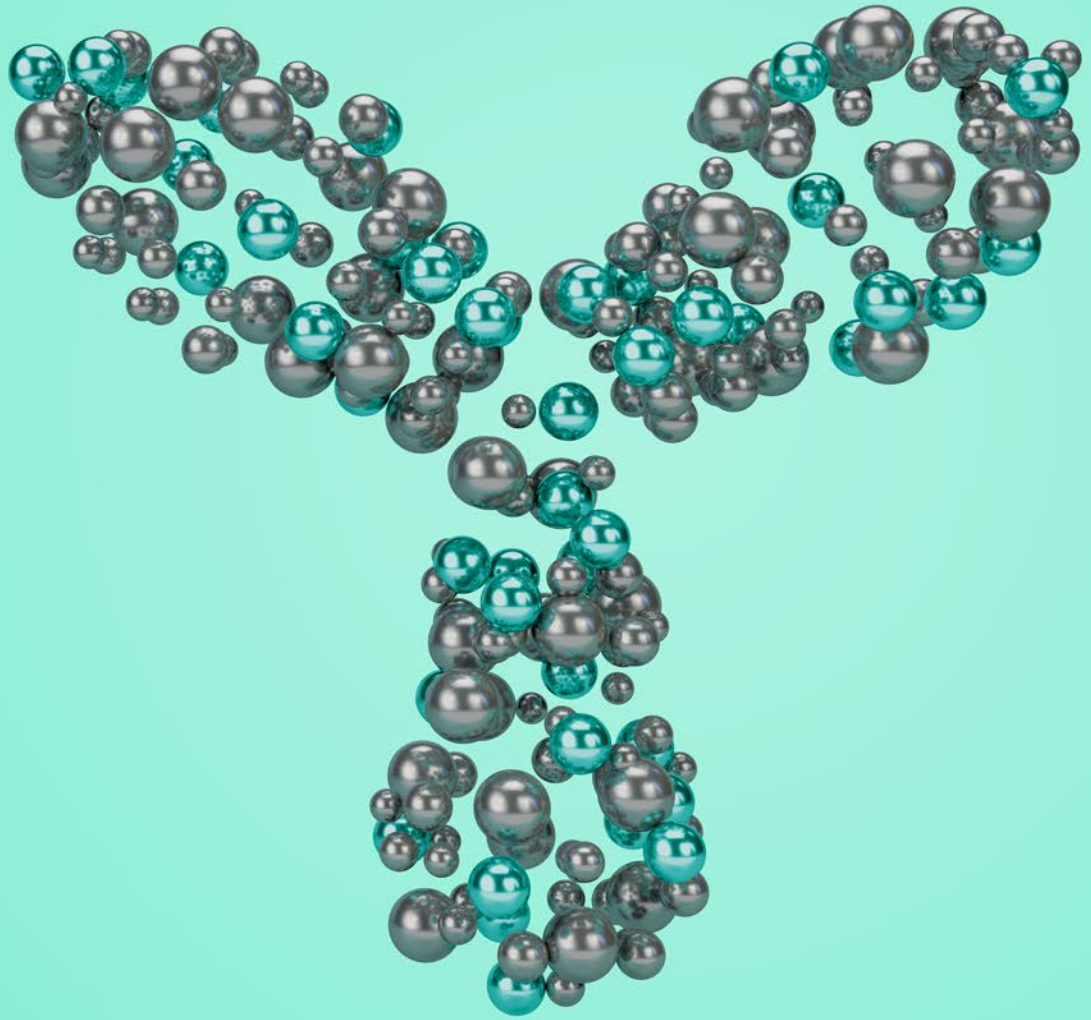
Genmab

Working to Transform the Future of Cancer Treatment



Investor Presentation

May 2022

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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Towards 2025:
Evolving Into a Fully Integrated Biotech Innovation Powerhouse

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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Well Positioned for Growth

- Consistent and solid track record
- Experienced world-class team
- Innovative proprietary technologies and first-in-class / best-in-class pipeline
- Partnerships with innovators and industry leaders
- Strong financials to invest in growth opportunities

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Solid Track Record and Financial Foundation Fuel Our Growth

- ✓ 39 Cumulative INDs since 1999
- ✓ Innovative clinical pipeline: 7 Genmab owned ≥50%
- ✓ 5 approved medicines based on Genmab's innovation and antibody expertise
- ✓ First medicine on the market: Tivdak® (tisotumab vedotin-tftv), co-promoting with Seagen in U.S.
- ✓ Growing recurring revenue
- ✓ Sustainably profitable with cash position of ~USD 3B
- ✓ Investing in our capabilities
- ✓ Experienced, international leadership team

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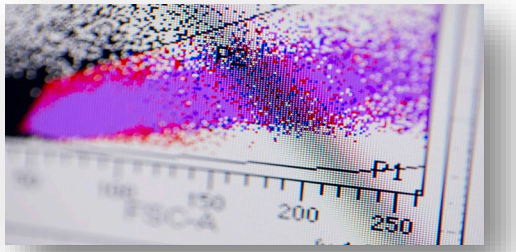
Tivdak is being co-developed and co-promoted by Genmab and Seagen.

