Genmab

Innovating Antibodies, Improving Lives

Investor Presentation

November 2021

Forward looking statement

This presentation contains forward looking statements. The words “believe”, “expect”, “anticipate”, “intend” and “plan” and similar expressions identify forward looking statements. All statements other than statements of historical facts included in this presentation, including, without limitation, those regarding our financial position, business strategy, plans and objectives of management for future operations (including development plans and objectives relating to our products), are forward looking statements. Such forward looking statements involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward looking statements. Such forward looking statements are based on numerous assumptions regarding our present and future business strategies and the environment in which we will operate in the future. The important factors that could cause our actual results, performance or achievements to differ materially from those in the forward looking statements include, among others, risks associated with product discovery and development, uncertainties related to the outcome of clinical trials, slower than expected rates of patient recruitment, unforeseen safety issues resulting from the administration of our products in patients, uncertainties related to product manufacturing, the lack of market acceptance of our products, our inability to manage growth, the competitive environment in relation to our business area and markets, our inability to attract and retain suitably qualified personnel, the unenforceability or lack of protection of our patents and proprietary rights, our relationships with affiliated entities, changes and developments in technology which may render our products obsolete, and other factors. Further, certain forward looking statements are based upon assumptions of future events which may not prove to be accurate. The forward looking statements in this document speak only as at the date of this presentation. Genmab does not undertake any obligation to update or revise forward looking statements in this presentation nor to confirm such statements to reflect subsequent events or circumstances after the date made or in relation to actual results, unless required by law.

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On the Road to 2025: Evolving Into a Fully Integrated Biotech

Core Purpose

To improve the lives of patients
by creating & developing innovative antibody products

Our Strategy

- ✓ Focus on core competence
- ✓ Turn science into medicine
- ✓ Build a profitable & successful biotech

Vision

By 2025, our own product has transformed cancer treatment and we have a pipeline of knock-your-socks off antibodies

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Our Core Purpose, Strategy & Vision Guide Our Work

Well Positioned for Future Growth

Consistent and solid track record

Innovative proprietary technologies and first-in-class / Best-in-class pipeline including Genmab's first approved medicine

Partnerships with innovators and industry leaders

Strong Financials to invest in growth opportunities

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Consistent, Solid Track Record Fuels Our Growth:

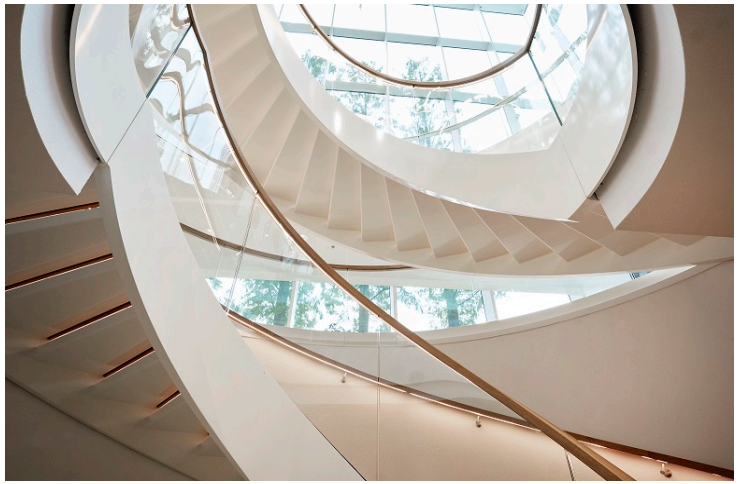
Over 20 Years of Achievements

- ✓ 39 Cumulative INDs since 1999
- ✓ Innovative clinical pipeline: 6 Genmab owned ≥50%
- ✓ First BLA submission

- ✓ 5 approved therapies that include Genmab's innovation
- ✓ First product on the market: TIVDAK™ (tisotumab vedotin-tftv)*
- ✓ 8 Years of profitability & expanding top line

tivdak™
tisotumab vedotin-tftv
for injection 40 mg

- ✓ Investing in our capabilities
- ✓ Experienced, international management team
- ✓ Dual-listed in US & DK



