UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of Report (Date of earliest event reported): May 16, 2018

ImmunoGen, Inc.

(Exact name of registrant as specified in its charter)

0-17999 (Commission File Number) 04-2726691 (IRS Employer Identification No.)

830 Winter Street, Waltham, MA 02451 (Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: (781) 895-0600

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

o Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

Massachusetts

(State or other jurisdiction of

incorporation)

o Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

o Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

o Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is a an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company o

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 13(a) of the Exchange Act. o

Item 8.01 Other Events.

On May 16, 2018, ImmunoGen, Inc. ("ImmunoGen") issued a press release announcing positive findings from the FORWARD II trial of mirvetuximab soravtansine combination regimens with Avastin[®] (bevacizumab) and carboplatin. ImmunoGen also announced that on May 17, 2018 at 8:00 a.m. ET, it will host an investor conference call to discuss new data from the FORWARD II trial. A copy of such press release is being filed as Exhibit 99.1 to this report and is incorporated herein by reference. A copy of the investor presentation to be used on the investor conference call is being furnished as Exhibit 99.2 to this report.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Exhibit
99.1	Press Release of ImmunoGen, Inc. dated May 16, 2018.
99.2	Investor presentation to be presented by ImmunoGen, Inc. on May 17, 2018.

The information set forth in Exhibit 99.2 shall not be deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liability of that section, and shall not be incorporated by reference into any registration statement or other document filed under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in such filing.

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SIGNATURES

ImmunoGen, Inc. (Registrant)

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: May 17, 2018

/s/ David B. Johnston David B. Johnston

Executive Vice President and Chief Financial Officer

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ImmunoGen Announces Positive Findings from the FORWARD II Study of Mirvetuximab Soravtansine Combination Regimens with Avastin® and Carboplatin in Ovarian Cancer

Data from Avastin Cohort to be Presented at 2018 ASCO Annual Meeting

Updated Data from Carboplatin Dose-Escalation Cohort Demonstrate Increased Response Rate and Durable Benefit with Longer-Term Follow Up

Conference Call Scheduled for 8 a.m. ET on Thursday, May 17

Waltham, MA - May 16, 2018 - ImmunoGen, Inc., (Nasdaq: IMGN), a leader in the expanding field of antibody-drug conjugates (ADCs) for the treatment of cancer today announced positive data from the FORWARD II trial evaluating mirvetuximab soravtansine in multiple combination cohorts in patients with folate receptor alpha (FR α)-positive ovarian cancer. Results from the cohort assessing mirvetuximab in combination with Avastin (bevacizumab) in patients with platinum-resistant disease will be presented at the 2018 American Society of Clinical Oncology (ASCO) Annual Meeting, which is being held June 1-5 in Chicago, IL. In addition, ImmunoGen reported updated data from the dose-escalation cohort evaluating mirvetuximab in combination with carboplatin in patients with recurrent platinum-sensitive ovarian cancer.

"Building upon the encouraging data generated with mirvetuximab monotherapy, we have looked to expand our addressable patient population through combination regimens with both currently approved and experimental agents in ovarian cancer. In dose escalation, we have demonstrated that full dose mirvetuximab can be combined safely with full doses of Avastin, carboplatin, or Keytruda, with encouraging preliminary clinical activity," said Anna Berkenblit, MD, Vice President and Chief Medical Officer of ImmunoGen. "The promising new data reported in the FORWARD II Avastin and carboplatin arms support the potential of mirvetuximab combinations in earlier lines of therapy. Together, these results have informed the triplet combination study with mirvetuximab plus carboplatin and Avastin, which we initiated last quarter."

Berkenblit continued, "In addition, we plan to present initial data from the Keytruda expansion cohort later this year, building upon the dose escalation data recently presented at SGO. The totality of these data from FORWARD II will guide the next stages of development of mirvetuximab and support a path to registration for combination regimens."

