be senior to those of noteholders in respect of all funds collected or held by the trustee.

Certain Definitions

“indebtedness” means:

- (1) all indebtedness, obligations and other liabilities for borrowed money, including overdrafts, foreign exchange contracts, currency exchange agreements, interest rate protection agreements, and any loans or advances from banks, or evidenced by bonds, debentures, notes or similar instruments, other than any account payable or other accrued current liability or obligation incurred in the ordinary course of business in connection with the obtaining of materials or services;
- (2) all reimbursement obligations and other liabilities with respect to letters of credit, bank guarantees or bankers’ acceptances;
- (3) all obligations and liabilities in respect of leases required in conformity with generally accepted accounting principles to be accounted for as capitalized lease obligations on our balance sheet;
- (4) all obligations and other liabilities under any lease or related document in connection with the lease of real property which provides that we are contractually obligated to purchase or cause a third party to purchase the leased property and thereby guarantee a minimum residual value of the leased property to the lessor and our obligations under the lease or related document to purchase or to cause a third party to purchase the leased property;

(5) all obligations with respect to an interest rate or other swap, cap or collar agreement or other similar instrument or agreement or foreign currency hedge, exchange, purchase or other similar instrument or agreement;

(6) all direct or indirect guaranties or similar agreements in respect of, and our obligations or liabilities to purchase, acquire or otherwise assure a creditor against loss in respect of, indebtedness, obligations or liabilities of others of the type described in (1) through (5) above;

(7) any indebtedness or other obligations described in (1) through (6) above secured by any mortgage, pledge, lien or other encumbrance existing on property which is owned or held by us; and

(8) any and all refinancings, replacements, deferrals, renewals, extensions and refundings of, or amendments, modifications or supplements to, any indebtedness, obligation or liability of the kind described in clauses (1) through (7) above.

“permitted junior securities” means (i) equity interests in the Company; or (ii) debt securities of the Company that are subordinated to all senior indebtedness and any debt securities issued in exchange for senior indebtedness to substantially the same extent as, or to a greater extent than the notes are subordinated to senior indebtedness under the indenture.

“senior indebtedness” means the principal, premium, if any, interest, including any interest accruing after bankruptcy, and rent or termination payment on or other amounts due on our current or future indebtedness, whether created, incurred, assumed, guaranteed or in effect guaranteed by us, including any deferrals, renewals, extensions, refundings, amendments, modifications or supplements to the above. However, senior indebtedness does not include:

- indebtedness that expressly provides that it shall not be senior in right of payment to subordinated debt securities or expressly provides that it is on the same basis or junior to subordinated debt securities;
- our indebtedness to any of our majority-owned subsidiaries; and
- subordinated debt securities.

DESCRIPTION OF UNITS

This description is a summary of the certain provisions of the units, and does not purport to be complete and is subject to, and qualified in its entirety by reference to, the provisions of the unit agreement that will be filed with the SEC in connection with an offering of the units. The particular terms of any units offered by us will be described in the applicable prospectus supplement. To the extent the terms of the units described in the prospectus supplement differ from the terms set forth in this summary, the terms described in the prospectus supplement will supersede the terms described below.

We may issue units consisting of one or more of the other securities described in this prospectus or the applicable prospectus supplement in any combination in such amounts and in such numerous distinct series as we determine.

Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security.

The terms of units described in the applicable prospectus supplement may include the following:

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- a description of the terms of any unit agreement governing the units;
- a description of any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units; and
- whether the units will be issued in fully registered or global form.

PLAN OF DISTRIBUTION

We may sell the securities offered by this prospectus in any one or more of the following ways from time to time:

- directly to investors, including through a specific bidding, auction or other process;
- to investors through agents;
- directly to agents;
- to or through brokers or dealers;
- to the public through underwriting syndicates led by one or more managing underwriters;
- to one or more underwriters acting alone for resale to investors or to the public; or
- through a combination of any such methods of sale.

We may also sell the securities offered by this prospectus in “at the market offerings” within the meaning of Rule 415(a)(4) of the Securities Act, to or through a market maker or into an existing trading market, on an exchange or otherwise.

The prospectus supplement related to a particular offering will set forth the terms of the offering and the method of distribution and will identify any firms acting as underwriters, dealers or agents in connection with the offering, including:

- the name or names of any underwriters, dealers or agents;
- the purchase price of the securities and the proceeds to us from the sale;
- any over-allotment options under which the underwriters may purchase additional securities from us;
- any underwriting discounts and other items constituting compensation to underwriters, dealers or agents;
- any public offering price;
- any discounts or concessions allowed or reallocated or paid to dealers; or
- any securities exchange or market on which the securities offered in the prospectus supplement may be listed.

Only those underwriters identified in such prospectus supplement are deemed to be underwriters in connection with the securities offered in the prospectus supplement. Any underwritten offering may be on a best efforts or a firm commitment basis.