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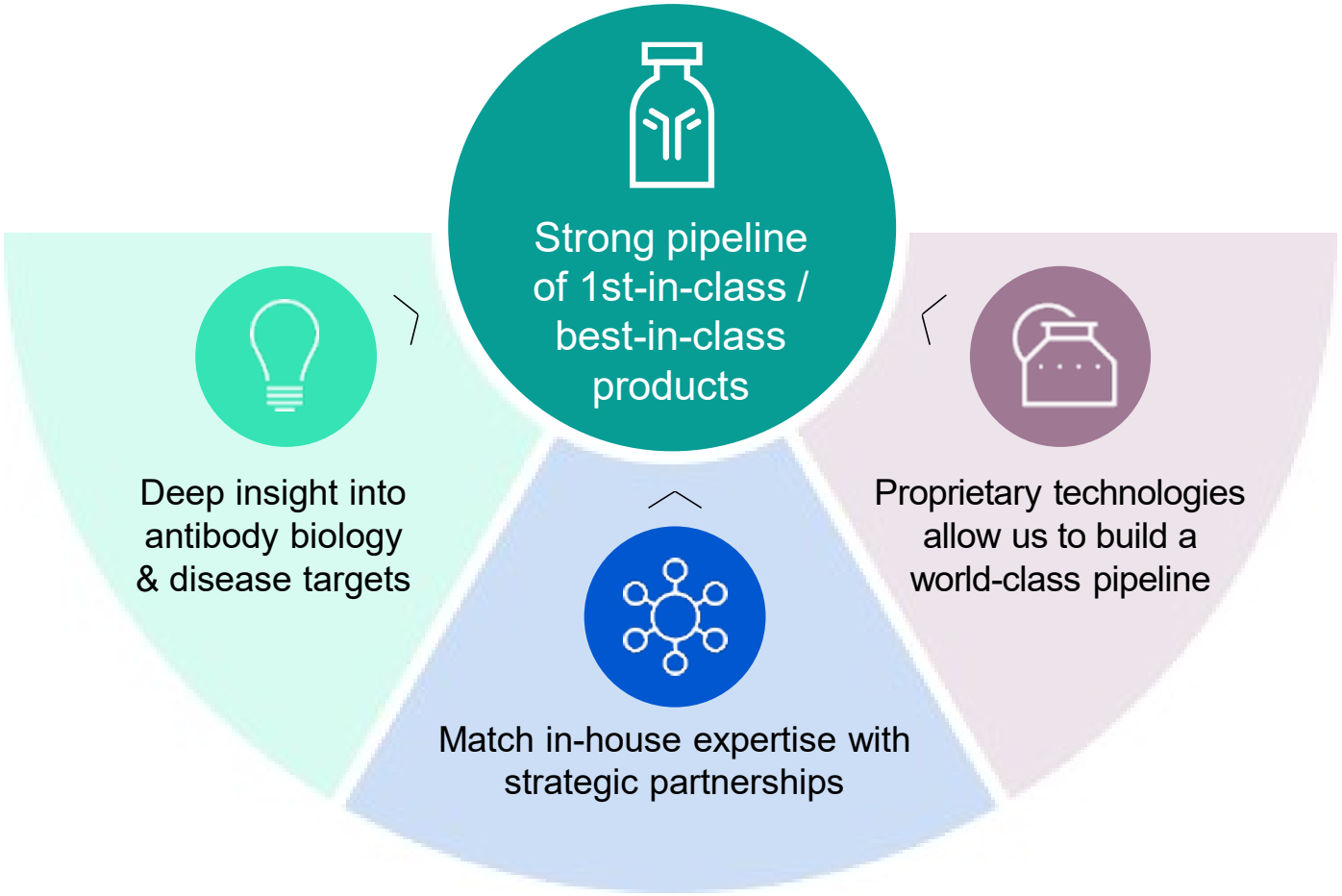
*Co-development Genmab and Seagen

The Genmab Difference



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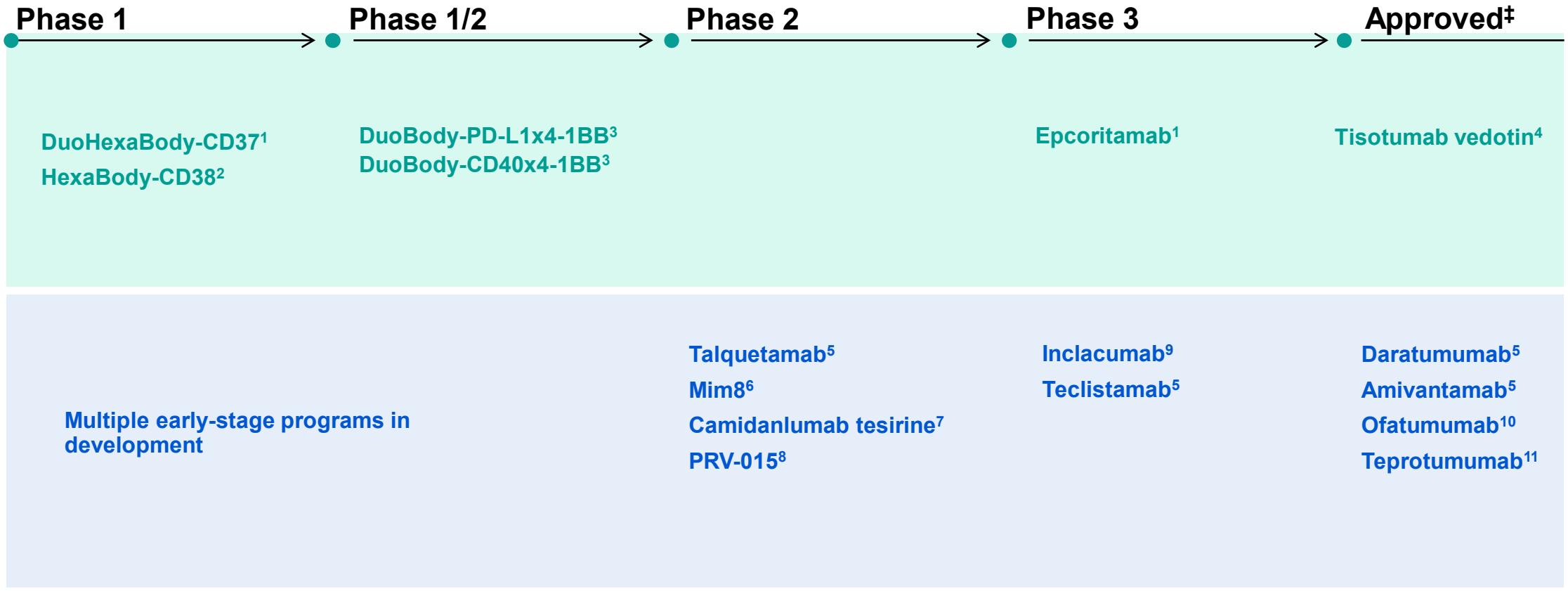
Innovative Clinical Pipeline: Genmab Proprietary* and Partnered Products - Most Advanced Development Phase



