

As filed with the Securities and Exchange Commission on February 5, 2021

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

AMENDMENT NO. 1 TO
FORM S-1
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)

33-1007393
(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.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) 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

Non-accelerated filer

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.

EXPLANATORY NOTE

This Pre-Effective Amendment No. 1 (this "Amendment") to the Registration Statement on Form S-1 of Predictive Oncology, Inc. (File No. 333-252585) initially filed on January 29, 2021 (the "Registration Statement"), is being filed as an exhibit-only filing to file an updated legal opinion and consent of Maslon LLP, filed herewith as Exhibit 5.1 (the "Consent"). Accordingly, this Amendment consists only of the facing page, this explanatory note, Item 16 of Part II of the Registration Statement, the signature pages to the Registration Statement, and the Opinion and Consent filed herewith as Exhibit 5.1. The prospectus and the balance of Part II of the Registration Statement are unchanged and have been omitted.

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 February 5, 2021.

PREDICTIVE ONCOLOGY INC.

/s/ Bob Myers
Bob Myers
Chief Financial Officer

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>Carl Schwartz</u>	Chief Executive Officer (principal executive officer) and Director	February 5, 2021
<u>/s/ Bob Myers</u> Bob Myers	Chief Financial Officer (principal financial and accounting officer)	February 5, 2021
* <u>J. Melville Engle</u>	Director	February 5, 2021
* <u>Richard L. Gabriel</u>	Director	February 5, 2021
* <u>Daniel E. Handley</u>	Director	February 5, 2021
* <u>Gregory S. St. Clair, Sr.</u>	Director	February 5, 2021
* <u>Chuck Nuzum</u>	Director	February 5, 2021
* <u>Nancy Chung-Welch</u>	Director	February 5, 2021
*By: <u>/s/ Bob Myers</u> Bob Myers, Attorney-in-Fact		

EXHIBIT INDEX

Exhibit Number	Description
1.1	Engagement Letter with H.C. Wainwright & Co. dated January 7, 2021 (40) Exhibit 1.1
2.1	Amended and Restated Agreement and Plan of Merger dated October 22, 2018 (13) Exhibit 2.1
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 (2) 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 (3) 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 (7) 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 (8) 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 (9) 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 (15) 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 (4) Exhibit 3.8
3.9	Certificate of Amendment to Certificate of Incorporation to increase authorized share capital and establish a classified Board of Directors (17) Exhibit 3.9
3.10	Second Amended and Restated Bylaws as of June 10, 2019 (25) Exhibit 3.10
3.11	Form of Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock (5) Exhibit 3.11
3.12	Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock (14) Exhibit 3.12
3.13	Certificate of Amendment to Certificate of Incorporation dated March 22, 2019 (18) Exhibit 3.13
3.14	Certificate of Designation Of Preferences, Rights And Limitations of Series D Convertible Preferred Stock (35) Exhibit 3.14
3.15	Certificate of Designation of Preferences, Rights and Limitations of Series E Convertible Preferred Stock Effective June 13, 2019 (26) Exhibit 3.15
3.16	Certificate of Amendment of Certificate of Incorporation (25) Exhibit 3.16
3.17	Certificate of Amendment of Certificate of Incorporation (30) Exhibit 3.17

