MacroGenics®

Breakthrough Biologics,
Life-changing Medicines

Corporate Update

May 2019

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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, 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: 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 regulatory approvals, other matters that could affect the availability or commercial potential of the Company's product candidates and other risks described in the Company's filings with the Securities and Exchange Commission. In addition, the forward-looking statements included in this presentation 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.

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Committed to Developing Life-changing Medicines

Innovative Combinatorial Approaches

Nine immuno-oncology clinical candidates

Fc optimization platform to **enhance antibodies**' immune activation

Leading bispecific **DART® platform** to exploit **multiple mechanisms**

Multi-program "franchises" around high-value targets (B7-H3, PD-1)

Resourced for Success

$320M Cash @ 03/31/19(a)

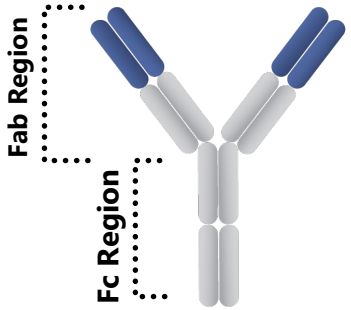
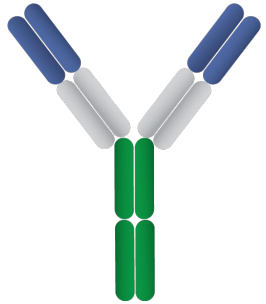
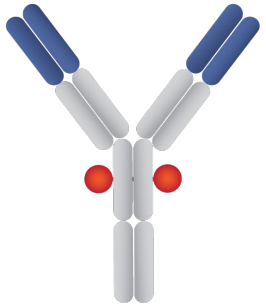
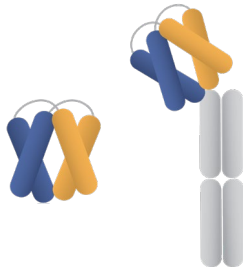
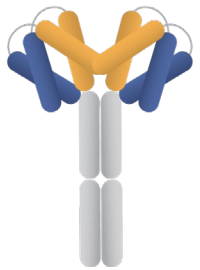
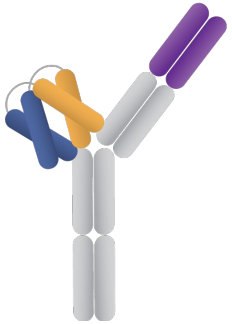
Multiple alliances with leading biopharma companies

Commercial scale GMP manufacturing facility

~366 Employees (Rockville, MD & SF Bay Area)

(a) Includes cash equivalents and marketable securities.

Ability to Engineer Broad Array of Antibody Formats

Antibody	Fc-Optimized Antibody	Antibody Drug Conjugate	DART/TRIDENT™ Molecules		
Bivalent Monospecific	Bivalent Monospecific	Bivalent Monospecific	Bivalent Bispecific	Tetravalent Bispecific	Trivalent Trispecific
					

Key Features:

• Enhance Fc-mediated activity, incl. ADCC • Promote innate and adaptive immunity • Combine with checkpoint inhibitors to augment activity	• Leverage 3rd party linker-payload tech (Synthon, Immunogen) • Deliver potent anti-tumor payload	• "Plug-and-play" multi-specific platforms • Tailored half-life and avidity/valency to optimize product profile • Broad range of modalities pursued: – Co-blockade of multiple checkpoint molecules – Redirect T-cell killing – Tumor-directed co-stimulation

Our Growing Immuno-Oncology Pipeline

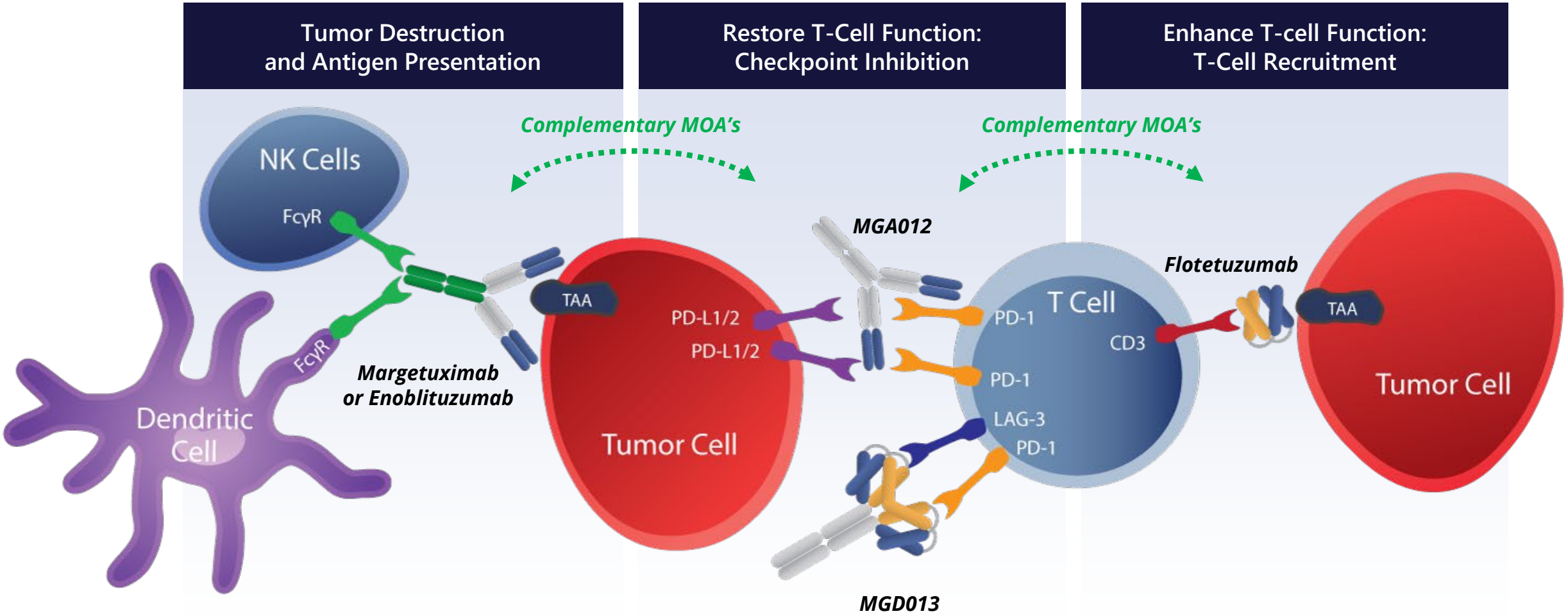
Retains major market commercial rights for 8 of 9 development candidates

	Program (Target)	Potential Indication	Pre-IND	Phase 1	Phase 2	Phase 3	Collaborator	Our Commercial Rights
	Margetuximab (HER2)	Breast (HER2+) "SOPHIA"					Zai Lab, GC Pharma	Worldwide, excluding South Korea and Greater China
		Gastric (+anti-PD-1)						
B7-H3	**Enoblituzumab** (B7-H3)	Solid Tumors (+anti-PD-1)					—	Worldwide
B7-H3	**MGD009** (B7-H3 × CD3)	Solid Tumors					—	Worldwide
B7-H3		Solid Tumors (+MGA012)						
B7-H3	**MGC018** (B7-H3)[a]	Solid Tumors					—	Worldwide
PD-1	**MGA012** (PD-1)	Solid Tumors					Incyte[b]	—
PD-1	**MGD013** (PD-1 × LAG-3)	Solid Tumors/Heme Mal.					Zai Lab	Worldwide, excluding Greater China
PD-1	**MGD019** (PD-1 × CTLA-4)	Solid Tumors					—	Worldwide
	Flotetuzumab (CD123 × CD3)	AML					Servier	North America, Japan, Korea, India
		AML (+MGA012)						
	MGD007 (gpA33 × CD3)	Colorectal (+MGA012)					—	Worldwide

