-mAbs Therapeutics, Inc.

Company Presentation

September 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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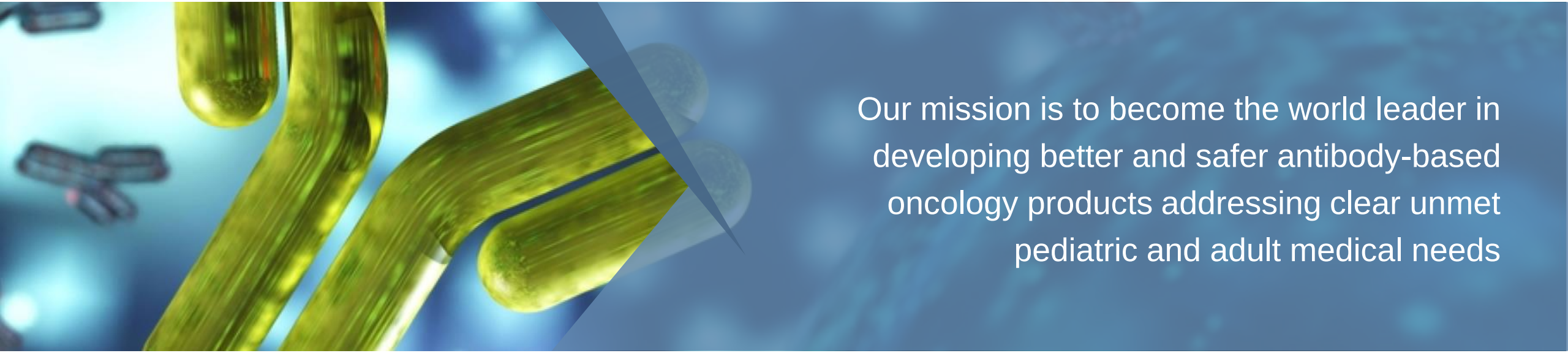
MISSION



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

Investment Highlights

FDA acceptance of BLA[1] for Danyelza™ (naxitamab) for NB. PDUFA date in Nov 2020. Submission for omburtamab completed Aug 2020. Both products have BTD[2]

Potential to expand into other indications and other lines of therapy, multiple studies ongoing. Expansion includes ^{177}Lu-omburtamab-DTPA, opening Phase 1/2 in Q4 2020

First BsAb product candidate, nivatrotamab, using the Y-BiClone technology in Phase 1/2. Second BsAb product candidate CD33xCD3

Novel SADA technology platform, a concept also referred to as Liquid Radiation™

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

Financial strength – secured financing through the end of 2022

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

Strong Pipeline

Programs	RPDD[1]	Preclinical	Phase 1	Phase 2/Pivotal Study	Next Anticipated Milestones
Lead Development Candidates	✓	Naxitamab (GD2)			PDUFA date in Nov 2020. Priority review
	✓	^{131}I-omburtamab (B7-H3)			Rolling BLA submission completed in Aug 2020
Vaccine	✓	GD2-GD3 Vaccine			Multicenter Phase 2 study to open Q1 2021
Y-BiClone Bispecific Platform		Nivatrotamab			Small Cell Lung Cancer - IND filing in Q4 2020
		CD33xCD3			AML Pediatric Cancer IND being prepared
Early Stage RIT		^{177}Lu-omburtamab-DTPA			Medulloblastoma study to open in Q4 2020
SADA Technology		GD2-SADA			GD2 Positive solid tumors, IND 2021
		GPA33-SADA			Colon Therapeutic/Diagnostic, IND 2022
		HER2-SADA			Breast Cancer, IND 2022
		B7-H3-SADA			Prostate Cancer, IND 2022

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

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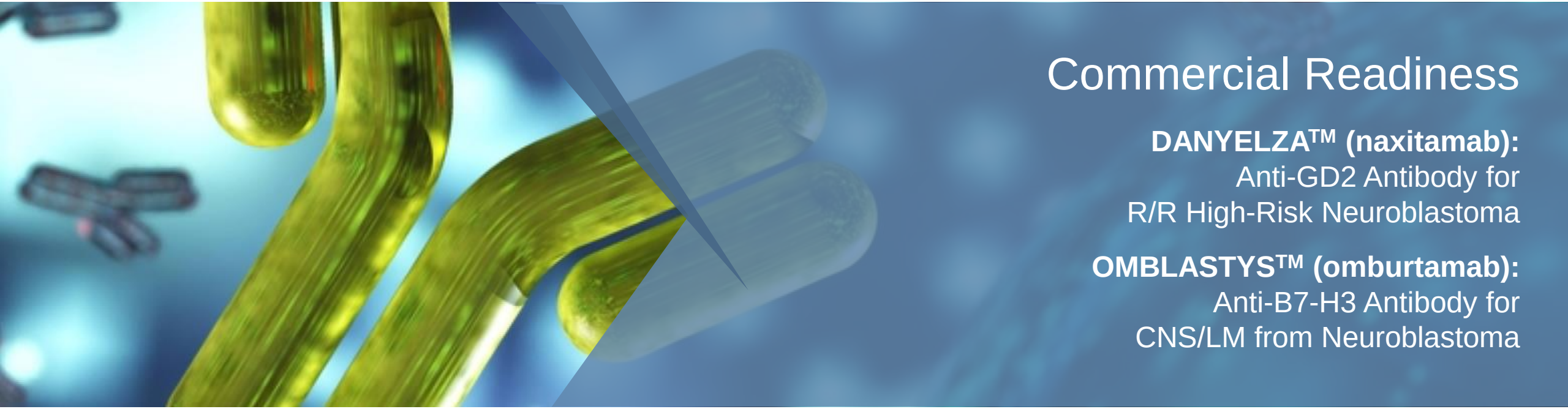


Commercial Readiness

DANYELZA™ (naxitamab):
Anti-GD2 Antibody for
R/R High-Risk Neuroblastoma

OMBLASTYS™ (omburtamab):
Anti-B7-H3 Antibody for
CNS/LM from Neuroblastoma

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

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
- Medical congress presence to raise profile of Y-mAbs

DANYELZA™ naxitamab 40mg/10mL INJECTION

OMBLASTYS™ omburtamab 50mCi INJECTION

Danyelza (naxitamab) and Omblastys (omburtamab) are compounds of investigational nature, and not approved by the FDA.

