MacroGenics®

Corporate Presentation

January 11, 2021

Legal Notices

The information in this slide deck is current as of January 11, 2021, unless otherwise noted, and is qualified in its entirety by reference to MacroGenics' Annual, Quarterly and Current Reports filed with the SEC. MacroGenics undertakes no obligation to update any of the information herein.

Cautionary Note on Forward-Looking Statements

Any statements in these materials about future expectations, plans and prospects for MacroGenics ("Company"), including statements about the Company's strategy, future operations, clinical development of the Company's therapeutic candidates, commercial prospects of or product revenues from MARGENZA, milestone or opt-in payments from the Company's collaborators, the Company's anticipated milestones and future expectations and plans and prospects for the Company and other statements containing the words "subject to", "believe", "anticipate", "plan", "expect", "intend", "estimate", "project", "may", "will", "should", "would", "could", "can", the negatives thereof, variations thereon and similar expressions, or by discussions of strategy constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including: risks that MARGENZA revenue, expenses and costs may not be as expected, risks relating to MARGENZA market acceptance, competition, reimbursement and regulatory actions, the uncertainties inherent in the initiation and enrollment of future clinical trials, expectations of expanding ongoing clinical trials, availability and timing of data from ongoing clinical trials, expectations for the timing and steps required in the regulatory review process, expectations for regulatory approvals, the impact of competitive products, our ability to enter into agreements with strategic partners and other matters that could affect the availability or commercial potential of the Company's product candidates, business or economic disruptions due to catastrophes or other events, including natural disasters or public health crises such as the novel coronavirus (referred to as COVID-19), and other risks described in the Company's filings with the Securities and Exchange Commission. In addition, the forward-looking statements included in these materials represent the Company's views only as of the date hereof. The Company anticipates that subsequent events and developments will cause the Company's views to change. However, while the Company may elect to update these forward-looking statements at some point in the future, the Company specifically disclaims any obligation to do so, except as may be required by law. These forward-looking statements should not be relied upon as representing the Company's views as of any date subsequent to the date hereof.

Trademarks

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Investigational Agents

The safety and efficacy of investigational agents and/or investigational uses of approved products have not been established.

Building a Leadership Position in Immuno-Oncology

Commercial-stage immuno-oncology company	• MARGENZA™ approved December 2020 • Three ongoing registration-directed studies
Proprietary platform technologies	• Bispecific DART® platform technology that exploits multiple mechanisms • Fc Optimization platform to enhance innate and adaptive immunity
Deep and differentiated pipeline	• Unique immune-based mechanisms • Retain major market rights for 7 of 8 clinical assets
Funded to execute on plan	• $281M cash, cash equivalents and marketable securities at 9/30/20[(a)] • Multiple 2020 and 2021 inflection points • Cash runway into 2023 via anticipated and potential collaboration payments

(a) Excludes subsequent receipt of $15 million and $25 million payments from Incyte under a collaboration and license agreement.

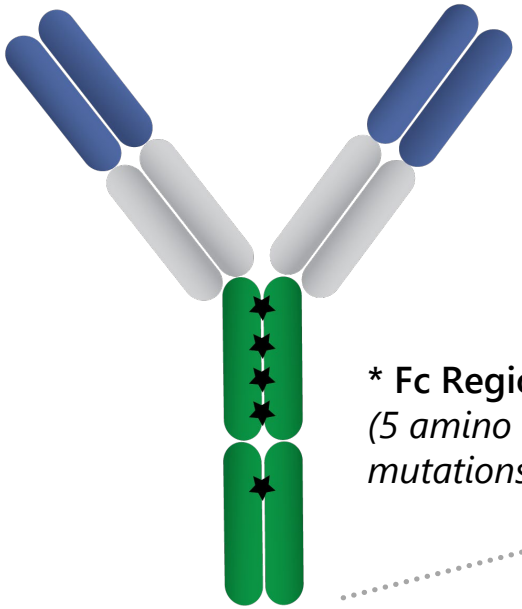
MARGENZA — Now Approved

MARGENZA is a HER2/neu receptor antagonist indicated, in combination with chemotherapy, for the treatment of adult patients with metastatic HER2-positive breast cancer who have received two or more prior anti-HER2 regimens, at least one of which was for metastatic disease.

See Important Safety Information, including Boxed Warning, on slide 7.

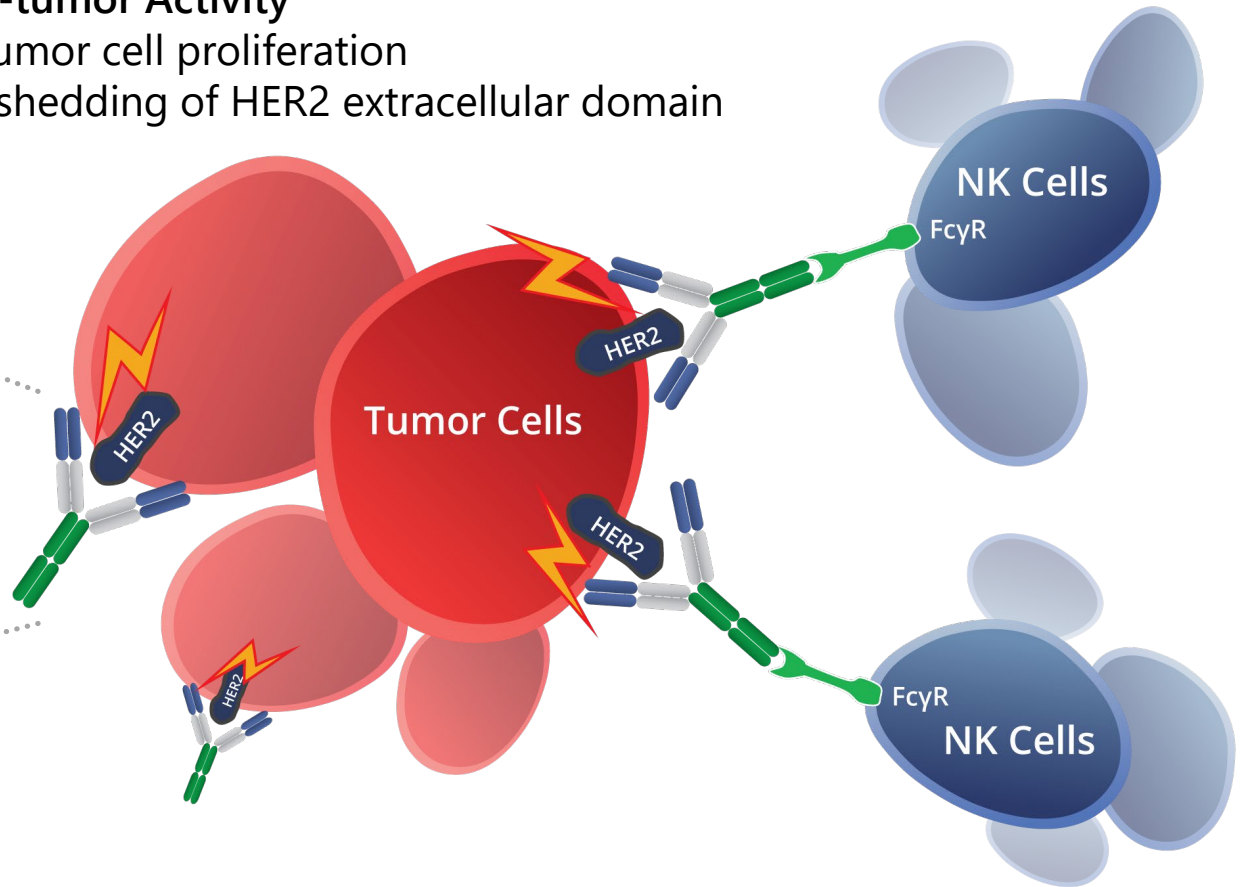
Designed to Increase Anti-tumor Immune Responses Through Fc-Engineering

Margenza™



*** Fc Region**
(5 amino acid mutations)

Direct Anti-tumor Activity
- Inhibits tumor cell proliferation
- Reduces shedding of HER2 extracellular domain



Proprietary Fc Optimization Platform:
- Increased binding to CD16A (activating)
- Decreased binding to CD32B (inhibitory)

Antibody-Dependent Cellular Cytotoxicity (ADCC)
- Immune cell-mediated anti-tumor activity
- Greater in vitro ADCC and NK cell activation

MARGENZA Approval Based on Results of SOPHIA

Improved PFS vs. Herceptin®, both with chemotherapy, in pretreated HER2+ metastatic breast cancer

Efficacy

- 24% Reduction in risk of disease progression or death (HR=0.76, p=0.033)
- mPFS favoring MARGENZA
  - MARGENZA = 5.8 months (95% CI: 5.5, 7.0)
  - Herceptin = 4.9 months (95% CI: 4.2, 5.6)
- Overall Response Rate
  - MARGENZA = 22% (95% CI: 17, 27)
  - Herceptin = 16% (95% CI: 12, 20)
- Final Overall Survival analysis expected in 2H 2021

Safety

- Boxed Warning for left ventricular dysfunction and embryo-fetal toxicity
- Infusion reactions in 13% of patients treated with MARGENZA
  - Almost all Grade 1 or Grade 2; 1.5% Grade 3
  - Resolved within 24 hours with routine supportive care
- Most common adverse drug reactions (≥20%) with MARGENZA in combination with chemotherapy:
  - Fatigue/asthenia (57%), nausea (33%), diarrhea (25%), and vomiting (21%)

See Important Safety Information, including Boxed Warning, on slide 7.

MARGENZA — Important Safety Information

WARNING: LEFT VENTRICULAR DYSFUNCTION AND EMBRYO-FETAL TOXICITY

- **Left Ventricular Dysfunction:** MARGENZA may lead to reductions in left ventricular ejection fraction (LVEF). Evaluate cardiac function prior to and during treatment. Discontinue MARGENZA treatment for a confirmed clinically significant decrease in left ventricular function.
- **Embryo-Fetal Toxicity:** Exposure to MARGENZA during pregnancy can cause embryo-fetal harm. Advise patients of the risk and need for effective contraception.

WARNINGS & PRECAUTIONS:

Left Ventricular Dysfunction

- Left ventricular cardiac dysfunction can occur with MARGENZA.
- MARGENZA has not been studied in patients with a pretreatment LVEF value of <50%, a prior history of myocardial infarction or unstable angina within 6 months, or congestive heart failure NYHA class II-IV.
- Withhold MARGENZA for ≥16% absolute decrease in LVEF from pre-treatment values or LVEF below institutional limits of normal (or 50% if no limits available) and ≥10% absolute decrease in LVEF from pretreatment values.
- Permanently discontinue MARGENZA if LVEF decline persists greater than 8 weeks, or dosing is interrupted more than 3 times due to LVEF decline.
- Evaluate cardiac function within 4 weeks prior to and every 3 months during and upon completion of treatment. Conduct thorough cardiac assessment, including history, physical examination, and determination of LVEF by echocardiogram or MUGA scan.
- Monitor cardiac function every 4 weeks if MARGENZA is withheld for significant left ventricular cardiac dysfunction.

Embryo-Fetal Toxicity

- Based on findings in animals and mechanism of action, MARGENZA can cause fetal harm when administered to a pregnant woman. Post-marketing studies of other HER-2 directed antibodies during pregnancy resulted in cases of oligohydramnios and oligohydramnios sequence manifesting as pulmonary hypoplasia, skeletal abnormalities, and neonatal death.
- Verify pregnancy status of women of reproductive potential prior to initiation of MARGENZA.
- Advise pregnant women and women of reproductive potential that exposure to MARGENZA during pregnancy or within 4 months prior to conception can result in fetal harm.
- Advise women of reproductive potential to use effective contraception during treatment and for 4 months following the last dose of MARGENZA.

Infusion-Related Reactions (IRRs)

- MARGENZA can cause IRRs. Symptoms may include fever, chills, arthralgia, cough, dizziness, fatigue, nausea, vomiting, headache, diaphoresis, tachycardia, hypotension, pruritus, rash, urticaria, and dyspnea.
- Monitor patients during and after MARGENZA infusion. Have medications and emergency equipment to treat IRRs available for immediate use.
- In patients experiencing mild or moderate IRRs, decrease rate of infusion and consider premedications, including antihistamines, corticosteroids, and antipyretics. Monitor patients until symptoms completely resolve.
- Interrupt MARGENZA infusion in patients experiencing dyspnea or clinically significant hypotension and intervene with supportive medical therapy as needed. Permanently discontinue MARGENZA in all patients with severe or life-threatening IRRs.

MOST COMMON ADVERSE REACTIONS:

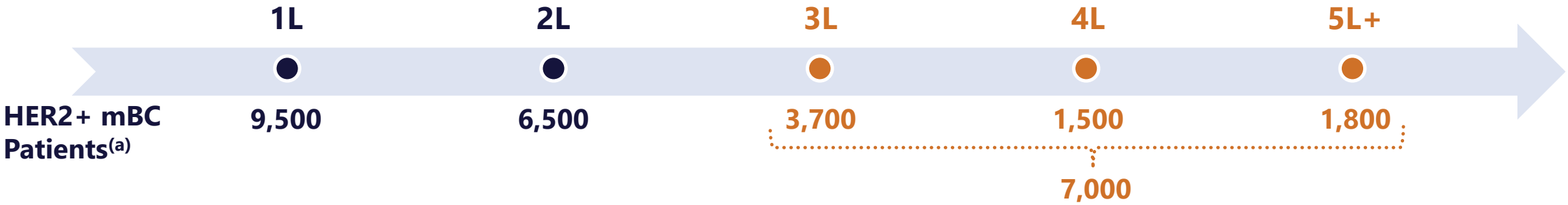
The most common adverse drug reactions (≥10%) with MARGENZA in combination with chemotherapy are fatigue/asthenia, nausea, diarrhea, vomiting, constipation, headache, pyrexia, alopecia, abdominal pain, peripheral neuropathy, arthralgia/myalgia, cough, decreased appetite, dyspnea, infusion-related reactions, palmar-plantar erythrodysesthesia, and extremity pain.

You may report side effects to the FDA at (800) FDA-1088 or www.fda.gov/medwatch or to MacroGenics at (844)-MED-MGNX (844-633-6469).

For full Prescribing Information, including Boxed Warning, go to www.margenza.com

Rapidly Evolving HER2+ Metastatic Breast Cancer Treatment Landscape

Oncologists will consider specific patient attributes for sequencing of therapies



1L & 2L Therapy Options

trastuzumab + pertuzumab + taxane

trastuzumab emtansine

Approved in early breast cancer

3L+Therapy Options

Recently Approved Therapies:

- MARGENZA (margetuximab)
- tucatinib
- trastuzumab deruxtecan
- neratinib

Older Options:

- trastuzumab combinations
- lapatinib combinations

(a) MacroGenics' estimate for U.S. market from publicly available data.

Fully Aligned & Engaged with EVERSANA to Support Anticipated March Launch

Innovative risk-sharing structure provides balance of flexibility and control

MACROGENICS

- Books sales and controls decision-making
- Leads execution of all development and manufacturing activities
- Maintains flexibility to pursue future licensing collaborations

EVERSANA™

- Provides access to its broad spectrum of commercialization services
- Receives revenue share payments (pre-defined % of net sales, capped at 125% of cumulative service fees)

- **Post-approval commercialization costs are shared equally**
- **Co-exclusive rights to commercialize MARGENZA in U.S.**
- **5-Year term following FDA approval, subject to predefined termination provisions**

Deep and Differentiated Immuno-Oncology Pipeline

Program (Target)	Potential Indication(s)	First-in-Human (Phase 1)	Proof-of-Concept (Phase 2)	Pivotal/ Regist. Directed	Approved	Major Market Rights
Margetuximab (HER2)	HER2+ Breast					MacroGenics; Greater China: Zai Lab
	HER2+ GC/GEJ (+retifanlimab/tebotelimab)					
Flotetuzumab (CD123 × CD3)	Refractory AML					MacroGenics
Retifanlimab[(a)] (PD-1)	NSCLC, Anal					Incyte; Greater China: Zai Lab
Enoblituzumab (B7-H3)	SCCHN (+retifanlimab/tebotelimab)	*Planned 1Q21*				MacroGenics; Greater China: I-MAB Biopharma
Tebotelimab (PD-1 × LAG-3)	Solid Tumors & Heme Malignancies					MacroGenics; Greater China: Zai Lab
MGD019 (PD-1 × CTLA-4)	Solid Tumors					MacroGenics
MGC018 (B7-H3)	mCRPC, TNBC, NSCLC					MacroGenics
IMGC936 (ADAM9)	Solid Tumors					MacroGenics; 50/50 immunogen

MGD = DART | MGA = Antibody | MGC = ADC

The safety and efficacy of investigational agents and/or investigational uses of approved products have not been established.

(a) MacroGenics retains rights to develop its pipeline assets in combination w/retifanlimab (formerly MGA012) and to manufacture a portion of global clinical and commercial supply needs of retifanlimab.