- 4.1 Form of specimen certificate evidencing shares of Series B Convertible Preferred Stock (6) [Exhibit 4.1](#)
 - 4.2 Form of New Warrant Agency Agreement by and between Skyline Medical Inc. and Form of Warrant Certificate for Series B Warrant (10) [Exhibit 4.2](#)
 - 4.3 Form of Series B Warrant Certificate (included as part of Exhibit 4.2) (10) [Exhibit 4.3](#)
 - 4.4 Form of Series C Warrant (11) [Exhibit 4.4](#)
 - 4.5 Form of Unit Purchase Option (11) [Exhibit 4.5](#)
 - 4.6 Form of Series D Warrant Agency Agreement by and between Skyline Medical Inc. and Corporate Stock Transfer, Inc. and Form of Series D Warrant Certificate (12) [Exhibit 4.6](#)
 - 4.7 Form of Series D Warrant Certificate (included as part of Exhibit 4.6) (12) [Exhibit 4.78](#)
 - 4.8 Form of Amendment to Warrant (4) [Exhibit 4.8](#)
 - 4.9 Investor Warrant (14) [Exhibit 4.9](#)
 - 4.10 Series E Warrant Agency Agreement by and between Skyline Medical Inc. and Corporate Stock Transfer, Inc. dated January 9, 2018 (16) [Exhibit 4.10](#)
 - 4.11 Form of Series E Warrant Certificate (16) [Exhibit 4.11](#)
 - 4.12 Common Stock Purchase Warrant issued to L2 Capital, LLC dated September 28, 2018 (17) [Exhibit 4.12](#)
 - 4.13 Common Stock Purchase Warrant issued to Peak One Opportunity Fund, LP dated September 28, 2018 (17) [Exhibit 4.13](#)
 - 4.14 Second Amended and Restated Common Stock Purchase Warrant issued to Carl Schwartz dated February 6, 2019 (19) [Exhibit 4.14](#)
 - 4.15 Form of Warrant (Initial Issue Date: March 1, 2019) (20) [Exhibit 4.15](#)
 - 4.16 Form of Unit Purchase Option (20) [Exhibit 4.16](#)
 - 4.17 Common Stock Purchase Warrant issued to Carl Schwartz dated November 30, 2018 (21) [Exhibit 4.17](#)
 - 4.18 Amended and Restated Common Stock Purchase Warrant issued to Carl Schwartz dated January 8, 2019 (22) [Exhibit 4.18](#)
 - 4.19 Form of Common Stock Purchase Warrant issued March 29, 2019 (24) [Exhibit 4.19](#)
 - 4.20 Form of Unit Purchase Option for the Purchase of Units (24) [Exhibit 4.20](#)
 - 4.21 Common Stock Purchase Warrant Issued to Oasis Capital, LLC dated September 27, 2019 (27) [Exhibit 4.21](#)
 - 4.22 Form of Specimen Common Stock Certificate (28) [Exhibit 4.22](#)
 - 4.23 Form of Common Stock Purchase Warrant Issued on or about October 1, 2019 (29) [Exhibit 4.23](#)
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- 4.24 Common Stock Purchase Warrant issued to Oasis Capital, LLC dated February 5, 2020 (32) [Exhibit 4.24](#)
- 4.25 Form of Series A Warrant (33) [Exhibit 4.25](#)
- 4.26 Form of Series B Warrant (33) [Exhibit 4.26](#)
- 4.27 Form of Prefunded Warrant (33) [Exhibit 4.27](#)
- 4.28 Form of Prefunded Common Stock Purchase Warrant (34) [Exhibit 4.28](#)
- 4.29 Description of Registrant's Securities (35) [Exhibit 4.29](#)
- 4.30 Common Stock Purchase Warrant issued to Oasis Capital, LLC dated March 6, 2020 (31) [Exhibit 4.30](#)
- 4.31 Common Stock Purchase Warrant issued to Oasis Capital, LLC dated April 5, 2020 (31) [Exhibit 4.31](#)
- 4.32 Form of Common Stock Purchase Warrant (36) [Exhibit 4.32](#)
- 4.33 Form of Common Stock Purchase Warrant (37) [Exhibit 4.33](#)
- 4.34 Form of Common Stock Purchase Warrant (29) [Exhibit 4.34](#)
- 4.35 Form of Common Stock Purchase Warrant (40) [Exhibit 4.35](#)
- 4.36 Form of Common Stock Purchase Warrant (41) [Exhibit 4.36](#)
- 4.37 Form of Common Stock Purchase Warrant (42) [Exhibit 4.37](#)
- 4.38 Form of Placement Agent Warrant to H.C. Wainwright & Co., LLC or its designees in connection with certain financing transactions in 2020 and 2021 (43) [Exhibit 4.38](#)

[5.1**](#) [Opinion of Maslon LLP](#)

- 10.1 Equity Purchase Agreement by and between the Company and Oasis Capital, LLC dated October 24, 2019 (39) [Exhibit 10.1](#)
- 10.2 Registration Rights Agreement by and between the Company and Oasis Capital, LLC dated October 24, 2019 (39) [Exhibit 10.2](#)
- 10.3 Form of Securities Purchase Agreement dated January 8, 2021, by and between Predictive Oncology Inc. and certain Purchasers (40) [Exhibit 10.3](#)
- 10.4 Form of Securities Purchase Agreement dated January 19, 2021, by and between Predictive Oncology Inc. and certain Purchasers (41) [Exhibit 10.4](#)
- 10.5 Form of Securities Purchase Agreement dated January 21, 2021y, b and between Predictive Oncology Inc. and certain Purchasers (42) [Exhibit 10.5](#)

- 23.1 Consent of Deloitte & Touche LLP (43) [Exhibit 23.1](#)
- 23.2 Consent of Schneider Downs & Co., Inc. (43) [Exhibit 23.2](#)

[23.3**](#) [Consent of Maslon LLP \(included as part of Exhibit 5.1\)](#)

- 24.1 Power of Attorney (included on signature page)(43) [Exhibit 24.1](#)

