

PROSPECTUS



PREDICTIVE ONCOLOGY INC.

5,889,561 Shares

Common Stock

This prospectus relates to the offer and resale of up to 5,889,561 shares of our common stock, par value \$0.01 per share, by the selling stockholders as listed in the selling stockholders table on page 15 (the “Selling Stockholders”).

For more information about the Selling Stockholders, please see the section of this prospectus entitled “Selling Stockholders” beginning on page 14.

The Selling Stockholders may sell any shares offered under this prospectus at fixed prices, prevailing market prices at the time of sale, at varying prices or negotiated prices.

One or more of the Selling Stockholders may be deemed to be “underwriters” within the meaning of the Securities Act of 1933, as amended (the “Securities Act”), in connection with the resale of our common stock, and any broker-dealers or agents that are involved in such resales may be deemed to be “underwriters” within the meaning of the Securities Act in connection therewith. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. For more information, please see the section of this prospectus titled “Plan of Distribution” beginning on page 17.

We will not receive any proceeds from the resale of shares of common stock by the Selling Stockholders. We will, however, receive the proceeds of any cash exercises of warrants.

Our common stock is listed on the Nasdaq Capital Market under the symbol “POAI.” On April 9, 2020, the last reported per share price of our common stock on the Nasdaq Capital Market was \$1.40 per share.

Investing in our common stock involves a high degree of risk. Before deciding whether to invest in our securities, you should consider carefully the risks that we have described beginning on page 10 of this prospectus under the caption “Risk Factors” and in the documents incorporated by reference into this prospectus.

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

The date of this prospectus is April 15, 2020.

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ABOUT THIS PROSPECTUS

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

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

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

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

PROSPECTUS SUMMARY

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

The Company

We operate in two primary business areas: first, application of artificial intelligence (“AI”) in our precision medicine business, to provide AI-driven predictive models of tumor drug response to improve clinical outcomes for patients and to assist pharmaceutical, diagnostic, and biotech industries in the development of new personalized drugs and diagnostics; and second, production of the United States Food and Drug Administration (“FDA”)-cleared STREAMWAY® System for automated, direct-to-drain medical fluid disposal and associated products.

We have three operating segments: domestic, international, and Helomics. Domestic and international consist of the STREAMWAY System product sales. The Helomics segment consists of clinical testing and contract research. Our TumorGenesis subsidiary is included within corporate. Going forward, we have determined that we will focus our resources on the Helomics segment and our primary mission of applying AI to precision medicine and drug discovery.

Precision Medicine Business

Our precision medicine business, conducted in our Helomics division, is committed to improving the effectiveness of cancer therapy using our proprietary, multi-omic tumor profiling platform, one-of-a-kind database of historical tumor data, and the power of AI to build predictive models of tumor drug response.

Helomics’ mission is to improve clinical outcomes for patients by partnering with pharmaceutical, diagnostic, and academic organizations to bring innovative clinical products and technologies to the marketplace. In addition to our proprietary patient-derived (“PDX”) tumor profiling platform for oncology, Helomics offers: 1) data and AI driven contract research organization (“CRO”) services for clinical and translational research that leverage PDX tumor models, 2) a wide range of multi-omics assays (genomics, proteomics, and biochemical), and 3) AI driven predictive models to drive the discovery of targeted therapies.

Contract Research Organization (CRO) and AI-Driven Business

We believe leveraging our unique, historical database of the drug responses of over 149,000 patient tumors to build AI and data-driven multi-omic predictive models of tumor drug response and outcome will provide actionable insights critical to both new drug development and individualizing patient treatment. Our large historical database of tumors and related data, plus our ability to obtain the associated patient outcome data is a significant competitive advantage. Cancer treatments require at least 5 years of testing to provide sufficient information on progression-free survival rates. While competitors must wait for this data, we can leverage it today. These AI-driven predictive models, coupled with the PDX platform will create a unique service to drive revenue generating projects with pharma, diagnostic and biotech companies in areas such as biomarker discovery, drug screening, drug repurposing, and clinical trials. The AI-driven models will, once validated, also provide clinical decision support to help oncologists individualize treatment.

Our CRO/AI business is committed to improving the process of targeted therapy discovery. Our proprietary, TruTumor multi-omic PDX profiling and AI platform coupled to our vast multi-omic database of biochemical and clinical information on patients with cancer, uses deep learning to understand the association between the mutational profile of a patient’s tumor and the drug response profile of the tumor that is grown in the lab. This approach is used to build an AI-driven predictive model that offers actionable insights of which mutations in the tumor are associated with drugs to which the tumor is sensitive and which will lead to the optimal outcome for the patient.