The distribution of the securities may be effected from time to time in one or more transactions at a fixed price or prices, which may be changed, at varying prices determined at the time of sale, or at prices determined as the applicable prospectus supplement specifies. The securities may be sold through a rights offering, forward contracts or similar arrangements. In any distribution of subscription rights to shareholders, if all of the underlying securities are not subscribed for, we may then sell the unsubscribed securities directly to third parties or may engage the services of one or more underwriters, dealers or agents, including standby underwriters, to sell the unsubscribed securities to third parties.

In connection with the sale of the securities, underwriters, dealers or agents may be deemed to have received compensation from us in the form of underwriting discounts or commissions and also may receive commissions from securities purchasers for whom they may act as agent. Underwriters may sell the securities to or through dealers, and the dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters or commissions from the purchasers for whom they may act as agent.

We will provide in the applicable prospectus supplement information regarding any underwriting discounts or other compensation that we pay to underwriters or agents in connection with the securities offering, and any discounts, concessions or commissions which underwriters allow to dealers. Underwriters, dealers and agents participating in the securities distribution may be deemed to be underwriters, and any discounts and commissions they receive and any profit they realize on the sale of the securities may be deemed to be underwriting discounts and commissions under the Securities Act.

In compliance with guidelines of the Financial Industry Regulatory Authority, or FINRA, the aggregate maximum discount, commission, agency fees or other items constituting underwriting compensation to be received by any FINRA member or independent broker dealer may not exceed 8% of the gross proceeds received from the sale of the securities offered pursuant to this prospectus and any applicable prospectus supplement.

Underwriters and their controlling persons, dealers and agents may be entitled, under agreements entered into with us, to indemnification against and contribution toward specific civil liabilities, including liabilities under the Securities Act.

Unless otherwise specified in the related prospectus supplement, each series of securities will be a new issue with no established trading market, other than shares of our common stock, which are listed on The NASDAQ Capital Market. Any common stock sold pursuant to a prospectus supplement will be listed on The NASDAQ Capital Market, subject to compliance with applicable NASDAQ continued listing requirements. We may elect to list any series on an exchange, but we are not obligated to do so. It is possible that one or more underwriters may make a market in the securities, but such underwriters will not be obligated to do so and may discontinue any market making at any time without notice. No assurance can be given as to the liquidity of, or the trading market for, any offered securities.

In connection with an offering, the underwriters may purchase and sell securities in the open market. These transactions may include short sales, stabilizing transactions and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater number of securities than they are required to purchase in an offering. Stabilizing transactions consist of bids or purchases made for the purpose of preventing or retarding a decline in the market price of the securities while an offering is in progress. The underwriters also may impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the underwriters have repurchased securities sold by or for the account of that underwriter in stabilizing or short-covering transactions. These activities by the underwriters may stabilize, maintain or otherwise affect the market price of the securities. As a result, the price of the securities may be higher than the price that otherwise might exist in the open market. If these activities are commenced, they may be discontinued by the underwriters at any time. Underwriters may engage in over-allotment. If any underwriters create a short position in the securities in an offering in which they sell more securities than are set forth on the cover page of the applicable prospectus supplement, the underwriters may reduce that short position by purchasing the securities in the open market.

Underwriters, dealers or agents that participate in the offer of securities, or their affiliates or associates, may be customers of, have engaged or engage in transactions with, and perform services for, us or our affiliates in the ordinary course of business for which they may have received or receive customary fees and reimbursement of expenses.

LEGAL MATTERS

The validity of any securities offered from time to time by this prospectus and any related prospectus supplement will be passed upon by Maslon LLP, Minneapolis, Minnesota. If legal matters in connection with offerings made pursuant to this prospectus and any related prospectus supplement are passed upon by counsel to underwriters, dealers or agents, if any, such counsel will be named in the prospectus supplement related to such offering.

EXPERTS

The consolidated financial statements for the fiscal year ended December 31, 2018 incorporated in this Prospectus by reference from the Company's Annual Report on Form 10-K for the year ended December 31, 2018, have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which is incorporated herein by reference (which report expresses an unqualified opinion on the consolidated financial statements and includes an explanatory paragraph referring to going concern). Such consolidated financial statements have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing. Our financial statements for the fiscal year ended December 31, 2017 incorporated by reference in this prospectus supplement have been so incorporated in reliance on the report of our auditors, Olsen Thielen & Co., Ltd., certified public accountants registered with the Public Company Accounting Oversight Board. The financial statements of Helomics Holding Corporation for the fiscal years ended December 31, 2018 and 2017, as restated, incorporated by reference in this prospectus supplement have been so incorporated in reliance on the report of our auditors, Schneider Downs & Co., Inc., certified public accountants registered with the Public Company Accounting Oversight Board.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the securities we are offering under this prospectus. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. Reports filed with the SEC pursuant to the Exchange Act, including proxy statements, annual and quarterly reports, and other reports filed by the Company can be inspected and copied at the public reference facilities maintained by the SEC at the Headquarters Office, 100 F Street N.E., Room 1580, Washington, D.C. 20549. The reader may obtain information on the operation of the public reference room by calling the SEC at 1-800-SEC-0330. The reader can request copies of these documents upon payment of a duplicating fee by writing to the SEC. Our filings are also available on the SEC's internet site at <http://www.sec.gov> and the Company's website at www.skylinemedical.com. Information on any Skyline Medical website, any subsection, page, or other subdivision of any Skyline Medical website, or any website linked to by content on any Skyline Medical website, is not part of this prospectus and you should not rely on that information unless that information is also in this prospectus or incorporated by reference in this prospectus.