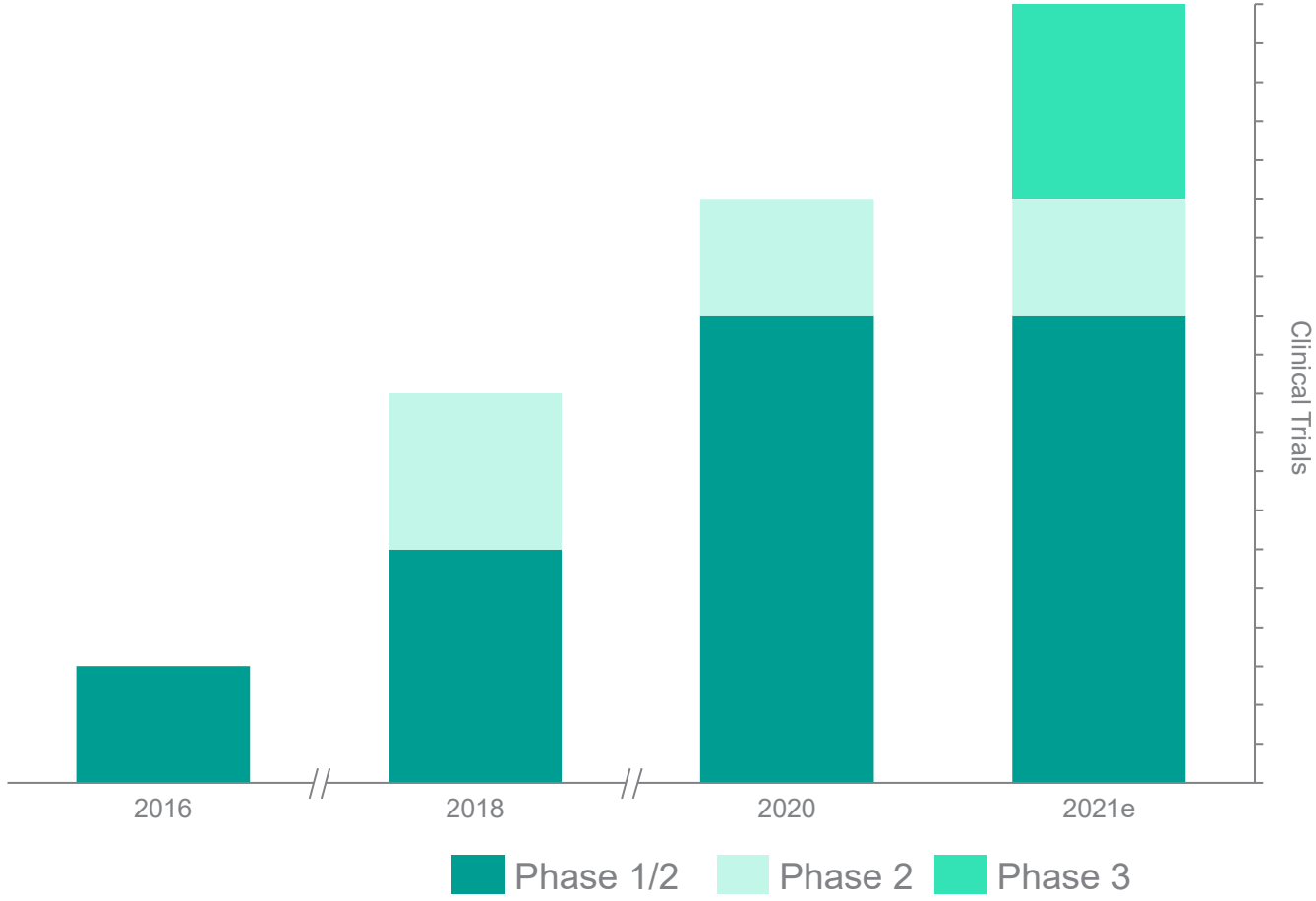
*Products where Genmab has ownership of at least 50%
‡See local prescribing information for full indications / safety information
[1]50:50 partnership with AbbVie; [2]Genmab is developing HexaBody-CD38 in an exclusive worldwide license and option agreement with Janssen Biotech, Inc; [3]50:50 partnership with BioNTech; [4]50:50 partnership with Seagen; [5]Development by Janssen Biotech, Inc; [6]Development by Novo Nordisk; [7]Development by ADC Therapeutics; [8]Development by Provention Bio; [9]Development by Global Blood Therapeutics [10]Development by Novartis; [11]Development by Horizon Therapeutics, approved in the US

Investing in the Breadth & Depth of our Pipeline

R&D Engine:
Our Technology Platforms

- DuoBody®
- HexaBody®
- DuoHexaBody®
- HexElect®

Expanding & maturing trials for our proprietary* assets



*Genmab owned ≥50%; number of active clinical trials >20 expected in 2021

First Genmab Approved Therapy: TIVDAK™ (tisotumab vedotin-tftv)

in Collaboration with Seagen

First-in-class

- Antibody–drug conjugate (ADC) directed against Tissue Factor (TF)
- U.S FDA approval: recurrent or metastatic cervical cancer with disease progression on or after chemotherapy*
- First and only approved ADC for treatment in this patient population
- Phase 3 study in Recurrent or Metastatic Cervical Cancer (innovaTV 301) recruiting

Very favorable efficacy with manageable safety profile

- Very favorable overall response in Phase 2 innovaTV 204 study vs. prior reported SoC, with manageable safety profile

Broad population in innovaTV 204 study

- Not restricted to biomarker selection
- Pre-treated as per current SoC
- Regardless of histology

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*See U.S. prescribing information for full indication and safety information.