Our CRO services business applies these AI-driven predictive models coupled with our unique proprietary TruTumor PDx model to address a range of needs from discovery through clinical and translational research, to clinical trials and diagnostic development and validation as noted below:

Research

- Biomarker discovery
- Drug discovery
- Drug-repurposing

Development

- Patient enrichment & selection for trials
- Clinical trial optimization
- Adaptive trials

Clinical Decision Support

- Patient stratification
- Treatment selection

We believe this market segment has significant growth potential and we believe we are differentiated from traditional CRO's and other precision medicine and AI companies through these unique assets:

- clinically validated PDx platform;
- database of over 149,000 tumor cases;
- experienced AI team and AI platform;
- ability to access outcome data going back over ten years for over 120,000 of the tumor cases in our database.

Industry and Market Background and Analysis – Precision Medicine Business

Precision medicine is an emerging approach for disease treatment and prevention that considers individual variability in genes, disease, environment, and lifestyle for each case to develop effective therapies. This approach allows doctors and researchers to predict more accurately which treatment, dose, and therapeutic regimen could provide the best possible outcome. The global precision medicine market is estimated to reach \$141.7 billion by 2026, up from \$43.6 billion in 2016. This growth is supported by the industry's investment in precision medicine, with leading biopharmaceutical companies doubling their investments in the technology over the last five years, with the potential to increase by an additional 33% over the next five years (Source: BIS Research's Global Precision Medicine Market to Reach \$141.70 Billion by 2026, December 2017).

Precision medicine, precisely targeting drugs based on the genomic profile of the patient, has become the aspiration for cancer therapy. Over the past several decades, researchers have identified molecular patterns that are useful in defining the prognosis of a given cancer, determining the appropriate treatments, and designing targeted treatments to address specific molecular alterations. The objective of precision oncology is to develop treatments tailored to the genetic changes in each person's cancer, intended to improve the effectiveness of the therapeutic regimen and minimize the treatment's effects on healthy cells. However, for a majority of patients the reality is that while many mutations in the patient's tumor can be identified most are not actionable with current protocols. As a result, the impact of targeted therapies is low, and uptake in clinical practice is inconsistent.

There is now a growing realization that genomics alone will not be enough to achieve the promise of personalized therapeutics, especially for cancer. A multi-omic approach (e.g. assessing the genome, transcriptome, epigenome, proteome, responseome, and microbiome) provides researchers and clinicians the comprehensive information necessary for new drug development and individualized therapy. Comparatively, the multi-omic approach provides a three-dimensional, 360-degree view of the cancer, while genomics alone is just a flat, one-dimensional view. However, multi-omic data is difficult to access quickly as it is both costly and time consuming to initiate prospective data collection, and few comprehensive, multi-omic datasets exist, especially specific to cancer.

Clinical Testing

Via our Helomics subsidiary, we offer a group of clinically relevant, cancer-related tumor profiling and biomarker tests for gynecological cancers that determine how likely the patient is to respond to various types of chemotherapy and which therapies might be indicated by relevant tumor biomarkers.

Clinical testing is comprised of ChemoFx and BioSpeciFx tests. The ChemoFx test determines how a patient's tumor specimen responds to a panel of various chemotherapy drugs, while the BioSpeciFx test evaluates the expression of a specific genes, or biomarkers, in the patient's tumor. Our proprietary TruTumor™ PDx tumor platform provides us with the ability to work with actual live tumor cells to study the unique biology of the patient's tumor in order to understand how the patient responds to treatment.

Testing involves obtaining tumor tissue during biopsy or surgery which is then sent to our Clinical Laboratory Improvement Amendments ("CLIA") certified laboratory using a special collection kit. Two samples of the tumor tissue are obtained, fixed and live. The fixed tumor tissue is tested for a panel of biomarkers using a combination of Immunohistochemistry and Quantitative Polymerase Chain Reactions. The live tumor tissue is grown in the lab and used to test the drug response of the tumor to a panel of standard-of-care drugs. When testing is complete a report is provided back to the clinician with recommended therapies based on the drug response and biomarker profiles. Helomics integrates the drug response with other genomic and molecular data and compares it with historical data in our database to generate a roadmap that provides additional context to help the oncologist personalize patient treatment.

Business Strategy for Precision Medicine Business

We are a data and AI-driven discovery services company that provides AI-driven predictive models of tumor drug response to improve clinical outcomes for patients by leveraging our two primary unique assets:

- A clinically validated PDx tumor profiling platform, TruTumor, that can generate drug response profiles and other multi-omic data. Over \$200 million has been invested in this platform and was clinically validated in ovarian cancer.
- Data on the drug response profiles of over 149,000 tumors across 137 cancer types tested using the PDx platform in over 10+ years of clinical testing. We call this database TumorSpace™.

Over 38,000 of the more than 149,000 clinically validated cases in our TumorSpace™ database are specific to ovarian cancer. The data in TumorSpace is highly differentiated, having both drug response data, biomarkers and access to historical outcome data from those patient samples. We intend to generate additional data (genomics and transcriptomics) from these tumor samples to deliver a multi-omic approach to the pharmaceutical industry.

