Better Health, Brighter Future

Takeda Information

Takeda to Host Wave 1 Pipeline Market Opportunity Conference Call

Osaka, JAPAN, December 8, 2020 – Takeda Pharmaceutical Company Limited (TSE:4502/NYSE:TAK) ("Takeda") will host its Wave 1 Pipeline Market Opportunity Conference Call from 5:00 p.m. to 7:15 p.m. on December 8, 2020, EST (7:00 a.m. to 9:15 a.m. on December 9, 2020, JST). The presentation is now available as attached. The Wave 1 Pipeline is a portfolio of 12 New Molecular Entities (NMEs) which Takeda anticipates being approved by FY2024, and in the conference call, Takeda will showcase the potential of select Wave 1 Pipeline assets as well as peak sales of each pipeline and the medium- to long-term sustainable growth prospects of the overall company.

A webcast of the conference call is available on the IR Events page of our website.

###

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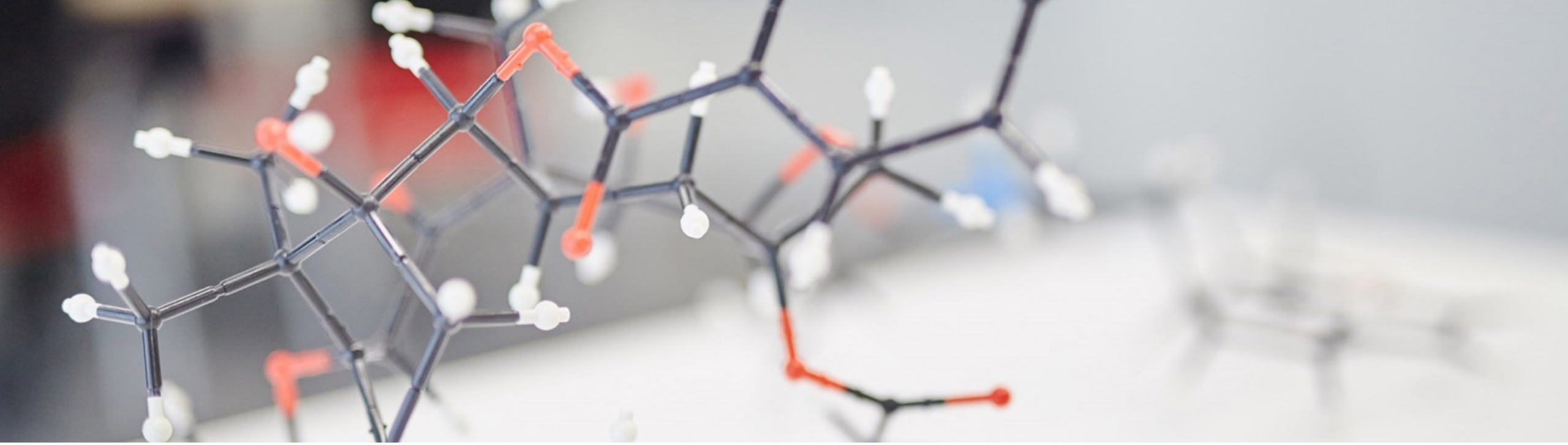

WAVE 1 PIPELINE MARKET OPPORTUNITY CALL

December 8, 2020 (ET) / December 9, 2020 (JST)

Takeda Pharmaceutical Company Limited

Better Health, Brighter Future

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The companies in which Takeda directly and indirectly owns investments are separate entities. In this presentation, "Takeda" is sometimes used for convenience where references are made to Takeda and its subsidiaries in general. Likewise, the words "we", "us" and "our" are also used to refer to subsidiaries in general or to those who work for them. These expressions are also used where no useful purpose is served by identifying the particular company or companies.

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This presentation and any materials distributed in connection with this presentation may contain forward-looking statements, beliefs or opinions regarding Takeda's future business, future position and results of operations, including estimates, forecasts, targets and plans for Takeda. Without limitation, forward-looking statements often include words such as "targets", "plans", "believes", "hopes", "continues", "expects", "aims", "intends", "ensures", "will", "may", "should", "would", "could" "anticipates", "estimates", "projects" or similar expressions or the negative thereof. These forward-looking statements are based on assumptions about many important factors, including the following, which could cause actual results to differ materially from those expressed or implied by the forward-looking statements: the economic circumstances surrounding Takeda's global business, including general economic conditions in Japan and the United States; competitive pressures and developments; changes to applicable laws and regulations; the success of or failure of product development programs; decisions of regulatory authorities and the timing thereof; fluctuations in interest and currency exchange rates; claims or concerns regarding the safety or efficacy of marketed products or product candidates; the impact of health crises, like the novel coronavirus pandemic, on Takeda and its customers and suppliers, including foreign governments in countries in which Takeda operates, or on other facets of its business; the timing and impact of post-merger integration efforts with acquired companies; the ability to divest assets that are not core to Takeda's operations and the timing of any such divestment(s); and other factors identified in Takeda's most recent Annual Report on Form 20-F and Takeda's other reports filed with the U.S. Securities and Exchange Commission, available on Takeda's website at: https://www.takeda.com/investors/reports/sec-filings/ or at www.sec.gov. Takeda does not undertake to update any of the forward-looking statements contained in this presentation or any other forward-looking statements it may make, except as required by law or stock exchange rule. Past performance is not an indicator of future results and the results or statements of Takeda in this presentation may not be indicative of, and are not an estimate, forecast, guarantee or projection of Takeda's future results.

Certain Non-IFRS Financial Measures

This presentation and materials distributed in connection with this presentation include certain financial measures not presented in accordance with International Financial Reporting Standards ("IFRS"), such as Underlying Revenue, Core Operating Profit, Underlying Core Operating Profit, Core Net Profit, Underlying Core EPS, Net Debt, EBITDA, Adjusted EBITDA and Free Cash Flow. Takeda's management evaluates results and makes operating and investment decisions using both IFRS and non-IFRS measures included in this presentation. These non-IFRS measures exclude certain income, cost and cash flow items which are included in, or are calculated differently from, the most closely comparable measures presented in accordance with IFRS. By including these non-IFRS measures, management intends to provide investors with additional information to further analyze Takeda's performance, core results and underlying trends. Takeda's non-IFRS measures are not prepared in accordance with IFRS and such non-IFRS measures should be considered a supplement to, and not a substitute for, measures prepared in accordance with IFRS (which we sometimes refer to as "reported" measures). Investors are encouraged to review the reconciliation of non-IFRS financial measures to their most directly comparable IFRS measures, which are on slides 158 and 159.

Medical information

This presentation contains information about products that may not be available in all countries, or may be available under different trademarks, for different indications, in different dosages, or in different strengths. Nothing contained herein should be considered a solicitation, promotion or advertisement for any prescription drugs including the ones under development.

Financial information

Takeda's financial statements are prepared in accordance with International Financial Reporting Standards ("IFRS").

AGENDA

TIME (EST)	TIME (JST)	AGENDA
17:00 – 17:10	07:00 – 07:10	**Takeda: A Global Values-Based, R&D-Driven Biopharmaceutical Leader** *Christophe Weber, President & CEO*
17:10 – 17:25	07:10 – 07:25	**Following Through On Our Commitment To Deliver Innovative Medicines To Patients: *Spotlight On Select Wave 1 Programs*** *Andy Plump, President, R&D*
17:25 – 17:35	07:25 – 07:35	**Entyvio Case Study: Building A Gold Standard Therapy Along The Patient Journey** *Ramona Sequeira, President, USBU & Global Portfolio Commercialization*
17:35 – 18:05	07:35 – 08:05	**TAK-721 Deep Dive: Potential To Be First FDA-Approved Agent With Indication For Eosinophilic Esophagitis** *Mike Nedham, Global Program Leader for TAK-721, Global Product & Launch Strategy*
18:05 – 18:35	08:05 – 08:35	**TAK-003 Deep Dive: Live-Attenuated Tetravalent Vaccine For Prevention Of Dengue Disease** *Rajeev Venkayya, President, Global Vaccine Business Unit*
18:35 – 19:15	08:35 – 09:15	**Panel Q&A Session**
		Appendix 1: Wave 1 Pipelines One-Pager Summaries **Appendix 2: Epidemiology Data** **Appendix 3: Clinical Trial Summary**

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A VALUES-BASED AND R&D-DRIVEN BIOPHARMACEUTICAL LEADER

PURPOSE

Better health for people, brighter future for the world

VISION

Discover and deliver life-transforming treatments, guided by our commitment to patients, our people and the planet

VALUES

We are guided by our values of Takeda-ism which incorporate Integrity, Fairness, Honesty, and Perseverance, with Integrity at the core. They are brought to life through actions based on Patient-Trust-Reputation-Business, in that order

IMPERATIVES

PATIENT

- Responsibly translate science into highly innovative, life-changing medicines and vaccines
- Accelerate access to improve lives worldwide

PEOPLE

- Create an exceptional people experience

PLANET

- Protect our planet

UNLEASH THE POWER OF DATA AND DIGITAL

- We strive to transform Takeda into the most trusted, data-driven, outcomes-based biopharmaceutical company

TRANSFORMATION TO TOP 10 GLOBAL R&D-DRIVEN BIOPHARMA COMPANY

Strategic Evolution

2014

GLOBALIZATION

R&D TRANSFORMATION

FY2014	
TOP 20 GLOBALLY	REPORTED REVENUE JPY 1,778BN
UNDERLYING CORE PROFIT[1] MARGIN 17%	

We Are One Takeda

Today

VALUES BASED, R&D-DRIVEN GLOBAL BIOPHARMA COMPANY

5 KEY BUSINESS AREAS AND 14 GLOBAL BRANDS

12 NEW MOLECULAR ENTITIES IN WAVE 1 PIPELINE

FY2020	
TOP 10 GLOBALLY	REPORTED REVENUE FORECAST JPY 3,200BN
UNDERLYING CORE PROFIT[1] MARGIN LOW 30%s	

Accelerating Growth & Patient Impact

Next 10 Years

TRANSFORM SCIENCE INTO LIFE-CHANGING MEDICINES

WAVE 1 AND WAVE 2 PIPELINE GROWTH OPPORTUNITIES

LONG TERM
GLOBAL PATIENT IMPACT ACCELERATING GROWTH
REVENUE GOAL JPY 5TN[2] BY FY2030

1. Underlying Core Operating Profit. Please refer to slide 157 for its definition and slides 158 and 159 for reconciliation. 2. Includes incremental revenues on a non-PTS (probability of technical success) basis (i.e., figures represent best case scenarios, including technical success that Takeda does not currently consider probable to occur and should not be seen as a forecast or target figure). Further, actual future net sales achieved by our commercialized products and pipelines will be different, perhaps materially so, as there is a range of possible outcomes from clinical development, driven by a number of variables, including safety, efficacy and product labelling. Does not include any potential impacts imposed by the Most Favored Nation Model interim final rule issued by the U.S. Centers for Medicare & Medicaid Services (CMS) on November 20, 2020, which are currently being assessed. In addition, if a product is approved, the effect of commercial factors including the patient population, the competitive environment, pricing and reimbursement is also uncertain. As shown in slide 8, Takeda's base case (i.e., its estimate of revenue based on technical milestones it believes it is probable to achieve) is achieving low single digit Compound Annual Growth Rate (CAGR) as compared to FY2019 baseline. FY2019 currency assumption rate is applied for FY2030 revenues.

14 GLOBAL BRANDS HAVE POTENTIAL TO DELIVER SIGNIFICANT GROWTH WITH INCREMENTAL REVENUE OPPORTUNITY OF >$8B BY FY2024

	FY2019 REVENUE		PREVIOUS PEAK REVENUE	NEW PEAK REVENUE ESTIMATE[3]
	(MM USD)[2]	versus PY (underlying)		
Entyvio vedolizumab	3,189	+32.9%	**$4.0 – 5.0BN**	**$5.5 – 6.5BN**
Gattex (Teduglutide [rDNA origin]) for Injection	568	+21.7%	N/A	**$0.7 – 0.8BN**
ALOFISEL	3	N/A	N/A	**$0.5 – 0.8BN**
TAKHZYRO (lanadelumab-flyo) injection	627	+318%	N/A	**$1.8 – 2.2BN**
NINLARO (ixazomib) capsules	712	+28.5%	**$1.5 – 2.0BN**	**$1.5 – 2.0BN**
ALUNBRIG BRIGATINIB	66	+43.1%	**$1BN**	**$0.8 – 1.0BN**
			LONG-TERM OUTLOOK	
IMMUNOGLOBULIN	2,744	+7.2%	**"High single digit CAGR" for the next decade**	
ALBUMIN/FLEXBUMIN[1]	617	+20.3%	**"Mid single digit CAGR" for the next decade**	
14 Global Brands Total	**10,152**	**+21.7%**		

1. Includes Albumin Glass, Flexbumin and Kenketsu Albumin.
2. USD included for reference calculated at JPY/USD of 107 yen.
3. New peak revenue estimates for these products are based on combination of base case scenario projection adjusted for development and regulatory risk and best case scenarios without such adjustments.

Note: Absolute values are presented on an IFRS (reported) basis; Year-on-year changes are underlying growth. Does not include any potential impacts imposed by the Most Favored Nation Model interim final rule issued by the U.S. Centers for Medicare & Medicaid Services (CMS) on November 20, 2020, which are currently being assessed.

WAVE 1 PIPELINE ASSETS HAVE SIGNIFICANT MARKET POTENTIAL

	PRODUCT	INDICATION	FULL MARKET OPPORTUNITY[2]	TAKEDA'S PEAK REVENUE POTENTIAL[3]
ONCOLOGY	mobocertinib (TAK-788)	Exon 20 non-small cell lung cancer 1L	●●○	$300 – 600MN
		Exon 20 non-small cell lung cancer 2L	●○○	
	pevonedistat (TAK-924)	Higher risk-Myelodysplastic syndromes	●●●	$400 – 800MN
		Unfit Acute myeloid leukemia	●●●	
	TAK-007	3L+ Diffuse Large B-Cell Lymphoma	●●●	$700 – 1,500MN
		3L+ Chronic Lymphocytic Leukemia	●●●	
		3L+ Follicular Lymphoma	●●●	
RARE GENETIC & HEMATOLOGY	TAK-609	Hunter CNS (intrathecal)[1]	●●○	<$100MN
	maribavir (TAK-620)	CMV infection in transplant patients (R/R & 1L)	●●●	$700 – 800MN
	TAK-611	Metachromatic leukodystrophy (intrathecal)	●●○	$300 – 450MN
	TAK-755	cTTP / iTTP, Sickle cell disease	●●●	$1,000 – 1,500MN

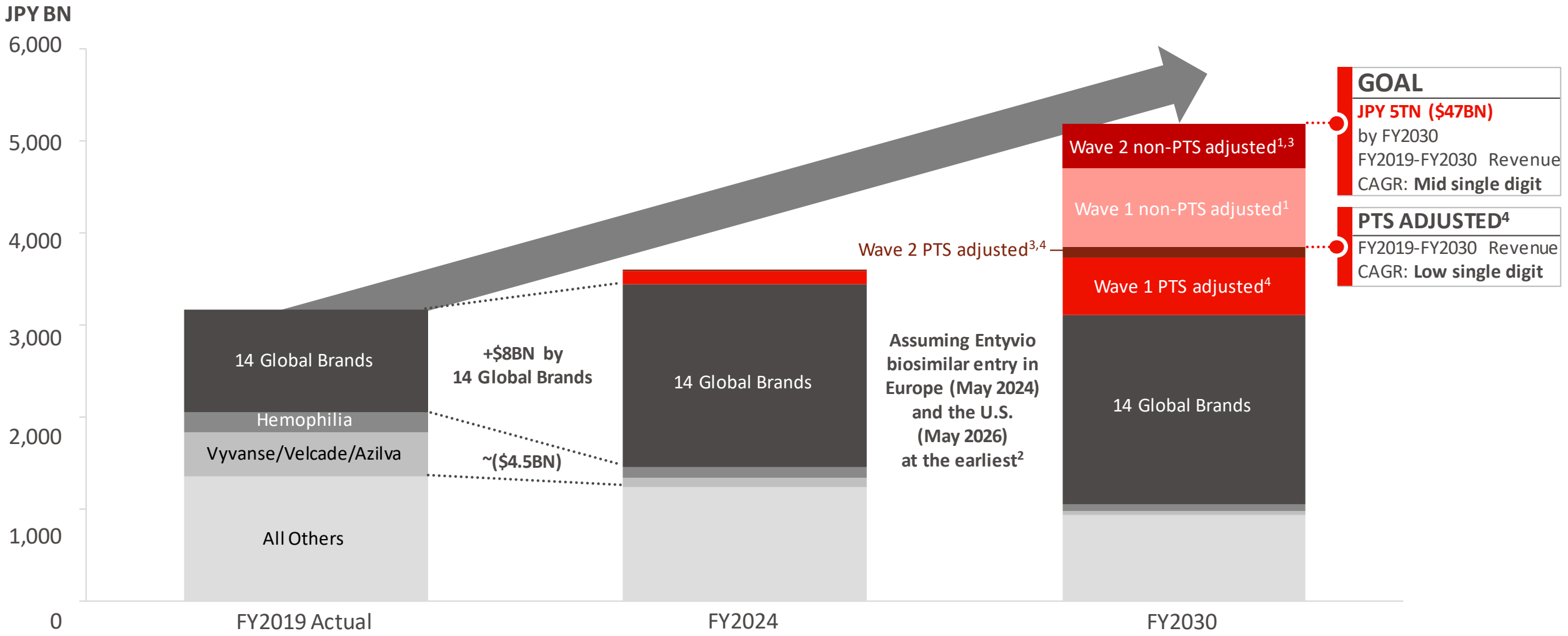
	PRODUCT	INDICATION	FULL MARKET OPPORTUNITY[2]	TAKEDA'S PEAK REVENUE POTENTIAL[3]
NEUROSCIENCE	Orexin programs[4]	Narcolepsy type 1 (NT1)	●●●	$3,000 – 4,000MN (NT1)
		Narcolepsy type 2 (NT2)	●●●	$1,000 – 2,000MN (NT2 + IH)
		Idiopathic hypersomnia	●●○	
	soticlestat (TAK-935)	Lennox-Gastaut syndrome, Dravet syndrome and other indications	●●●	Not disclosed
GASTROENTEROLOGY (GI)	Eohilia[5] (TAK-721)	Eosinophilic Esophagitis	●●●	$300 – 500MN
	TAK-999[6]	Alpha-1 Antitrypsin-Associated Liver Disease	●●●	Not included
VACCINES	TAK-003	Prevention of dengue	●●●	$700 – 1,600MN
PDT	CoVIg-19	Treatment of COVID-19	*Not disclosed*	

Up to $0.5BN ●○○ | $0.5BN to $1.0BN ●●○ | $1.0BN to $3.0BN ●●● | More than $3.0BN ●●●

1. MPSII market in total (somatic + CNS)
2. Market potential indicates Takeda's best estimate about addressable market size, based on available data and estimates.
3. Non-PTS (probability of technical success) adjusted figures represent best case scenarios, including technical success that Takeda does not currently consider probable to occur and should not be seen as a forecast or target figure.
4. Other rare indications than NT1, NT2 and IH are not included in the calculation.
5. Eohilia is the proposed brand name for TAK-721. TAK-721 is an investigational treatment and has not been approved for use by the U.S. Food and Drug Administration or other regulatory authorities.
6. TAK-999 has the potential to accelerate into Wave 1.

Note: Does not include any potential impacts imposed by the Most Favored Nation Model interim final rule issued by the U.S. Centers for Medicare & Medicaid Services (CMS) on November 20, 2020, which are currently being assessed.

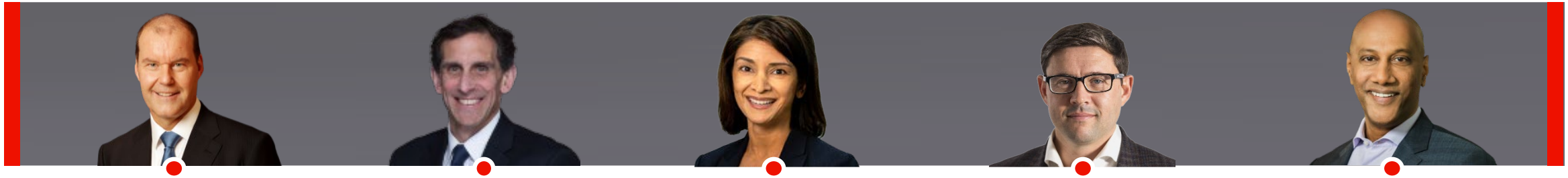
POSITIONED FOR ORGANIC & SUSTAINABLE REVENUE GROWTH; GOAL TO REACH JPY 5TN ($47BN) REVENUE BY FY2030[1]



1. Shows incremental revenues on a non-PTS (probability of technical success) basis; i.e. figures represent best case scenarios, including technical success that Takeda does not currently consider probable to occur and should not be seen as a forecast or target figure. 2. The assumption in this chart is for biosimilar entry for ENTYVIO in Europe in May 2024 and U.S. in May 2026, based on expiry of data exclusivity periods in each region. There are also patents for ENTYVIO that expire in 2032, and therefore the exact timing of biosimilar entry is uncertain at this time. 3. Only a select subset of eight Wave 2 programs (TAK-906, TAK-954, TAK-951, TAK-062, TAK-101, TAK-573, TAK-676, and TAK-981) are included for this analysis which are either in Phase 2 clinical development or have "Accelerate" designation with broad early investment. If all Wave 2 assets were included, the potential revenue contribution would be higher. 4. PTS (Probability of Technical Success) adjusted figures represent Takeda's base case, i.e. its estimate of revenue based on technical milestones it believes it is probable to achieve.

The above chart represents conceptual changes in revenue through FY2024 and FY2030 demonstrating growth over time offsetting loss of exclusivities and achieving single digit Compound Annual Growth Rate as compared to FY2019 baseline. Actual future net sales achieved by our commercialized products and pipelines will be different, perhaps materially so, as there is a range of possible outcomes from clinical development, driven by a number of variables, including safety, efficacy and product labelling. Does not include any potential impacts imposed by the Most Favored Nation Model interim final rule issued by the U.S. Centers for Medicare & Medicaid Services (CMS) on November 20, 2020, which are currently being assessed. In addition, if a product is approved, the effect of commercial factors including the patient population, the competitive environment, pricing and reimbursement is also uncertain. FY2019 currency assumption rate is applied for FY2024 and FY2030 revenues.

TODAY'S SPEAKERS



CHRISTOPHE WEBER
President & CEO

ANDY PLUMP
President, Research & Development

RAMONA SEQUEIRA
President, USBU & Global Portfolio Commercialization

MICHAEL NEDHAM
Global Program Leader for TAK-721, Global Product & Launch Strategy

RAJEEV VENKAYYA
President, Global Vaccine Business Unit

Available for Q&A

COSTA SAROUKOS
Chief Financial Officer

TERESA BITETTI
President, Global Oncology Business Unit

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Following Through On Our Commitment to Deliver Innovative Medicines To Patients

Spotlight on Select Wave 1 Programs

Andy Plump

President, R&D

Takeda

Better Health, Brighter Future

A GLOBAL VALUES-BASED BIOPHARMACEUTICAL COMPANY WITH A PATIENT-DRIVEN AND SCIENCE-FIRST R&D ENGINE

R&D FOCUS

INNOVATIVE BIOPHARMA

- ONCOLOGY
- RARE GENETIC & HEMATOLOGY
- NEUROSCIENCE
- GASTROENTEROLOGY (GI)
- PLASMA-DERIVED THERAPIES
- VACCINES

- CELL THERAPY
- GENE THERAPY
- DATA SCIENCES

INNOVATIVE PIPELINE

- **12 Wave 1 NMEs**
  5 programs with BTD, 3 with FTD and 1 with Sakigake designation
- **~30 Wave 2 NMEs**

ROBUST PARTNERSHIP MODEL

- Takeda's Labs are designed to access innovation wherever it originates
- Investments in novel mechanisms and capabilities for a sustainable future

 NME: New Molecular Entity; BTD: Breakthrough Therapy Designation; FTD: Fast Track Designation.

WE ARE ACCESSING INNOVATION BY INTEGRATING TAKEDA'S WORLD CLASS LABORATORY WITH A NETWORK OF PARTNERS

Select new partnerships from FY19 and FY20

HEMOSHEAR THERAPEUTICS
Fibrotic, Rare Liver Diseases

MD Anderson Cancer Center
TAK-007 & CAR-NK Platform

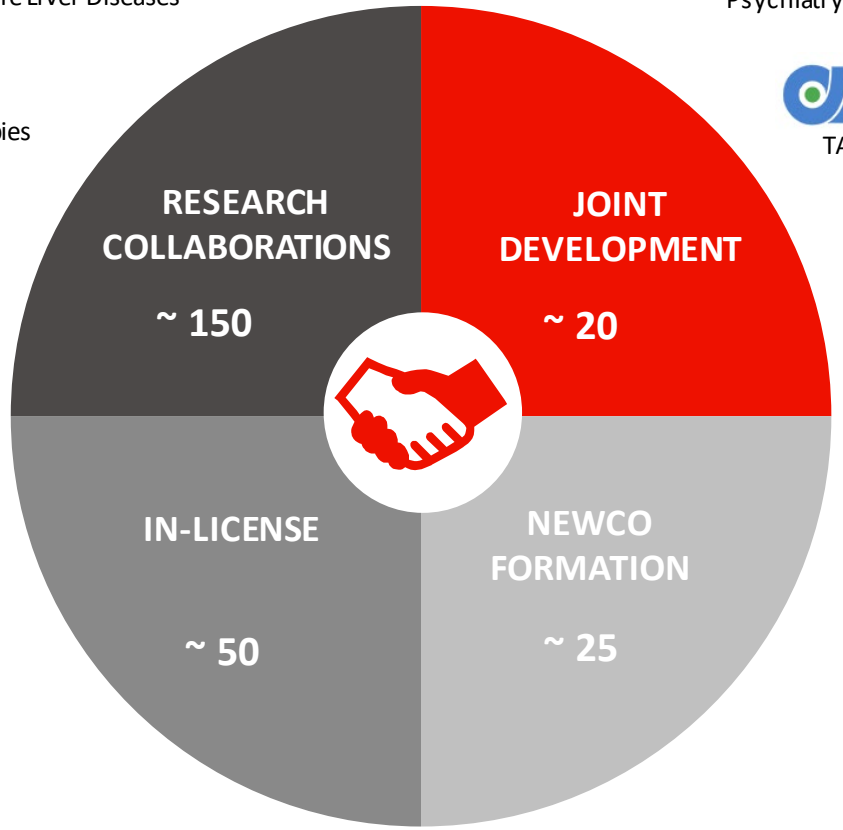
Neurocrine BIOSCIENCES
Psychiatry Partnership

Carmine THERAPEUTICS
Non-Viral Gene Therapies

arrowhead pharmaceuticals
TAK-999, RNAi therapy

SKYHAWK THERAPEUTICS
RNA Splicing Small Molecules Targeting Neurologic Disease

TURNSTONE BIOLOGICS
TAK-605 and Oncolytic Virus Platform



- Access to Innovation
- Risk-Sharing
- Expanding Capacity

Total Upfront Investment
~$1B IN FY19/20

MOMENTUM IN OUR DYNAMIC PIPELINE BASED ON EMERGING DATA

WAVE 1[1]

WAVE 2[2]

CLINICAL-STAGE NMEs

TARGET APPROVAL	FY20	FY21	FY22	FY23	FY24	FY25/26		FY27 AND BEYOND		
ONCOLOGY		**mobocertinib** *2L NSCLC with EGFR exon 20 insertion mutation*[3]	**pevonedistat** *HR-MDS*	**mobocertinib** *1L NSCLC with EGFR exon 20 insertion mutation*	**pevonedistat** *Unfit AML* **TAK-007** *CD19+ hematologic malignancies*	**TAK-981** *Multiple cancers* **TAK-573** *R/R MM*	**mobocertinib** *HER2 mutant NSCLC* **TAK-605** *Multiple cancers*	**TAK-252** *Solid tumors* **TAK-169** *R/R MM*	**TAK-102** *Multiple cancers* **TAK-676** *Solid tumors*	**TAK-940** *CD19+ hematologic malignancies*
RARE GENETIC & HEMATOLOGY		**maribavir** *R/R CMV infect. in transplant* **TAK-609** *Hunter CNS (IT)*	**maribavir** *1L CMV infect. in HSCT*	**TAK-611** *MLD (IT)* **TAK-755** *cTTP*		**TAK-755** *iTTP, SCD*	**mezagitamab** *MG, ITP*	**TAK-607** *Complications of prematurity*		
NEUROSCIENCE				**soticlestat** *DEE*	**Orexin2R-ag** *(TAK-925/994) Narcolepsy T1*	**Orexin2R-ag** *Sleep Disorders* **WVE-120101** *Huntington's Disease*	**WVE-120102** *Huntington's Disease*	**TAK-341** *Parkinson's Disease* **TAK-041** *Anhedonia in MDD*	**TAK-653** *TRD*	**TAK-831** *CIAS NS*
GASTRO-ENTEROLOGY	**TAK-721**[4] *EoE*					**TAK-062** *Celiac Disease* **TAK-999**[5] *AAT Liver Disease*	**TAK-101** *Celiac Disease* **TAK-951** *Nausea & vomiting*	**sibofimloc** *Crohn's Disease (post-op and ileitis)* **TAK-954** *POGD*	**TAK-671** *Acute Pancreatitis*	**TAK-039** *Hepatic encephalopathy*
VACCINES		**TAK-003** *Dengue Vaccine*				**TAK-426** *Zika Vaccine*		**TAK-214** *Norovirus Vaccine*		
PDT	**CoVIg-19** *COVID-19 H-IG (Formerly TAK-888)*									

Orphan potential in at least one indication ● Breakthrough or Fast Track ● China Breakthrough designation ■ Part 1: Wave 1 investor event

1. Projected approval dates depend on data read-outs; some Wave 1 target approval dates assume accelerated approval
2. Potential for data driven acceleration of some Wave 2 programs into Wave 1
3. Approval date assumes filing on Phase 2 data
4. Approval expected Q4 FY20 or early Q1 FY21
5. Pending deal close

All timelines are approximate estimates of December 8, 2020.