Investigation of Gastric Cancer as Potential Follow-on Indication

Data from 2L margetuximab + anti-PD-1 mAb presents opportunity to advance to 1L

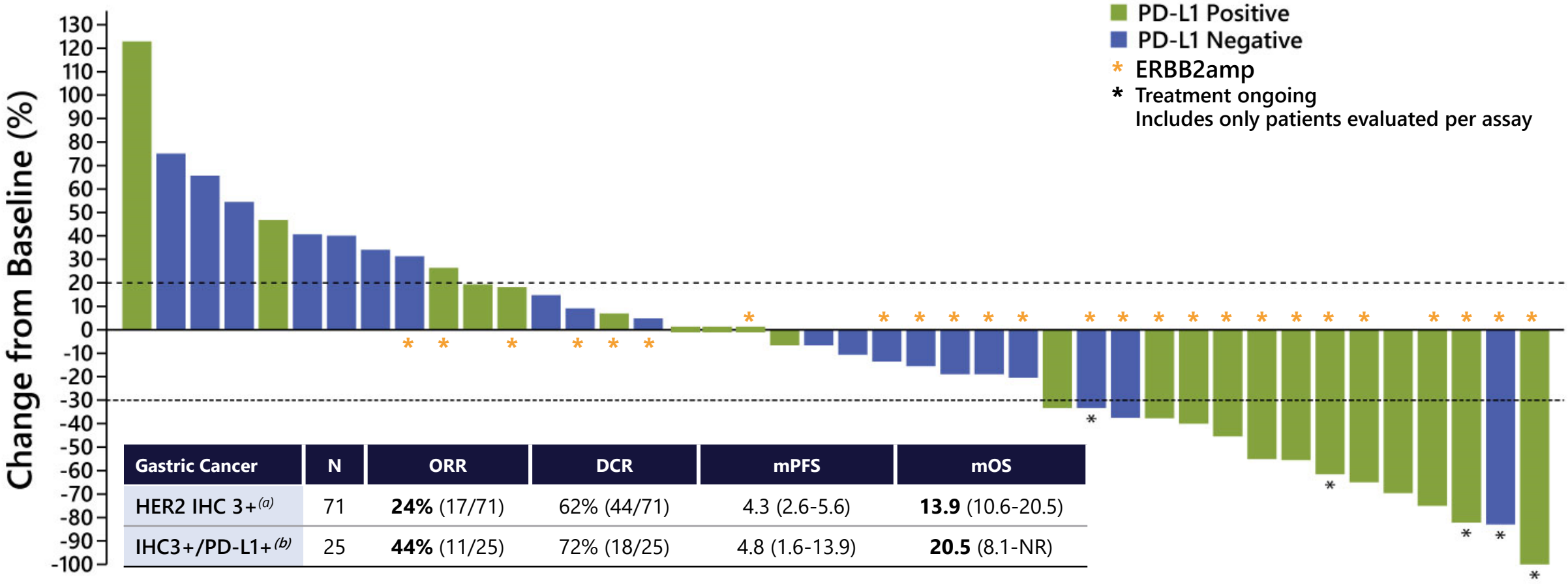
Benchmarks

	1st Line	2nd Line			3rd Line
	SOC	SOC	Ongoing Phase 2 Study	Failed	Ongoing Study
Agent (Study)	Trastuzumab + Chemo[a] (TOGA)	Ramucirumab + Paclitaxel[b] (RAINBOW)	**Margetuximab + Pembrolizumab[c]** IHC 3+	**Margetuximab + Pembrolizumab[c]** IHC 3+/PD-L1+	Pembrolizumab[d] (KEYNOTE-61) PD-L1+	DS-8201[e]
ORR	47%	28%	**24%**	**44%**	15.8%	43%
Median PFS	6.7 mos.	4.4 mos.	**4.3 mos.**	**4.8 mos.**	1.5 mos.	5.6 mos.
Median OS	**13.1 mos.**	9.6 mos.	**13.9 mos.**	**20.5 mos.**	9.1 mos.	12.8 mos.
≥ Grade 3 TRAEs	**68%**	Overall: N/A 41% Neutropenia 15% Hypertension 12% Fatigue	**20%**		14%	48%
Gastric/GEJ Patient Mix	80/20%	80/20%	**64%/36%**		70%/30%	80%/20%

SOC = Standard of Care
(a) Data from Herceptin package insert; Bang, et al., 2010, Lancet;
(b) Data from Cyramza package insert; Wilkes, et al., 2014, Lancet Oncology;
(c) Catenacci, et al., 2020, Lancet Oncology;
(d) Shitara, et al., 2018, Lancet;
(e) Shitara, et al., 2020, Lancet Oncology.
The safety and efficacy of investigational uses of approved products have not been established.

Promising Activity in Advanced Gastric Cancer Patients in 2L Phase 2 Study

44% ORR in HER2 3+/PD-L1+ gastric & GEJ previously treated with chemotherapy and trastuzumab



Gastric Cancer	N	ORR	DCR	mPFS	mOS
HER2 IHC 3+[(a)]	71	**24%** (17/71)	62% (44/71)	4.3 (2.6-5.6)	**13.9** (10.6-20.5)
IHC3+/PD-L1+[(b)]	25	**44%** (11/25)	72% (18/25)	4.8 (1.6-13.9)	**20.5** (8.1-NR)

Catenacci, et al., 2020, Lancet Oncology. Data cut-off July 10, 2019. All responses are confirmed.

(a) Immunohistochemistry (IHC) test gives score of 0 to 3+ that measures amount of HER2 receptor protein on surface of cells in cancer tissue sample. Score of 0 to 1+ is called "HER2 negative", score of 2+ is called "borderline", score of 3+ is called "HER2 positive."

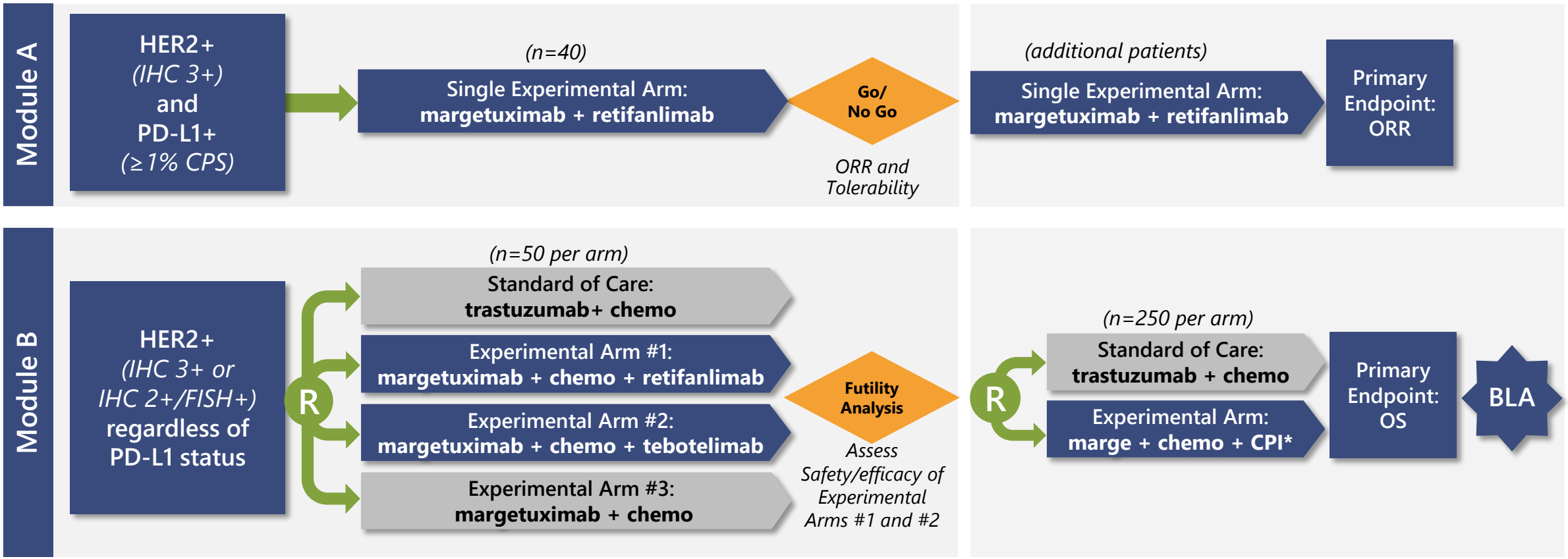
(b) "PD-L1 Positive" reflects Combined Positive Score (per standard FDA approved assay) ≥1% (PD-L1 tested on archival tissue by IHC; clone 22C3 pharmDx).

The safety and efficacy of investigational uses of approved products have not been established.

MAHOGANY Phase 2/3 Study: Registration Path in 1L Gastric & GEJ Cancer

Module A has potential for U.S. Accelerated Approval of chemotherapy-free regimen

MAHOGANY

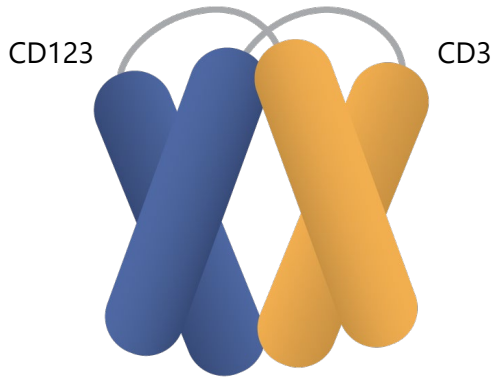


MAHOGANY *(**Ma**rgetuximab in **H**ER2-p**o**sitive **Ga**stric Cancer*
The safety and efficacy of investigational uses of approved products have not been established.

** Pending chronic tox study (if regimen with tebotelimab (MGD013) is selected).*

Flotetuzumab: CD123 × CD3 DART Molecule

Establishing leadership position among CD123-targeting bispecifics



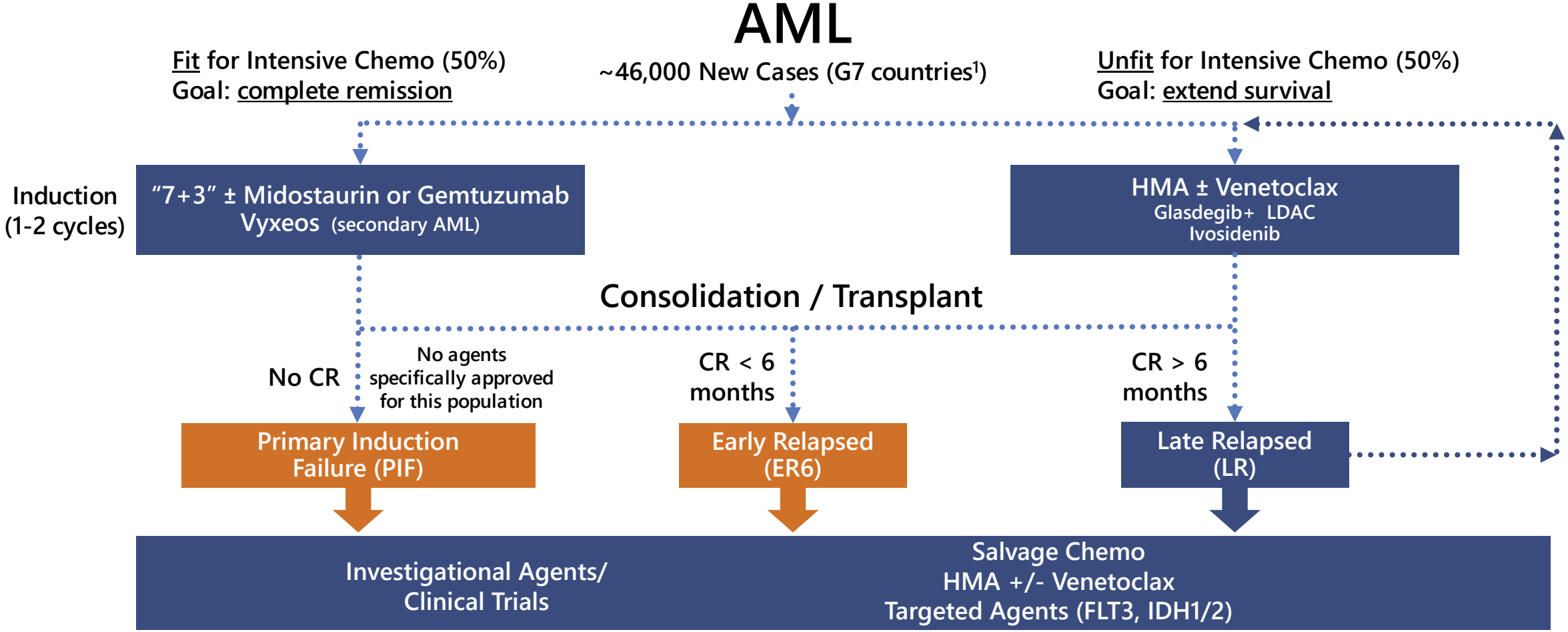
Function/ MoA	• Redirected T-cell killing against leukemia cells – Eliminates leukemic stem cells; spares normal hematopoietic stem cells – Engages any T-cell without HLA-restriction
Clinical Studies	• Single arm study to support registration – Primary induction failure (PIF) and early relapse (ER) AML[(a)] – Expansion of ongoing Phase 1/2 study
Milestones	• 2020: – Initiated registrational study – Presented updated data from Phase 1/2 study at ASH • Anticipated 2021: – Provide clinical update (2H)

(a) Patients who never achieved complete remission in response to induction therapy (PIF) or achieved a complete remission lasting less than 6 months (ER)

Flotetuzumab is investigational and has not yet been approved for marketing by any regulatory authority

Primary Induction Failure & Early Relapsed AML: Significant Unmet Need

~50% of AML patients are refractory to induction therapy or have short remission



(1) G7 countries: Canada, France, Germany, Italy, Japan, United Kingdom and United States

Adapted from Aldoss, et al., ASH 2020

Flotetuzumab in PIF/ER6 AML: Demographics

Analysis of all PIF/ER pts (per previous definition) treated at RP2D[1]

Characteristic	Population (n=44)[2]
Age, Median (range)	63.5 (28.0, 81.0)
Gender, Female	13 (29.5)
Disease Status at Study Entry	
Primary Induction Failure	27 (61.4)
Cytarabine based induction chemotherapy	20 (74.1)
Alternative induction therapy	7 (25.9)
Early Relapse	17 (38.6)
Median duration of CR1 (range)	3.3 months (0.8-5.7)
ELN Risk Stratification (2017)	
Adverse	32 (72.7%)
Intermediate	11 (25.0%)
Favorable	1 (2.3%)
Secondary AML	16 (36.4%)
Number of Prior Lines of Therapy, median (range)	2.0 (1.0, 3.0)
Baseline BM Blasts Median (Range)[3]	34.5 (5.0, 84)

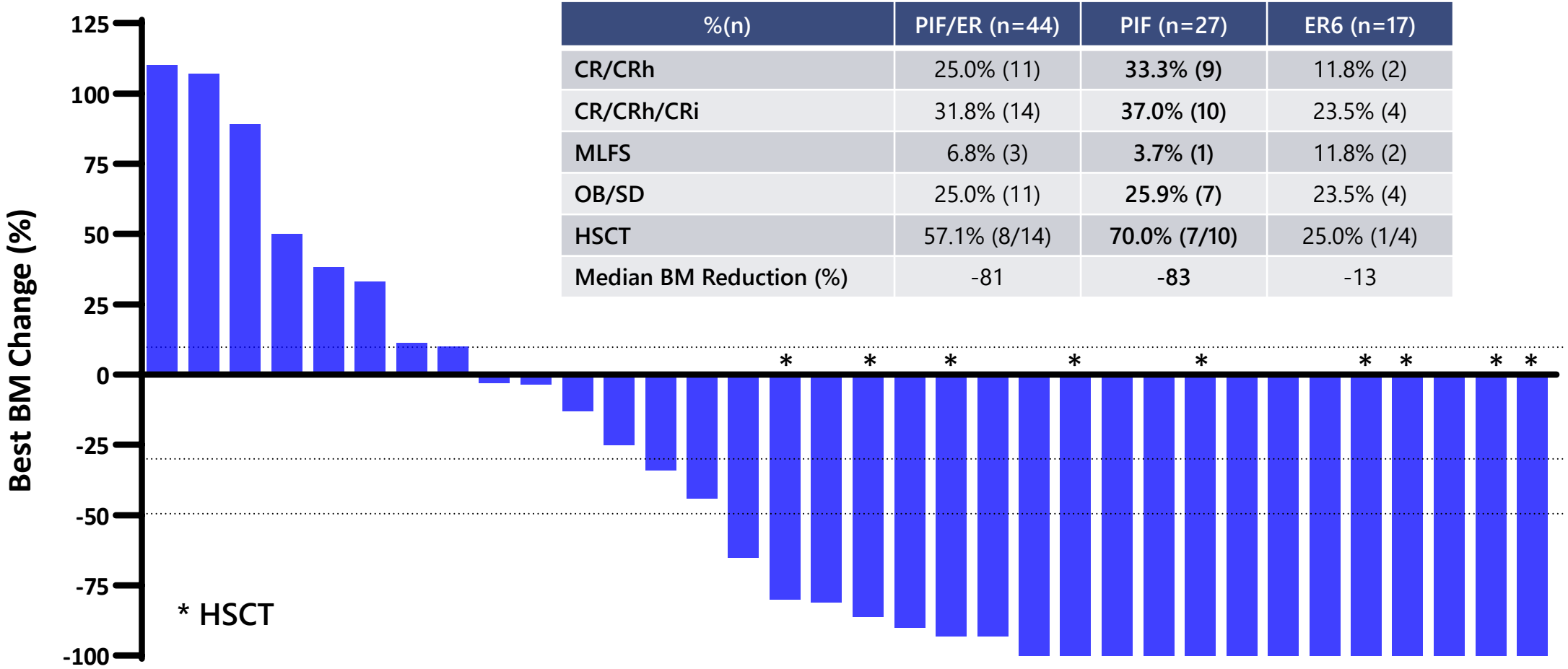
(1) Recommended Phase 2 Dose = multistep-LID C1W1 followed by 500ng/kg/day continuous infusion through induction
(2) Including ruxolitinib mini-cohort – see Abstract # 2817: "Prophylactic Ruxolitinib for Cytokine Release Syndrome (CRS) in Relapse/Refractory (R/R) AML Patients Treated with Flotetuzumab"
(3) A patient confirmed with AML by IHC not included in baseline BM analysis

Data cut-off: Nov. 10, 2020; Aldoss, et al., ASH 2020

Active in Primary Induction Failure & Early Relapsed AML Patients

Historical CR/CRh rates in PIF/ER6 range from 5-12%, with median expected overall survival ~3.5 mos.