In Phase 2 innovaTV 204 study, basis of U.S. FDA approval: Tisotumab vedotin demonstrated very favorable, durable responses and a manageable safety profile in 2L+ r/m cervical cancer patients

Epcoritamab
in Collaboration with AbbVie

Novel MoA
- Bispecific T cell engager [DuoBody]

Potential best-in-class
- Potential for Improved efficacy & safety

Subcutaneous administration
- Enhanced convenience & ease of administration for HCPs & patients compared to IV infusion

Comprehensive development plan
- Trials in several B-cell malignancies
- Trials across multiple lines of therapy
- Exploration as both monotherapy and in combination

Currently investigated in several clinical trials across B-cell NHL histologies / in various combinations: Phase 3 DLBCL; Phase 2 expansion part ongoing; Phase 1b exploring combinations with multiple SoC treatments

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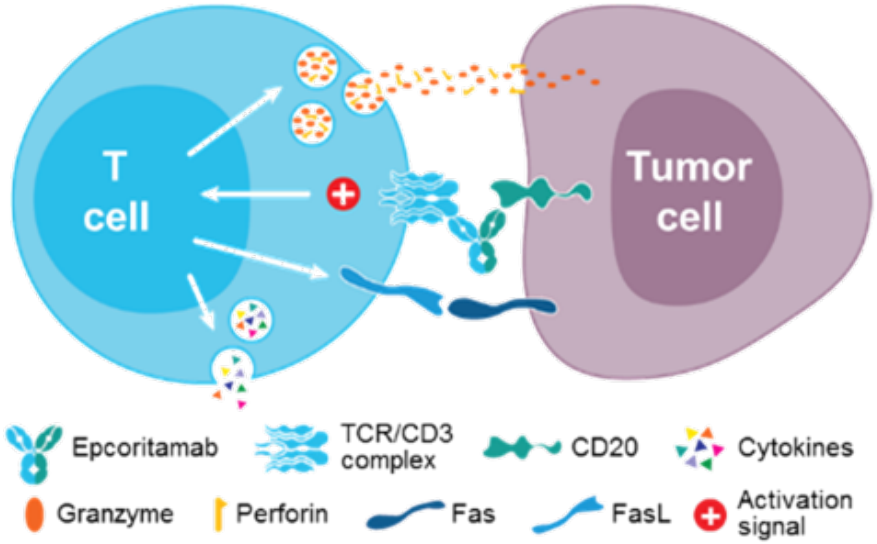
Epcoritamab: Potential Best-in-Class



Updated Data Presented at ESH 2021*

Novel, off-the-shelf therapy with convenient SubQ administration

- Phase 1/2 study (NCT03625037) in patients with relapsed, progressive or refractory B-cell lymphoma
- At RP2D of 48 mg, epcoritamab enabled more patients to achieve a response, including CR

Binds to distinct epitope

- Different from that of rituximab and obinutuzumab:
- Has potential to be partner of choice in combinations with SoC therapies containing rituximab

Favorable safety profile

- CRS events were Grade 1 and 2, resolved with SoC CRS mgmt. strategies
- No pts discontinued therapy due to treatment-related AEs

At median follow-up of 14.9 mos, epcoritamab continues to demonstrate encouraging single-agent activity and manageable safety profile

- Pts with R/R DLBCL receiving epcoritamab ≥12 mg (n=22), at a median follow-up of 11.1 mos, ORR was 68%; median DoR not reached and median PFS 9.1 mos
- Pts with R/R DLBCL receiving epcoritamab ≥48 mg (n=11), ORR was 91%; at a median follow-up of 11.1 months, median DoR was 9.2 mos and median PFS 11.8 mos
- Pts with R/R FL receiving epcoritamab ≥12 mg, at a median follow-up of 12.2 months, median DoR not reached

*"Antitumor Activity and Safety Profile of Subcutaneous Epcoritamab in Patients With Relapsed/Refractory B-Cell Non-Hodgkin Lymphoma: Dose-escalation Data From the EPCORE NHL-1 Trial" Lugtenburg et al.

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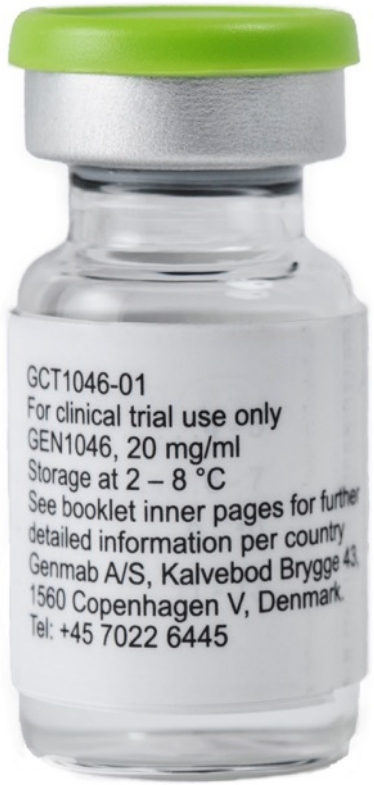
DuoBody-PD-L1x4-1BB (GEN1046) & DuoBody-CD40x4-1BB (GEN1042) in Collaboration with BioNTech

GEN1046

- First-in-class bispecific next generation checkpoint immunotherapy
- Designed to enhance T-cell and NK cell function through conditional 4-1BB co-stimulation
- Simultaneously blocking the PD-L1 axis
- Enhances proliferation and cytokine production of activated T-cells
- Activates immune cells in the tumor-draining lymph nodes
- Induces tumor regression *in vivo*.



GEN1042

- First-in-class bispecific antibody
- Designed to conditionally activate both CD40-expressing antigen-presenting cells (APC) and 4-1BB-expressing T cells
- Conditionally activates T cells and APC in the presence of CD40-expressing cells

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Earlier Stage Clinical Development

DuoHexaBody-CD37

- Combination of DuoBody & HexaBody platforms
- Novel target for hematological malignancies
- Unique MoA
- Dose escalation ongoing
- 50:50 co-development with AbbVie

HexaBody-CD38

- Incorporates proprietary HexaBody technology
- Highly promising data pre-clinical models for MM, lymphoma & AML
- Could potentially add to and broaden DARZALEX franchise
- Dose escalation ongoing
- Developing in exclusive worldwide license and option agreement with Janssen

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Approved Antibody Therapeutics Incorporating Genmab's Innovation

Janssen Biotech, Inc:
DARZALEX® (daratumumab) / DARZALEX *FASPRO*® (daratumumab and hyaluronidase-fihj)

Redefining Treatment of Multiple Myeloma (MM)*

- Subcutaneous daratumumab -first and only SC CD38 mAb approved for treatment of MM & AL amyloidosis*
- Genmab entitled to tiered royalty of 12-20% of net sales