"MGD" = DART | "MGA" = Antibody | "MGC" = ADC

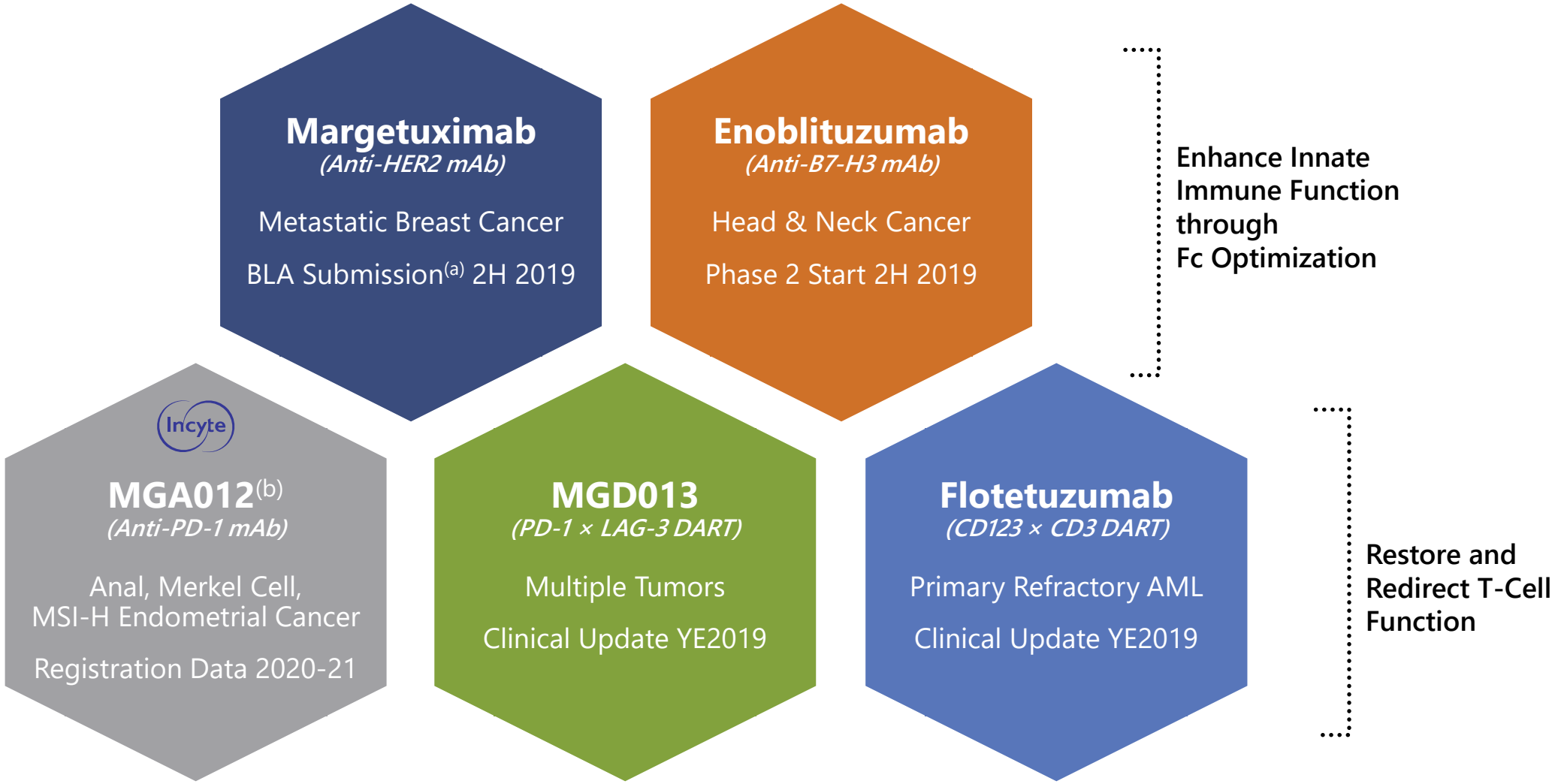
(a) MGC018 is an antibody-drug conjugate (ADC) based on a duocarmycin payload with cleavable peptide linker that was licensed from Synthon Biopharmaceuticals.
(b) MacroGenics retains rights to develop its pipeline assets in combination w/MGA012 and to manufacture a portion of global clinical and commercial supply needs of MGA012. Incyte designates this molecule as "INCMGA0012".

Building Competitive Advantage Around Combinatorial Mechanisms



TAA: tumor-associated antigen

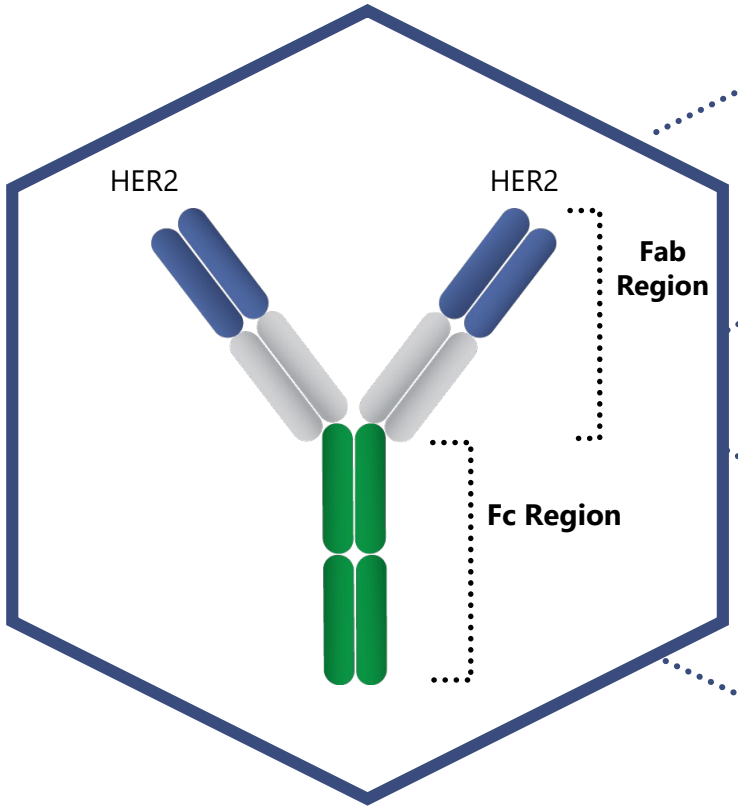
Near-Term Development Milestones Anticipated Across Core Programs



(a) Biologics License Application (BLA) to the U.S. Food and Drug Administration.
(b) MacroGenics retains rights to develop its pipeline assets in combination with MGA012 and to manufacture a portion of global clinical and commercial supply needs of MGA012.

Margetuximab: Potential Best-in-Class Anti-HER2 mAb

Engineered to enhance activation of immune system



Function/ MoA	• Inhibits HER2 signaling (similar to trastuzumab) • Fc region optimized to enhance immune response, including ADCC
Potential Indications	• HER2+ metastatic breast cancer (Ph. 3 SOPHIA) • HER2+ gastric cancer (Ph. 2 combo study with PD-1)
Status	• Positive Ph. 3 SOPHIA study PFS topline data • BLA Submission expected in 2H19 • Initiate gastric study (w/checkpoint inhibitor) 2H19
MacroGenics' Retained Rights	• Global rights (excl. Greater China, South Korea)

3rd/4th Line HER2+ Metastatic Breast Cancer Represents Attractive Entry Point

mBC Line of Therapy	1st Line	2nd Line	3rd/4th Line
Annual # of Patients[a]	~19,200	~16,000	~18,800
Standard of Care	Trastuzumab + pertuzumab + taxane (docetaxel)	T-DM1 (ado-trastuzumab emtansine)	No consensus (lapatinib + capecitabine; trastuzumab + different chemo)
Median OS	56.5 months[b]	30.9 months[c]	15.8 months[d]
Median PFS	18.5 months[b]	9.6 months[c]	3.3 months[e]
ORR	80.2%[b]	43.6%[c]	8.6%

(a) US/EU5 Data from 9/13/18 Roche Virtual Late Stage Pipeline Event
(b) Baselga, et al. – *CLEOPATRA Study Group*; Perjeta package insert
(c) Verma, et al. – *EMILIA Study Group*; Kadcyla package insert
(d) Krop, et al., *The Lancet* (June 2017) – TH3RESA Study Group
(e) Krop, et al., *The Lancet* (May 2014) – TH3RESA Study Group

Phase 3 Study Demonstrated Superiority to Trastuzumab in Primary Endpoint

SOPHIA clinical trial met its primary endpoint of improved progression-free survival

HER2+ mBC

1–3 Prior Treatment Lines in Metastatic Setting

(including prior treatment with multiple other anti-HER2 agents)[a]

Investigator's Choice of Chemotherapy

(capecitabine, eribulin, gemcitabine or vinorelbine)

R

Arm 1

margetuximab + chemotherapy

1:1 Randomization (N = 536)

Arm 2

trastuzumab + chemotherapy

Positive SOPHIA clinical results support BLA filing[b]

Margetuximab + Chemotherapy Arm	% of Study Population	Risk Reduction in PFS[c]	HR	p-value
HER2+	100%	24%	0.76	P=0.033
HER2+ and CD16A (FcγRIIIa) 158F Allele	~85%	32%	0.68	P=0.005

Global sites: ~200

Sequential primary endpoints:

PFS (N=257, HR=0.67, α=0.05, power=90%)

OS (N=385, HR=0.75, α=0.05, power=80%)

(a) All study patients had previously received trastuzumab and pertuzumab, and approximately 90% had previously received ado-trastuzumab emtansine.
(b) Follow-up for determination of the impact of therapy on the sequential primary endpoint of overall survival (OS) is ongoing, as pre-specified in the study protocol.
(c) Compared to trastuzumab plus chemotherapy arm.