Naxitamab - Primary and Secondary Refractory Patients

Investigator evaluated responses

Study 12-230 (SIOP October 2019)

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

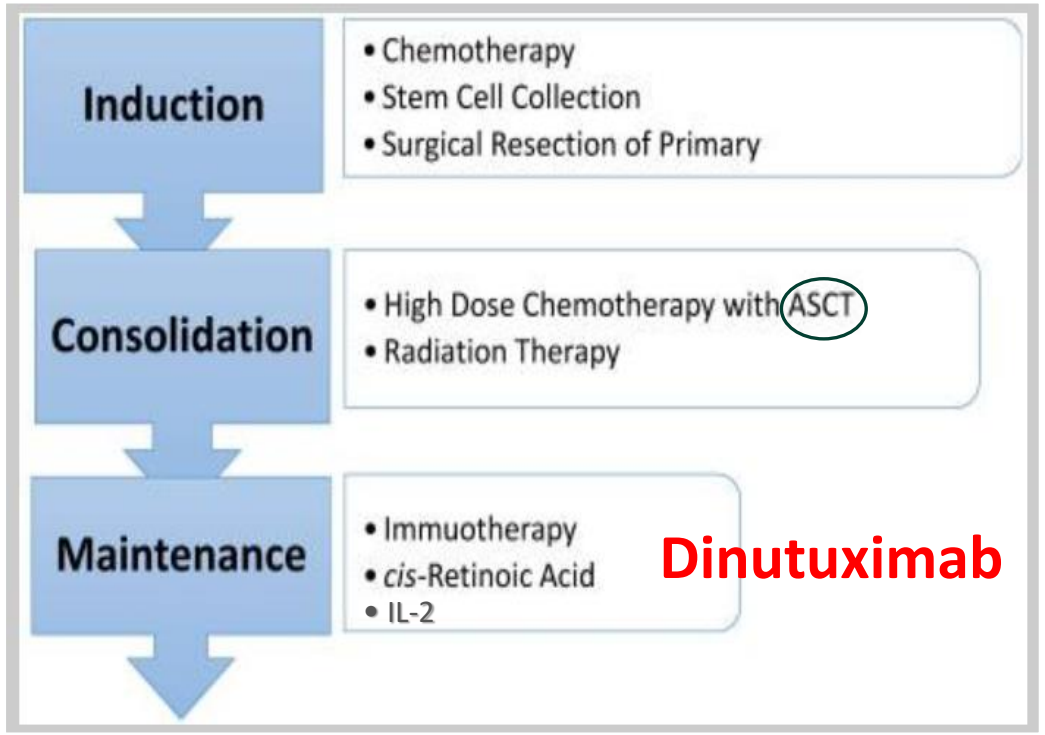
Study 201 (investigator assessed dataset for BLA)

- 24 patients included in BLA filing: ***79% ORR*** *and* ***71% CR***
- In 13 of 14 patients with bone marrow disease, bone marrow was cleared after treatment

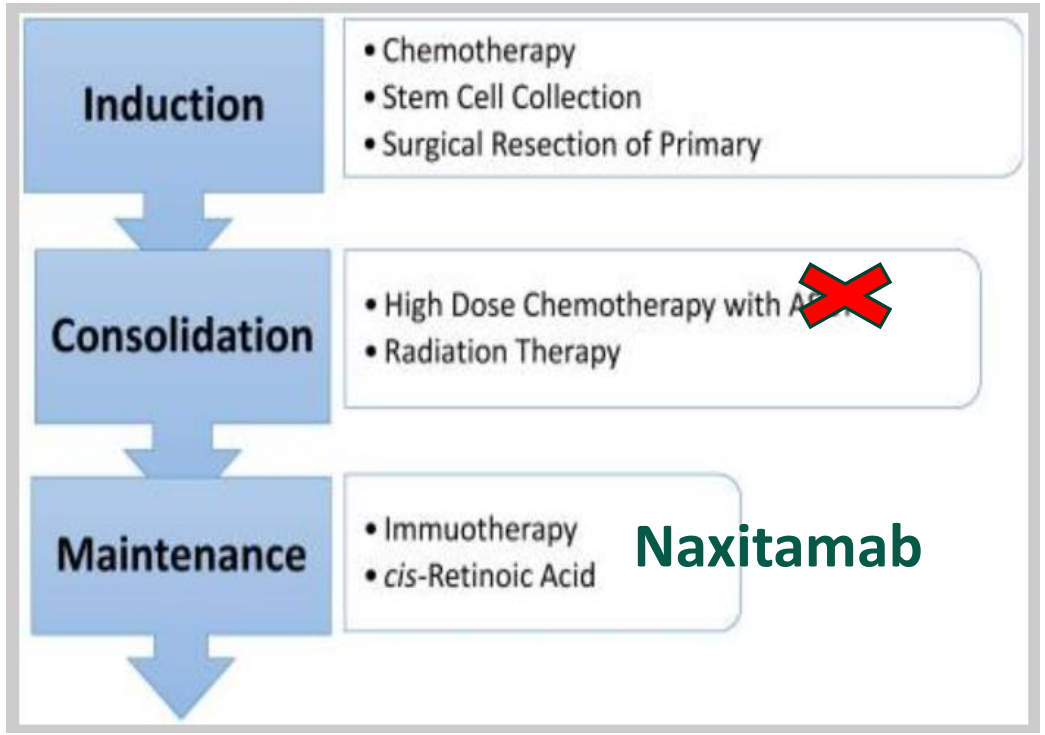
High-Risk Neuroblastoma Treatment Recommendation

COG and MSK/Y-mAbs

COG – 8-20 h infusion (x4 per week)