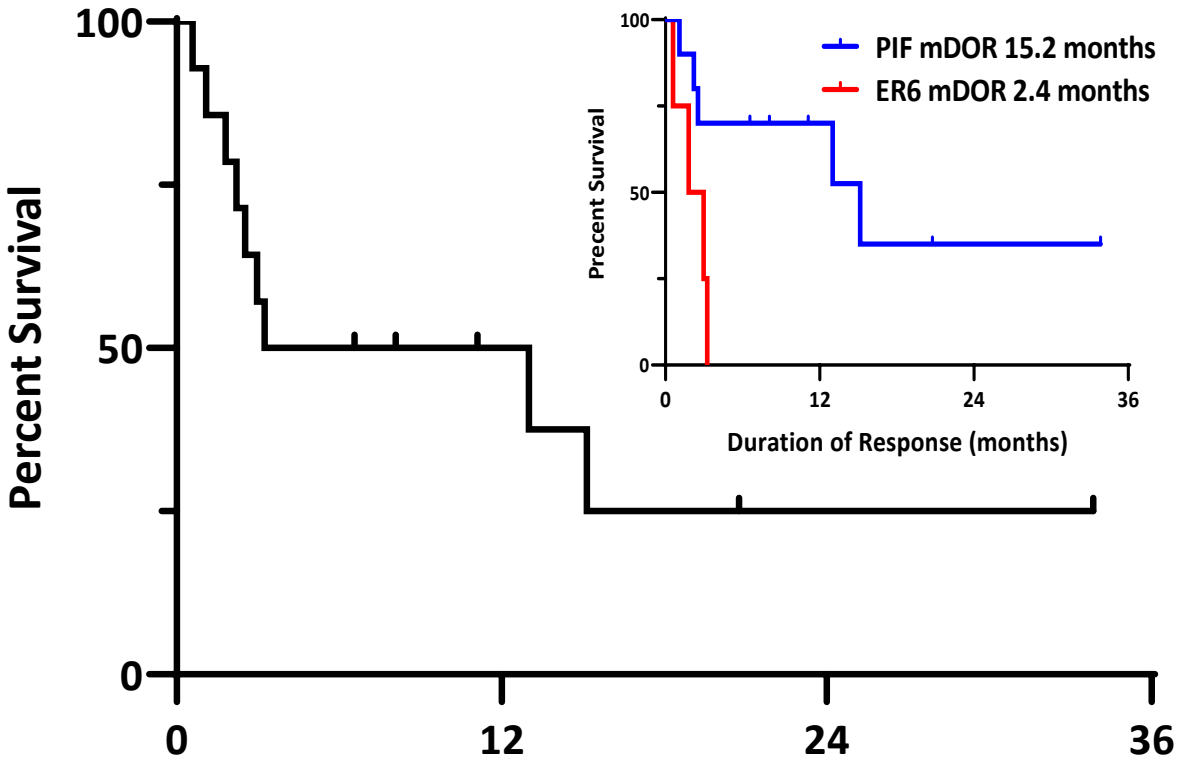
%(n)	PIF/ER (n=44)	PIF (n=27)	ER6 (n=17)
CR/CRh	25.0% (11)	**33.3% (9)**	11.8% (2)
CR/CRh/CRi	31.8% (14)	**37.0% (10)**	23.5% (4)
MLFS	6.8% (3)	**3.7% (1)**	11.8% (2)
OB/SD	25.0% (11)	**25.9% (7)**	23.5% (4)
HSCT	57.1% (8/14)	**70.0% (7/10)**	25.0% (1/4)
Median BM Reduction (%)	-81	**-83**	-13



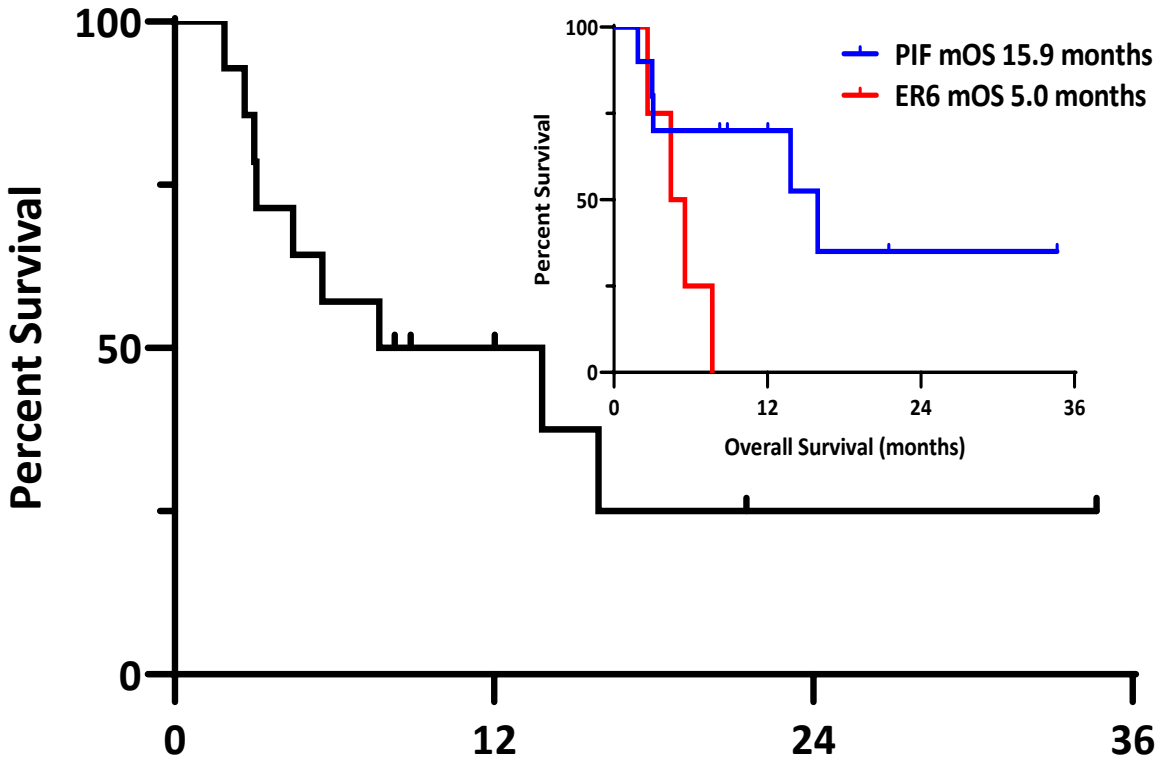
Data cut-off: Nov. 10, 2020; Aldoss, et al., ASH 2020

Duration of Response & Overall Survival in PIF/ER6 AML Responders (CR/CRh/CRi)

Duration of Response (months)
mDOR 8.13 months



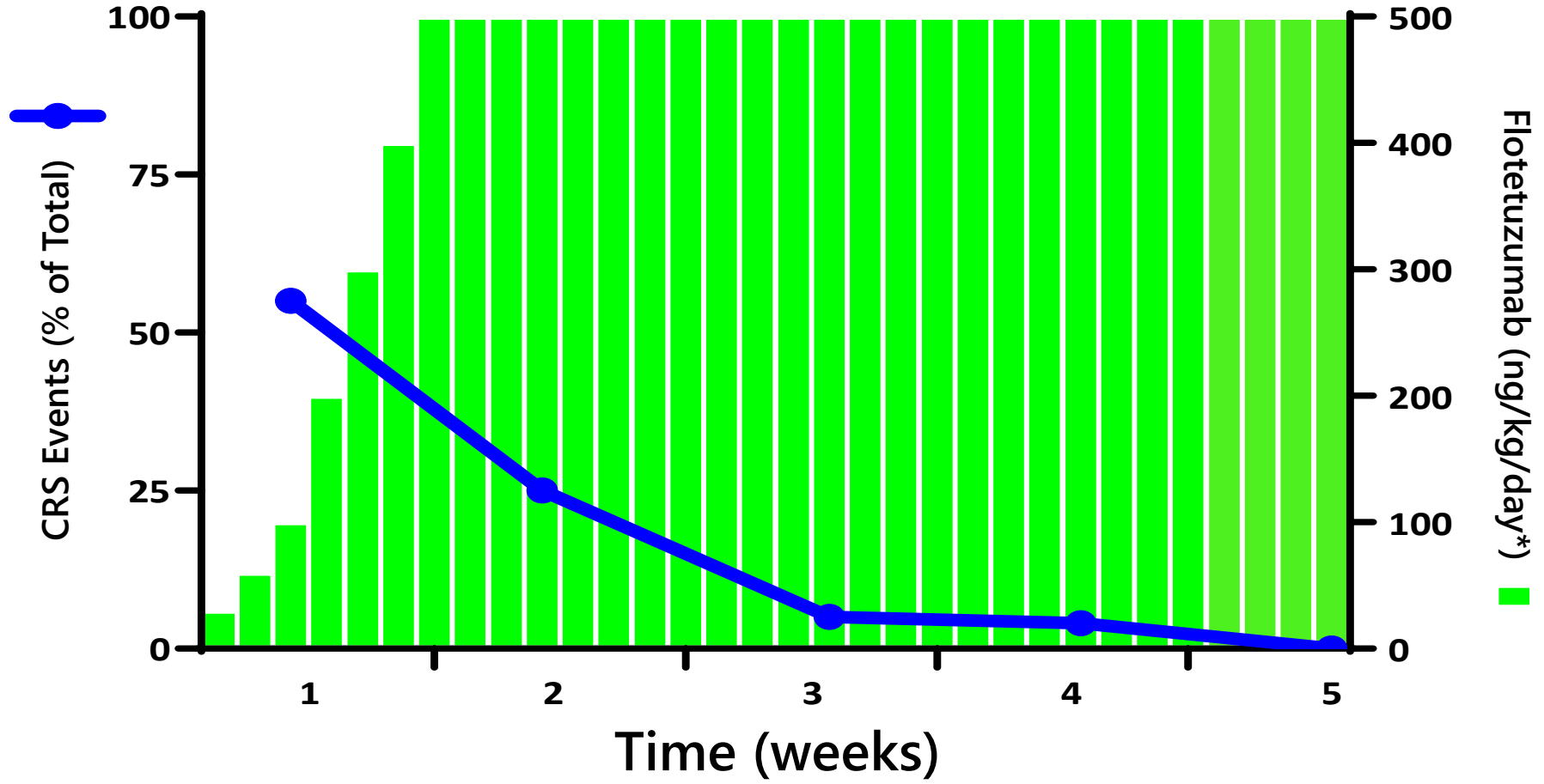
Overall Survival (months)
mOS 10.7 months



Data cut-off: Nov. 10, 2020; Aldoss, et al., ASH 2020

Effectively Managed CRS through Lead-in Dosing and Supportive Care

- *Most CRS events (52%) occurred in first week of treatment during step-up dosing*
- *Incidence of CRS progressively decreased during dosing, allowing outpatient treatment after day 8*

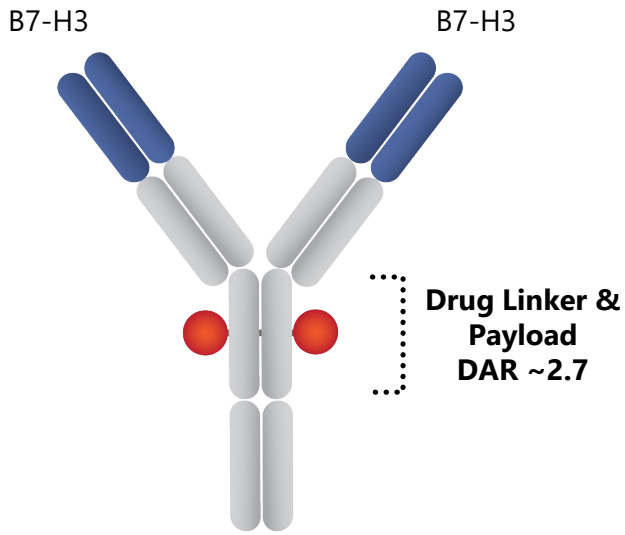


** Planned dose.*

Data cut-off: Nov. 10, 2020; Aldoss, et al., ASH 2020

MGC018: Antibody-Drug Conjugate with Duocarmycin-based Linker Payload

Leveraging high B7-H3 expression in solid tumors



Function/ MoA	• ADC that delivers potent duocarmycin payload to dividing and non-dividing B7-H3-expressing cells • Cleavable peptide linker facilitates bystander effect • Not subject to multi-drug resistance (MDR)
Clinical Study	• Phase 1/2 study in advanced solid tumors (ongoing)
Milestones	• 2020: Initiated Ph. 1/2 cohort exp. in mCRPC, TNBC & NSCLC • Anticipated 2021: Provide clinical update (mid-2021)

Duocarmycin payload and cleavable peptide linker technology was licensed from Byondis..
MGC018 is investigational and has not yet been approved for marketing by any regulatory authority

High Penetrance in Broad Set of Solid Tumors

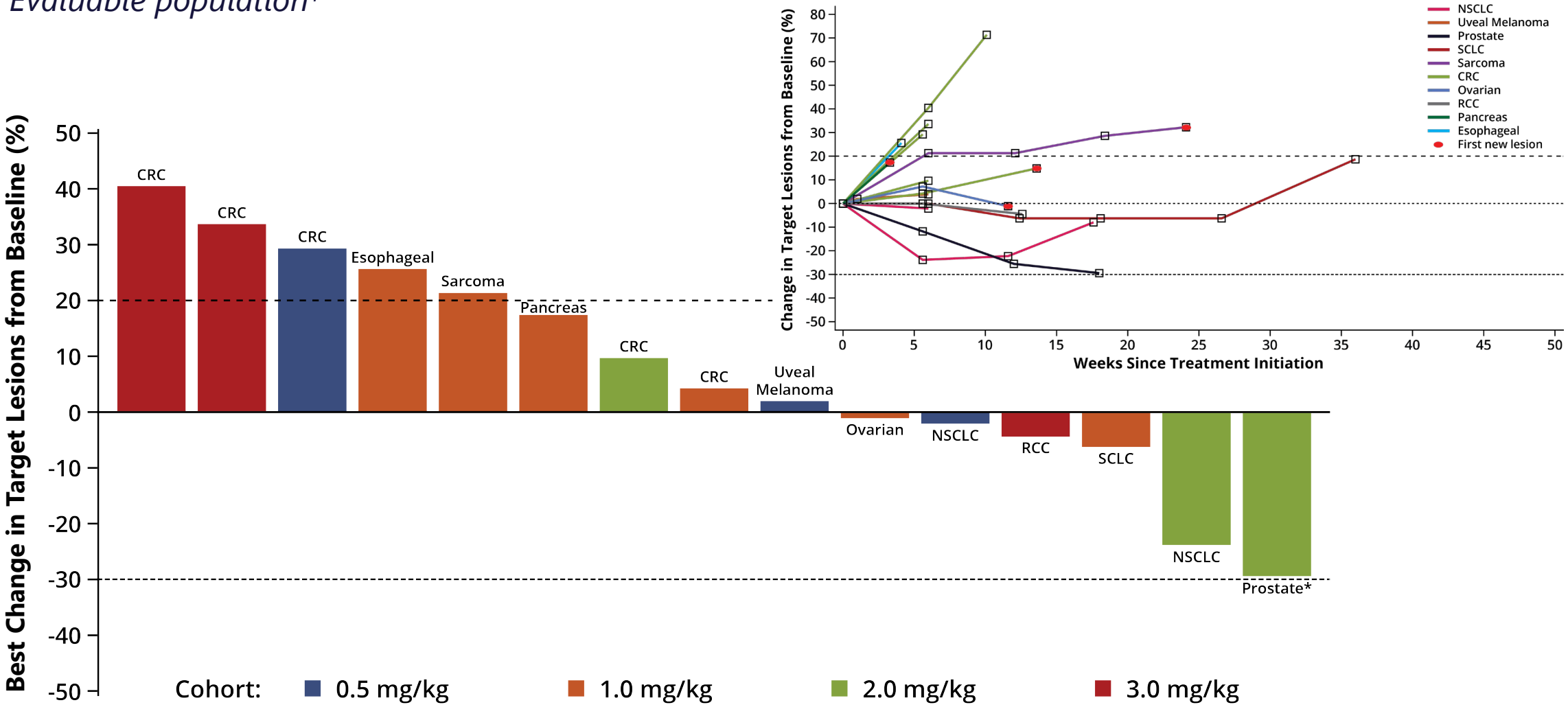
Majority express high levels of B7-H3, with limited expression in normal tissue

	Potential Indications:	IHC Summary of >1,530 Tumor Tissue Samples Screened			
		B7-H3 Positive[(a)]		2+ or Above	
	Head and Neck	19/19	100%	19/19	100%
	Kidney Cancer	77/78	99%	75/78	96%
	Glioblastoma	65/66	98%	63/66	95%
	Bladder	86/88	98%	78/88	89%
	Thyroid Cancer	34/35	97%	33/35	94%
	Mesothelioma	45/47	96%	34/47	72%
	Anal Cancer	34/37	92%	33/37	89%
MGC018 Expansion Cohorts	**Triple Negative Breast Cancer**	**120/131**	92%	**114/131**	87%
MGC018 Expansion Cohorts	Melanoma	132/146	90%	94/146	64%
MGC018 Expansion Cohorts	**Prostate Cancer**	**88/99**	89%	**51/99**	52%
MGC018 Expansion Cohorts	Pancreatic Cancer	69/78	88%	45/78	58%
MGC018 Expansion Cohorts	**Non Small Cell Lung Cancer**	**323/371**	87%	**297/371**	80%
	Breast Cancer	189/249	76%	156/249	63%
	Ovarian Cancer	59/79	75%	36/79	46%

(a) B7-H3 positivity reflects any grade staining via fixed tumor microarray; B7-H3 is expressed on tumor as well as tumor vasculature.

Preliminary Evidence of Activity in Multiple Tumor Types

Evaluable population[1]



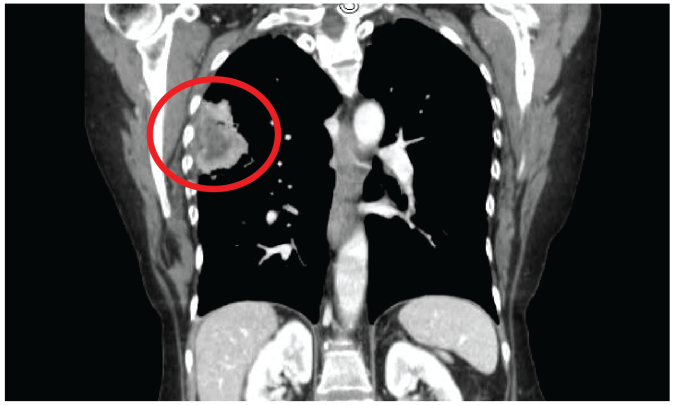
[1]Patients who received at least one dose and had at least one post-baseline tumor evaluation. *mCRPC Pt #1. Data were extracted on 06MAY2020.