The Genmab Model

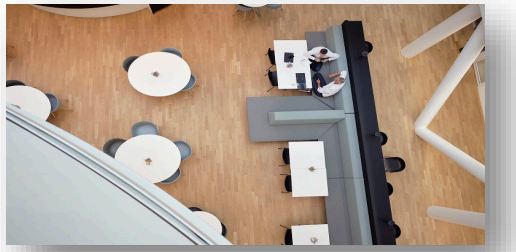
Deep insight into antibody biology & disease targets

- Solid tumors
- B-cell NHL
- Multiple Myeloma



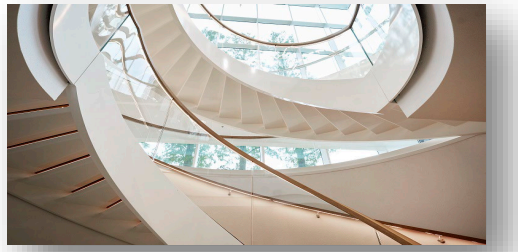
Proprietary technologies enable us to build a world-class pipeline

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



Match in-house expertise with strategic partnerships

- Discovery / academic collaborations
- Technology collaborations
- Product partnerships & collaborations

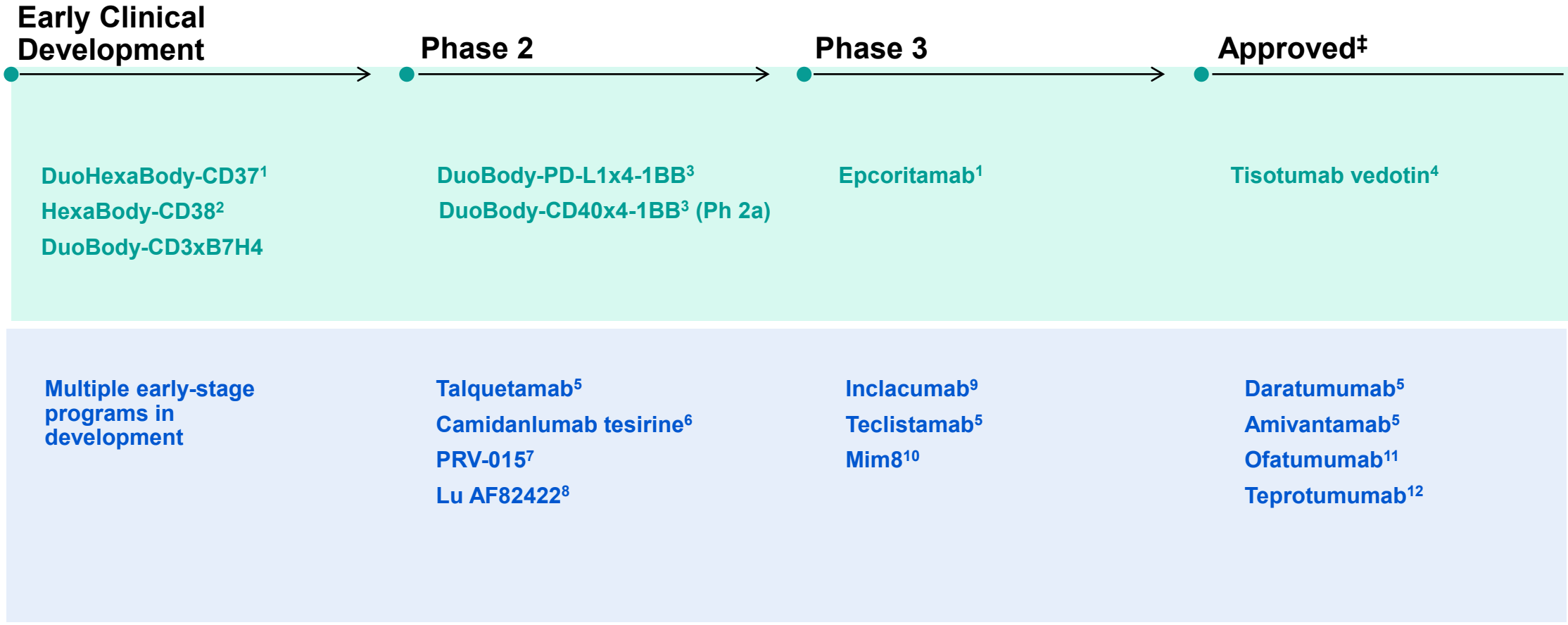


Strong pipeline of 1st-in-class / best-in-class products

- Tisotumab vedotin
- Epcoritamab
- DuoBody-PD-L1x4-1BB
- DuoBody-CD40x4-1BB
- DuoHexaBody-CD37
- HexaBody-CD38
- DuoBody-CD3xB7H4

Tisotumab vedotin is being co-developed and co-promoted by Genmab and Seagen; Epcoritamab and DuoHexaBody-CD37 (GEN3009) are being co-developed by Genmab and AbbVie; DuoBody-PD-L1x4-1BB (GEN1046) and DuoBody-CD40x4-1BB (GEN1042) are being co-developed by Genmab and BioNTech; HexaBody-CD38 is being developed in exclusive worldwide license and option agreement with Janssen.

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]Co-development with AbbVie; [2]Genmab is developing HexaBody-CD38 in an exclusive worldwide license and option agreement with Janssen; [3]Co-development with BioNTech; [4]Co-development with Seagen; [5]Development by Janssen; [6]Development by ADC Therapeutics; [7]Development by Provention Bio; [8]Development by Lundbeck; [9]Development by Global Blood Therapeutics; [10]Development by Novo Nordisk; [11]Development by Novartis; [12]Development by Horizon Therapeutics