Fully Enrolled Phase 2 Study in Advanced Metastatic Gastric Cancer

Data from gastric cancer (HER2 3+) cohort disclosed at ASCO GI 2019

Dose Escalation

(n=3-6 per margetuximab dose)

Margetuximab 10 – 15 mg/kg q3w + pembrolizumab 200 mg q3w

MERCK
Clinical Supply Agreement

Dose Expansion #1

(margetuximab 15 mg/kg q3W + pembrolizumab 200 mg q3W)

Gastric and Gastroesophageal (n=60)

Dose Expansion #2

(margetuximab 15 mg/kg q3W + pembrolizumab 200 mg q3W)

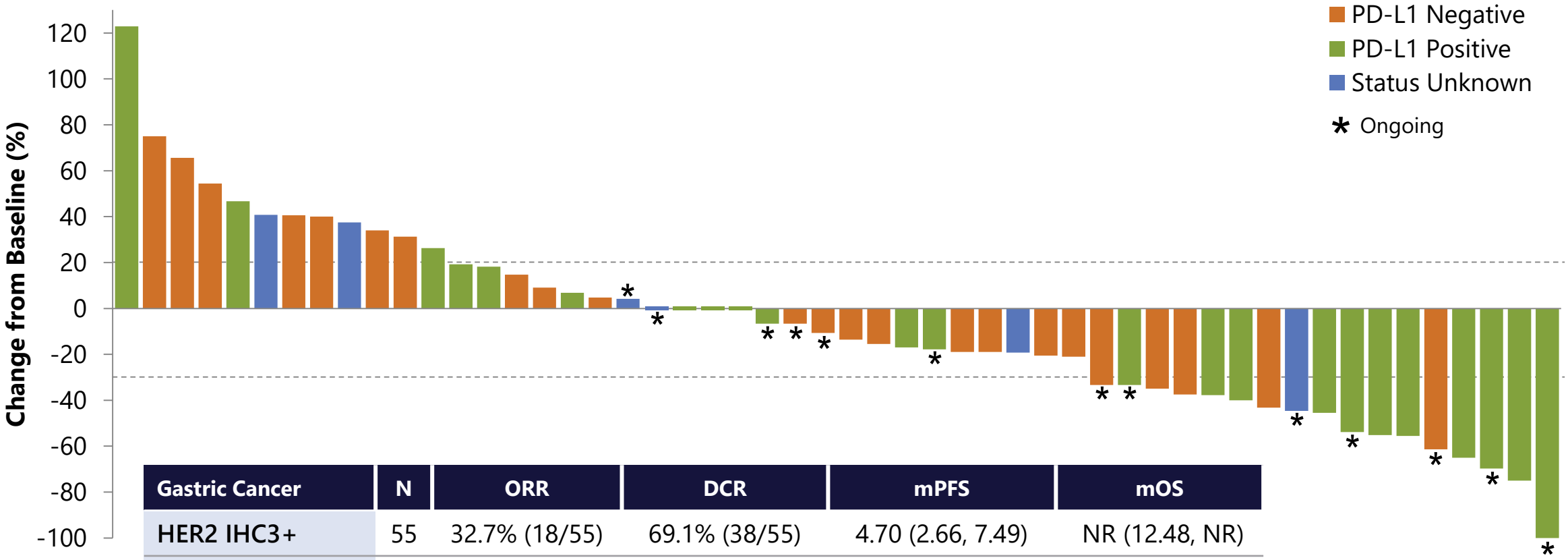
Data presented at ASCO GI 2019

Gastric (HER2 3+) (n=25)

Treatment	• Potential for chemotherapy-free regimen • Margetuximab and pembrolizumab administered day 1 of every 3 week cycle
Inclusion/Exclusion Criteria	• Received ≥ 1 prior line of chemotherapy treatment • No prior immunotherapy
Endpoints	• Primary: safety, tolerability and efficacy (as evaluated by objective response rate (ORR)) of combo • Secondary: PFS, OS, immunogenicity

Promising Activity in Gastric Cancer Population[(a)]

33% ORR in HER2 3+(by IHC[(b)]) gastric cancer



Gastric Cancer	N	ORR	DCR	mPFS	mOS
HER2 IHC3+	55	32.7% (18/55)	69.1% (38/55)	4.70 (2.66, 7.49)	NR (12.48, NR)
IHC3+/PD-L1+[(c)]	23	52.2% (12/23)	82.6% (19/23)	4.14 (2.60, 15.54)	NR (6.74, NR)

(a) Data cutoff January 8, 2019. Includes patients who received at least one margetuximab and pembro dose in expansion phase, and had baseline measurable disease and at least one post-baseline disease assessment.
(b) The immunohistochemistry (IHC) test gives a score of 0 to 3+ that measures the amount of HER2 receptor protein on the surface of cells in a cancer tissue sample. If the score is 0 to 1+, it's called "HER2 negative." If the score is 2+, it's called "borderline." A score of 3+ is called "HER2 positive."
(c) "PD-L1 Positive" reflects a Combined Positive Score (per standard FDA approved assay) ≥ 1% (PD-L1 tested on archival tissue by IHC; clone 22C3 pharmDx).

HER2+ Gastric Cancer Therapeutic Landscape

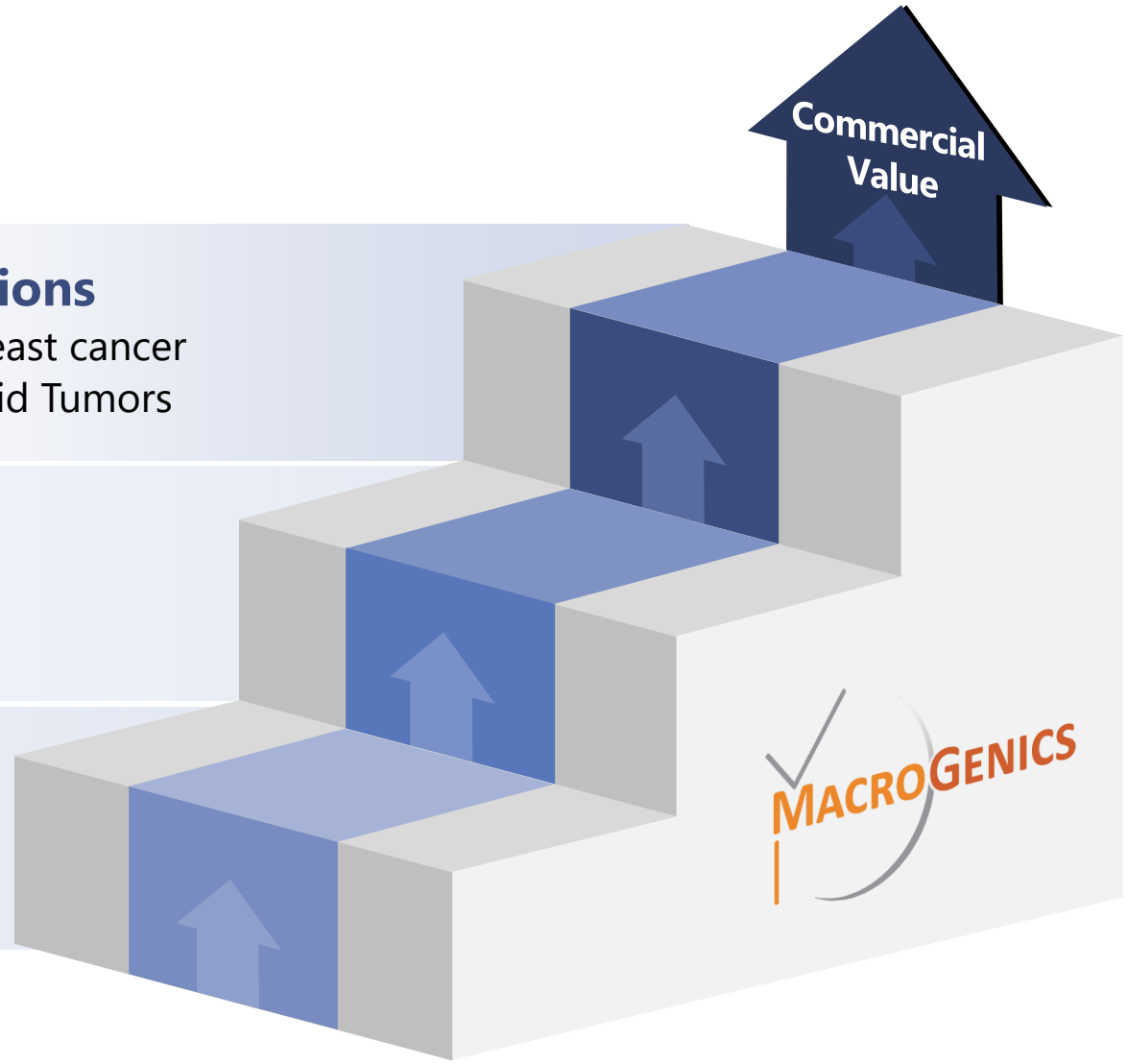
Margetuximab+PD-1 has potential to displace 2nd line standard-of-care therapy