For glossary of disease abbreviations please refer to appendix.

ALL WAVE 1 MEDICINES HAVE NEAR-TERM PIVOTAL MILESTONES

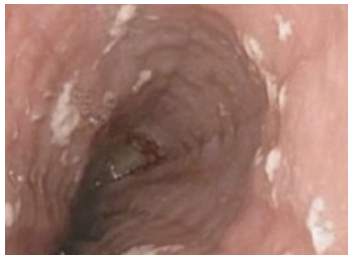
DEVELOPMENT STAGE	PROGRAM	INDICATION	NEXT MILESTONE	EXPECTED TIMING
Regulatory Milestones	TAK-721	Eosinophilic esophagitis	Approval	Q4FY20[1]
	TAK-003	Prevention of dengue fever	Submission	Q4FY20
	TAK-609	Hunter syndrome CNS	Submission	Q4FY20
	mobocertinib	NSCLC exon 20 insertion mutation (2L)	Submission	Q4FY20
Pivotal Data Readout	maribavir	Cytomegalovirus infection in transplant	Phase 3 readout	Q3FY20
	CoVIg-19	Treatment of COVID-19	Phase 3 readout	Q4FY20
	pevonedistat	Higher-risk myelodysplastic syndromes	Phase 3 readout	Q4FY20
	TAK-755	Congenital thrombotic thrombocytopenic purpura	Phase 3 readout	H1FY22
	TAK-611	Metachromatic leukodystrophy	Phase 2[2] readout	H2FY22
Pivotal Study Starts	soticlestat	Developmental and epileptic encephalopathies	Phase 3 start	Q1FY21
	TAK-007	CD19+ hematologic malignancies	Phase 2[2] start	H1FY21
	TAK-994	Narcolepsy	Phase 3 start	H2FY21

1. Approval expected Q4 FY20 or early Q1 FY21
2. Potential pivotal study

TODAY IS THE FIRST IN A SERIES OF INVESTOR EVENTS TO CONNECT CLINICAL DATA TO THE MARKET POTENTIAL OF OUR WAVE 1 PIPELINE

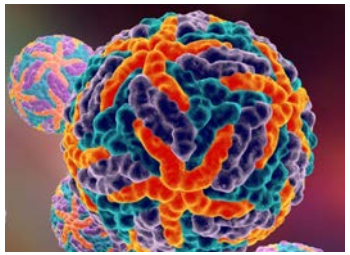
TODAY'S EVENT **PART 1** WAVE 1 MARKET OPPORTUNITY INVESTOR EVENT

TAK-721



US NDA submission for eosinophilic esophagitis

TAK-003



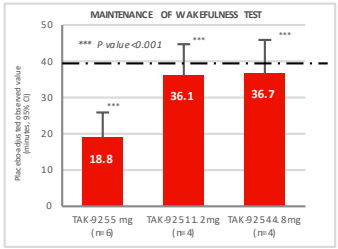
Regulatory filing for Dengue vaccine in endemic region

Wave 1 Pipeline

Development Status | Commercial Potential | Supplemental Data

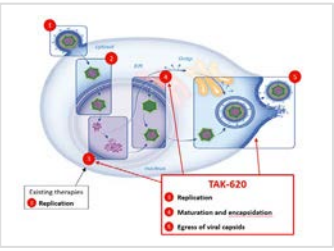
APRIL 6, 2021[1] **PART 2** WAVE 1 MARKET OPPORTUNITY INVESTOR EVENT

Orexin agonists



TAK-994 (oral) and TAK-925 (IV) orexin agonists for narcolepsy Type 1 and other sleep disorders

maribavir



US NDA submission for 2L R/R post transplantation CMV infection

Oncology Update

1. Date to be confirmed

AGENDA

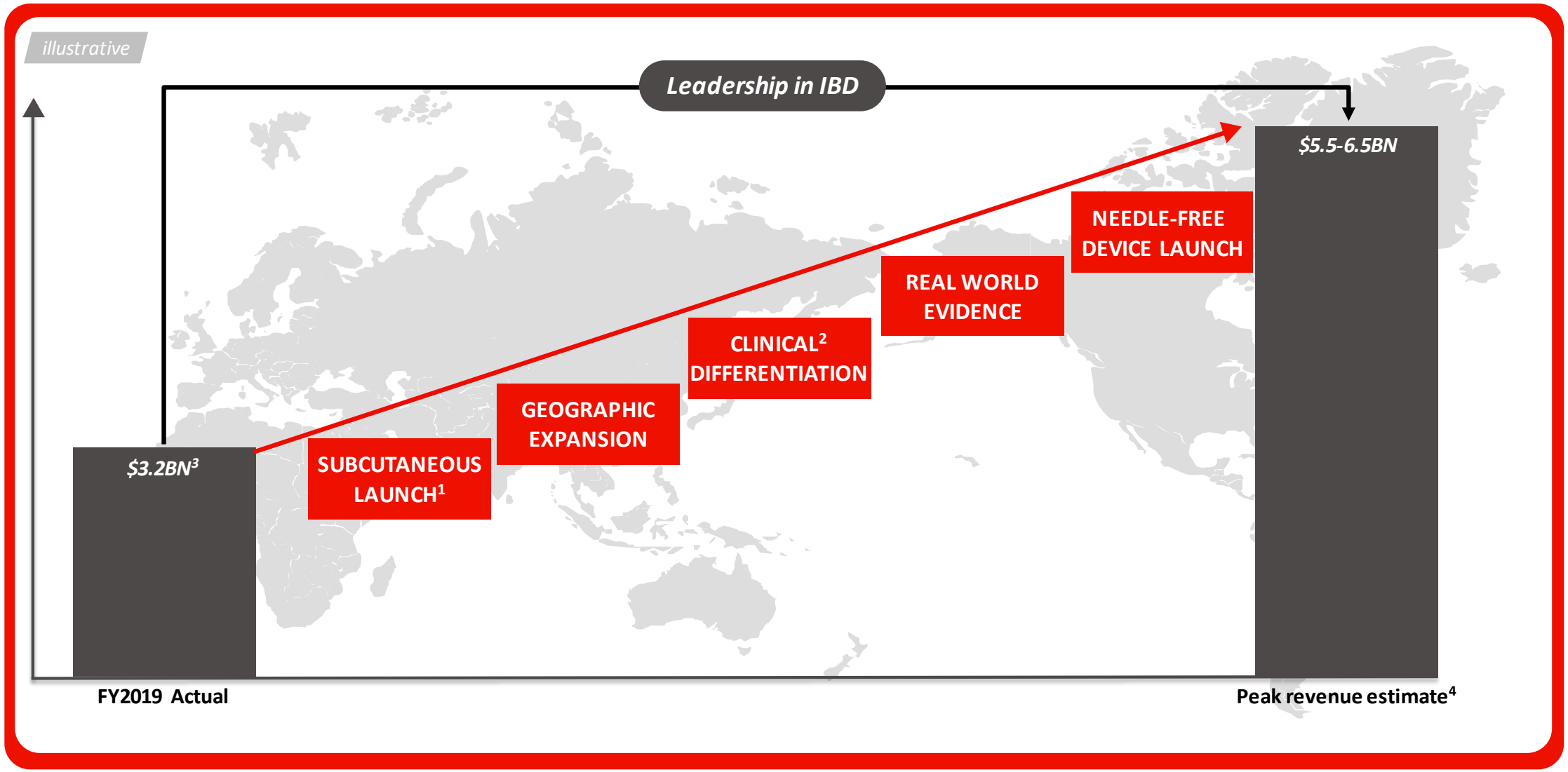
TIME (EST)	TIME (JST)	AGENDA
17:00 – 17:10	07:00 – 07:10	**Takeda: A Global Values-Based, R&D-Driven Biopharmaceutical Leader** *Christophe Weber, President & CEO*
17:10 – 17:25	07:10 – 07:25	**Following Through On Our Commitment To Deliver Innovative Medicines To Patients: *Spotlight On Select Wave 1 Programs*** *Andy Plump, President, R&D*
17:25 – 17:35	07:25 – 07:35	**Entyvio Case Study: Building A Gold Standard Therapy Along The Patient Journey** *Ramona Sequeira, President, USBU & Global Portfolio Commercialization*
17:35 – 18:05	07:35 – 08:05	**TAK-721 Deep Dive: Potential To Be First FDA-Approved Agent With Indication For Eosinophilic Esophagitis** *Mike Nedham, Global Program Leader for TAK-721, Global Product & Launch Strategy*
18:05 – 18:35	08:05 – 08:35	**TAK-003 Deep Dive: Live-Attenuated Tetravalent Vaccine For Prevention Of Dengue Disease** *Rajeev Venkayya, President, Global Vaccine Business Unit*
18:35 – 19:15	08:35 – 09:15	**Panel Q&A Session**
		Appendix 1: Wave 1 Pipelines One-Pager Summaries **Appendix 2: Epidemiology Data** **Appendix 3: Clinical Trial Summary**

Entyvio Case Study:
Building A Gold Standard Therapy Along The Patient Journey

Ramona Sequeira
President, USBU & Global Portfolio Commercialization

Better Health, Brighter Future

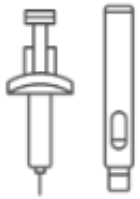
ENTYVIO: THE GOLD STANDARD THERAPY FOR IBD



1. Per approval by country Regulatory Authority
2. Based on head-to-head trial that compared clinical remission rates for Entyvio and adalimumab in adults with moderately to severely active UC
3. USD included for reference calculated at JPY/USD of 107 yen.
4. PTS (Probability of Technical Success) adjusted figures represent Takeda's base case, i.e. its estimate of revenue based on technical milestones it believes it is probable to achieve.

Note: Does not include any potential impacts imposed by the Most Favored Nation Model interim final rule issued by the U.S. Centers for Medicare & Medicaid Services (CMS) on November 20, 2020, which are currently being assessed.

GLOBAL MULTI-PRONGED GROWTH STRATEGY TO MAXIMIZE POTENTIAL OF ENTYVIO



SUBCUTANEOUS (SC) LAUNCH[1]

- *Meet the **needs** of IBD patients*
- *SC or IV options **offer flexibility** to find optimal route of administration (RoA)*
- ***VISIBLE** Trial*

GEOGRAPHIC EXPANSION
E.G. CHINA

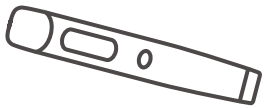
- *Takeda is investing in **development of the China IBD market***
- *Capture potential opportunities with approximately **67K Entyvio patients peak** in China*
- *FY2030 target: 36% peak share CD and 49% UC in China*

CLINICAL DIFFERENTIATION

- *VARSITY[2]*
- *GvHD*
- *Pouchitis*
- *Pediatric Ph3 program*
- *Long-term Safety (PASS)*
- *Explorer (CD natural history)*
- *Verdict (UC T2T)*

REAL WORLD EVIDENCE

- *Victory*
- *Evolve*
- *Versify*



NEEDLE-FREE DEVICE LAUNCH
(LAUNCH IN 2023)

- ***The only, Entyvio exclusive** and **first-to-market IBD** product with **jet-injector (needle-free) technology**, in partnership with PORTAL instruments*

1. Per approval by country Regulatory Authority
2. Based on head-to-head trial that compared clinical remission rates for Entyvio and adalimumab in adults with moderately to severely active UC

ROBUST RESEARCH PORTFOLIO TO HELP INFORM CLINICAL PRACTICE

COMPETITIVE POSITIONING

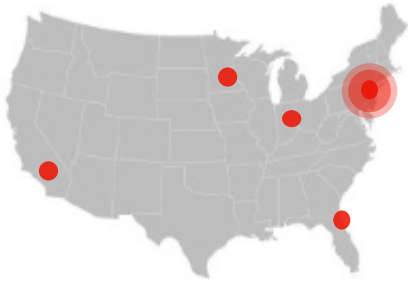
VARSITY: 1st Head-to-Head study in IBD (UC)

- Vedolizumab was superior to adalimumab on the primary endpoint of clinical remission at week 52

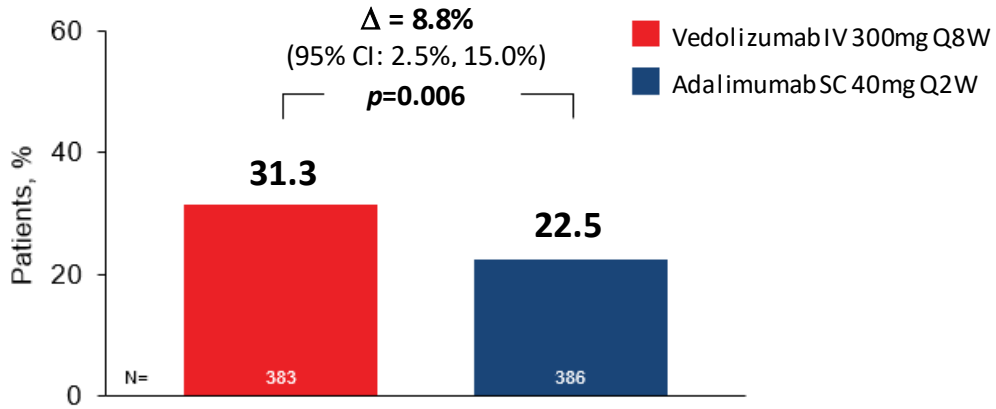
REAL WORLD EVIDENCE

VICTORY: Largest real-world registry with over 1,000 Vedolizumab-treated patients with UC or CD

- Higher rates of remission in UC with vedolizumab versus TNF-antagonist therapy in routine practice



Clinical Remission
(Primary endpoint)



Comparative effectiveness of VDZ to TNF-antagonist therapy (IPW ATE match set)

Outcome	Comparison groups	Hazard ratio (95% CI)
Clinical remission[b]	VDZ vs overall	1.65 (1.23-2.22)
	VDZ vs IFX	1.81 (1.23-2.68)
	VDZ vs SC TNF antagonists[c]	1.69 (1.09-2.63)
	VDZ vs TNF-antagonist exposed	1.69 (1.51-2.70)
	VDZ vs TNF-antagonist naïve	1.68 (1.16-2.43)

Source: Sands et al. Vedolizumab versus Adalimumab for Moderate-to-Severe Ulcerative Colitis. N Engl J Med 2019; 381:1215-1226
Lukin D, et al; on behalf of VICTORY Collaboration. Comparative safety and effectiveness of vedolizumab to tumour necrosis factor antagonist therapy for ulcerative colitis. Clin Gastroenterol Hepatol. 2020; S1542-3565(20)31388-4.
IBD: Inflammatory Bowel Disease; UC: ulcerative colitis; CD: Crohn's Disease

Bringing our pipeline to life

GLOBAL CAPABILITIES to deliver LIFE TRANSFORMING TREATMENTS

LAUNCH EXCELLENCE

Patient Journey & Diagnosis

Data, Insights & Analytics

Patient Services

Value Based Partnerships

Digital

Evidence Generation

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TAK-721 Deep Dive: Potential To Be First FDA-Approved Agent With Indication For Eosinophilic Esophagitis

Michael Nedham

TAK-721 Global Program Lead, Global Product & Launch Strategy

Better Health, Brighter Future

KEY TAKEAWAYS FOR TAK-721 IN EOE (EOSINOPHILIC ESOPHAGITIS)

1

Unmet need in EoE is high, leadership needed

- Chronic inflammatory disease which impacts QoL and can lead to long term fibrosis.
- Incidence and prevalence growing and no FDA approved treatments

2

TAK-721 is specifically designed to tackle EoE

- Has breakthrough therapy designation and completed registration studies
- NDA submitted and if approved will be the 1st FDA approved agent

3

Takeda is strongly positioned to launch TAK-721

- As an established leader with proven capabilities launching GI products
- US launch expected in H1 FY2021

 TAK-721 is an investigational treatment and has not been approved for use by the U.S. Food and Drug Administration or other regulatory authorities. Neither Breakthrough Therapy Designation nor Orphan Drug Designation guarantee approval or commercial availability.

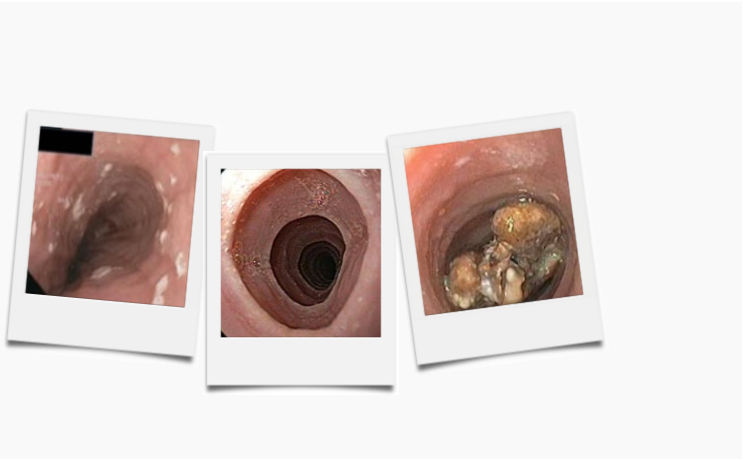
WHAT IS EOE (EOSINOPHILIC ESOPHAGITIS)?

EoE is a rare, chronic, inflammatory, immune-mediated disease of the esophagus, often resulting in dysphagia (difficulty swallowing) in adults and children.

Over time, untreated chronic inflammation can progress to fibrotic disease, narrowing of the esophagus, and associated food impactions.

Diagnosed through biopsy confirming high eosinophil count (>15/hpf) in the esophagus.

WHAT IS IT LIKE FOR PATIENTS LIVING WITH EOE?



Physical
PAIN

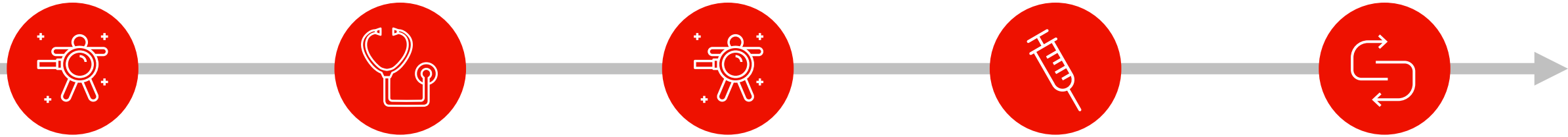
Staying
NOURISHED

Social
ISOLATION

"I sometimes go for days or weeks without an impaction, but I always feel like I'm living on the edge of another choking incident. I wish I could go back to not having to constantly think about food."

 Source: "Illuminating the Emotions & Needs of the EoE Patient," ethnographic market research, 2018

PATIENT JOURNEY INVOLVES MULTIPLE SPECIALTIES AND LONG DIAGNOSIS TIMES



PRE-EOE DIAGNOSIS (6 MONTHS)

Rxs:

- 50% are untreated
- 34% are on PPI

Comorbidities:

- 30% of patients have allergy disease
- 45% have GERD and/or dysphagia

EOE DIAGNOSIS PROCEDURE

- 72% of patients are diagnosed with endoscopy
- 25% have had an endoscopy prior but may not have had a biopsy

1ST EOE DIAGNOSIS

- 62% of patients are diagnosed by gastroenterologists
- 8% of patients are diagnosed by allergist

TREATMENT INITIATION

- 77% of patients are treated within 18 months
- 63% of treated patients are initiated by gastroenterologists

PERSISTENCE

- On average, patients are on therapy for a total of 6.5 months within the 12 months from treatment initiation

 PPI: Proton Pump Inhibitor, GERD: Gastroesophageal Reflux Disease. Source: 2019 EoE Patient Flow Analysis, IQVIA Pharmetrics Plus data, Jan 2013 - Dec 2018.

EOE IS STILL RELATIVELY NEW AND RARE, BUT PREVALENCE IS GROWING

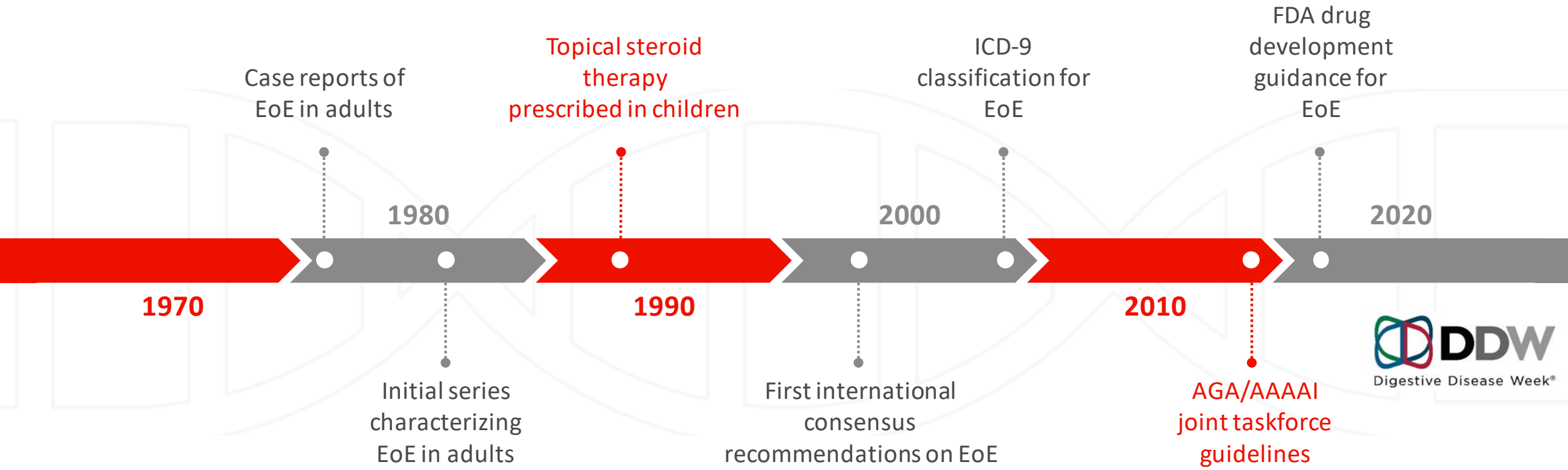
Approximately **1 in 2000 people** in the US live with EoE[1-5]

Emerging evidence suggests environmental factors such as microbes, early-life events affecting the microbiome, and other factors may be contributing to the rise in prevalence of EoE[1,10-14]

EoE can affect all ages, but predominantly adults under 50 and adolescents, and twice as common in men.[4,6-9]

1. O'Shea KM, Aceves SS, Dellon ES, et al. *Gastroenterology.* 2018;154(2):333-345.
2. Dellon ES, Jensen ET, Martin CF, et al. *Clin Gastroenterol Hepatol.* 2014;12(4):589-596.
3. Dellon ES. *Gastroenterol Clin North Am*. 2013;42(1):133-153
4. Dellon ES. *Gastroenterol Clin North Am*. 2014;43(2):201-218.
5. Spergel JM, Book WM, Mays E, et al. *J Pediatr Gastroenterol Nutr.* 2011;52(3):300-306.
6. Muir AB, Brown-Whitehorn T, Godwin B, et al. *Clin Exp Gastroenterol.* 2019;12:391-399.
7. Lucendo AJ, Molina-Infante J, Arias Á, et al. *United European Gastroenterol J.* 2017;5(3):335-358.
8. Shaheen NJ, Mukkada V, Eichinger CS, et al. *Dis Esophagus*. 2018;31(8):1-14.
9. Mansoor E, Cooper GS. *Dig Dis Sci.* 2016;61(10):2928-2934.
10. Dellon ES, Hirano I. *Gastroenterology.* 2018;154(2):319-332.e3.
11. Furuta GT, Katzka DA. *N Engl J Med*. 2015;373(17):1640-1648.
12. Harris JK, Fang R, Wagner BD, et al. *PLoS One*. 2015;10(5):e0128346.
13. Carr S, Chan ES, Watson W. *Allergy Asthma Clin Immunol*. 2018;14(Suppl 2):58.
14. Alexander ES, Martin LJ, Collins MH, et al. *J Allergy Clin Immunol.* 2014;134(5):1084-1092.

ACADEMIC INTEREST AND RESEARCH ACTIVITIES RAMPING UP



DDW Digestive Disease Week®

"[Patients] will tell you "I am eating fine" but that they stopped eating meat because they have this fear that they are going to get another food impaction…. so **it's not really that their disease got better, their symptoms got better because they are avoiding food**…"

Dr Ikuo Hirano, Professor of Medicine at Northwestern University Feinberg School of Medicine

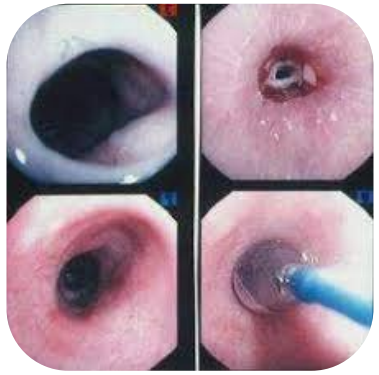
 AGA: American Gastroenterological Association, AAAAI: American Academy of Allergy, Asthma & Immunology, ICD-9: International Classification of Diseases 9th Revision.

CURRENT U.S. TREATMENT APPROACHES ARE LIMITED

Patient Adaptive Behaviors

Active Diet Management

Esophageal Dilation



Off-Label Treatments

- PPIs
- Swallowing inhaled steroids
- Homemade "slurry"
- Compounding pharmacy

 PPI: Proton Pump Inhibitor.