DATA FROM FORWARD II EXPANSION COHORT WITH AVASTIN

Mirvetuximab soravtansine in combination with Avastin in patients with platinum-resistant ovarian cancer has demonstrated anti-tumor activity with durable responses and a favorable tolerability profile, particularly among the subset of patients who have received up to three prior lines of therapy and have medium or high levels of FR α expression. This is the population being studied in the FORWARD I Phase 3 registration trial.

Key findings in 59 patients with platinum-resistant ovarian cancer include:

- In the subset of 23 patients evaluable for response with medium or high FRα expression levels who have received up to three prior lines of therapy, the confirmed overall response rate (ORR) was 48 percent (95% CI 27,69), with a median progression-free survival (PFS) of 9.9 months (95% CI 4.6,14.5) and a median duration of response (DOR) of 10.6 months (95% CI 3.3,12.0).
- For the 54 patients evaluable for response, the confirmed ORR was 43 percent (95% CI 29,57), with a median PFS of 7.8 months (95% CI 5.6,10.2); patients in this cohort had received a median of 3 prior lines of systemic therapy, with 58 percent of patients having received prior bevacizumab.
- The combination continues to display a safety profile in-line with the known profiles of each agent, with no new safety signals identified.

"The mirvetuximab and Avastin combination has demonstrated very encouraging initial clinical activity in ovarian cancer patients and a consistently favorable safety profile," stated David O'Malley, M.D., Professor, Director of Gynecology Clinical Trial and Phase 1 Program, James Cancer Center and The Ohio State University Wexner Medical Center, and FORWARD II Investigator. "There is a significant need for new therapeutic options to improve outcomes and tolerability for this difficult-to-treat patient population, and I believe these results support further clinical evaluation of this combination regimen."

ASCO PRESENTATION DETAILS

Title: Mirvetuximab soravtansine, a folate receptor alpha (FRα)-targeting antibody-drug conjugate (ADC), in combination with bevacizumab in patients (pts) with platinum-resistant ovarian cancer: maturing safety and activity profile from the FORWARD II Phase 1b study

Presenter: David M. O'Malley, MD, The Ohio State University College of Medicine Day/Time: Monday, June 4, 1:15-4:45 pm CDT Location: Hall A

Abstract: 5549

Additional information, can be found at www.asco.org.

UPDATED DATA FROM FORWARD II DOSE-ESCALATION COHORT WITH CARBOPLATIN

Initial findings from a dose escalation cohort of mirvetuximab in combination with carboplatin were presented at ASCO 2017. The data have matured and updated findings in heavily pre-treated patients with platinum-sensitive ovarian cancer include:

- In the subset of 10 patients with medium or high FRα expression levels, the confirmed ORR was 80 percent (95% CI 44,98), with a median PFS of 15 months (95% CI 9.9,-), and with median DOR not reached.
- For all 17 evaluable patients, the confirmed ORR was 71 percent (95% CI 44,90), with a median PFS of 15 months (95% CI 9.9, -), and with median DOR not reached; 50 percent of patients in this cohort had received 3 or more prior lines of systemic therapy.
- · The combination continues to display a favorable safety profile in-line with the known profiles of each agent, with no new safety signals identified.

Based on the findings from the carboplatin and Avastin cohorts, ImmunoGen recently initiated an additional cohort assessing a triplet combination of mirvetuximab plus carboplatin and Avastin in patients with recurrent platinum-sensitive ovarian cancer as part of the FORWARD II trial.

DATA FROM FORWARD II DOSE-ESCALATION COHORT WITH KEYTRUDA

Additionally, ImmunoGen recently announced encouraging activity and favorable tolerability data from the FORWARD II cohort assessing mirvetuximab in combination with Merck's anti-PD-1 therapy Keytruda[®] (pembrolizumab) in patients with platinum-resistant ovarian cancer at the Society of Gynecologic Oncology Annual Meeting. Based on these data, ImmunoGen is completing enrollment in an expansion cohort that includes an additional 35 patients with medium or high FRα expression levels. ImmunoGen plans to report initial findings from this cohort in the second half of this year.