Investing in the Breadth & Depth of our Pipeline

R&D Engine

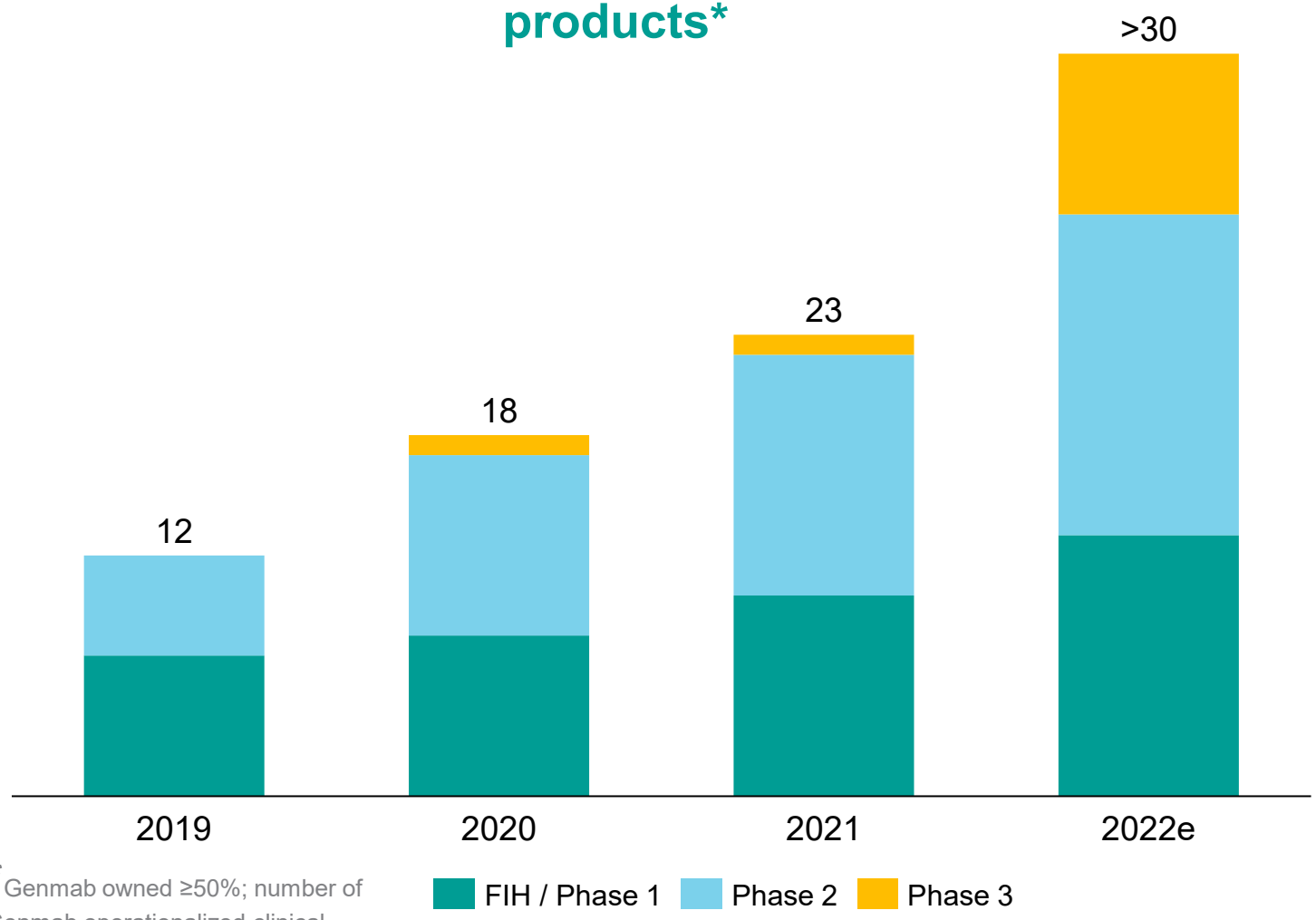
DuoBody technology

HexaBody technology

DuoHexaBody technology

HexElect technology

Expanding & maturing trials for our proprietary products*

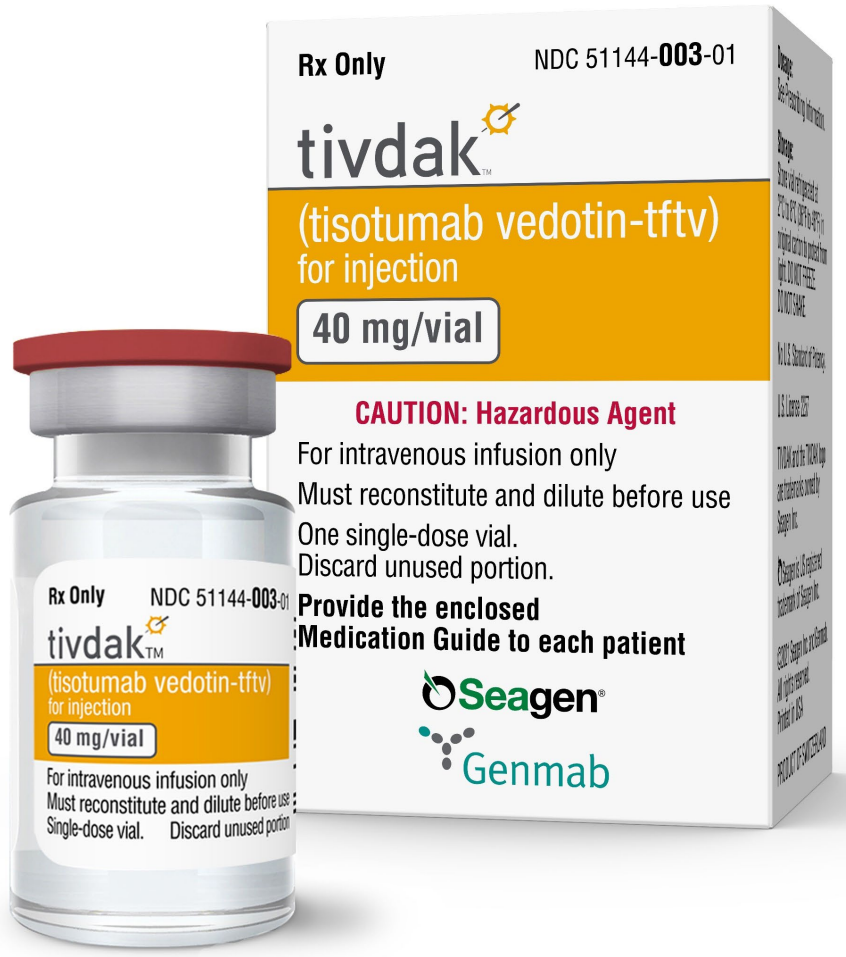


*Genmab owned ≥50%; number of Genmab operationalized clinical trials and Genmab funded trials operationalized by partners. 2022 is estimated.

First Genmab Approved Therapy: Tivdak® (tisotumab vedotin-tftv)

in Collaboration with Seagen

- U.S FDA accelerated approval: recurrent or metastatic cervical cancer with disease progression on or after chemotherapy*
- First and only approved ADC for treatment in this patient population
- First Genmab-owned therapy to receive regulatory approval
- Pursuing potential in early lines of Cervical Cancer and in other solid tumors