Powderly, et al., ASCO 2020

Reduction of Pleural-Based Tumor in NSCLC Patient

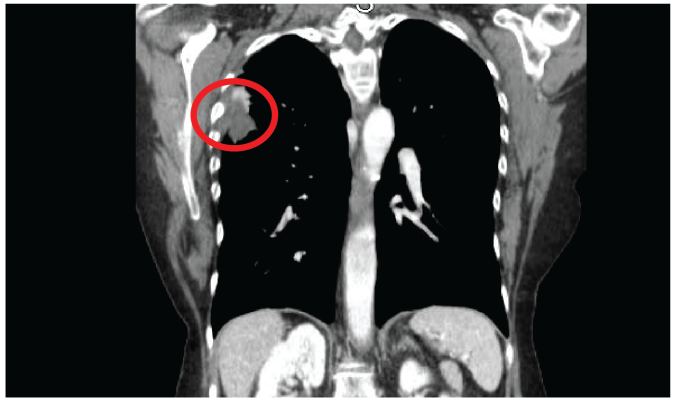
MGC018 following progression after five lines of prior therapy

Baseline (May 23, 2019)



2 Doses of MGC018 (2.0 mg/kg)
Decrease in pleural lesion read by Investigator

Week 6 (July 26, 2019)



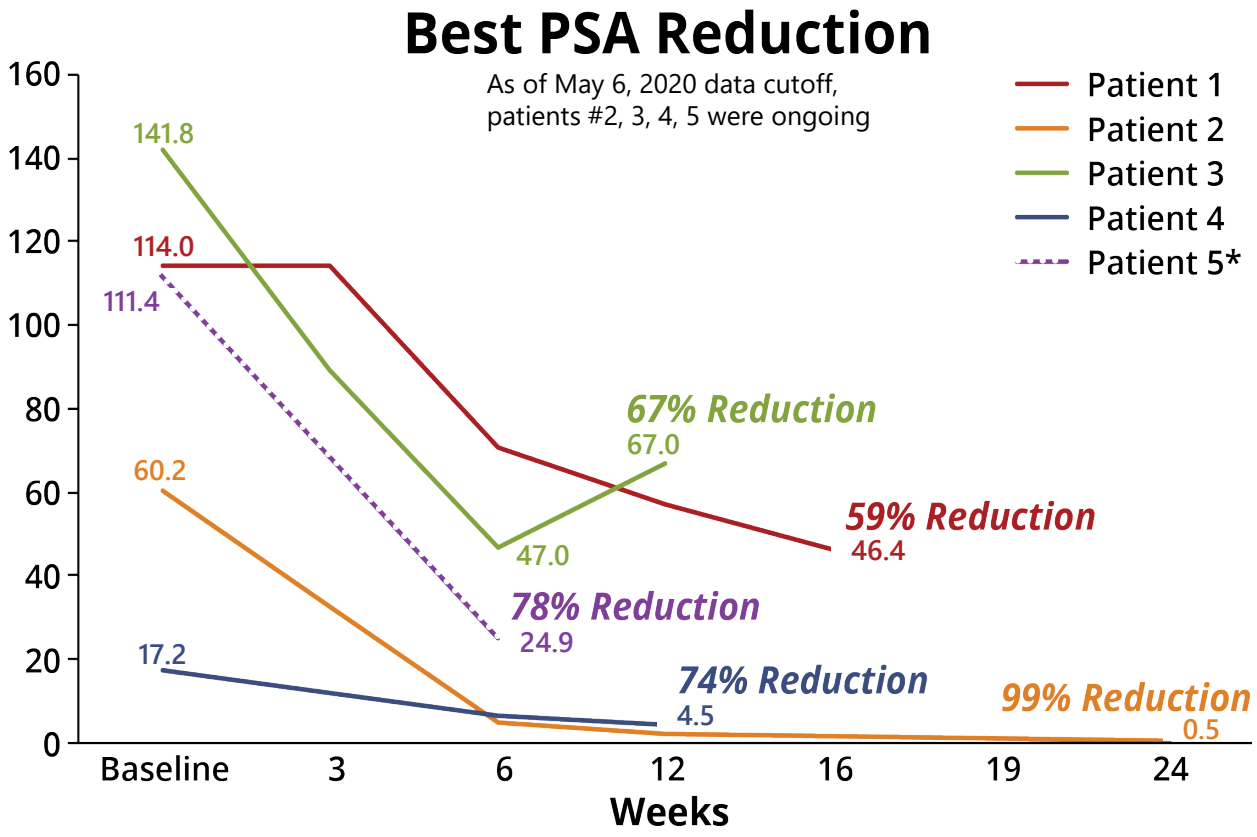
Note image not exact Anterior-Posterior slice as May 23, 2019

Line of Tx	Treatment	Cycles	Duration of Therapy (Months)	Best Response
1	Carboplatin+Paclitaxel+Bevacizumab	4	2	SD
2	Nivolumab	40	16	SD
3	MK-7162 (IDO1 inhibitor)	3	2	SD
4	APG-1252 (Bcl-2 inhibitor)	2	1	PD
5	Pembrolizumab (MK-3475)	2	1	PD
6	**MGC018**	**2**	**2**	**SD (≈24%)**

Powderly, et al., ASCO 2020

Greater than 50% PSA Decline Following MGC018 in Heavily Pre-treated mCRPC

Patient (Dose)	Line of Therapy	Treatment	Duration of Therapy (months)	MGC018 Response
Patient #1 2 mg/kg One target lesion (lymph node), abdominal adenopathy & bone lesions	1 2 3 4 5 **6**	Docetaxel Enzalutamide Prostvac Abiraterone Nivolumab **MGC018**	4 24 5 6 6 **4**	**SD (-29%); 59% PSA Decline**
Patient #2 3 mg/kg Bone only disease	1 2 3 4 **5**	Docetaxel Abiraterone Enzalutamide Radium 223 **MGC018**	6 4 12 6 **3+**	**SD (Ongoing); 99% PSA Decline**
Patient #3 3mg/kg Bone only disease	1 2 3 4 **5**	Docetaxel Provenge Enzalutamide Abiraterone **MGC018**	8 2 6 9 **1.5+**	**SD (Ongoing); 67% PSA Decline**
Patient #4 3 mg/kg Bone only disease	1 2 **3**	Abiraterone Nivo + Rucaparib **MGC018**	Unknown Unknown **1.5+**	**SD (Ongoing); 74% PSA Decline**
Patient #5 3mg/kg Bone only disease	1 2 3 4 5 **6**	Docetaxel Provenge Enzalutamide Abiraterone Docetaxel **MGC018**	4 12 7 7 4 **1.5+**	**SD (Ongoing); 78% PSA Decline**

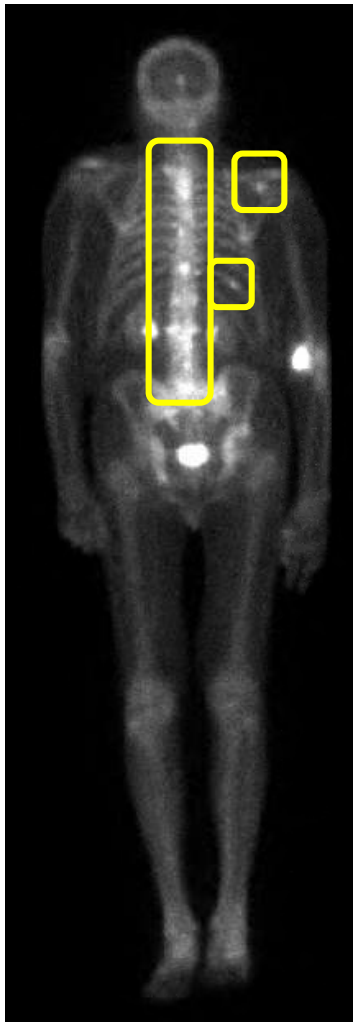


*Patient #5 data scaled for charting purposes:
Note: Baseline PSA 1,114 ng/mL dropped to 249 ng/mL at Week 6, with a further decline to 95 ng/mL at Week 12 (May 18, 2020; after the May 6, 2020 data cut-off).

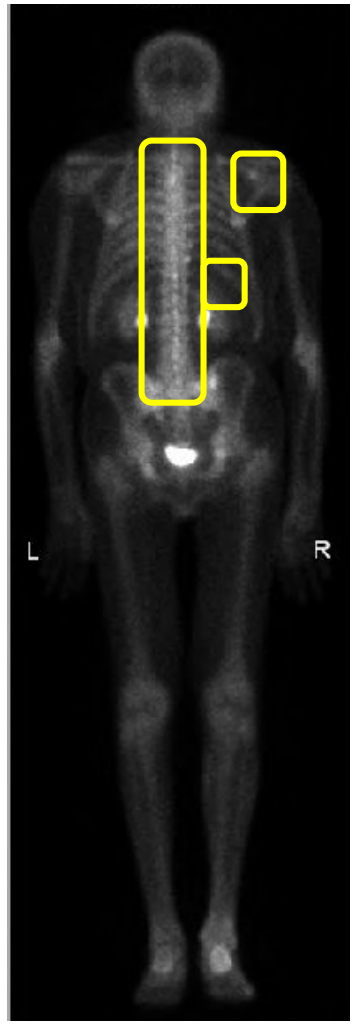
Powderly, et al., ASCO 2020

99% PSA Reduction with Substantial Improvement in Metastatic Bone Lesions

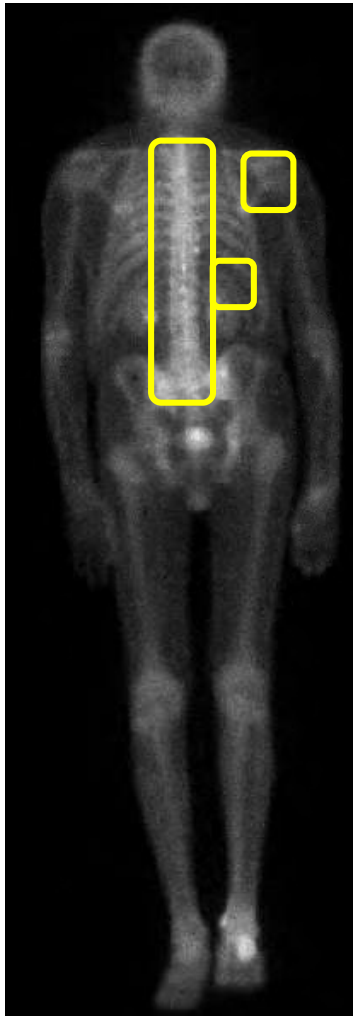
mCRPC Patient #2: Bone lesions of thoracic/lumbar spine, ribs, sternum, and pelvis



November 13, 2019



February 7, 2020



May 1, 2020

Powderly, et al., ASCO 2020

Manageable Safety Profile Across Dose Cohorts

Cytopenias and skin disorders were most common

Grade ≥3 Related Adverse Events

System Organ Class Preferred Term	0.5 mg/kg (N=3)	1.0 mg/kg (N=6)	2.0 mg/kg (N=7)	3.0 mg/kg (N=7)	All (N=23)
AT LEAST ONE EVENT	2 (66.7)	2 (33.3)	7 (100)	3 (42.9)	14 (60.9)
Blood and lymphatic system disorders	0	0	2 (28.6)	2 (28.6)	4 (17.4)
Neutropenia	0	0	2 (28.6)	2 (28.6)	4 (17.4)
Lymphopenia	0	0	1 (14.3)	1 (14.3)	2 (8.7)
Gastrointestinal disorders	0	1 (16.7)	0	0	1 (4.3)
Gastrointestinal inflammation	0	1 (16.7)	0	0	1 (4.3)
Investigations	1 (33.3)	2 (33.3)	4 (57.1)	2 (28.6)	9 (39.1)
Lymphocyte count decreased	0	1 (16.7)	2 (28.6)	1 (14.3)	4 (17.4)
Blood alkaline phosphatase increased	0	0	1 (14.3)	1 (14.3)	2 (8.7)
Neutrophil count decreased	0	1 (16.7)	1 (14.3)	0	2 (8.7)
Platelet count decreased	0	0	1 (14.3)	1 (14.3)	2 (8.7)
Lipase increased	1 (33.3)	0	0	0	1 (4.3)
White blood cell count decreased	0	1 (16.7)	0	0	1 (4.3)
Respiratory, thoracic and mediastinal disorders	1 (33.3)	0	0	0	1 (4.3)
Pneumonitis	1 (33.3)	0	0	0	1 (4.3)
Skin and subcutaneous tissue disorders	0	0	3 (42.9)	1 (14.3)	4 (17.4)
Palmar-plantar erythrodysaesthesia syndrome	0	0	1 (14.3)	1 (14.3)	2 (8.7)
Rash maculo-papular	0	0	2 (28.6)	0	2 (8.7)
Stasis dermatitis	0	0	1 (14.3)	0	1 (4.3)

Powderly, et al., ASCO 2020

Overall Summary of Treatment Emergent Adverse Events

Patients Reporting at Least One Adverse Event	0.5 mg/kg (N=3)	1.0 mg/kg (N=6)	2.0 mg/kg (N=7)	3.0 mg/kg* (N=7)	All (N=23)
Adverse Event	3 (100)	6 (100)	7 (100)	7 (100)	23 (100)
Treatment-Related Adverse Event [1]	3 (100)	4 (66.7)	7 (100)	7 (100)	21 (91.3)
Adverse Event ≥ Grade 3 [2]	3 (100)	4 (66.7)	7 (100)	4 (57.1)	18 (78.3)
Treatment-Related Adverse Event ≥ Grade 3 [2]	2 (66.7)	2 (33.3)	7 (100)	3 (42.9)	14 (60.9)
Serious Adverse Event	1 (33.3)	1 (16.7)	3 (42.9)	0	5 (21.7)
Event that Resulted in Study Discontinuation	1 (33.3)	1 (16.7)	3 (42.9)	0	5 (21.7)
Event that Resulted in Drug MGC018 Withdrawal	1 (33.3)	1 (16.7)	3 (42.9)	1 (14.3)	6 (26.1)
Event that Resulted in Drug MGC018 Dose Reduction	0	0	1 (14.3)	2 (28.6)	3 (13.0)
Event that Resulted in Drug MGC018 Interrupted	1 (33.3)	0	2 (28.6)	5 (71.4)	8 (34.8)
Fatal Adverse Event (pneumonitis)	1 (33.3)	0	0	0	1 (4.3)
Adverse Event of Special Interest (AESI) – Infusion Reaction	0	0	2 (28.6)	5 (71.4)	7 (30.4)

*Amendment applied to allow dose modification.

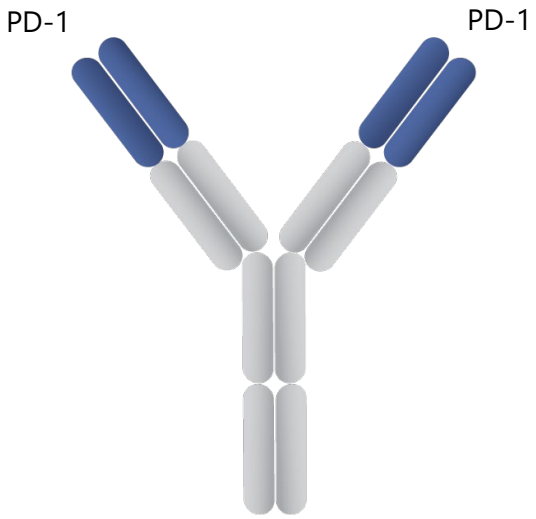
- Three treatment-related serious adverse events occurred in three patients:
  - pneumonitis in a patient with concurrent bacterial pneumonia; non-infectious gastroenteritis; and stasis dermatitis in a patient with chronic venous insufficiency
- One dose-limiting toxicity (Grade 4 neutropenia resolved to baseline); no febrile neutropenia observed

[1]Includes events with causality assessments of 'Possible', 'Probable' or 'Definite'. [2]Based on CTCAE criteria version 4.0.3.