The SEC allows us to "incorporate by reference" information into this prospectus supplement, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The documents incorporated by reference into this prospectus supplement contain important information that you should read about us. The following documents are incorporated by reference into this prospectus supplement:

We are allowed to incorporate by reference information contained in documents that we file with the SEC. This means that we can disclose important information to you by referring you to those documents and that the information in this prospectus supplement is not complete and you should read the information incorporated by reference for more detail. We incorporate by reference in two ways. First, we list certain documents that we have already filed with the SEC. The information in these documents is considered part of this prospectus supplement. Second, the information in documents that we file in the future will update and supersede the current information in, and incorporated by reference in, this prospectus supplement.

We incorporate by reference the documents listed below and any future filings we will make with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act (other than information furnished in Current Reports on Form 8-K filed under Item 2.02 or 7.01 of such form unless such form expressly provides to the contrary):

- Our Annual Report on Form 10-K for the fiscal year ended December 31, 2018;
- Quarterly Reports on Form 10-Q for the quarters ended March 31, 2019 and June 30, 2019;
- Current Reports on Form 8-K filed September 30, 2019; September 26, 2019, September 26, 2019 (amendment), August 19, 2019, July 11, 2019, June 19, 2019, June 18, 2019 (amendment), June 13, 2019, June 4, 2019, May 23, 2019, May 17, 2019, May 15, 2019, May 8, 2019, April 10, 2019, April 2, 2019, April 1, 2019, March 22, 2019, March 14, 2019, March 8, 2019, March 5, 2019, March 1, 2019, February 26, 2019, February 19, 2019, February 12, 2019, February 7, 2019, January 28, 2019 (amendment), January 25, 2019, January 22, 2019, January 18, 2019, January 17, 2019, January 14, 2019 and January 3, 2019.
- The description of the Company's common stock under the caption "Description of Precision Capital Stock – Common Stock" in the Company's Amendment No. 2 to Registration Statement on Form S-4 as filed with the SEC on January 24, 2019.

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

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

\$20,000,000



Predictive Oncology Inc.

Predictive Oncology Inc.

**Common Stock
Preferred Stock
Warrants to Purchase Common Stock or Preferred Stock
Debt Securities
Units**

PROSPECTUS

[•], 2019

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses Of Issuance And Distribution.

The following table sets forth the costs and expenses, payable by the registrant in connection with the sale of common stock being registered. All amounts are estimates except the SEC registration fee and the NASDAQ listing fee.

Securities and Exchange Commission registration fee	\$ 2,596.00
NASDAQ listing fee	\$ 10,000.00
Printing and engraving expenses	\$ 5,000.00
Legal fees and expenses	\$ 25,000.00
Accounting fees and expenses	\$ 10,000.00
Miscellaneous	\$ 17,404.00
Total	\$ 70,000.00

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.

(a) Exhibits

See "Exhibit Index" below, which follows the signature pages to this registration statement.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

- (a) (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, an 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% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

- (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.
- (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 of the registrant under the Securities Act of 1933 to any purchaser:
 - (i) 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
 - (ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), 424(b)(5), or 424(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), 415(a)(1)(vii), or 415(a)(1)(x) for the purpose of providing the information required by Section 10(a) of the Securities Act 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.
- (b) The undersigned registrant hereby further undertakes that, for the purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in this 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.
 - (c) 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 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.
 - (d) Insofar as indemnification for liabilities arising under the Securities Act 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 SEC such indemnification is against public policy as expressed in the Securities Act 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 of whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.
 - (e) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.
 - (f) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus 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.
 - (g) If and when applicable, the Registrant hereby further undertakes to file an application for the purpose of determining the eligibility of the trustee to act under subsection (a) of Section 310 of the Trust Indenture Act in accordance with the rules and regulations prescribed by the Securities and Exchange Commission under Section 305(b)(2) of the Trust Indenture Act.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Eagan, State of Minnesota, on October 3, 2019.

PREDICTIVE ONCOLOGY INC.

/s/ Bob Myers
Bob Myers
Chief Financial Officer

Each person whose signature appears below hereby constitutes and appoints Carl Schwartz and Bob Myers, and each of them, as his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and any and all additional registration statements pursuant to Rule 462(b) of the Securities Act of 1933, as amended, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent or his substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Carl Schwartz</u> Carl Schwartz	Chief Executive Officer (principal executive officer) and Director	October 3, 2019
<u>/s/ Bob Myers</u> Bob Myers	Chief Financial Officer (principal financial and accounting officer)	October 3, 2019
<u>/s/ J. Melville Engle</u> J. Melville Engle	Director	October 3, 2019
<u>/s/ Richard L. Gabriel</u> Richard L. Gabriel	Director	October 3, 2019
<u>/s/ Timothy A. Krochuk</u> Timothy A. Krochuk	Director	October 3, 2019
<u>/s/ Thomas J. McGoldrick</u> Thomas J. McGoldrick	Director	October 3, 2019
<u>/s/ Andrew P. Reding</u> Andrew P. Reding	Director	October 3, 2019
<u>/s/ Gerald Vardzel</u> Gerald Vardzel	Director	October 3, 2019