	1st Line	2nd Line				3rd Line
	SOC	SOC		Ongoing	Failed	SOC(g)
Agent (Study)	Trastuzumab + Chemo(a) (TOGA)	Ramucirumab + Paclitaxel(b) (RAINBOW)	Ramucirumab(c) (REGARD)	**Margetuximab+ Pembrolizumab(d)** (Ongoing Ph. 2)	✖ T-DM1(e) (GATSBY) / ✖ Pembrolizumab(f) (KEYNOTE-61)	*Anti-PD-1:* Nivolumab(h)/ Pembrolizumab(i)
ORR	47%	28%	3%	**33%**	20.6% / 15.8% *(PD-L1+)*	11.2(h) – 13.3%(i) PD-L1+ = 15.5%(i) PD-L1– = 5.5%(i)
Median PFS	6.7 mos.	4.4 mos.	2.1 mos.	**4.7 mos.**	2.7 mos. / 1.5 mos.	1.6(h) – 2 mos.(i)
Median OS	13.1 mos.	9.6 mos.	5.2 mos.	**14.6 mos. (Overall GC); IHC 3+ GC not reached**	7.9 mos. / 9.1 mos.	5.3(h) – 5.6mos.(i)
≥ Grade 3 TRAEs	68% *(Black Box Warn.)*	Overall: N/A 41% Neutropenia 15% Hypertension 12% Fatigue *(Black Box Warn.)*	Overall: N/A 8% Hypertension *(Black Box Warn.)*	**18% (GC+GEJ)**	60% *(Black Box Warn.)* / 14.3%	10(h) – 18%(i)
Gastric/GEJ Patient Mix	80/20%	80/20%	75/25%	**100%/0% *(All IHC 3+ Gastric)***	66/34% / Not disclosed	90/10% *(excl. 'unknown')*

SOC = Standard of Care
(a) Data from Herceptin package insert; Bang, et al., *Lancet*, 2010; Black box warning: cardiomyopathy, infusion reactions, embryo-fetal toxicity and pulmonary toxicity.
(b) Data from Cyramza package insert; Wilkes et al., *Lancet Oncology*, 2014; Black box warning: hemorrhage, GI perforation, impaired wound healing.
(c) Data from Cyramza package insert; Fuchs, et al., *Lancet* 2014.
(d) Data presented at ASCO GI 2019.
(e) Data from Thuss-Patience, et al., Lancet *Oncology*, 2017; Black box warning: hepatotoxicity, cardiac toxicity, embryo-fetal toxicity.
(f) Data presented at ASCO 2018 Abstract 4062.
(g) Note: Avelumab (anti-PD-L1) failed 3L JAVELIN Gastric300 study (Merck KGaA and Pfizer press release, November 28, 2017).
(h) ATTRACTION-2 poster ASCO-GI 2017; Kang, el al., *Lancet*, 2017.
(i) Keytruda package insert; KEYNOTE-059, ESMO 2017.

Capturing Full Potential of Margetuximab

Sequenced development strategy



3 Future Indications
- Neo-adjuvant breast cancer
- Other HER2+ Solid Tumors

2 Follow-on Indications
- Gastric Cancer

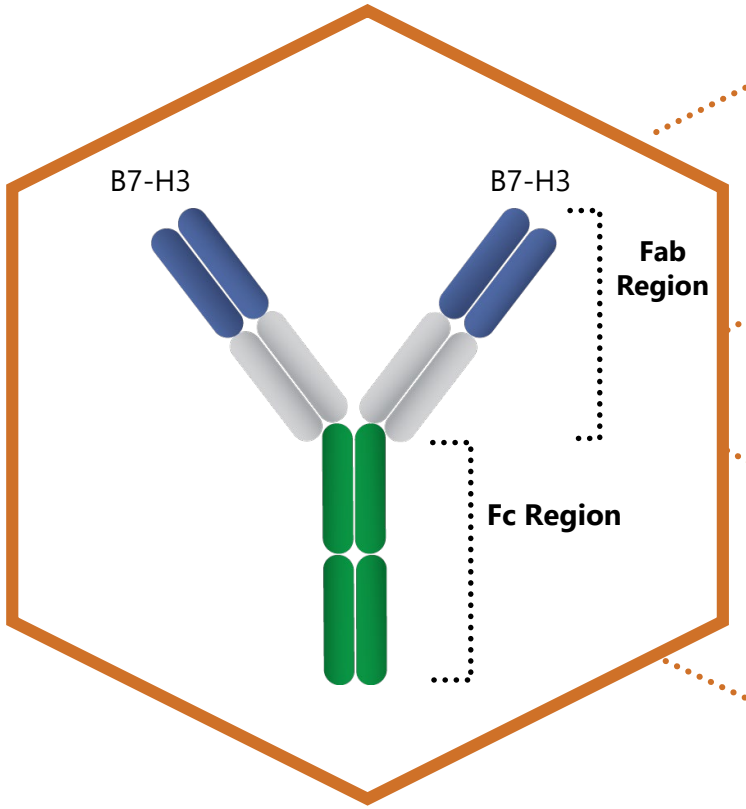
1 Potential Approval
- 3rd/4th Line mBC (w/chemo)

SOPHIA

MACROGENICS

Enoblituzumab: Potential Leading Anti-B7-H3 mAb

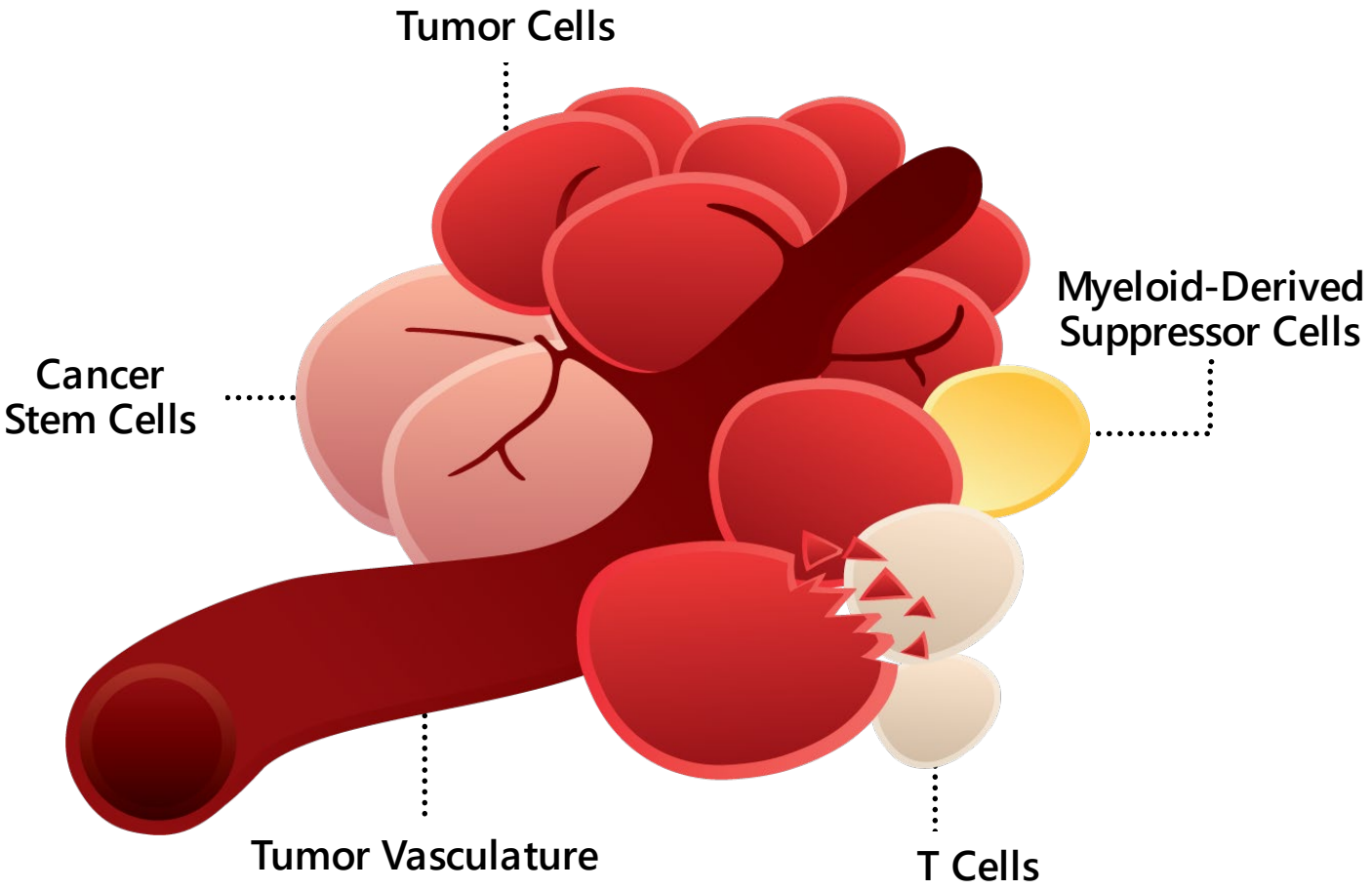
Leveraging immune modulation through Fc optimization



Function/ MoA	• Fc region optimized to enhance immune response, including ADCC • Evidence of T-cell immunomodulation
Potential Indications	• 1st Line SCCHN cancer • 1st Line NSCLC (including PD-L1 negative) • Others under consideration
Status	• Planning to initiate Phase 2 study in SCCHN in combination w/ MGA012 (anti-PD-1 mAb) in 2H19
MacroGenics' Retained Rights	• Global rights

Rationale for Targeting B7-H3 in Cancer

Associated with adverse clinical features and outcome in various solid tumors



Expression on:
- Primary tumor & metastases
- Cancer stem cells
- Tumor stroma and vasculature

Potential immunological role
- Inhibition of T-cell activation
- Correlated with lack of response to anti-PD-1 therapy[(a)]

Tumor-autonomous role
- Migration & invasion
- Tumor metabolic advantage
- Associated with chemotherapy resistance