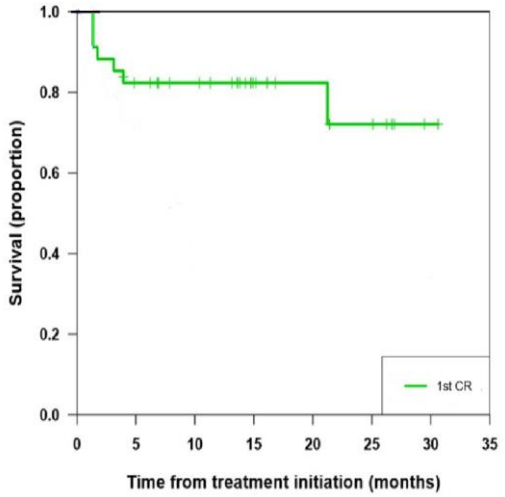


MSK/Y-mAbs – app 30 min infusion (x3 per week)



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

2-year Event Free Survival:

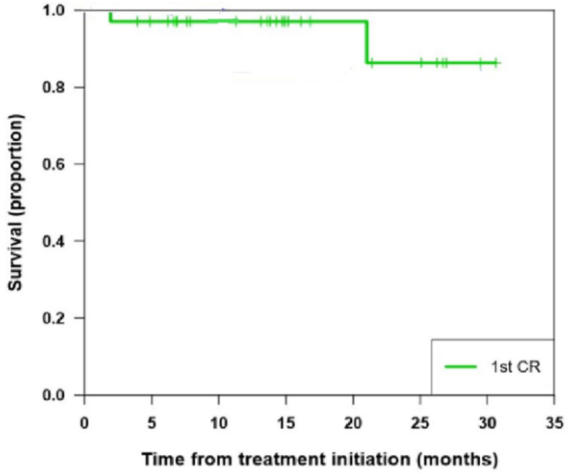


72.1%
(95% CI =
(53.1%, 97.7%))

vs.

dinutuximab 63%

2-year Overall Survival:



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

vs.

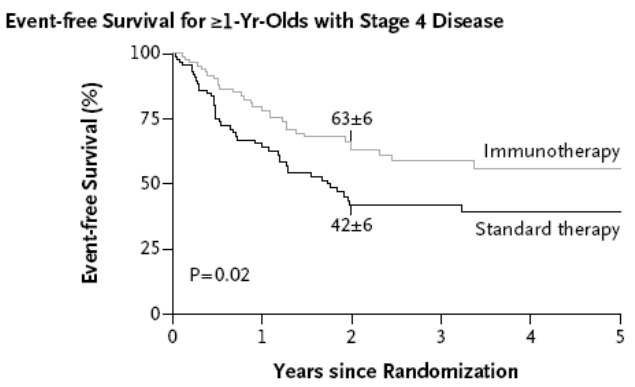
dinutuximab 84%

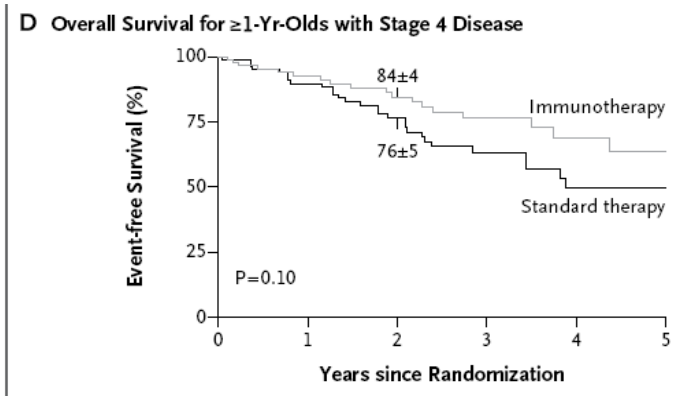
Data from Dr. J. Mora, Y-mAbs R&D Day Dec 11, 2019

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: Key Takeaways

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

Studies 12-230 and 201 formed primary basis of BLA, which was completed in March 2020. PDUFA date in November 2020.

US commercialization in high-risk NB being planned for 2020 – Frontline studies ongoing

Granted ODD, BTD, and RPDD[1]

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

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

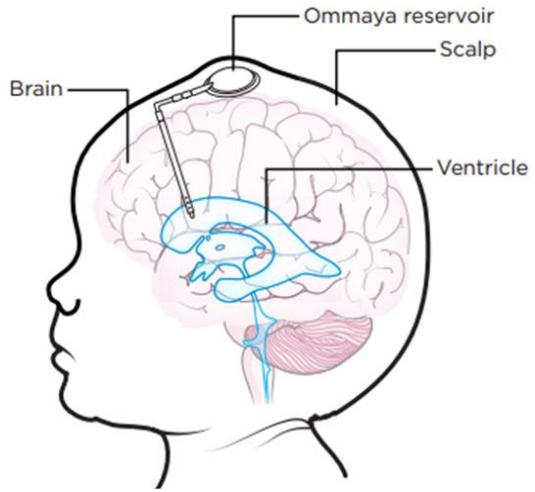
Omburtamab: Regulatory Path to BLA Approval

Regulatory
Studies 03-133 and 101 formed basis of BLA submission:
OS data accepted by FDA for accelerated approval PK and dosimetry comparison required
Data from Study 101 multicenter supports BLA submission
Qualifies for accelerated approval
BLA submission completed in August 2020
ODD, BTD, and RPDD