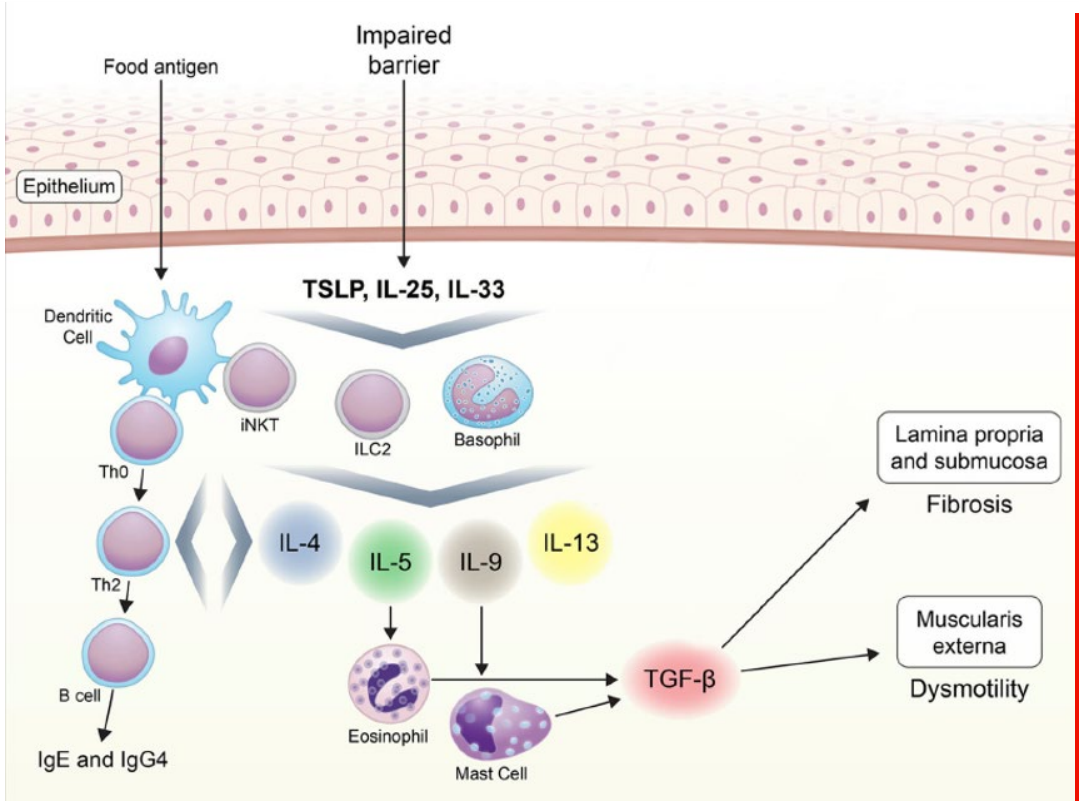
SUMMARIZING THE OPPORTUNITY IN EOE

- Increasing prevalence and incidence of EoE
- Limited access to high quality treatment options
- Challenge in consistency in managing disease, but high interest and excitement from HCPs
- Low overall patient awareness and education with long diagnosis times

- *Need for leadership in EoE*

TAK-721 IS A POTENTIAL SOLUTION TO THE UNMET NEED IN EOE

- Topically active, oral viscous suspension of budesonide, formulated specifically to target inflammation in the esophagus
- TAK-721 is a synthetic second-generation, non-halogenated corticosteroid having potent topical anti-inflammatory and glucocorticoid activity
- TAK-721 has a wide range of inhibitory activities against multiple cell types



 Davis BP. Clin Rev Allergy Immunol. 2018;55(1):19-42

PIONEERING CLINICAL DEVELOPMENT PROGRAM OF FIRSTS FOR EOE, PARTNERING WITH FDA

- Orphan Drug Designation in EoE (2006)
- Breakthrough Therapy Designation in EoE (2016)
- NDA submitted on EoE (2020)
- Comprehensive development program of EoE specific Ph2 & Ph3 studies, aligned with FDA, and largest completed studies specific to EoE
- To develop and validate with FDA a Patient Reported Outcome tool specific to EoE – Dysphagia Symptom Questionnaire (DSQ)
- Ph3 program covering histology, symptoms & endoscopy, as well as adolescents and adults in one program

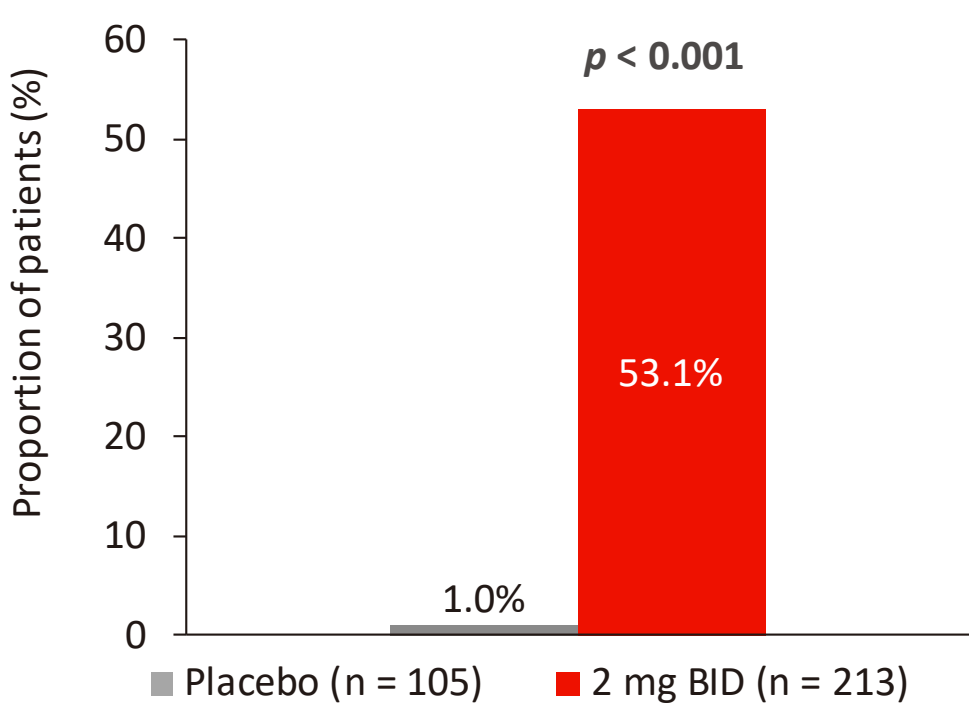
ORBIT 1 STUDY: CO-PRIMARY ENDPOINTS MET FOR HISTOLOGY & SYMPTOMS

Results presented at presidential plenary at ACG, Texas, Oct 2019

Histologic Response at 12 Weeks

(peak ≤ 6 eosinophils/hpf on biopsy)

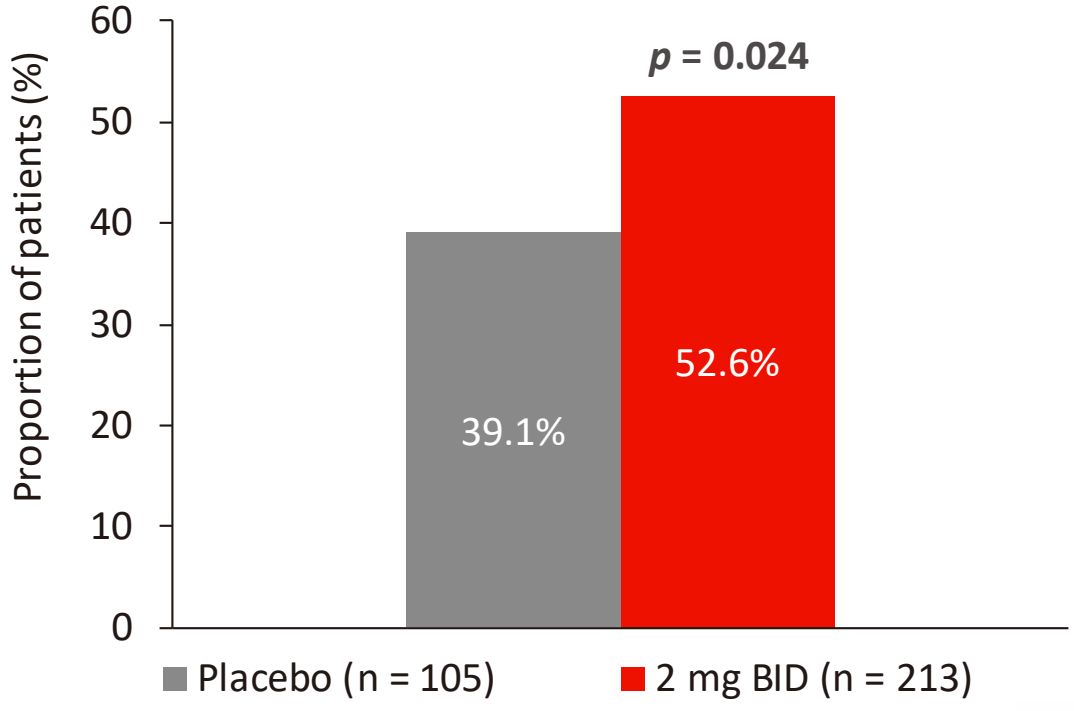
Declare statistical significance if $p < 0.05$



Symptom Response at 12 Weeks

(≥ 30% reduction in DSQ score[1])

Declare statistical significance if $p < 0.05$

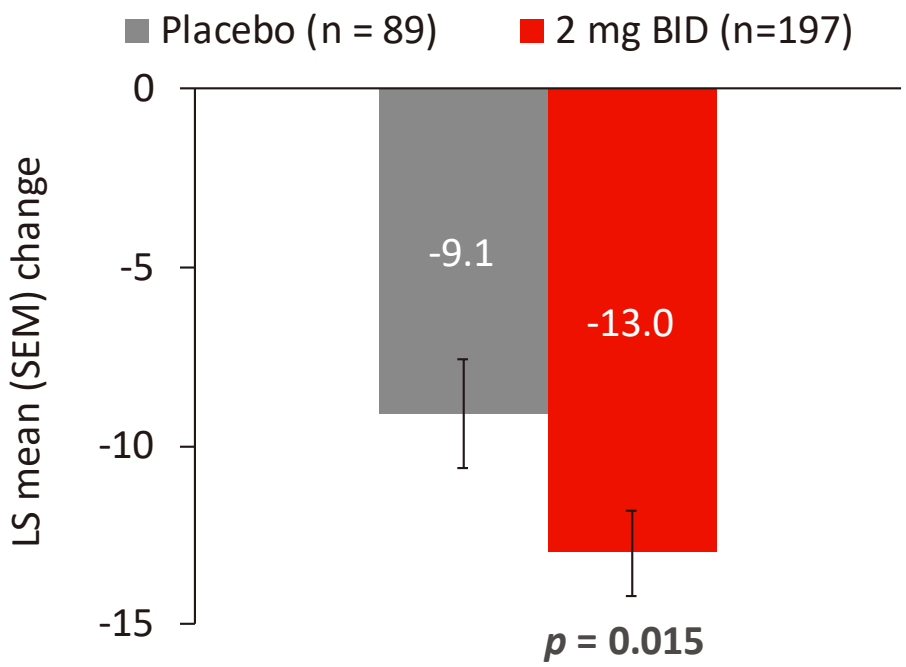


1. DSQ score: Dysphagia Symptom Questionnaire patient reported outcome score eos/hpf: peak eosinophils per high-powered field from endoscopic biopsies
ACG: American College of Gastroenterology

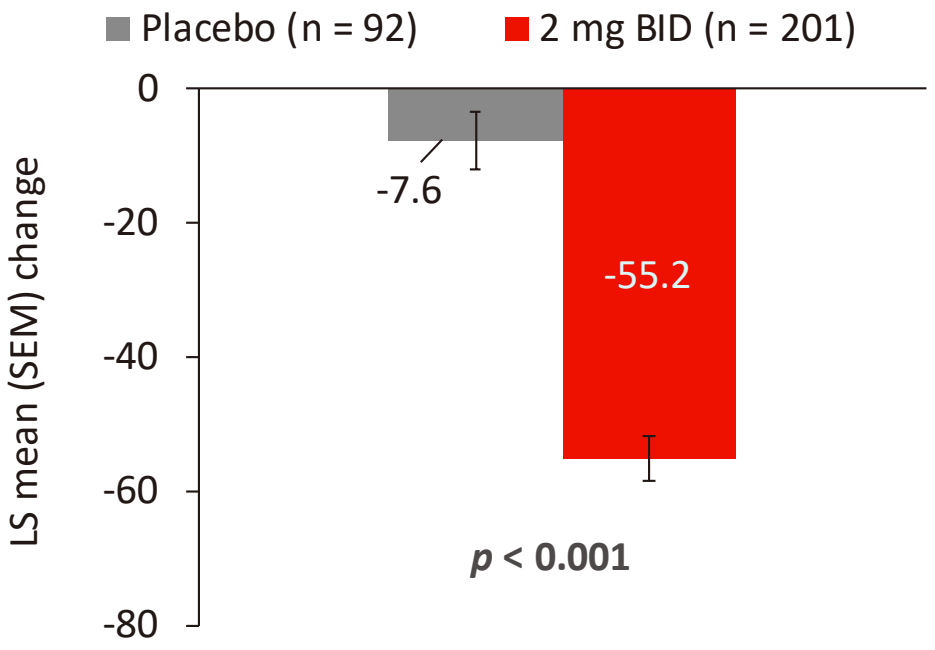
KEY SECONDARY EFFICACY ENDPOINT MET

Change in **DSQ score from baseline** to week 12 of therapy

P value required = 0.05



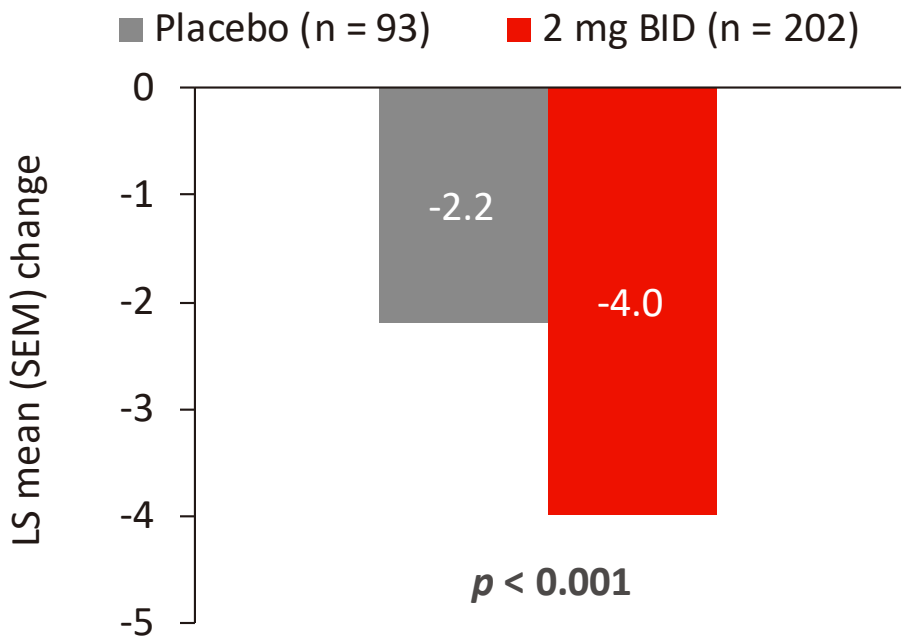
Change in overall **peak eosinophil counts** from baseline to week 12 of therapy



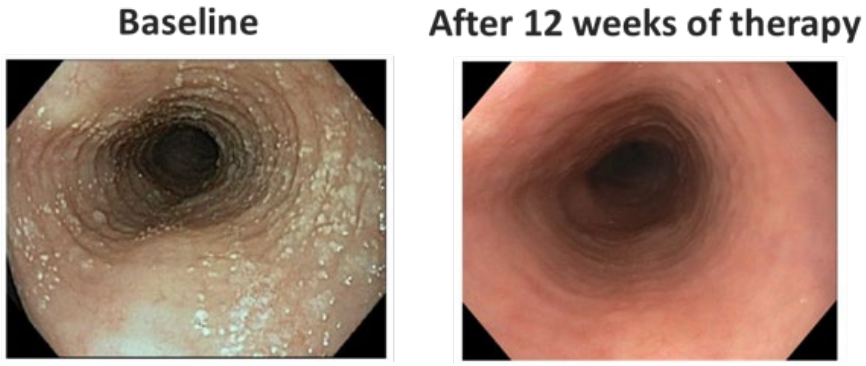
 LS: least squares, SEM: standard error of the mean

ENDOSCOPIC APPEARANCE (EREFS) ENDPOINT MET AT 12 WEEKS

Change to **total EREFS score** from baseline to week 12 of therapy

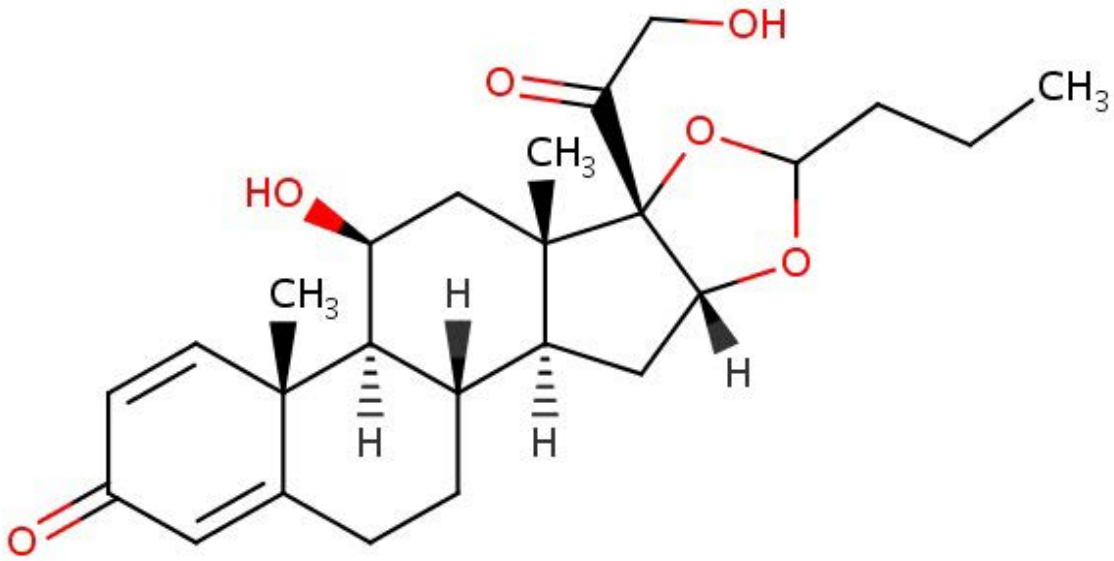


Individual patient example from ORBIT 1 study

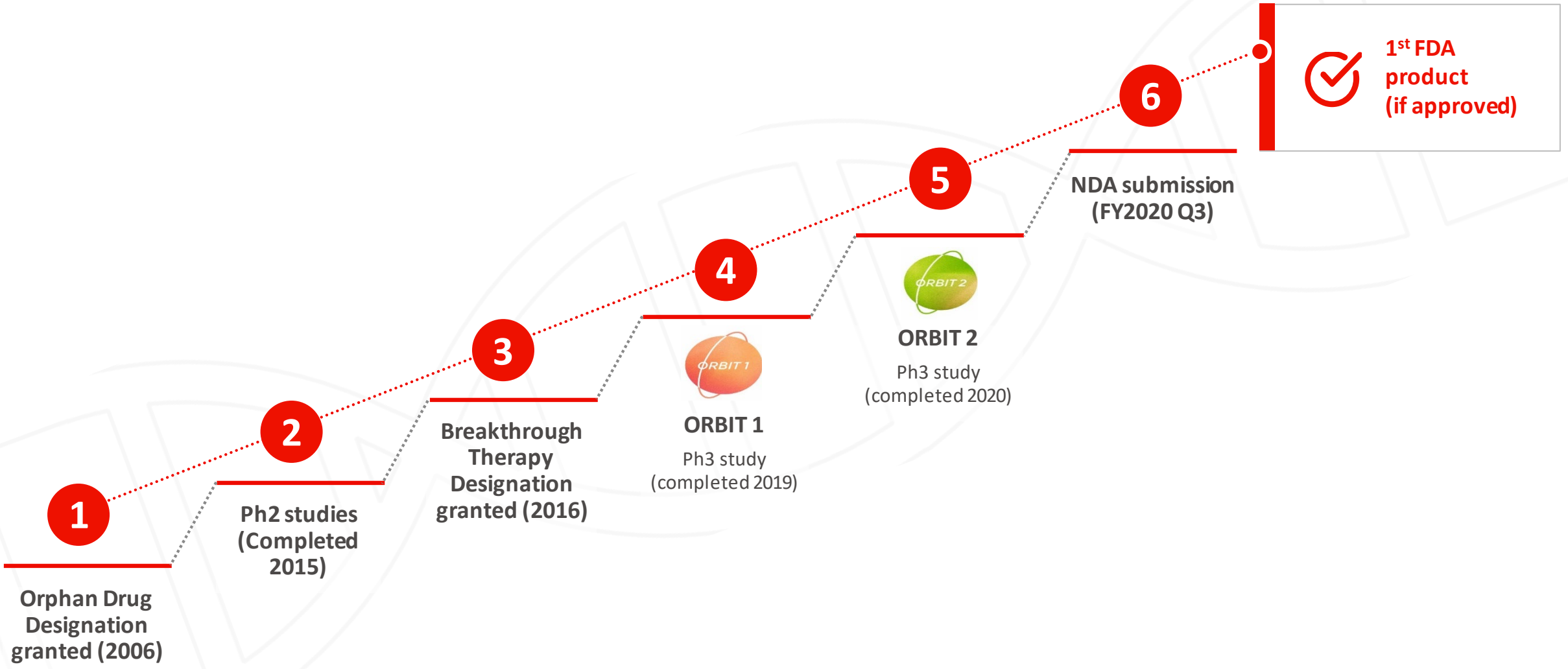


SAFETY RESULTS CONSISTENT WITH KNOWN SAFETY PROFILE OF BUDESONIDE

- TAK-721 was well tolerated
- Treatment-emergent adverse events (TEAEs) were similar for TAK-721 (61.0%) and placebo (61.0%) groups after 12 weeks
- Most TEAEs reported were mild or moderate in severity



A LEADERSHIP PATH TO 1ST POTENTIAL U.S. APPROVAL NEXT YEAR



 NDA: New Drug Application.

TAK-721 POTENTIAL LAUNCH AS 1ST FDA APPROVED PRODUCT IN EOE TO SET STANDARD AS 1ST LINE THERAPY

1st line Therapy

TAK-721

1st FDA product
(if approved)

Later Line Therapy

Biologic Treatments
Currently in trials

WE AIM TO ACHIEVE BROAD ACCESS FOR PATIENTS TO AN APPROVED TREATMENT

Broad Patient Access

- **Strong value proposition** for payers
- Many patients currently **pay full out-of-pocket** for off-label treatments
- Objective to make TAK-721 **accessible to as many patients as possible**
- **Services and solutions** to enable access to TAK-721

U.S. BUSINESS UNIT WELL PREPARED FOR LAUNCHING TAK-721 BRAND

Eohilia
(budesonide oral suspension) 2mg

U.S. BUSINESS UNIT WELL PREPARED FOR LAUNCHING TAK-721 BRAND

Eohilia
(budesonide oral suspension) 2mg

HCP

Field Force
- Medical, Thought Leader Liaisons and Sales personnel already hired and established to support EoE launch

Disease State Education
- New Digital approach to bolster EoE awareness with the launch of SeeEoE.com

KOL Engagement and Congress Presence
- First disease state awareness effort launched at ACG, as well as commercial and medical advisory boards completed.

PATIENT

Patient Awareness
- Launch of a patient centric disease state awareness campaign through digital channels

Product Access
- Ensuring the right support with patient services and market access plans in place

Launch formulation
- Development of new formulation for launch

Partnership with patient advocacy
- To understand educational and support gaps to improve diagnosis and standard of care

TOGETHER. BEYOND.

Leadership in **Inflammatory Bowel Disease (IBD)**

Entyvio®

Lialda™

PENTASA®

Leadership in **Short Bowel Syndrome (SBS)**

Gattex®

Leadership in **Motility & Acid Related Disorders**

motegrity™

amitiza

DEXILANT

Takecab®

Leadership in **EOE**

Eohilia

REINFORCING LEADERSHIP IN GI WITH POTENTIAL FIRST FDA APPROVED THERAPY IN EOE

1

Unmet need in EoE is high, leadership needed

2

Eohilia is specifically designed to tackle EoE

3

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17:25 – 17:35	07:25 – 07:35	**Entyvio Case Study: Building A Gold Standard Therapy Along The Patient Journey** *Ramona Sequeira, President, USBU & Global Portfolio Commercialization*
17:35 – 18:05	07:35 – 08:05	**TAK-721 Deep Dive: Potential To Be First FDA-Approved Agent With Indication For Eosinophilic Esophagitis** *Mike Nedham, Global Program Leader for TAK-721, Global Product & Launch Strategy*
18:05 – 18:35	08:05 – 08:35	**TAK-003 Deep Dive: Live-Attenuated Tetravalent Vaccine For Prevention Of Dengue Disease** *Rajeev Venkayya, President, Global Vaccine Business Unit*
18:35 – 19:15	08:35 – 09:15	**Panel Q&A Session**
		Appendix 1: Wave 1 Pipelines One-Pager Summaries **Appendix 2: Epidemiology Data** **Appendix 3: Clinical Trial Summary**

TAK-003 Deep Dive: Live-Attenuated Tetravalent Vaccine For Prevention Of Dengue Disease

Rajeev Venkayya

President, Global Vaccine Business Unit

Better Health, Brighter Future

DENGUE IS A TOP TEN THREAT TO GLOBAL HEALTH

World Health Organization, 2019[1]

>3.9 BILLION

people around the globe
are at risk of dengue[2]

390 M

Estimated infections each year[2]

>100

Endemic countries, primarily in Asia and Latin America[2]

A leading cause of hospitalization and death in children and adults in endemic regions[2]

1. World Health Organization (WHO). Top ten threats to global health in 2019. https://www.who.int/news-room/spotlight/ten-threats-to-global-health-in-2019
2. WHO. Dengue and Severe Dengue. https://www.who.int/news-room/fact-sheets/detail/dengue-and-severe-dengue

FASTEST-SPREADING MOSQUITO-BORNE VIRAL DISEASE[1]

- Four strains of the dengue virus (DENV) 1-4 spread by the *Aedes aegypti* and *Aedes albopictus* mosquitos[2]
- All four strains of dengue may be circulating at any time, and it is not always known which strain is present[3]
- The second infection with a different strain could lead to more severe disease[4]
- Unlike other mosquito-borne diseases, such as malaria, a targeted treatment for dengue does not exist[5,6]

1. WHO. https://www.who.int/images/default-source/departments/ntd-library/dengue/infographics-and-illustrations/dengue-infographic.png?sfvrsn=ae8ce604_8
2. WHO. Promoting dengue vector surveillance and control https://www.who.int/activities/promoting-dengue-vector-surveillance-and-control
3. Mol Biol Evol. 2010 Apr; 27(4): 811–818. Epidemic Dynamics Revealed in Dengue Evolution: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2877535/
4. J R Soc Interface. 2013 Sep 6; Interactions between serotypes of dengue highlight epidemiological impact of cross-immunity. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3730691
5. WHO. Malaria. https://www.who.int/news-room/fact-sheets/detail/malaria
6. WHO. Dengue and Severe Dengue. https://www.who.int/news-room/fact-sheets/detail/dengue-and-severe-dengue

GEOGRAPHICAL RANGE OF DENGUE IS EXPANDING

More than 6 billion people could be at risk for dengue by 2080 due to population growth in endemic areas[1]

**MICs are defined as those with a GNI per capita between $1,036 and $12,535[3] It includes countries classified as Low Middle Income and High Middle Income. Limited data on dengue burden in low income countries*

Dengue is found mostly in urban and semi-urban areas in tropical and sub-tropical climates. Globalization, urbanization and climate change are contributing to rise in disease[1]

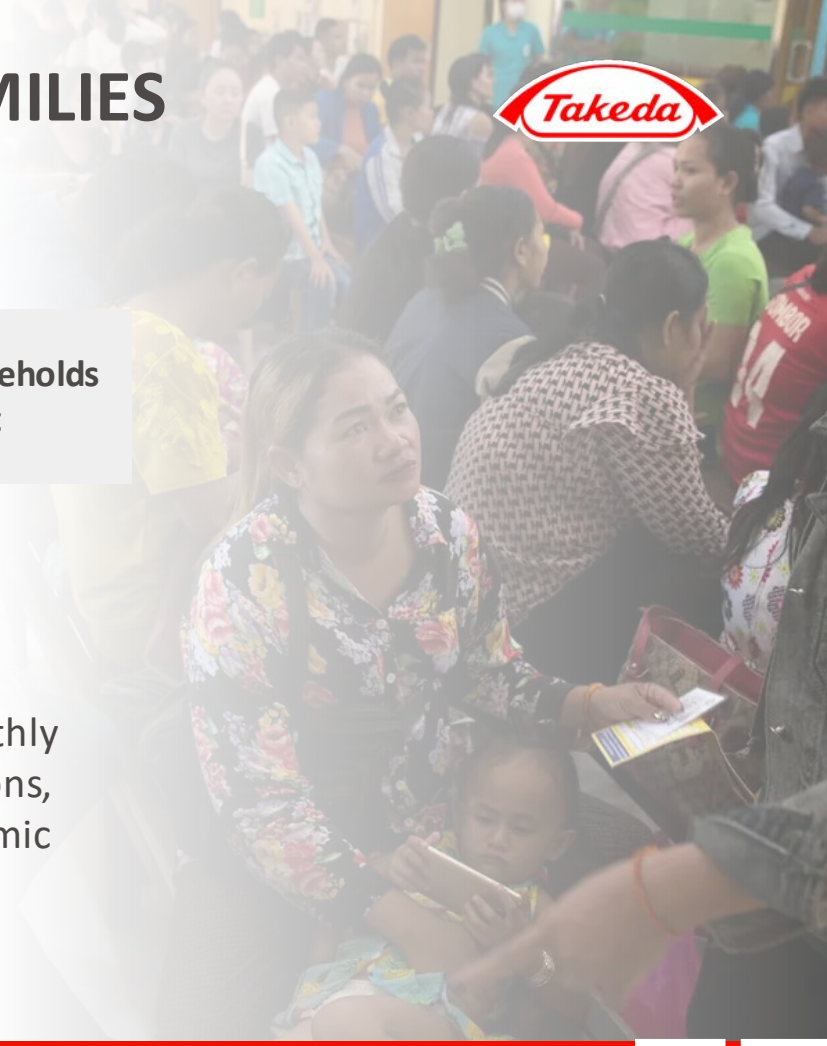
More than 90% of dengue cases occur in Middle Income Countries* (MICs)[2,3,4]

- *Brazil: 2 million cases, 2019[5]*
- *Philippines, ~400,000 cases, 2019[6]*

Burden of dengue is placing additional strain on countries dealing with COVID-19[7]

1. 5.Messina, J.P., Brady, O.J., Golding, N. et al. The current and future global distribution and population at risk of dengue. Nat Microbiol 4, 1508–1515 (2019). https://doi.org/10.1038/s41564-019-0476-8
2. Cases: Supplement to Stanaway JD, Shepard DS, Undurraga EA, et al. The global burden of dengue: an analysis from the Global Burden of Disease Study 2013. Lancet Infect Dis 2016; published online Feb 10. http://dx.doi.org/10.1016/S1473-3099(16)00026-8. Accessed Jan 14, 2019.
3. Income Classification: World Bank: List of Economies (June 2018). https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups
4. 2018 World Development Indicators. World Bank. https://databank.worldbank.org/data/reports.aspx?source=2&series=NY.GDP.MKTP.CD&country=#.
5. WHO. https://www.who.int/news/item/21-11-2019-who-region-of-the-americas-records-highest-number-of-dengue-cases-in-history-cases-spike-in-other-regions
6. WHO. https://www.who.int/docs/default-source/wpro---documents/emergency/surveillance/dengue/dengue-20201105.pdf?sfvrsn=fc80101d_42
7. Harapan H, Ryan M, Yohan B, et al. Covid-19 and dengue: Double punches for dengue-endemic countries in Asia [published online ahead of print, 2020 Sep 18]. Rev Med Virol. 2020;e2161. doi:10.1002/rmv.2161

OUTBREAKS CAN OVERWHELM HOSPITALS AND FAMILIES



Hospitals and clinics struggle with increased cases

- Areas may see more than 400%+ increase of cases in one month[1]
- Thousands of patients may be admitted to hospitals in just a few days[2]
- Makeshift treatment wards, and ordinary wards are converted to dengue wards[1]

Medical costs of dengue can be great. Households bear a substantial burden of this cost

- Average cost range $36-$2,000 per person hospitalized in endemic countries[3]
- Families may spend 15-23% of monthly household income for hospitalizations, or more, depending on socioeconomic factors[4,5]

It was scary. Both public and private service centres were overflowing. The urgent care centres in private hospitals were also over capacity.[1]

1. PLOS. Neglected Tropical Disease. Societal impact of dengue outbreaks: Stakeholder perceptions and related implications. A qualitative study in Brazil, 2015
2. WHO scales up response to worldwide surge in dengue https://www.who.int/news-room/feature-stories/detail/who-scales-up-response-to-worldwide-surge-in-dengue
3. Shepard, et al. Lancet Infect Dis 2016;16:935–41
4. Tozan Y, Ratanawong P, Sewe MO, Wilder-Smith A, Kittayapong P. Household costs of hospitalized dengue illness in semi-rural Thailand. PLoS Negl Trop Dis. 2017;11(9):e0005961
5. Sri Lanka Journal of Child Health, 2014; 43(4): 205-207 . Economic cost of hospitalized non-fatal paediatric dengue at the Lady Ridgeway Hospital for Children in Sri Lanka

THE ECONOMIC IMPACT OF DENGUE IS BROAD[1–4]

HOUSEHOLD

Health care expenditures
Direct medical and non-medical costs

Care-related productivity
Indirect costs: time off work & school for patients and their caregivers

GOVERNMENT

Vector control, surveillance and communication costs

Dengue outbreak control costs
Additional expenses for communication, surveillance, vector control, health care personnel, etc.