EXHIBIT INDEX

Exhibit Number	Description
1.1***	Form of Underwriting Agreement
1.2	Placement Agency Agreement dated February 27, 2019 (18)
2.1	Agreement and Plan of Merger, dated December 16, 2013, between Skyline Medical Inc., a Minnesota corporation, and the registrant (1) Exhibit 2.1
2.2	Agreement and Plan of Merger dated August 9, 2017 (2) Exhibit 2.2
2.3	Agreement and Plan of Merger dated June 28, 2018, by and among registrant, Helomics Acquisition, Inc. and Helomics Holding Corporation (3) Exhibit 2.3
2.4	Amended and Restated Agreement and Plan of Merger dated October 22, 2018 by and among registrant, Helomics Acquisition, Inc., Helomics Holding Corporation and Gerald Vardzel, Jr. as Shareholder Representative (14) Exhibit 2.4
3.1	Certificate of Incorporation (1) Exhibit 3.1
3.2	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 (4) Exhibit 3.2
3.3	Certificate of Amendment to Certificate of Incorporation regarding increase in share capital, filed with the Delaware Secretary of State on July 24, 2015 (5) Exhibit 3.3
3.4	Certificate of Amendment to Certificate of Incorporation to increase authorized share capital, filed with the Delaware Secretary of State on September 16, 2016 (6) Exhibit 3.4
3.5	Certificate of Amendment to Certificate of Incorporation to effect reverse stock split and reduction in authorized share capital, fled with the Delaware Secretary of State on October 26, 2016 (7) Exhibit 3.5
3.6	Certificate of Amendment to Certificate of Incorporation regarding increase in share capital, filed with the Delaware Secretary of State on January 26, 2017 (8) Exhibit 3.6
3.7	Certificate of Amendment to Certificate of Incorporation to effect reverse stock split, filed with the Delaware Secretary of State on January 2, 2018 (9) Exhibit 3.7
3.8	Certificate of Amendment to Certificate of Incorporation to effect name change, filed with the Delaware Secretary of State on February 1, 2018 (10) Exhibit 3.8
3.9	Amended and Restated Bylaws (10) Exhibit 3.9
3.10	Form of Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock (11) Exhibit 3.10
3.11	Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock (12) Exhibit 3.11

3.12	First Amendment to Amended and Restated Bylaws (22) Exhibit 3.11
3.13	Form of Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock (20) Exhibit 3.12
3.14	Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock (21) Exhibit 3.13
3.15	Certificate of Designation of Preferences, Rights and Limitations of Series E Convertible Preferred Stock (19)
4.1	Form of Common Stock Purchase Warrant dated March 1, 2019 (18)
4.2	Form of Unit Purchase Option (18)
4.6*	Specimen certificate evidencing shares of Common Stock
4.7***	Specimen certificate evidencing shares of Preferred Stock
4.8***	Form of Warrant
4.9***	Form of Warrant Agreement
4.10**	Form of Indenture between the Registrant and one or more trustees to be named
4.11***	Form of Unit
4.12***	Form of Unit Agreement
5.1*	Opinion of Maslon LLP as to the validity of the securities being registered
23.1*	Consent of Deloitte & Touche LLP
23.2*	Consent of Olsen Thielen & Co., Ltd.
23.3*	Consent of Schneider Downs & Co., Inc.
23.4*	Consent of Maslon LLP (included as part of Exhibit 5.1)
24.1*	Power of Attorney (included on signature page hereto)

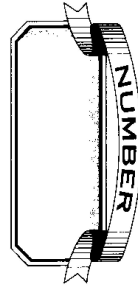
* Filed herewith

** Filed previously with Form S-3 (File No. 333-213766) and incorporated herein by reference.

*** To be filed by an amendment or as an exhibit to a document filed under the Securities Exchange Act of 1934, as amended, and incorporated by reference herein by amendment.