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*See U.S. prescribing information for full indication and safety information. U.S. FDA accelerated approval; continued approval may be contingent on verification and confirmation of clinical benefit in confirmatory trials.

Epcoritamab (DuoBody-CD3xCD20)
in Collaboration with AbbVie

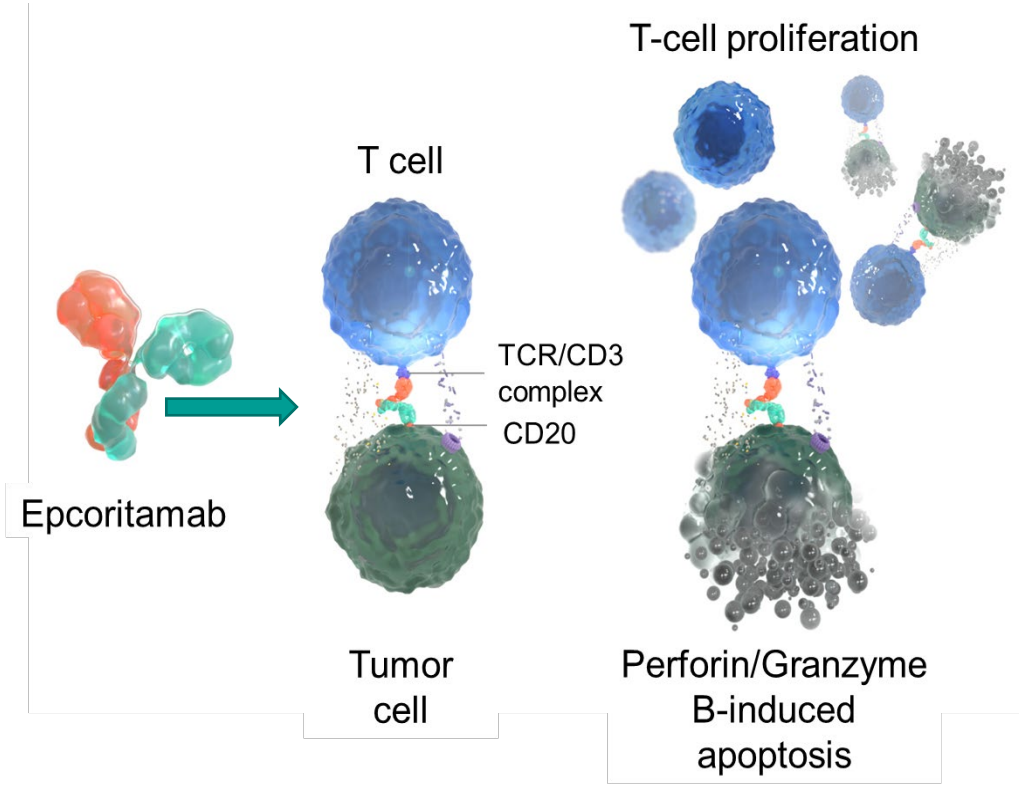
Single-agent epcoritamab demonstrated manageable safety profile, substantial antitumor activity in patients with heavily pretreated B-cell NHL in first-in-human Phase 1/2 trial[1]

Encouraging early data presentenced at ASH 2021

Investigational bispecific antibody delivered as an off the shelf, rapid, subcutaneous injection, studied in B-NHL[2,3]

TCR, T-cell receptor.
1. Hutchings M, et al. *Lancet*. 2021;398:1157-69. 2. Engelberts PJ, et al. *EBioMedicine*. 2020;52:102625. 3. van der Horst HJ, et al. *Blood Cancer J*. 2021;11:38.