(a) Yonesaka, et al., CCR, 2018

Confirmed High Penetrance in Broad Set of Solid Tumors

Majority of B7-H3 positive tumors express high levels of B7-H3 (≥ 2+)

Enoblituzumab +Anti-PD-1 Combination Study Indications Evaluated

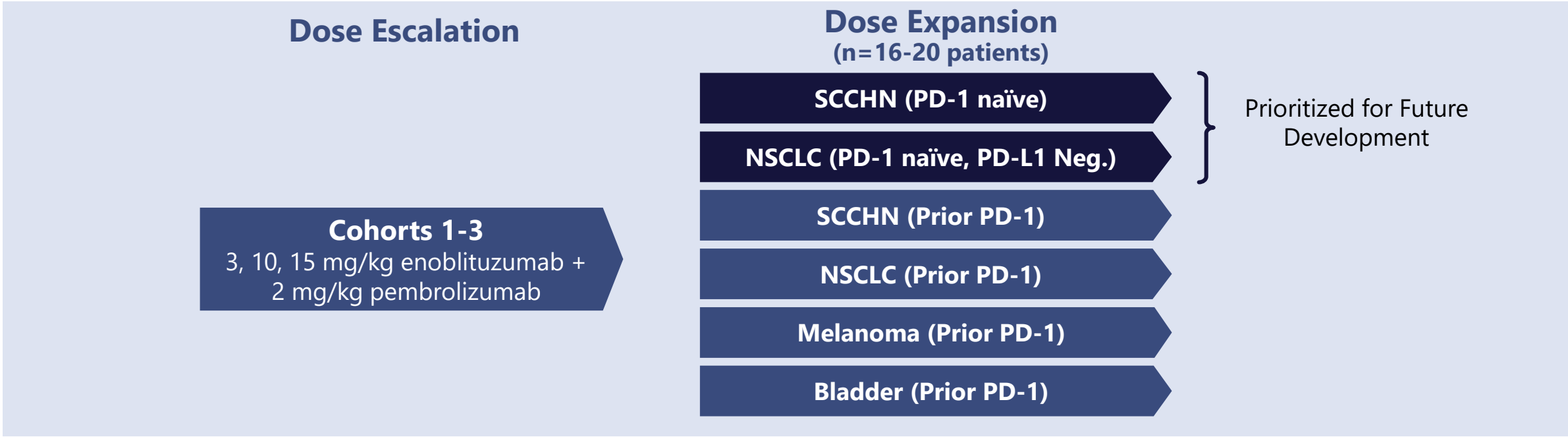
Potential Indications	IHC Summary of >1,400 Tumor Tissue Samples Screened			
	B7-H3 Positive[(a)]		2+ or Above	
Head and Neck	**19/19**	**100%**	**19/19**	**100%**
Kidney Cancer	77/78	**99%**	75/78	**96%**
Glioblastoma	65/66	**98%**	63/66	**95%**
Thyroid Cancer	34/35	**97%**	33/35	**94%**
Mesothelioma	41/44	**93%**	39/44	**89%**
Melanoma	**132/146**	**90%**	**94/146**	**64%**
Prostate Cancer	88/99	**89%**	51/99	**52%**
Pancreas Cancer	69/78	**88%**	45/78	**58%**
Bladder	**134/156**	**86%**	**123/156**	**79%**
Lung Cancer	**324/379**	**85%**	**300/379**	**79%**
Breast Cancer	189/249	**76%**	156/249	**63%**
Ovarian Cancer	59/79	**75%**	36/79	**46%**

Limited expression in normal tissue → favorable profile for targeting B7-H3

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

Fully Enrolled Enoblituzumab + anti-PD-1 mAb Study in B7-H3^{+} Tumors

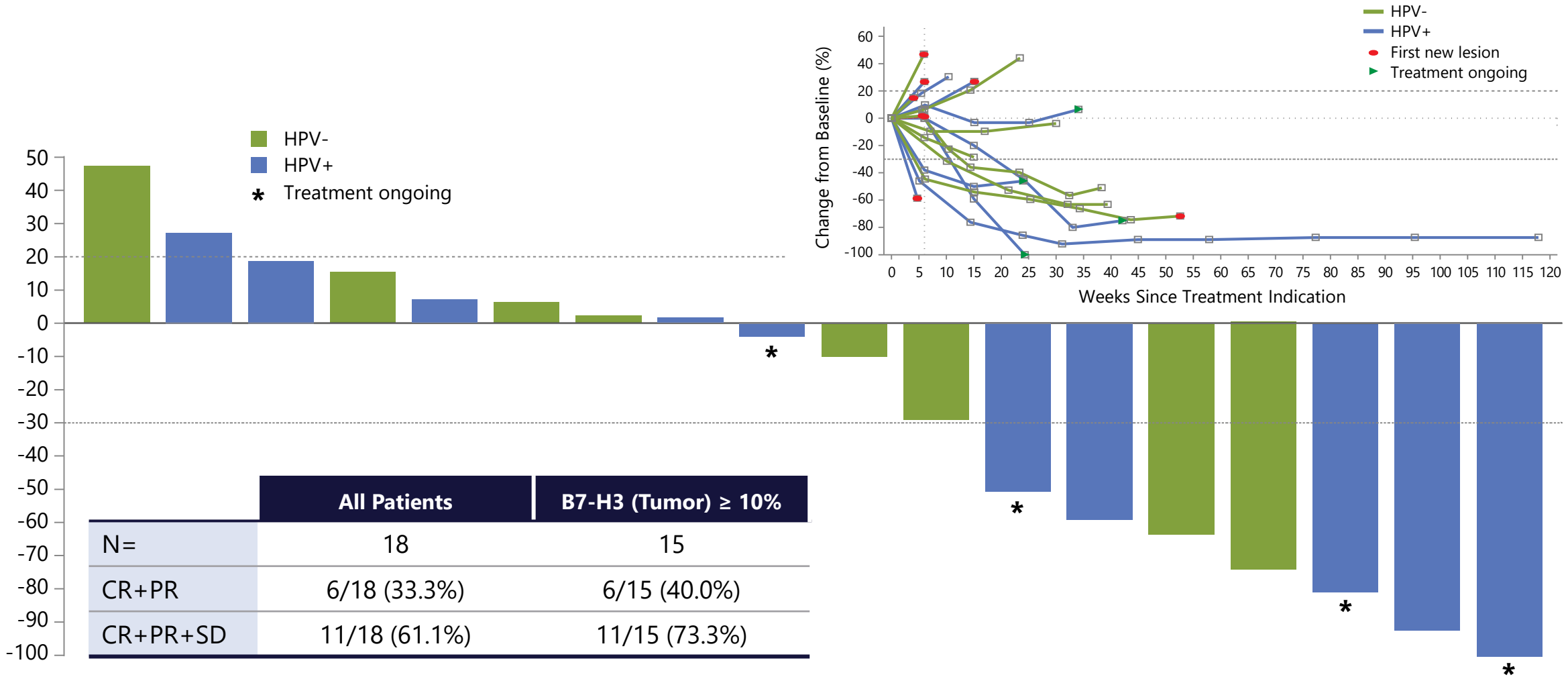
Oral presentation at SITC 2018



Treatment	• Incorporate chemotherapy-free regimen based on combo with pembrolizumab
Inclusion/Exclusion Criteria	• Received ≥1 prior line of chemotherapy and TKI treatment • B7-H3 agnostic (retrospective testing) • NSCLC cohorts: tumor PD-L1 expression <1% by DAKO IHC
Endpoints	• Primary: safety, tolerability and efficacy (as evaluated by objective response rate) of combo • Secondary: PFS, OS, immunogenicity

Antitumor Activity in SCCHN Patients (Anti-PD-1/PD-L1 Naïve)

