-mAbs Therapeutics, Inc.

Company Presentation

February 2020

Disclaimer

This presentation contains forward-looking statements within the meaning of the US Private Securities Litigation Reform Act of 1995. The forward-looking statements involve substantial risks and uncertainties. All statements, other than statements of historical facts, contained in this presentation, including statements regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans and objectives of management and expected market growth are forward-looking statements. The words “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “might,” “plan,” “potential,” “predict,” “project,” “should,” “target,” “would” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Such statements include, but are not limited to, statements about regulatory approvals, clinical trial timing and plans, the achievement of clinical and commercial milestones, future financial and operating results, business strategies, market opportunities, financing, and other statements that are not historical facts. Our product candidates and related technologies are novel approaches to cancer treatment that present significant challenges. Actual results may differ materially from those indicated by such forward-looking statements as a result of various factors, including but not limited to: risks associated with the Company's development work, including any delays or changes to the timing, cost and success of our product development activities and clinical trials including if we encounter difficulties enrolling patients in our clinical trials; the risks of delays in FDA and/or EU approval of our drug candidates or failure to receive approval; the risks related to commercializing any approved new pharmaceutical product including the rate and degree of market acceptance of our product candidates; development of our sales and marketing capabilities and risks associated with failure to obtain sufficient reimbursement for our products; our inability to enter into collaboration or alliances with partners; risks associated with protection of our intellectual property rights; and other risks and uncertainties affecting the Company including those described in the "Risk Factors" section included in documents the Company files from time to time with the Securities and Exchange Commission.. Any forward-looking statements contained in this presentation speak only as of the date hereof, and the Company undertakes no obligation to update any forward-looking statement, whether as a result of new information, future events or otherwise.

This presentation includes statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third parties or us. Industry publications and third-party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. All of the market data used in this presentation involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. While we believe these industry publications and third-party research, surveys and studies are reliable, we have not independently verified such data. The industry in which we operate is subject to a high degree of uncertainty, change and risk due to a variety of factors, which could cause results to differ materially from those expressed in the estimates made by the independent parties and by us.

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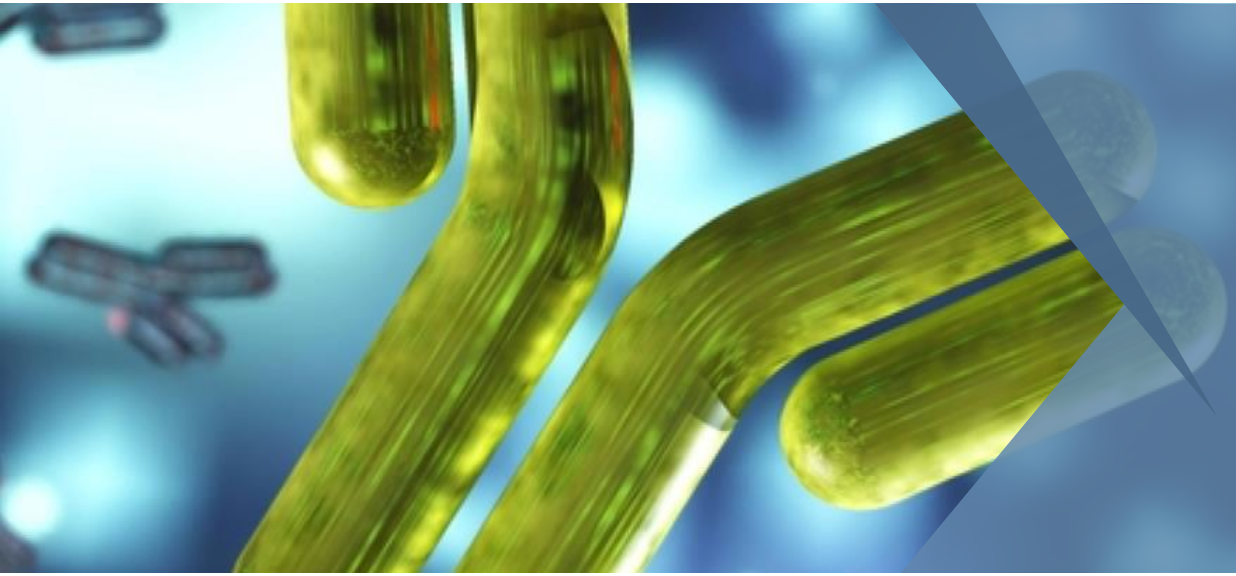
MISSION



Our mission is to become the world leader in developing better and safer antibody-based pediatric oncology products addressing clear unmet medical needs

Investment Highlights

Two pivotal-stage candidates – naxitamab and omburtamab – with BTD[1]

Rolling BLA[2] submission for naxitamab initiated Nov 2019, to be completed end March 2020. Rolling BLA submission for omburtamab completed by May 2020

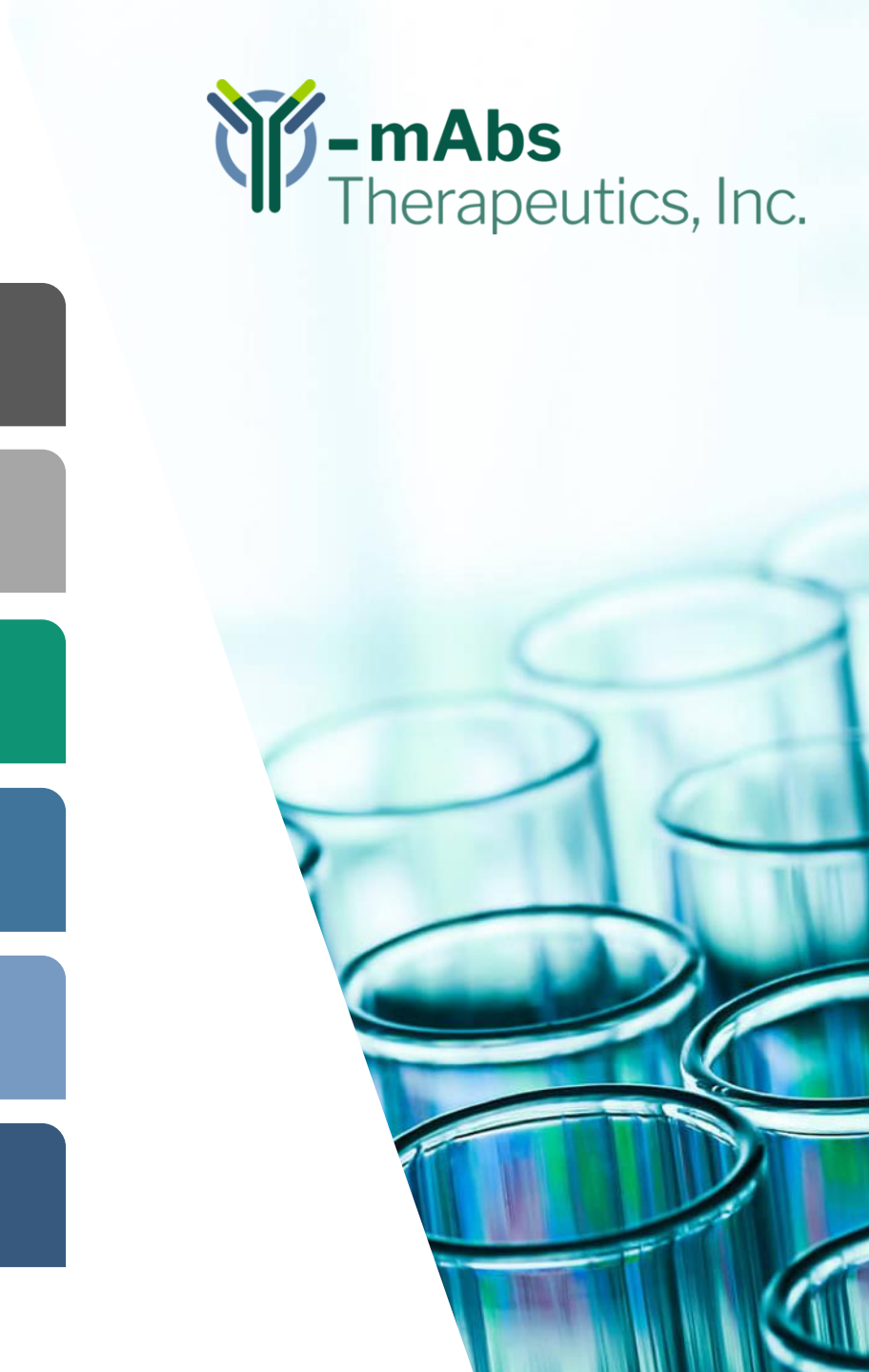
Potential to expand into other indications and lines of therapy – studies ongoing