CONFERENCE CALL INFORMATION

ImmunoGen will host a conference call on Thursday, May 17 at 8:00am ET to discuss new data from the FORWARD II trial. To access the live call by phone, dial 323-794-2423; the conference ID is 5718620. The call may also be accessed through the "Investors" section of the Company's website, www.immunogen.com. Following the live webcast, a replay of the call will be available at the same location through June 7, 2018.

ABOUT FORWARD II

FORWARD II is a Phase 1b/2 study of mirvetuximab in combination with Avastin (bevacizumab), carboplatin or Keytruda (pembrolizumab) in patients with FRα-positive platinum-resistant ovarian cancer, primary peritoneal, or fallopian tube tumors, as well as a triplet combination of mirvetuximab plus carboplatin and Avastin in patients with platinum-sensitive ovarian cancer.

ABOUT MIRVETUXIMAB SORAVTANSINE

Mirvetuximab soravtansine (IMGN853) is the first folate receptor alpha (FRα)-targeting ADC. It uses a humanized FRα-binding antibody to target the ADC specifically to FRα-expressing cancer cells and a potent anti-tumor agent, DM4, to kill the targeted cancer cells.

ABOUT IMMUNOGEN

ImmunoGen is developing the next generation of antibody-drug conjugates (ADCs) to improve outcomes for cancer patients. By generating targeted therapies with enhanced anti-tumor activity and favorable tolerability profiles, we aim to disrupt the progression of cancer and offer our patients more good days. We call this our commitment to "target a better now." Our lead product candidate, mirvetuximab soravtansine, is in Phase 3 study for folate receptor alpha (FRα)-positive platinum-resistant ovarian cancer, and in Phase 1b/2 testing in combination regimens. Our novel IGN candidates for hematologic malignancies, IMGN779 and IMGN632, are in Phase 1 studies.

Learn more about who we are, what we do, and how we do it at www.immunogen.com.

Keytruda[®] and Avastin[®] are registered trademarks of their respective owners.

This press release includes forward-looking statements based on management's current expectations. These statements include, but are not limited to, ImmunoGen's ability to expand the addressable patient population for mirvetuximab soravtansine and the regulatory and commercial potential of mirvetuximab combinations in earlier lines of therapy. For these statements, ImmunoGen claims the protection of the safe harbor for forward-looking statements provided by the Private Securities Litigation Reform Act of 1995. Various factors could cause ImmunoGen's actual results to differ materially from those discussed or implied in the forward-looking statements, and you are cautioned not to place undue reliance on these forward-looking statements, which are current only as of the date of this release. It should be noted that there are risks and uncertainties related to the development of novel anticancer products, including risks related to preclinical and clinical studies, their timings and results. A review of these risks can be found in ImmunoGen's Annual Report on Form 10-K for the fiscal year ended December 31, 2017 and other reports filed with the Securities and Exchange Commission.

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FORWARD II PROGRAM UPDATE NASDAQ: IMGN



FORWARD-LOOKING STATEMENTS

This presentation includes forward-looking statements based on management's current expectations. These statements include, but are not limited to, ImmunoGen's expectations related to: the occurrence, timing and outcome of potential pre-clinical, clinical and regulatory events related to the Company's and its collaboration partners' product programs; the presentation of preclinical and clinical data on the Company's and its collaboration partners' product candidates; and the financial guidance provided. For these statements, ImmunoGen claims the protection of the safe harbor for forwardlooking statements provided by the Private Securities Litigation Reform Act of 1995. Various factors could cause ImmunoGen's actual results to differ materially from those discussed or implied in the forward-looking statements, and you are cautioned not to place undue reliance on these forward-looking statements, which are current only as of the date of these slides. Factors that could cause future results to differ materially from such expectations include, but are not limited to: the timing and outcome of ImmunoGen's and its collaboration partners' research and clinical development processes; the difficulties inherent in the development of novel pharmaceuticals, including uncertainties as to the timing, expense and results of preclinical studies, clinical trials and regulatory processes; ImmunoGen's ability to financially support its product programs; the Company's dependence on its collaborative partners; industry merger and acquisition activity; and other factors more fully described in ImmunoGen's Annual Report on Form 10-K for the year ended December 31, 2017 and other reports filed with the Securities and Exchange Commission.