Through our Helomics subsidiary, we will utilize both this historical data and the PDx platform to build AI-driven predictive models of tumor drug response and outcome through our CancerQuest 2020 ("CCQ2020") initiative. Once validated, we will commercialize these AI-driven predictive models in revenue generating service projects with pharmaceutical, biotech, and diagnostic companies.

A key part of our commercialization strategy for the CCQ2020 initiative is the understanding that our AI-driven models of tumor drug response serves a key unmet need of pharmaceutical, diagnostic, and biotech industries for actionable multi-omic insights on cancer. In collaboration with these companies, using the predictive models, we will accelerate the search for more individualized and effective cancer treatments, through revenue generating projects in biomarker discovery, drug screening, drug repurposing, and clinical trials.

Our commercial strategy has identified a portfolio of revenue generating project types that leverage the predictive models, our AI expertise, PDx tumor profiling, and CLIA laboratory to provide custom solutions utilizing our full array of assets and expertise.

The CCQ2020 initiative will focus initially on ovarian cancer, which is where we have the most expertise, samples, data, and access to outcomes. However, we intend to expand the initiative to include cancers of the lung, breast, colon, and prostate, and will actively seek partners to assist in that effort.

Within the clinical sector, we will utilize these predictive models (once validated) for new clinical decision support tools for individualizing therapy for patients with cancer. These clinical decision support tools are a longer revenue horizon than the research projects with pharmaceutical companies but, importantly, will provide a steady stream of additional data generation to refine the predictive models for both clinical and research applications.

Skyline Medical – The STREAMWAY System

Sold through our subsidiary, Skyline Medical, Inc (“Skyline Medical”), 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 both 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 the Occupational Safety and Health Administration (“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 United States.

In December 2019, we announced that we had received indications of interest from several parties for the possible acquisition of our Skyline Medical division, and we reaffirmed that we are focusing our resources on our precision medicine business. We continue to operate the Skyline Medical business with a focus on maximizing our strategic opportunities with respect to this division.

Industry and Market Background and Analysis - Infectious and Bio-hazardous Waste Management

There has long been recognition of the collective potential for ill effects to healthcare workers from exposure to infectious/bio-hazardous materials. Federal and state regulatory agencies have issued mandatory guidelines for the control of such materials, and in particular, bloodborne pathogens. OSHA’s Bloodborne Pathogens Standard (29 CFR 1910.1030) requires employers to adopt engineering and work practice controls that would eliminate or minimize employee exposure from hazards associated with bloodborne pathogens. In 2001, in response to the Needlestick Safety and Prevention Act, OSHA revised the Bloodborne Pathogens Standard. The revised standard clarifies and emphasizes the need for employers to select safer needle devices and to involve employees in identifying and choosing these devices. The revised standard also calls for the use of “automated controls” as it pertains to the minimization of healthcare exposure to bloodborne pathogens.

Most surgical procedures produce potentially infectious materials that must be disposed with the lowest possible risk of cross-contamination to healthcare workers. Current standards of care allow for these fluids to be retained in canisters and located in the operating room where they can be monitored throughout the surgical procedure. Once the procedure is complete these canisters and their contents are disposed using a variety of methods, all of which include manual handling and result in a heightened risk to healthcare workers for exposure to their contents. Canisters are the most prevalent means of collecting and disposing of infectious fluids in hospitals today. Traditional, non-powered canisters and related suction and fluid disposable products are exempt and do not require FDA clearance.

We believe that our virtually hands free direct-to-drain technology (1) significantly reduces the risk of healthcare worker exposure to these infectious fluids by replacing canisters, (2) further reduces the risk of worker exposure when compared to powered canister technology that requires transport to and from the operating room, (3) reduces the cost per procedure for handling these fluids, and (4) enhances the surgical team’s ability to collect data to accurately assess the patient’s status during and after procedures. In addition to the traditional canister method of waste fluid disposal, several other powered medical devices have been developed that address some of the deficiencies described above. Most of these competing products continue to utilize some variation on the existing canister technology, and while not directly addressing the canister, most have been successful in eliminating the need for an expensive gel and its associated handling and disposal costs. Our existing competitors with products already on the market have a clear competitive advantage over us in terms of brand recognition and market exposure. In addition, many of our competitors have extensive marketing and development budgets that could overpower an emerging growth company like ours.

We expect the hospital surgery market to continue to increase due to population growth, the aging of the population, and expansion of surgical procedures to new areas (for example, use of the endoscope) which requires more fluid management and new medical technology.

STREAMWAY System Product Sales

Our domestic and international segments consist primarily of sales of the STREAMWAY System, as well as sales of the proprietary cleaning fluid and filters for use with the STREAMWAY System. We manufacture an environmentally conscious system for the collection and disposal of infectious fluids resulting from surgical and other medical procedures. We have been granted patents for the STREAMWAY System in the United States, Canada, and Europe. We distribute our products to medical facilities where bodily and irrigation fluids produced during medical procedures must be contained, measured, documented, and disposed. Our products minimize the exposure potential to the healthcare workers who handle such fluids. In addition to simplifying the handling of these fluids, our goal is to create products that dramatically reduce staff exposure without significant changes to established operative procedures, historically a major industry stumbling block to innovation and product introduction.