First BsAb product candidate in Phase 1/2
^{177}Lu-omburtamab, our 2nd gen radioconjugate starting Phase 1/2 in Q2 2020

GD2-GD3 Vaccine - ongoing Phase 2 Study at MSK in high-risk NB patients in remission

Financial strength – secured financing through the end of 2022

[1]BTD – Breakthrough Therapy Designation
[2]BLA – Biologics License Application



Strong Clinical Pipeline

Programs	Phase 1	Phase 2/Pivotal Study	Next Anticipated Milestones
Lead Development Candidates	Naxitamab (GD2)		Rolling BLA submission to be completed in March 2020
	Omburtamab (B7-H3)		Rolling BLA submission to be completed in May 2020
Vaccine	GD2-GD3 Vaccine		Ongoing Phase 2 study at MSK
Bispecific	GD2xCD3 - BsAb		In Phase 1/2 study since Q1 2019
Early Stage	^{177}Lu-omburtamab		IND filed Dec 2019

Lead Development Programs Approaching Registration and Commercialization

Compound	Indication	Total Incidence per Year (US)	Addressable Patient Population per Year (US)
GD2 naxitamab	Neuroblastoma – 2nd Line	300	300
	Neuroblastoma – Front Line	800	450
	Osteosarcoma – 2nd Line	450	200
B7-H3 omburtamab	Neuroblastoma Metastatic to the Central Nervous System (CNS/LM from NB)	80	80
	Diffuse Intrinsic Pontine Glioma (DIPG)	300	300
	Desmoplastic Small Round Cell Tumors (DSRCT)	100	100

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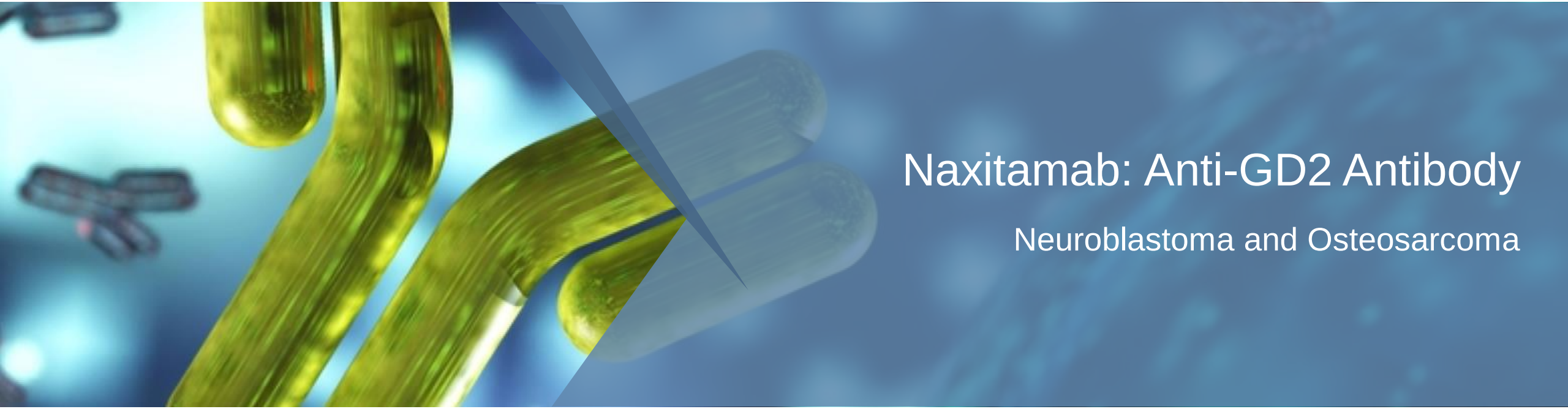


Naxitamab: Anti-GD2 Antibody

Neuroblastoma and Osteosarcoma

Primary and Secondary Refractory Patients – 2019 SIOP Presentations

Study 12-230

- 23 evaluable patients with primary refractory high-risk NB **- *78% ORR***
- 50% two-year progression free survival (PFS) was observed
- Study population of 35 patients with relapsed NB resistant to salvage therapy (Secondary refractory patients) ***– 37% ORR***
- 36% two-year progression free survival (PFS) was observed

Study 201

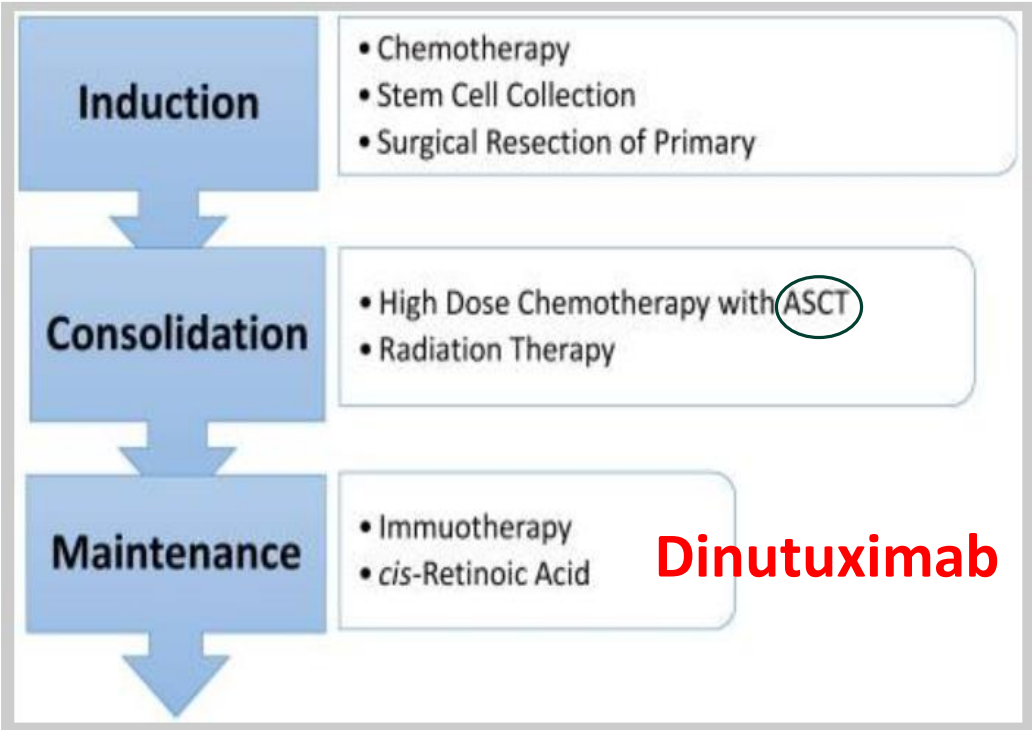
- 24 evaluable patients to be included in BLA filing **- *+70% ORR***

