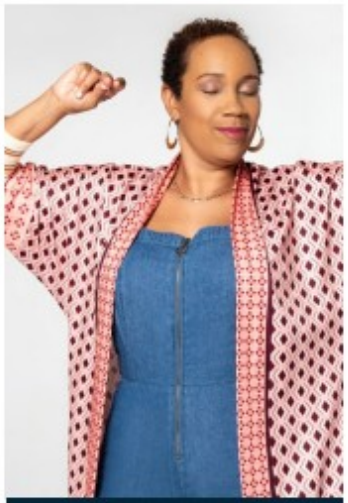

TARGET A BETTER NOW
immunogen
JP Morgan Healthcare Conference
January 10-13, 2022
NASDAQ: IMGN

FORWARD-LOOKING STATEMENTS

This presentation includes forward-looking statements regarding ImmunoGen's current expectations related to: the design and potential success of ImmunoGen's mirvetuximab soravtansine, IMGN632, IMGC936, and IMGN151 preclinical and clinical studies and regulatory pathways, including the timing of initiating and receiving data from, as well as the likelihood of success of, the studies for these product candidates, including studies that are intended to support regulatory approval of mirvetuximab and IMGN632 and the submission of the Company's BLA to the FDA for mirvetuximab; the potential of mirvetuximab to become a standard of care and transform the Company into a fully integrated oncology company; the potential of mirvetuximab to become a combination agent of choice; the presentation of preclinical and clinical events related to the Company's product candidates, including mirvetuximab and IMGN632; the potential of IMGN632 to become a best-in-class therapeutic option for BPDCN patients and a product marketed by the Company; the market opportunities for the Company's development programs; the occurrence, timing, and outcome of other potential preclinical, clinical, and regulatory events related to ImmunoGen's and its collaboration partners' programs; the Company's business and product development strategies, including the Company's expected cash runway; and potential future collaborations. 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 presentation. We undertake no obligation to update or revise any of these forward-looking statements. Factors that could cause future results to differ materially from such expectations include, but are not limited to: that top-line data may change as more patient data become available and are subject to audit and verification procedures; the difficulties inherent in the development of novel biopharmaceuticals; the risks and uncertainties inherent in the Company's development programs, including its preclinical and clinical studies and regulatory processes, their timing, expense, and results as well as the possibility that studies of the Company's development programs fail to confirm the hypotheses suggested by exploratory analyses or fail to satisfy the requirements for approval by one or more regulatory agencies; the Company's ability to financially support its development programs; additional market research and sources that may cause the Company's expectations of future market opportunities for its development programs to change; and the risks and uncertainties associated with the scale and duration of the COVID-19 pandemic and resulting impact on ImmunoGen's industry and business. A review of these and other risks can be found in the "risk factors" set forth in the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission on March 1, 2021, and other reports filed with the Securities and Exchange Commission and available at www.sec.gov and on our website at immunogen.com. In addition, as the reported cash and cash equivalents balance in this presentation is preliminary, has not been audited and is subject to change pending completion of our audited financial statements for the year ended December 31, 2021, it is possible that we or our independent registered public accounting firm may identify items that require us to make adjustments to the preliminary estimated cash and cash equivalents balance, as well as our expected cash runway, and such changes could be material. Additional information and disclosures would also be required for a more complete understanding of our financial position and results of operations as of December 31, 2021.

WHY IMMUNOGEN?

POISED TO BECOME A FULLY-INTEGRATED ONCOLOGY COMPANY WITH FIRST COMMERCIAL LAUNCH EXPECTED THIS YEAR



ACCELERATED PATH FOR MIRVETUXIMAB IN PROC

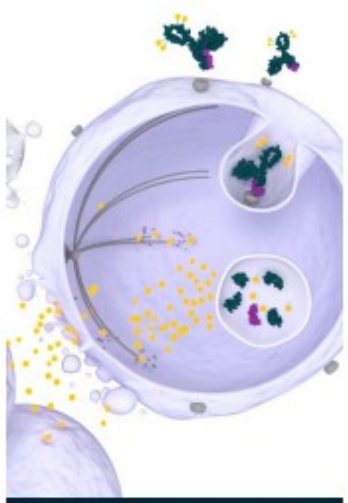
PIVOTAL SORAYA STUDY MET PRIMARY ENDPOINT
PREPARING BLA SUBMISSION

MOVING MIRVETUXIMAB INTO BROAD OVARIAN CANCER POPULATIONS

PURSUING STUDIES SUPPORTIVE OF LABEL EXPANSION

DEFINED PATH FOR IMGN632 FULL APPROVAL IN BPDCN

ANTICIPATE TOP-LINE BPDCN DATA IN H2 2022
ADVANCING AML TRIPLET



INNOVATIVE EARLIER STAGE CANDIDATES AND ADVANCED ADC TECHNOLOGY

EXPECT IMGN936 PH 1 DATA IN 2022 AND IMGN151 FPI IN H1 2022

EXPERIENCED LEADERSHIP AND STRONG CASH POSITION TO SUPPORT COMMERCIAL AND MEDICAL BUILD

EXPECTED CASH RUNWAY INTO 2024

PROC: platinum-resistant ovarian cancer; BLA: Biologics License Application; BPDCN: blastic plasmacytoid dendritic cell neoplasm; AML: acute myeloid leukemia; ADC: antibody-drug conjugate; PH: phase; FPI: first patient in

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SIGNIFICANTLY ADVANCED THE BUSINESS IN 2021

RECENT ACCOMPLISHMENTS

MIRVETUXIMAB SORAVTANSINE

- Reported positive topline pivotal data from SORAYA
- Continued enrollment in MIRASOL
- Initiated PICCOLO for patients with FRα-high recurrent platinum-sensitive ovarian cancer
- Supported enrollment in mirvetuximab + carboplatin combination ISTs
- Presented mature mirvetuximab + bevacizumab combination data in oral session at ASCO 2021
- Aligned with FDA on randomized Phase 3 trial for mirvetuximab + bevacizumab in FRα-high platinum sensitive ovarian cancer in the maintenance setting
- Advanced collaboration with Huadong Medicine, with first patient enrolled in development program for Greater China

IMGN632

- Presented initial IMGN632 + venetoclax + azacitidine data in AML in oral session and initial frontline BPDCN data in poster session at ASH 2021
- Continued enrollment in the pivotal CADENZA trial in frontline and R/R BPDCN

IMGC936

- Presented preclinical data at AACR
- Continued dose escalation in Phase 1 study

IMGN151

- Submitted IND

LEADERSHIP AND FINANCIALS

- Appointed Kristen Harrington-Smith as CCO, and Dr. Helen M. Thackray and Tracey L. McCain, Esq. to Board of Directors
- Raised gross proceeds of $295.7 million in public offering
- ~$475M in cash and cash equivalents on hand as of December 31, with runway expected into 2024

FRα: folate receptor alpha; ISTs: investigator-sponsored trials; ASCO: American Society of Clinical Oncology; FDA: US Food and Drug Administration; AML: acute myeloid leukemia; ASH: American Society of Hematology R/R: relapsed/refractory; BPDCN: blastic plasmacytoid dendritic cell neoplasm; AACR: American Association for Cancer Research; IND: investigational new drug application; CCO: Chief Commercial Officer