The STREAMWAY System is a wall-mounted fully automated system that disposes of an unlimited amount of suction fluid providing uninterrupted performance for physicians while virtually eliminating healthcare workers' exposure to potentially infectious fluids collected during surgical and other patient procedures. The STREAMWAY System also provides an innovative way to dispose of ascites and pleural fluid with no evac bottles, suction canisters, transport, or risk of exposure. We also manufacture and sell two disposable products required for the operation of the STREAMWAY System: a bifurcated dual port procedure filter with tissue trap and a single use bottle of cleaning solution. Both items are utilized on a single procedure basis and must be discarded after use. The STREAMWAY disposables are a critical component of our business model. Recurring revenues from the sale of the disposables are expected to be significantly higher over time than the revenues from the initial sale of the unit. We have exclusive distribution rights to the disposable solution.

We sell our medical device products directly to hospitals and other medical facilities using employed sales representatives, independent contractors and distributors.

Our subsidiary, TumorGenesis, is pursuing 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. We 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).

Ability to Continue as a Going Concern

We have suffered recurring losses from operations, and we have significant debt repayment obligations that are due within the current year. Although we have been able to fund our current working capital requirements, principally through debt and equity financing, there is no assurance that we will be able to do so in the future. As a result of our capital needs for operations and debt repayment, we need to raise significant capital, and there is no assurance that we will be successful in raising sufficient capital. These factors raise substantial doubt about our ability to continue as a going concern. As a result of the above factors, our management has substantial doubts about our ability to continue as a going concern.

Corporate Information

We were originally incorporated on April 23, 2002 and reincorporated in Delaware in 2013. We changed our name from Skyline Medical, Inc. to Precision Therapeutics, Inc. on February 1, 2018 and to Predictive Oncology, Inc. on June 13, 2019.

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

Description of the Private Placements

Securities Purchase Agreement and Registration Rights Agreement

On March 15, 2020, Predictive Oncology Inc. (the “Company”) entered the Securities Purchase Agreement (the Purchase Agreement”) with Armistice Capital Master Fund Ltd. (“Armistice”) and Sabby Volatility Warrant Master Fund, Ltd. (“Sabby”). On March 19, 2020, the Company closed on the sale of its common stock and warrants to Armistice and Sabby. The Company sold and issued (i) 260,000 shares of common stock, at a sale price of \$2.121 per share; (ii) prefunded warrants (the “Prefunded Warrants”) to acquire 1,390,166 shares of common stock, sold at \$2.12 per share and exercisable at an exercise price of \$0.001 per share; (iii) Series A warrants (the “Series A Warrants”) to acquire 1,650,166 shares of Common Stock at \$1.88 per share, exercisable immediately and terminating five and one-half years after the date of issuance; and (iv) Series B warrants (the “Series B Warrants”) to acquire 1,650,166 shares of Common Stock at \$1.88 per share, exercisable immediately and terminating two years after the date of issuance. The Prefunded Warrants, the Series A Warrants and the Series B Warrants are referred to collectively herein as the “Warrants”.

Net proceeds from the sale of the Offering Shares and Prefunded Warrants was approximately \$3,185,000 after deducting the placement agent fees and estimated offering expenses payable by the Company. The Company agreed to use the net proceeds from the offering for general corporate purposes and not for (a) for the satisfaction of any portion of the Company’s debt (other than payment of trade payables in the ordinary course of the Company’s business and prior practices), (b) for the redemption of any Common Stock or Common Stock equivalents, (c) for the settlement of any outstanding litigation or (d) in violation of the Foreign Corrupt Practices Act of 1977, as amended, or Office of Foreign Assets Control of the U.S. Treasury Department regulations.

In connection with the offering, the Company entered into a registration rights agreement (the “Registration Rights Agreement”), pursuant to which, among other things, the Company agreed to prepare and file with the Securities and Exchange Commission (the “SEC”) one or more registration statements, to register for resale the Offering Shares sold in the offering and the shares of Common Stock underlying the Warrants.

The securities issued in the offering have not been registered under the Securities Act of 1933, as amended (the “Securities Act”), and until so registered the securities may not be offered or sold absent registration or availability of an applicable exemption from registration.

The Company agreed that from March 13, 2020 until 90 days after the initial registration statement required by the Registration Rights Agreement is declared effective by the SEC, neither the Company nor any of its subsidiaries will issue, enter into any agreement to issue or announce the issuance or proposed issuance of any shares of Common Stock or Common Stock equivalents. Notwithstanding the foregoing, if, at any time following 30 days after the effective date of such registration statement, the last closing sale price for the Common Stock on the Nasdaq Capital Market is at least \$6.30 (subject to adjustment for reverse and forward stock splits, stock dividends, stock combinations and other similar transactions of the Common Stock that occur after the date of the Purchase Agreement) for three consecutive trading days, then these issuance restrictions shall have no further force and effect.