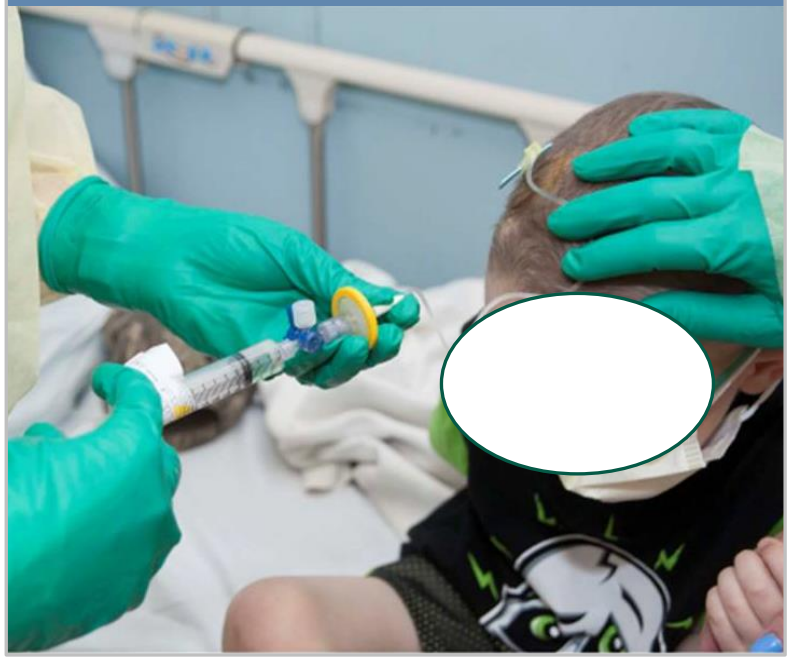
Omburtamab: Delivered in an Outpatient Setting – 2 Doses per Patient

CNS/LM from NB patients

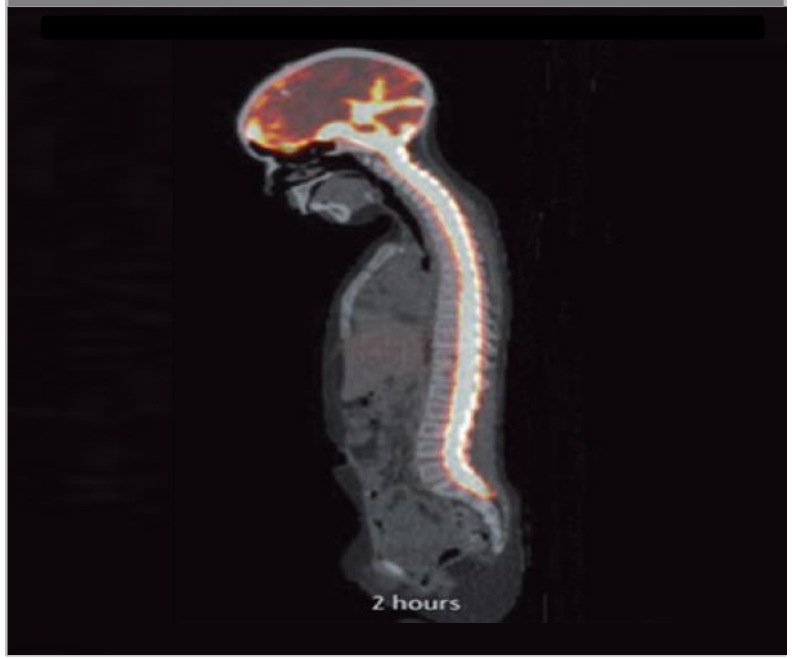
Administration of radiolabeled omburtamab via Ommaya reservoir



Omburtamab being delivered in an outpatient setting



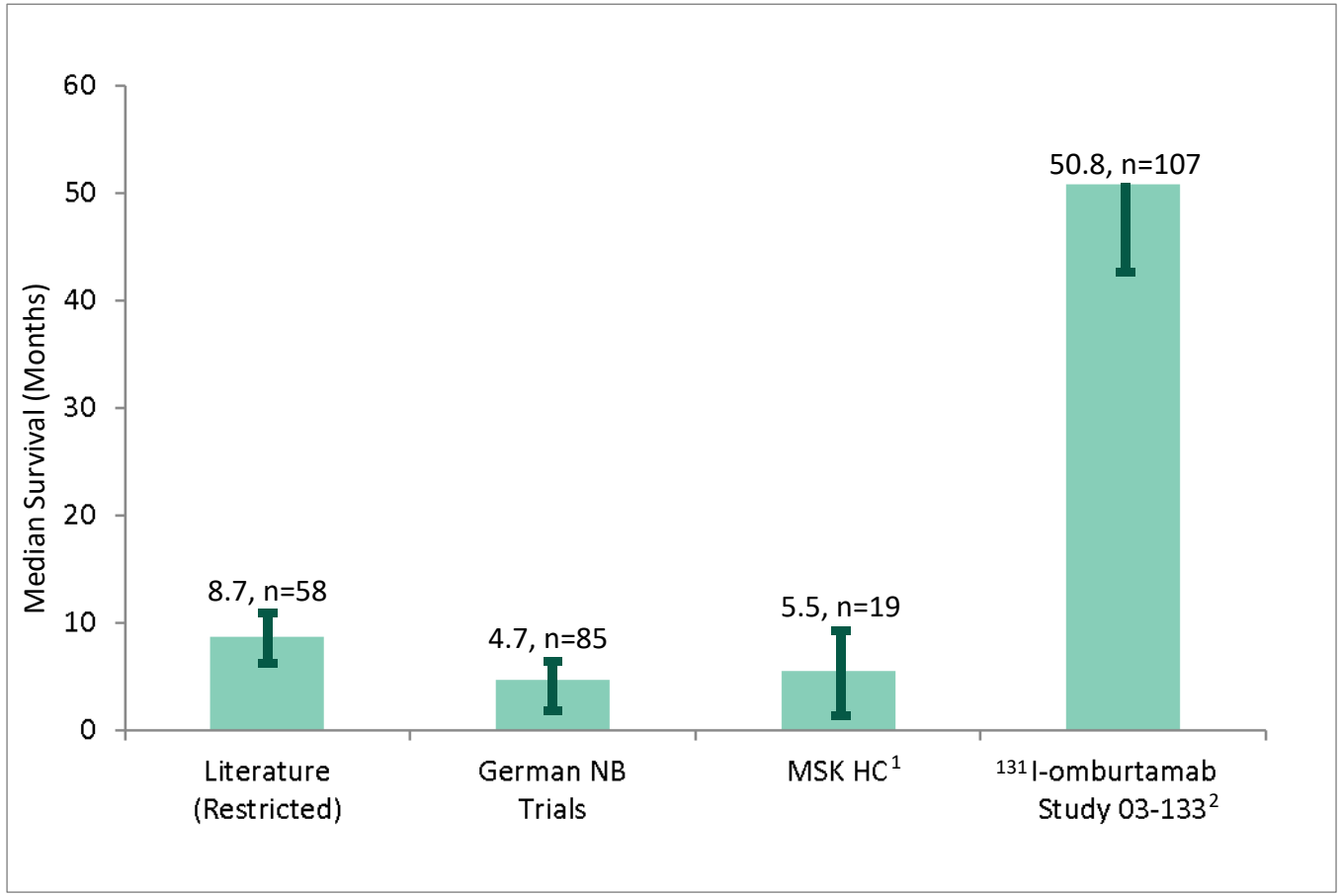
PET scan of distribution of radiolabeled omburtamab two hours after administration