Novartis AG:
Kesimpta® (ofatumumab)

Approved in U.S., EU & Japan in relapsing multiple sclerosis (RMS)*

- First B-cell therapy that can be self-administered by patients at home using Sensoready® autoinjector pen
- Genmab entitled to royalty of 10% of net sales

Horizon Therapeutics:
TEPEZZA® (teprotumumab-trbw)

Approved in U.S. in thyroid eye disease (TED)*

- First and only U.S. FDA-approved medicine for treatment of TED
- Genmab entitled to mid single digit royalty of net sales

Janssen Biotech Inc:
RYBREVANT® (amivantamab-vmjw)

Approved in U.S. for patients with locally advanced or metastatic NSCLC with EGFR Exon 20 insertion mutations*

- First regulatory approval for a product created using Genmab's DuoBody® technology platform
- Genmab entitled to royalties on net sales

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*See local prescribing information for full indication and safety information.

Building Our Capabilities

Research

Track record of success and investing for tomorrow

- State-of-the-art facilities
- Novel technologies and formats
- External innovation

Development

Scaling up to expand from early to late stage

- Clinical development & operations
- Disease area expertise
- Medical Affairs, Safety and Regulatory

Commercialization

Step change in our business

- Leadership team in place
- Focus on U.S. & Japan
- Building expanded team

Enabling functions to support growth & manage risk | Data Sciences to drive insights

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2021 Guidance: Recurring Revenue Growth and Focused Investments

Key Figures	DKKM	~USDM*
Revenue	7,900 – 8,500	1,317 – 1,417
Operating Expenses	(5,300) – (5,600)	(884) – (934)
Operating Income	2,300 – 3,200	383 - 533

DARZALEX royalties of ~DKK 5.8B to ~DKK 6.2B to drive significant recurring revenue growth

Operating expenses continue to be driven by expanding and accelerating our clinical pipeline and broadening organizational capabilities

Significant underlying profitability

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*2021 Guidance – November 10, 2021 / USD 1.00 = DKK 6.00

Key 2021 Priorities: Build a Strong Differentiated Product Pipeline & Bring Own Medicines to Market

Priority	✓	Targeted Milestones
Bring our own medicines to patients	✓	» Tisotumab vedotin – U.S. FDA decision on BLA and progress to market
	X*	» Tisotumab vedotin – JNDA submission in cervical cancer
		» Epcoritamab – acceleration & maximization of development program by advancing expansion cohorts and initiating additional Phase 3 trials
Build world-class differentiated product pipeline		» DuoBody-PD-L1x4-1BB – expansion cohort data
		» DuoBody-CD40x4-1BB – dose escalation data
	✓	» Tisotumab vedotin – data in other tumor indication
		» Earlier stage products – progress & expand innovative product pipeline
Become leading integrated innovation powerhouse	✓	» Operational commercialization model in US & Japan
		» Further strengthen solid financial foundation

*Potential JNDA filing timeline postponed to include Phase 3 innovaTV 301 data

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Well On Track to Reaching Our 2025 Vision

Successful track record

	Strategy	2025 Vision
Focus Areas	▪ Focus on core competence ▪ Turn science into medicine ▪ Build a profitable and successful biotech	By 2025, our own product has transformed cancer treatment and we have a pipeline of knock-your-socks-off antibodies
Progress	**Sustained Execution**	**Building fully integrated biotech innovation powerhouse**

Genmab profile today

1 approved therapy and 1 potential near-term Genmab owned product launch

Imperative to invest

Remain focused and disciplined

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Appendix

A Leading International Biotech With Large Free Float

- Ordinary shares: Nasdaq Copenhagen, DK
- ADSs: Nasdaq Global Select USA
- Shares world-wide incl: US, DK, NL, UK
- Market Cap:
  - ~ DKK 200bn
  - ~ USD 31bn
- Shares outstanding: ~66M

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As of November 4, 2021

Successful Network of Collaborations: Broadening Differentiated Antibody Pipeline & Supporting Our Vision

Discovery / Academic Collaborations

Lundbeck

Princeton University

abbvie

Netherlands Cancer Institute – Antoni van Leeuwenhoek

TEMPUS

Leids Universitair Medisch Centrum

Atrium Health Levine Cancer Institute

UMC Utrecht

BOLT Biotherapeutics

Technology Collaborations

BioNTech

BliNK Biomedical

CureVac – the RNA people®

immatics

Janssen – Pharmaceutical Companies of Johnson & Johnson

novo nordisk

Roche Diagnostics

Product Partnerships & Collaborations

ADC Therapeutics

Amgen

BioNTech

Bristol Myers Squibb

iDD biotech – International Drug Development Bio Technologies

Janssen – Pharmaceutical Companies of Johnson & Johnson

Lundbeck

Novartis

novo nordisk

Roche

Seagen

abbvie

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Genmab's Commitment to Society:
Building a Socially Responsible & Sustainable Company

Anchored in our Core Purpose, Values & Vision

- To improve the lives of patients by creating and developing innovative antibody products
- By 2025 our own product has transformed cancer treatment and we have a pipeline of knock-your-socks-off antibodies

Focused on four main areas to guide our programs

- Science-Driven Health Innovations
- Employee Well-Being & Vitality
- Ethics & Transparency
- Environment & Community Sustainability

Commitment to UNSDG and Aligned to ESG Priorities

- Ensures that Genmab carries out CSR activities effectively & communicates clearly and openly
- Focus on Environment, Society and Governance reporting

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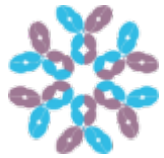
Innovation Powerhouse:
Cutting Edge Proprietary Technologies

Technology		Principle	Applications
DuoBody®		Bispecific antibodies	Dual targeting
HexaBody®		Target-mediated enhanced hexamerization	Enhanced potency
DuoHexaBody®		Bispecific antibodies with target-mediated enhanced hexamerization	Dual targeting + enhanced potency
HexElect®		Two co-dependent antibodies with target-mediated enhanced hexamerization	Dual targeting + enhanced potency & selectivity