Naxitamab Targets GD2 with Expanding Clinical Program

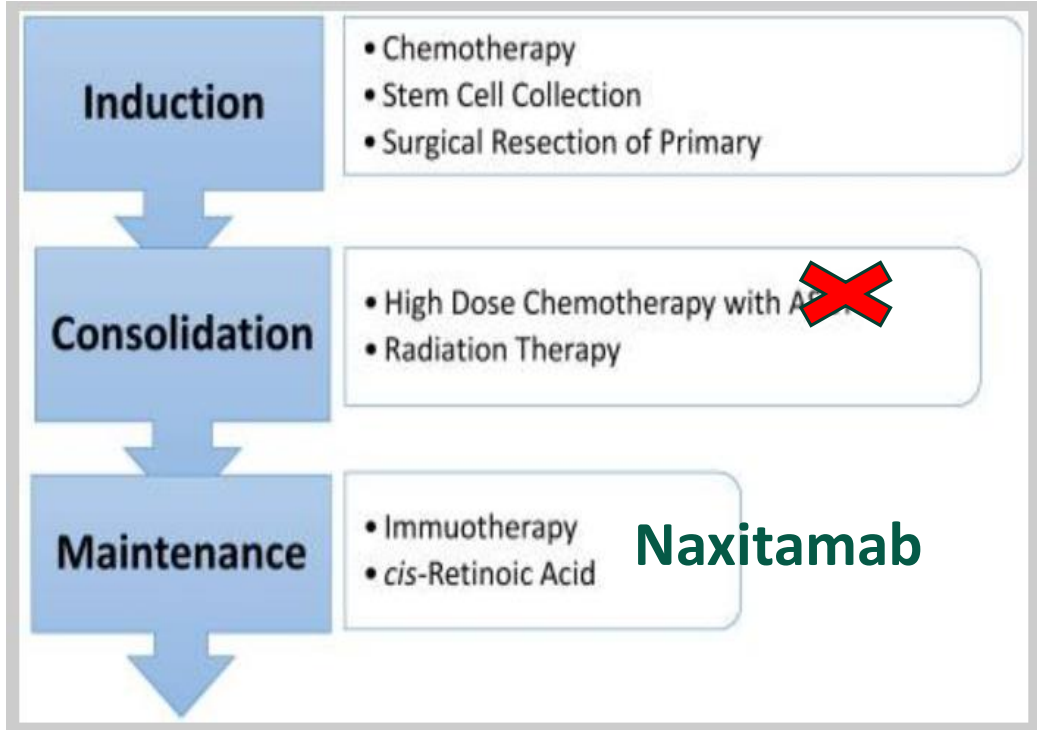
Naxitamab (GD2)	Phase 1	Phase 2/Pivotal Study	Highlights
Accelerated Pathway	Phase 2: Primary R/R High-Risk NB (Pediatric) – Study 201		Multi-center pivotal study per FDA; rolling BLA submission commenced Nov 2019
	Phase 2: Primary R/R NB (Pediatric) – Study 12-230		Single-center study – part of rolling BLA pivotal data package
Expanding to Frontline	Phase 2: Frontline High-Risk NB (Pediatric) – Study 16-1643		Ongoing Phase 2 study
	Phase 2: Frontline naxitamab – Study 202		Frontline Phase 2 study to initiate in 2020
Label Expansion	Phase 2: Chemoimmunotherapy for R/R High-Risk NB – Study 17-251		Heavily pre-treated, high-risk NB patients
	Phase 2: Combo naxitamab plus chemo – Study 203		Combo Phase 2 to initiate in 2020
	Phase 2: Relapsed Second-line Osteosarcoma – Study 15-096		If successful, may form part of support for future sBLA in Osteosarcoma

High Risk Neuroblastoma Treatment Recommendation – COG and MSK/Y-mAbs

COG – 8-20 h infusion (x4 per week)



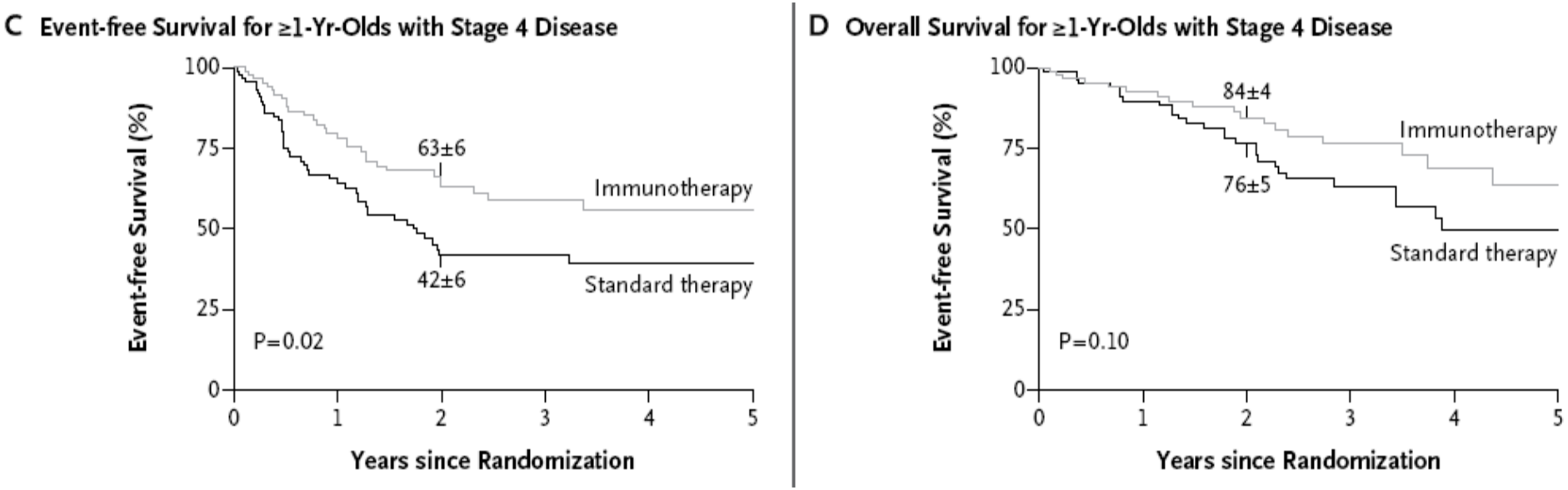
MSK/Y-mAbs – app 30 min infusion (x3 per week)



The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

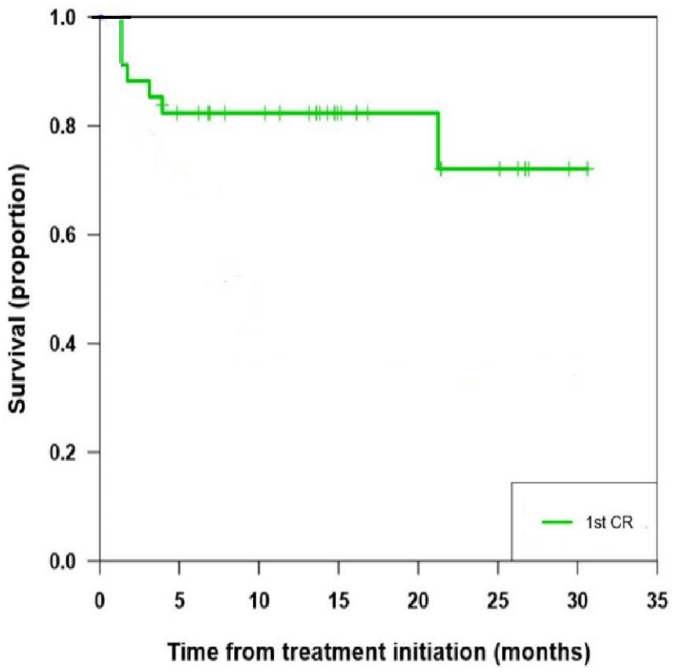
Anti-GD2 Antibody with GM-CSF, Interleukin-2, and Isotretinoin for Neuroblastoma