** Filed herewith

- (1) Filed on December 19, 2013 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
 - (2) Filed on October 24, 2014 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
 - (3) Filed on June 30, 2015 as an appendix to our Information Statement on Schedule 14C and incorporated herein by reference.
 - (4) Filed on February 6, 2018 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
 - (5) 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.
 - (6) Filed on August 10, 2015 as an exhibit to our Registration Statement on Form S-1 (File No. 333-198962) and incorporated herein by reference.
 - (7) Filed on September 16, 2016 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
 - (8) Filed on October 27, 2016 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
 - (9) Filed on January 27, 2017 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
 - (10) Filed on March 25, 2016 as an exhibit to our Registration Statement on Form S-4 (File No. 333-210398) and incorporated herein by reference.
 - (11) Filed on November 30, 2016 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
 - (12) Filed on January 10, 2017 as an exhibit to our Registration Statement on Form S-1 (File No. 333-215005) and incorporated herein by reference.
 - (13) Filed on October 30, 2018 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
 - (14) Filed on November 29, 2017 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
 - (15) Filed on January 2, 2018 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
 - (16) Filed on January 10, 2018 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
 - (17) Filed on October 4, 2018 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
 - (18) Filed on March 22, 2019 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
 - (19) Filed on February 12, 2019 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
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- (20) Filed on March 1, 2019 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
 - (21) Filed on December 7, 2018 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
 - (22) Filed on January 14, 2019 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
 - (23) Filed on January 24, 2019 as Annex H to Amendment No. 2 to Form S-4 (File No. 333-228031) and incorporated herein by reference.
 - (24) Filed on April 2, 2019 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
 - (25) Filed on June 13, 2019 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference
 - (26) Filed on June 19, 2019 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference
 - (27) Filed on September 30, 2019 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference
 - (28) Filed on October 3, 2019 as an exhibit to our Registration Statement on Form S-3 (File No. 333-234073) and incorporated herein by reference
 - (29) Filed on October 10, 2019 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference
 - (30) Filed on October 28, 2019 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference
 - (31) Filed on April 6, 2020 as an exhibit to our Registration Statement on Form S-3 (File No. 333-237581) and incorporated herein by reference
 - (32) Filed on February 7, 2020 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference
 - (33) Filed on March 16, 2020 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference
 - (34) Filed on March 23, 2020 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference
 - (35) Filed on April 1, 2020 as an exhibit to our Annual Report on Form 10-K and incorporated herein by reference
 - (36) Filed on May 8, 2020 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference
 - (37) Filed on June 26, 2020 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference
 - (38) Filed on December 26, 2018 as an exhibit to Amendment No. 1 to Form S-4 (File No. 333-228031) and incorporated herein by reference.
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- (39) Filed on October 25, 2019 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
 - (40) Filed on January 12, 2021 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference.
 - (41) Filed on January 21, 2021 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference
 - (42) Filed on January 26, 2021 as an exhibit to our Current Report on Form 8-K and incorporated herein by reference
 - (43) Filed on January 29, 2021 as an exhibit to our Registration Statement No. 333-252585 on Form S-1 and incorporated herein by reference
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Maslon LLP
Office Dial: 612.672.8200
www.maslon.com

February 5, 2021

Predictive Oncology Inc.
2915 Commers Drive, Suite 900
Eagan, Minnesota 55121

Re: Issuance of Common Stock

Ladies and Gentlemen:

We have acted as counsel for Predictive Oncology Inc., a Delaware corporation (the "Company"), in connection with the filing by the Company of a Registration Statement on Form S-1 (the "Registration Statement") with the Securities and Exchange Commission, including a related prospectus filed with the Registration Statement (the "Prospectus"), covering the registration for resale of up to 9,713,526 shares of the Common Stock, \$0.01 par value, of the Company (the "Shares") on behalf the selling stockholder. The Shares are being sold pursuant to an Equity Purchase Agreement (the "Agreement") dated October 24, 2019 by and between the Company and Oasis Capital, LLC (the "Investor").

In connection with this opinion, we have examined and relied upon the Registration Statement and the Prospectus, including the exhibits thereto, the Certificate of Incorporation and Bylaws of the Company, each as amended to date, the Agreement, corporate records and instruments, and have examined such laws and regulations, as we have deemed necessary for purposes of rendering the opinions set forth herein. In rendering this opinion, we have assumed the genuineness and authenticity of all signatures on original documents; the genuineness and authenticity of all documents submitted to us as originals; the conformity to originals of all documents submitted to us as copies; the accuracy, completeness and authenticity of certificates of public officials; and the due authorization, execution and delivery of all documents where due authorization, execution and delivery are prerequisites to the effectiveness of such documents. As to any facts material to the opinions expressed herein which we have not independently established or verified, we have relied upon statements and representations of officers and other representatives of the Company and others.

Subject to the foregoing and the other matters set forth herein, we are of the opinion that, the Shares when issued and sold in accordance with the terms of the Agreement will be validly issued, fully paid and nonassessable.

This opinion is being furnished in connection with the requirements of Item 601(b)(5) of Regulation S-K promulgated under the Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement or the Prospectus, other than as expressly stated herein.

The opinions expressed herein are limited to the federal laws of the United States and the General Corporation Law of the State of Delaware. Our opinion is based on these laws as in effect on the date hereof. We express no opinion as to whether the laws of any particular jurisdiction are applicable to the subject matter hereof.

The opinions and statements expressed herein are as of the date hereof. We assume no obligation to update or supplement this opinion letter to reflect any facts or circumstances that may hereafter come to our attention or any changes in applicable law which may hereafter occur.

This opinion is for your benefit in connection with the Registration Statement and may be relied upon only by you and by persons entitled to rely upon it pursuant to the applicable provisions of the Act. We consent to your filing this opinion as an exhibit to the Registration Statement, and to the reference to our firm in the Prospectus under the heading "Legal Matters." In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission thereunder.

Very truly yours,

A handwritten signature in blue ink that reads "Maslon LLP".

/MASLON LLP