Powderly, et al., ASCO 2020

Retifanlimab: Anti-PD-1 Antibody

Global collaboration with Incyte

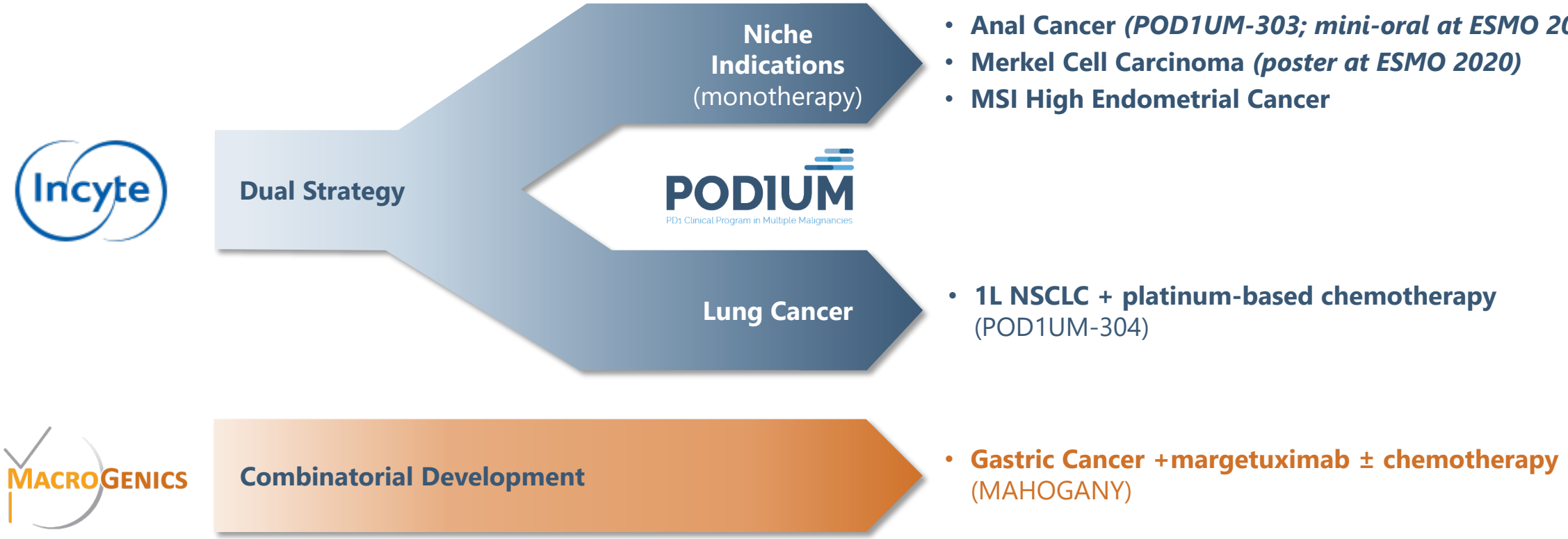


Function/ MoA	• Humanized, hinge-stabilized IgG4 mAb • Inhibits PD-1
Clinical Studies	• Five registration-directed studies ongoing or planned in 2020 across a broad range of tumor types
Global Incyte Transaction	• Up to $750M in potential milestones ($55M achieved to date) • Tiered royalties of 15-24% on future retifanlimab sales • Rights to develop pipeline assets with retifanlimab
Milestones	• 2020: – Presented MCC & SCAC monotherapy results at ESMO – Initiated global Ph. 3 randomized studies in NSCLC, SCAC • Anticipated 2021: Per Incyte's disclosure

Retifanlimab (formerly MGA012) is investigational and has not yet been approved for marketing by any regulatory authority

Comprehensive Development Plans

Multiple potentially registration-enabling clinical studies



- **Anal Cancer *(POD1UM-303; mini-oral at ESMO 2020)***
- **Merkel Cell Carcinoma *(poster at ESMO 2020)***
- **MSI High Endometrial Cancer**

- **1L NSCLC + platinum-based chemotherapy** (POD1UM-304)

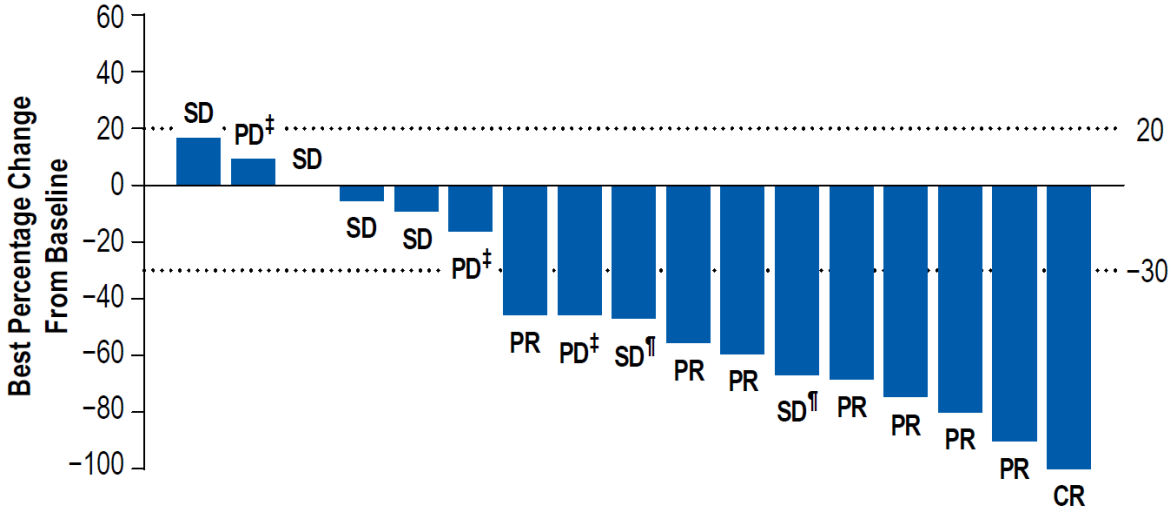
- **Gastric Cancer +margetuximab ± chemotherapy** (MAHOGANY)

ClinicalTrials.gov referenced July 27, 2020

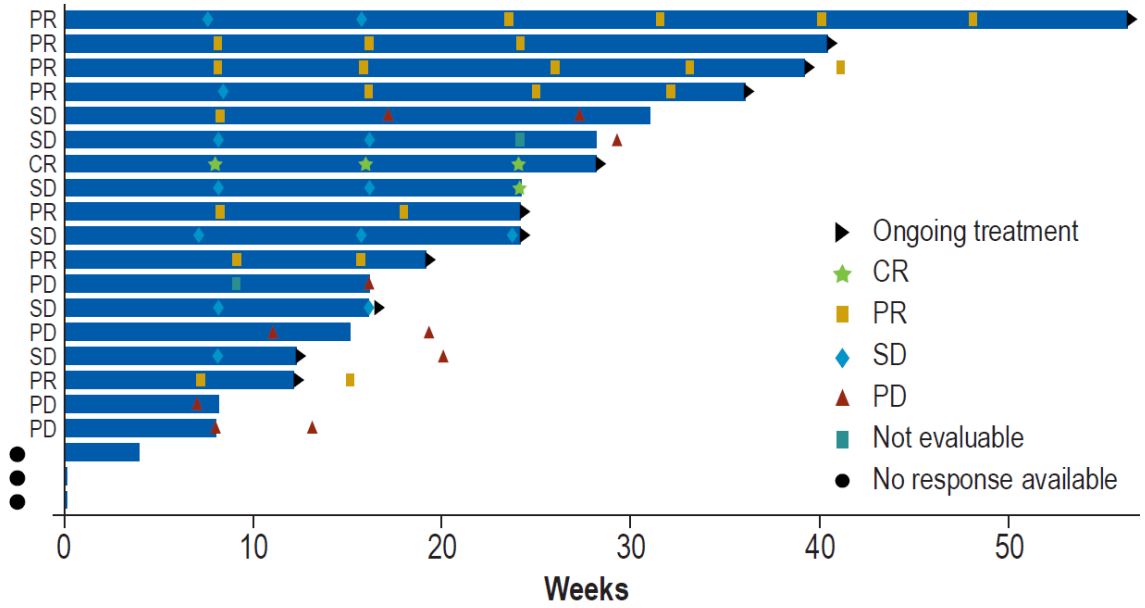
Phase 2 Data in Locally Advanced or Metastatic Merkel Cell Carcinoma

Incyte's initial POD1UM-201 results demonstrate promising activity in chemotherapy-naive MCC

Best Percentage Change From Baseline in Target Lesion Size (Sum of Diameters) for Individual Patients by ICR* (Chemotherapy-Naive Patients)



Duration of Treatment and Best Objective Responses by ICR (Chemotherapy-Naive Patients; N = 21)



Presented at ESMO Virtual Congress 2020; Giovanni Grignani, et al. April 7, 2020 data cutoff.

* Of 21 chemotherapy-naive patients assessable for efficacy evaluable analysis, four had missing baseline or postbaseline target lesion assessments. ‡ Patients had PD by nontarget lesions and new lesions by ICR assessment. ¶ Patients with >30% decrease in sum of target lesion diameters did not have a confirmed objective response or are pending confirmation of response.

Phase 2 Data in Squamous Carcinoma of the Anal Canal

Incyte POD1UM-202: promising activity in patients w/ platinum refractory SCAC, including in HIV+ pts.

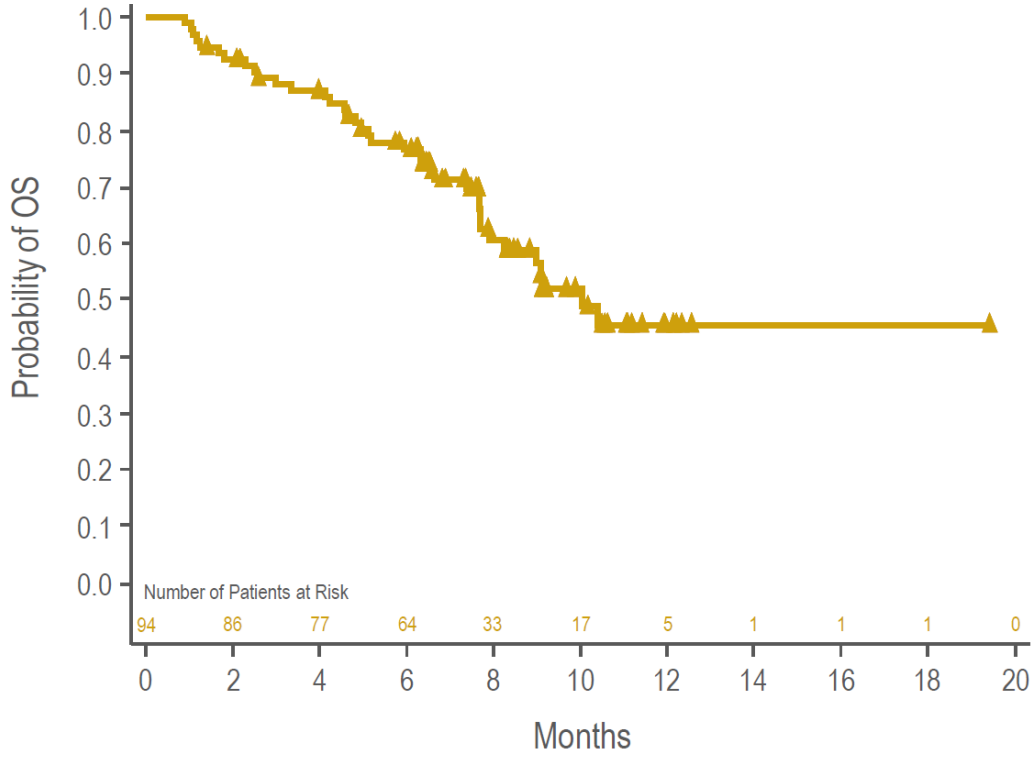
Objectives Responses by ICR

Variable	N = 94
ORR (95% CI), %	**13.8 (7.6 – 22.5)**
Best overall response, n (%)	
Complete Response (CR)	1 (1.1)
Partial Response (PR)	12 (12.8)
Stable Disease (SD)	33 (35.1)
Progressive Disease (PD)	43 (45.7)
Missing	5 (5.3)
Disease Control Rate (DCR), n (%)	**46 (48.9)**
Median Duration of Response	**9.5 Months**

- Responses observed in patients regardless of age, sex, HIV status, liver metastases, and PD L1 expression

KEYNOTE-158 benchmark data (n=112):
- 11% ORR
- mPFS=2.0 mos.
- mOS=12.0 mos.

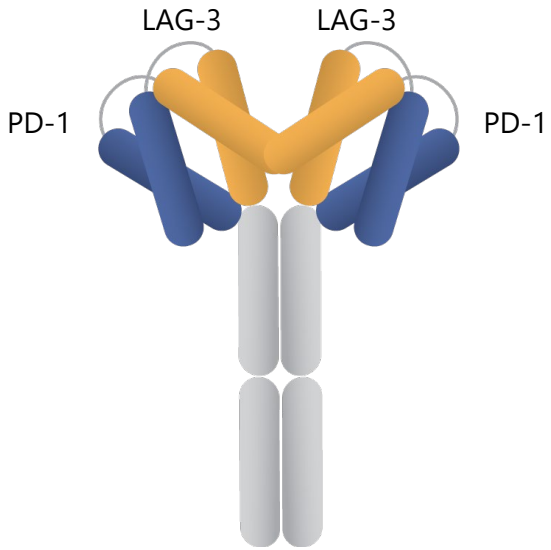
Kaplan-Meier Estimate of OS



Number of patients evaluable	94
Events, n (%)	37 (39.4)
Censored, n (%)	57 (60.6)
Median OS (95% CI), months	10.1 (7.9, NE)

Presented at ESMO Virtual Congress 2020; Abstract #2006; Sheela Rao, et al. June 8, 2020 data cutoff.

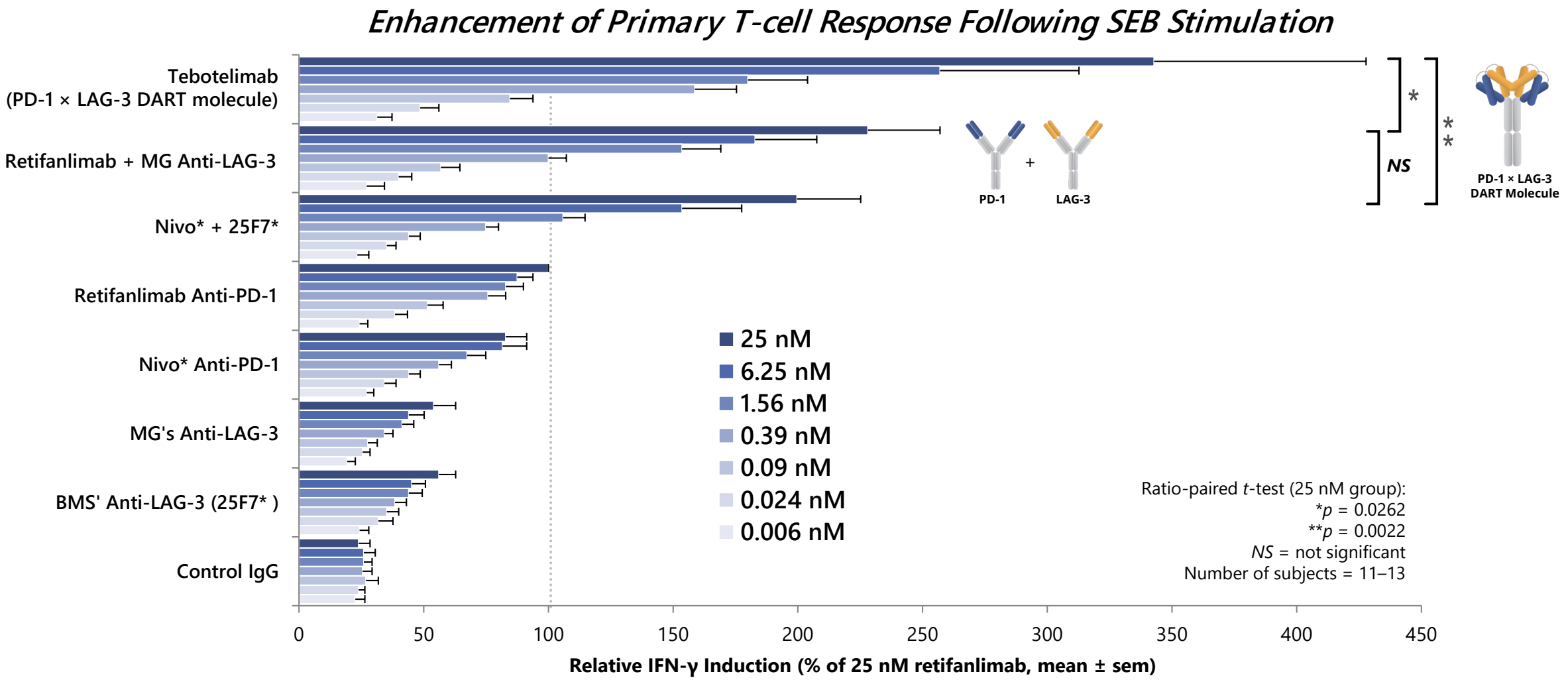
Tebotelimab: First PD-1 × LAG-3 Bispecific Molecule in Clinical Trials



Function/ MoA	• Simultaneous and/or independent blockade of two checkpoint molecules • Reactivation of exhausted T cells
Clinical Studies	• Ph. 1 dose expansion in: – Nine tumor types (solid and liquid); checkpoint-naïve and checkpoint-experienced – Multiple combination studies ongoing or planned (including with margetuximab and with enoblituzumab)
Milestones	• 2020: – Combination data with margetuximab presented at SITC – DLBCL cohort data presented at ASH • Anticipated 2021: Clinical update, including future development plans

Tebotelimab (formerly MGD013) is investigational and has not yet been approved for marketing by any regulatory authority

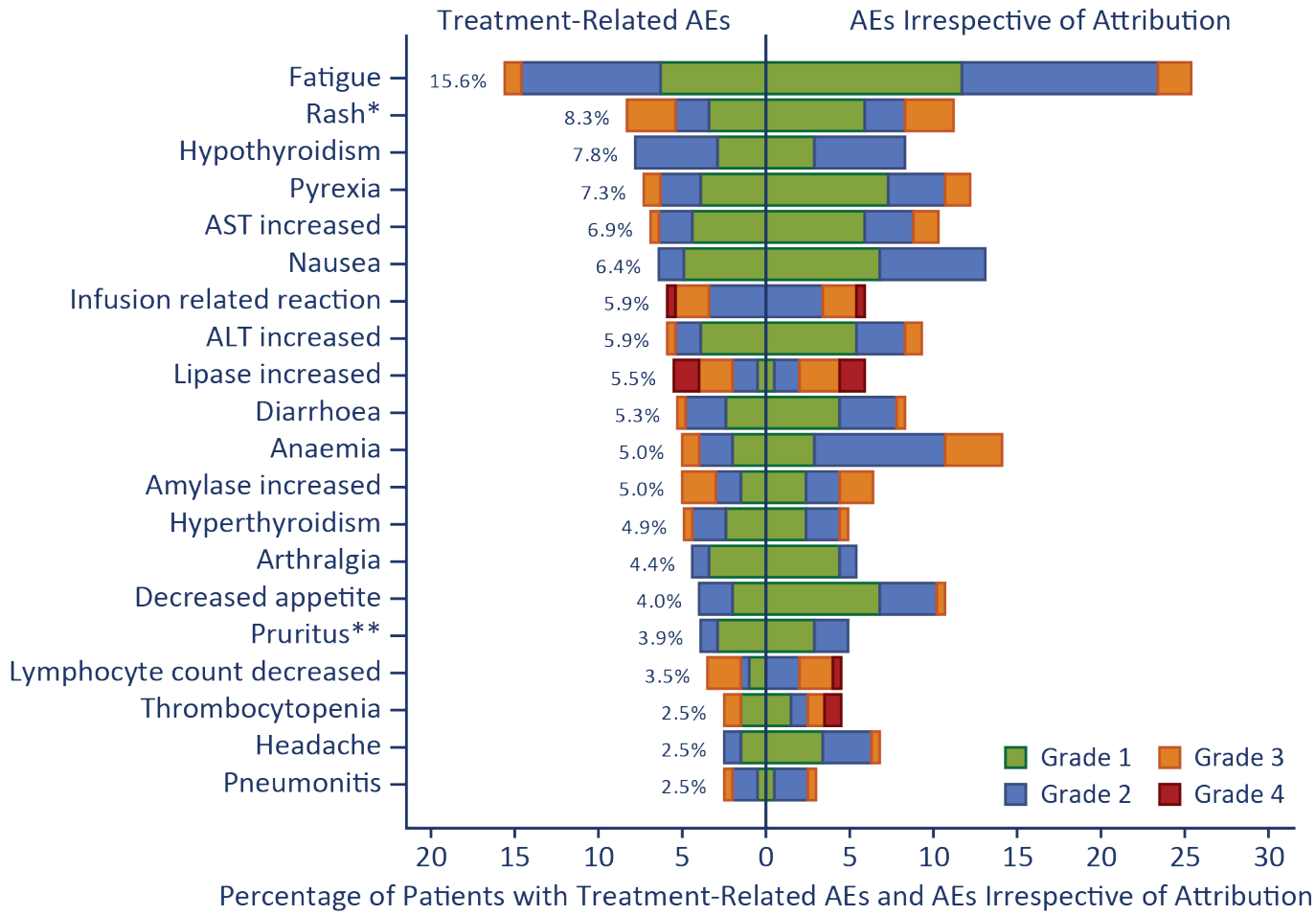
DART Molecule Demonstrates Synergistic T-cell Activation in Vitro



** Replicas of nivolumab and 25F7 mAb based on published sequences.*
Note: IFNγ release by 25 nM retifanlimab = 3276±744 pg/ml.