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Innovative Pipeline: Genmab's Proprietary[1] Products

Product	Target	Developed By	Disease Indications	Most Advanced Development Phase
				Pre-Clinical / 1 / 1/2 / 2 / 3 / Approved
TIVDAK (tisotumab vedotin-tftv)	TF	Co-development Genmab / Seagen	Cervical cancer[2]	✓
Tisotumab vedotin			Ovarian cancer	
			Solid tumors	
Epcoritamab	CD3, CD20	Co-development Genmab / AbbVie	Relapsed/refractory DLBCL	
			B-cell NHL	
			B-cell NHL (combo)	
			Relapsed/refractory CLL	
DuoBody-PD-L1x4-1BB (GEN1046)	PD-L1, 4-1BB	Co-development Genmab / BioNTech	Solid tumors	
DuoBody-CD40x4-1BB (GEN1042)	CD40, 4-1BB	Co-development Genmab / BioNTech	Solid tumors	
DuoHexaBody-CD37 (GEN3009)	CD37	Co-development Genmab / AbbVie	Hematologic malignancies	
HexaBody-CD38 (GEN3014)	CD38	Genmab[3]	Hematologic malignancies	

[1]Certain product candidates in development with partners, as noted. [2]See US prescribing information for indication and safety information; [3]Genmab is developing HexaBody-CD38 in an exclusive worldwide license and option agreement with Janssen Biotech, Inc

Approved Medicines Incorporating Genmab Innovation

Including Proposed Label Expansions for Marketed Products

Product	Developed & Marketed By	Disease Indications	Most Advanced Development Phase
			Pre-Clinical / 1 / 1/2 / 2 / 3 / Approved
DARZALEX (daratumumab) & **DARZALEX *FASPRO*** (daratumumab and hyaluronidase-fihj)	Janssen Biotech Inc. (Tiered royalties to Genmab on net global sales)	Multiple myeloma*	✓
		AL Amyloidosis*	✓
Daratumumab		Non-MM blood cancers	
Kesimpta (ofatumumab)	Novartis (Royalties to Genmab on net global sales)	Relapsing multiple sclerosis*	✓
TEPEZZA (teprotumumab-trbw)	Horizon Therapeutics (under sublicense from Roche, royalties to Genmab on net global sales)	Thyroid eye disease*	✓
RYBREVANT (amivantamab-vmjw)	Janssen (Royalties to Genmab on net sales)	Non-small cell lung cancer*	✓
Amivantamab		Advanced or metastatic gastric or esophageal cancer	

*See local country prescribing information for indication and safety information

≥Phase 2 Clinical-stage Programs Incorporating Genmab's Innovation

Product	Technology	Developed By	Disease Indications	Most Advanced Development Phase
				Pre-Clinical 1 1/2 2 3 Approved
Inclacumab	UltiMAb®*	Global Blood Therapeutics	VOC in sickle cell disease	
Teclistamab (JNJ-64007957)	DuoBody	Janssen	Relapsed or refractory MM	
Talquetamab (JNJ-64407564)	DuoBody	Janssen	Relapsed or refractory MM	
Camidanlumab tesirine (ADCT-301)	UltiMAb	ADC Therapeutics	Relapsed /Refractory Hodgkin Lymphoma	
Mim8	DuoBody	Novo Nordisk	Healthy volunteers & hemophilia A	
PRV-015 (AMG 714)	UltiMAb	Provention Bio	Celiac disease	

*UltiMab® transgenic mouse technology licensed from Medarex, Inc., a wholly owned subsidiary of Bristol Myers Squibb
VOC = vaso-occlusive crises

Tisotumab Vedotin in Cervical Cancer

Designed to Address a High Unmet Medical Need

Recurrent or metastatic cervical cancer

- Poor prognosis advanced / recurrent cervical cancer
  - RR standard therapies generally <15%
  - Median OS 6-8 months
- Data ORR & survival after progression on 1L bevacizumab + doublet chemotherapy are limited

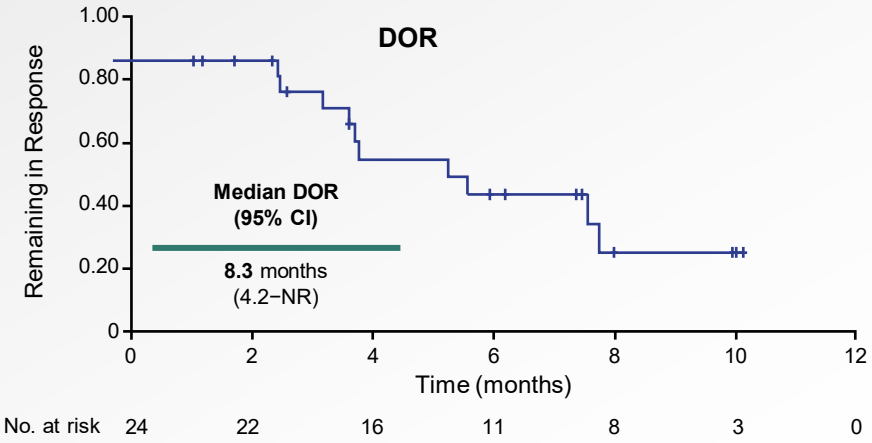
Conclusions*

(previously treated recurrent or metastatic cervical cancer)

- Compelling and durable antitumor activity with manageable and tolerable safety profile
- ORR 24%; CR: 7%
- Median DOR 8.3 mo
- Median PFS (4.2 mo) and OS (12.1 mo) encouraging