On March 15, 2020, the Company also entered into a letter agreement (the “Placement Agreement”) with H.C. Wainwright & Co, LLC (the “Placement Agent”), pursuant to which the Placement Agent agreed to serve as placement agent for the offering. The Company has agreed to pay the Placement Agent an aggregate fee equal to 7.5% of the aggregate gross proceeds received by the Company in the offering. The Company will also issue the Placement Agent warrants to purchase shares of Common Stock equal to 7.5% of the number of the shares issuable in the offering, pay the Placement Agent a management fee equal to 1% of the aggregate gross aggregate gross proceeds received by the Company in the offering, and reimburse the Placement Agent for \$25,000 in non-accountable expenses and up to \$40,000 in legal and other out-of-pocket expenses.

The Purchase Agreement and the Placement Agreement contain customary representations, warranties and covenants by the Company, customary conditions to closing, indemnification obligations of the Company and the Investors, including for liabilities under the Securities Act, other obligations of the parties and termination provisions. The representations, warranties and covenants contained in the Purchase Agreement and the Placement Agreement were made only for purposes of such agreements and as of specific dates, were solely for the benefit of the parties to such agreements, and may be subject to limitations agreed upon by the contracting parties.

Securities Purchase Agreement with Oasis Capital, LLC

On February 5, 2020 (the "Effective Date"), Predictive Oncology Inc. (the "Company") entered into a Securities Purchase Agreement (the "Purchase Agreement") with Oasis Capital, LLC ("Oasis") pursuant to which the Company issued a convertible promissory note to Oasis (the "Note") in the principal amount of up to \$1,450,000 in exchange for a cash investment of \$1,200,000. \$240,000 of the Note's principal represents an original issue discount ("OID") and the remaining \$10,000 represents a credit for the Oasis' transaction expenses. Under a Security Agreement entered into by the Company and Oasis on the Effective Date (the "Security Agreement"), the Company granted to Oasis a security interest in the Company's assets to secure repayment of the Note. The principal amount of the Note accrues interest at a rate of 8% per annum (with six months of interest guaranteed). Unless previously converted (as discussed below), the Note will mature and become due and payable on the six month anniversary of the Effective Date. The Company will incur a 20% repayment charge in connection with any repayment of principal under the Note. Subject to certain limitations, the outstanding principal amount of the Note and interest thereon are convertible at the election of Oasis into shares of the Company's common stock at a conversion price equal to \$2.589.

Advances under the Note will be made in three tranches. The principal amount of the first tranche, which was advanced on the Effective Date, was \$490,000 (including a \$400,000 cash advance, a pro rata (\$80,000) OID and the \$10,000 transaction expense credit). The second and third tranches, each with principal amounts of \$480,000 (including a \$400,000 cash advance and a pro rata (\$80,000) OID), will be advanced 30 and 60 days after the Effective Date, respectively.

The Company issued to Oasis five-year warrants ("Warrants") to purchase 94,631 shares of the Company's common stock at the closing of the first tranche, and will issue Warrants to purchase 92,700 shares at the closing of each of the second and third tranches. The Warrants are exercisable beginning on the sixth month anniversary of the issuance date at an exercise price equal \$2.992 per share. As additional consideration for the investment, the Company issued 46,875 shares of its common stock (the "Inducement Shares") to the Investor at the closing of the first tranche. The Investor will have piggyback registration rights with respect to the Inducement Shares and the shares issuable upon conversion of the Note.

Third Amendment to and Extension of Promissory Note.

On March 19, 2020, Predictive Oncology Inc. (the "Company") entered into a third amendment to the Amended and Restated Senior Secured Promissory Note dated September 28, 2018 and amended and restated as of February 7, 2019 issued to L2 Capital, LLC (as amended by that certain First Amendment dated September 27, 2019 and that certain Second Amendment dated December 12, 2019, the "L2 Note"). Under the third amendment, the maturity date of the L2 Note was extended from March 28, 2020 to June 28, 2020.

First Amendment to and Extension of Promissory Note.

On March 19, 2020, the Company entered into an amendment to the Senior Secured Promissory Note dated September 27, 2019 issued to Oasis Capital, LLC (the "Oasis Note"). Under the amendment, the maturity date of the Oasis Note was extended from March 27, 2020 to June 27, 2020. In exchange for such extension, the outstanding principal amount of the Oasis Note was increased by \$300,000, such that, as of the effective date of the amendment, the outstanding principal amount owed under the Oasis Note was \$980,833.33. Under the amendment, through March 26, 2020, the holder waived its rights under the Oasis Note to have the Oasis Note repaid from the proceeds of any financing consummated by the Company. In exchange for such waiver, the Company issued 30,000 shares of common stock (the "Waiver Shares") to the holder.

Risk Factors

Our business is subject to numerous risks. For a discussion of the risks you should consider before purchasing shares of our common stock, see “Risk Factors” on page 10 of this prospectus.