Mechanism of Action



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Broad and Comprehensive Epcoritamab Development Plan

B-NHL Type	Intervention	Study Phase
DLBCL, FL, MCL and other histologies		
Front-line		
DLBCL	Epcoritamab + R-CHOP	EPCORE NHL-2 (Ph 1b)
FL	Epcoritamab + BR	EPCORE NHL-2 (Ph 1b)
Relapsed or refractory		
B-NHL (DLBCL, FL, MCL)	Epcoritamab monotherapy	EPCORE NHL-1 (Ph 1/2)
ASCT eligible DLBCL	Epcoritamab + R-DHAX/C	EPCORE NHL-2 (Ph 1b)
DLBCL	Epcoritamab + GemOx	EPCORE NHL-2 (Ph 1b)
FL	Epcoritamab + R^2	EPCORE NHL-2 (Ph 1b)
B-NHL (Japanese patients)	Epcoritamab monotherapy	EPCORE NHL-3 (Ph 1/2)
DLBCL	Epcoritamab vs SOC	EPCORE DLBCL-1 (Ph 3)
CLL		
Relapsed or refractory & Richter's Syndrome	Epcoritamab monotherapy	EPCORE CLL-1 (Ph 1b)

Study Phase: Preclinical | 1 | 1/2 | 2 | 3

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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

GEN1046 & GEN1042
in Collaboration with BioNTech

DuoBody-PD-L1x4-1BB (GEN1046) – in solid tumors

- First-in-class, bispecific next generation checkpoint immunotherapy
- Designed to elicit anti-tumor immune response by simultaneous and complementary blockade of PD-L1 on tumor cells and conditional 4-1BB stimulation on T cells and NK cells
- Encouraging clinical activity & manageable safety during dose escalation in Phase 1/2a trial in advanced solid tumors[1]
- Phase 2 trial in combination with pembrolizumab in recurrent NSCLC, and several expansion cohorts ongoing in other solid tumors

DuoBody-CD40x4-1BB (GEN1042) – in solid tumors

- First-in-class bispecific next generation immunotherapy
- Designed to conditionally activate both CD40-expressing antigen-presenting cells (APC) and 4-1BB-expressing T cells
- Encouraging clinical activity & manageable safety during dose escalation in Phase 1/2a trial in advanced solid tumors[2]
- Expansion cohorts, including combination therapy with pembrolizumab, currently enrolling

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1. Garralda E, et al. SITC 2020. Poster 412..
2. Johnson M. et al SITC 2021

50:50 Collaboration with BioNTech for both investigational medicines

Earlier Stage Clinical Development

DuoHexaBody-CD37 (GEN3009)

- Combination of DuoBody & HexaBody platforms
- Novel target for hematological malignancies
- Unique MoA
- Dose escalation ongoing
  - Early signs of activity, no safety signals
- Co-development with AbbVie

HexaBody-CD38 (GEN3014)

- Incorporates proprietary HexaBody technology
- Highly promising data in pre-clinical models for MM, DLBCL & AML
- Could potentially add to and broaden DARZALEX franchise
- Dose escalation ongoing
  - Early signs of activity, no safety signals
- Developing in exclusive worldwide license and option agreement with Janssen

DuoBody-CD3xB7H4 (GEN1047)

- Incorporates proprietary DuoBody technology
- In preclinical studies, induced T-cell mediated cytotoxicity of B7H4-positive tumor cells
- Potential in solid cancer indications known to express B7H4
- Latest in the clinic, dose escalation ongoing

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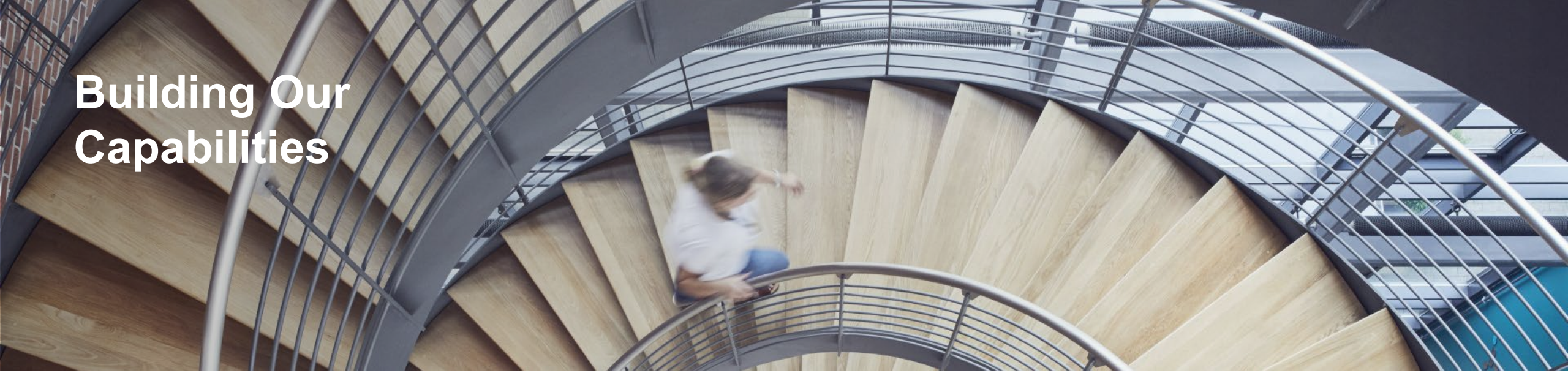

Building Our Capabilities

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, Translational Research, Safety and Regulatory

Commercialization

Evolving into end-to-end, fully integrated biotech

- Experienced team in place
- Focused on U.S. and Japan
- First successful launch: Tivdak

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

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Approved Antibody Therapeutics Incorporating Genmab's Innovation

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

Redefining Treatment of Multiple Myeloma (MM)*

- ~USD 6B in net sales in 2021 [up 44% YoY]
- Genmab entitled to tiered royalty [12-20%] of net sales

Novartis: 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
- USD 372M in net sales in 2021
- Genmab entitled to royalty of 10% of net sales

Horizon Therapeutics: TEPEZZA® (teprotumumab-trbw)

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

- Genmab entitled to mid single digit royalty of net sales

Janssen: RYBREVANT® (amivantamab-vmjw)