- (1) Filed on December 19, 2013 as an exhibit to Predictive's Current Report on Form 8-K and incorporated herein by reference.
 - (2) Filed on August 11, 2017 as an exhibit to Predictive's Current Report on Form 8-K and incorporated herein by reference.
 - (3) Filed on July 5, 2018 as an exhibit to Predictive's Current Report on Form 8-K and incorporated herein by reference.
 - (4) Filed on October 24, 2014 as an exhibit to Predictive's Current Report on Form 8-K and incorporated herein by reference.
 - (5) Filed on June 30, 2015 as an appendix to Predictive's Information Statement on Schedule 14C and incorporated herein by reference.
 - (6) Filed on September 16, 2016 as an exhibit to Predictive's Current Report on Form 8-K and incorporated herein by reference.
 - (7) Filed on October 27, 2016 as an exhibit to Predictive's Current Report on Form 8-K and incorporated herein by reference.
 - (8) Filed on January 27, 2017 as an exhibit to Predictive's Current Report on Form 8-K and incorporated herein by reference.
 - (9) Filed on January 2, 2018 as an exhibit to Predictive's Current Report on Form 8-K and incorporated herein by reference.
 - (10) Filed on February 6, 2018 as an exhibit to Predictive's Current Report on Form 8-K and incorporated herein by reference.
 - (11) Filed on August 20, 2015 as an exhibit to Predictive's Registration Statement on Form S-1 (File No. 333-198962) and incorporated herein by reference.
 - (12) Filed on November 29, 2017 as an exhibit to Predictive's Current Report on Form 8-K and incorporated herein by reference.
 - (13) Reserved
 - (14) Filed on October 30, 2018 as an exhibit to Predictive's Current Report on Form 8-K and incorporated herein by reference.
 - (15) Reserved.
 - (16) Filed on December 19, 2018 as an exhibit to Predictive's Registration Statement on Form S-3 and incorporated herein by reference.
 - (17) Filed on September 30, 2019 as an exhibit to Predictive's Current Report on Form 8-K and incorporated herein by reference.
 - (18) Filed on March 1, 2019 as an exhibit to Predictive's Current Report on Form 8-K and incorporated herein by reference.
-

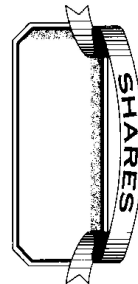
- (19) Filed on June 19, 2019 as an exhibit to Predictive's Current Report on Form 8-K and incorporated herein by reference.
 - (20) Filed on August 20, 2015 as an exhibit to our Registration Statement on Form S-1 (File No. 333-198962) and incorporated herein by reference.
 - (21) Filed on November 29, 2017 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
 - (22) Filed on October 4, 2018 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
-



PREDICTIVE ONCOLOGY INC.

INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE

AUTHORIZED: 1,000,000,000 COMMON SHARES,
\$0.01 PAR VALUE PER SHARE



CUSIP 74039M 10 1

SEE REVERSE FOR
CERTAIN DEFINITIONS

This Certifies That SPECIMEN

is the owner of

Fully Paid and Non-Assessable Common Stock, \$0.01 Par Value of

PREDICTIVE ONCOLOGY INC.

transferable on the books of this Corporation in person or by attorney upon surrender of this Certificate duly endorsed or assigned. This Certificate and the shares represented hereby are subject to the laws of the State of Delaware, and to the Articles of Incorporation and the Bylaws of the Corporation, as now or hereafter amended. This Certificate is not valid until countersigned by the Transfer Agent.

IN WITNESS WHEREOF, the Corporation has caused this Certificate to be signed by the facsimile signatures of its duly authorized officers and to be sealed with the facsimile seal of the Corporation.

Dated:

[Signature]
PRESIDENT



[Signature]
SECRETARY

12822

© Mountain Financial Print & Design, LLC

Countersigned:
CORPORATE STOCK TRANSFER, INC.
3200 Cherry Creek South Drive, Suite 430
Denver, CO 80209
By _____
Transfer Agent and Registrar Authorized Officer

MASLON LLP

October 3, 2019

Predictive Oncology 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 Predictive Oncology Inc., a Delaware corporation (the “*Company*”) in connection with the Company’s filing of a Registration Statement on Form S-3 (the “*Registration Statement*”) pursuant to the Securities Act of 1933, as amended (the “*Securities Act*”), pertaining to the registration of securities for sale from time to time. This opinion is being furnished in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement, the Prospectus or any Prospectus Supplement (both as herein defined) other than as to (i) the enforceability of the Agreements, the Debt Securities and the Warrants (each as herein defined) and (ii) the validity of the shares of the Common Stock and the Preferred Stock (both as herein defined).

You have provided us with a draft of the Registration Statement in the form in which it will be filed, which includes the prospectus (the “*Prospectus*”). The Prospectus provides that it will be supplemented in the future by one or more supplements to the Prospectus (each, a “*Prospectus Supplement*”). The Prospectus, as supplemented by various Prospectus Supplements, will provide for the registration by the Company of (i) shares of common stock, par value \$0.01 per share (the “*Common Stock*”), (ii) shares of preferred stock, par value \$0.01 per share (the “*Preferred Stock*”), (iii) warrants to purchase Common Stock or Preferred Stock (the “*Warrants*”), (iv) one or more series of debt securities (the “*Debt Securities*”), and (v) units consisting of a combination of the foregoing (the “*Units*”), or any combination of the foregoing (collectively, the “*Securities*”), for an aggregate initial offering price of up to \$20,000,000. Any Debt Securities may be exchangeable for and/or convertible into shares of Common Stock or Preferred Stock or into other securities. The Preferred Stock may also be convertible into shares of Common Stock or another series of Preferred Stock or into other securities. The Warrants may be issued under one or more warrants and warrant agreements in the forms to be incorporated by reference as Exhibits 4.8 and 4.9 to the Registration Statement (each, a “*Warrant Agreement*”) between the Company and a bank or trust company to be identified therein as warrant agent (each, a “*Warrant Agent*”). The Debt Securities may be issued pursuant to an indenture by and between the Company and a financial institution to be identified therein as trustee (the “*Trustee*”) in the form filed as Exhibit 4.10 to the Registration Statement, as such indenture may be supplemented from time to time (the “*Indenture*”). The Units may be issued under one or more units and unit agreements in the forms to be incorporated by reference as Exhibits 4.11 and 4.12 to the Registration Statement (each, a “*Unit Agreement*”). The Warrant Agreements, Indenture and the Unit Agreements are herein collectively called the “*Agreements*.”