Safety Profile Consistent with PD-1 Antibody Monotherapy

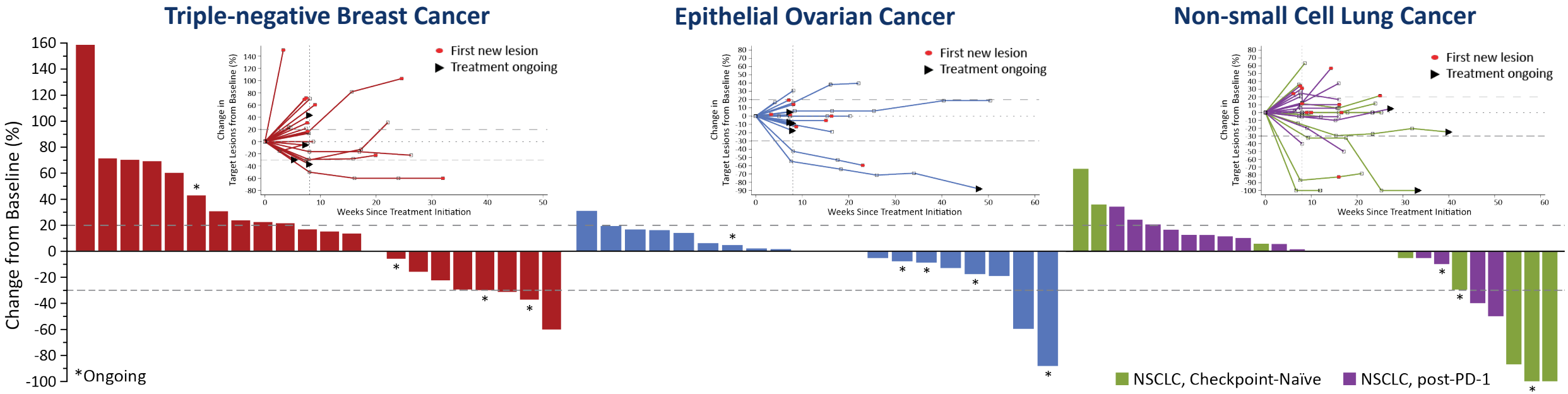
Overall AE Totals	No. (%) of Patients	
	All Grades (N=205)	≥ Grade 3 (N=205)
AE (irrespective of causality)	178 (86.8)	86 (42.0)
Treatment-related AE	118 (57.6)	37 (18.0)[a]
SAE (irrespective of causality)	63 (30.7)	47 (22.9)
Treatment-related SAE	18 (8.8)	11 (5.4)
AE leading to discontinuation	18 (8.8)	16 (7.8)
AESIs in ≥ 2 Patients		
Rash	17 (8.3)	6 (2.9)
Hypothyroidism	16 (7.8)	0 (0.0)
IRR or CRS	13 (6.3)	5 (2.4)
Diarrhea	11 (5.4)	1 (0.5)
Lipase increased	11 (5.4)	7 (3.4)
Hyperthyroidism	10 (4.9)	1 (0.5)
Arthralgia	9 (4.4)	0 (0.0)
Pneumonitis	4 (2.0)	1 (0.5)
Myalgia	4 (2.0)	0 (0.0)
Peripheral neuropathy	3 (1.5)	1 (0.5)
Hepatitis	3 (1.5)	2 (1.0)
Adrenal insufficiency	2 (1.0)	0 (0.0)



* Includes MedDRA Preferred Terms of Rash and Maculopapular Rash. ** Includes MedDRA Preferred Terms of Pruritus and Generalized Pruritus.
Grade 4 drug-related AEs include: lipase increased (n=3), neutrophil count decreased, and IRR (n=1, each). No Grade 5 TRAEs have been reported.
AESI = adverse events of special interest. Data cutoff: April, 25, 2020.

Luke, et al., ASCO 2020

Monotherapy: Anti-tumor Activity Observed in Multiple Tumor Types



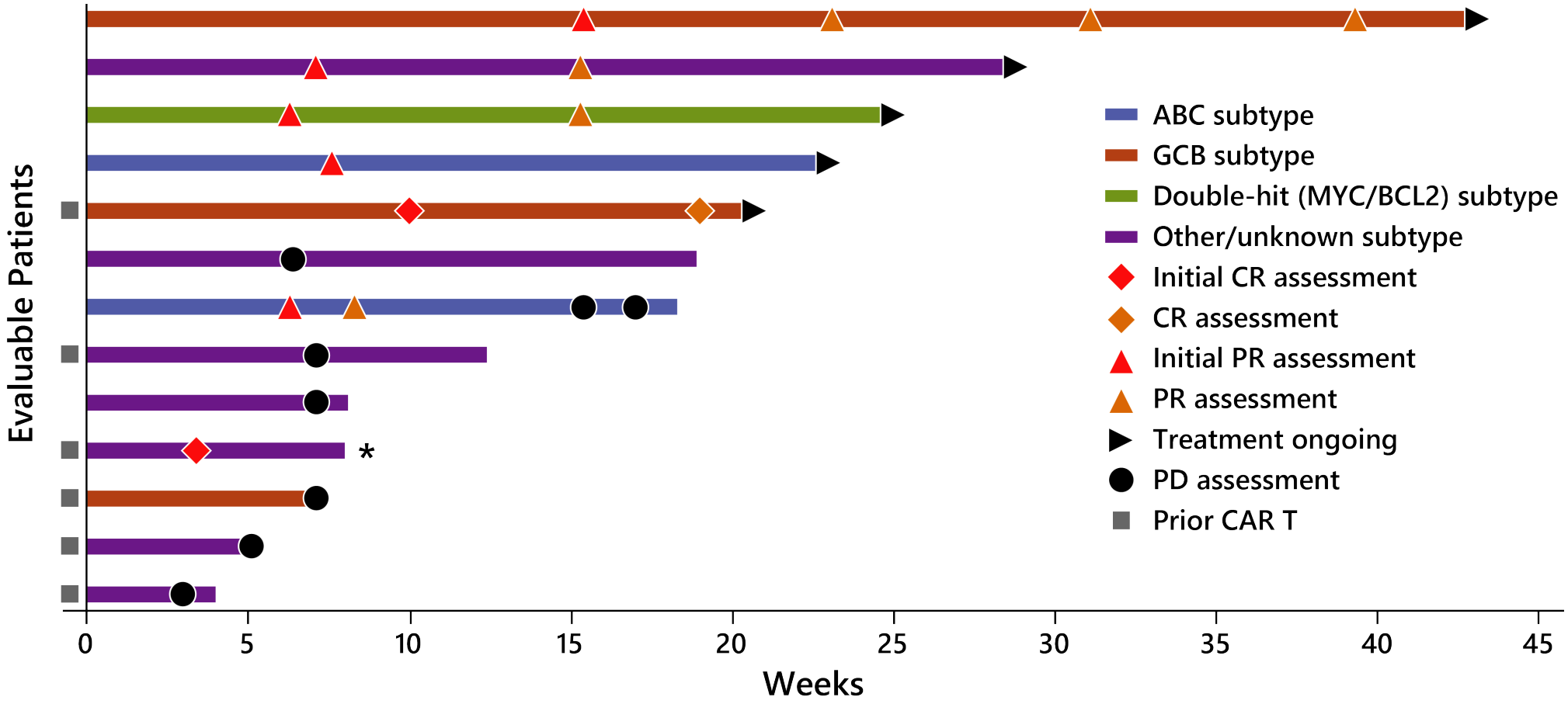
	TNBC	EOC	NSCLC, CPI-Naïve	NSCLC, post-PD-1
Evaluable Patients	23	23	14	15
ORR (Confirmed)	4.3% (1/23)	8.7% (2/23)	14.3% (2/14)	0% (0/15)
ORR (Confirmed + Unconfirmed)	17.4% (4/23)	8.7% (2/23)	21.4% (3/14)	13.3% (2/15)
SD	34.8% (8/23)	43.5% (10/23)	50.0% (7/14)	53.3% (8/15)
DCR	39.1% (9/23)	52.2% (12/23)	64.3% (9/14)	53.3% (8/15)

Data cutoff: April, 25, 2020

Luke, et al., ASCO 2020

Encouraging Evidence of Antitumor Activity in DLBCL

- *Preliminary ORR of 53.8%: 71.4% (5/7) for CAR T naïve, 33.3% (2/6) for CAR T experienced patients*
- *Preliminary duration of response of up to168 days, with 6 of 7 ongoing responses at cut-off date*

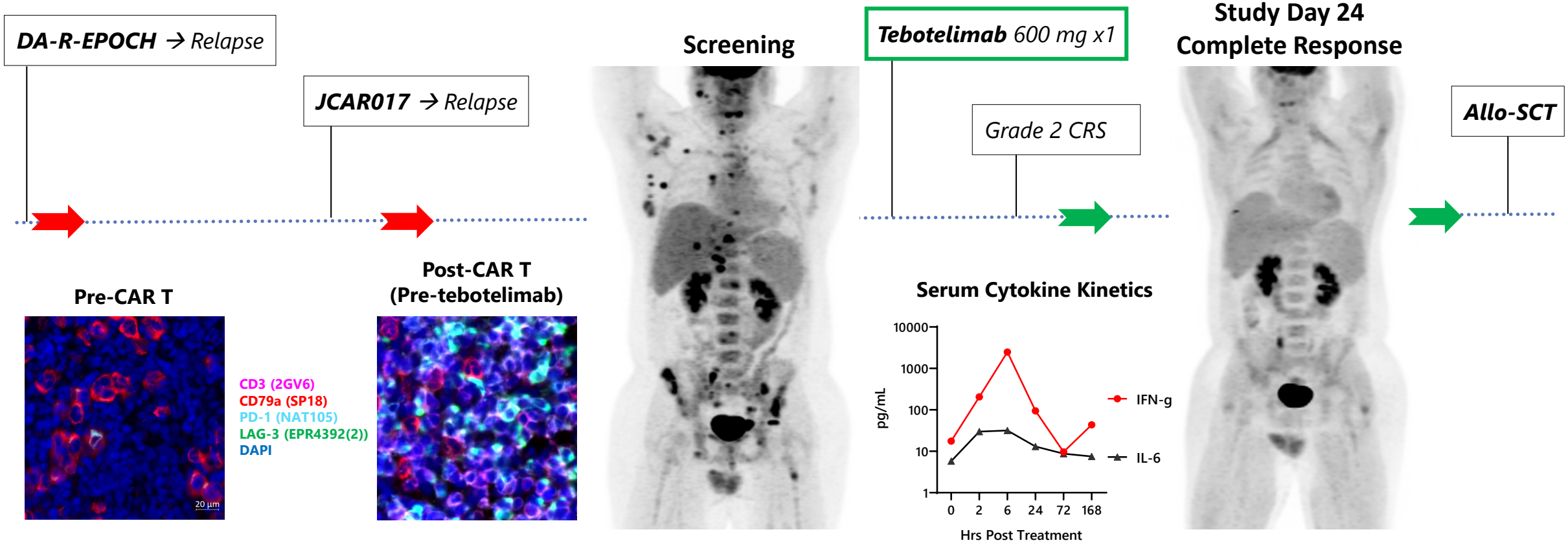


***** Allogeneic stem cell transplant (allo-SCT) performed after CR and end of treatment. Patient remains in remission ~16 months post-allo-SCT.

Data cut-off: Oct. 23, 2020; Wang, et al., ASH 2020

Complete Response after Single Tebotelimab Administration

28-year-old male with DLBCL progressive disease after CAR T cell therapy



- Dynamic changes observed in the TME after CAR T therapy, with increased expression of LAG-3, PD-1, PD-L1, and MHC-II evident
- Malignant cells CD19-negative, consistent with antigen loss relapse

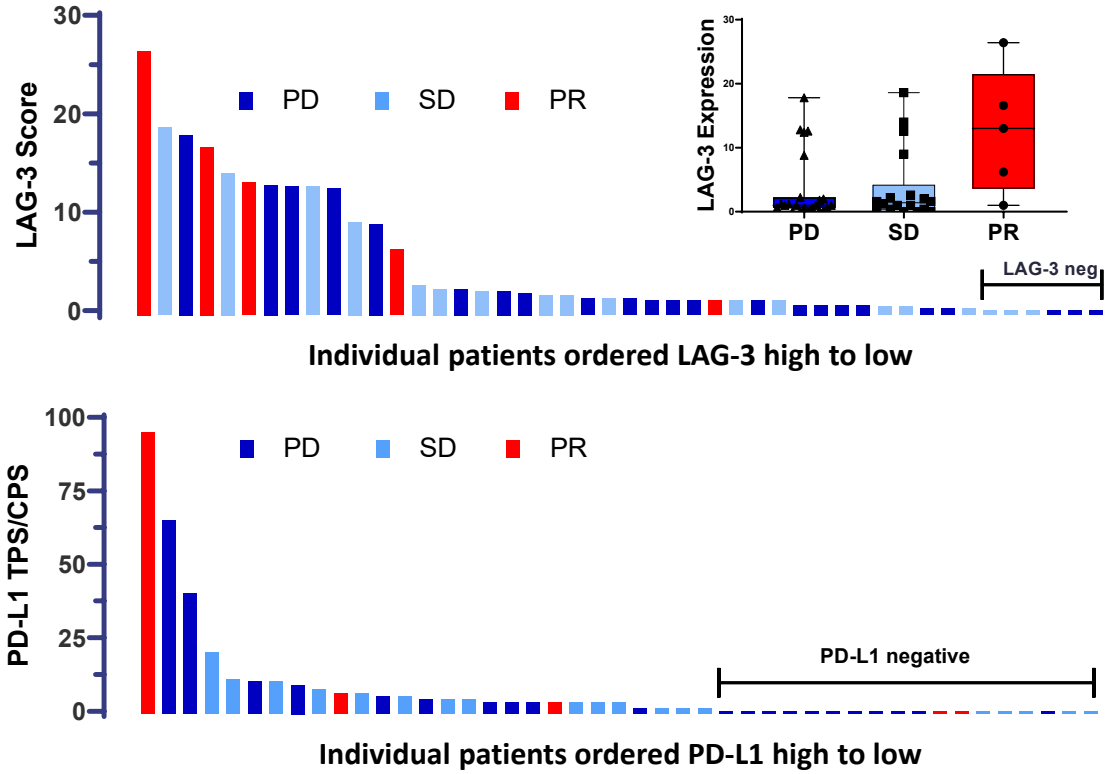
- After Grade 2 CRS, early scan demonstrated Complete Response at Day 24
- JCAR017's EGFR epitope not detected pre- or post-tebotelimab
- The patient remains in remission approximately 18 months post-tebotelimab and 16 months post-allo-SCT

Data cut-off: Oct. 23, 2020; Wang, et al., ASH 2020

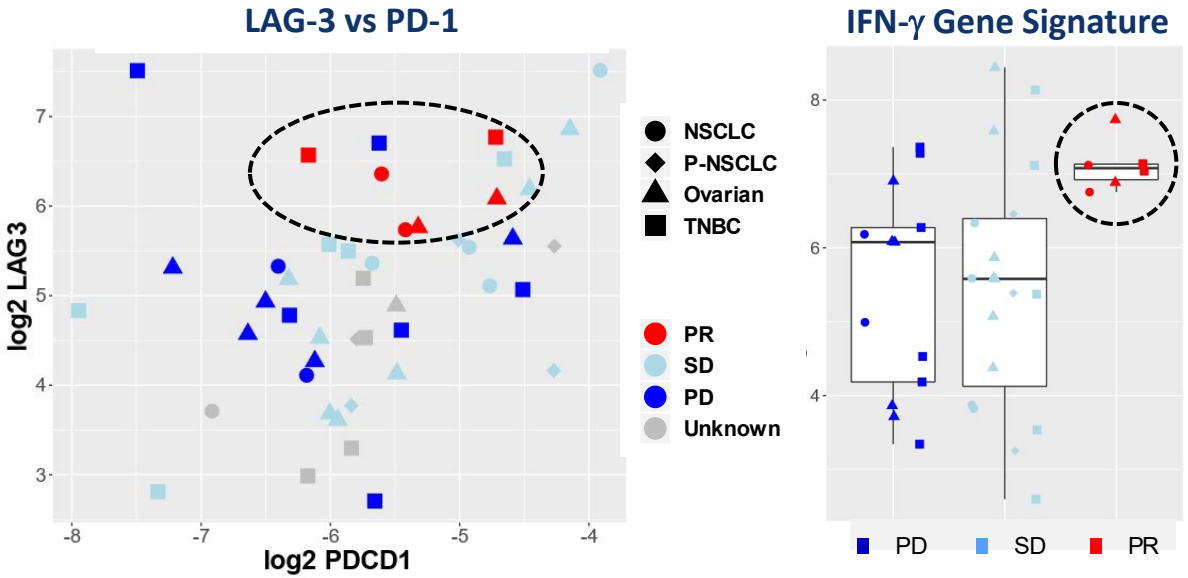
Monotherapy Objective Responses Associated with LAG-3 Expression

Inflammatory interferon-γ signature elevated in patients with clinical response

Retrospective IHC Analyses



Transcript Profiling (Baseline Tumor Biopsy)



Objective responses associated with high baseline LAG-3/PD-1 expression and IFN-g gene signature (CXCL9, CXCL10, CXC11, STAT1)

Archival biopsies from TNBC, EOC, and NSCLC expansion cohorts analyzed for LAG-3 (N=46) or PD-L1 (N=45) by IHC. LAG-3 score was determined as per Chen et al., e15086 ASCO 2020. PD-L1 expression was determined per Agilent PD-L1 (22C3) pharmDx kit

The NanoString PanCancer IO 360™ assay was used to interrogate gene expression, including the abundance of 14 immune cell types and 32 immuno-oncology signatures from archival biopsies from EOC (N=14) NSCLC (N=25) and TNBC (N=13) expansion cohorts.