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

- First regulatory approvals for a product created using Genmab's DuoBody® technology platform
- Genmab entitled to single to double digit royalties of net sales

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

2022 Guidance
Recurring Revenue Growth and Focused Investments

Key Figures (DKKM)	Revised Guidance	~USDM
Revenue	11,000 – 12,000	1,718 – 1,875
Operating Expenses	(7,200) – (7,800)	(1,125) – (1,219)
Operating Profit	3,200 – 4,800	500 – 750

DARZALEX royalties of ~DKK 8.0B to ~DKK 8.5B to drive significant 40%* growth in recurring revenue

Growth in operating expenses driven by expanding and accelerating our clinical pipeline and investing in launch readiness for epcoritamab

Significant underlying profitability

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**Mid-point of guidance range.*
All amounts in DKK millions unless otherwise noted
2022 guidance assumes a USD/DKK exchange rate of 6.4

Key 2022 Priorities: Expanding and Advancing Differentiated Product Pipeline towards the Market

Priority	✓	Targeted Milestones
Broad and rapid development of late-stage clinical pipeline and further build US country organization		➢ Epcoritamab[1] • Expand clinical development program with multiple Phase 3 trials initiated and submission of first BLA (subject to supportive FDA feedback) ➢ Tivdak[2] • Establish Tivdak as a clear choice for 2L+ r/m Cervical Cancer patients • Broaden clinical development program including Phase 2 evaluation of combination therapy in earlier line treatment for cervical cancer and other solid tumors
Growth and development of differentiated early-stage product candidates		➢ DuoBody-PD-L1x4-1BB[3] & DuoBody-CD40x4-1BB[3] • Data from clinical expansion cohorts to progress to next steps ➢ Expand and advance proprietary clinical product portfolio
Further scale organization aligned with growing product portfolio and brand needs		➢ Further scale organization aligned with differentiated antibody product portfolio growth and future launches ➢ Use solid financial base to grow and broaden antibody product and technology portfolio

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1. Co-development w/ AbbVie; 2. Co-development w/ Seagen; 3. Co-development w/ BioNTech

Well On Track to Reaching Our 2025 Vision

Clear Vision & Focused Strategy

Genmab Today

- ✓ 1 approved medicine
- ✓ 1 potential near-term Genmab product launch
- ✓ Strong rationale to invest
- ✓ Focused and disciplined

Our Future

- ✓ Fully-integrated biotech innovation powerhouse

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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 136bn
  - ~ USD 19bn
- Shares outstanding: ~66M

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As of May 11, 2022

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
LUMC Leids Universitair Medisch Centrum
Atrium Health Levine Cancer Institute
UMC Utrecht
BOLT BIOTHERAPEUTICS
Genmab

Technology Collaborations

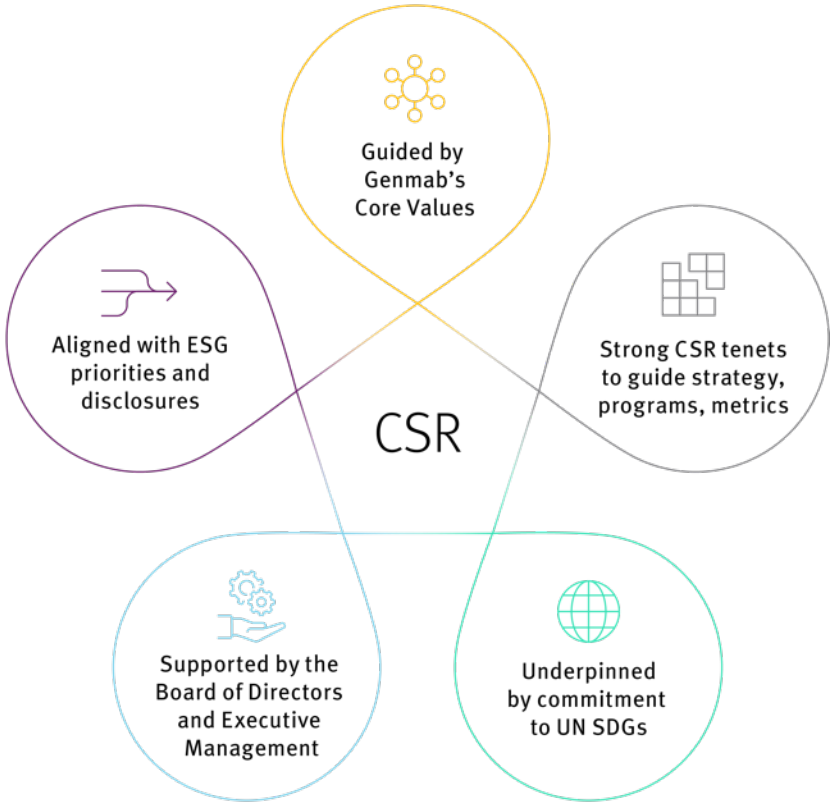
BIONTECH
BLINK BIOMEDICAL
CUREVAC the RNA people®
immatics®
janssen PHARMACEUTICAL COMPANIES OF Johnson & Johnson
novo nordisk®
Roche Diagnostics

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

Our Approach to Corporate Social Responsibility (CSR)

Genmab is committed to being a socially responsible and sustainable biotechnology company. Our commitment to CSR is anchored in our company's purpose, values and vision. Being socially responsible is fundamental to the way we do business.