For the purposes of this opinion, we have assumed that such proceedings to be taken in the future will be timely completed in the manner presently proposed and that the terms of each issuance will otherwise be in compliance with law. As such counsel, we have examined such matters of fact and questions of law as we have considered appropriate for purposes of this letter. With your consent, we have relied upon the foregoing and upon certificates and other assurances of officers of the Company and others as to factual matters without having independently verified such factual matters.

We are opining herein as to the effect on the subject transaction only of the General Corporation Law of the State of Delaware and, with respect our opinion in paragraph 4 relating to enforceability of the Indenture, the existing laws of the State of New York, and we express no opinion with respect to the applicability thereto, or the effect thereon, of the laws of any other jurisdiction or, in the case of Delaware, any other laws, or as to any matters of municipal law or the laws of any local agencies within any state.

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

1. Upon adoption by the Board of Directors of the Company of a resolution in form and content as required by applicable law authorizing the issuance of shares of Common Stock and upon issuance and delivery of and payment of legal consideration not less than the par value thereof for certificates representing the shares of Common Stock in the form of the specimen certificate incorporated by reference as Exhibit 4.6 to the Registration Statement being duly executed, countersigned, registered and delivered, and assuming that (i) at the time of issuance of such shares, the Company has a sufficient number of authorized but unissued shares under the Company's certificate of incorporation (the "*Certificate of Incorporation*"), (ii) such shares as issued and delivered comply with all requirements and restrictions, if any, applicable to the Company, whether imposed by any court or governmental or regulatory body having jurisdiction over the Company or otherwise and (iii) such shares are then issued and sold as contemplated in the Registration Statement, the Prospectus, the related Prospectus Supplement(s) and such resolution, such shares of Common Stock (including any Common Stock duly issued (a) upon the exchange or conversion of any shares of Preferred Stock that are exchangeable or convertible into Common Stock, (b) upon the exercise of any Warrants pursuant to the terms thereof that are exercisable for the purchase of Common Stock or (c) upon the exchange or conversion of Debt Securities that are exchangeable or convertible into Common Stock) will be validly issued, fully paid and nonassessable.

2. When (i) a form of certificate representing the shares of Preferred Stock has been duly adopted by resolution of the Board of Directors of the Company and certificates in such form have been executed, countersigned, registered and delivered, (ii) a series of Preferred Stock has been duly established in accordance with the terms of the Certificate of Incorporation, and applicable law, and upon adoption by the Board of Directors of the Company of a resolution in form and content as required by applicable law authorizing the issuance of such shares and upon issuance and delivery of and payment of legal consideration not less than the par value thereof, and assuming that (a) the terms of such shares as issued and delivered are as described in the Registration Statement, the Prospectus and the related Prospectus Supplement(s), and such resolution, (b) at the time of issuance of such shares, the Company has a sufficient number of authorized but unissued shares under the Certificate of Incorporation, (c) such shares as issued and delivered comply with all requirements and restrictions, if any, applicable to the Company, whether imposed by any court or governmental or regulatory body having jurisdiction over the Company or otherwise and (d) such shares are then issued and sold as contemplated in the Registration Statement, the Prospectus and the related Prospectus Supplement(s), and such resolution, such shares of such series of Preferred Stock (including any Preferred Stock duly issued (i) upon the exchange or conversion of any shares of Preferred Stock that are exchangeable or convertible into another series of Preferred Stock, (ii) upon the exercise of any Warrants pursuant to the terms thereof that are exercisable for the purchase of Preferred Stock or (iii) upon the exchange or conversion of Debt Securities that are exchangeable or convertible into Preferred Stock) will be validly issued, fully-paid and nonassessable.

3. When (i) the applicable Warrant Agreement has been duly authorized, executed and delivered by the Company and the Warrant Agent, (ii) the Warrants have been duly authorized and duly established in accordance with the terms of the Warrant Agreement and applicable law (including, without limitation, by the adoption by the Board of Directors of the Company of a resolution duly authorizing the issuance and delivery of the Warrants) (the "*Warrant Authorization*") and (iii) the Warrants have been duly executed, authenticated and/or countersigned in accordance with the Warrant Agreement relating to such Warrants and delivered on behalf of the Company against payment therefor (which, in the case of Warrants for Common Stock or Preferred Stock, shall consist of legal consideration not less than the par value of such shares) as contemplated by the Registration Statement, the Prospectus, the related Prospectus Supplement(s) and the Warrant Authorization, and assuming that (a) the terms of the Warrants as executed and delivered are as described in the Registration Statement, the Prospectus, the related Prospectus Supplement(s) and the Warrant Authorization, (b) the Warrants as executed and delivered do not violate any law applicable to the Company or result in a default under or breach of any agreement or instrument binding upon the Company, (c) the Warrants as executed and delivered comply with all requirements and restrictions, if any, applicable to the Company, whether imposed by any court or governmental or regulatory body having jurisdiction over the Company or otherwise and (d) the Warrants are then issued and sold as contemplated by the Registration Statement, the Prospectus, the related Prospectus Supplement(s) and the Warrant Authorization, the Warrant Agreement and the Warrants will constitute legally valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