MACROECONOMIC IMPACT

Economy and social
Trade and tourism, foreign direct investment

Country productivity
Long-term fatigue impacts educational level, labor supply and productivity

Behavior
Investment for children and young adults, economic condition within family and community (consumption of goods)

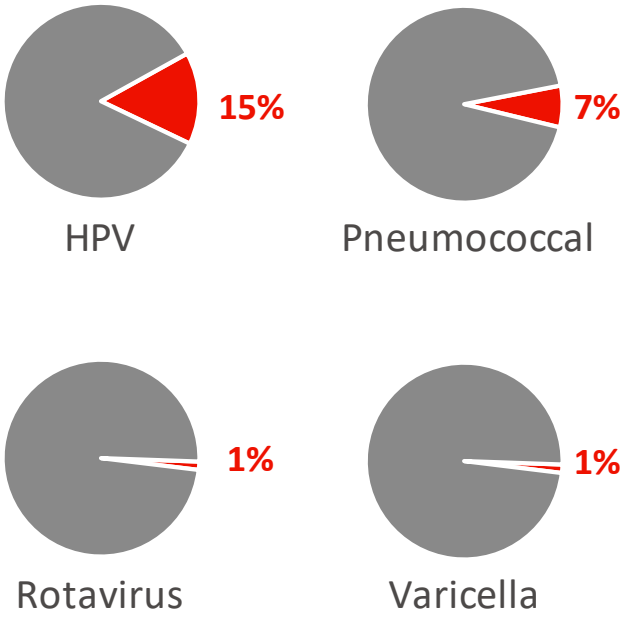
1. Drummond, *et al.* Vaccine 2007;25:5945–57
2. Deogaonkar, *et al. BMC Public Health* 2012;12:878
3. Bärnighausen, *et al. Semin Immunol* 2013;25:104–13
4. Bloom, 4th International Conference on Tropical Medicine 2014

LARGE ELIGIBLE POPULATION FOR DENGUE VACCINATION

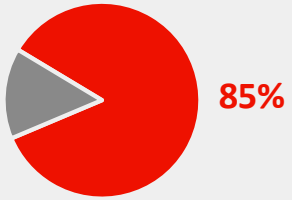
Vaccine Eligible Population In Endemic Countries For A Dengue Vaccine Far Exceeds Any Recently Launched Vaccine[1]

% of Overall Population that is Vaccine Eligible (Brazil)[2]

RECENTLY LAUNCHED VACCINES



DENGUE



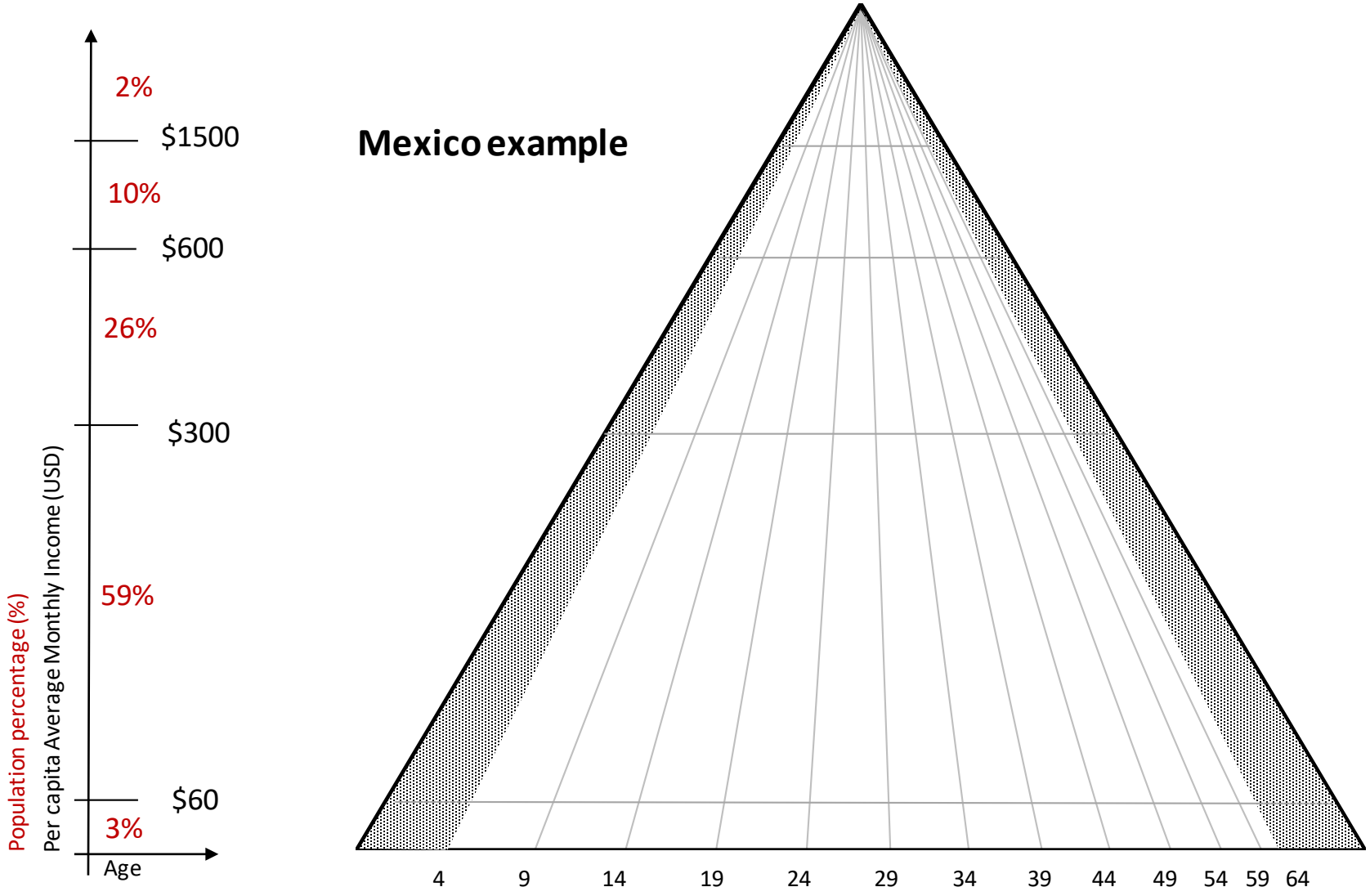
~180 million eligible for Dengue vaccine

Larger and more diverse cohorts

- Urban and rural dwellers
- Children, adolescents, adults
- Men and women

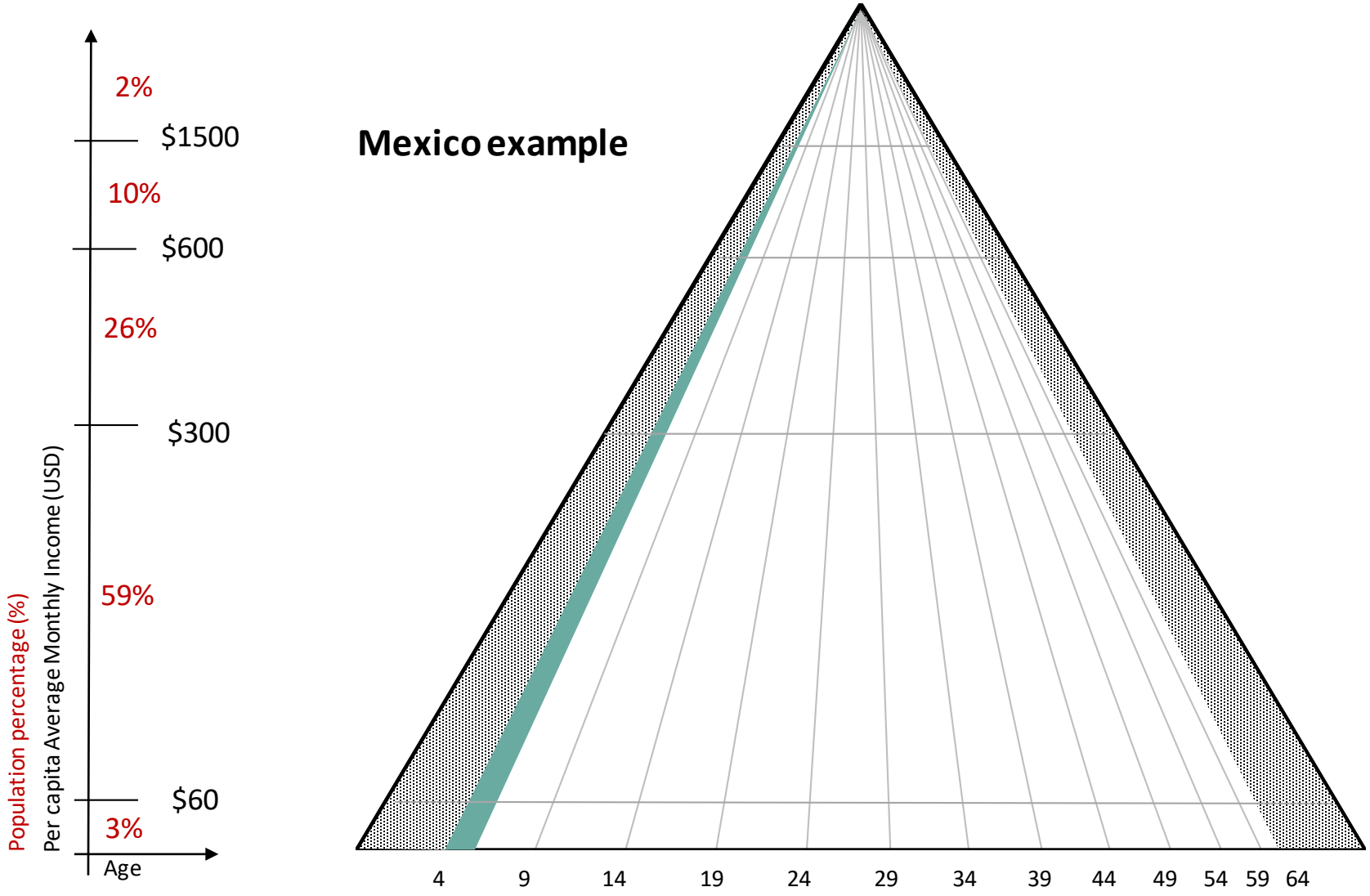
1. Brazil data shown as proxy for endemic countries
2. Recommended population/country population

PLAN TO MAXIMIZE ACCESS IN ENDEMIC COUNTRIES



Statistical data from: Pew Research Center analysis of data from the World Bank PovcalNet database (Center for Global Development version available on the Harvard Dataverse Network) and the Luxembourg Income Study database. 2011
The diagrams shown are tentative for illustrative purposes only. Real program scope may differ.

PLAN TO MAXIMIZE ACCESS IN ENDEMIC COUNTRIES



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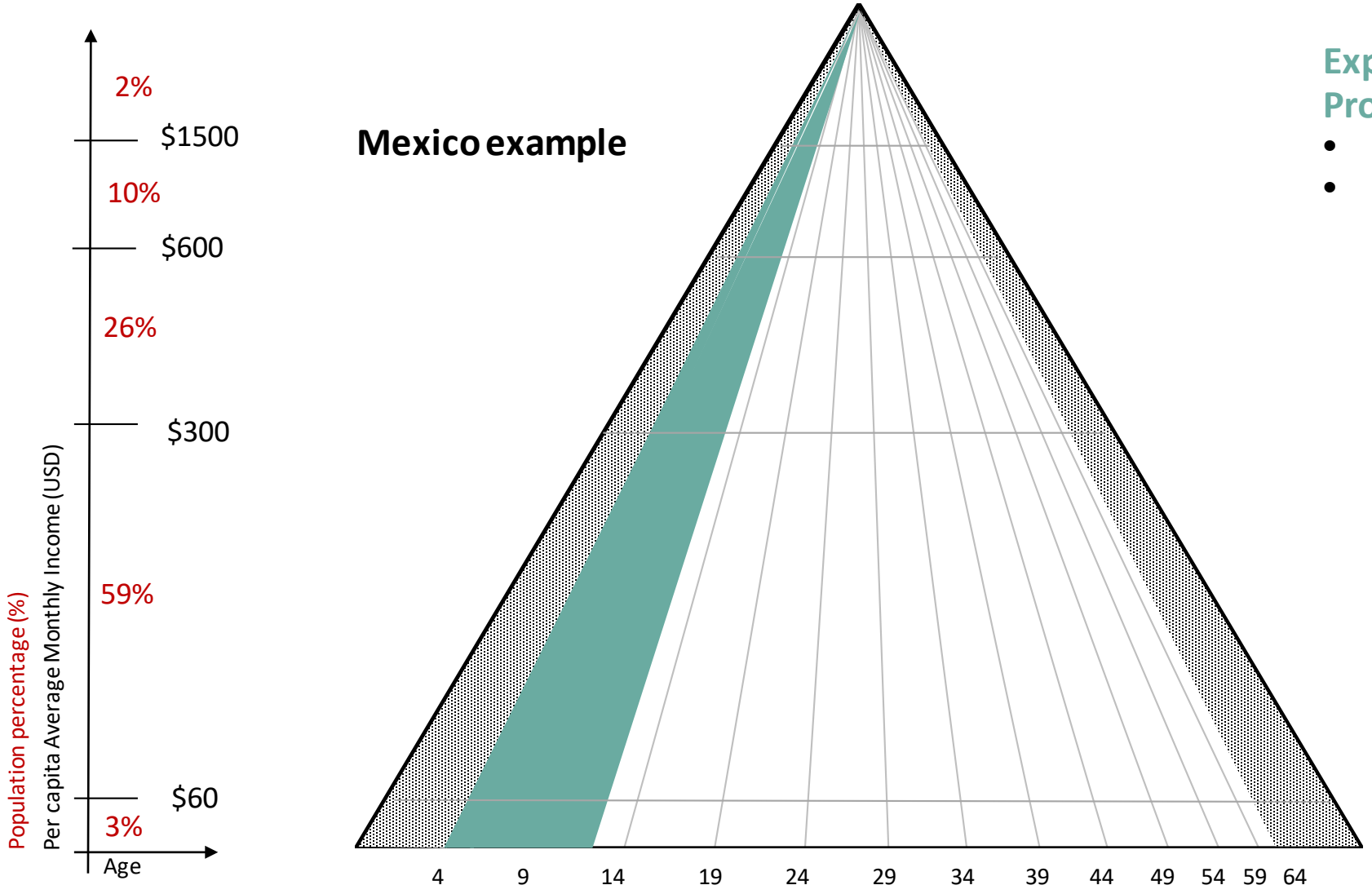
PLAN TO MAXIMIZE ACCESS IN ENDEMIC COUNTRIES



Expanded National Immunization Programs

- Government Financing
- Procurement modalities

Statistical data from: Pew Research Center analysis of data from the World Bank PovcalNet database (Center for Global Development version available on the Harvard Dataverse Network) and the Luxembourg Income Study database. 2011
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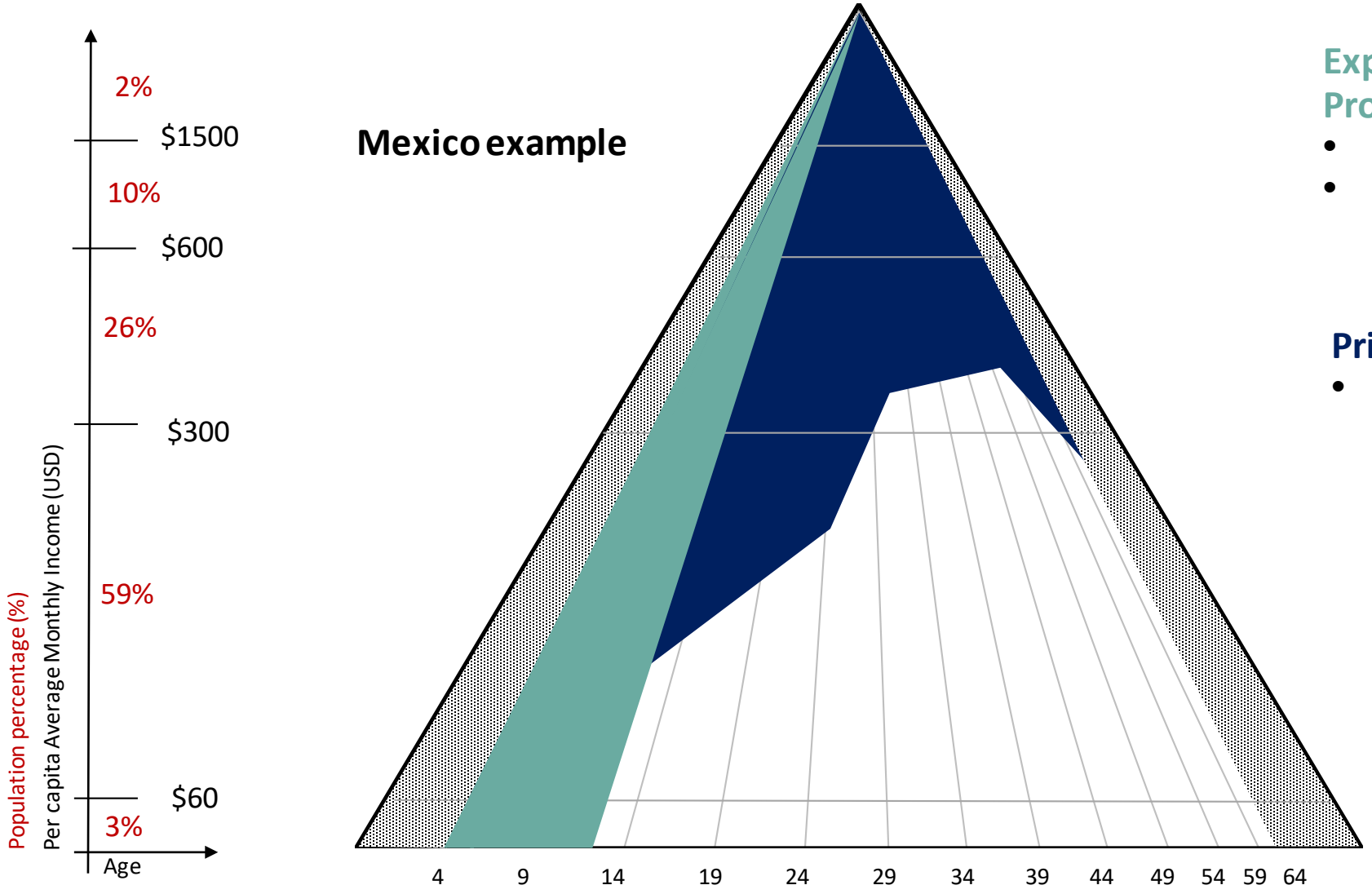
PLAN TO MAXIMIZE ACCESS IN ENDEMIC COUNTRIES



Expanded National Immunization Programs

- Government Financing
- Procurement modalities

Private Sector Activation

- Individual Financing options

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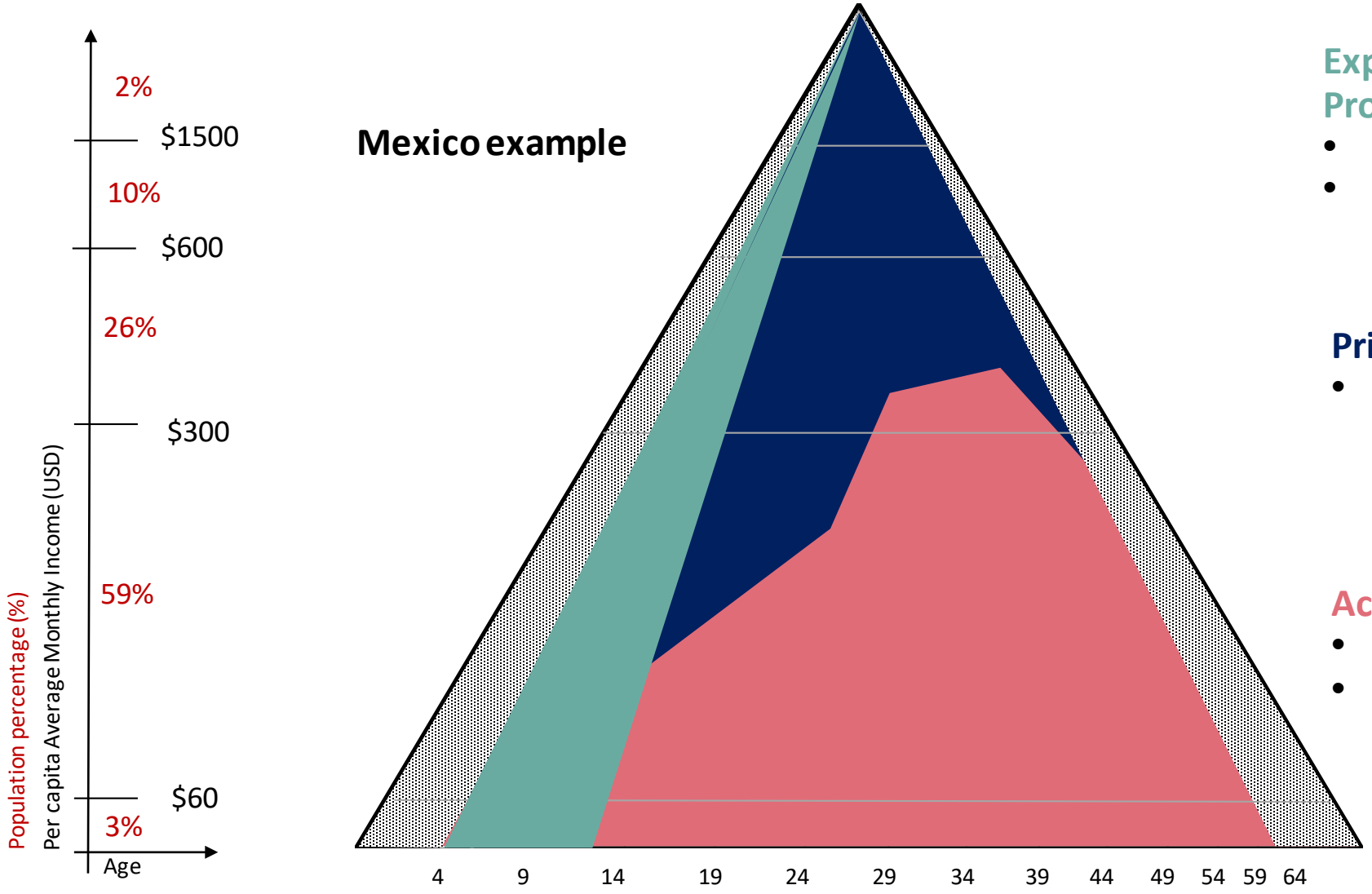
PLAN TO MAXIMIZE ACCESS IN ENDEMIC COUNTRIES



Expanded National Immunization Programs

- Government Financing
- Procurement modalities

Private Sector Activation

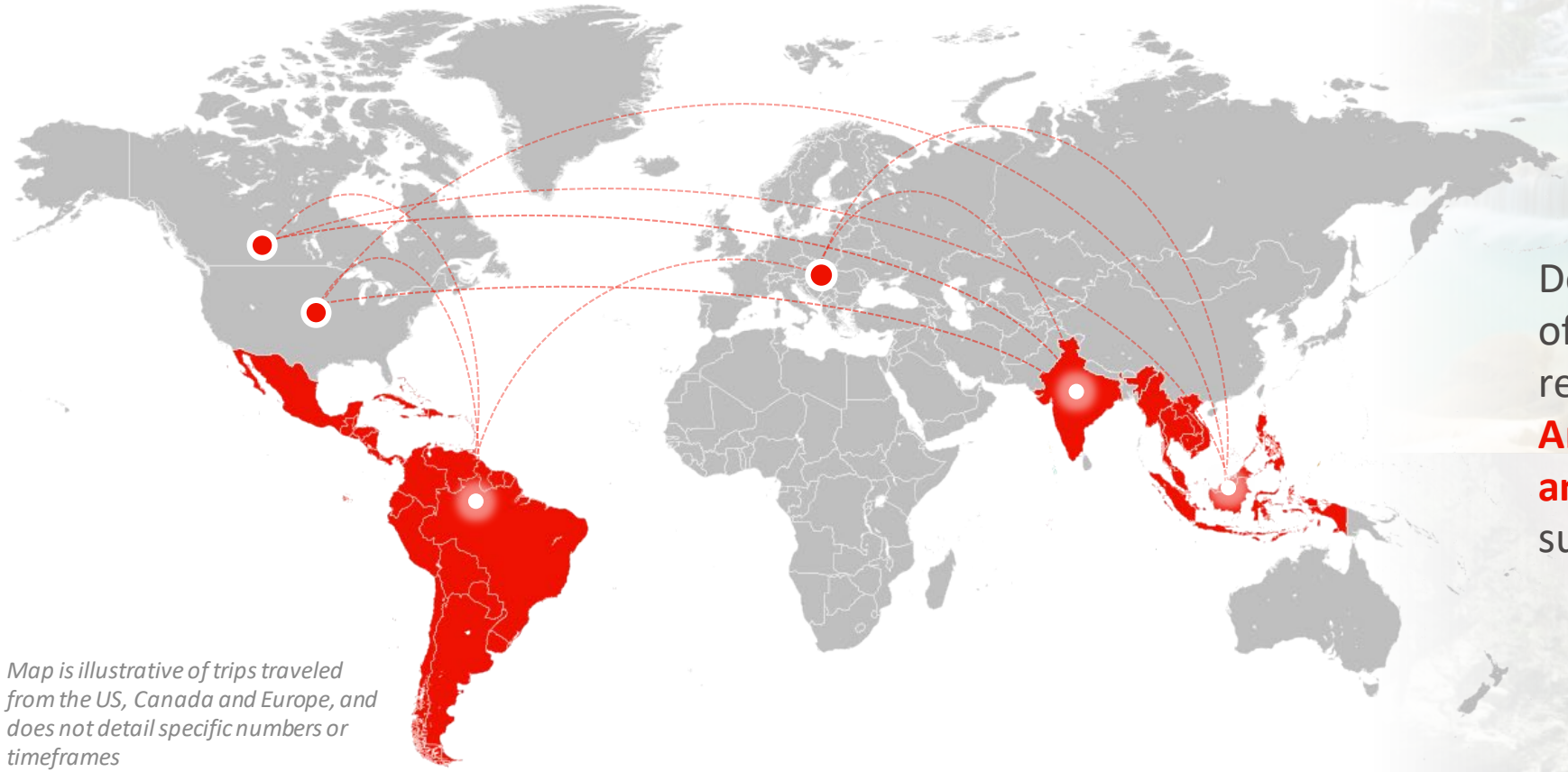
- Individual Financing options

Access to Medicines

- Patient Assistance Programs
- Vulnerable populations

Statistical data from: Pew Research Center analysis of data from the World Bank PovcalNet database (Center for Global Development version available on the Harvard Dataverse Network) and the Luxembourg Income Study database. 2011
The diagrams shown are tentative for illustrative purposes only. Real program scope may differ.