The Board of Directors and Senior Leadership at Genmab are committed to Genmab's business-driven CSR strategy, which focuses on four main areas:

- Science-Driven Health Innovations for Patients
- Employee Well-Being and Vitality
- Ethics and Transparency
- Environmental and Community Sustainability

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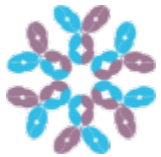
Innovation Powerhouse:
Cutting Edge Proprietary Technologies

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
				Preclinical / 1 / 1/2 / 2 / 3 / Approved
Tivdak (tisotumab vedotin-tftv)	TF	Co-development Genmab / Seagen	Cervical cancer[2]	✓
			Solid tumors	
Epcoritamab	CD3, CD20	Co-development Genmab / AbbVie	Relapsed/refractory DLBCL	
			B-cell NHL	
			B-cell NHL (combo)	
			Relapsed/refractory CLL & Richter's Syndrome	
DuoBody-PD-L1x4-1BB (GEN1046)	PD-L1, 4-1BB	Co-development Genmab / BioNTech	NSCLC	
			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	
DuoBody-CD3xB7H4 (GEN1047)	CD3, B7H4	Genmab	Solid tumors	

[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

Product	Developed & Marketed By	Disease Indications	Most Advanced Development Phase
			Preclinical / 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[2]	✓
		AL Amyloidosis[2]	✓
Daratumumab		Non-MM blood cancers	
Kesimpta (ofatumumab)	Novartis (Royalties to Genmab on net global sales)	Relapsing multiple sclerosis[2]	✓
TEPEZZA (teprotumumab-trbw)	Horizon Therapeutics (under sublicense from Roche, royalties to Genmab on net global sales)	Thyroid eye disease[2]	✓
RYBREVANT (amivantamab-vmjw)	Janssen (Royalties to Genmab on net sales)	Non-small cell lung cancer[2]	✓
Amivantamab		Advanced or metastatic gastric or esophageal cancer	

*See local country prescribing information for indication and safety information

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

Product	Technology	Developed By	Disease Indications	Most Advanced Development Phase
				Preclinical / 1 / 1/2 / 2 / 3 / Approved
Teclistamab (JNJ-64007957)	DuoBody	Janssen	Relapsed or refractory MM	**(BLA submitted)**
Inclacumab	UltiMAb*	Global Blood Therapeutics	VOC in sickle cell disease	
Mim8	DuoBody	Novo Nordisk	Hemophilia A	
Talquetamab (JNJ-64407564)	DuoBody	Janssen	Relapsed or refractory MM	
Camidanlumab tesirine (ADCT-301)	UltiMAb	ADC Therapeutics	Relapsed /refractory Hodgkin lymphoma	
PRV-015 (AMG 714)	UltiMAb	Provention Bio	Celiac disease	
Lu AF82422	UltiMAb	Lundbeck	Multiple system atrophy	

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

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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