The Offering

This prospectus relates to the proposed resale or other disposition from time to time of up to 5,889,561 shares of Predictive Oncology Inc. (“Predictive”) common stock, \$0.01 par value per share, which includes 336,875 shares of common stock which have been issued; 4,970,529 shares of common stock that may be issued upon exercise of warrants, and 582,157 shares of common stock that may be issued upon conversion of a convertible promissory note held by the Selling Stockholders identified in this prospectus. See “Selling Stockholders” and “Plan of Distribution.”

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

We have agreed to register the offer and sale of the common stock to satisfy registration rights we have granted to the Selling Stockholders. We will not receive any of the proceeds from the sale of shares of our common stock in this offering. The Selling Stockholders will receive all of the proceeds from this offering. We will, however, receive the proceeds of any cash exercises of the warrants.

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, 2019, which is incorporated by reference 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.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Some of the statements made in this prospectus 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:

- We may 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 2019 merger with Helomics including: 1) significant goodwill could result in further impairment; 2) possible failure to realize anticipated benefits of the merger; 3) costs associated with the merger may be higher than expected; 4) the merger may result in the disruption of our existing businesses; and 5) distraction of management and diversion of resources;
- Risks related to our partnerships with other companies, including the need to negotiate the definitive agreements; possible failure to realize anticipated benefits of these partnerships; and costs of providing funding to our partner companies, which may never be repaid or provide anticipated returns;
- Risks related to the transaction with Quantitative Medicine including: 1) completion of the transaction; 2) possible failure to realize anticipated benefits of the merger; 3) costs associated with the merger may be higher than expected; 4) the merger may result in the disruption of our existing businesses; and 5) distraction of management and diversion of resources;
- Risk that we will be unable to complete the transaction with InventaBioTech;
- 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;
- Acquisition and maintenance of any necessary regulatory clearances applicable to applications of our technology;
- Inability to attract or retain qualified senior management personnel, including sales and marketing personnel;
- Risk that we never become profitable if our product is not accepted by potential customers;
- Possible impact of government regulation and scrutiny;

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 6 of this prospectus 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. 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

We will not receive any proceeds from the sale of the shares of our common stock by the Selling Stockholders. However, we will receive proceeds from the exercise, if any, of the Warrants issued to the Selling Stockholders pursuant to the Securities Purchase Agreement. We will use these proceeds for general corporate and working capital purposes, or for other purposes that our board of directors, in its good faith, deems to be in the best interest of our Company. We have agreed to bear the expenses relating to the registration of the offer and resale by the Selling Stockholders of the shares being offered hereby.

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.

General

Our authorized capital stock consists of 100,000,000 shares of Common Stock, and 50,000,000 shares of preferred stock, \$0.01 par value per share (“Preferred Stock”). Out of the Preferred Stock, as of December 31, 2019, (i) 300,000 shares have been designated Series B Convertible Preferred Stock, of which 79,246 shares were outstanding, (ii) 3,500,000 shares have been designated Series D Convertible Preferred Stock, of which 3,500,000 shares were outstanding, and (iii) 350 shares have been designated Series E Convertible Preferred Stock, of which 258 shares were outstanding.

The outstanding shares of our Common Stock and Preferred Stock are fully paid and nonassessable.

The Series B Convertible Preferred Stock is convertible into Common Stock at the option of its holders on a 1:1 basis, subject to a 4.99% beneficial ownership blocker. The Series D Convertible Preferred Stock converts on a 1:10 basis on April 4, 2020, subject to a 4.99% beneficial ownership blocker. Each share of Series E Convertible Preferred Stock is convertible at the option of its holder into 0.056857% of the shares of Common Stock issued and outstanding immediately prior to giving effect to such conversion, subject to a 19.99% beneficial ownership blocker, and on June 13, 2020, the Company may at its option convert all outstanding shares of Series E Convertible Preferred Stock into shares of Common Stock.

Our Board of Directors is authorized, subject to any limitations prescribed by law, to provide for the issuance of the shares of Preferred Stock in 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 such series and any qualifications, limitations or restrictions thereon. The number of authorized shares of Preferred Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the outstanding shares of Common Stock without a vote of the holders of the Preferred Stock, or of any series thereof, unless a vote of any such holders is required pursuant to the certificate or certificates establishing the series of Preferred Stock.

Common Stock

As of April 13, 2020, we had 6,197,722 shares of common stock outstanding held by approximately 165 stockholders of record.

Voting Rights. The holders of our Common Stock are entitled to one vote for each outstanding share of Common Stock owned by that shareholder on every matter properly submitted to the shareholders for their vote. Shareholders are not entitled to vote cumulatively for the election of directors.

Dividend Rights. Subject to the dividend rights of the holders of any outstanding series of preferred stock, holders of our Common Stock are entitled to receive ratably such dividends and other distributions of cash or any other right or property as may be declared by our Board of Directors out of our assets or funds legally available for such dividends or distributions.