Yu, AL, et. al, *New England Journal of Medicine*, 2010

Naxitamab: Frontline NB data ***without*** standard ASCT

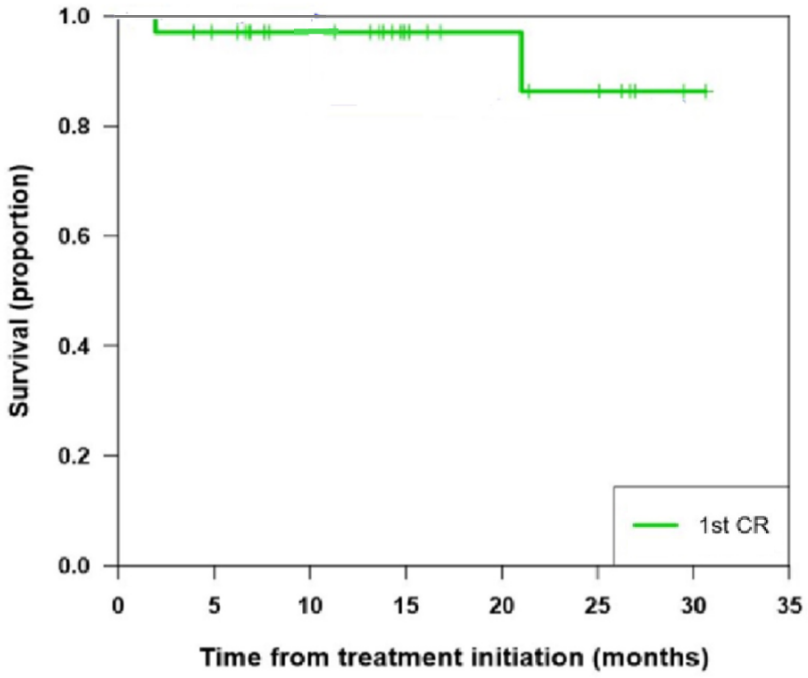
2-year Event Free Survival:



72.1%, 95% CI = (53.1%,97.7%)

vs. Dinutuximab 63%

2-year Overall Survival:



86.3%, 95% CI = (68.0%,100.0%)

vs. Dinutuximab 84%

Data from Dr. J. Mora, Y-mAbs R&D Day Dec 11, 2019

Naxitamab: Key Takeaways

Addresses Significant Unmet Needs in R/R High-Risk NB; Potential to Expand to Broader Populations

- Multiple potential advantages over other GD2 targeting antibody-based therapies: Modest toxicity, shorter infusion time, ability to be administered in outpatient setting

- Studies 12-230 and 201 forming primary basis of rolling BLA.
- Rolling BLA initiated in November 2019

- Granted ODD, BTD, and RPDD[1]

- US commercialization in high-risk NB being planned for 2020

[1]Indicates eligibility for a Priority Review Voucher (PRV) on approval

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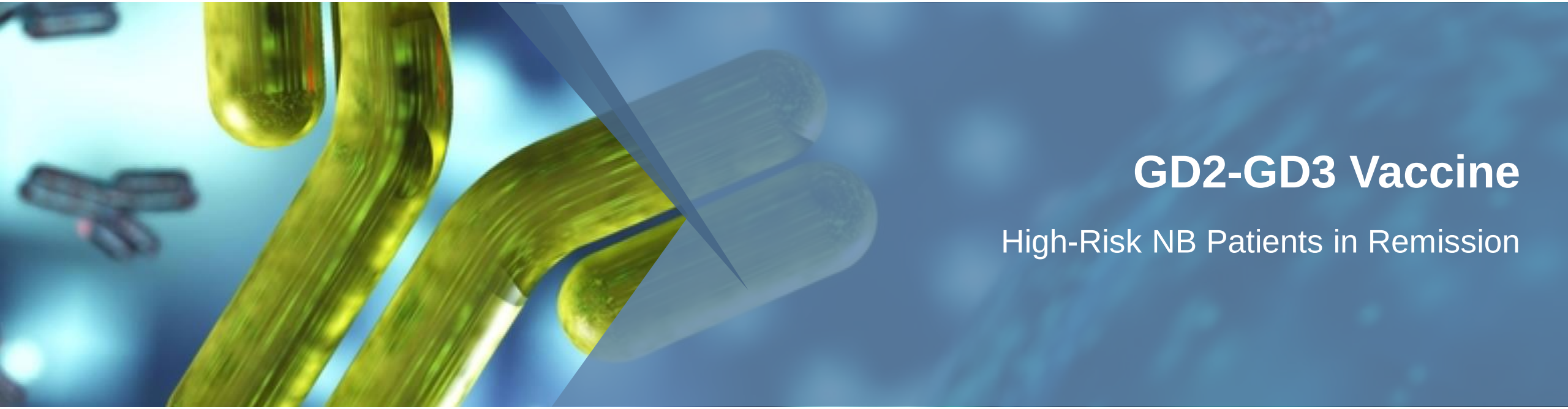


GD2-GD3 Vaccine

High-Risk NB Patients in Remission

GD2-GD3 Vaccine Update – A Naxitamab Add-On

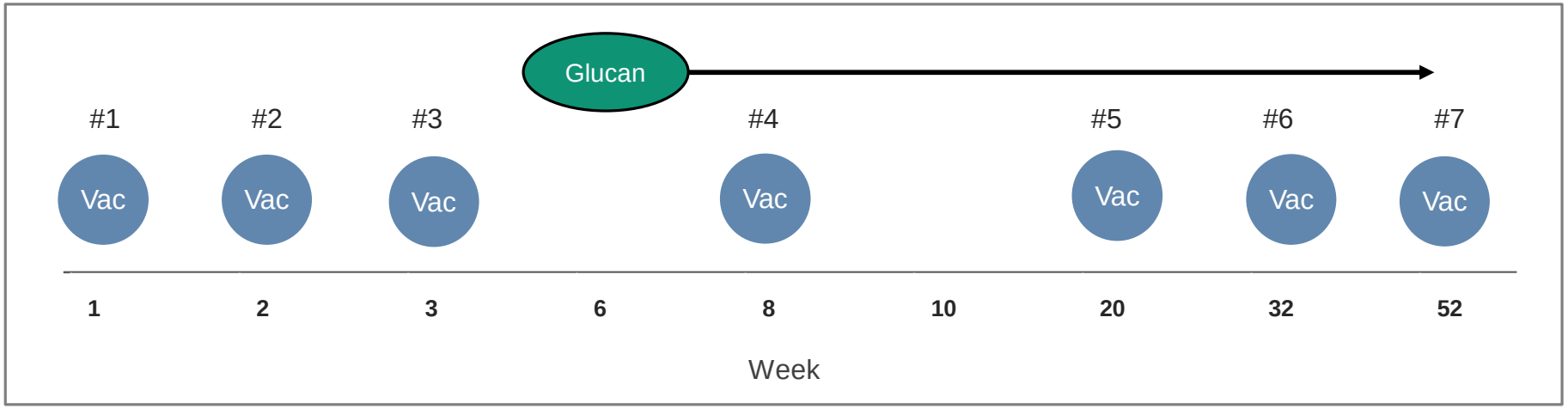
Ongoing Phase 2 Study at MSK; Phase 1 Study Published in 2014; First Phase 2 Study Data Published May 2018 at ANR

- More than 230 patients on study drug – ODD granted – RPDD Granted Dec 2019
- 84 high-risk NB patients received the GD2-GD3 Vaccine, all of whom were in second or later remission
- PFS of approximately 51% and OS of approximately 90% at two years
- Study now also enrolling patients in first remission
- The GD2-GD3 Vaccine appears to be well tolerated, with no reported grade 3 or grade 4 toxicities

Phase 2 Vaccine Study at Memorial Sloan Kettering

Clinicaltrials.gov
NCT00911560

7 cycles



Vac = GD2–KLH/GD3-KLH → Bivalent 30ug each (sc)

+ OPT 821 (QS21) → 150 ug/m2 each (sc)

Glucan = yeast beta-glucan → 40 mg/kg/day, 2 weeks on and 2 weeks off (oral)