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 form primary basis for rolling BLA submission for CNS/LM from NB – Completed in August 2020
- Large potential market opportunity for the treatment of LM from tumors expressing B7-H3

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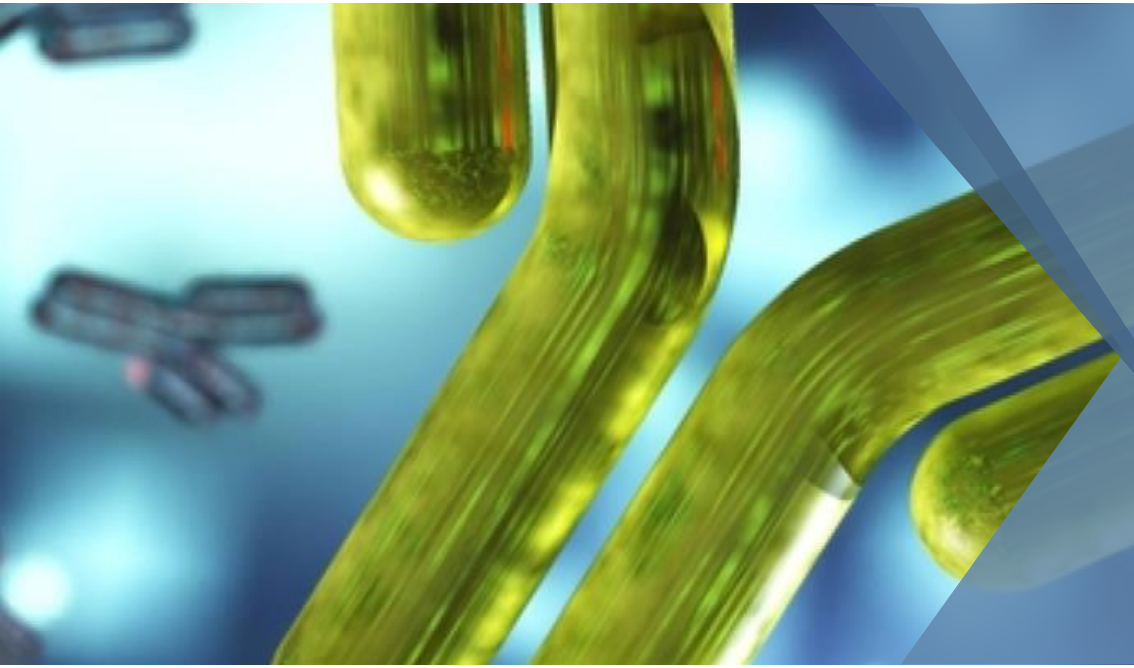


Pipeline expansion

Naxitamab: Frontline NB and Osteosarcoma

^{131}I-omburtamab: DIPG and DSRCT

^{177}Lu-omburtamab-DTPA: Medulloblastoma and Adult CNS/LM Tumors

GD2-GD3 Vaccine: High-Risk NB Patients in Remission

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	BLA submission completed in March 2020. PDUFA date in November 2020. Priority review.
		Phase 2: Primary R/R NB (Pediatric) – Study 12-230	Single-center study – part of 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 study 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

Omburtamab: Broad 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 in Aug 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

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

^{177}Lu-omburtamab-DTPA	Phase 1	Phase 2/Pivotal Study	Highlights
Pediatric	Phase 1: Medulloblastoma - Study 301		Phase 1 to initiate in Q4 2020
Adult	Phase 1: B7-H3 Positive - Study 302		Phase 1 to initiate in Q4 2020

Adult

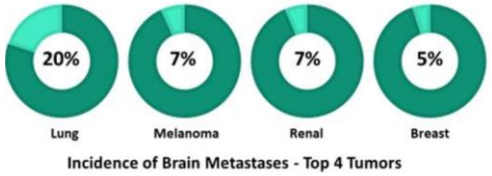
- First indication: **Basket study of B7-H3 positive CNS/LM tumors**
- Prior experience from compartmental treatment of adult patients with ^{131}I-omburtamab

Pediatric

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

Clinical Testing (Adult)

- Experience using ^{131}I-omburtamab in 68 patients with tumors such as sarcoma, melanoma and medulloblastoma
- cGMP production established



Incidence of Brain Metastases - Top 4 Tumors

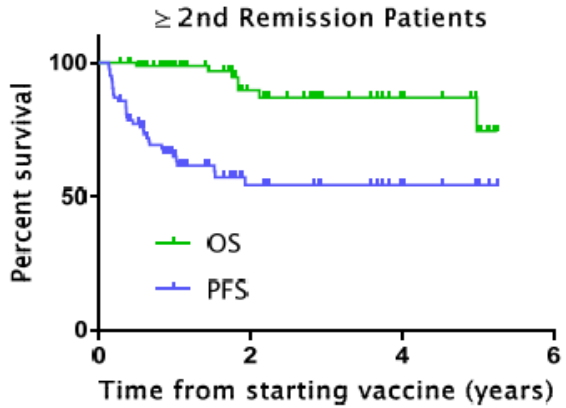
SURVIVAL	
Primary Tumor 5 Years	32.9%
Metastatic	3-6 months

GD2-GD3 Vaccine: A Naxitamab Add-On in Phase 2 at MSK

GD2-GD3 Vaccine	Phase 1	Phase 2/Pivotal Study	Highlights
MSK	Phase 2: NB - Second and later remission – Study 05-075		Phase 2 ongoing at MSK
Multicenter	Phase 2: NB - Second remission - Study 601		Phase 2 multicenter to start Q1 2021