Liquidation Rights. In the event of any voluntary or involuntary liquidation, dissolution or winding up of our affairs, holders of our Common Stock would be entitled to share ratably in our assets that are legally available for distribution to shareholders after payment of liabilities and after the satisfaction of any liquidation preference owed to the holders of any Preferred Stock.

Conversion, Redemption and Preemptive Rights. Holders of our Common Stock have no conversion, redemption, preemptive, subscription or similar rights.

Anti-Takeover Provisions

Bylaws. Certain provisions of our Bylaws could have anti-takeover effects. These provisions are intended to enhance the likelihood of continuity and stability in the composition of our corporate policies formulated by our Board of Directors. In addition, these provisions also are intended to ensure that our Board of Directors will have sufficient time to act in what our Board of Directors believes to be in the best interests of our Company and our shareholders. Nevertheless, these provisions could delay or frustrate the removal of incumbent directors or the assumption of control of us by the holder of a large block of Common Stock, and could also discourage or make more difficult a merger, tender offer, or proxy contest, even if such event would be favorable to the interest of our shareholders. These provisions are summarized below.

Advance Notice Provisions for Raising Business or Nominating Directors. Sections 2.09 and 2.10 of our Bylaws contain advance-notice provisions relating to the ability of shareholders to raise business at a shareholder meeting and make nominations for directors to serve on our Board of Directors. These advance-notice provisions generally require shareholders to raise business within a specified period of time prior to a meeting in order for the business to be properly brought before the meeting.

Number of Directors and Vacancies. Our Bylaws provide that the exact number of directors shall be determined from time to time solely by resolution adopted by the affirmative vote of a majority of the entire Board of Directors. The Board of Directors is divided into three classes, as nearly equal in number as possible, designated: Class I, Class II and Class III (each, a "Class"). In the case of any increase or decrease, from time to time, in the number of directors, the number of directors in each class shall be apportioned as nearly equal as possible. Except as otherwise provided in the Certificate of Incorporation, each director serves for a term ending on the date of the third annual meeting of the Company's stockholders following the annual meeting at which such director was elected; provided, that the term of each director shall continue until the election and qualification of a successor and be subject to such director's earlier death, resignation or removal. Vacancies on the Board of Directors resulting from death, resignation, removal or otherwise and newly created directorships resulting from any increase in the number of directors may be filled solely by a majority of the directors then in office (although less than a quorum) or by the sole remaining director.

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.

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 April 9, 2020, the last reported sale price per share for our common stock as reported by The Nasdaq Capital Market was \$1.40.

SELLING STOCKHOLDERS

This prospectus covers the resale by the Selling Stockholders or its permitted transferees of up to 5,889,561 shares that have been or may be issued by us to the Selling Stockholders under the arrangements and agreements described in “Prospectus Summary – Description of the Private Placements.” The Selling Stockholders have not had any position or office, or other material relationship with us or any of our affiliates over the past three years. The following table sets forth certain information regarding the beneficial ownership of shares of common stock by the Selling Stockholders as of March 30, 2020 and the number of shares of our common stock being offered pursuant to this prospectus.

The table below (i) lists the Selling Stockholders and other information regarding the beneficial ownership of our common stock by the Selling stockholder; (ii) have been prepared based upon information furnished to us by the selling stockholder; and (iii) to our knowledge, is accurate as of the date of this prospectus. The Selling Stockholders may sell all, some or none of their shares in this offering. The Selling Stockholders identified in the table below may have sold, transferred or otherwise disposed of some or all of its shares since the date of this prospectus in transactions exempt from or not subject to the registration requirements of the Securities Act. Information concerning the Selling Stockholders may change from time to time and, if necessary, we will amend or supplement this prospectus accordingly and as required.

| Name of selling stockholder | Shares beneficially owned as of the date of this prospectus(1) | Number of shares being offered | Number of shares to be beneficially owned and percentage of beneficial ownership after the offering(1)(2) | |
|--|--|--------------------------------|---|-------------------------|
| | | | Number of shares | Percentage of class (3) |
| Armistice Capital Master Fund | 2,828,856(4) | 2,828,856(4) | 0 | 0% |
| Sabby Volatility Warrant Master Fund, Ltd. | 2,121,642(5) | 2,121,642(5) | 0 | 0% |
| Oasis Capital, LLC | 1,091,532(6) | 939,063(7) | 152,469(8) | 2.4% |