Induction of tumor regression in SCCHN patients, irrespective of HPV status

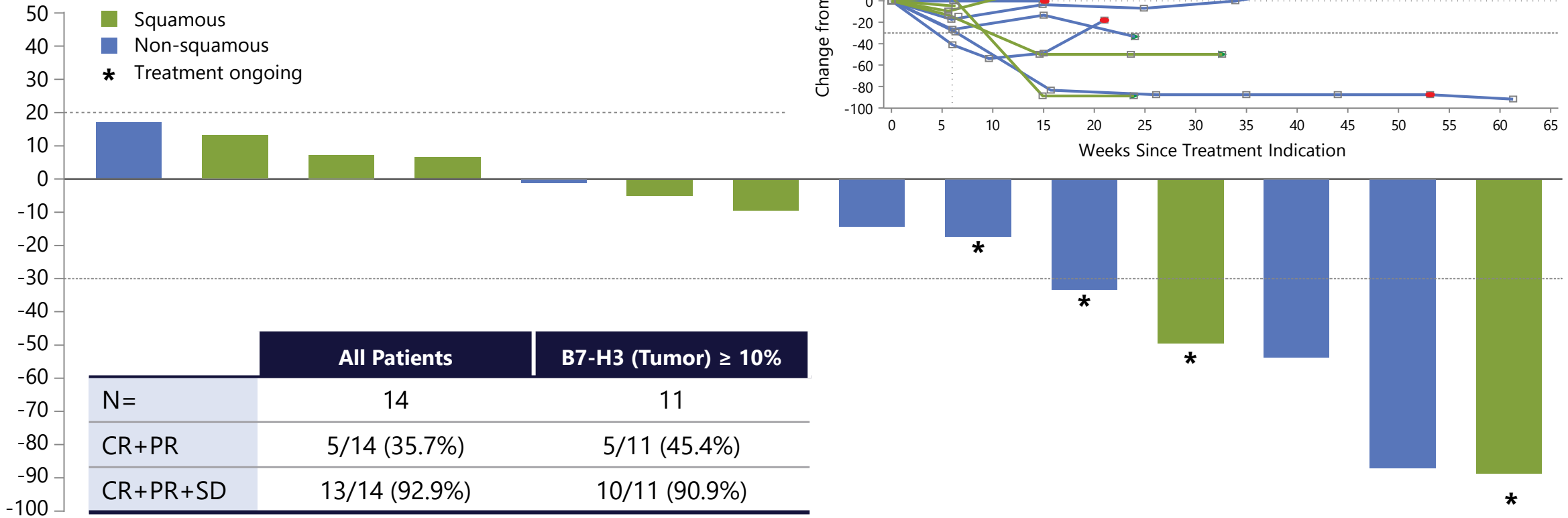


	All Patients	B7-H3 (Tumor) ≥ 10%
N=	18	15
CR+PR	6/18 (33.3%)	6/15 (40.0%)
CR+PR+SD	11/18 (61.1%)	11/15 (73.3%)

Source: SITC 2018 Oral Presentation O24; Data cut-off date: October 12, 2018

Antitumor Activity in NSCLC Patients (Anti-PD-1/PD-L1 Naïve)

Induction of tumor regression in NSCLC patients with <1% PD-L1



	All Patients	B7-H3 (Tumor) ≥ 10%
N=	14	11
CR+PR	5/14 (35.7%)	5/11 (45.4%)
CR+PR+SD	13/14 (92.9%)	10/11 (90.9%)

Source: SITC 2018 Oral Presentation O24; Data cut-off date: October 12, 2018

Encouraging Enoblituzumab + Anti-PD-1 Combo Data

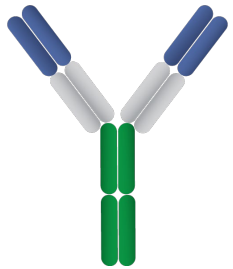
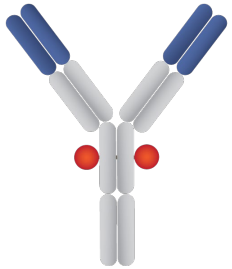
SCCHN	Study Results			
Agent (Study)	Enoblituzumab + Pembrolizumab	Nivolumab (CM-141)[(a)]	Pembrolizumab (KN-012)[(b)]	Pembrolizumab (KN-040)[(c)]
N	18	240	174	247
ORR	33.3%	13%	16%	15%

NSCLC	Study Results			
Agent (Study)	Enoblituzumab + Pembrolizumab	Nivolumab (CM-057)[(d)]	Nivolumab (CM-017)[(e)]	Pembrolizumab (KN-001)[(f)]
Histology	Both	Non-Squamous	Squamous	Both
PD-L1 Status	PD-L1<1%	PD-L1<1%	PD-L1<1%	PD-L1<1%
N	14	108	54	87
ORR	35.7%	9%	17%	8%

(a) Ferris, et al., 2016, N Eng J Med
(b) Keytruda® package insert
(c) Cohen, et al., 2017, ESMO LBA45
(d) Borghaei, et al., 2015, NEJM
(e) Brahmer, et al., 2015, NEJM
(f) Garon, et al., 2015, NEJM

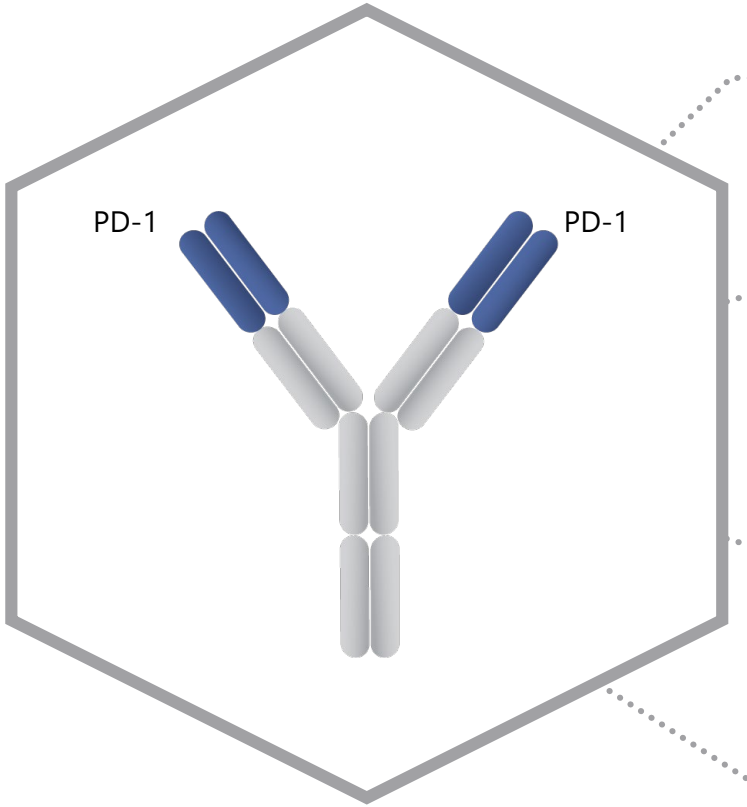
B7-H3 Franchise: Three Molecules with Complementary Mechanisms

MacroGenics retains global rights

	Enoblituzumab	MGD009	MGC018
Candidate	• Fc-optimized mAb 	• B7-H3 × CD3 DART (Fc-bearing) 	• B7-H3 Antibody-Drug Conjugate 
Intended MoA	• Fc-mediated tumor cell killing • Potential enhancement of adaptive immune responses	• Recruitment and expansion of T cells • Potent redirection of T cells to kill tumor cells	• Direct tumor killing • Leverage Synthon's linker/payload
Current Development Status	• Combo study with anti-PD-1 oral pres. at SITC 2018	• Ongoing Phase 1 monotherapy and combo studies	• Phase 1 study initiated

MGA012 Global Collaboration with Incyte

Significant development effort across multiple studies



Function/ MoA	• Humanized, hinge-stabilized IgG4 mAb • Inhibits PD-1, with initial activity profile similar to anti-PD-1 mAb benchmarks
Status	• Eleven ongoing monotherapy/combo studies • Initial monotherapy data projected in 2020[(a)]
Global Incyte Transaction	• $150M Upfront cash payment • Up to $750M in milestones ($15M received in 2018) • Tiered royalties of 15-24% on future MGA012 sales
MacroGenics' Retained Rights	• Develop pipeline assets in combination with MGA012 • Manufacture portion of global MGA012 supply

(a) Ongoing studies in MSI-high endometrial cancer, Merkel cell carcinoma and anal cancer are potentially registration-directed.

MGA012: Building a Pipeline within a Product

Monotherapy

Registration Intent[(a)]

MSI-High Endometrial Cancer	Merkel Cell Carcinoma	Anal Cancer
~8,500 patients/year	~1,300 patients/year	~5,000 patients/year
Pembro provides POC	Avelumab provides POC	Pembro/Nivo provide POC
Data Expected 2020	**Data Expected 2020**	**Data Expected 2021**

Multiple Benchmarking Studies Ongoing

- Non-small Cell Lung Cancer ± Chemo
- Melanoma
- Renal Carcinoma
- Urothelial Cancer
- Cervical Cancer
- Soft Tissue Sarcoma
- Endometrial Cancer

Combination Therapy

Multiple tumors

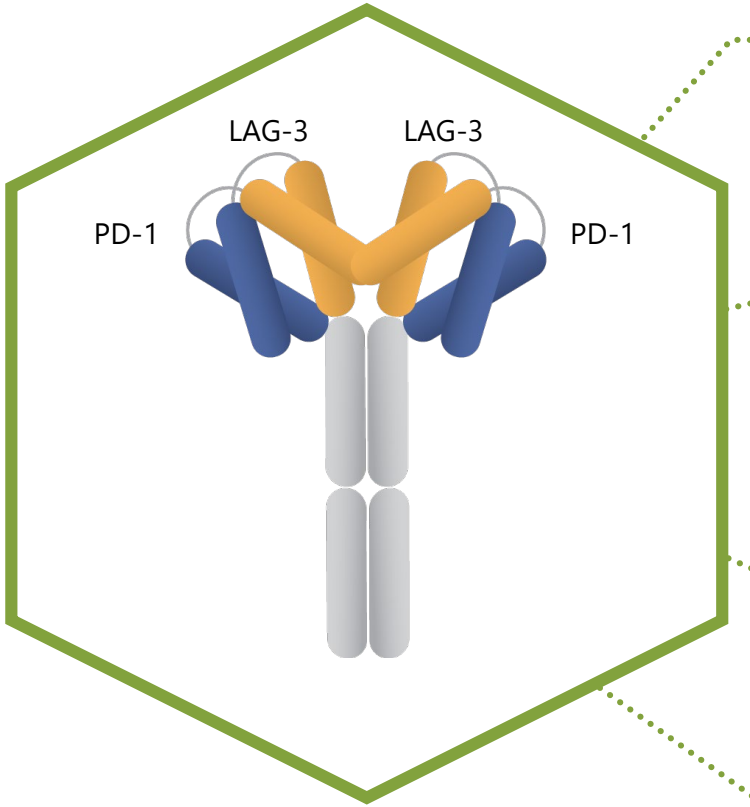
Epacadostat (IDO1)	Parsaclisib (PI3Kδ)
Pemigatinib (FGFR)	INCB01158 (Arginase)
MGD007 (gpA33 × CD3)	MGD009 (B7-H3 × CD3)
Margetuximab (HER2)	Enoblituzumab (B7-H3)
Flotetuzumab (CD123 × CD3)	MGC018 (B7-H3 ADC)

Initiated

Planned

(a) Epidemiological estimates are for US, EU and Japan. Source: Incyte Corporation.