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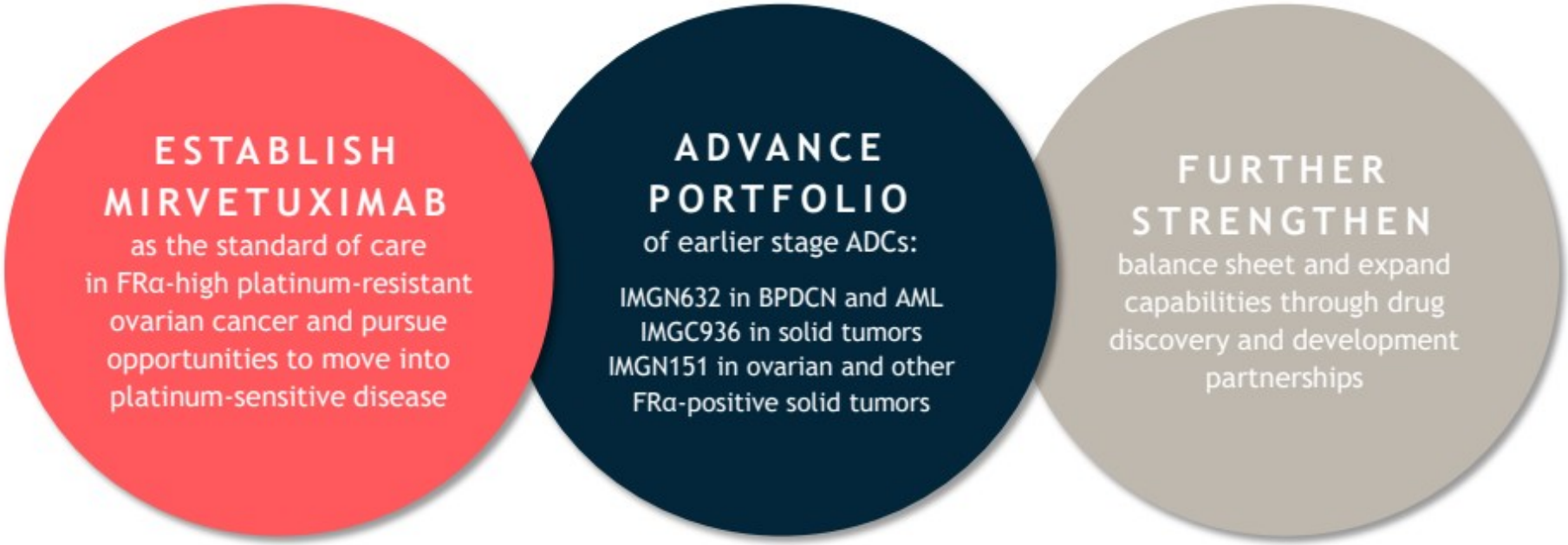
STRATEGIC PRIORITIES

BRINGING ANTIBODY-DRUG CONJUGATES TO CANCER PATIENTS



FRα: folate receptor alpha; BPDCN: blastic plasmacytoid dendritic cell neoplasm

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Someone you know has been diagnosed with ovarian cancer...
WHAT'S NEXT FOR HER?
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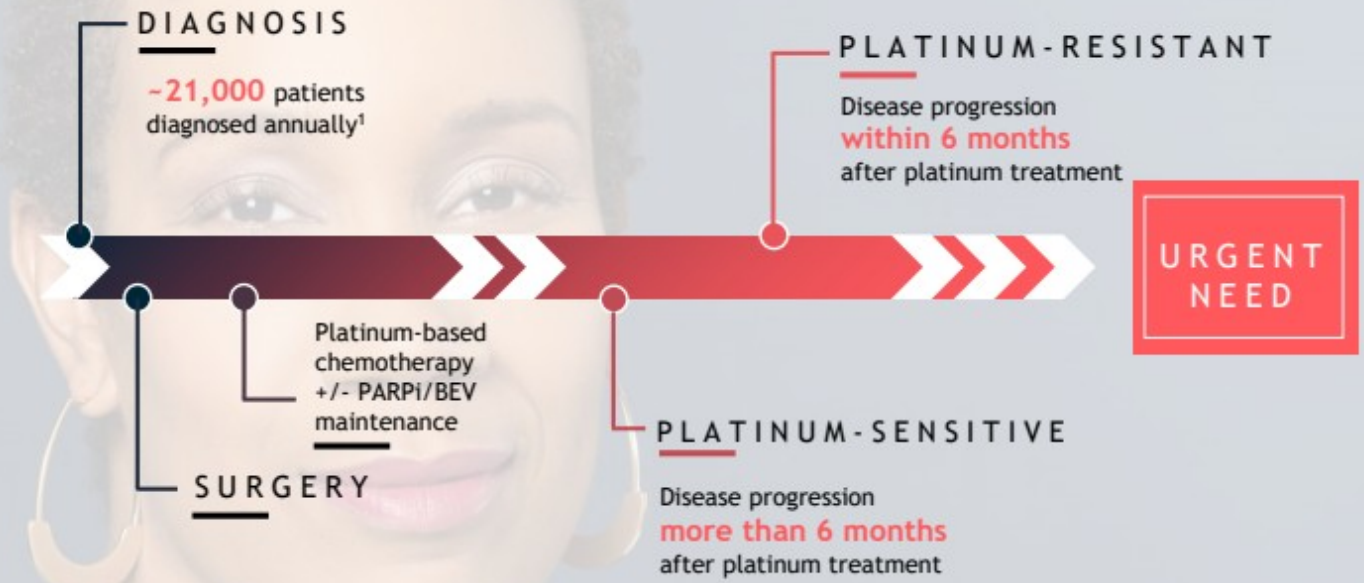
OVARIAN CANCER IS THE LEADING CAUSE OF DEATH FROM GYNECOLOGICAL CANCERS

~14,000 DIE ANNUALLY FROM OVARIAN CANCER IN THE US[1]



MOST PATIENTS DEVELOP PLATINUM-RESISTANT DISEASE: LIMITED OPTIONS WITH POOR OUTCOMES

Low response rates, short duration of response, and considerable toxicities associated with current single agents [2,3]

ALIGNED WITH FDA RECOMMENDATIONS

Patients with FRα-high platinum-resistant ovarian cancer require better therapeutic options, particularly those who progress after prior treatment with bevacizumab

~12% ORR
BENCHMARK FOR BEST AVAILABLE THERAPIES[4,5]

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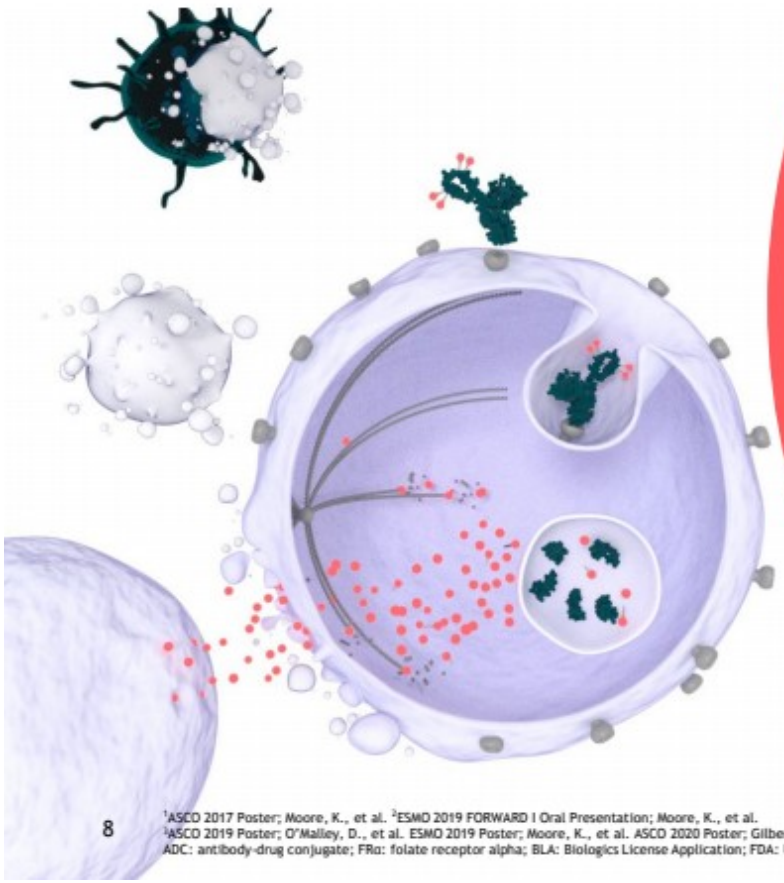
[1]NIH SEER Data: Estimated New Cases, 2021. [2]Poveda JCO: Vol 33 (2015) 3836-3838. [3]Davis Gyn Onc: Vol 133 (2014) 624-631. [4]AVASTIN® (bevacizumab) prescribing information. [5]CORAIL study, Gaillard Gyn Onc; available online 11 Sept 2021.
PARPi: poly ADP-ribose polymerase inhibitor; BEV: AVASTIN® (bevacizumab); FDA: US Food and Drug Administration; FRα: folate receptor alpha