UTILITY FOR TRAVEL AND NON-ENDEMIC MARKETS



Map is illustrative of trips traveled from the US, Canada and Europe, and does not detail specific numbers or timeframes

Dengue is a leading cause of fever among travelers returning from **Latin America**, **the Caribbean**, **and Southeast Asia**[1,2] surpassing malaria

More than 90 million arrivals* from the US, Canada and Europe to dengue endemic countries in 2018[3]

**non-resident visitors*

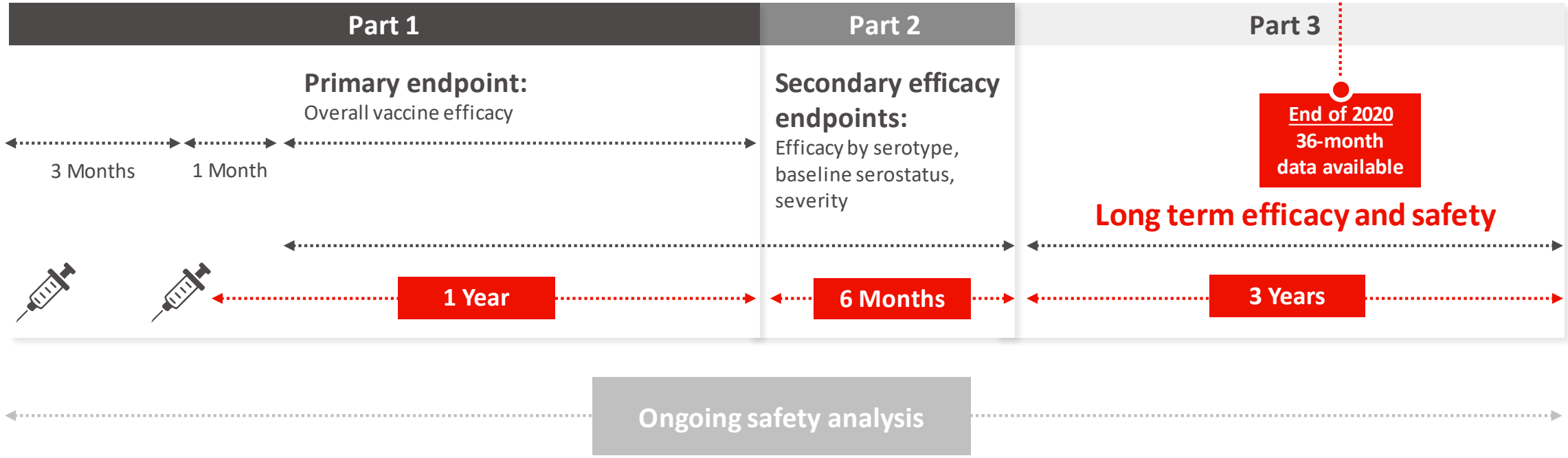
1. Halstead S, Wilder-Smith A. Severe dengue in travelers: pathogenesis, risk and clinical management. J Travel Med. 2019;26(7).
2. CDC. Yellow Book. https://wwwnc.cdc.gov/travel/yellowbook/2020/travel-related-infectious-diseases/dengue
3. World Tourism Organization Yearbook of Tourism Statistics, Data 2014 – 2018, 2020 Edition https://tillvaxtverket.se/download/18.5d4267f7170c014f2fcbbaa/1583832450663/Yearbook_2020_ed.pdf

TAK-003 HAS THE POTENTIAL TO HELP ADDRESS THE MASSIVE GLOBAL BURDEN OF DENGUE

- TAK-003 is being developed by Takeda to protect children and adults against all four virus serotypes, regardless of previous dengue exposure
- Based on a live-attenuated dengue serotype 2 virus, which provides the genetic “backbone” for four dengue serotypes represented in the vaccine
- Designed to stimulate multiple arms of the immune system

PIVOTAL PHASE 3 TRIAL DESIGN

DEN-301: 20,099 children (aged 4–16 years) were randomized 2:1 to receive either TAK-003 or placebo in endemic countries in Latin America and Asia; subjects were balanced across geographies[1]



 1. ClinicalTrials.gov Identifier: NCT02747927

TAK-003 EFFICACIOUS AGAINST DENGUE ILLNESS WITH A STRONG SAFETY PROFILE

DEN-301 met the primary endpoint at 12 months[1]

DEN-301 met the majority of secondary endpoints at 18 months[2]

80% EFFICACY AGAINST DENGUE ILLNESS

80.2% (73.3 to 85.3; p<0.001) **overall vaccine efficacy (VE)** across serotypes and serostatus[1]

90% EFFICACY AGAINST HOSPITALIZATION

90.4% (82.6 to 94.7; p<0.001) **VE against hospitalized dengue** across serotypes and serostatus[2]

BROAD PROTECTION

VE was similar in baseline seropositive and seronegative individuals**: 76.1%** (68.5 to 81.9) **VE and 66.2%** (49.1 to 77.5) **VE,** respectively[2]

VARIED RESULTS BY SEROTYPE[2]

DENV1: 69.8% VE (54.8 to 79.9)
DENV2: 95.1% VE (89.9 to 97.6)
DENV3: 48.9% VE (27.2 to 64.1)
DENV4: Insufficient cases to determine VE

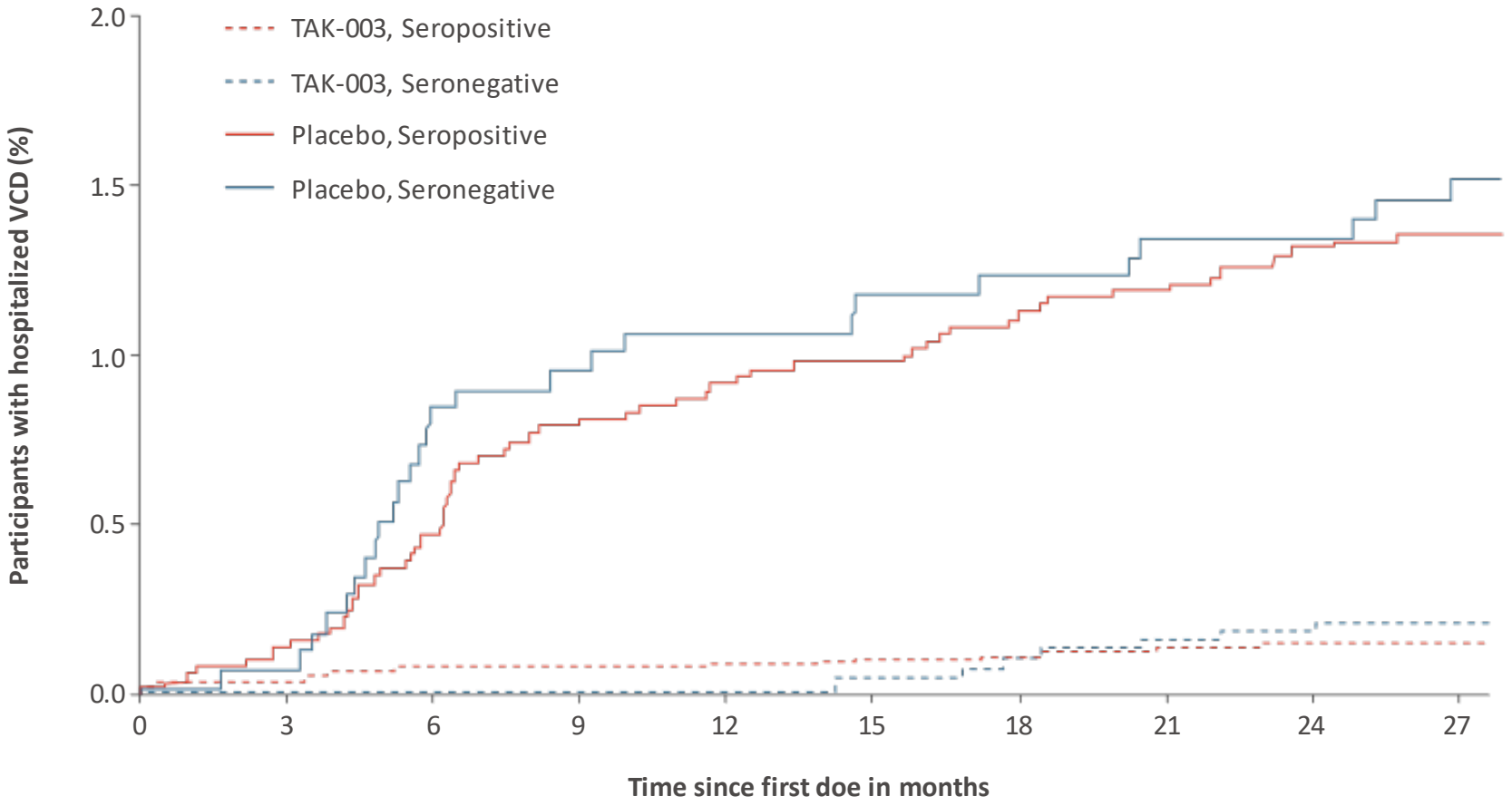
TAK-003 was generally well tolerated, with a strong safety profile to date[1,2]

1. Biswal S, et al. Efficacy of a tetravalent dengue vaccine in healthy children and adolescents. N Engl J Med. 2019
2. Biswal S, et al. Efficacy of a tetravalent dengue vaccine in health children aged 4-16 years: a randomized, placebo-controlled, phase 3 trial. Lancet. 2020. doi:10.1016/S0140-6736(20)30414-1

Seronegative at baseline: seronegative to all four dengue serotypes
Seropositive at baseline: reciprocal neutralizing antibody titer ≥10 for one or more dengue serotypes
VE: Vaccine Efficacy. (95% CI)

HOSPITALIZATIONS REDUCED BY APPROXIMATELY 90%

Through 24 Months[1]



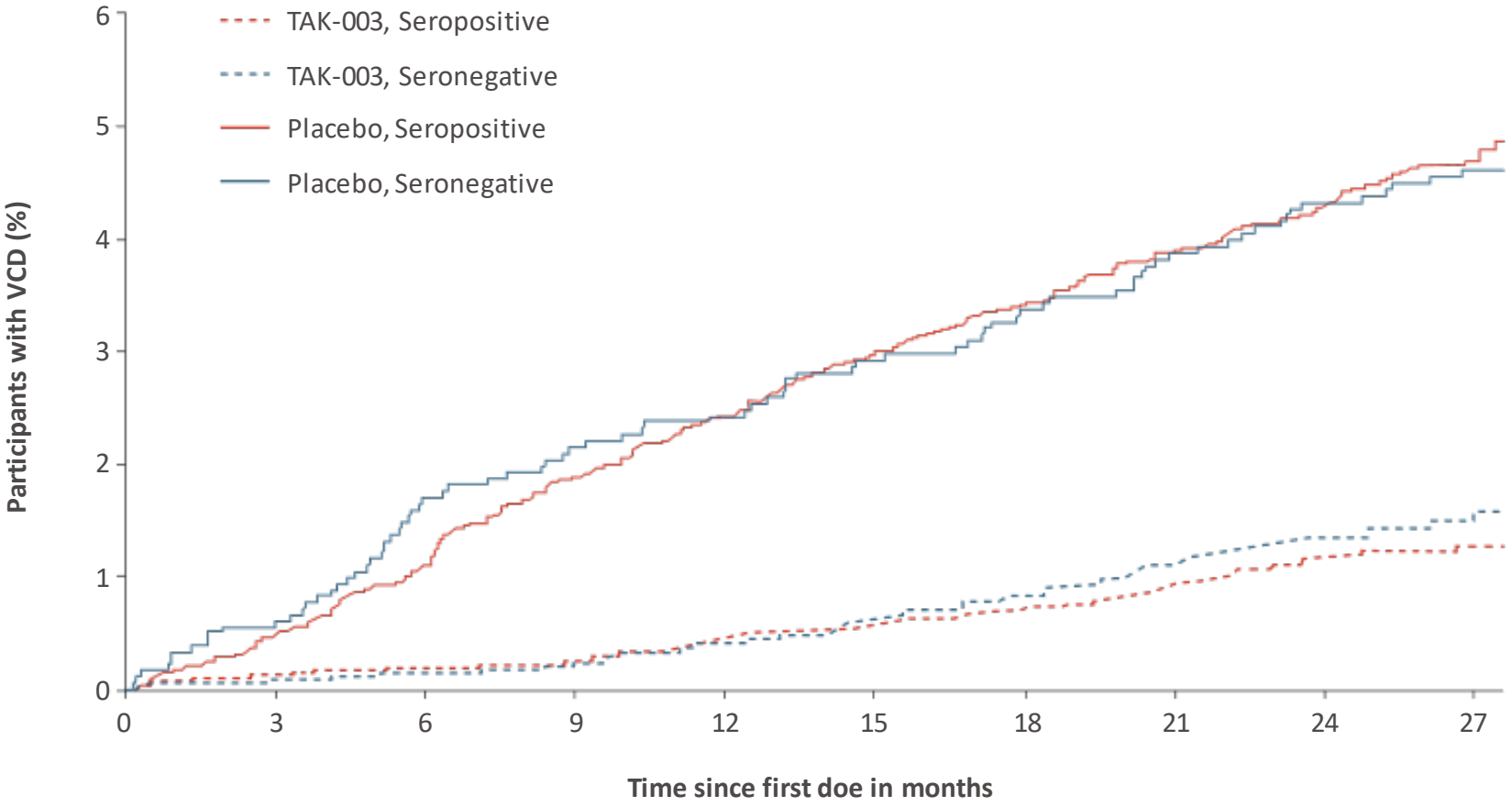
Overall VE	**89.2% (82.4, 93.3)**
Baseline Sero-	87.0% (70.1, 94.3)
Baseline Sero+	90.0% (81.9, 94.5)

Seronegative at baseline: seronegative to all four dengue serotypes; Seropositive at baseline: reciprocal neutralizing antibody titer >= 10 for one or more dengue serotypes.
VCD: virologically confirmed dengue
VE: Vaccine Efficacy (95% CI)

1. Takeda data on file. Presented at the American Society of Tropical Medicine and Hygiene Annual Meeting, November 17, 2020

DENGUE ILLNESS REDUCED BY MORE THAN 70%

Through 24 Months[1]



Overall VE	**72.7% (67.1 to 77.3)**
Baseline Sero-	67.0% (53.6, 76.5)
Baseline Sero+	74.8% (68.6, 79.8)

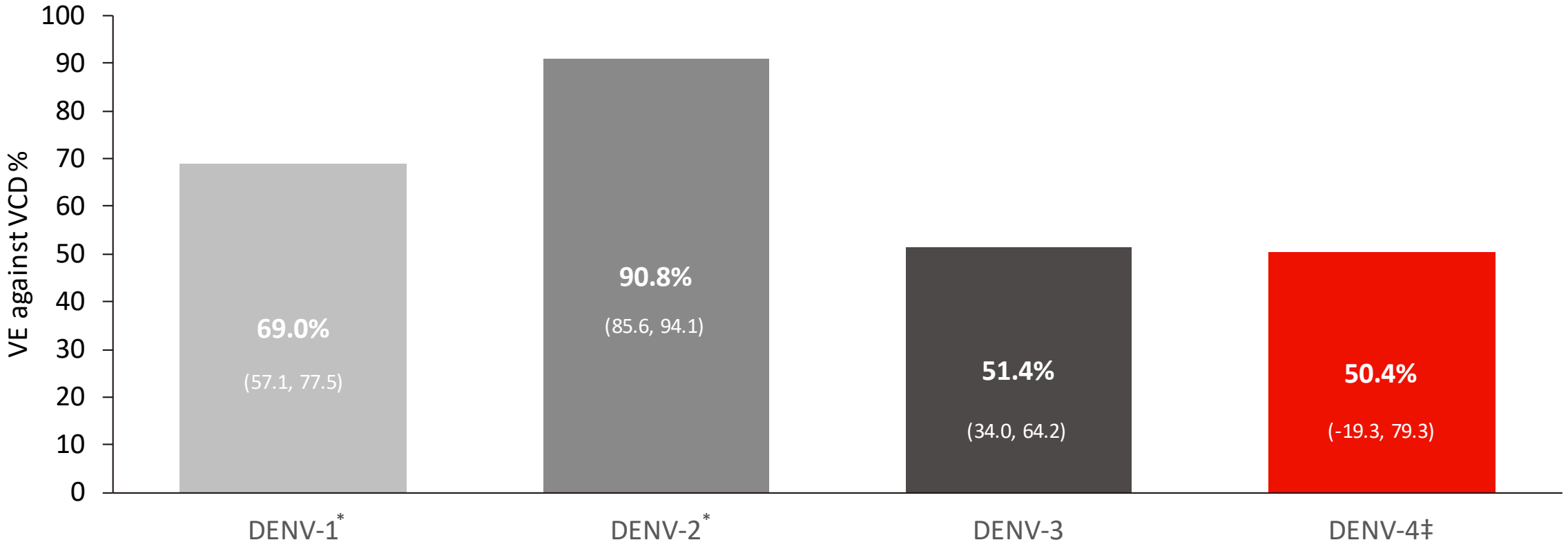
Seronegative at baseline: seronegative to all four dengue serotypes; Seropositive at baseline: reciprocal neutralizing antibody titer >= 10 for one or more dengue serotypes.
VCD: virologically confirmed dengue
VE: Vaccine Efficacy (95% CI)

1. Takeda data on file. Presented at the American Society of Tropical Medicine and Hygiene Annual Meeting, November 17, 2020

EFFICACY VARIED BY SEROTYPE WITH GREATEST REDUCTIONS IN DENGUE ILLNESS OBSERVED FOR THE MOST PREVALENT SEROTYPE, DENV-2*

Through 24 Months[1]

VE against dengue illness up to 24 Months, by serotype†



First dose to Year 2 post-second dose in the safety set
* DENV-1 and DENV-2 have been seen most commonly in the study while DENV-4 least commonly.
†Data includes baseline seropositives and seronegatives
‡The total number of DENV-4 cases was low
Seronegative at baseline: seronegative to all four dengue serotypes; Seropositive at baseline: reciprocal neutralizing antibody titer >= 10 for one or more dengue serotypes.
VCD: virologically confirmed dengue
VE: Vaccine Efficacy (95% CI)
1. Takeda data on file. Presented at the American Society of Tropical Medicine and Hygiene Annual Meeting, November 17, 2020

SAFETY AND TOLERABILITY OF TAK-003

Through 24 Months

Strong safety profile up to 24 months after second dose of TAK-003[1]

No evidence of disease enhancement in seronegative individuals[1,2,3]

Slight increase in dengue fever* in the DENV-3 seronegative population at 18 months. Stabilized at 24 months[1,3]

*The finding was not statistically significant, a lack of efficacy.

1. Takeda data on file. Presented at the American Society of Tropical Medicine and Hygiene Annual Meeting, November 17, 2020
2. Biswal S, et al. Efficacy of a tetravalent dengue vaccine in healthy children and adolescents. *N Engl J Med*. 2019
3. Biswal S, et al. Efficacy of a tetravalent dengue vaccine in health children aged 4-16 years: a randomized, placebo-controlled, phase 3 trial. Lancet. 2020. doi:10.1016/S0140-6736(20)30414-1

STRONG EFFICACY AND SAFETY PROFILE TWO YEARS AFTER VACCINATION

Robust reduction of hospitalized dengue[1]

Continued efficacy against dengue, with some waning efficacy seen between year 1 and year 2; evaluating potential for a booster[1]

Similar efficacy regardless of previous dengue exposure[1]

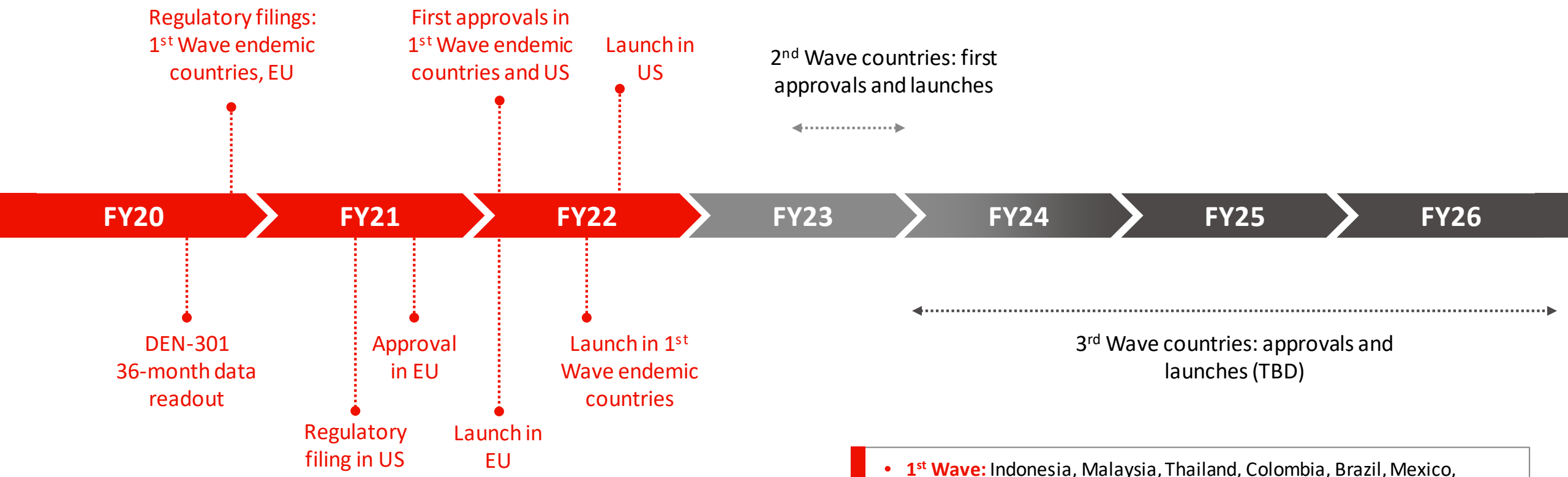
The observed level of efficacy continued to vary by serotype[1]

Well-tolerated in trial participants[1]

Strong safety profile up to 24 months after second dose of TAK-003[1]

1. Takeda data on file. Presented at the American Society of Tropical Medicine and Hygiene Annual Meeting, November 17, 2020

EXPECTED MILESTONES



- **1st Wave:** Indonesia, Malaysia, Thailand, Colombia, Brazil, Mexico, Singapore, Sri Lanka, Argentina, United States, Multiple EU Countries
- **2nd Wave:**, Canada, Israel, Ecuador, Guatemala, Paraguay, Peru, Costa Rica, El Salvador, Panama, Nicaragua, D. Republic, Philippines, Hong Kong, Australia, Vietnam
- **3rd Wave:** Cuba, Honduras, Venezuela, China, India

SUMMARY

1

Takeda building up capacity to fulfill 50+ million doses per year, meeting urgent need for a new dengue vaccine

2

First regulatory filings in endemic countries (Article 58), Europe and US expected in 2021

3

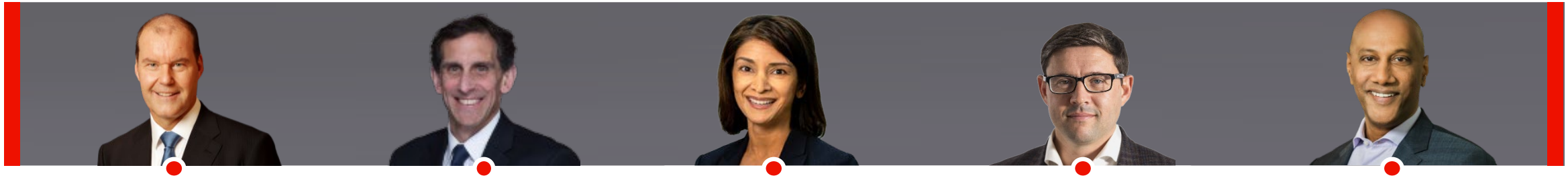
Estimate the dengue vaccine market could reach USD 1.5-2 billion annually by 2029[1]

1. VacZine Analytics' Global Dengue report

AGENDA

TIME (EST)	TIME (JST)	AGENDA
17:00 – 17:10	07:00 – 07:10	**Takeda: A Global Values-Based, R&D-Driven Biopharmaceutical Leader** *Christophe Weber, President & CEO*
17:10 – 17:25	07:10 – 07:25	**Following Through On Our Commitment To Deliver Innovative Medicines To Patients: *Spotlight On Select Wave 1 Programs*** *Andy Plump, President, R&D*
17:25 – 17:35	07:25 – 07:35	**Entyvio Case Study: Building A Gold Standard Therapy Along The Patient Journey** *Ramona Sequeira, President, USBU & Global Portfolio Commercialization*
17:35 – 18:05	07:35 – 08:05	**TAK-721 Deep Dive: Potential To Be First FDA-Approved Agent With Indication For Eosinophilic Esophagitis** *Mike Nedham, Global Program Leader for TAK-721, Global Product & Launch Strategy*
18:05 – 18:35	08:05 – 08:35	**TAK-003 Deep Dive: Live-Attenuated Tetravalent Vaccine For Prevention Of Dengue Disease** *Rajeev Venkayya, President, Global Vaccine Business Unit*
18:35 – 19:15	08:35 – 09:15	**Panel Q&A Session**
		Appendix 1: Wave 1 Pipelines One-Pager Summaries **Appendix 2: Epidemiology Data** **Appendix 3: Clinical Trial Summary**

TODAY'S SPEAKERS



CHRISTOPHE WEBER
President & CEO

ANDY PLUMP
President, Research & Development

RAMONA SEQUEIRA
President, USBU & Global Portfolio Commercialization

MICHAEL NEDHAM
Global Program Leader for TAK-721, Global Product & Launch Strategy