- (1) Beneficial ownership is determined in accordance with SEC rules and generally includes voting or investment power with respect to shares of common stock. Shares of common stock subject to options and warrants currently exercisable, or exercisable within 60 days, are counted as outstanding for computing the percentage of the person holding such options or warrants but are not counted as outstanding for computing the percentage of any other person. Substantially all of the warrants and convertible securities included in the table are subject to restrictions that prevent exercise to the extent that after the exercise the holder or its affiliates would beneficially own in excess of 4.99% of the Company’s outstanding stock.
- (2) The amount and percentage of shares of our common stock that will be beneficially owned by the Selling Stockholders after completion of the offering assume that they will sell all shares of our common stock being offered pursuant to this prospectus.
- (3) Based on 6,197,722 shares of our common stock issued and outstanding as of April 13, 2020. All shares of our common stock being offered pursuant to this prospectus by a Selling Stockholder are counted as outstanding for computing the percentage beneficial ownership of such Selling Stockholder.
- (4) Includes 260,000 shares owned directly by Armistice Capital Master Fund Ltd. (“Armistice”) and 2,568,856 shares issuable upon exercise of warrants. Such warrants are subject to restrictions that prevent exercise to the extent that after the exercise the holder or its affiliates would beneficially own in excess of 4.99% of the Company’s outstanding stock. Steven Boyd has shared voting and investment control over shares owned by Armistice.
- (5) Includes 2,121,642 shares issuable upon exercise of warrants. Such warrants are subject to restrictions that prevent exercise to the extent that after the exercise the holder or its affiliates would beneficially own in excess of 4.99% of the Company’s outstanding stock. Sabby Management, LLC serves as the investment manager of Sabby Volatility Warrant Master Fund, Ltd. (“SVWMF”). Hal Mintz is the manager of Sabby Management, LLC and has voting and investment control of the securities held by SVWMF. Each of Sabby Management, LLC and Hal Mintz disclaims beneficial ownership over the securities beneficially owned by SVWMF except to the extent of their respective pecuniary interest therein.

- (6) Includes 85,733 shares owned directly, up to 280,031 shares issuable upon exercise of warrants and up to 582,167 shares upon conversion of a convertible promissory note. Adam Long has sole voting and investment control over shares owned by Oasis Capital, LLC.
- (7) Includes 76,875 shares owned directly, up to 280,031 shares issuable upon exercise of warrants and up to 582,157 shares upon conversion of a convertible promissory note. Adam Long has sole voting and investment control over shares owned by Oasis Capital, LLC.
- (8) Includes 8,858 shares owned directly and up to 143,611 shares issuable upon exercise of warrants. Adam Long has sole voting and investment control over shares owned by Oasis Capital, LLC.

PLAN OF DISTRIBUTION

The Selling Stockholders or their permitted transferees may, from time to time, sell any or all of shares of our common stock covered hereby on the Nasdaq stock market, or any other stock exchange, market or trading facility on which the shares are traded or in private transactions. The Selling Stockholders may sell all or a portion of the shares being offered pursuant to this prospectus at fixed prices, at prevailing market prices at the time of sale, at varying prices or at negotiated prices. The Selling Stockholders may use any one or more of the following methods when selling securities:

- on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;
- in the over-the-counter market;
- in transactions otherwise than on these exchanges or systems or in the over-the-counter market;
- through the writing or settlement of options, whether such options are listed on an options exchange or otherwise;
- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;

The Selling Stockholders may also sell securities under Rule 144 under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the Selling Stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the Selling Stockholders (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, provided such amounts are in compliance with FINRA Rule 2121. Discounts, concessions, commissions and similar selling expenses, if any, that can be attributed to the sale of common stock will be paid by the Selling Stockholders and/or the purchasers.

The Selling Stockholders may be deemed to be underwriters within the meaning of the Securities Act and any broker-dealers or agents that are involved in selling the shares may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Because the Selling Stockholders may be deemed to be underwriters within the meaning of the Securities Act, they may be subject to the prospectus delivery requirements of the Securities Act.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale of securities may not simultaneously engage in market making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the Selling Stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of securities of the common stock by the Selling Stockholders or any other person. We will make copies of this prospectus available to the selling security holders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale.

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.

EXPERTS

The financial statements incorporated in this prospectus by reference from the Company's Annual Report on Form 10-K for the year ended December 31, 2019 have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which is incorporated herein by reference. Such financial statements have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

The financial statements of Helomics Holding Corporation for the fiscal year ended December 31, 2018, as restated, incorporated by reference in this prospectus have been so incorporated in reliance on the report of Schneider Downs & Co., Inc., certified public accountants registered with the Public Company Accounting Oversight Board, as auditor for Helomics Holding Corporation prior to the acquisition by the Company.

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.predictive-oncology.com. Information on any Company website, any subsection, page, or other subdivision of any Company website, or any website linked to by content on any Company 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.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" information into this prospectus, 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 contain important information that you should read about us. The following documents are incorporated by reference into this prospectus:

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 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. 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.

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, 2019;
- Current Reports on Form 8-K filed March 23, 2020, March 16, 2020, February 21, 2020, February 7, 2020, February 4, 2020, January 28, 2020, January 24, 2020, and January 6, 2020.
- The description of the Company's common stock filed as Exhibit 4.29 "Description of Registrant's Securities" to the Company's Annual Report on Form 10-K on April 1, 2020.

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

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

PREDICTIVE ONCOLOGY INC.

5,889,561 Shares

Common Stock

PROSPECTUS

April 15, 2020