MIRVETUXIMAB SORAVTANSINE



KEY ATTRIBUTES

- Novel ADC with distinct FRα-binding antibody, cleavable linker, and maytansinoid DM4 payload
- Favorable tolerability profile[1, 2]
- Demonstrated activity in patients with FRα-positive platinum-resistant and platinum-sensitive ovarian cancer[1, 3]
- Sizeable safety database; studied in more than 700 patients

DEVELOPMENT STRATEGY

- Seek initial label as monotherapy in FRα-high platinum-resistant ovarian cancer with 1 to 3 prior lines of therapy
- Submit BLA to FDA in Q1 2022
- Execute commercial strategy for successful launch in 2022
- Move into platinum-sensitive disease and become the combination agent of choice in ovarian cancer
- Lever cooperative groups and ISTs to generate complementary data in ovarian and endometrial cancers

[1]ASCO 2017 Poster; Moore, K., et al. [2]ESMO 2019 FORWARD I Oral Presentation; Moore, K., et al.
[3]ASCO 2019 Poster; O'Malley, D., et al. ESMO 2019 Poster; Moore, K., et al. ASCO 2020 Poster; Gilbert, L., et al. ESMO 2020 Poster; O'Malley, D., et al.
ADC: antibody-drug conjugate; FRα: folate receptor alpha; BLA: Biologics License Application; FDA: US Food and Drug Administration; ISTs: investigator sponsored trials

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SORAYA

POSITIVE TOP-LINE RESULTS
POTENTIAL FOR ACCELERATED APPROVAL

SINGLE-ARM PIVOTAL TRIAL OF MIRVETUXIMAB IN FRα-HIGH PATIENTS WITH PLATINUM-RESISTANT OVARIAN CANCER

INCLUSION CRITERIA

106 PATIENTS

- Platinum-resistant disease (PFI < 6 months)
- FRα-high only
- Prior bevacizumab required
- Prior PARPi allowed
- 1 to 3 prior lines allowed
- Patients with BRCA mutations allowed

PRIOR TREATMENT

51% 3 prior lines of therapy

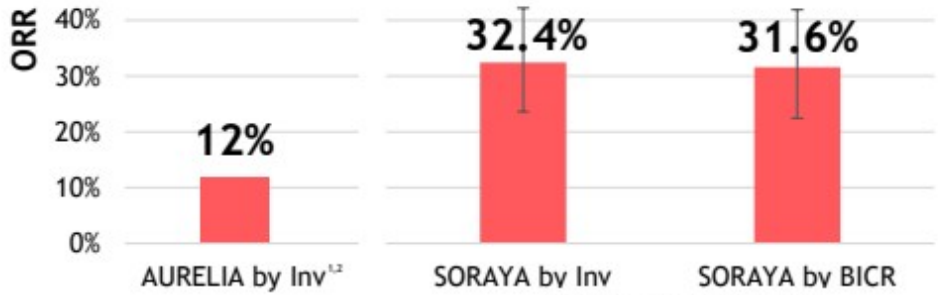
100% Received prior bevacizumab

48% Received prior PARPi

SAFETY AND TOLERABILITY

- Favorable tolerability data with >700 patients treated to date
- In SORAYA, the most common AEs were low-grade gastrointestinal and ocular events, including blurred vision, keratopathy, and nausea; 7% of patients discontinued due to treatment-related AEs, including one patient due to ocular AE

MET PRIMARY ENDPOINT



Responses were irrespective of number of prior lines or prior PARPi use

KEY SECONDARY ENDPOINT

5.9 months mDOR

By Investigator at Data Cutoff *(95% CI: 5.6, 7.7)*

Nearly half of responders still receiving mirvetuximab at data cutoff; with longer follow-up, ***mDOR could range from 5.7 to above 7 months***

MOVING FORWARD TO SUBMIT BLA TO FDA IN Q1 2022

[1]ORR for single-agent chemotherapy published in the AURELIA Study, JCO 2014, Pujade-Lauraine, E., et al.
[2]Disclaimer: These comparisons are not based on head-to-head clinical studies. The results from these two studies are not directly comparable.
FRα: folate receptor alpha; PFI: platinum-free interval; PARPi: poly ADP-ribose polymerase inhibitor; BRCA: BReast CAncer gene; AE: adverse event; ORR: confirmed objective response rate; Inv: Investigator
BICR: blinded independent central review; mDOR: median duration of response; BLA: Biologics License Application; FDA: US Food and Drug Administration

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EXPANDING THE MIRVETUXIMAB LABEL

MOVE INTO PLATINUM-SENSITIVE DISEASE AND BECOME THE COMBINATION AGENT OF CHOICE IN OVARIAN CANCER

MIRVETUXIMAB PSOC MONOTHERAPY

PHASE 1 EFFICACY DATA[1]

64% ORR

FRα-HIGH RECURRENT OVARIAN CANCER
n= 11

- Potential for a clinically meaningful benefit in FRα-high recurrent platinum-sensitive ovarian cancer
  - 64% ORR (7/11); 2 CRs and 5 PRs

→ **PICCOLO**

- Single-arm Phase 2 trial for mirvetuximab in FRα-high patients with platinum-sensitive ovarian cancer
- Now enrolling
- Potential for label expansion in 2024

MIRVETUXIMAB IN COMBINATION

MIRVETUXIMAB + BEVACIZUMAB[2,3]

64% ORR

FRα-HIGH RECURRENT OVARIAN CANCER
n= 33

- Compelling activity in FRα-high recurrent ovarian cancer, regardless of platinum status
  - 59% ORR (10/17), 9.4 month mDOR, 9.7 month mPFS in the platinum-resistant subgroup
  - 69% ORR (11/16), 12.7 month mDOR, 13.3 month mPFS in the platinum-sensitive subgroup

→ **GLORIOSA**

- Randomized Phase 3 trial for mirvetuximab + bevacizumab maintenance in FRα-high platinum-sensitive ovarian cancer
- Aligned with FDA on trial design
- Trial initiation in Q2 2022

MIRVETUXIMAB + CARBOPLATIN[4]

80% ORR

15 MOS mPFS
FRα-MED and -HIGH
n= 10

- Highly active in recurrent platinum-sensitive ovarian cancer with mDOR of 24 months
- Supporting ongoing ISTs in recurrent platinum-sensitive ovarian cancer: ~70 patient neo-adjuvant study initiated in H1 2021; and a randomized Phase 2 ~140 patient study