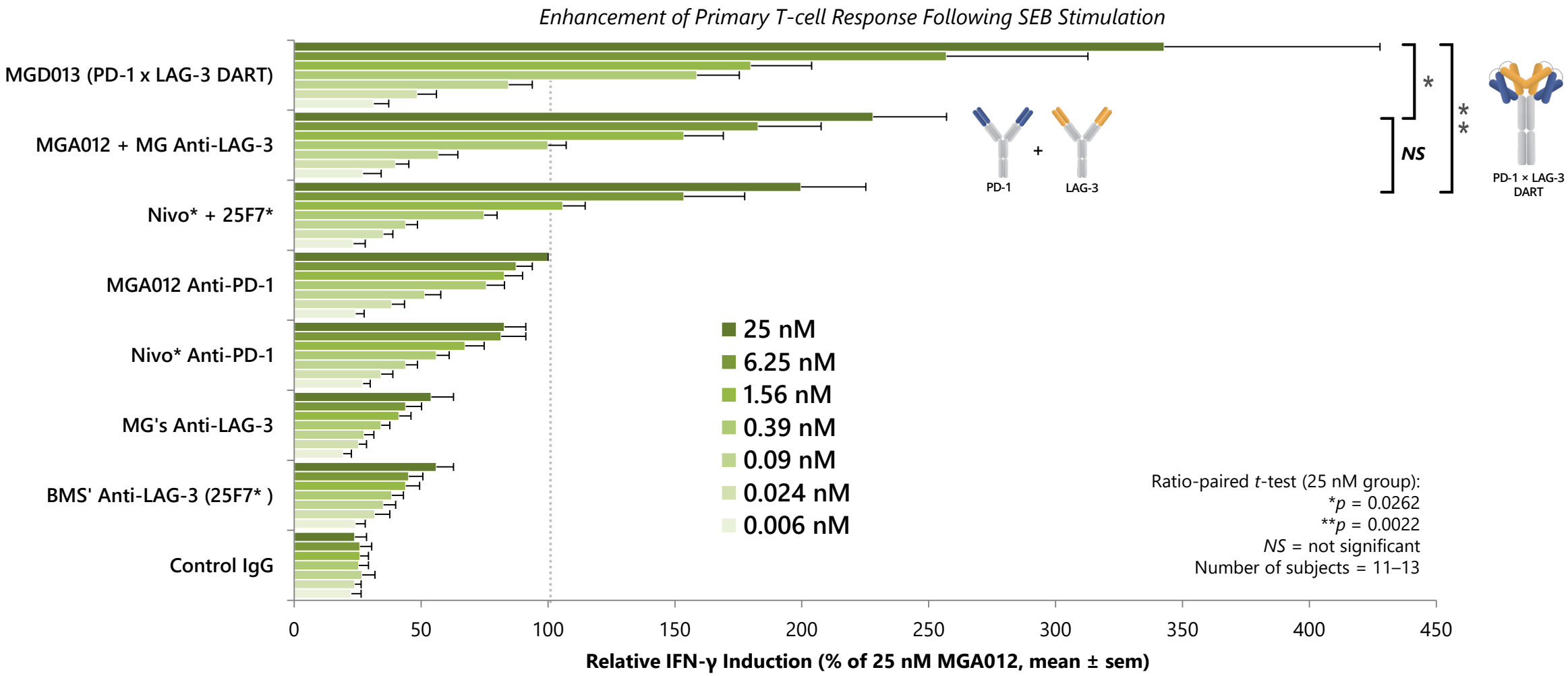
MGD013: First Bispecific Checkpoint Molecule in Clinic



Function/ MoA	• Simultaneous and/or independent blockade of two checkpoint molecules • Reactivation of exhausted T cells
Potential Indications	• Patients with solid and liquid tumors: – Progressed on prior checkpoint inhibitor – Checkpoint-naïve
Status	• Ongoing Ph. 1 dose expansion in nine tumor types • Exploring correlative biomarkers (with Nanostring)
MacroGenics' Retained Rights	• Global rights (excl. Greater China)

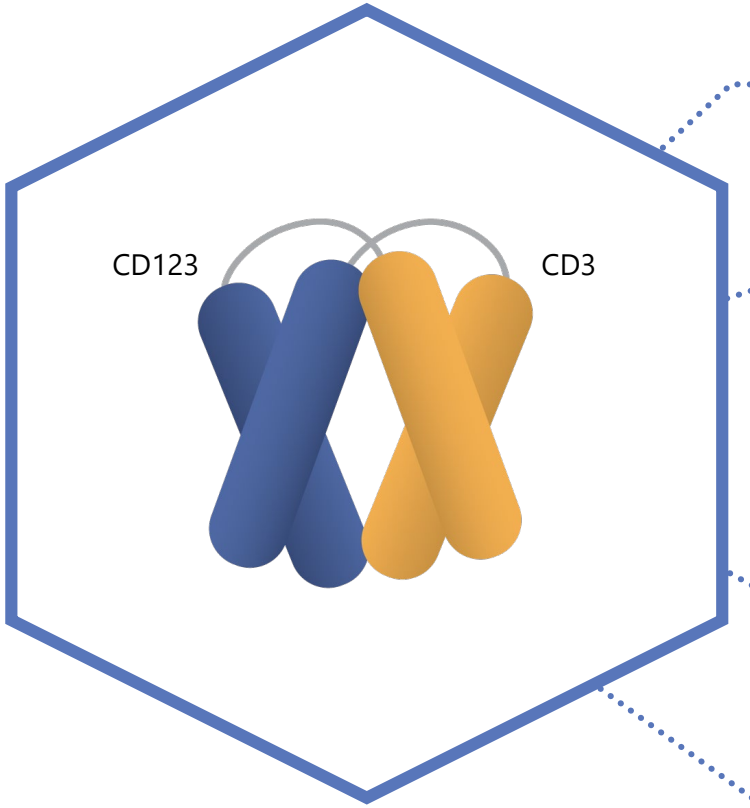
MGD013: Synergistic T-cell Activation

DART construct enhances T-cell activation vs. anti-PD-1 + anti-LAG-3 mAbs



*IFNγ release by 25 nM MGA012 = 3276±744 pg/ml.

Flotetuzumab: CD123 × CD3 DART Molecule



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
Potential Indications	• Acute Myeloid Leukemia (AML) • Other hematologic neoplasms, including B-cell ALL under consideration
Status	• ASH 2018 oral presentation • Ongoing/future studies will: – Enrich for primary refractory and biomarker-selected AML patients – Evaluate combo with MGA012 (anti-PD-1 mAb)
MacroGenics' Retained Rights	• MacroGenics: exclusive rights in North America, Japan, Korea and India • Servier: exclusive rights in other territories

Flotetuzumab: Phase 1/2 Study Design

Dose Escalation

Intra-patient and multi-patient escalation cohorts

Establish Target Dose and Schedule (n=47)

Target Dose: 500 ng/kg/day
Cycle 1: Continuous Infusion over 28 Days
Cycle ≥ 2: 4 Days On/ 3 Days Off

Dose Expansion #1

Data presented at ASH 2018

Relapsed/Refractory AML (n=31)