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EXECUTING ON OUR HIGHEST STRATEGIC PRIORITY: MIRVETUXIMAB SORAVTANSINE



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COMPREHENSIVE

DEVELOPMENT

MIRVETUXIMAB

STRATEGY

FOR

FORWARDI

- Patient enrollment completed ahead of schedule
- Trial continuing as planned following successful pre-specified interim futility analysis
- Top-line data on-track to be reported in IH19

FORWARD II

- Updated data from the Keytruda[®] cohort at SGO Annual Meeting
- Data from Avastin[®] expansion cohort in over 50 patients at ASCO 2018
- Updated data from carboplatin escalation cohort
- Initiated triplet cohort in January

CLINICAL COLLABORATIONS

- Co-sponsoring mirvetuximab + Rubraca® combination study in ovarian cancer with Clovis
- Multiple studies underway underway with NCCN in FRα-positive tumor types

Rubraca® is a registered trademark of Clovis

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≫FORWARD |

Establish initial position through single-agent monotherapy in ovarian cancer

FORWARD

 Expand benefit through combinations in earlier lines of ovarian cancer



 Broaden use into additional FRα-positive solid tumors (NSCLC, endometrial and triple-negative breast cancer)



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LABEL EXPANSION:

BECOME THE COMBINATION AGENT OF CHOICE



ENROLLMENT: Patients with recurrent platinum-resistant or platinum-sensitive FRα-positive ovarian cancer



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Avastin[©] is a registered trademark of Genentech Keytruda[⊕] is a registered trademark of Merck

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NEED FOR EFFECTIVE COMBINATIONS

CURRENT TREATMENTS FOR BOTH PLATINUM-RESISTANT AND PLATINUM-SENSITIVE OVARIAN CANCER

PLATINUM-RESISTANT OVARIAN CANCER		PLAT	PLATINUM-SENSITIVE OVA	
	AURELIA ¹		O C E A N s ²	
Regimen	Chemo/Avastin	Regimen	Carbo/Gem	
Aedian age	61	Median age	61	
Patient population	Platinum resist 1-2 priors 60% - 1 prior 40% - 2 prior	Patient population	plat sensitive, 1 prior	
rior Avastin	7%	Prior Avastin	0	
ORR	27%	ORR	57%	
mPFS (mo)	6.7 (95% 5.7, 7.9)	mPFS (mo)	8.4 (95% 8.3, 9.7	

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¹Pujade-Lauraine, et al., JCO 32:1302 (2014) ²Aghajanian, et al., JCO 30:2039 (2012) ³Coleman, et al., Lancet Oncol 18:779 (2017)

AVASTIN ¹ HEAVILY PRE-TREATED PLATINUM-RESISTANT						
<u>ALL</u> (n=54)	MED + HIGH <u>1-3 Priors</u> (n=23)	MED + HIGH 1-2 Priors <u>Avastin-naïve</u> (n=16)				
43 % orr	48 % orr	50 % orr				
7.8 months mPFS	9.9 months mPFS	9.9 months mPFS				
10.6 months mDOR	10.6 months mDOR	12.0 months mDOR				

AVASTIN EXPANSION COHORT

- Mirvetuximab in combination with Avastin shows early evidence of anti-tumor activity with durable responses
- Greatest benefit seen among the subset of patients with medium or high FRa expression levels, which is the population being studied in the FORWARD I Phase 3 trial
- Encouraging efficacy results support further trials of this novel therapeutic combination
- Safety profile in line with known profiles of . each agent

Avastin[®] is a registered trademark of its owner. ORR: objective response rate; mPFS: median progression-free survival; mDOR: median duration of response

1ASCO 2018 O'Malley D., et al.