→ **TRIAL 420**

- Single-arm Phase 2 trial for mirvetuximab + carboplatin followed by mirvetuximab continuation in FRα-low, medium, and high patients with platinum-sensitive ovarian cancer
- Initiate trial in Q2 2022

[1]Internal data on file. [2]ASCO 2020 Oral Presentation; Gilbert, L., et al. [3]ASCO 2021 Oral Presentation; O'Malley, D., et al. [4]Gynecologic Oncology 151 (2018) 46-52.
PSOC: platinum-sensitive ovarian cancer; ORR: objective response rate; FRα: folate receptor alpha; CR: complete response; PR: partial response; mDOR: median duration of response
mPFS: median progression-free survival; IST: investigator sponsored trial; FDA: Food and Drug Administration

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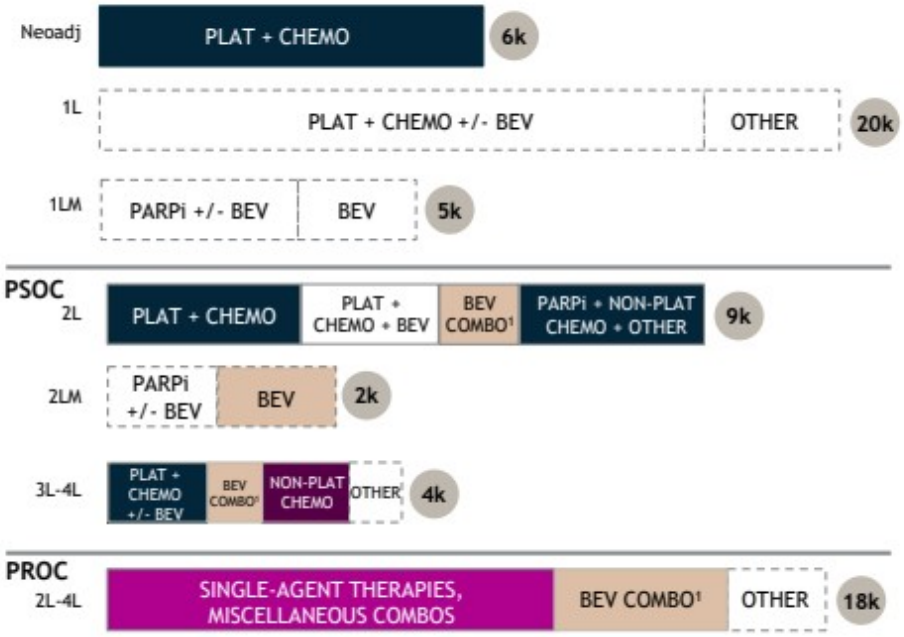
MARKET SEGMENTATION IN 2022

MIRVETUXIMAB'S INITIAL INDICATION AND LABEL EXPANSION PLANS AIM TO BENEFIT PATIENTS ACROSS THE OVARIAN CANCER TREATMENT PARADIGM

~40% OF OVARIAN CANCER IS FRα-HIGH



SORAYA	**MONOTHERAPY** BEV Pre-Treated 2L-4L Platinum-Resistant	~2,100 FRα-HIGH PATIENTS
MIRASOL	**MONOTHERAPY** 2L-4L Platinum-Resistant	~2,100 FRα-HIGH PATIENTS
PICCOLO	**MONOTHERAPY** 3L+ Platinum-Sensitive	>600 FRα-HIGH PATIENTS
GLORIOSA	**BEV COMBINATION** 2LM Platinum-Sensitive	>900 FRα-HIGH PATIENTS
MIRV+BEV	**COMBINATION** Recurrent Ovarian Cancer	~2,500 FRα-HIGH PATIENTS
MIRV+CARBO	**COMBINATION** Platinum-Sensitive Neoadjuvant	~4,700 FRα-HIGH PATIENTS

Numbers represent Company estimates of US patients with conditions covered by the Company's targeted indications. Similar market size expected in Europe.
Sources: Decision Resources Group, diagnosed drug-treatable patients 2021. Flatiron Ovarian Cancer Cohort. FRα: folate receptor alpha; PLAT: platinum; CHEMO: chemotherapy; BEV: AVASTIN® (bevacizumab)
PARPi: poly ADP-ribose polymerase inhibitor; COMBO: combination; MIRV: mirvetuximab; L: line M: maintenance; CARBO: carboplatin

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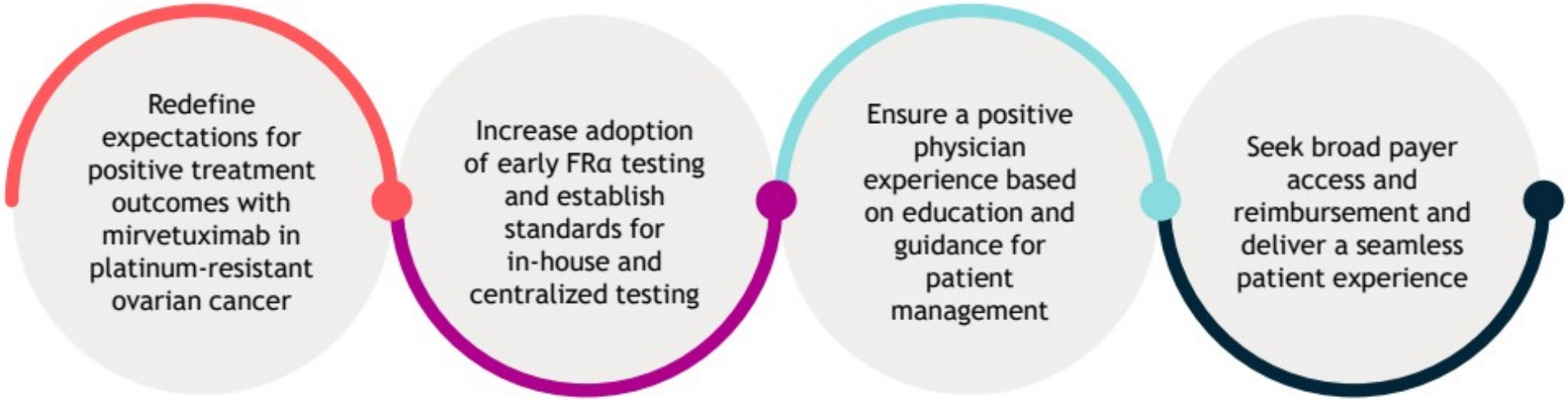
MIRVETUXIMAB LAUNCH IMPERATIVES