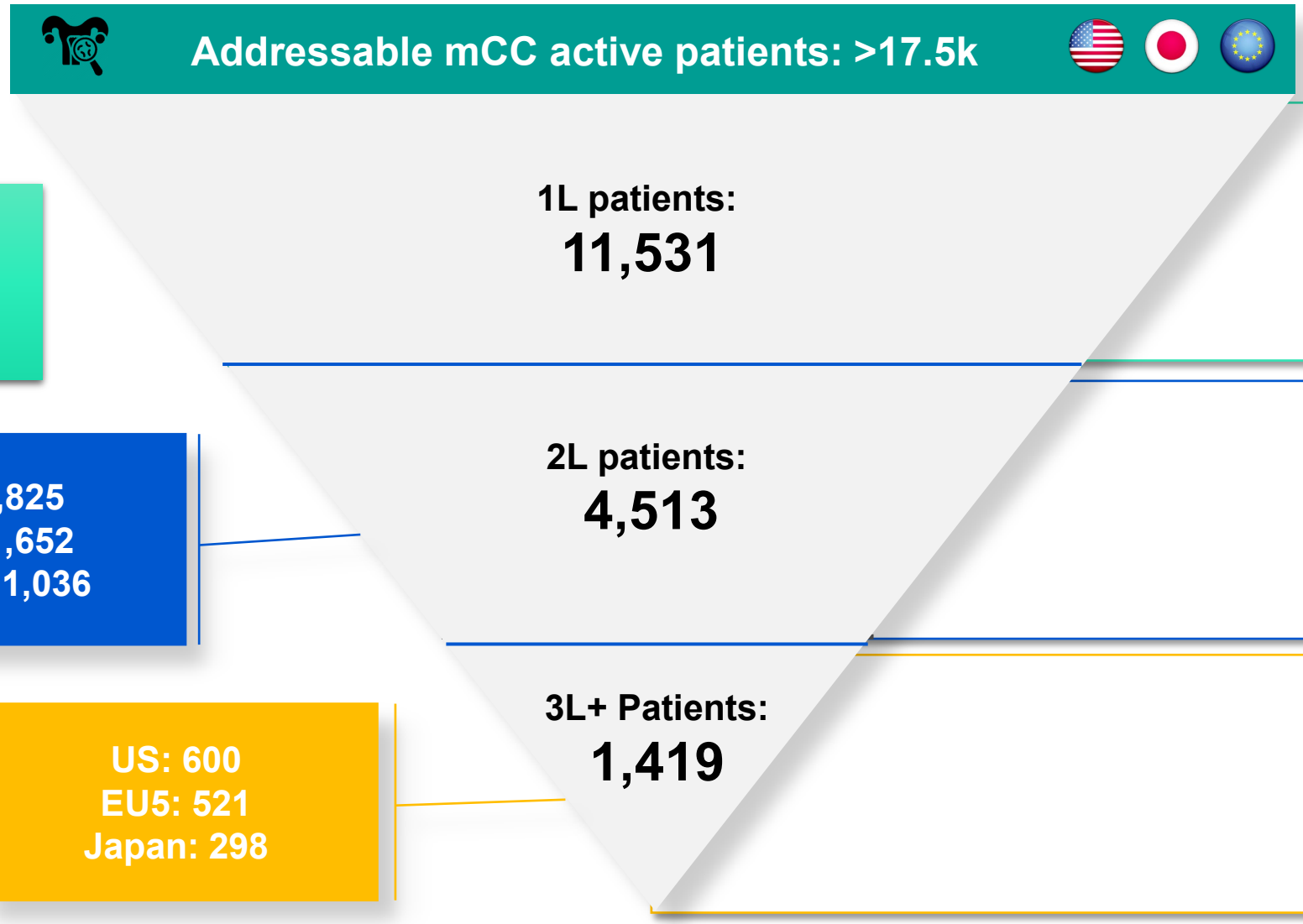
Clinically meaningful and durable responses observed*

	N=101
Confirmed ORR (95% CI),[a] %	**24 (15.9–33.3)**
CR, n (%)	7 (7)
PR, n (%)	17 (17)
SD, n (%)	49 (49)
PD, n (%)	24 (24)
Not evaluable, n (%)	4 (4)



*Data from innovaTV 204 study, Coleman R, et al. Tisotumab Vedotin in Cpreviously Treated Recurrent or Metastatic Cervical Cancer: Results from the Phase 2 innovaTV 204 / GOG-3023/ ENGOT-cx6 Study, ESMO September 21, 2020. Data cutoff: February 06, 2020. Median duration of follow-up: 10.0 months. CI, confidence interval; CR, complete response; DOR, duration of response; IRC, independent review committee; NR, not reached; ORR, objective response rate; PD, disease progression; PR, partial response; SD, stable disease.

Over 17k Patients Treated for Metastatic Cervical Cancer (mCC) in US, EU5 and Japan



Source: Kantar Health Drug Treated Patients (2020 Report);

Our Goal in Cervical Cancer: Establish Tisotumab Vedotin as the Clear Choice in 2L+ Settings

mCC Treatment Landscape

1L

Chemotherapy +/- Bevacizumab*

2L

	~50% PD-L1+	~50% PD-L1-
Pembro**, Other IO, or Chemo		

3L+

All Patient Types

Pembrolizumab or Chemotherapy

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Source: Kantar Treatment Architecture: Cervical Cancer; NCCN Treatment Guidelines; 2020 TV ATU (Strategic Research Insights)

*Pembrolizumab & other IOs are being evaluated in 1L treatment

**Pembrolizumab is approved for 2L r/mCC in the US; not approved in JPN or EU

Positive Perception of Next-Gen CD3xCD20 Bispecifics & Potential to Transform B-cell Malignancy Treatment