Supplied by Biotec Pharmacon, Norway

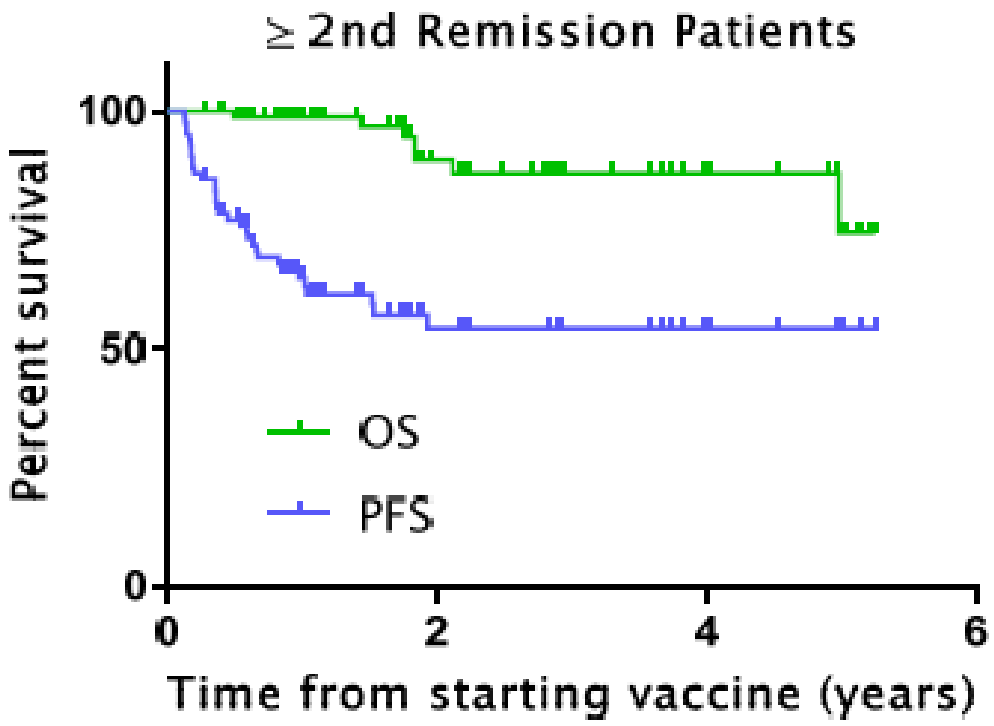
Seroconversion = antibody response		
	% patients with positive	
	Anti-GD2 titer	Anti-GD3 titer
Pre-vaccine	13.3%	29.4%
During vaccine/follow-up	82.7%	70.4%

I. Cheung et al., Phase II Trial of GD2-KLH/GD3-KLH Vaccine for Stage 4 Neuroblastoma in 2nd or later Remission ANR, San Francisco, May 2018

Focus on 2nd and Later Remission Group

Y-mAbs vaccine multi-center

Study 601 – NB patient 2nd CR



I. Cheung et al., Phase II Trial of GD2-KLH/GD3-KLH Vaccine for Stage 4 Neuroblastoma in 2nd or later Remission ANR, San Francisco, May 2018

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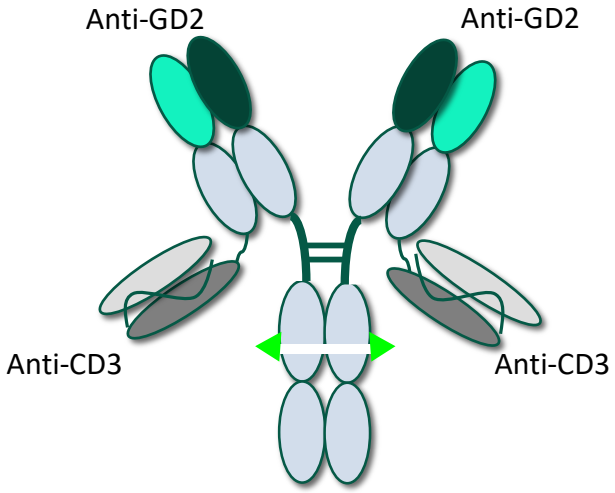
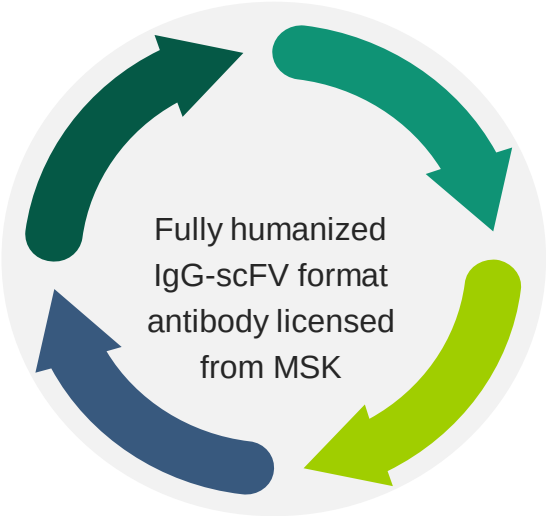
Bispecific Antibodies

First Two Antibodies Targeting GD2 and CD33 Positive Cancers

Bispecific GD2 Antibody Candidate – Planning for 3 Phase II Clinical studies





Phase 1/2 clinical dose escalation study ongoing since Q1 2019 – Cohort 6 ready, and recruiting patients with:

- R/R NB
- High grade osteosarcoma
- Other GD2(+) solid tumors, where patients have relapsed or refractory disease that is resistant to standard therapy

1) Phase 2 in SCLC - IND submission planned for Q4 2020. Multicenter Study 402

2) Phase 2 in 3rd line NB - Based on MSK legacy Study 18-034 in GD2+ tumors

3) Phase 2 in refractory Osteosarcoma - Based on MSK legacy Study 18-034 in GD2+ tumors

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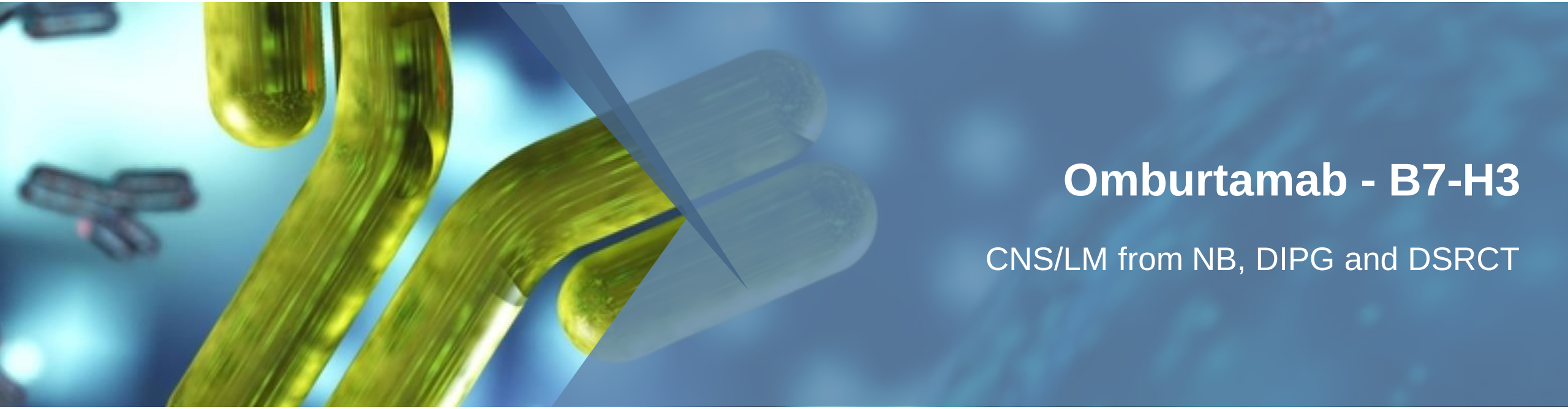