- More than 230 patients on study drug – ODD granted – RPDD granted in 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

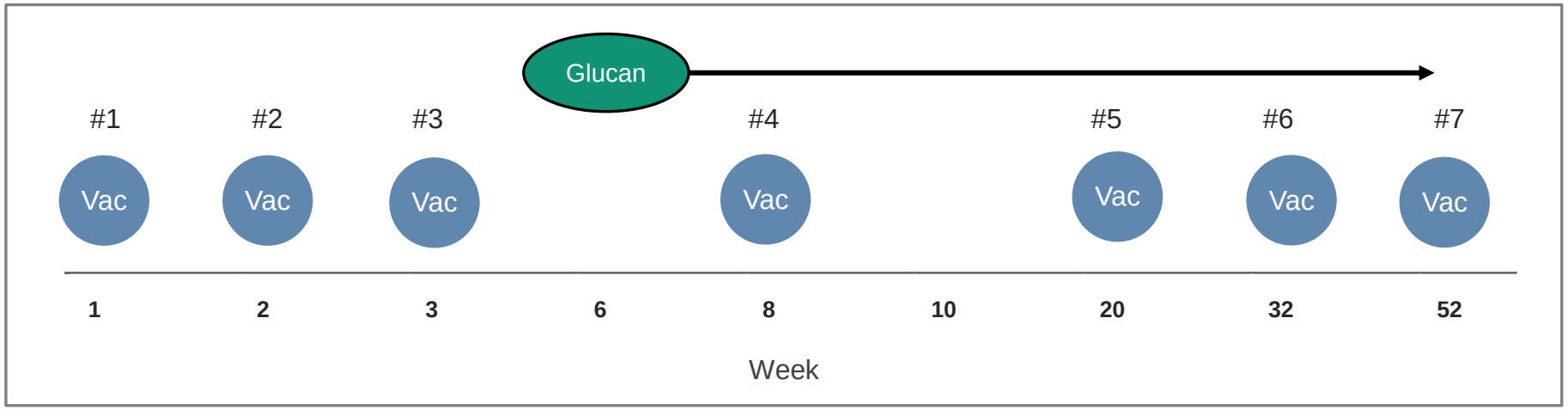
Initial Focus on 2nd and Later Remission Group:
Y-mAbs multi-center Study 601 in NB patient 2nd CR



Phase 2 Vaccine Study at MSK

Clinicaltrials.gov
NCT00911560

7 cycles



Vac = GD2–KLH/GD3-KLH + OPT 821 (QS21)
- → Bivalent 30ug each (sc)
- → 150 ug/m2 each (sc)

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

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

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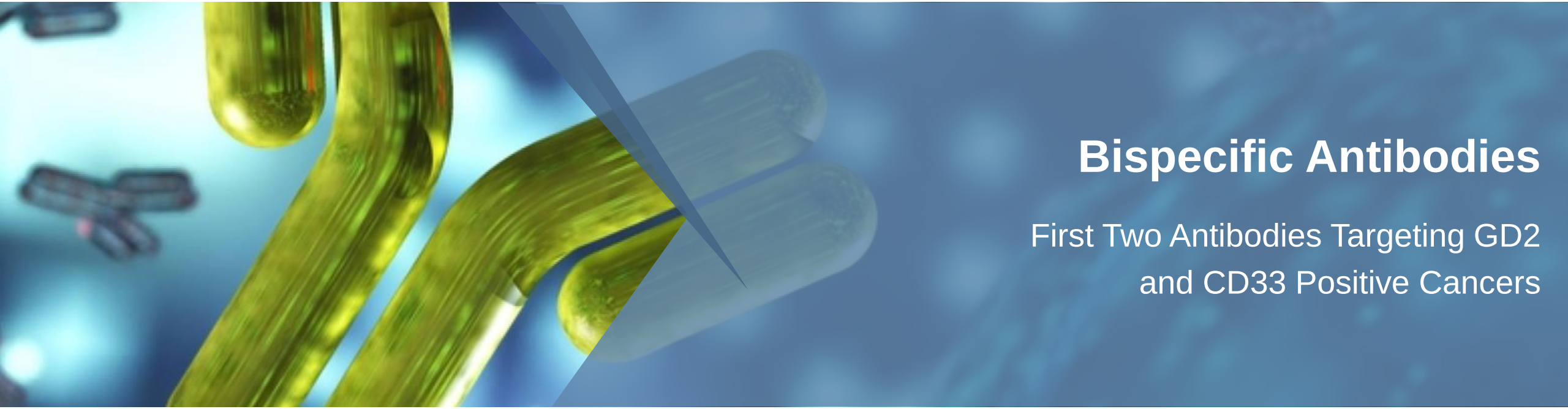
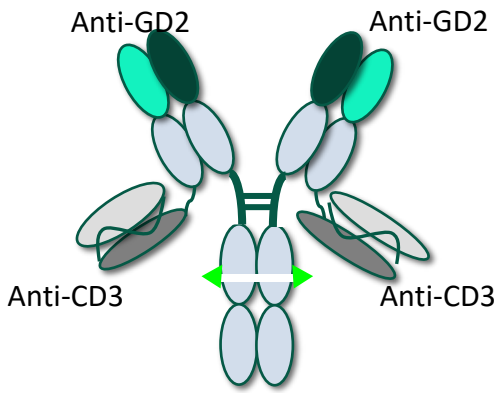


Bispecific Antibodies

First Two Antibodies Targeting GD2 and CD33 Positive Cancers

Nivatrotamab – Planning for three Phase 2 studies

GD2-BsAb	Phase 1	Phase 2/Pivotal Study	Highlights
	Phase 1: Basket trial – Study 18-034		Ongoing since Q1 2019, Cohort 6 recruiting
	Phase 2: SCLC - Study 402		Study planned for Q4 2020
	Phase 2: Third line NB – Based on Study 18-034		Expansion of MSK study into Phase 2 study in Q1 2021
	Phase 2: Refractory Osteosarcoma – Based on Study 18-034		Expansion of MSK study into Phase 2 study in Q1 2021