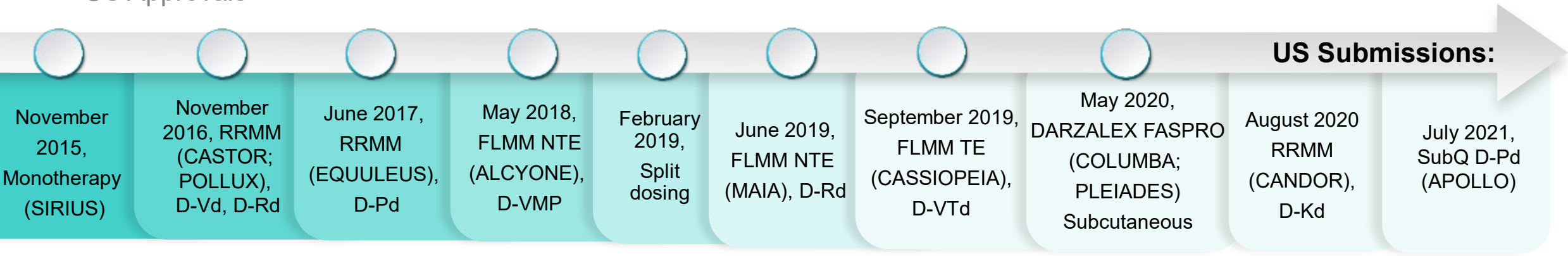
B-NHL Type	Intervention	Study Phase
		Preclinical | I | I/II | II | III
DLBCL, FL, MCL and other histologies		
Front-line		
DLBCL	Epcoritamab + R-CHOP	**GCT3013-02 (Ph Ib)**
FL	Epcoritamab + BR	**GCT3013-02 (Ph Ib)**
Relapsed or refractory		
DLBCL	Epcoritamab vs SOC	**GCT3013-05 (Ph III)**
B-NHL (DLBCL, FL, MCL)	Epcoritamab monotherapy	**GCT3013-01 (Ph I/II)**
B-NHL (Japanese patients)	Epcoritamab monotherapy	**GCT3013-04 (Ph I/II)**
ASCT eligible DLBCL	Epcoritamab + R-DHAX/C	**GCT3013-02 (Ph Ib)**
DLBCL	Epcoritamab + GemOx	**GCT3013-02 (Ph Ib)**
FL	Epcoritamab + R^2	**GCT3013-02 (Ph Ib)**
CLL		
Relapsed or refractory	Epcoritamab monotherapy	**GCT3013-03 (Ph Ib)**

B-NHL: B-cell Non-Hodgkin Lymphoma; BR: bendamustine + rituximab; DLBCL: diffuse large B-cell lymphoma; FL: follicular lymphoma; MCL: mantle cell lymphoma; SOC: standard of care; R2 = Revlimid + rituximab

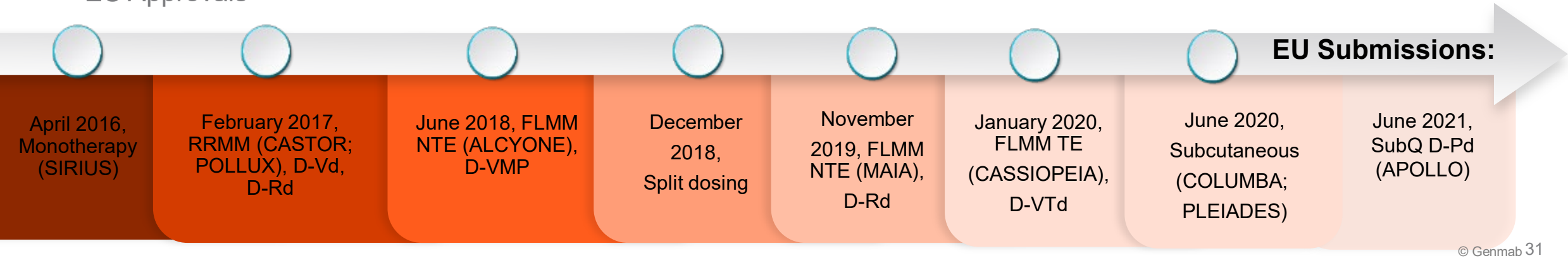
DARZALEX Approvals: US and EU

On Track for Approval Across All Lines of MM Treatment

US Approvals



EU Approvals



Ongoing Daratumumab Clinical Trials

Janssen Sponsored Phase 3 & 4

Daratumumab Trials Sponsored by Pharma / Biotech

Ct.gov Identifier	Phase	Sponsor	Indication	Therapy
NCT03768960	4	J&J Private Ltd	Relapsed or Refractory MM	Daratumumab (MMY4008)
NCT02252172	3	Janssen	Untreated MM	Daratumumab + Rd (MAIA)
NCT02195479	3	Janssen	Untreated MM	Daratumumab + VMP (ALCYONE)
NCT02541383	3	Janssen	Untreated MM	Daratumumab + VTd (CASSIOPEIA)
NCT02076009	3	Janssen	Relapsed or Refractory MM	Daratumumab + Rd (POLLUX)
NCT02136134	3	Janssen	Relapsed or Refractory MM	Daratumumab + Vd (CASTOR)
NCT03180736	3	Janssen	Relapsed or Refractory MM	Daratumumab + Pom-d (APOLLO)
NCT03201965	3	Janssen	Amyloidosis	Daratumumab + CyBorD (ANDROMEDA)
NCT03217812	3	Janssen	Untreated MM	Daratumumab + VMP (Asia Pacific) (OCTANS)
NCT03234972	3	Janssen	Relapsed or Refractory MM	Daratumumab + Vd vs Vd (LEPUS)
NCT03277105	3	Janssen	Relapsed or Refractory MM	Daratumumab SubQ vs IV (COLUMBA)
NCT03301220	3	Janssen	Smoldering MM	Daratumumab SubQ (AQUILA)
NCT03652064	3	Janssen	Untreated MM	Daratumumab + VRd (CEPHEUS)
NCT03710603	3	Janssen/EMN	Untreated MM	Daratumumab + VRd (PERSEUS)
NCT03901963	3	Janssen	Untreated MM / Maintenance	Daratumumab + R (AURIGA)