Omburtamab - B7-H3

CNS/LM from NB, DIPG and DSRCT

Omburtamab Clinical Platform

Omburtamab B7-H3	Phase 1	Phase 2/Pivotal Study	Highlights
Accelerated Pathway	Phase 2: CNS/LM from NB (Pediatric) – Study 101		Multi-center PK study; Rolling BLA submission completed by May 2020
	Phase 1: CNS/LM – Study 03-133		MSK single-center efficacy data
Label Expansion	Phase 2: DIPG multi-center Study 102		Multi-center study to initiate in 2020
	Phase 1: DIPG – Study 11-011		Study update presented at ASCO 2019
	Phase 2: DSRCT – Study 19-182		Study update from Phase 1 presented at CTOS Nov 2019

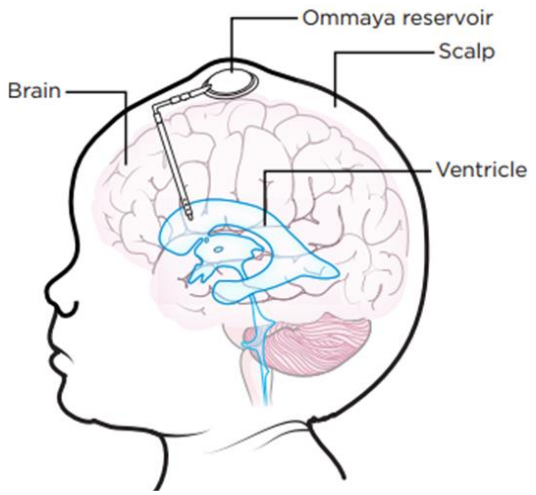
Omburtamab Regulatory Path to BLA Approval

Regulatory
Studies 03-133 and 101 to form basis of BLA submission: OS data accepted by FDA for accelerated approval PK and dosimetry comparison required
Data from Study 101 multicenter will support BLA submission
Qualifies for accelerated approval
BLA submission planned to be completed by May 2020
ODD, BTD, and RPDD

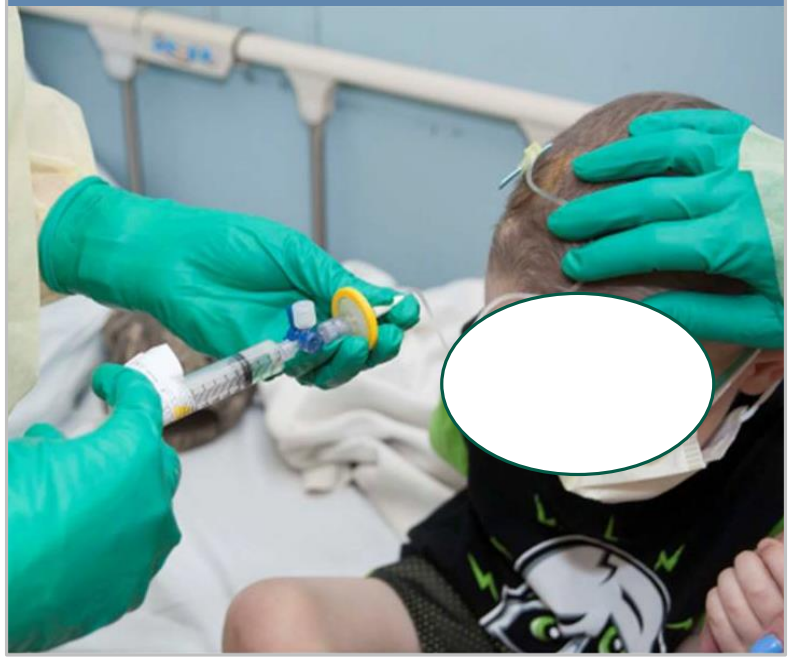
Omburtamab: Delivered in an Outpatient Setting – 2 doses per Patient

CNS/LM from NB patients

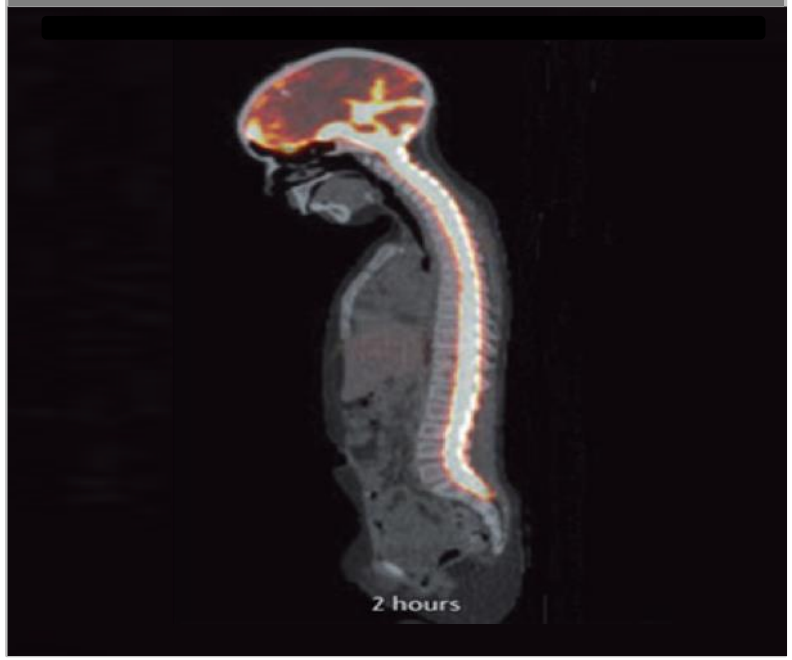
Administration of radiolabeled omburtamab via Ommaya reservoir



Omburtamab being delivered in an outpatient setting



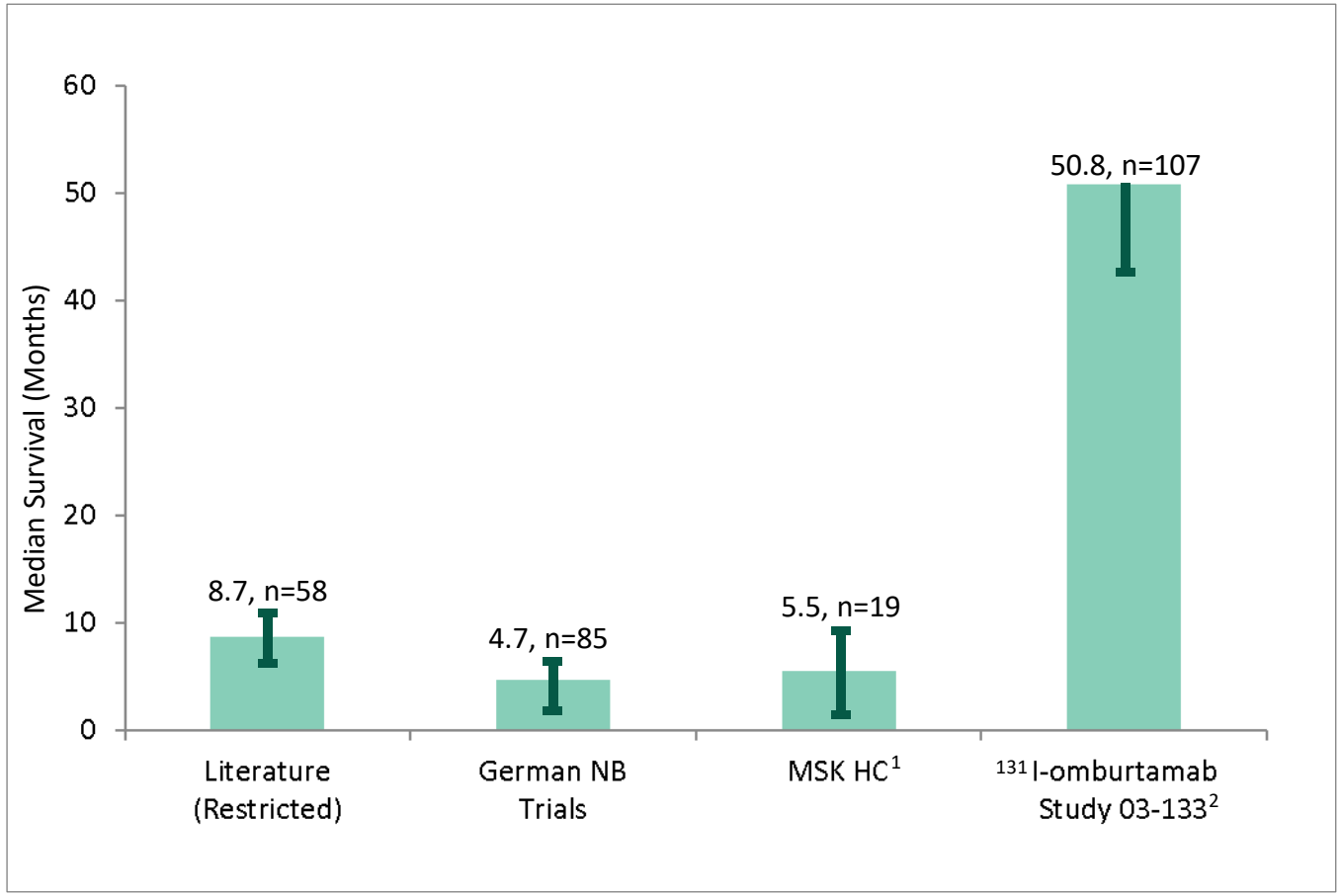
PET scan of distribution of radiolabeled omburtamab two hours after administration