4. When (i) the Indenture has been duly authorized, executed and delivered by the Company and the Trustee, (ii) the Debt Securities have been duly authorized and duly established in accordance with the Indenture and applicable law (including, without limitation, by the adoption by the Board of Directors of the Company of a resolution duly authorizing the issuance and delivery of the Debt Securities) (the “*Debt Securities Authorization*”), duly authenticated by the Trustee and duly executed and delivered on behalf of the Company against payment therefor in accordance with the terms and provisions of the Indenture and as contemplated by the Registration Statement, the Prospectus and the related Prospectus Supplement(s), and the Debt Securities Authorization, and assuming that (a) the terms of the Debt Securities as executed and delivered are as described in the Registration Statement, the Prospectus and the related Prospectus Supplement(s), and the Debt Securities Authorization, (b) the Debt Securities as executed and delivered do not violate any law applicable to the Company or result in a default under or breach of any agreement or instrument binding upon the Company, (c) the Debt Securities as executed and delivered comply with all requirements and restrictions, if any, applicable to the Company, whether imposed by any court or governmental or regulatory body having jurisdiction over the Company or otherwise, and (d) the Debt Securities are then issued and sold as contemplated in the Registration Statement, the Prospectus and the related Prospectus Supplement(s), and the Debt Securities Authorization, the Debt Securities (including any Debt Securities duly issued upon the exchange or conversion of any Debt Securities that are exchangeable or convertible into another series of Debt Securities) will constitute legally valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

5. When the Indenture has been duly authorized, executed and delivered by the Company and the Trustee, and assuming that (i) the Indenture does not violate any law applicable to the Company or result in a default under or breach of any agreement or instrument binding upon the Company, and (ii) the Indenture complies with all requirements and restrictions, if any, applicable to the Company, whether imposed by any court or governmental or regulatory body having jurisdiction over the Company or otherwise, the Indenture will constitute the legally valid and binding obligation of the Company, enforceable against the Company in accordance with its terms.

6. When (i) the applicable Unit Agreement has been duly authorized, executed and delivered by the Company, (ii) the Units have been duly authorized and duly established in accordance with the terms of the Unit Agreement and applicable law (including, without limitation, by the adoption by the Board of Directors of the Company of a resolution duly authorizing the issuance and delivery of the Units) (the “*Unit Authorization*”) and (iii) the Units have been duly executed, authenticated and/or countersigned in accordance with the Unit Agreement relating to such Unit and delivered on behalf of the Company against payment therefor (which, in the case of Units that include Common Stock or Preferred Stock, shall consist of legal consideration not less than the par value of such shares) as contemplated by the Registration Statement, the Prospectus, the related Prospectus Supplement(s) and the Unit Authorization, and assuming that (a) the terms of the Units as executed and delivered are as described in the Registration Statement, the Prospectus, the related Prospectus Supplement(s) and the Unit Authorization, (b) the Units as executed and delivered do not violate any law applicable to the Company or result in a default under or breach of any agreement or instrument binding upon the Company, (c) the Units as executed and delivered comply with all requirements and restrictions, if any, applicable to the Company, whether imposed by any court or governmental or regulatory body having jurisdiction over the Company or otherwise and (d) the Units are then issued and sold as contemplated by the Registration Statement, the Prospectus, the related Prospectus Supplement(s) and the Unit Authorization, the Unit Agreement and the Units will constitute legally valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

Our opinions are subject to: (i) the effect of bankruptcy, insolvency, reorganization, preference, fraudulent transfer, moratorium or other similar laws relating to or affecting the rights and remedies of creditors; (ii) the effects of general principles of equity, whether enforcement is considered in a proceeding in equity or at law (including the possible unavailability of specific performance or injunctive relief), concepts of materiality, reasonableness, good faith and fair dealing, and the discretion of the court before which a proceeding is brought; (iii) the invalidity under certain circumstances under law or court decisions of provisions for the indemnification of or contribution to a party with respect to a liability where such indemnification or contribution is contrary to public policy; and (iv) we express no opinion with respect to (a) consents to, or restrictions upon, governing law, jurisdiction, venue, arbitration, remedies or judicial relief; (b) advance waivers of claims, defenses, rights granted by law, or notice, opportunity for hearing, evidentiary requirements, statutes of limitation, trial by jury or at law, or other procedural rights; (c) waivers of broadly or vaguely stated rights; (d) covenants not to compete; (e) provisions for exclusivity, election or cumulation of rights or remedies; (f) provisions authorizing or validating conclusive or discretionary determinations; (g) grants of setoff rights; (h) provisions to the effect that a guarantor is liable as a primary obligor, and not as a surety; (i) provisions for the payment of attorneys’ fees where such payment is contrary to law or public policy; (j) proxies, powers and trusts; (k) provisions prohibiting, restricting, or requiring consent to assignment or transfer of any right or property; (l) provisions for liquidated damages, default interest, late charges, monetary penalties, make-whole premiums or other economic remedies to the extent such provisions are deemed to constitute a penalty; and (m) the severability, if invalid, of provisions to the foregoing effect.