- Expanding into three Phase 2 studies
- Expanding into adult indications
- Multicenter studies underway

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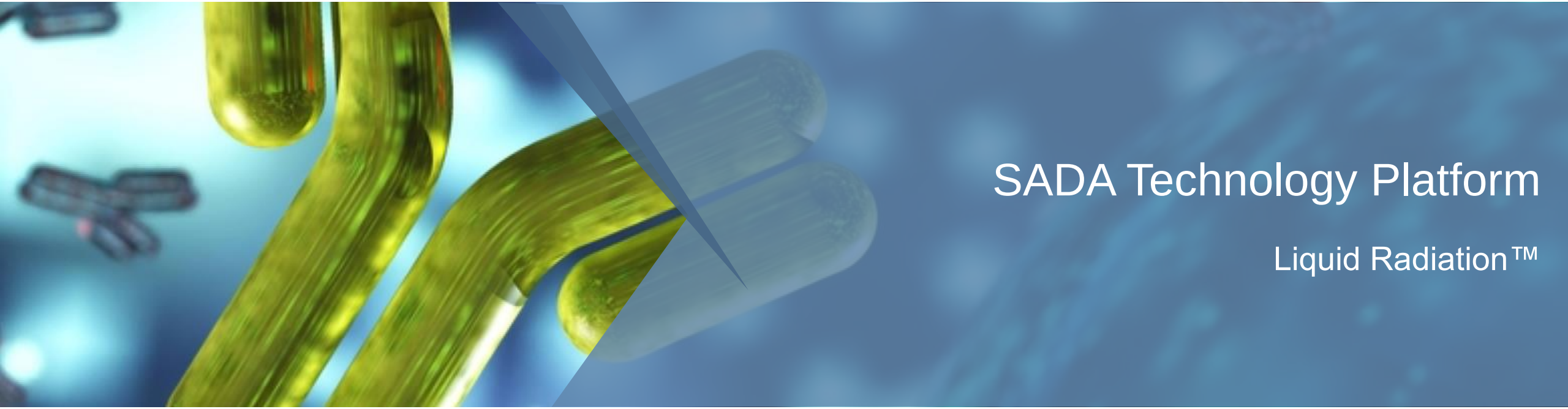


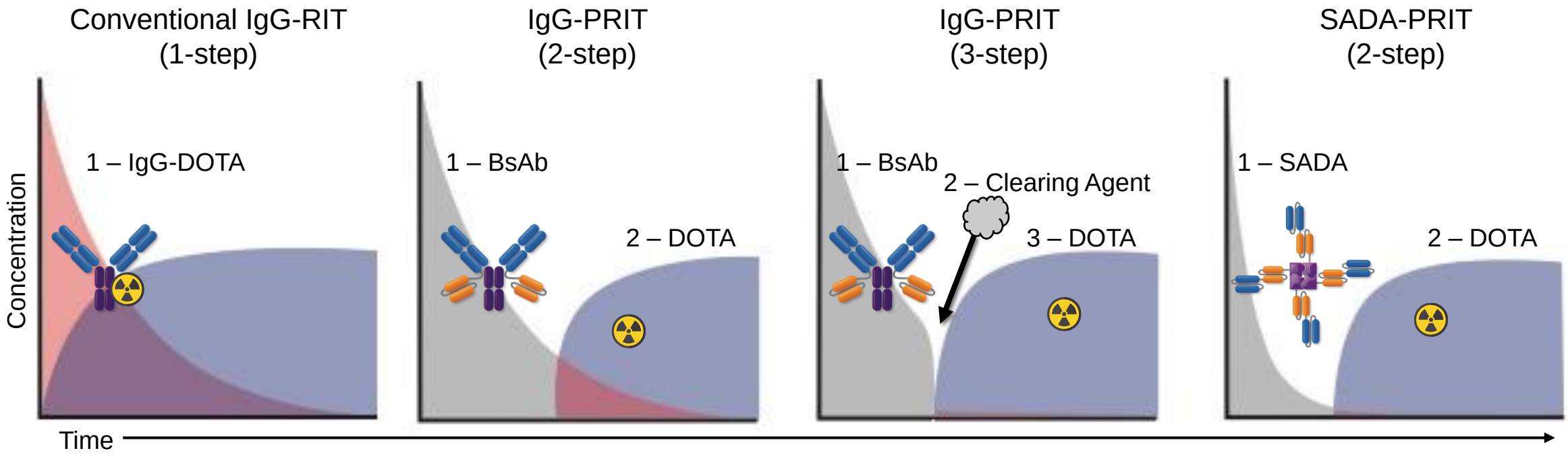
SADA Technology Platform

Liquid Radiation™

Conventional RadioImmunoTherapy (RIT)

Limited by high levels of unwanted radiation exposure to non-target tissues, like the blood