RAJEEV VENKAYYA
President, Global Vaccine Business Unit

Available for Q&A

COSTA SAROUKOS
Chief Financial Officer

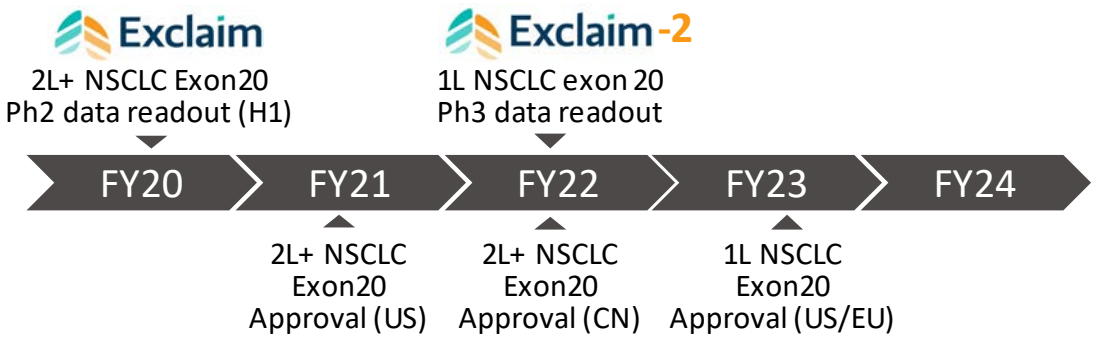
TERESA BITETTI
President, Global Oncology Business Unit

Appendix 1
Wave 1 Pipelines One-Pager Summaries

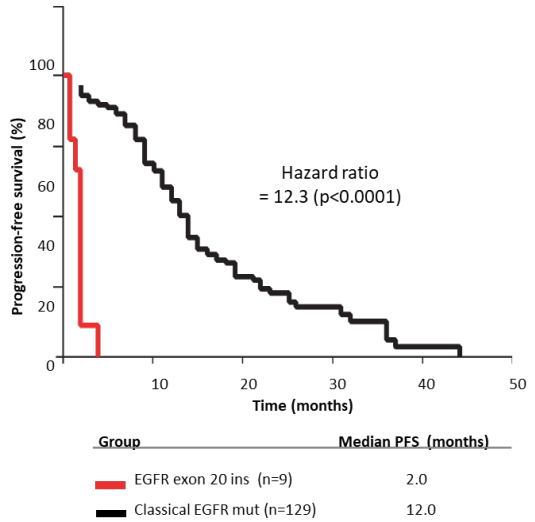
MOBOCERTINIB (TAK-788)

ODD | BTD | BTD (China) | FTD

Potential New Standard Of Care For NSCLC Patients With EGFR Exon20 Insertion Mutations

MECHANISM	**EGFR TKI specifically designed for Exon20 insertions**
PATIENT JOURNEY/ UNMET NEED	**Patients with EGFR Exon20 insertion mutations have no approved targeted therapy** • Approved EGFR TKIs are not designed to treat Exon20 insertions • Current treatment approaches including chemotherapy, approved EGFR inhibitors at recommended dose, and immunotherapy all deliver <6 months PFS across all lines of therapy • Greatest unmet need for the exon 20 insertion population is a targeted therapy that improves survival with an acceptable side effect profile
KEY DATA	Phase 1/2 study of mobocertinib in 2L+ NSCLC with Exon20 insertions showed promising efficacy with a **43% confirmed response rate** in the intent-to-treat population with a **DOR of 13.9 months** and a **7.3 months PFS**
MARKET OPPORTUNITY	Globally, **1-2% of non-small cell lung cancer** cases have an EGFR Exon20 insertion mutations (~4K patients in U.S., 20-30K WW)
DEVELOPMENT STATUS & EXPECTED MILESTONES	

Approved EGFR TKIs do not demonstrate significant PFS benefit in EGFR exon20 insertions



- Ph1/2 EXCLAIM study (single-arm) in relapsed/refractory patients could support first filings in FY20
- Ph-3 EXCLAIM-2 study (vs. chemo) in first-line now recruiting
- Partnerships for companion diagnostic for EGFR exon 20 insertions with Thermo Fisher in the US/JP/EU, Foundation Medicine in the US & Amoy Diagnostics in China

ORR: Overall response rate
PFS: Progression free survival

WW: World Wide annual incidence

Robichaux, J.P., Elamin, Y.Y., Tan, Z. et al. Mechanisms and clinical activity of an EGFR and HER2 exon 20–selective kinase inhibitor in non–small cell lung cancer. Nat Med 24, 638–646 (2018). https://doi.org/10.1038/s41591-018-0007-9

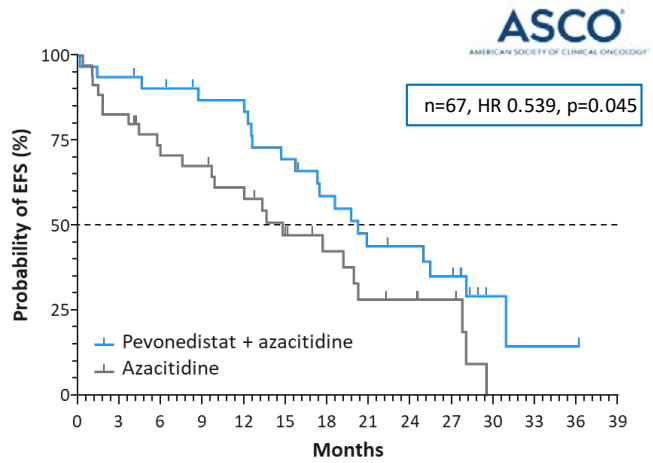
PEVONEDISTAT (TAK-924)

Potential To Be First Novel Therapy In HR-MDS In Over A Decade

ODD BTD

MECHANISM	**NEDD8-activating enzyme (NAE) inhibitor**
PATIENT JOURNEY/ UNMET NEED	**Patients with HR-MDS have a poor prognosis, diminished QoL, higher chance of transformation to AML and limited treatment options** • Outcomes are poor and, even with current treatment options, mortality rates remain high. Median survival for HR-MDS is 12-15 months, and 10 - 15 months for AML • Economic burden of supportive care is substantial: Hospitalizations are common and many patients are transfusion dependent
KEY DATA	HR-MDS: combination of pevonedistat and azacitidine demonstrated benefit across several clinically meaningful endpoints, including OS, EFS, CR and transfusion independence, with a safety profile similar to azacitidine alone. • Adding pevonedistat to azacitidine doubled CR (51.7% vs. 26.7%), and demonstrated potential to improve OS and EFS Unfit AML: promising clinical activity in elderly AML in a Phase 1b study • ORR 60% with a trend towards improved survival in secondary AML
MARKET OPPORTUNITY	1L HR-MDS: ~7K patients in U.S., 15-20K in G7 (~80% transplant ineligible) 1L AML: ~19K patients in U.S., 35-40K in G7 (~50% transplant ineligible)
DEVELOPMENT STATUS & EXPECTED MILESTONES	PANTHER HR-MDS Ph3 data; PEVOLAM Unfit AML Ph3 data FY20 → FY21 → FY22 → FY23 → FY24 1L HR-MDS Approval (US/EU/JP) 1L Unfit AML Approval

P2001: Phase 2 proof of concept In HR-MDS



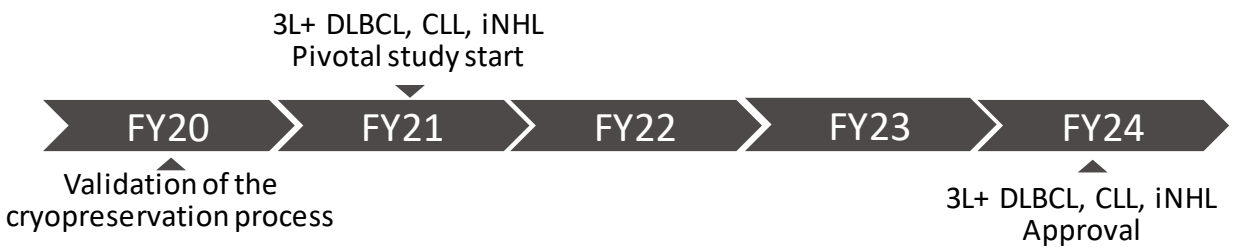
EFS: Event free survival, defined as death or transformation to AML

- US FDA granted BTD in July 2020
- Clinical development efforts in emerging markets including China have been integrated into overall program strategy
- Combination study with pevonedistat, venetoclax and azacitidine actively enrolling
- External collaborations have also been broadly but strategically leveraged to develop additional pevonedistat combinations in other AML/MDS populations

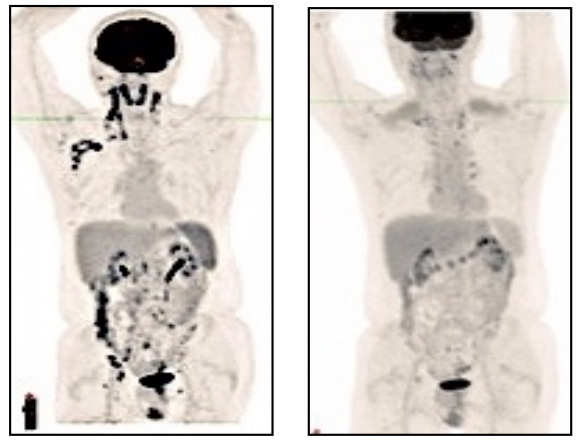
TAK-007

Potential Transformative "Off-the-shelf" Cell Therapy For Multiple Cancers

ODD

MECHANISM	**CD19 CAR-NK cell therapy**
PATIENT JOURNEY/ UNMET NEED	**Significant need for an efficacious, off-the-shelf cell therapy with an improved toxicity profile** • Patients with CD19 positive B-cell malignancies who cannot receive CAR-T have a median overall survival of <10 months • Current CAR T-cell therapies require a multi-week manufacturing process, use is restricted to specialized transplant centers, and they are associated with toxicity including cytokine release syndrome or neurotoxicity
KEY DATA	Encouraging Phase 1/2 data in CD19+ B-cell malignancies, with efficacy comparable to CAR-T therapies • 73% of patients responded to therapy (8/11) and **64% of patients had a complete response (7/11)** • **No occurrence of cytokine release syndrome, neurotoxicity, or graft-versus host disease** Opportunity to broaden access due to lower total cost of care and easier logistics • "Off the shelf" therapy enables treatment of patients without delay, and can be administered outpatient, which can reduce logistic burden and decrease health resource utilization and costs
MARKET OPPORTUNITY	3L+ DLBCL, CLL, iNHL: ~9K patients in U.S., 15-25K in G7 Potential to advance to 2L therapy and to expand CAR-NK platform to other malignancies
DEVELOPMENT STATUS & EXPECTED MILESTONES	

PH1/2 DATA: 47-YEAR OLD MALE WITH RELAPSED TRANSFORMED DOUBLE-HIT (C-MYC/BCL-2) DLBCL



BASELINE SCAN

DAY 30 POST CAR19-NK

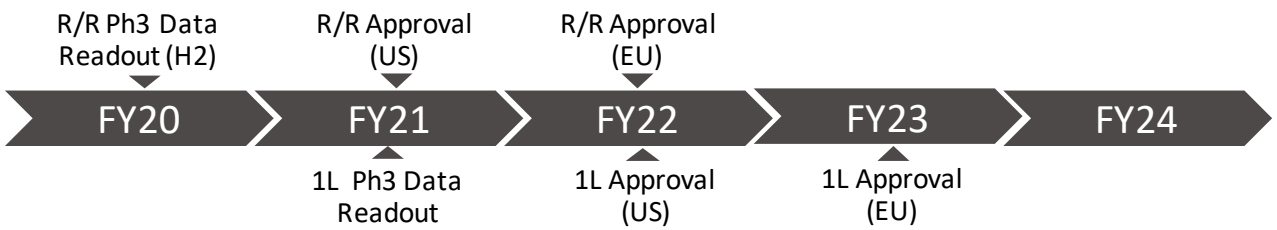
Data from Dr. Katy Rezvani, MD Anderson Cancer Center

- Potential to advance to 2L therapy and to expand CAR-NK platform to other malignancies

MARIBAVIR (TAK-620)

ODD BTD

Potential 1st Approved Treatment In Over 10 Years For Patients With Post-transplant CMV Infection

MECHANISM	Maribavir is an oral benzimidazole riboside with activity against cytomegalovirus, that blocks nuclear egress of viral capsids through the inhibition of protein kinase UL97[1-7]
PATIENT JOURNEY/ UNMET NEED	Existing therapies are unapproved for treatment of post-transplant CMV infection; clinical utility is significantly limited by severe toxicities requiring hospitalization and resistance development • Existing SOC are 1st L valganciclovir, ganciclovir; 2nd L foscarnet, cidofovir- all are unapproved for post-transplant CMV treatment, and all have severe toxicities (myelosuppression and nephrotoxicity) • A CMV prophylaxis therapy was approved in US (2017), EU (2018), Japan (2018). Label limited to CMV prophylaxis only, in high-risk HSCT patients (so not for Solid Organ transplant).
KEY DATA	• In a Phase 2 trial in pre-emptive treatment (1L) post-transplant CMV patients, TAK-620 demonstrated similar efficacy with lower incidence of myelosuppression versus standard of care (valganciclovir.) • In a Phase 2 trial in refractory/resistant (R/R) post-transplant CMV patients, maribavir ≥400 mg twice daily was active; no new safety signals were identified.
MARKET OPPORTUNITY	• >46k patients experience CMV infection (14k in the USA) • >20k patients w/ treatment-limiting toxicity or recurrent CMV (6k in the USA) • >10k patients fail 1st line SOC, so refractory/resistant to SOC
DEVELOPMENT STATUS & EXPECTED MILESTONES	

PHASE 2 DATA IN 2L R/R CMV PUBLISHED IN CLINICAL INFECTIOUS DISEASES[6]

Efficacy endpoint: Clearance of CMV DNA within 6 weeks

Overall: 67% efficacy → Large improvement over historical outcomes (~50%)[8-11]

Favorable safety profile → No treatment discontinuation due to nephrotoxicity and myelosuppression

PHASE 2 DATA IN 1L CMV PUBLISHED IN NEJM[10]

Efficacy endpoint: Clearance of CMV DNA within 6 weeks

	Maribavir	Valganciclovir
Clearance of CMV	79%	67%
Incidence of Neutropenia	6%	22%

- 303 Study: Multicenter, Randomized, Active-controlled, Open-label maribavir vs. investigator-assigned treatment in HSCT and SOT patients with CMV infections, disease resistant or refractory to prior therapy
- 302 Study: Multicentre, Randomized, Double-blind, Non-Inferiority study of maribavir vs. valganciclovir as a pre-emptive therapy of 1st episode CMV infection in treatment naïve HSCT recipients

1. Chou S, Marousek GI. J Virol. 2008;82:246–53;
2. Chou S. Curr Opin Infect Dis. 2015;28:293–9;
3. Krosky PM, et al. J Virol. 2003;77:905–14;
4. Maertens J, et al. N Engl J Med. 2019;381:1136–47;
5. Papanicolaou GA, et al. Clin Infect Dis. 2019;68:1255–64;
6. Prichard MN. Rev Med Virol. 2009;19:215–29;
7. Clin Infect Dis. 2019 Apr 8;68(8):1255-1264;
8. Antimicrob Agents Chemother, 2014;58:128-35;
9. Mehta et al, 2016 American Transplant Congress, Meeting abstract C279;
10. J Heart Lung Transplant. 2019;Vol.38,Issue 12;p.1268-1274;
11. N Engl J Med 2019; 381:1136-47

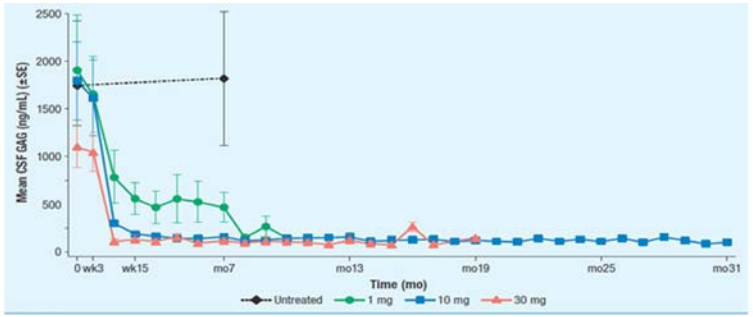
TAK-609

ODD

Potential To Be The First Product For Cognitive Impairment In Hunter Syndrome In US/EU

MECHANISM	Recombinant human iduronate-2-sulfatase unique formulated for intrathecal injection directly into the CNS through a surgically implanted port to circumvent the blood brain barrier.
PATIENT JOURNEY/ UNMET NEED	**Significant outstanding unmet need for a treatment that can address cognitive manifestation of the Hunter Syndrome, which affects the vast majority of patients (~60%).** • Deficiency of iduronate-2-sulfatase can lead to a build-up glycosaminoglycans (GAGs) that affect the function of cells and tissues within the central nervous system, causing a progressive decline in cognitive abilities. Current therapies do not address cognitive deterioration due to their inability to cross the blood brain barrier • TAK-609 will be first add-on therapy to Elaprase to halt/reduce cognitive decline in Hunter syndrome
KEY DATA	• In Dec 2017 the pivotal study, despite demonstrating a significant reduction in CSF GAG's (-74%), failed to meet both primary and secondary endpoints; **ad hoc analysis demonstrated potential efficacy in patients initiated on therapy before 6 years of age** • **A Phase 2/3 open-label extension study** is ongoing **to further evaluate long-term safety and clinical outcomes** of TAK-609 (49 patients treated) (Link to clinicaltrials.gov)
MARKET OPPORTUNITY	• 1 in 100,000 to 170,000 male births are affected by Hunter Syndrome (~600 patients in the U.S., ~4,600 in marketed territories[1]). 2/3 of Hunter patients are affected by CNS manifestations. • Global market approximately $745M- $780M[2]
DEVELOPMENT STATUS & EXPECTED MILESTONES	FY20 → FY21 (Approval (US)) → FY22 (Approval (EU)) → FY23 → FY24

REDUCTION IN CSF GAGS



The metabolites that accumulate as a result of the enzyme deficiency in Hunter Syndrome are declining on therapy compared to the range of GAG levels of untreated patients (black dotted line)

Source: Clinical Study Report Study SHP-609-094/302 (3 year data)

- HGT-HIT-094: A Controlled, Randomized, Two-arm, Open-label, Assessor-blinded, Multicenter Study of Intrathecal Idursulfase-IT Administered in Conjunction With Elaprase® in Pediatric Patients With Hunter Syndrome and Early Cognitive Impairment
- SHP609-302: An Open Label Extension of Study HGT-HIT-094 Evaluating Long Term Safety and Clinical Outcomes of Intrathecal Idursulfase Administered in Conjunction With Elaprase® in Patients With Hunter Syndrome and Cognitive Impairment

1. Elaprase universe, it includes Sanofi Genzyme territory (APAC, ANZ, SA), it excludes China and India, from 2020 to 2026
2. MPSII market in total somatic + CNS

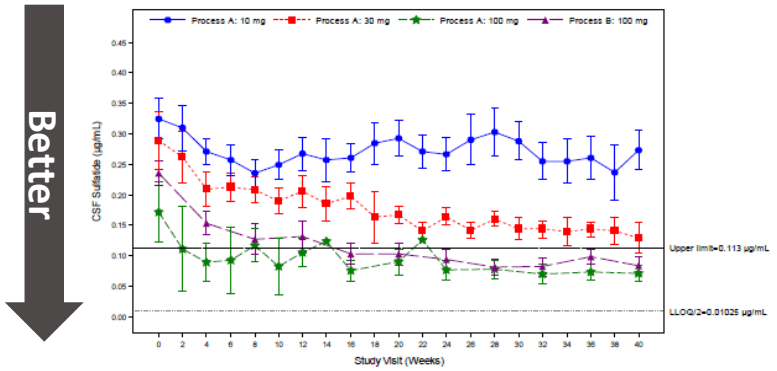
TAK-611

ODD

Potential As The Only Therapy To Halt Rapid Progression Of Symptomatic Late Infantile MLD

MECHANISM	Recombinant human arylsulfatase A (rhASA) unique formulated for intrathecal injection directly into the CNS through a surgically implanted port to circumvent the blood brain barrier
PATIENT JOURNEY/ UNMET NEED	**Tremendous unmet need for a treatment that can slow, delay or stop disease progression, because no treatments exist so far.** • Metachromatic leukodystrophy (MLD) is characterized by developmental delays, motor skill regression, cognitive impairment, and optic atrophy leading to paralysis and early death • Late Infantile Onset patients (50-60% of prevalent cases) experience rapid motor function decline and death within 5 years of onset • Current standard of care relies on very weak options: palliative care, symptom management
KEY DATA	In Phase 1 study IDEAMLD, 2/12 children had a motor response with a dose dependent reduction of accumulated sulfatides in cerebrospinal fluid. Delayed motor decline 1.5-2 years vs. natural history. Those 2 patients treated with the highest dose (100mg EOW) maintained most motor function until age 5-6. Ph2b EMBOLDEN study is currently enrolling patient at dose of 150mg every week; topline data is anticipated to be available in FY22
MARKET OPPORTUNITY	0.7-1.4 per 100,000 live births, ~325 - 450 prevalent patients in the U.S.; ~11K worldwide (~2K reachable in total). In the near term, OTL-200 (Libmeldy), an ex-vivo gene therapy (expected EUCAN launch H1 2021 with a price range of EUR 2.5-3m[1]), and TAK-611 will become available to MLD patients. Global market size approximately $ 500m- $600m
DEVELOPMENT STATUS & EXPECTED MILESTONES	Ph2b data readout FY20 → FY21 → FY22 → FY23 → FY24 Approval (US) Approval (EU)

TAK-611 REDUCES NEUROTOXIC SULFATIDES



Sulfatide clearance requires uptake by cells and movement of enzyme into the acidic lysosome to become active

Thus reduction of toxic sulfatides indicates TAK-611 is taken up by oligodendrocytes and active in the lysosome

Source: Clinical Study Report Study HGT-MLD-070/071 (40 week data)

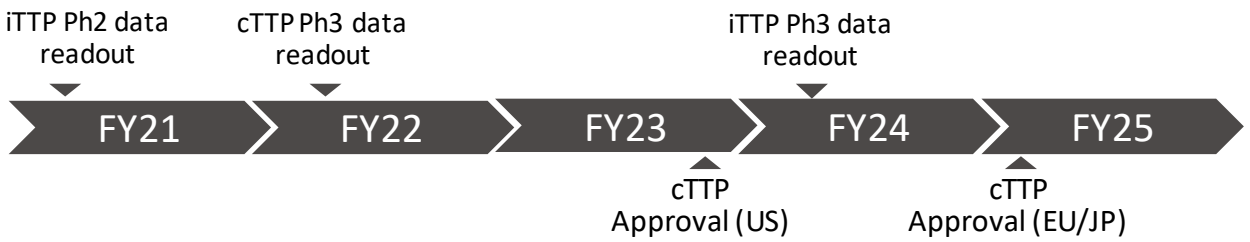
- IDEAMLD: Multicenter, open-label, dose-escalation study designed to evaluate the safety of up to 3 dose levels of TAK-611 administered via an intrathecal drug delivery device every other week for a total of 38 weeks to children with MLD.
- EMBOLDEN: Global, Multicenter, open-label, matched historical control study of intrathecal TAK-611 in subjects with late infantile MLD

1. Source: Orchard Therapeutics.

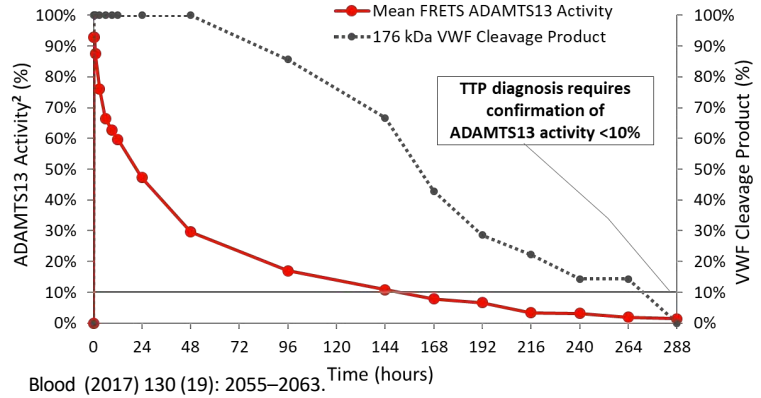
TAK-755

ODD FTD

Potential Transformational Therapy In cTTP & iTTP

MECHANISM	Recombinant ADAMTS-13 enzyme replacement therapy aiming to reduce the abnormally high von Willebrand factor activity seen in TTP
PATIENT JOURNEY/ UNMET NEED	• Standard of care with on-demand or prophylactic plasma infusions is highly burdensome. Replacement of ADAMTS13 to achieve sufficient levels is not possible in most cases with SoC. • Reduction of plasma dependency and improvement in short- and long-term morbidity seen as key value drivers
KEY DATA	The first and only recombinant ADAMTS-13 enzyme replacement therapy in development for congenital Thrombotic Thrombocytopenic Purpura (cTTP) and immune-mediated TTP (iTTP) • Phase 1 study demonstrated evidence for TAK-755 activity in vivo, including effects on VWF multimers, platelet count, and serum LDH. TAK-755 was well tolerated, no serious adverse events occurred, and no anti-ADAMTS-13 antibodies were observed • TAK-755 will allow for ADAMTS-13 substitution that is 3-5 times higher than possible with plasma infusions resulting in peak plasma levels in the normal range.
MARKET OPPORTUNITY	Congenital TTP: Global epidemiology ~1 per million; Treated patients: <500 in the U.S., 2.5K worldwide Immune TTP: Global epidemiology ~10 per million; patient events: < 2.5K in the U.S., ~14K worldwide Sickle Cell disease epidemiology: ~100K in in the USA and ~150K in EU
DEVELOPMENT STATUS & EXPECTED MILESTONES	

TAK-755 PK PROFILE AND PD EFFECT ON VWF CLEAVAGE AT 40 IU/KG



Blood (2017) 130 (19): 2055–2063.