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ALL

(n=17)

71% ORR

15.0 months

mPFS

mDOR

not yet reached

CARBOPLATIN¹

MED+HIGH

(n=10)

80% ORR

15.0 months

mPFS

mDOR

not yet reached

CARBOPLATIN MATURE DOSE-ESCALATION COHORT FINDINGS

- Mirvetuximab in combination with carboplatin appears well-tolerated and highly active in patients with recurrent, platinum-sensitive ovarian cancer
- Further evaluation of this combination in a randomized fashion is warranted
- Recent data support ongoing triplet designed to evaluate mirvetuximab + carboplatin + Avastin in patients with recurrent platinum-sensitive disease

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¹Company data - manuscript in preparation. ORR: objective response rate; mPFS: median progression-free survival 8

KEYTRUDA ¹ PLATINUM-RESISTANT				
<u>ALL</u> (n=14)	<u>MED+HIGH</u> (n=8)			
43% ORR	63% ORR			
5.2 months mPFS	8.6 months mPFS			
7.0 months mDOR	8.3 months mDOR			

KEYTRUDA DOSE ESCALATION COHORT

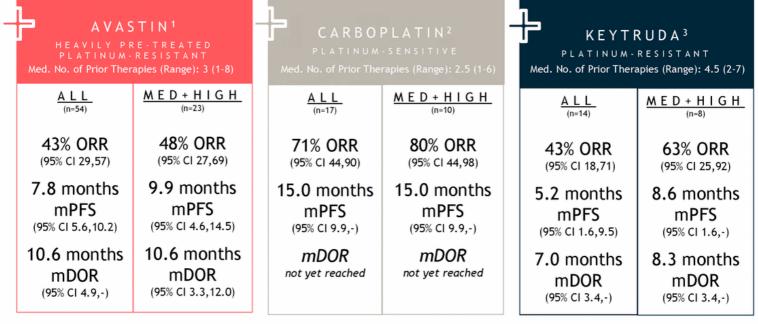
- Mirvetuximab in combination with Keytruda shows early evidence of anti-tumor activity with durable responses and favorable tolerability profile
- Greatest benefit seen among the subset of patients with medium or high FR α expression levels, which is the population being studied in the FORWARD | Phase 3 trial
- Expansion cohort completing enrollment, expect to report initial findings later this year

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¹SGO 2018 Matulonis U., et al. Keytruda® is a registered trademark of its owner. ORR: objective response rate; mPFS: median progression-free survival; mDOR: median duration of response

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MIRVETUXIMAB COMBINATIONS OFFER POTENTIAL TO TREAT MORE WOMEN WITH OVARIAN CANCER



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¹ASCO 2018 O'Malley D., et al.; ²Company data - manuscript in preparation; ³SGO 2018 Matulonis U., et al. Avastin[®] and Keytruda[®] are registered trademarks of their respective owners. ORR: objective response rate; mPFS: median progression-free survival; mDOR: median duration of response 10

MIRVETUXIMAB COMBINATIONS OFFER POTENTIAL TO TREAT MORE WOMEN WITH OVARIAN CANCER¹

CONSISTENCY OF FINDINGS UNDERSCORE POTENTIAL OF MIRVETUXIMAB TO TREAT PATIENTS WITH PLATINUM-RESISTANT AND PLATINUM-SENSITIVE OVARIAN CANCER

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- Results have indicated a favorable safety profile with adverse events in-line with known profiles of each agent full dose of each agent able to be combined
- Encouraged by early evidence of anti-tumor activity with durable responses
- Recent data support ongoing triplet designed to evaluate a mirvetuximab + carboplatin + Avastin in patients with recurrent platinum-sensitive disease
- Totality of data will guide next stages of development and support path to registration for combination regimens

¹O'Malley et al, abstract 5553, ASCO 2017 11