After induction treatment including all or some of the three treatments (chemotherapy, surgery, and radiation) patients will receive radiolabeled omburtamab

Omburtamab: Clinical Overview

Study 03-133: ^{131}I-omburtamab Improves Survival in CNS/LM from NB Patients



These results demonstrate the opportunity for ^{131}I-omburtamab to address the lack of an established, effective therapy for patients with CNS/LM from NB

[1]MSK HC = neuroblastoma patients with CNS/LM treated at MSK prior to 2003
[2]^{131}I-omburtamab = Patients with CNS/LM treated under Study 03-133

Omburtamab: Key Takeaways

Addresses Significant Unmet Needs and has the Potential to Expand its Application to Broader Populations

- No approved products for patients with R/R NB who have CNS/LM from NB
- Goal of treatment is generally palliative

- Demonstrated median OS of 51 months
- Historical median OS of ~six months and no expected five-year survival

- Granted ODD, BTD, and RPDD; May qualify for a sBLA for DIPG and DSRCT assuming positive pivotal data

- Studies 03-133 and 101 to form primary basis for rolling BLA submission for CNS/LM from NB - expected to be submitted in May 2020
- Large potential market opportunity for the treatment of LM from tumors that express B7-H3

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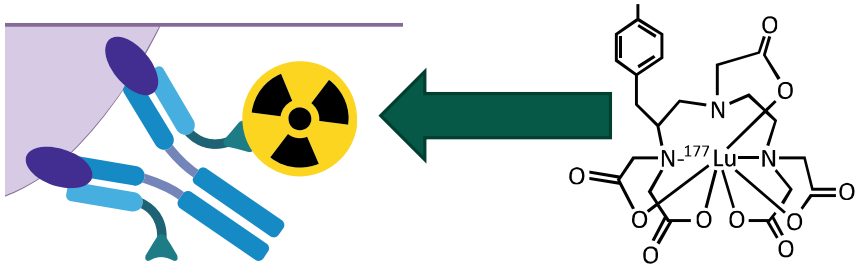

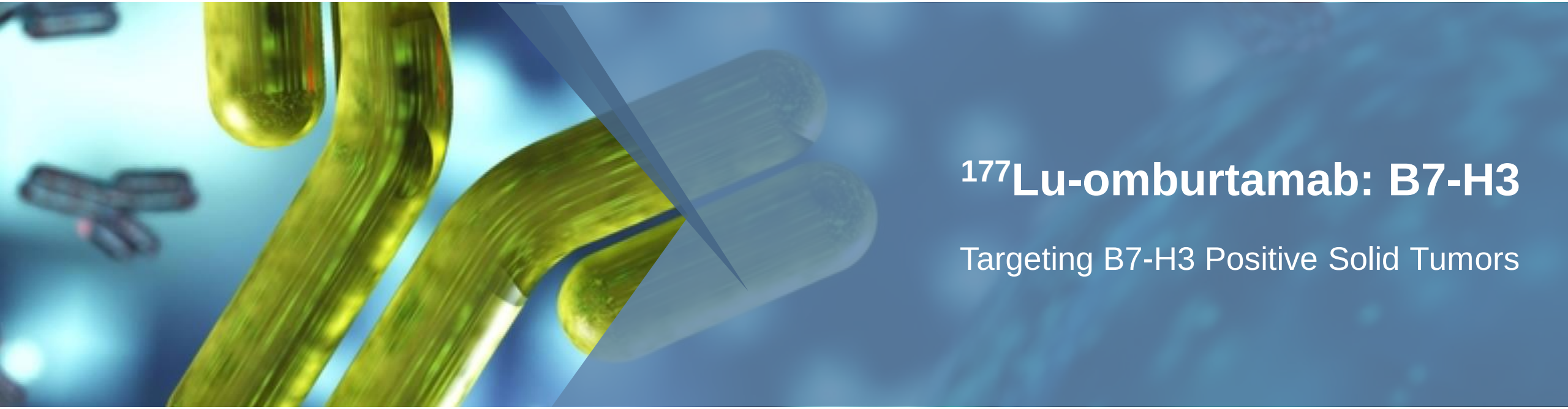

^{177}Lu-omburtamab: B7-H3

Targeting B7-H3 Positive Solid Tumors

^{177}Lu-omburtamab - Pediatric and Adult Strategy

Pediatric

- First indication: **Medulloblastoma**
- Prior experience from compartmental treatment with ^{131}I-omburtamab – 27 pediatric patients treated
- IND submitted Dec 2019

Adult

- First indication: **Basket study** of B7-H3 positive CNS/LM tumors
- Prior experience from compartmental treatment of adult patients with ^{131}I-omburtamab

Clinical Testing (Adult)

- Experience using ^{131}I-omburtamab in 68 patients with tumors such as sarcoma, melanoma, and medulloblastoma
- Animal toxicity studies of ^{177}Lu-omburtamab completed on GLP material
- cGMP production established

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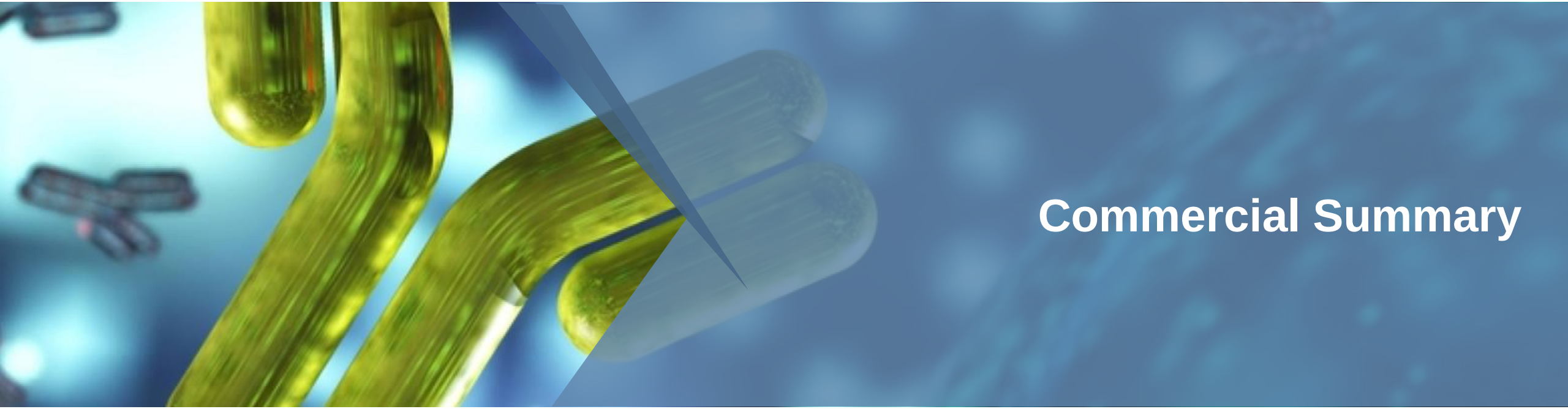