Incorporated multi-step, lead-in dosing and supportive care to mitigate CRS

Dose Expansion #2

Currently enrolling; Present data in 2019

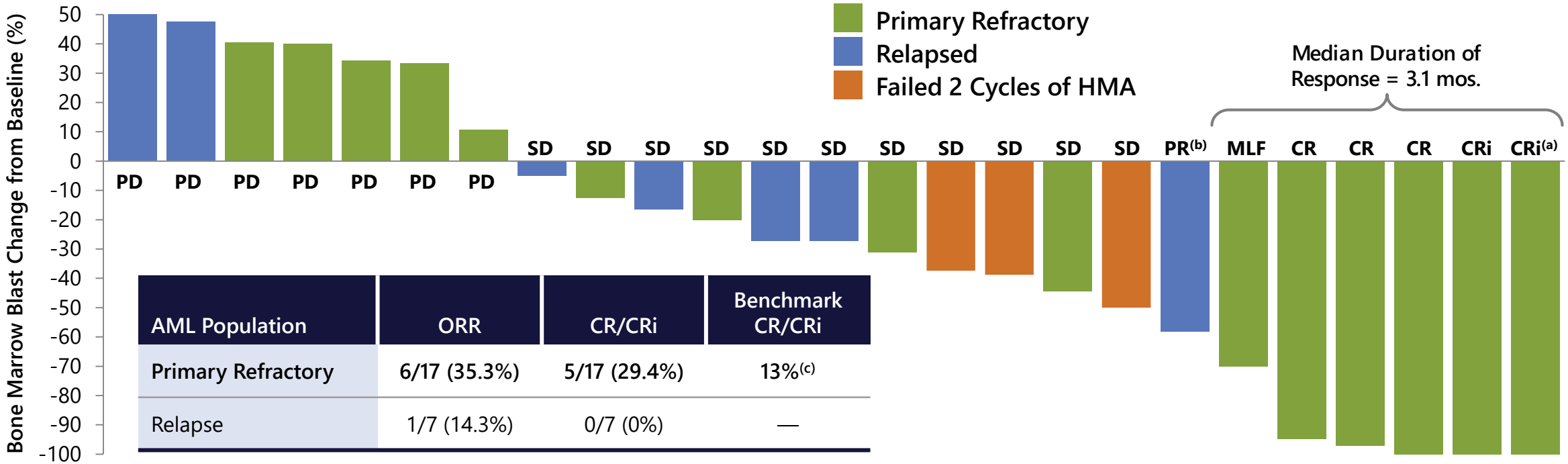
Relapsed/Refractory AML (n=25)
Enrich for primary refractory sub-pop.

Further optimize lead-in dosing; evaluate correlative biomarkers

Inclusion/Exclusion Criteria	• Primary refractory population: – Refractory to ≥2 induction attempts, or – 1st relapse with initial CR duration of <6 months, or – HMA failure to ≥4 cycles • Relapsed population (initial CR >6 months) • No prior allogeneic hematopoietic cell transplant
Endpoints	• Safety and disease status assessed by modified IWG criteria • Gene expression profiling performed using NanoString® PanCancerIO 360™ assay

Primary Refractory AML Patients Have Been Most Responsive to Flotetuzumab

Dose expansion #1 data presented at ASH 2018



AML Population	ORR	CR/CRi	Benchmark CR/CRi
Primary Refractory	6/17 (35.3%)	5/17 (29.4%)	13%(c)
Relapse	1/7 (14.3%)	0/7 (0%)	—

- *31 Patients treated at RP2D: 27 response evaluable (2 PD on PB blasts), 25 pts in waterfall plot*
- *3 Patients non-evaluable pts (2 pts withdrew consent, 1 pt. withdrawn due to TRAE); 1 pt. ongoing*
- *Acceptable safety: primarily low-grade CRS, w/Grade 3=12.9% (4/31 patients)*

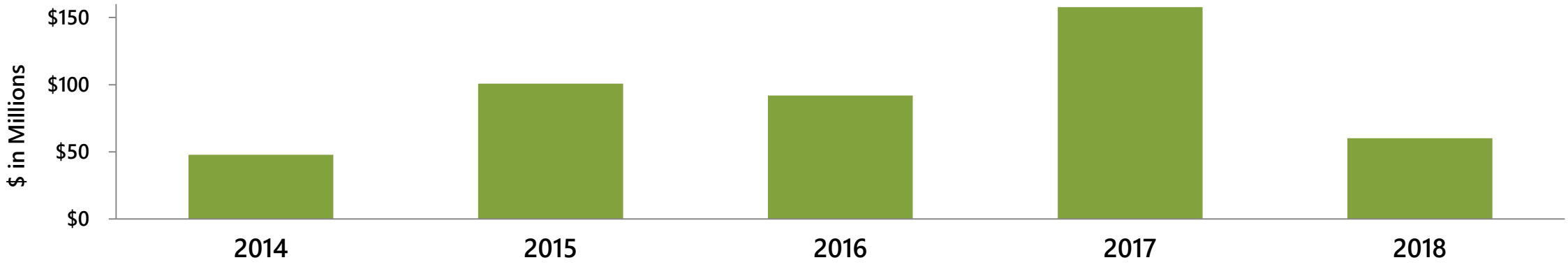
Source: ASH 2018 Oral Presentation #764; Data cut-off date: Nov. 1, 2018
CR=Complete Response; CRi=Complete Response with incomplete hematological improvement; MLF=Morphologic Leukemia-free state; PR=Partial Response; SD=Stable Disease; PD=Treatment Failure
(a) Patient subsequently underwent HSCT in remission
(b) Patient with PR had duration of response = 1.4 months
(c) CR/CRp rate reported by Kantarjian, et al. (Cancer 2018) in large-scale analysis of chemotherapy-based salvage therapy in primary refractory AML patients

Financial Overview

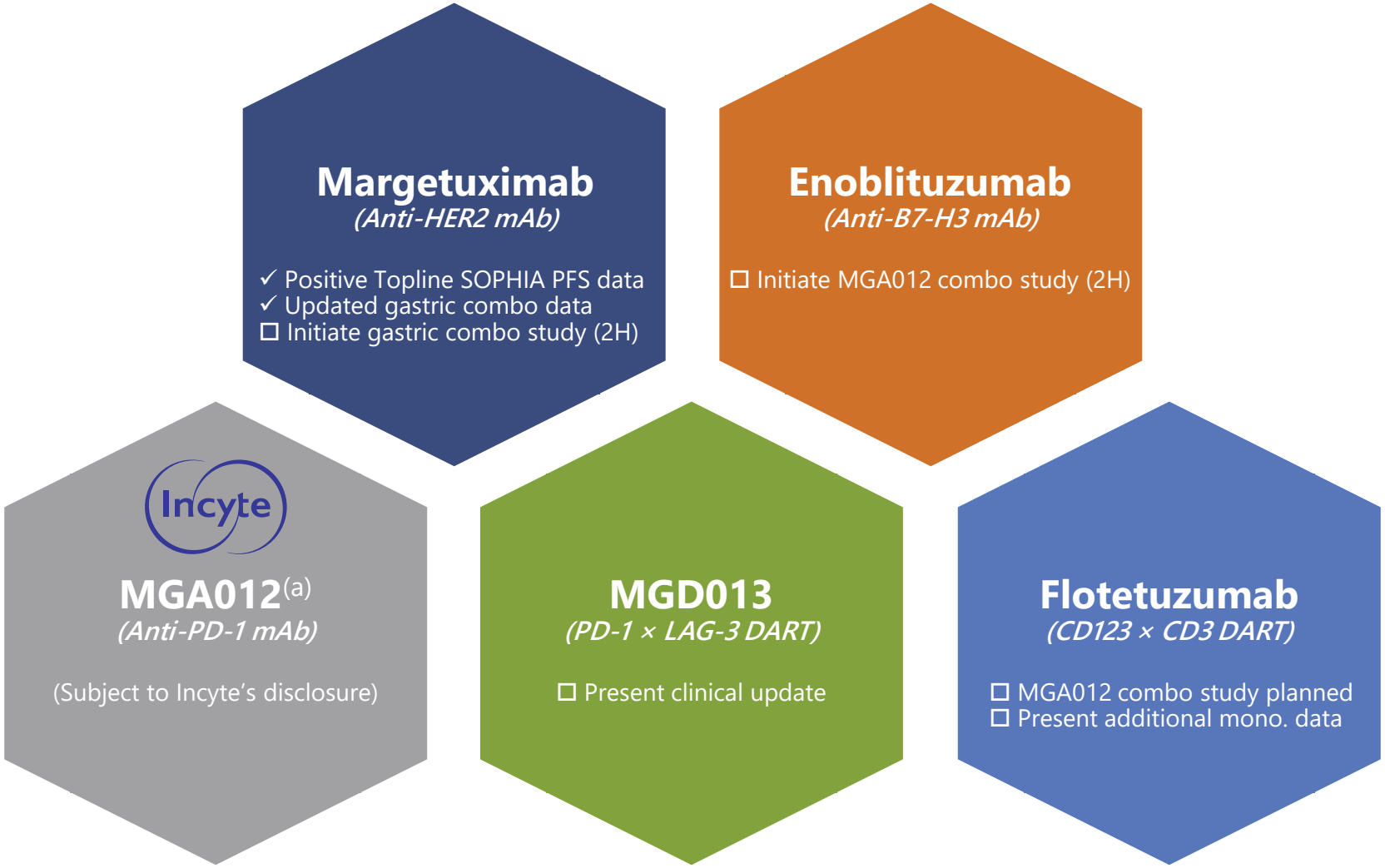
- $320M Cash, cash equivalents and marketable securities as of March 31, 2019
- Historical financial details:

$ in Millions	2014	2015	2016	2017	2018	Qtr. Ended March 31, 2019	Qtr. Ended March 31, 2018
Total Revenues	$48	$101	$92	$158	$60	$10	$5
R&D Expense	70	98	122	147	191	47	46
Total Operating Expenses	86	121	152	180	231	57	55
Cash & Investments	158	339	285	305	233	320	260

- Revenues from collaborative and government agreements (>$450M since 2013 IPO):



Anticipated Progress of Core Programs in 2019



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

Thank You!

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