GOAL: ESTABLISH MIRVETUXIMAB AS THE STANDARD OF CARE IN FRα-HIGH PLATINUM-RESISTANT PATIENTS

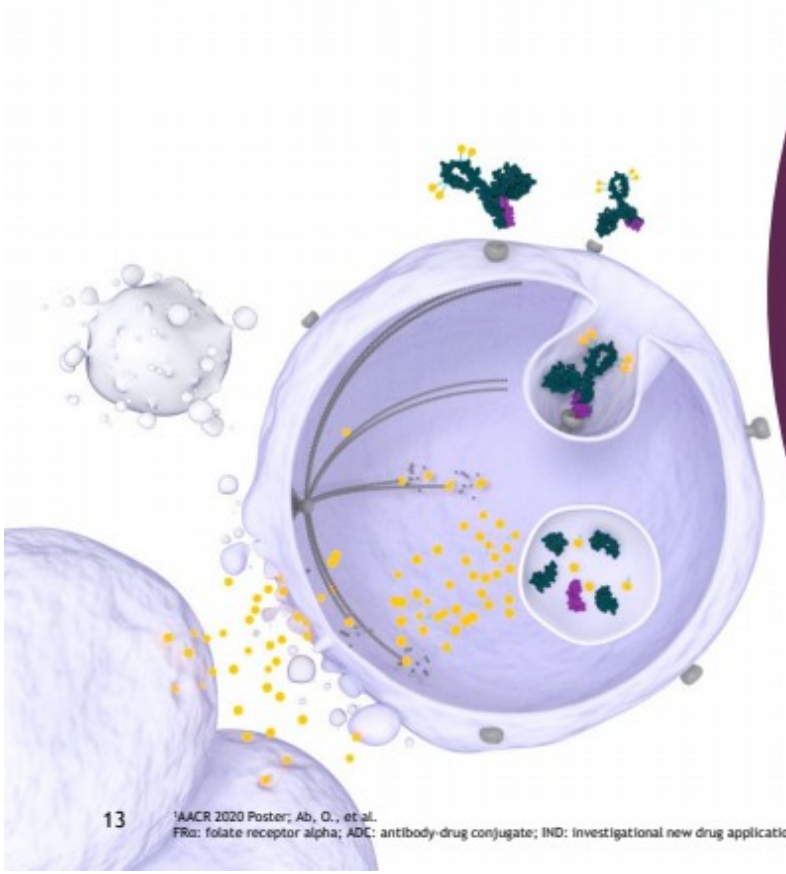


BUILDING OUT BEST-IN-CLASS COMMERCIAL AND MEDICAL AFFAIRS ORGANIZATIONS

FRα: folate receptor alpha

IMGN151

FOLLOW-ON CANDIDATE FOR FRα-TARGETING FRANCHISE



KEY ATTRIBUTES

- Next-generation anti-FRα ADC designed to address tumors with a broad range of FRα-expression (e.g., ovarian, endometrial, triple-negative breast, and non-small cell lung cancer)[1]
- Engineered to include multiple design innovations, including an asymmetric, bivalent, biparatopic antibody targeting two independent epitopes of FRα conjugated to DM21, a highly potent next-generation maytansinoid payload with a stable peptide linker
- Designed to enhance payload delivery, cell killing, and bystander activity

DEVELOPMENT STRATEGY

- Maximize the potential clinical benefit of IMGN151 in patients with lower FRα expression in a range of solid tumors
- Submitted IND; expect FPI in H1 2022
- Wholly-owned asset

[1]AACR 2020 Poster; Ab, O., et al.
FRα: folate receptor alpha; ADC: antibody-drug conjugate; IND: investigational new drug application; FPI: first patient in

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Someone you know has been diagnosed with a hematologic malignancy...
WHAT'S NEXT FOR THEM?
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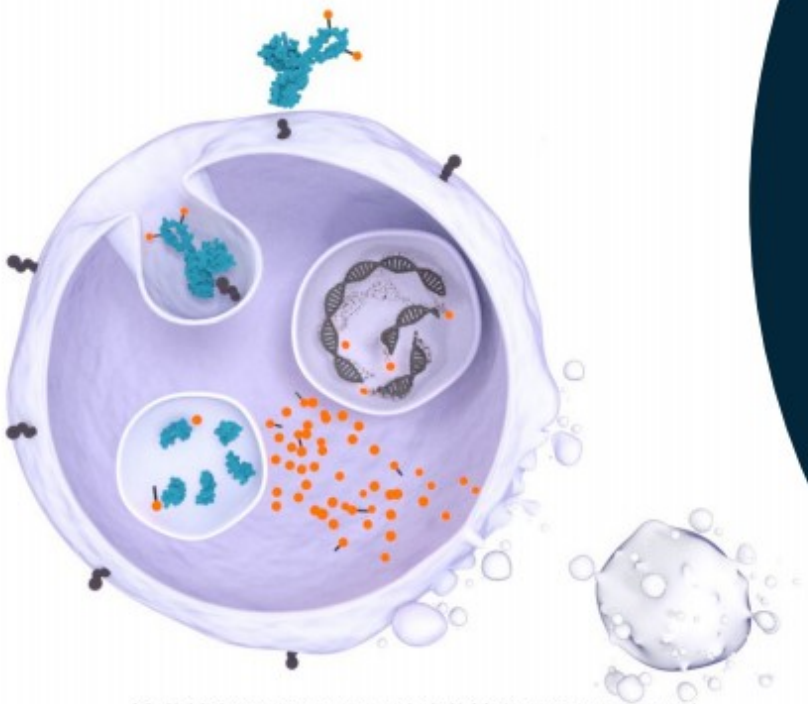
IMGN632

DESIGNED TO TARGET MULTIPLE CD123+ HEMATOLOGIC MALIGNANCIES



KEY ATTRIBUTES

- CD123-targeted ADC with novel DNA-acting IGN payload designed for high potency against leukemic blasts
- Demonstrated monotherapy activity with complete responses in BPDCN[1,2] and AML[1]
- Favorable safety and tolerability observed at multiple dose levels[1,2]
- Administered in the outpatient setting via short (less than 30 minutes) infusion every three weeks

DEVELOPMENT STRATEGY

- Granted Breakthrough Therapy Designation and aligned with FDA on a pathway to full approval in BPDCN
- Potential label expansion: in combination for relapsed and frontline AML patients unfit for intensive induction chemotherapy
- Seek proof of concept in additional CD123-positive hematologic malignancies
- Wholly-owned asset

[1]ASH 2018 Oral Presentation; Daver, N., et al. ASH 2019 Oral Presentation; Daver, N., et al.
[2]ASH 2020 Oral Presentation; Pemmaraju, N., et al.
CD123: interleukin-3 receptor alpha chain; ADC: antibody drug conjugate; DNA: deoxyribonucleic acid; IGN: indolinobenzodiazepine dimer
BPDCN: blastic plasmacytoid dendritic cell neoplasm; AML: acute myeloid leukemia; FDA: US Food and Drug Administration

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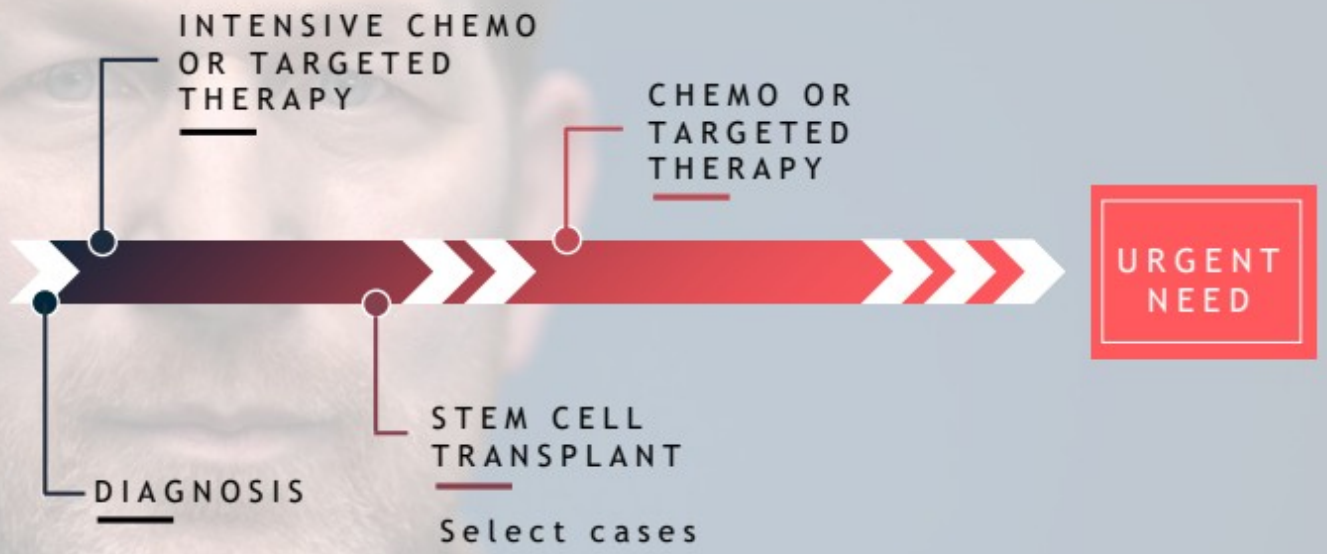
BPDCN IS A RARE AND AGGRESSIVE HEMATOLOGIC MALIGNANCY