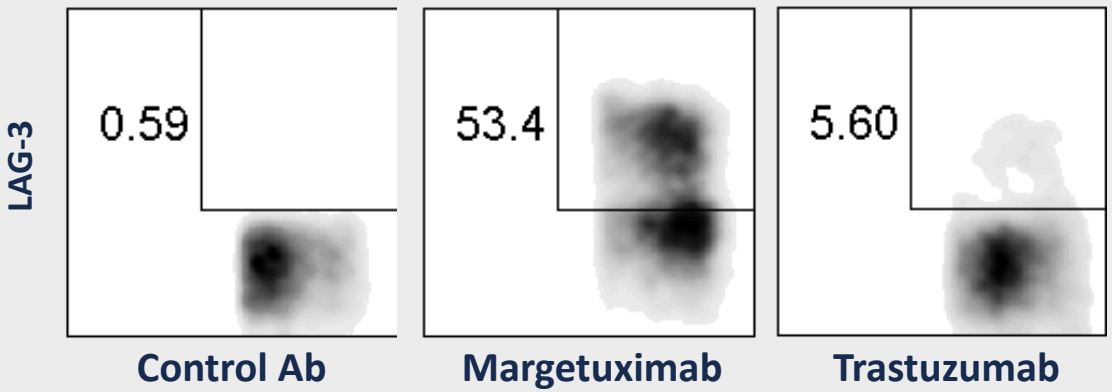
Luke, et al., ASCO 2020

Can Tumors Be Made More Responsive to PD-1 × LAG-3 Intervention?

Enhancing effector-cell activation via Fc-engineered mAb

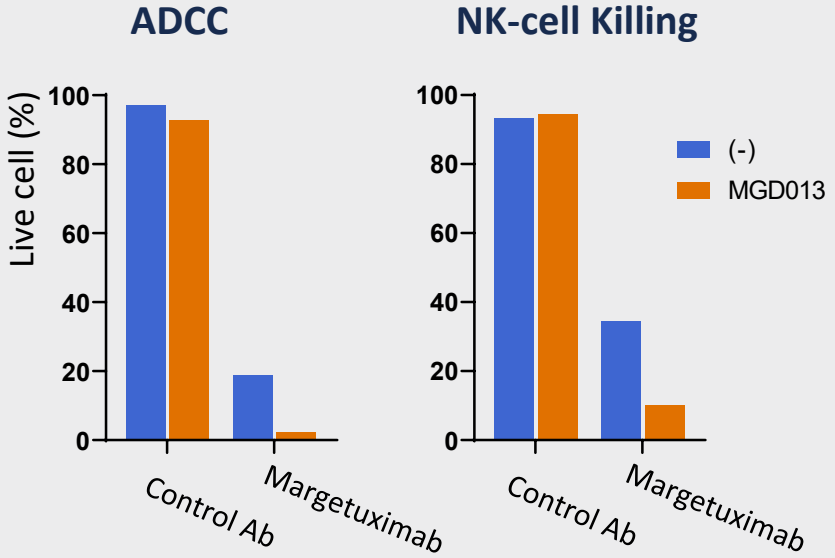
Fc-engineered margetuximab up-regulates LAG-3 and PD-L1 on NK, monocytes and T cells

Margetuximab Enhances LAG-3 Expression by NK Cells



Human PBMC + N87 (HER2+) gastric cancer cells; E:T=10:1; (IL-2, 20 U/mL) Control Ab 50ng/mL, margetuximab/trastuzumab, 5ng/mL; FACS analyses (72h) on $CD3^{-}CD56^{+}$-gated NK cells.

Tebotelimab enhances lytic activity of immune cells primed by Fc-engineered mAb (margetuximab)

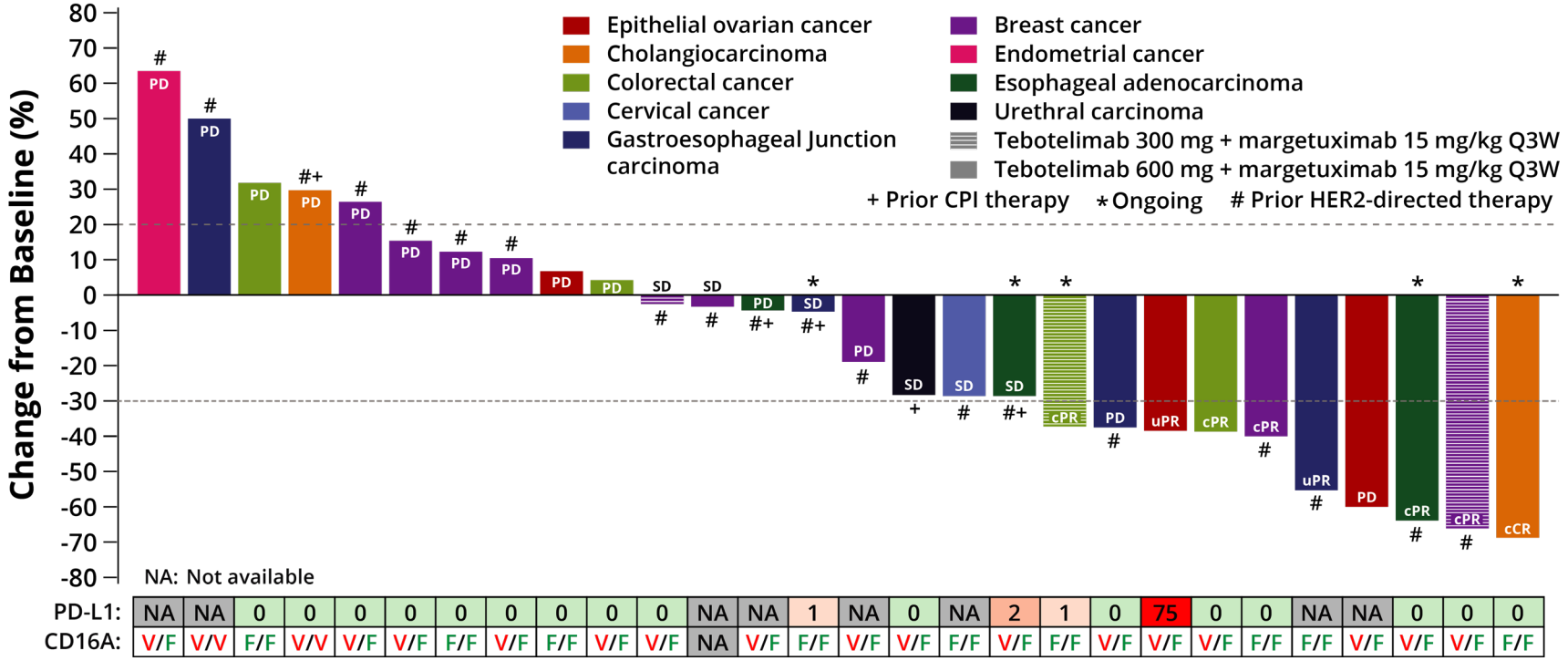


ADCC (target: margetuximab opsonized N87, E:T=10) and NK-cell killing (target: K562, E:T=10) mediated by immune cells activated for 6 days by margetuximab +/- tebotelimab in the presence of N87 tumor cells.

Luke, et al., ASCO 2020

Margetuximab plus Tebotelimab in Pts. w/ Relapsed/Refractory HER2+ Solid Tumors

Preliminary ORR = 28.6% based on 8/28 evaluable pts (includes unconfirmed objective responses)



PD-L1 Combined Positive Score (CPS) calculated as follows: Number of PD-L1+ cells (tumor cells, lymphocytes and macrophages)/total number of viable tumor cells x 100.

	Breast	GEJ/Esoph.	Colorectal	Other	Total
Evaluable Patients	9	7	4	8	28
ORR (Confirmed)	22.2% (2/9)	14.3% (1/7)	50% (2/4)	12.5% (1/8)	21.4% (6/28)
ORR (Confirmed + Unconfirmed)	22.2% (2/9)	28.6% (2/7)	50% (2/4)	25% (2/8)	28.6% (8/28)
DCR	44.4% (4/9)	57.1% (4/7)	50% (2/4)	50% (4/8)	50% (14/28)

Conclusions

- Duration of response (n=6 confirmed responders): 4.21–8.97 months (3 pts. ongoing)
- Majority of responding patients with baseline PD-L1 expression ≤1
- All responding patients carry less favorable CD16A-158F allotype (i.e., V/F or F/F)
- Baseline LAG-3 and PD-1 mRNA expression associated w/clinical response
- Analyses ongoing to define patient enrichment biomarker

PANACEA Study Benchmark Data

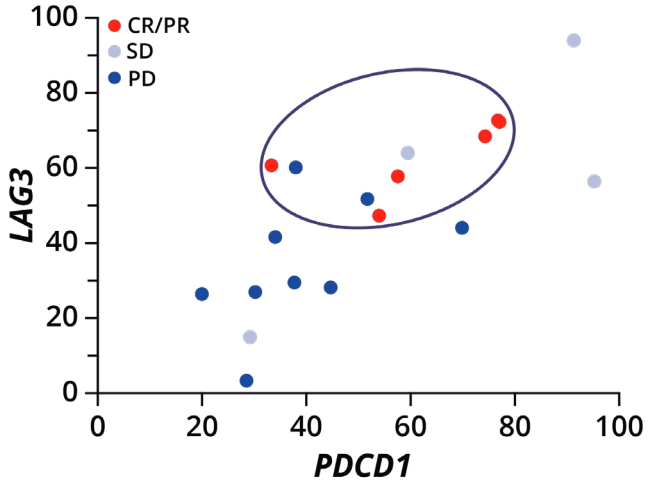
11.5% ORR (n=52) in single arm, multicenter Ph. 1b/2 trial of pembro. + trastuzumab in HER2+ mBC

- 15% ORR in PD-L1 positive (n=6/40)
- 0% ORR in PD-L1 negative (n=0/12)

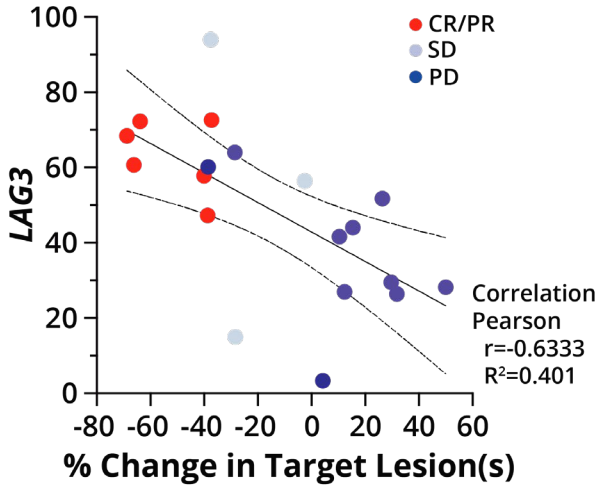
Patel, et al., SITC 2020

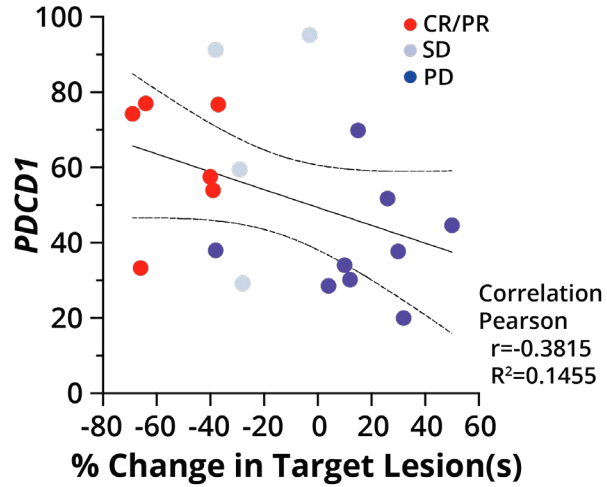
Margetuximab plus Tebotelimab: Association of Biomarkers w/ Responsiveness

Dual *LAG3/PDCD1* Expression at Baseline Associates with Objective Response



Baseline LAG-3 and PD-1 Levels Inversely Correlate with Best % Change in Target Lesions



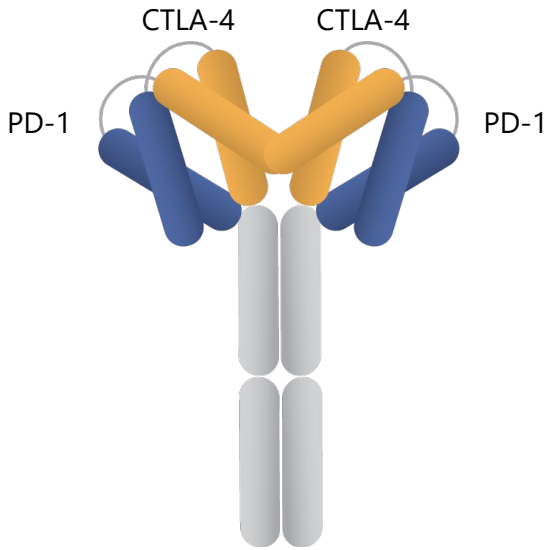


- Patients demonstrating objective responses exhibit higher expression of both LAG-3 and PD-1 (*PDCD1*) mRNA in baseline biopsy samples
- Expression of *LAG3* and *PDCD1* mRNA in baseline tumor biopsy inversely correlates with best change in tumor lesion
  - Highest correlation observed with LAG-3 expression
- ROC analyses of LAG-3 expression and objective responses (confirmed and unconfirmed) indicate a 75% response rate in LAG-3 biomarker high patients vs. 9% in biomarker low patients
  - Further analyses ongoing and will be extended to additional patients to further define potential enrichment biomarker component(s)

The NanoString PanCancer IO 360™ assay was used to interrogate gene expression, including the abundance of 14 immune cell types and 32 immuno-oncology signatures, from archival biopsies of 19 HER2+ advanced solid tumor cohorts treated with margetuximab and tebotelimab. **Left:** Normalized expression scores (standardized 0-100) for *LAG3* were plotted against *PDCD1*. **Right**: Correlation of standardized *LAG3* and *PDCD1* expression levels to best percent change in tumor lesions from baseline, respectively. Receiver Operating Characteristic (ROC) analyses were performed on the 19 patient data set using Youden Index and Distance methods.

Patel, et al., SITC 2020

MGD019 (PD-1 × CTLA-4): Bispecific w/Two Validated Checkpoint Targets

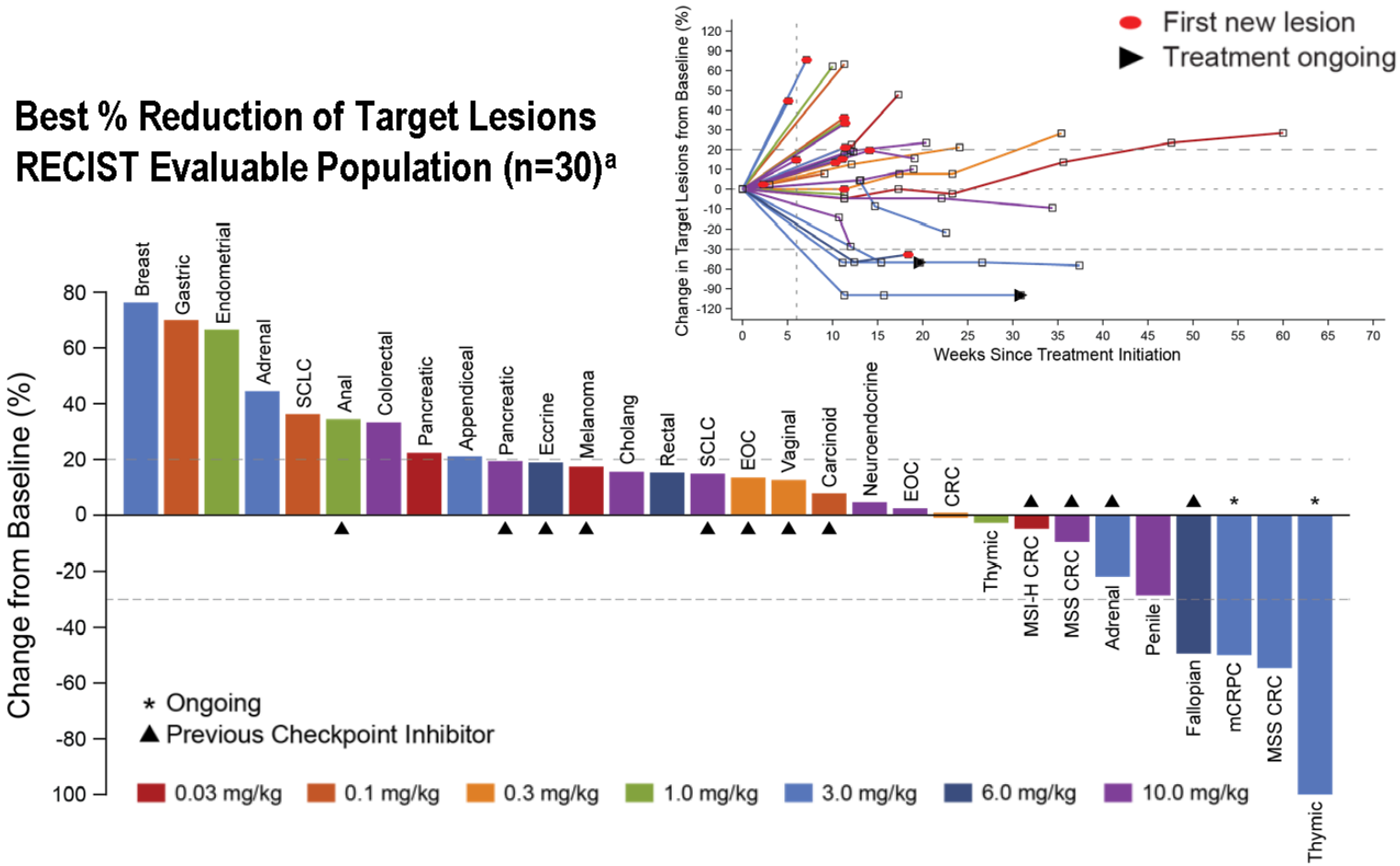


Function/ MoA	• Simultaneous and/or independent blockade of two validated checkpoint inhibitor molecules
Clinical Studies	• Ph. 1 dose expansion planned for: – Microsatellite stable colorectal cancer (MSS CRC) – Non-small cell lung cancer (NSCLC)
Milestones	• 2020: Ph. 1 dose escalation data presented at ESMO – Generally well tolerated at doses <10 mg/kg – Full peripheral PD-1 blockade evident at doses ≥1 mg/kg – Dose-dependent ICOS upregulation in treated patients – Responding patients with low PD-L1 expression at baseline • Anticipated 2021: Provide clinical update (mid-2021)