Blood exposure (payload)
Tumor uptake (payload)
Antibody clearance



Low Tumor:Blood Ratio
High toxicity

Mid to Hi Tumor:Blood Ratio
Some toxicity

High Tumor:Blood Ratio
Low toxicity
Needs clearing agent

High Tumor:Blood Ratio
Low toxicity
No clearing agent

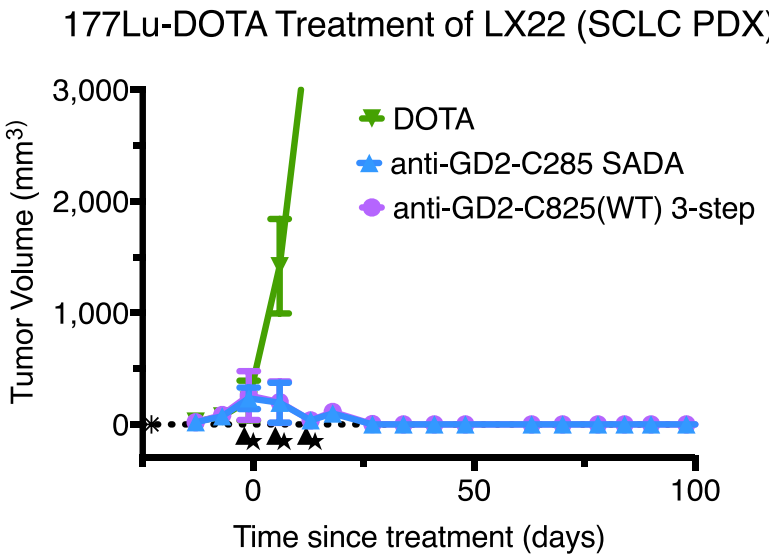
Proof of principle for GD2-SADA

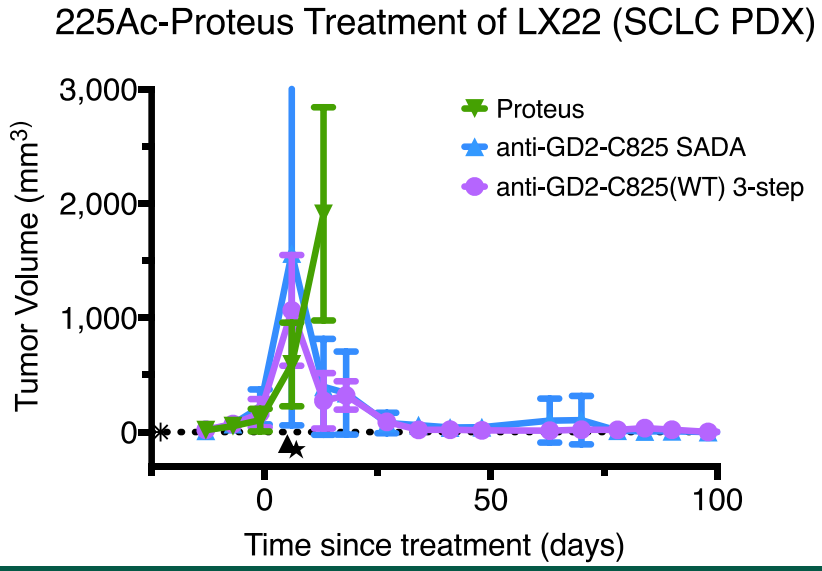
2-step GD2-SADA can successfully treat GD2(+) small cell lung cancer - ablating large, established tumors thereby potentially opening application beyond neuroblastoma for the GD2 construct

Major observations:

SCLC is highly sensitive to pre-targeted radioimmunotherapy

a) First time seeing complete responses in highly aggressive LX22 PDX tumor model
b) 1 dose of 1uCi/mouse of ^{225}Ac was sufficient to completely ablate very large established subcutaneous tumors (5/5 CR)
c) 3 doses of 1mCi/mouse of ^{177}Lu provided very comparable efficacy as well (5/5 CR)
d) 2-step GD2-SADA showed equivalent efficacy to conventional 3-step approach, without needing any clearing agent





Drs. Cheung, Larson, Santich and Cheal have intellectual property rights and interests in technology licensed by MSK to Y-mAbs. Drs. Cheung and Larson also have equity interests in Y-mAbs. MSK has institutional financial interests related to Y-mAbs in the form of intellectual property and associated interests by virtue of licensing agreements between MSK and Y-mAbs.

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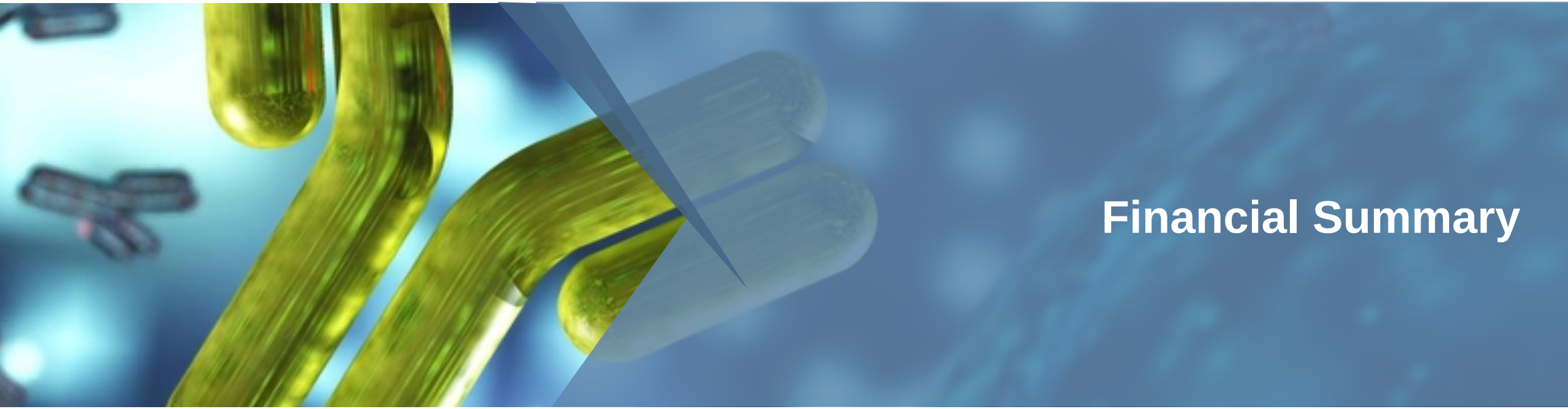

Financial Summary

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

3 RPDDs
Received for leading compounds

$158.1 Million

of cash and cash equivalents as of June 30, 2020

Investment Highlights

- FDA acceptance of BLA for Danyelza™ (naxitamab) for NB. PDUFA date in Nov 2020. Submission for omburtamab completed in Aug 2020. Both products have BTD
- Potential to expand into other indications and lines of therapy, multiple studies ongoing. Expansion includes ^{177}Lu-omburtamab-DTPA, opening Phase 1/2 in Q4 2020
- First BsAb product candidate, nivatrotamab, using the Y-BiClone technology in Phase 1/2. Second BsAb product candidate CD33xCD3
- Novel SADA technology platform, a concept also referred to as Liquid Radiation™
- GD2-GD3 Vaccine - ongoing Phase 2 Study in high-risk NB patients in remission
- Financial strength – secured financing through the end of 2022


THANK YOU