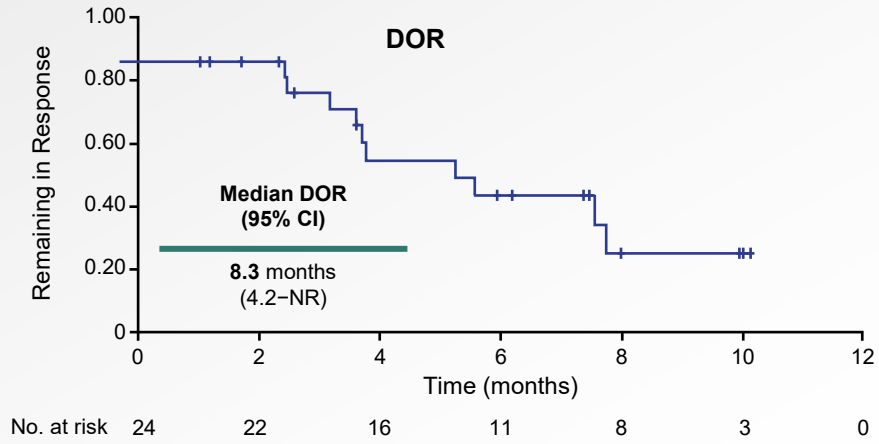
Conclusions*

(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

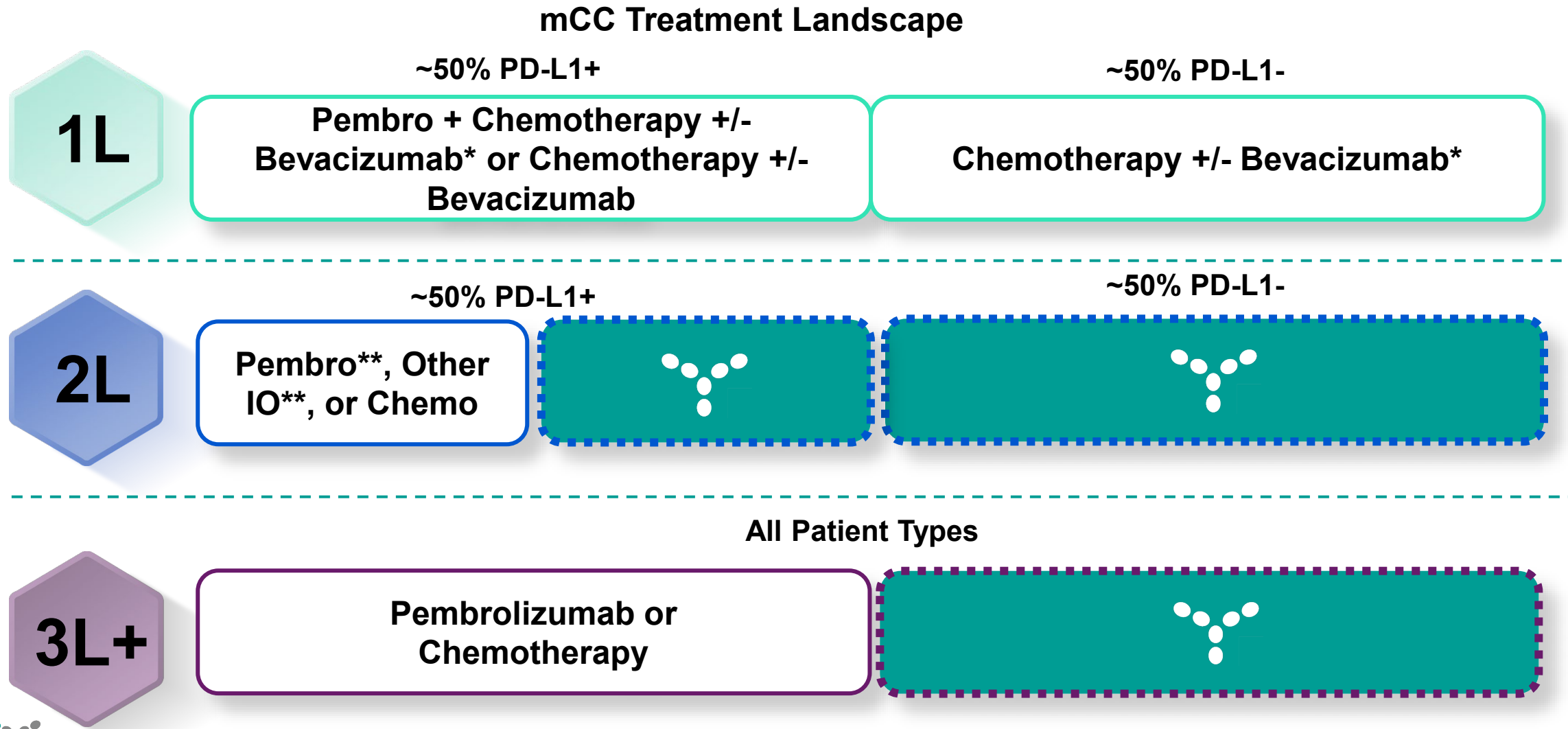
Clinically meaningful and durable responses observed*

	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.

Our Goal in Cervical Cancer: Establish Tivdak™ as the Clear Choice in 2L+ Settings



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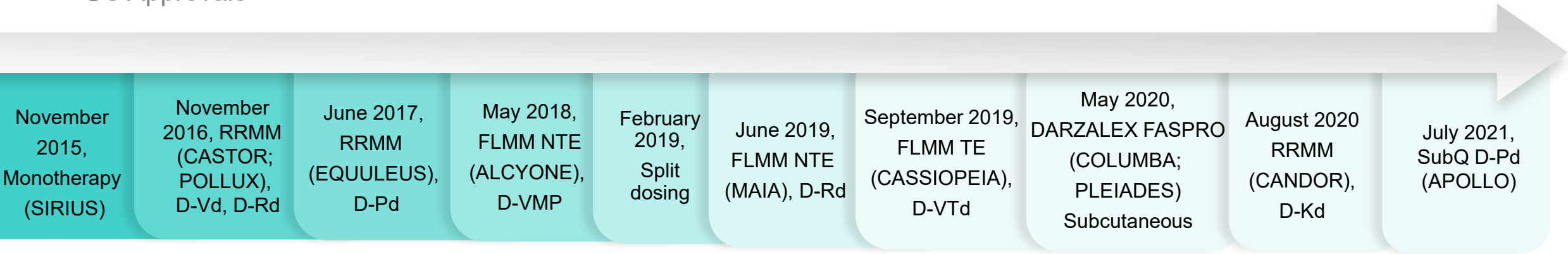
Source: Kantar Treatment Architecture: Cervical Cancer; NCCN Treatment Guidelines;

*Pembrolizumab is approved in combination with chemo +/- bev in 1L for PD-L1 positive patients only in the US at this time, global filings to follow. Other IOs are also being evaluated in 1L treatment

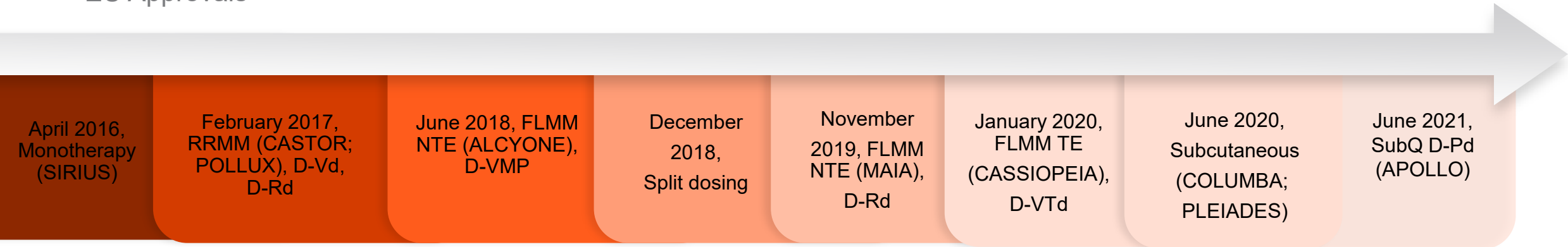
**Pembrolizumab is approved for 2L r/mCC in the US; not approved in JPN or EU. Nivo is on NCCN guidelines for PD-L1 positive patients

DARZALEX Approvals: US and EU

US Approvals



EU Approvals



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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)

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