~500 TO ~1,000 NEW CASES DIAGNOSED ANNUALLY IN THE US[1]

60% TO 70% BECOME R/R



OUTCOMES REMAIN POOR, PARTICULARLY FOR NON-TRANSPLANT CANDIDATES

CURRENTLY APPROVED THERAPIES REQUIRE INPATIENT HOSPITALIZATION AND ARE ASSOCIATED WITH SIGNIFICANT TOXICITIES

[1]MDAnderson.org 2019; Pagano Haematologica 2013; Leukemia Lymphoma Society LLS.org. Internal estimates. Expect similar number of cases annually in Europe.
BPDCN: blastic plasmacytoid dendritic cell neoplasm; R/R: relapsed refractory; CHEMO: chemotherapy

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IMGN632: ALIGNED WITH FDA ON PATH TO FULL APPROVAL IN BPDCN

CADENZA

801 STUDY: SINGLE-ARM PIVOTAL COHORT IN FRONTLINE BPDCN

- Enrolling in the US and EU; up to 20 frontline patients to support label
- Top-line data expected H2 2022
- Potential to become best-in-class therapeutic option and the Company's second marketed product in rare oncology

COMPELLING PRELIMINARY DATA IN BPDCN

FAVORABLE SAFETY PROFILE[1]

- No capillary leak syndrome
- No drug-related discontinuations
- No drug-related deaths at 30 days
- Limited grade ≥3 TEAEs

EFFICACY DATA[1]

In all R/R BPDCN patients:

- ORR: 29% (8/28, 2 CR, 2 CRc, 1 CRi, 3 PR)
- CCR: 18% (5/28)

In patients with prior tagraxofusp exposure:

- ORR: 31% (4/13, 1 CR, 1CRi, 2 PR)
- CCR: 15% (2/13)

In frontline BPDCN, 3/3 patients with CRc[2]

[1]ASH 2020 Oral Presentation; Pemmaraju, N., et al. [2]ASH 2021 Abstract #1284; Pemmaraju, N., et al.
FDA: US Food and Drug Administration; BPDCN: blastic plasmacytoid dendritic cell neoplasm; TEAE: treatment emergent adverse event; R/R: relapsed/refractory; ORR: objective response rate; CR: complete response
*CRc: clinical CR = CR criteria EXCEPT limited residual skin disease "marked clearance of all skin lesions from baseline; residual hyperpigmentation or abnormality with BPDCN identified on biopsy (or no biopsy performed)"; CRi: complete remission with incomplete hematologic recovery; PR: partial response; CCR: CR+CRc+CRi

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AML IS AN AGGRESSIVE HEMATOLOGIC MALIGNANCY

~20,000 PEOPLE DIAGNOSED WITH AML AND ~11,000 DIE ANNUALLY IN THE US[1]

DIAGNOSIS

Decisions about fitness for chemotherapy must be made quickly

URGENT NEED

FIT PATIENTS[2]

Approximately half of patients are "fit" enough to undergo intensive chemotherapy and transplant with curative intent

Median survival: 2-4 years

UNFIT PATIENTS[2]

Approximately half of patients are "unfit" or too elderly to undergo intensive chemotherapy and are appropriate for lower intensity therapy (e.g., VEN+AZA)

Median survival: 1-2 years

RELAPSE[2]

Up to 80% of patients are refractory to initial treatment or relapse within 2 years, with few treatment options available including various chemotherapy regimens and, for few patients, transplant

Median survival: 9 months - 2 years

UNMET NEED IN AML REMAINS HIGH

WHILE VEN+AZA HAS LED TO IMPROVED FRONTLINE RESPONSES IN UNFIT PATIENTS, SURVIVAL AFTER VEN+AZA FAILURE IS POOR AT ~2 TO 3 MONTHS[3]

[1]NIH SEER Data: Estimated New Cases and Deaths in 2021. [2]Dinardo, C., et al. ASH "How to Treat" Series, 2020. [3]Maiti, A., et al. Hematologica 2021.
AML: acute myeloid leukemia; VEN: VENCLEXTA® (venetoclax); AZA: VIDAZA® (azacitidine)

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IMGN632 IN AML

EVALUATING TRIPLET COMBO WITH AZACITIDINE AND VENETOCLAX

ASH 2021 DATA[1]

- Responses were seen across all cohorts/doses and schedules (efficacy evaluable population, n=46)
  - ORR was 48%, with a CCR rate of 30%
  - Higher intensity cohorts (n=29) were associated with higher response rates including an ORR of 59% and a CCR rate of 38%
    - CCRs of 53% and 21% were seen in VEN-naïve and difficult to treat prior VEN failure patients, respectively
  - Significant activity was also observed in the FLT3 mutant subset (n=9), with ORR and CCR rates of 89% and 78%, respectively
- IMGN632 continued to display a manageable safety profile in R/R AML patients; no tumor lysis syndrome, veno-occlusive disease, capillary leak, or cytokine release were reported

NEXT STEPS

- Determine recommended Phase 2 doses for triplet combination regimen
- Initiate expansion cohorts in relapsed and frontline AML

[1]ASH 2021 Abstract #372; Daver, N., et al.
AML: acute myeloid leukemia; COMBO: combination; ASH: American Society of Hematology; ORR: objective response rate; CCR: composite complete remission rate includes CR + CRh + CRp + Cri
VEN: Venclexta® (venetoclax); FLT3: Fms Related Receptor Tyrosine Kinase 3; R/R: relapsed/refractory

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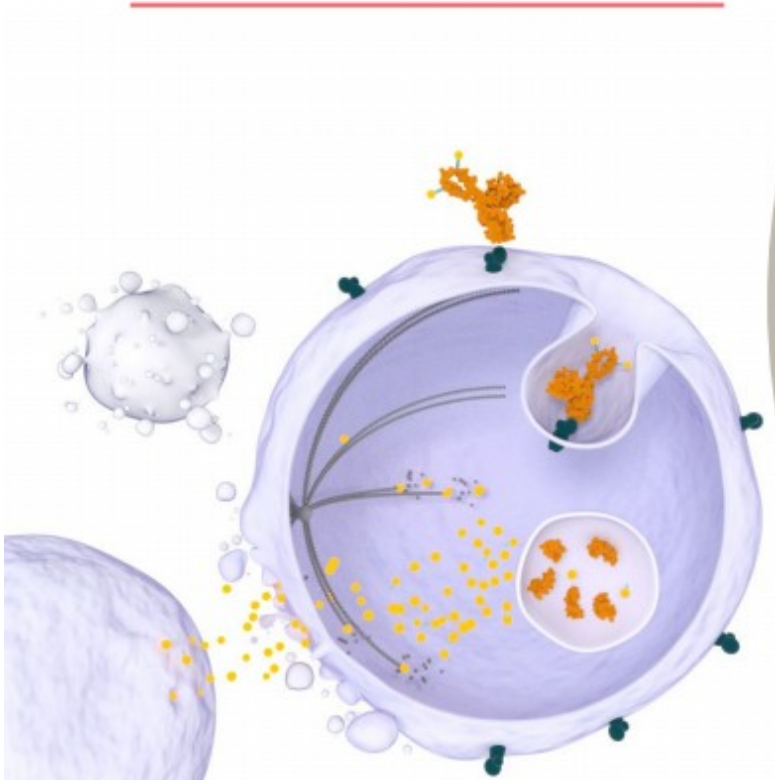
IMGC936