In addition, we express no opinion with respect to (i) whether acceleration of the Debt Securities may affect the collectibility of that portion of the stated principal amount thereof that might be determined to constitute unearned interest thereon, (ii) compliance with laws relating to permissible rates of interest, (iii) the creation, validity, perfection or priority of any security interest, mortgage, or lien, or (iv) any provision to the extent it requires any party to indemnify any other person against loss in obtaining the currency due following a court judgment in another currency.

We have not been requested to express and, with your consent, do not render any opinion as to the applicability to the obligations of the Company under the Indenture or the Debt Securities of Sections 547 and 548 of the United States Bankruptcy Code or applicable state law relating to preferences and fraudulent transfers and obligations.

With your consent, we have assumed for purposes of this opinion that (i) each of the parties to the Agreements, the Debt Securities and the Warrants other than the Company (a) is duly organized, validly existing and in good standing under the laws of its jurisdiction of organization; (b) has the requisite power and authority to execute and deliver and to perform its obligations under each of the Agreements, the Debt Securities and the Warrants to which it is a party; and (c) has duly authorized, executed and delivered each such Agreement, Debt Security and Warrant; (ii) that the Agreements, the Debt Securities and the Warrants will have been duly authorized, executed and delivered by, and constitute legally valid and binding obligations of, the parties thereto and will be, other than as to the Company, enforceable against it in accordance with their respective terms; and (iii) that the status of the Agreements, the Debt Securities and the Warrants as legally valid and binding obligations of the respective parties thereto will not be affected by any (a) breaches of, or defaults under, agreements or instruments, (b) violations of statutes, rules, regulations or court or governmental orders, or (c) failures to obtain required consents, approvals or authorizations from, or make required registrations, declarations or filings with, governmental authorities.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act. We also consent to the reference to our name under the caption "Legal Matters" in the prospectus filed as part of the Registration Statement. In giving such consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Securities and Exchange Commission.

Very truly yours,

/s/ Maslon LLP
MASLON LLP



Deloitte & Touche LLP
50 South 6th Street
Suite 2800
Minneapolis, MN 55402-1538
USA

Tel: +1 612 397 4000
Fax: +1 612 397 4450
www.deloitte.com

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 April 1, 2019, relating to the consolidated financial statements of Predictive Oncology Inc. (the "Company"; f/k/a Precision Therapeutics Inc.) (which report expresses an unqualified opinion and includes an explanatory paragraph relating to the substantial doubt about the Company's ability to continue as a going concern as described in Note 1 to the financial statements) appearing in the Annual Report on Form 10-K of Predictive Oncology, Inc. for the year ended December 31, 2018, and to the reference to us under the heading "Experts" in the Prospectus, which is part of this Registration Statement.

Deloitte & Touche LLP

/s/ DELOITTE & TOUCHE LLP

Minneapolis, Minnesota
October 3, 2019



CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-3 of Predictive Oncology, Inc. of our report for the year ended December 31, 2017 dated April 2, 2018, except for Note 12 as to which the date is April 1, 2019, appearing in Annual Report on Form 10-K of Predictive Oncology, Inc. for the year ended December 31, 2018, as amended on Form 10-K/A filed on April 2, 2019, and to the reference to our firm under the heading "Experts" in the Prospectus.

Olsen Thielen & Co., Ltd.

Olsen Thielen & Co., Ltd

Roseville, Minnesota

October 3, 2019

2675 Long Lake Road | Roseville, Minnesota | 55113-1117 | 651-483-4521 | 651-483-2467 FAX 300 Prairie otcpas.com
Center Drive, Suite 300 | Eden Prairie, Minnesota | 55344-7908 | 952-941-9242 | 952-941-0577 FAX

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement by Predictive Oncology Inc. on Form S-3 of our audit report, dated May 13, 2019 (September 25, 2019, as to the effects of the restatement discussed in Notes 3, 4 and 8), relating to the consolidated financial statements of Helomics Holding Corporation and Subsidiaries as of and for the years ended December 31, 2018 and 2017, which appears in Exhibit 99.1 to the Form 8-K/A report filed by Predictive Oncology Inc. on September 26, 2019. We also consent to the reference to our firm under the heading "Experts" in the Prospectus, which is part of this Registration Statement.

Schneider Downs & Co., Inc.

/s/ Schneider Downs & Co., Inc.

Pittsburgh, Pennsylvania

October 3, 2019