- TAK-755 therapy may be of benefit in other diseases associated with high von Willebrand Factor (VWF) activity and/or decreased ADAM-13 activity. TAK-755 is also in clinical phase 1/2 for sickle cell disease.
- Phase 3: A prospective, randomized, controlled, open-label, multicenter study evaluating the safety and efficacy of TAK-755 (rADAMTS13) in the prophylactic and on-demand treatment of participants with severe congenital Thrombotic Thrombocytopenic Purpura (cTTP)
- Phase 2: A multicenter, randomized, placebo-controlled, double-blind study evaluating the PK, safety, and efficacy of TAK-755 in patients with acquired Thrombotic Thrombocytopenic Purpura (aTTP)

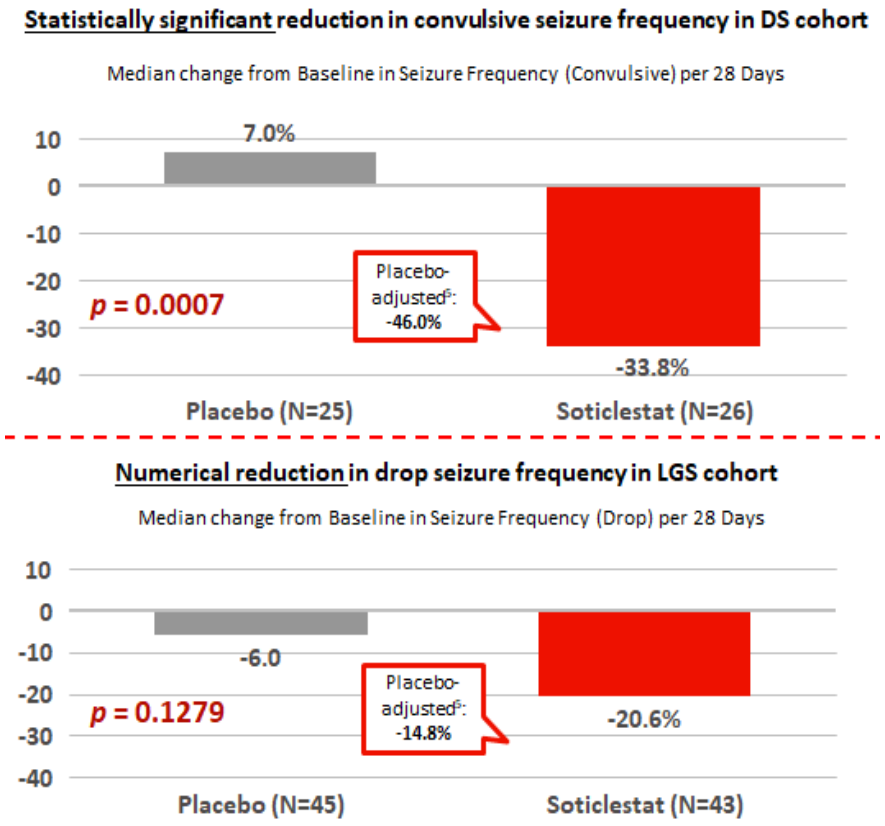
SOTICLESTAT (TAK-935)

ODD in DS | ODD in LGS

First-in-class Inhibitor Of Cholesterol 24-hydroxylase (CH24H) Enzyme To Improve Seizure Control In Rare Epileptic Syndromes

MECHANISM	Cholesterol 24-hydroxylase (CH24H) enzyme inhibitor
PATIENT JOURNEY/ UNMET NEED	**Developmental and Epileptic Encephalopathies (DEEs) are highly treatment resistant to multiple antiepileptic drugs, with few FDA-approved therapies** • Over 50% of patients suffer from treatment-resistant seizures that can manifest in developmental and/or cognitive delays, communication and behavioral challenges and risk of sudden unexpected death in epilepsy (SUDEP)[1]
KEY DATA	**Strong efficacy in DS and a numeric reduction in LGS from Phase 2 ELEKTRA study** • Well-tolerated, with a safety profile consistent with the findings of previous studies with no new safety signals identified • Statistically significant reduction in convulsive seizure frequency in DS cohort • Numerical reductions in drop seizure frequency in LGS cohort
MARKET OPPORTUNITY	• ~50K addressable DEE[3] patients in the US • ~70-90K addressable DEE patients in major global market
DEVELOPMENT STATUS & EXPECTED MILESTONES	• Meet with regulatory agencies and initiate Phase 3 studies in DS and LGS

REDUCTION IN SEIZURE FREQUENCY OVER 20 WEEKS OF FULL TREATMENT PERIOD (mITT)[4]



- Co-development partnership with Ovid Therapeutics[2]

1. SUDEP: Sudden unexpected death in epilepsy
2. Takeda and Ovid are sharing in the development and commercialization costs of soticlestat and, if successful, will share in the profits on a 50/50 basis
3. DEE: Developmental and epileptic encephalopathies
4. mITT: modified intent-to-treat
5. Based on Hodges-Lehmann estimation of the median of differences in % change between the two arms

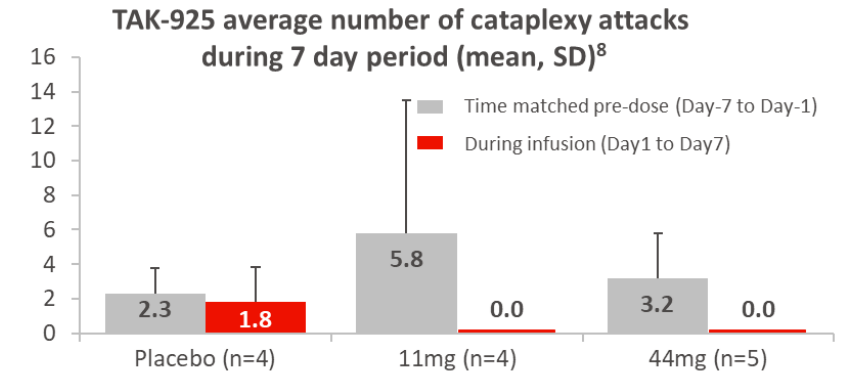
OREXIN 2 RECEPTOR AGONISTS (TAK-925/TAK-994)

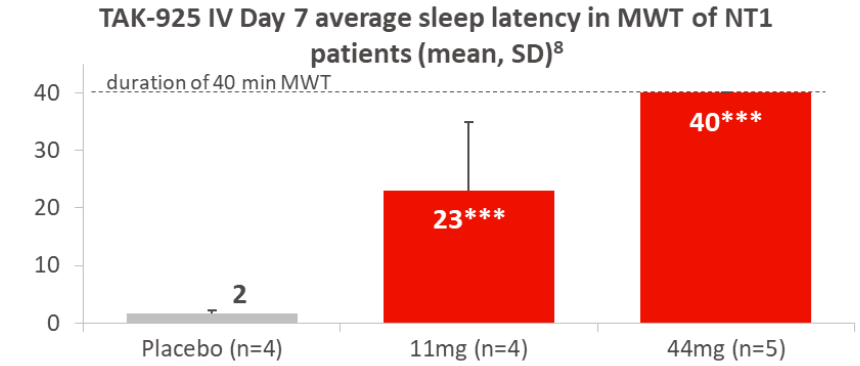
ODD | BTD | FTD | SKG

Transformative Potential In Narcolepsy Type 1 (NT1) And Other Sleep Disorders

MECHANISM	Orexin 2 receptor (OX2R) agonist
PATIENT JOURNEY/ UNMET NEED	**Current treatments do not address the underlying orexin deficiency in NT1 patients** • Backbone of care is a combination of wake promoting agents/stimulants for excessive daytime sleepiness (EDS), anti-depressants for cataplexy and sedating agents for disrupted nighttime sleep. • Despite treatment > 90% experience EDS[1] and 50% have daily cataplexy making functioning at home, school and work problematic.[2]
KEY DATA	• No cataplexy on TAK-925: Patients on TAK-925, an IV orexin 2 receptor agonist (OX2R), showed no cataplexy attacks during the infusion period[3] • In addition, benefits were seen in the MWT[4] over 7-days in NT1 and NT2[5] patients • TAK-925 has published POC data in NT1, NT2, shift work sleep disorder. Data for IH[6] and OSA[6] will be disclosed in the future.
MARKET OPPORTUNITY	NT1: Global prevalence 2-6 per 10,000; total adult prevalent population of ~135K in the U.S.; ~700K across key markets (US, EU5, JP, CN)[7]
DEVELOPMENT STATUS & EXPECTED MILESTONES	• TAK-994, the first oral OX2R agonist in Ph 2 is enrolling NT1 and NT2 patients. Final data targeted 2H FY21 • TAK-861, a second oral OX2R agonist will begin clinical testing in 2H FY20

POC NT1: 7-DAY REPEATED DOSING STUDY[3]





The lead indication is NT1, and we continue to explore use of OX2R agonists in other medical conditions, where wakefulness is needed and/or orexin pathophysiology plays a role such as Narcolepsy Type 2, Idiopathic Hypersomnia, and other conditions.

1. EDS: Excessive daytime sleepiness;
2. Maski, K et al. 2017. J Clin Sleep Med. Mar 15; 13(3): 419-425 ;
3. Presented at the European Sleep Research Society 2020 Virtual Congress, September 22-24, 2020;
4. MWT: Maintenance of Wakefulness Test;
5. NT2: Narcolepsy Type 2;
6. IH: Idiopathic hypersomnia. OSA: Obstructive sleep apnea.;
7. Diagnosis typically 5-15 years delayed;
8. Observed mean and standard deviation shown. ***: p-value <0.001 comparing to placebo;

TAK-721

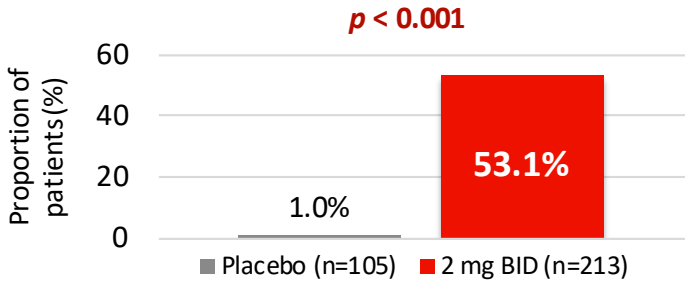
ODD BTD

On-track To Be The First FDA Approved Agent To Treat Eosinophilic Esophagitis

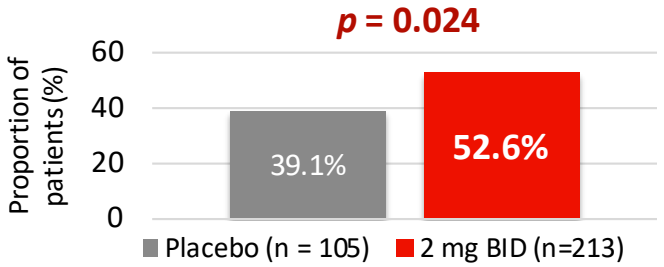
MECHANISM	Viscous budesonide oral suspension for eosinophilic esophagitis (EoE)
PATIENT JOURNEY/ UNMET NEED	**No U.S.-approved medication exists for EOE** • EoE often results in dysphagia (difficulty swallowing) and heartburn, and in adolescents often presents with vomiting and GI pain. Symptoms can represent a significant physical and emotional burden as patients avoid social settings focused on food • Standard of care is food elimination, off-label use of PPIs, and steroids[1] • There is often a long delay in diagnosis due to low awareness of the disease, symptom confusion, and patient adaptive behaviors that mask the symptoms of the disease
REASON TO BELIEVE	Largest EoE clinical trial program globally, including adults and adolescents • Pivotal 12-week study (301 study) showed **statistically significant histologic and symptomatic improvement** over placebo
MARKET OPPORTUNITY	>150,000 patients in U.S. and growing rapidly
DEVELOPMENT STATUS & EXPECTED MILESTONES	FY20 (Eosinophilic esophagitis Approval (US)[4]) → FY21 (Launch (US)) → FY22 → FY23 → FY24

12 WEEK DATA SHOWS SIGNIFICANT HISTOLOGIC AND SYMPTOM RESPONSE

Histologic Response at 12 Weeks
(peak ≤ 6 eosinophils/hpf[2] on biopsy)



Symptom Response at 12 Weeks
(≥ 30% reduction in DSQ score[3])



1. Gastroenterology 2020; 158: 1776 – 1786. In patients with EOE, the AGA/JTF recommend topical glucocorticosteroids over no treatment. Swallowed use of glucocorticoids intended for asthma (e.g., home or compounded thickening of budesonide solution, or swallowing fluticasone aerosol).
2. Eos/hpf: eosinophils per high-power field; BID: Twice daily; SOC: Standard of care; NDA: new drug application
3. DSQ score: Dysphagia Symptom Questionnaire patient reported outcome score
4. Approval expected Q4 FY20 or early Q1 FY21

TAK-003

Potential To Help Address The Fastest Spreading Mosquito-borne Viral Disease

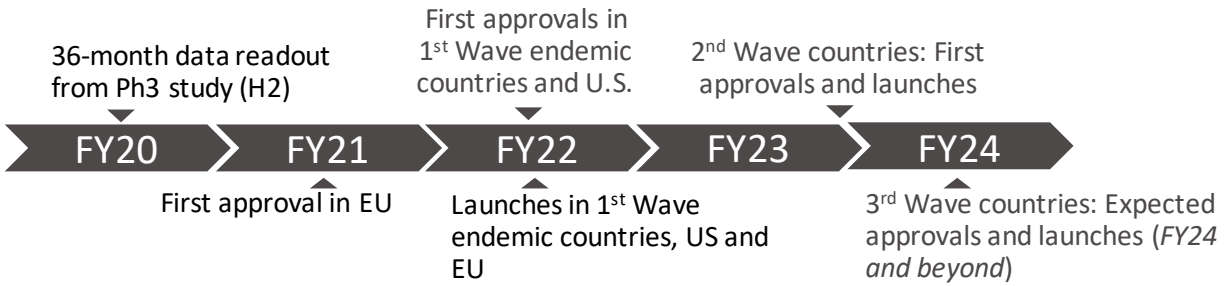
MECHANISM	Tetravalent Dengue Vaccine Candidate based on a live-attenuated dengue serotype 2 virus
PATIENT JOURNEY/ UNMET NEED	Dengue is endemic in more than 100 countries. Each year, dengue is estimated to cause 390 million infections[1]. • Severe dengue is a leading cause of serious illness and death in some Asian and Latin American countries[2]. There is no specific therapy available to treat dengue and care is supportive[1]. • Only one marketed vaccine exists; however, its **use is restricted to individuals** 9 to 16 years old and **with confirmed prior dengue virus exposure**.
REASON TO BELIEVE	80.2%: Overall vaccine efficacy (VE) in preventing symptomatic dengue at 12 months follow up (primary endpoint)[3]. • 90.4%: reduction in dengue-associated hospitalizations at 18 months (secondary endpoint)[4]. • Similar efficacy regardless of previous dengue exposure (VE: 76.1% and VE: 66.2% in baseline seropositives and seronegatives respectively (secondary endpoint)[4]. • TAK-003 has been generally well-tolerated with no important safety risks to date[3,4,5].
MARKET OPPORTUNITY	• More than 6 billion people could be at risk for dengue fever by 2080 due to population growth in endemic areas[6]. • High level of awareness of dengue and high attribution of potential severity of dengue disease. • Estimated 90% of burden in middle income countries[7,8].

TAK-003 PH3 DATA: 24 MONTHS FOLLOW-UP[5]

Overall Efficacy against Virologically Confirmed Dengue (VCD)	**72.7% (67.1, 77.3)**
Overall Efficacy against Hospitalized VCD	89.2% (82.4, 93.3)
Seronegative	67.0% (53.6, 76.5)
Seropositive	74.8% (68.6, 79.8)
DENV-1	69.0% (57.1, 77.5)
DENV-2	90.8% (85.6, 94.1)
DENV-3	54.4% (34.0, 64.2)
DENV-4	50.4% (-19.3, 79.3)

No important safety risks identified

DEVELOPMENT STATUS & EXPECTED MILESTONES



- Longer-term data is being collected to fully characterize TAK-003's safety and efficacy profile.
- The potential impact of a booster dose will be assessed during the TIDES study.

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7. Cases: Supplement to Stanaway JD, Shepard DS, Undurraga EA, et al. The global burden of dengue: an analysis from the Global Burden of Disease Study 2013. Lancet Infect Dis 2016; published online Feb 10. http://dx.doi.org/10.1016/S1473-3099(16)00026-8. Accessed Jan 14, 2019.
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Appendix 2
Epidemiology Data

OVERVIEW OF EPIDEMIOLOGY DATA

ONCOLOGY

GASTROENTEROLOGY (GI)

RARE GENETIC & HEMATOLOGY

EPIDEMIOLOGY – NINLARO, ALUNBRIG, ADCETRIS & ICLUSIG

Product	Indication	Total Global Eligible Population (FY20)	Geographies included
NINLARO® (ixazomib) capsules	R/R 2L+ Multiple Myeloma	~105,000[1]	Japan, US, EU5, China
ALUNBRIG™	ALK+ NSCLC	~14,000 [+ ~25,000 in China][2]	Japan, US, EU5, [China]
ADCETRIS® brentuximab vedotin BRINGING Hope TO Life	HL – Front Line, ASCT Consolidation, 2L+; TCL - PTCL & R/R CTCL	~11,000[3]	Japan, EU5, China
ICLUSIG® (ponatinib) tablets 45 mg, 15 mg	2L+ CML, ALL	~2,400	US

1. R/R 2L+ MM label eligible patients; 2. ALK+ tested patients; 3. CD30+ label eligible patients - approved regulatory approval include Stage IV/ITT Front Line Patients and High Risk HL consolidation patients
Source: Takeda estimates.

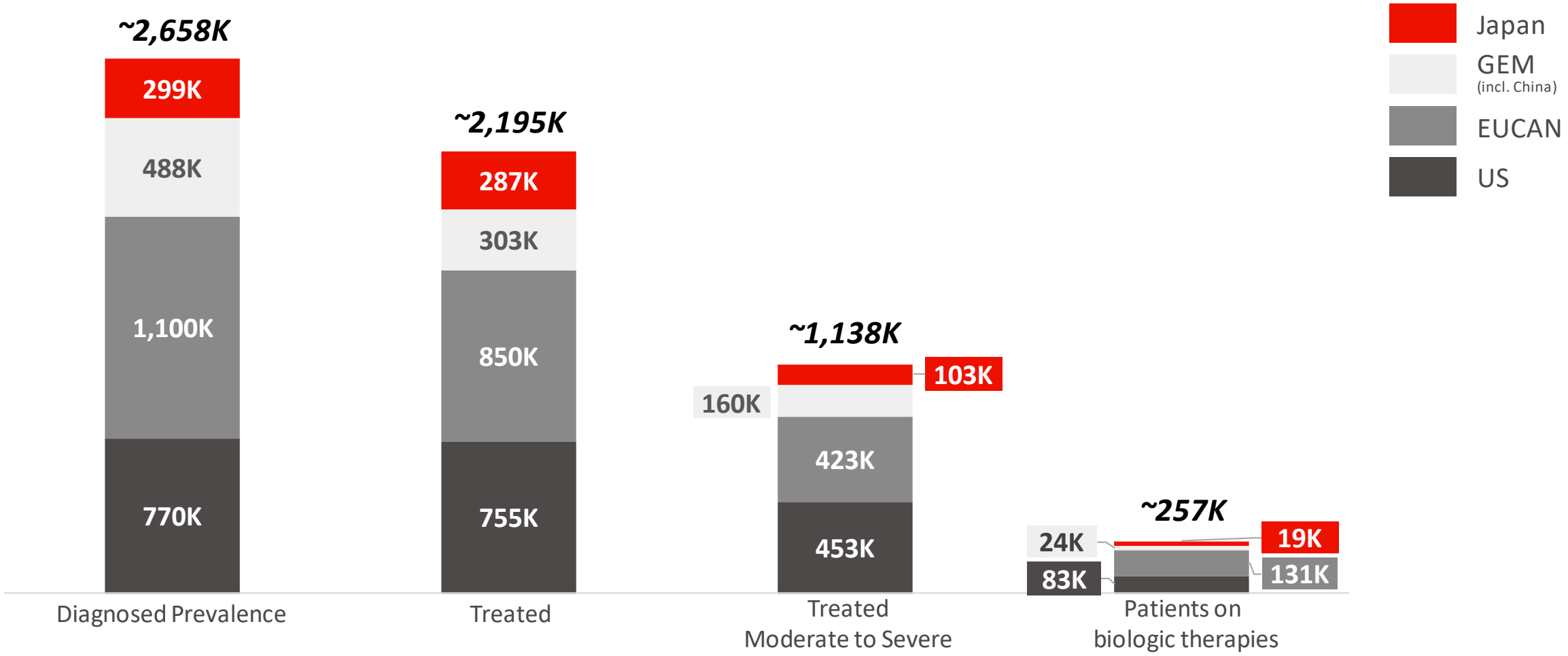
OVERVIEW OF EPIDEMIOLOGY DATA

ONCOLOGY

GASTROENTEROLOGY (GI)

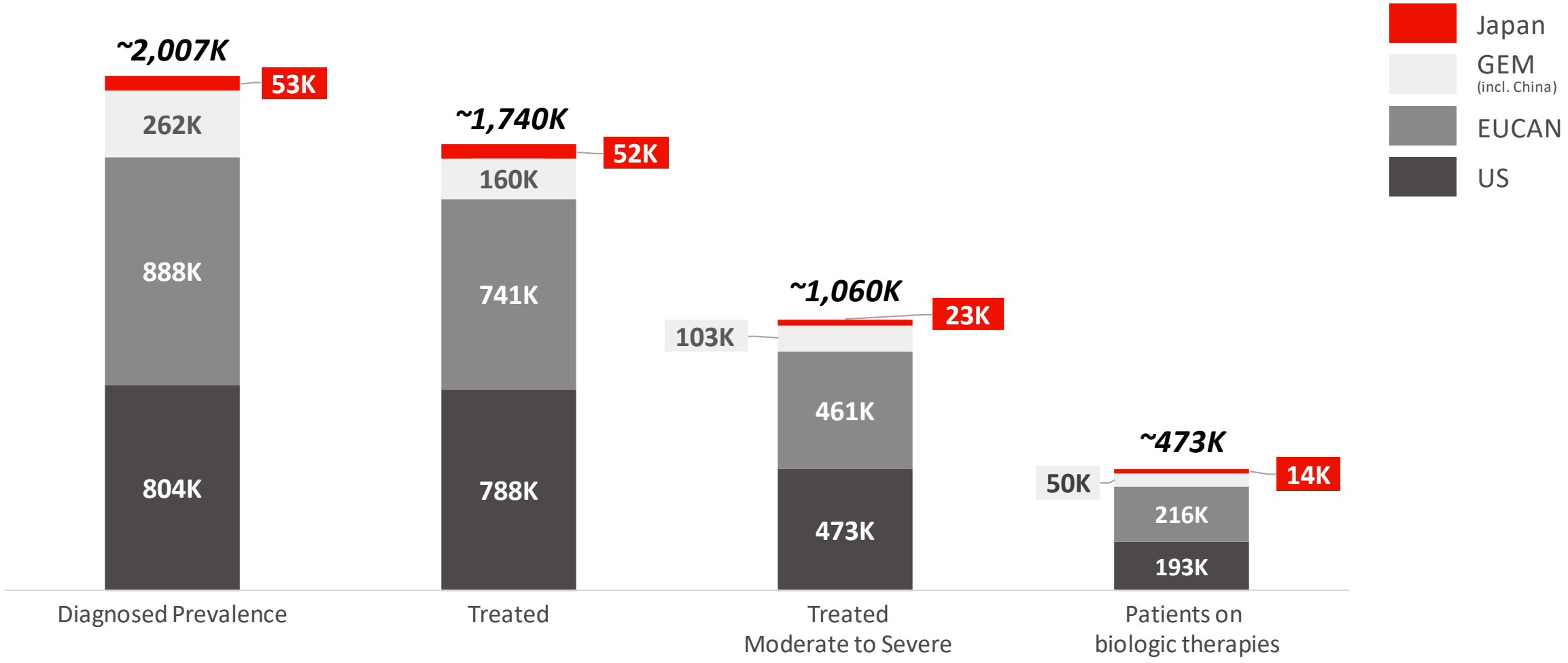
RARE GENETIC & HEMATOLOGY

EPIDEMIOLOGY ULCERATIVE COLITIS (UC)



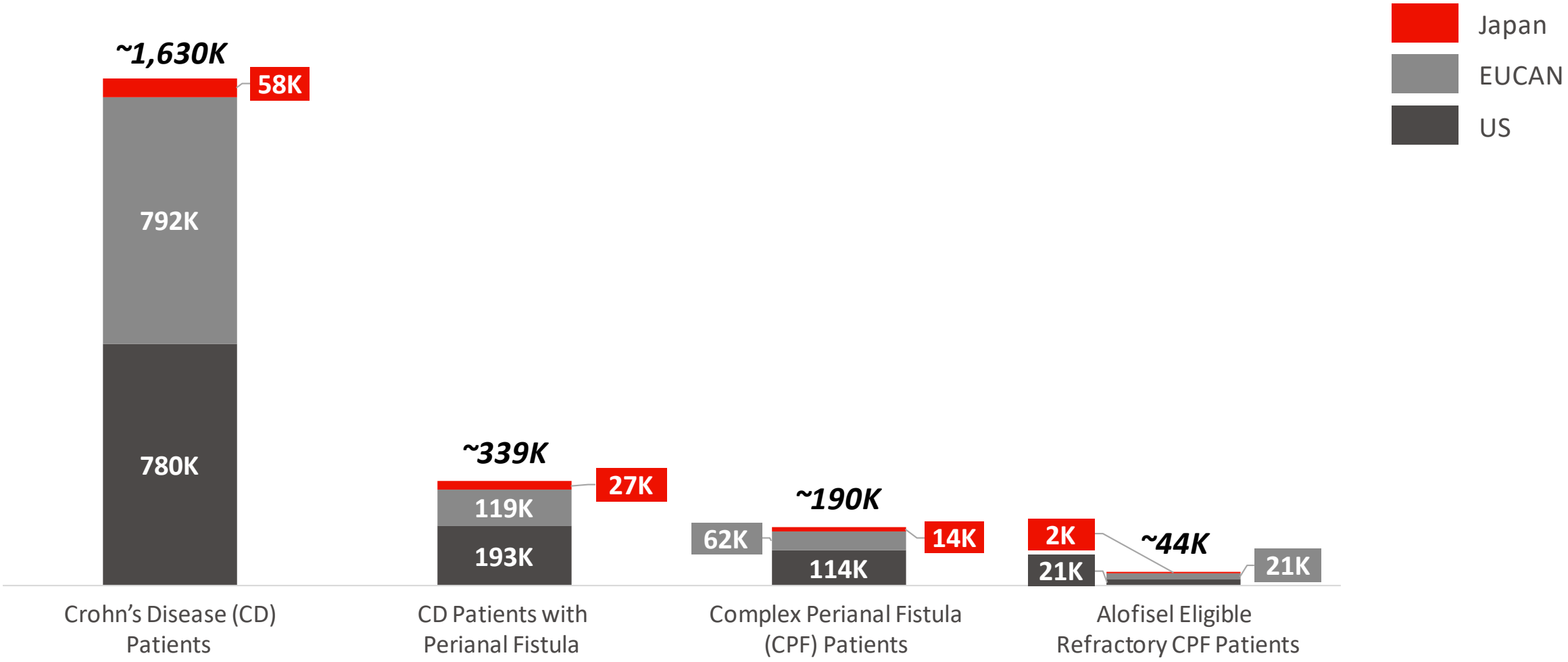
 Source: Takeda estimate. Note: Numbers are rounded.

EPIDEMIOLOGY CROHN'S DISEASE (CD)



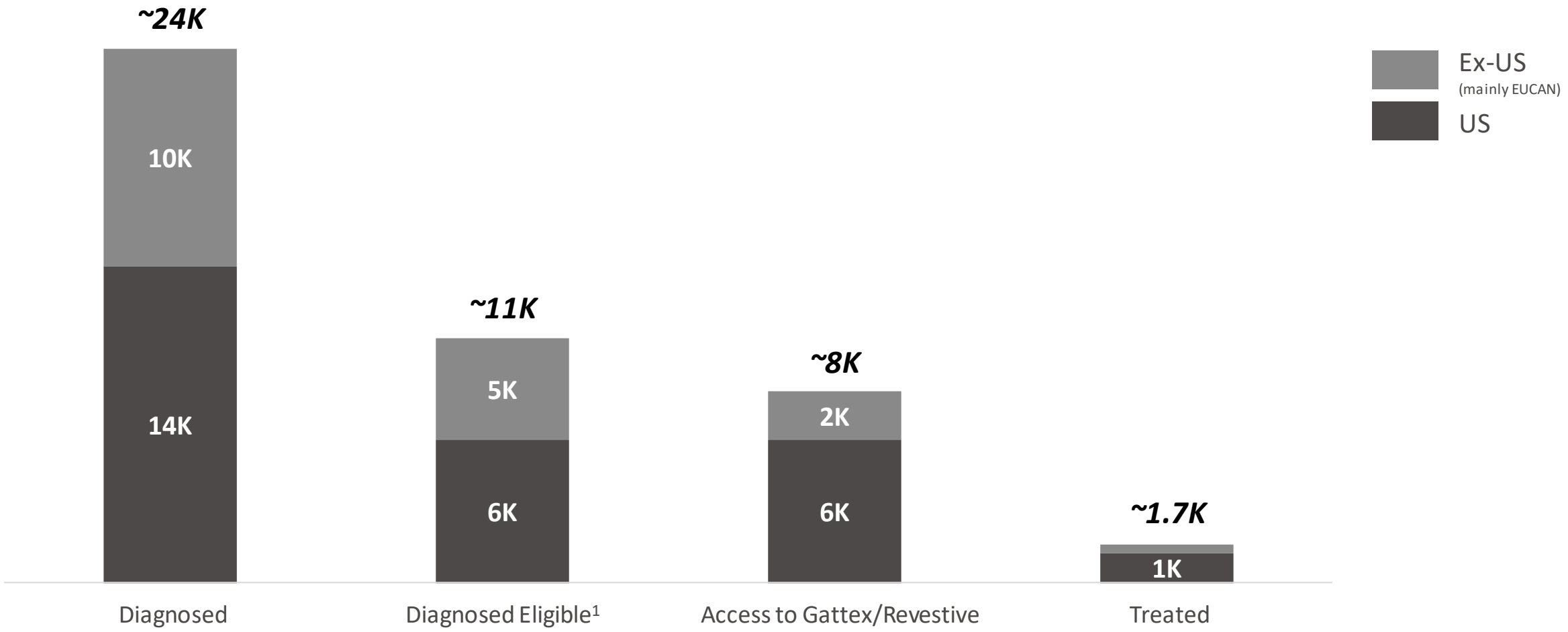
 Source: Takeda estimate. Note: Numbers are rounded.

EPIDEMIOLOGY COMPLEX PERIANAL FISTULA (CPF)



 Source: Takeda estimate. Note: Numbers are rounded.