FIRST-IN-CLASS ADAM9-TARGETING ADC



KEY ATTRIBUTES

- ADAM9 is overexpressed in multiple solid tumors (e.g., non-small cell lung, gastric, pancreatic, triple-negative breast, and colorectal)[1] with low levels of expression in normal tissue
- IMGC936 comprised of a high-affinity humanized antibody with YTE mutation conjugated to DM21, a highly potent next-generation maytansinoid payload, with a stable peptide linker

DEVELOPMENT STRATEGY

- Presented preclinical data at AACR 2021 demonstrating compelling anti-tumor activity
- Phase 1 dose-escalation underway; initial data anticipated in 2022
- 50/50 co-development with MacroGenics

[1]AACR 2019 Poster; Hicks S., et al.
ADAM: a disintegrin and metalloproteinase; ADC: antibody-drug conjugate; AACR: American Association for Cancer Research

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OUR APPROACH TO PARTNERING

MAXIMIZE THE VALUE OF OUR STRATEGIC PROGRAMS AND NOVEL ADC TECHNOLOGY BY RISK SHARING AND PARTNERING FOR CAPABILITIES

HUADONG MEDICINE — Development and commercialization of mirvetuximab in Greater China

MACROGENICS — Global co-development and co-commercialization of IMGC936

RICH PORTFOLIO OF PLATFORM IP PROVIDES OPPORTUNITIES FOR PARTNERSHIPS AND PIPELINE EXPANSION

OUT-LICENSING
Key legacy licenses enabled KADCYLA® (Roche/Genentech) and SARCLISA® (Sanofi); current licenses to nine parties for cancer and non-cancer applications

IP AND KNOW-HOW
Portfolio comprised of latest generation of maytansinoid, IGN, and novel camptothecin toxins, associated linkers, and antibodies

IGN: indolinobenzodiazepine dimer

BLA: Biologics License Application; BPDCN: blastic plasmacytoid dendritic cell neoplasm; AML: acute myeloid leukemia; ADAM: a disintegrin and metalloproteinase; ADC: antibody-drug conjugate; FRα: folate receptor alpha

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Appendix

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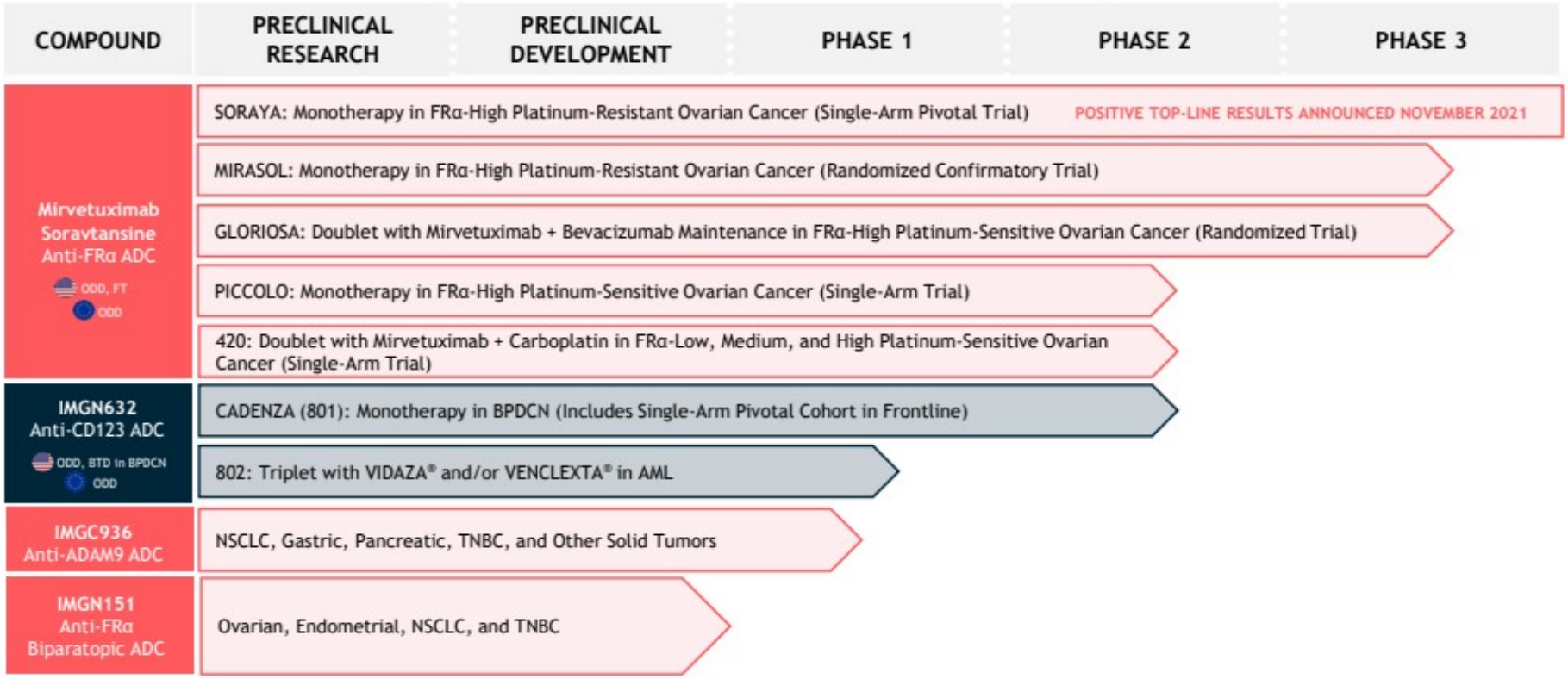
DEEP PIPELINE OF ADCs TARGETING SOLID TUMORS AND HEMATOLOGIC MALIGNANCIES



ADC: antibody-drug conjugate; FRα: folate receptor alpha; ODD: orphan drug designation; FT: fast track; BTD: breakthrough therapy designation; BPDCN: blastic plasmacytoid dendritic cell neoplasm
AML: acute myeloid leukemia; ADAM: a disintegrin and metalloproteinase; NSCLC: non-small cell lung cancer; TNBC: triple-negative breast cancer
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MIRASOL

PHASE 3 RANDOMIZED TRIAL FOR MIRVETUXIMAB IN FRα-HIGH PATIENTS WITH PLATINUM-RESISTANT OVARIAN CANCER

1:1 RANDOMIZATION

Mirvetuximab

STRATIFICATION FACTORS
IC Chemotherapy (Paclitaxel, PLD, Topotecan)
Prior Therapies (1 vs 2 vs 3)