MGD019 is investigational and has not yet been approved for marketing by any regulatory authority

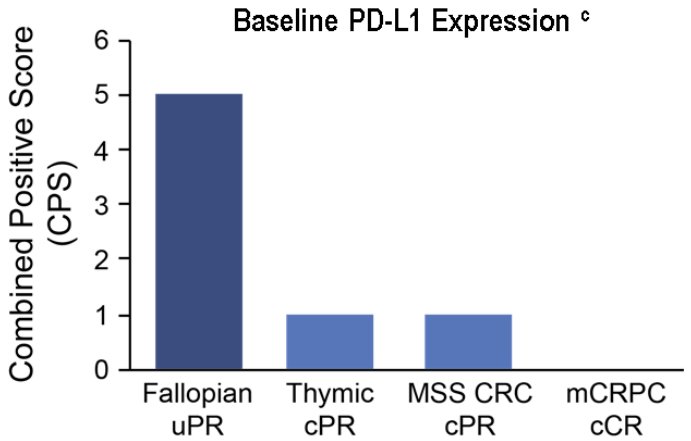
Preliminary Activity in Dose Escalation

Best % Reduction of Target Lesions
RECIST Evaluable Population (n=30)[a]



Objective Responses (n=4):

- Microsatellite stable CRC – cPR
- Metastatic type AB thymoma – cPR
- Serous fallopian tube carcinoma[b] – uPR
- mCRPC – cCR
- 10 patients with SD as best response



Preliminary Results[d]:

- *All Dose Levels*: ORR 13.3%; DCR 43.3%
- *Doses ≥ 3 mg/kg*: ORR 22.2%; DCR 50.0%

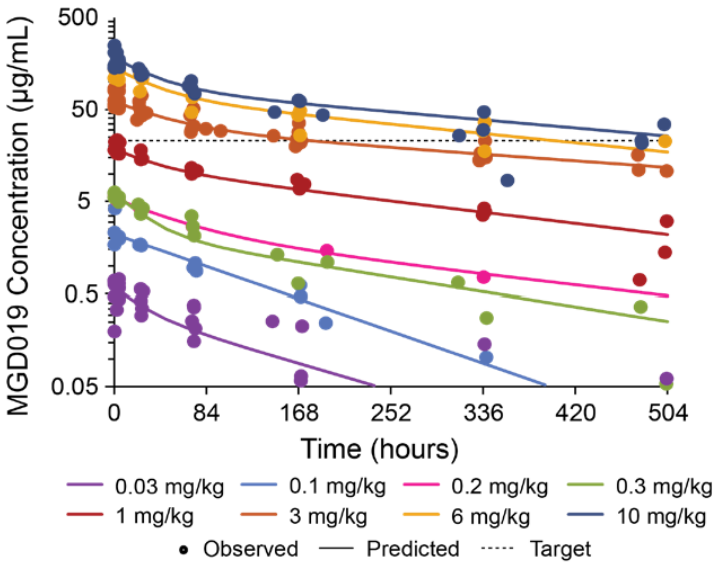
Sharma, et al., ESMO 2020

[a] Based on patients with baseline and post-treatment tumor measurements. [b] Previously refractory to anti-PD-L1 therapy in combination with anti-CD47 mAb. [c] PD-L1 expression determined per Agilent PD-L1 (22C3) pharmDx kit; CPS = number of PD-L1 + cells (tumor and immune)/total number of viable tumor cells x 100. [d] Includes the unconfirmed PR. Data cutoff: July 21, 2020

Pharmacokinetics and Receptor Occupancy

Linear PK (1.0 –10.0 mg/kg dose range) and sustained receptor occupancy (≥ 1.0 mg/kg Q3W)

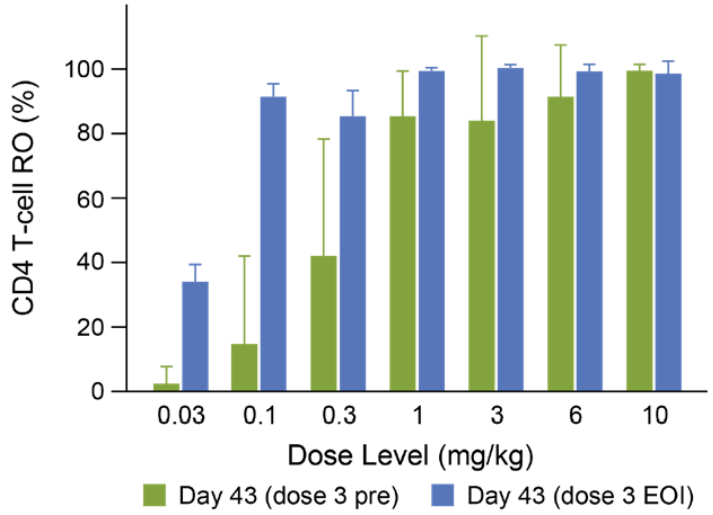
First Dose PK



Estimated $t_{1/2}$ = 298 hours (~12 days)

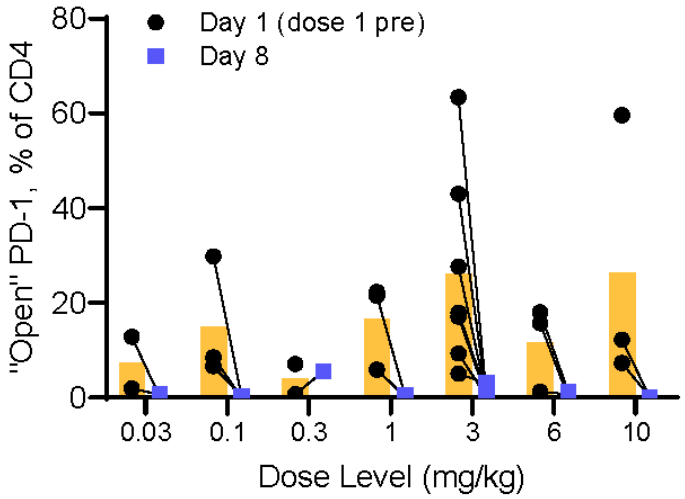
First-dose PK profiles of 0.03 to 10 mg/kg. Symbols and solid lines represent observed data and model fitted median curves, respectively. "Target" refers to published serum trough concentration of pembrolizumab at 2 mg/kg Q3W (23.6 µg/mL) [CDER, KEYTRUDA (pembrolizumab) Clinical Pharmacology and Biopharmaceutics Review(s). 2014]

Receptor (PD-1) Occupancy



MGD019 peripheral PD-1 receptor occupancy for CD4+ T cells collected 21 days after second infusion (green) compared to measured immediately after third infusion (blue).

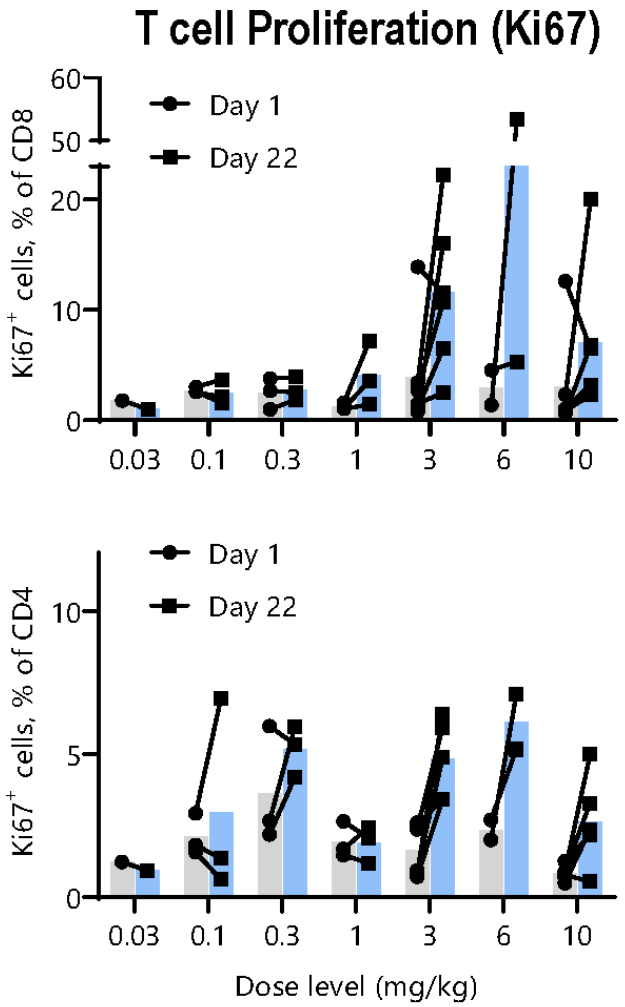
PD-1 Blockade



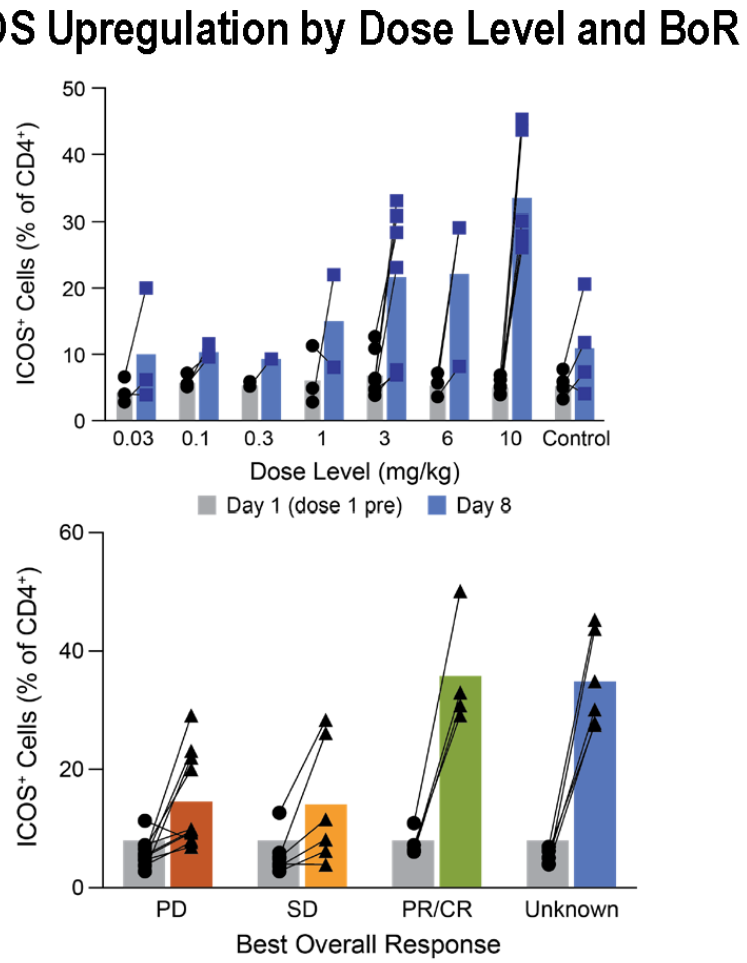
MGD019 blocks binding of competing anti-PD-1 mAb (J105) to peripheral CD4+ T cells of patients. Connected symbols represent individual patients before and after (day 8) MGD019 administration.

Sharma, et al., ESMO 2020

Dose-dependent ICOS Upregulation and T-Cell Proliferation in Treated Patients



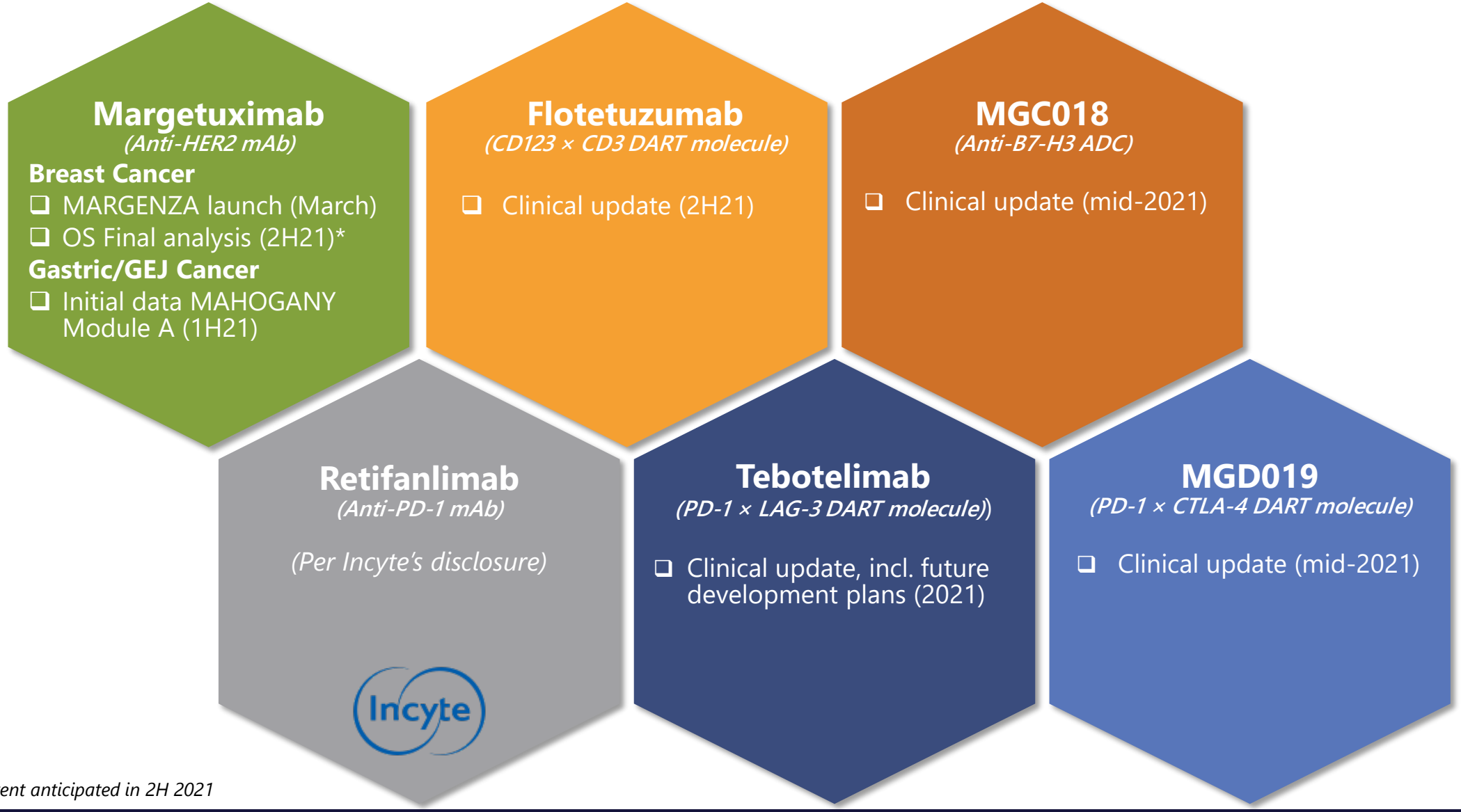
MGD019 increases fraction of Ki67+ T cells in patients' PBMCs.



Dose-dependent ICOS upregulation on peripheral CD4 T-cells attributable to CTLA-4 arm based on cross-comparison with other MacroGenics' PD-1 based molecules.

Sharma, et al., ESMO 2020

Key Anticipated 2021 Program Milestones



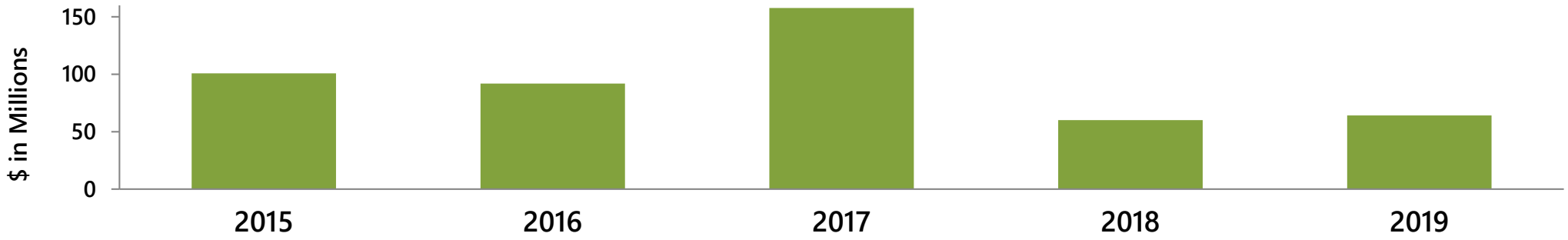
*Final OS event anticipated in 2H 2021

Financial Overview

- $281M Cash, cash equivalents and marketable securities as of September 30, 2020[(a)]
  - Cash runway into 2023 via anticipated and potential collaboration payments
- Historical financial details:

$ in Millions	2015	2016	2017	2018	2019	9 Mos. Ended Sep. 30, 2020	9 Mos. Ended Sep. 30, 2019
Total Revenues	$101	$92	$158	$60	$64	$52	$39
R&D Expense	98	122	147	191	195	151	143
Total Operating Expenses	121	152	180	231	241	181	178
Cash & Investments	339	285	305	233	216	281	254

- Revenues from collaborative and government agreements (>$550M since 2013 IPO):



(a) Excludes subsequent receipt of $15 million and $25 million payments from Incyte under a collaboration and license agreement.

Thank You!

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