Commercial Summary

In preparation for launch, commercial activities focused on three key areas:

Build best in class, right-sized commercial organization

- Small universe of pediatric cancer centers treat majority of neuroblastoma
- Lean and efficient commercial organization to align with targeted launch

Launch planning and execution focused on driving:

- Rapid uptake at launch
- Optimal pricing and reimbursement coverage
- Supportive stakeholder experience along neuroblastoma treatment journey

Building awareness of Y-mAbs

- Outreach & engagement with KOLs and top pediatric cancer centers
- Engagement with key neuroblastoma advocacy groups
- Increased medical congress presence to raise profile of Y-mAbs

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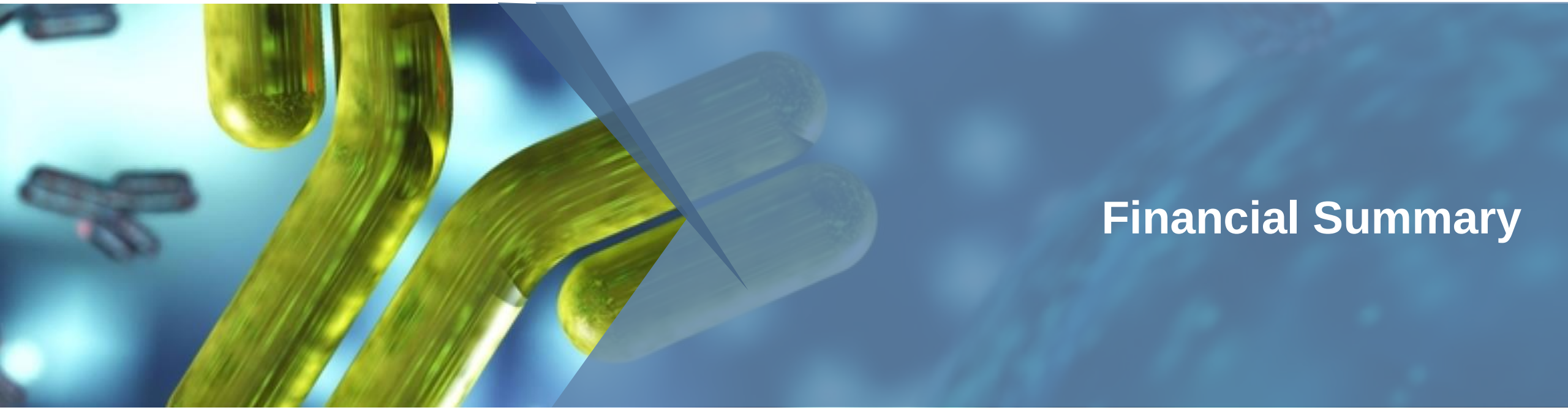

Financial Summary

Strong Financial Position with Blue Chip Investors

Y-mAbs Has Completed a Series of Successful Financing Rounds, with $374 Million Raised to Date

Nasdaq

IPO – September 2018

$110 Million

Follow on: November 2019

$144 Million

$374 Million

Raised to Date

$233 Million

of cash and cash equivalents pro forma (cash balance as of September 30, 2019 and net proceeds from follow-on offering)

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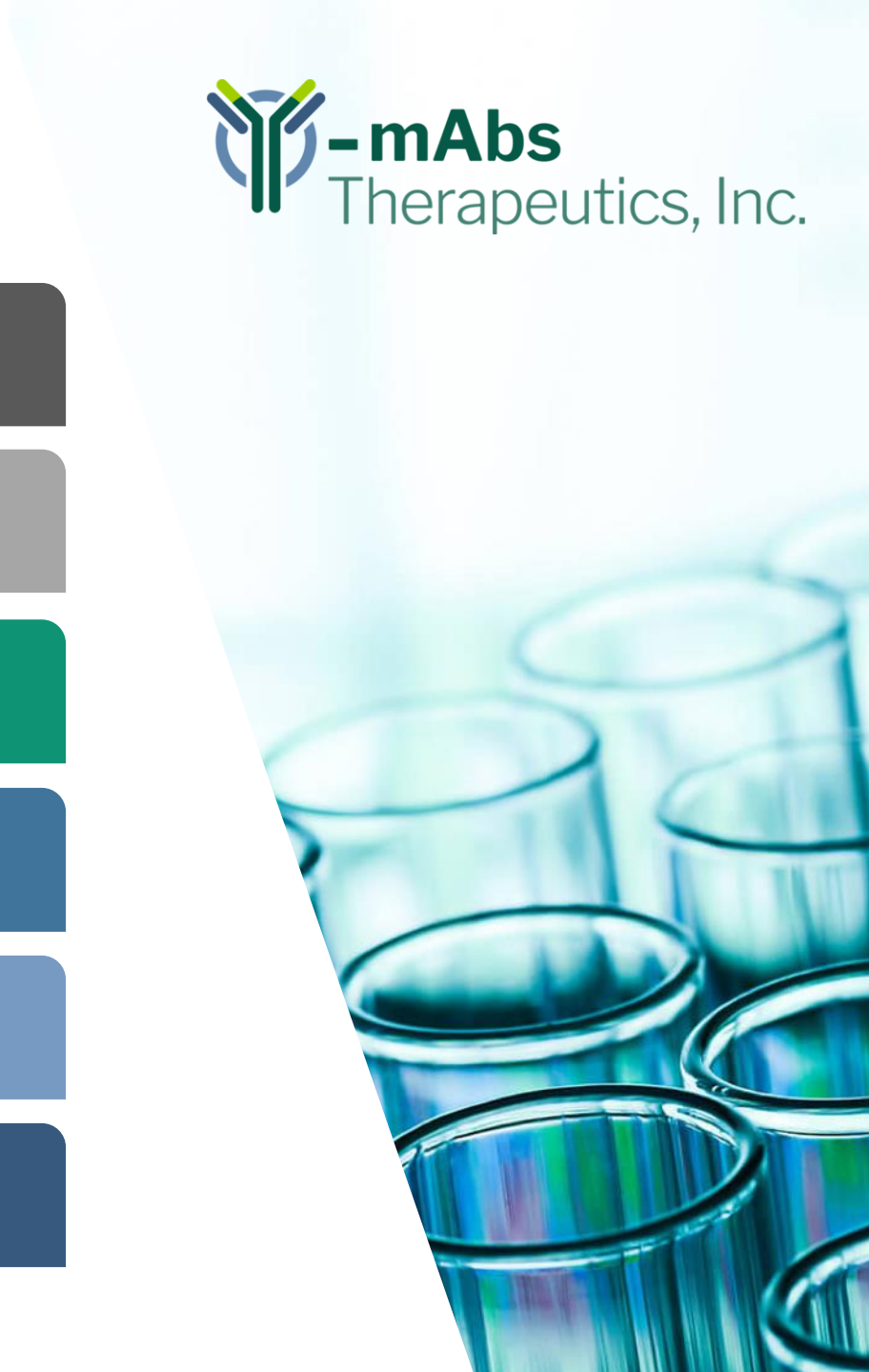

THANK YOU