Investigator's Choice Chemotherapy
Paclitaxel, PLD, or Topotecan

PRIMARY ENDPOINT
PFS by Investigator
BICR for Sensitivity Analysis

SECONDARY ENDPOINTS
ORR by Investigator, OS, and PRO

ENROLLMENT AND KEY ELIGIBILITY
430 patients/330 events for PFS by Investigator
Platinum-resistant disease (primary PFI >3 months)
1 to 3 prior lines of therapy
Prior bevacizumab* and prior PARPi allowed
Patients with BRCA mutations allowed

TARGET TIMELINES

- ENROLLING GLOBALLY
- TOP-LINE DATA Q3 2022
- EXPECTED APPROVAL 2023

*Eligibility criterion different than SORAYA
FRα: folate receptor alpha; IC: investigator's choice; PLD: pegylated liposomal doxorubicin; PFS: progression-free survival; BICR: blinded independent central review; ORR: objective response rate
OS: overall survival; PRO: patient-reported outcomes; PFI: platinum-free interval; PARPi: poly ADP-ribose polymerase inhibitor; BRCA: BReast CAncer gene

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PICCOLO

SINGLE-ARM TRIAL
FOR MIRVETUXIMAB
IN FRα-HIGH PATIENTS WITH
PLATINUM-SENSITIVE
OVARIAN CANCER

TARGET TIMELINES

- FPI IN H2 2021
- ENROLLING GLOBALLY
- POTENTIAL APPROVAL 2024

PRIMARY ENDPOINT
ORR by Investigator

SECONDARY ENDPOINT
DOR by Investigator

ENROLLMENT AND KEY ELIGIBILITY
~75 patients
Platinum-sensitive ovarian cancer
2 or more prior systemic treatments
At least 2 prior platinum-containing regimens
Prior PARPi required if BRCA+
Appropriate for single-agent therapy

FRα: folate receptor alpha; FPI: first patient in; ORR: objective response rate; DOR: duration of response; PARPi: poly ADP-ribose polymerase inhibitor; BRCA: BReast CAncer gene

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GLORIOSA

RANDOMIZED PHASE 3 TRIAL FOR MIRVETUXIMAB + BEVACIZUMAB MAINTENANCE IN FRα-HIGH PLATINUM-SENSITIVE OVARIAN CANCER

INITIATING IN Q2 2022

PRIMARY ENDPOINT
PFS

SECONDARY ENDPOINTS
OS, DOR

ENROLLMENT AND KEY ELIGIBILITY
438 patients
Platinum-sensitive ovarian cancer
1 prior platinum treatment
Prior PARPi required if BRCA+
CR, PR, or SD after treatment with platinum-based doublet + bevacizumab required

FRα: folate receptor alpha; PFS: progression free survival; ; OS: overall survival; DOR: duration of response; PARPi: poly ADP-ribose polymerase inhibitor; BRCA: BReast CAncer gene; CR: complete response; PR: partial response; SD: stable disease

420 STUDY

SINGLE-ARM PHASE 2 TRIAL OF MIRVETUXIMAB + CARBOPLATIN FOLLOWED BY MIRVETUXIMAB CONTINUATION IN FRα-LOW, MEDIUM, AND HIGH PATIENTS WITH PLATINUM-SENSITIVE OVARIAN CANCER

INITIATING IN Q2 2022

PRIMARY ENDPOINT
ORR by Investigator

SECONDARY ENDPOINTS
DOR, PFS

ENROLLMENT AND KEY ELIGIBILITY
~110 patients
Platinum-sensitive ovarian cancer
1 prior platinum treatment
Prior PARPi required if BRCA+

FRα: folate receptor alpha; ORR: overall response rate; DOR: duration of response; PFS: progression free survival; PARPi: poly ADP-ribose polymerase inhibitor; BRCA: BReast CAncer gene

CADENZA

801 STUDY: SINGLE-ARM PIVOTAL COHORT FOR IMGN632 IN FRONTLINE BPDCN

ENROLLING IN THE US AND EU

Top-line data expected H2 2022

ALIGNED WITH FDA ON PATH TO FULL APPROVAL IN BPDCN

PRIMARY ENDPOINT
CR plus CRc

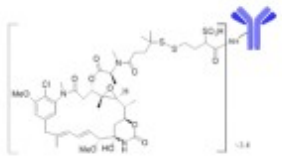
KEY SECONDARY ENDPOINT
Duration of CR/CRc

ENROLLMENT AND KEY ELIGIBILITY
Up to 20 frontline patients
Includes patients with prior local therapy
Patients ≥18 years old
CD123+ by flow cytometry or IHC
No minimum serum albumin required

SUPPORTING DATA
3 patients previously enrolled in Study 801 meet the eligibility criteria for the frontline cohort; all 3 of these patients achieved CRc

BPDCN: blastic plasmacytoid dendritic cell neoplasm; FDA: US Food and Drug Administration; CR: complete response; *CRc: clinical CR = CR criteria EXCEPT limited residual skin disease "marked clearance of all skin lesions from baseline; residual hyperpigmentation or abnormality with BPDCN identified on biopsy (or no biopsy performed)"; IHC: immunohistochemistry

IMMUNOGEN ADCs AT-A-GLANCE



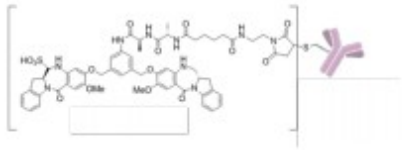
MIRVETUXIMAB SORAVTANSINE
Folate receptor alpha-targeting ADC

ANTIBODY: Humanized monoclonal antibody which selectively binds to FRα

PAYLOAD: DM4 maytansinoid payload; potent tubulin-targeting agent

LINKER: Cleavable sulfo-SPDB linker

DAR: 3 to 4



IMGN632
CD123-targeting ADC

ANTIBODY: Novel epitope, high affinity anti-CD123 antibody

PAYLOAD: New indolinobenzodiazepine class of DNA-targeting payload which causes single stranded DNA damage

LINKER: Novel non-cleavable peptide linker

Payload linked via site-specific CYSMAB technology

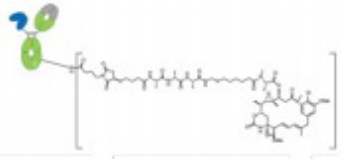
DAR: 2

IMGC936
ADAM9-targeting ADC

ANTIBODY: Humanized anti-ADAM9 antibody engineered to include the YTE mutation for enhanced exposure through improved recycling (improved PK, half-life)

LINKER / PAYLOAD: Tri-peptide cleavable linker and next generation DM21 maytansinoid payload; active metabolites are more hydrophobic and thus membrane permeable with increased bystander activity. Linker stable in circulation. Payload linked via site-specific CYSMAB technology.

DAR: 2



IMGN151
Folate receptor alpha-targeting ADC

ANTIBODY: Asymmetric, bivalent, biparatopic antibody targeting two independent epitopes of FRα (greater binding and internalization)

LINKER / PAYLOAD: Tri-peptide cleavable linker and next generation DM21 maytansinoid payload; active metabolites are more hydrophobic and thus membrane permeable with increased bystander activity. Linker stable in circulation.

DAR: 3.5

Mirv structure: Neoplasia (2016) 18, 775-784. IMGN632 structure: ASH 2016 poster; Adams, S., et al. IMGC936 structure: AACR 2019 Poster; Hicks S., et al. IMGN151 Structure: AACR 2020 Poster; Ab, O., et al.
ADC: antibody-drug conjugate; DAR: Drug-to-Antibody Ratio; FRα: folate receptor alpha; CD123: Interleukin-3 receptor alpha chain; ADAM9: a disintegrin and metalloproteinase

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