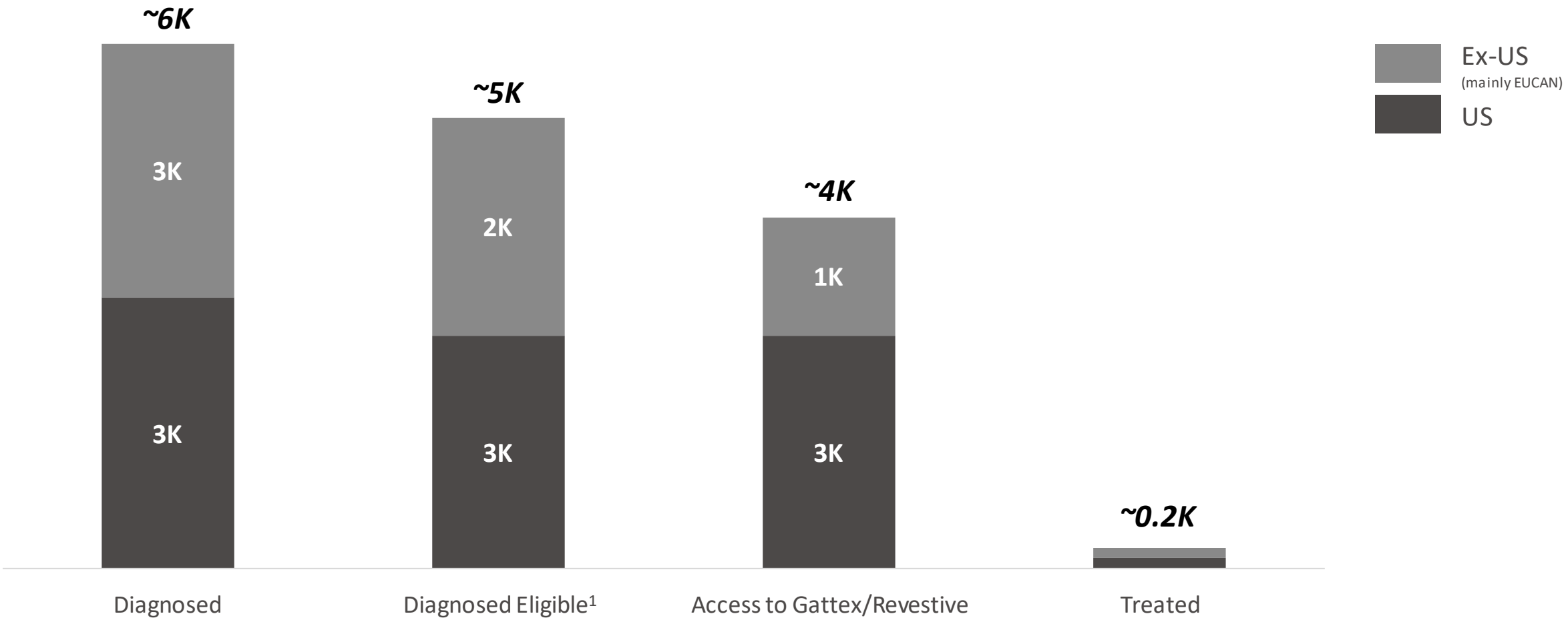
EPIDEMIOLOGY SHORT BOWL SYNDROME (SBS-IF)-ADULT INDICATION



1. Revestive/Gattex Eligible patients: excluding SBS caused by malignancies that occurred less than 5 years ago

Source: Takeda estimates. Note: Numbers are rounded.

EPIDEMIOLOGY SHORT BOWL SYNDROME (SBS-IF)-PEDIATRIC INDICATION



1. Revestive/Gattex Eligible patients: excluding SBS caused by malignancies that occurred less than 5 years ago

Source: Takeda estimates. Note: Numbers are rounded.

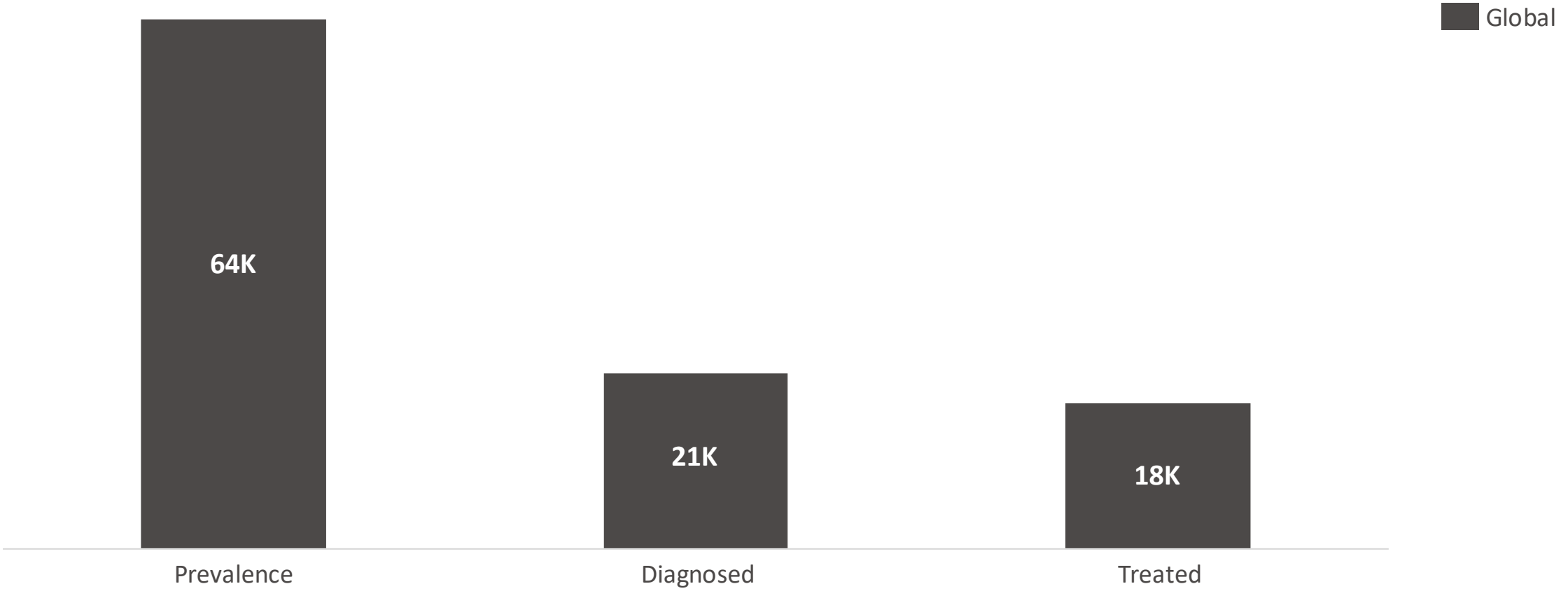
OVERVIEW OF EPIDEMIOLOGY DATA

ONCOLOGY

GASTROENTEROLOGY (GI)

RARE GENETIC & HEMATOLOGY

EPIDEMIOLOGY HEREDITARY ANGIOEDEMA

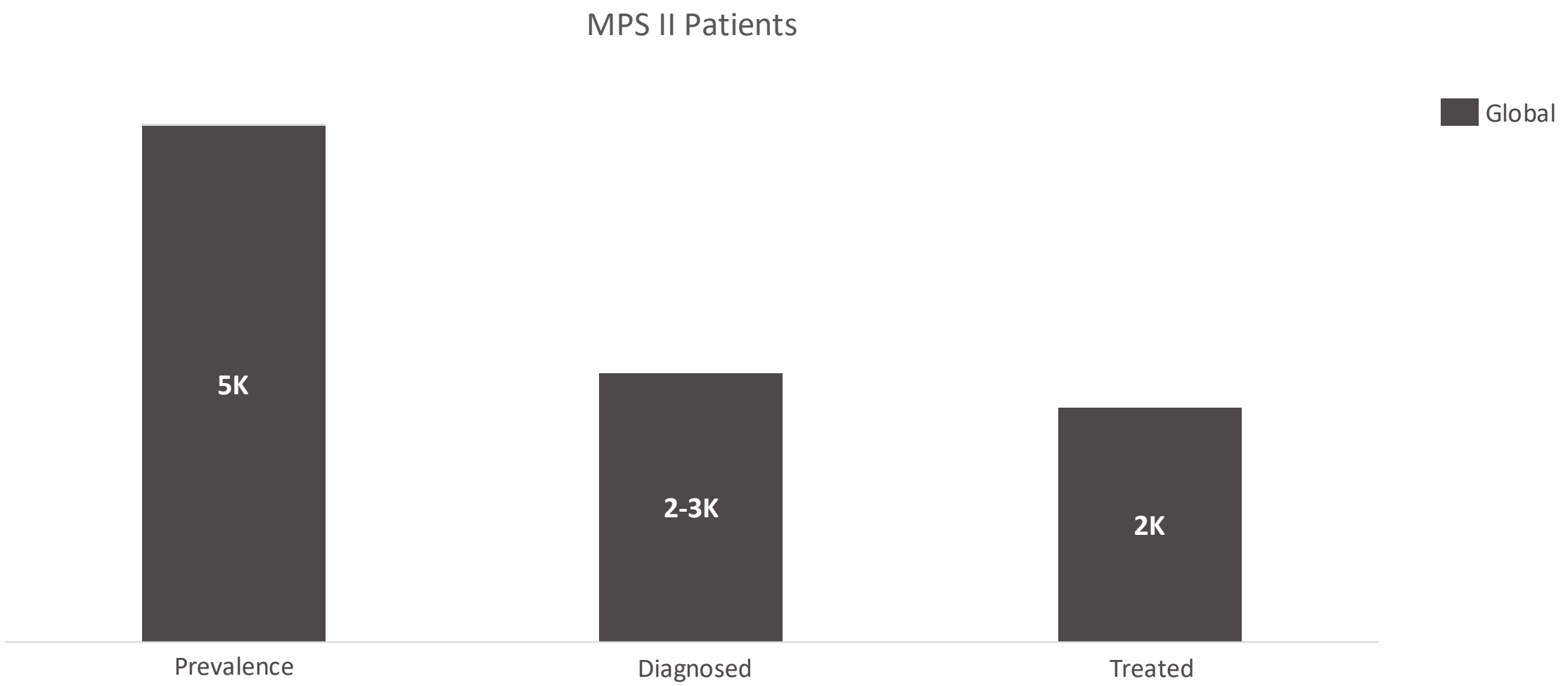


Source: Takeda estimates. Note: Numbers are rounded.

1. ORE HAE: Global overview of Hereditary Angioedema Epidemiology (http://207.154.195.35/)
2. Dx and Tx to be reviewed with the country

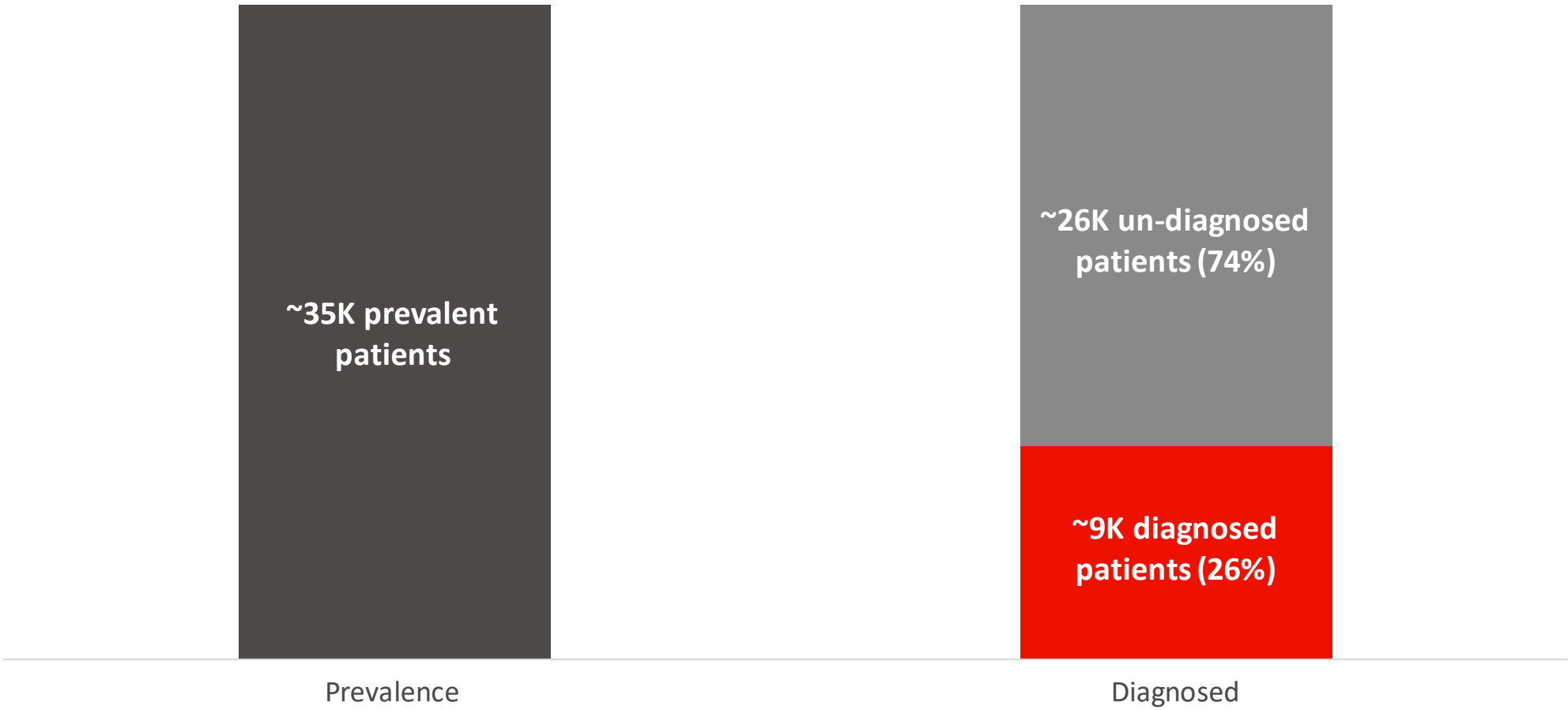
* Geographies considered:
EUCAN: Canada, Germany, Austria, France, The Netherlands, Belgium, Italy, United Kingdom, Spain, Region Nordics, Israel
GEM: China, Russia, Australia, Brazil, Mexico, Colombia, Argentina

EPIDEMIOLOGY HUNTER'S DISEASE: GLOBAL, INDIA/CHINA NOT INCLUDED



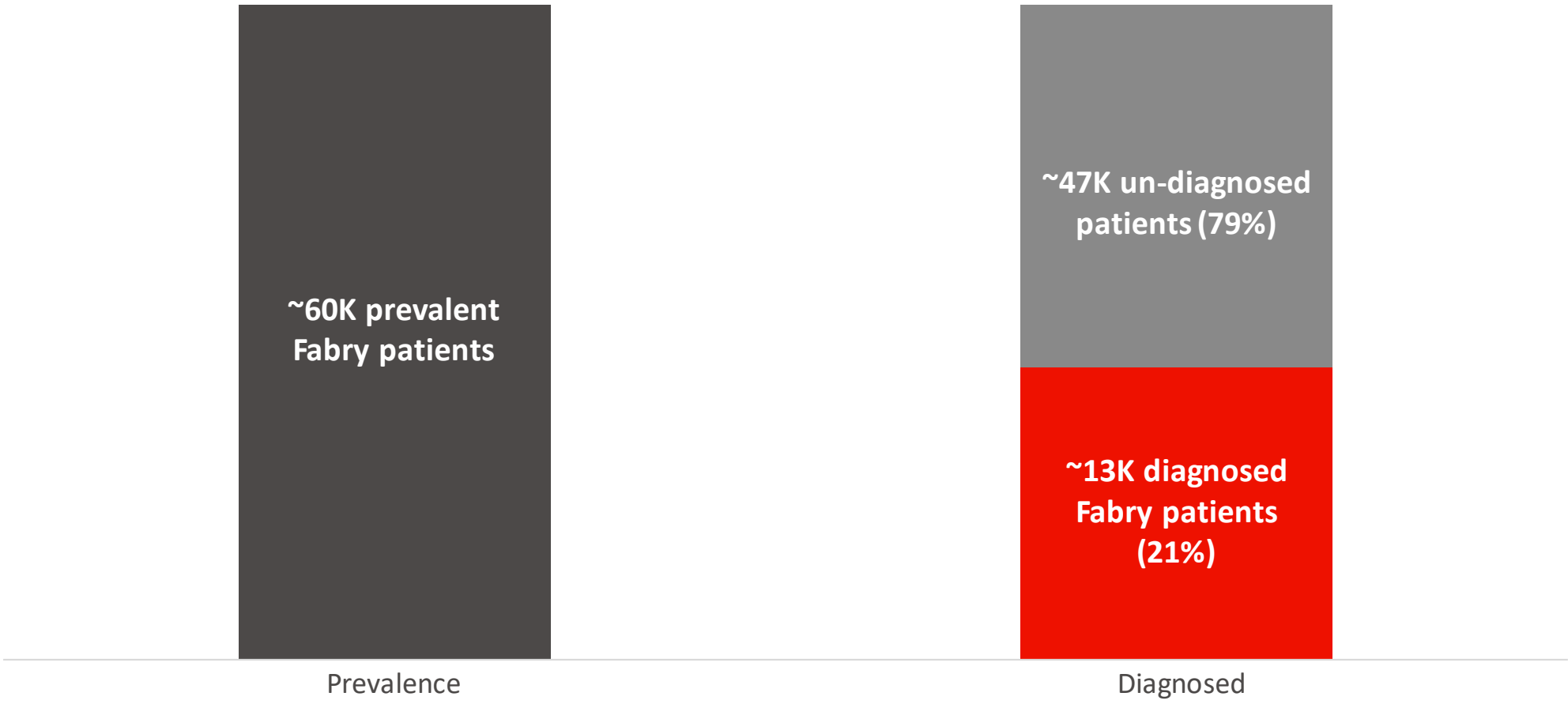
 Source: Takeda estimates. Note: Numbers are rounded.

EPIDEMIOLOGY GAUCHER'S DISEASE: GLOBAL, CHINA/INDIA NOT INCLUDED



 Source: Takeda estimates, US Census Bureau, Shire/CRA developed epi rate (2016). Note: Numbers are rounded.

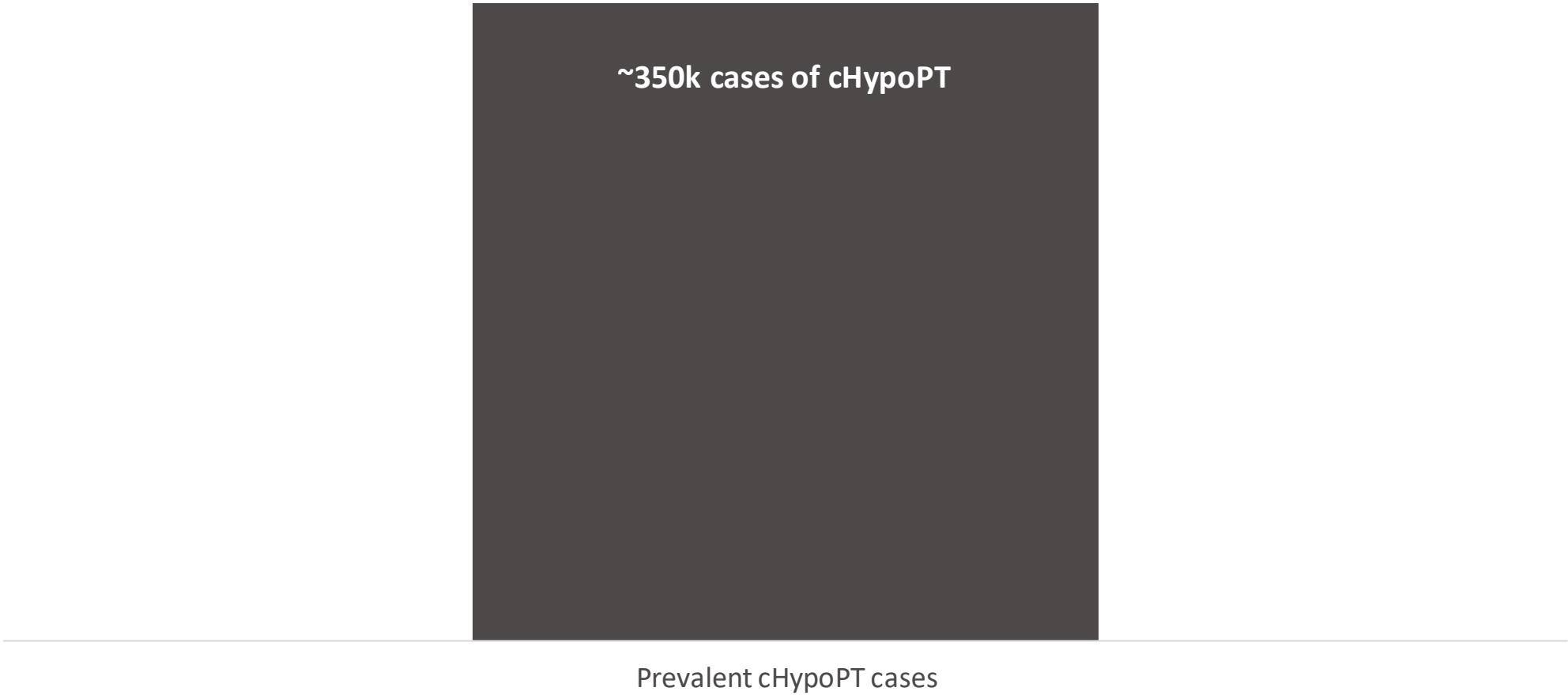
EPIDEMIOLOGY FABRY'S DISEASE: EX-US REGION, CHINA/INDIA NOT INCLUDED



 Source: Takeda estimates, US Census Bureau, Shire/CRA developed blended epi rate (2016): 1.28,500. Note: Numbers are rounded.

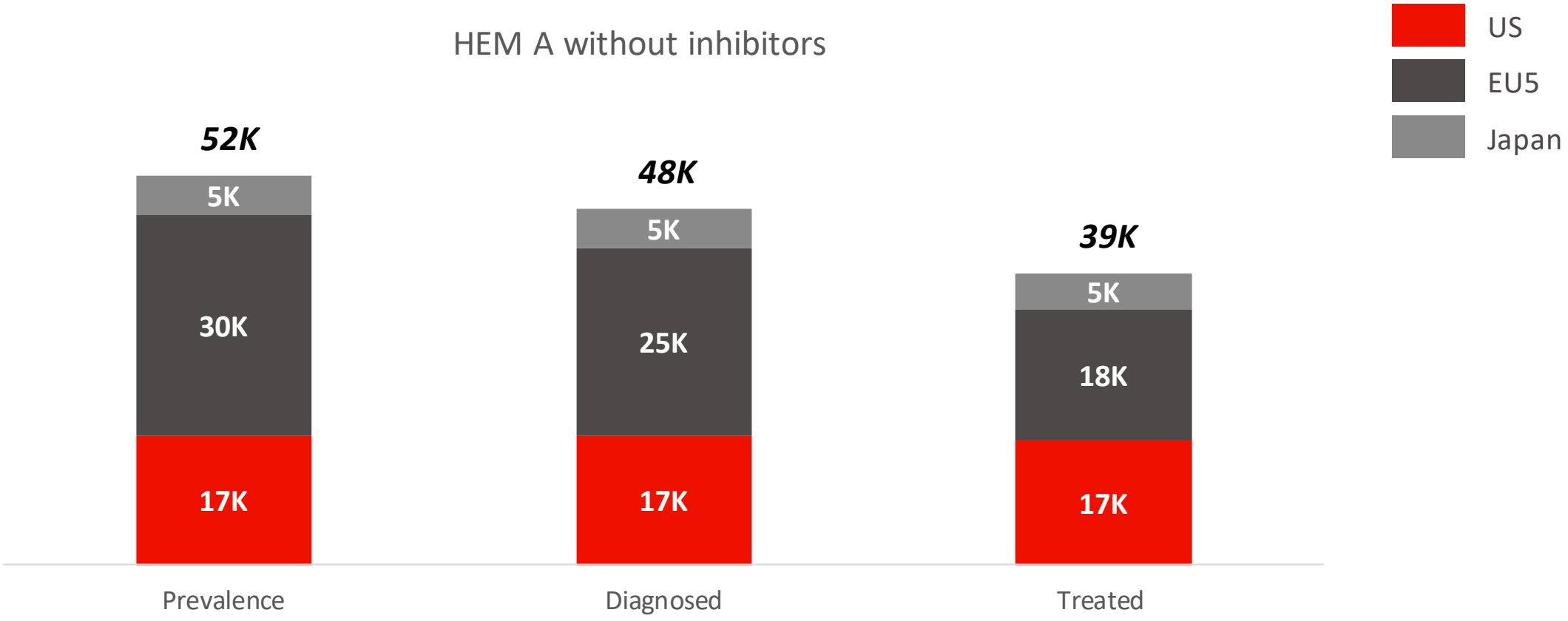
EPIDEMIOLOGY CHRONIC HYPOPARATHYROIDISM US + EUROPE

GEM, Japan And China Not Included



 Sources: Takeda estimates. Note: Numbers are rounded.

EPIDEMIOLOGY HEMOPHILIA A



*Note: In the graph, prevalence refers to the number of patients with Hemophilia A without inhibitors. Calculated prevalence for US based on occurrence per x population is high as is does not consider high mortality due to concomitant conditions such as AIDS and Hep C.

 Sources: Takeda estimates, WFH 2018 Report, Epidemiology of Hemophilia; Pharmametrics, NHF. Note: Numbers are rounded.

Appendix 3
Clinical Trial Summary

OVERVIEW OF CLINICAL TRIAL SUMMARY

	LCM[1]	WAVE 1	WAVE 2	
ONCOLOGY	ALUNBRIG 1L ALK+ NSCLC	mobocertinib 2L NSCLC w/EGFR exon 20 insertion mutation	TAK-981 Multiple cancers	TAK-169 R/R Multiple myeloma
	ALUNBRIG 2L ALK+NSCLC H2H with alectinib	mobocertinib 1L NSCLC w/EGFR exon 20 insertion mutation	TAK-981 Non-Hodgkin's lymphoma	TAK-252 Bispecific solid tumors
	ICLUSIG TKI res. Chronic phase CML	pevonedistat HR-MDS	TAK-981 Solid tumors	TAK-102 CAR-T solid tumors
	ICLUSIG FL Ph+ ALL	pevonedistat Unfit AML	TAK-605 Multiple cancers	TAK-940 CAR-T CD19+ Heme malignancy
	NINLARO Maintenance ND MM post-SCT (MM3)	TAK-007 CD19+ Heme malignancies	TAK-573 Solid tumors	
	NINLARO Maintenance ND MM no-SCT (MM4)		TAK-573 R/R Multiple myeloma	
	NINLARO Maintenance no-SCT (MM6)		TAK-676 STING agonist solid tumors	
RARE GENETIC & HEMATOLOGY	ADYNOVATE Pediatric Hemophilia A	maribavir R/R CMV infection in HSCT and SOT	mezagitamab (TAK-079) ITP, MG	
	VONVENDI vWD Adult prophylaxis, Peds	maribavir 1L CMV infection In HSCT	TAK-607 Complications of prematurity	
	TAKHZYRO HAE Pediatric	TAK-755 cTTP	TAK-755 iTTP	
	TAKHZYRO Bradykinin-mediated angioedema	TAK-611 MLD (IT)	TAK-755 SCD	
	OBIZUR CHAWI surgery	TAK-609 Hunter CNS (IT)		
NEUROSCIENCE		TAK-994 Orexin 2-ag NT1 and NT2	WVE 120101/02 Huntington's Disease	
		TAK-925 Narcolepsy NT1 and other sleep disorders soticlestat Rare epilepsies – LGS, DS	TAK-341 Parkinson's Disease	
GI	ENTYVIO GvHD Prophylaxis	TAK-721 Eosinophilic Esophagitis	TAK-951 Post-op nausea & vomiting	
	ENTYVIO UC/CD SC		TAK-906 Gastroparesis	
	ENTYVIO Pediatric UC/CD		TAK-954 POGD	
	Alofisel Complex perianal fistulas in CD		sibofimloc Post-Op CD	
	Vonoprazan H. Pylori China			
PDT	HYQVIA CIDP	CoVIg-19 COVID-19 hyperimmune IV globulin		
	HYQVIA Pediatric PID			
	GLASSIA A1P1 deficient patients			
VACCINES		TAK-003 Dengue vaccine	TAK-214 Norovirus vaccine	
			TAK-426 Zika vaccine	

1. LCM = Life cycle management programs or marketed assets in development seeking new indications, new geographic expansions, fulfillment of regulatory requirements, new formulations/method of use, and/or enhancement in commercial/competitive profile.

OVERVIEW OF CLINICAL TRIAL SUMMARY

- ONCOLOGY
- RARE GENETIC & HEMATOLOGY
- PLASMA-DERIVED THERAPIES
- NEUROSCIENCE
- VACCINES
- GASTROENTEROLOGY (GI)

ALUNBRIG (BRIGATINIB): *ALK INHIBITOR*

Study	NCT02737501	NCT03596866
Indication	ALK-positive advanced lung cancer	ALK-positive non-small-cell lung cancer (NSCLC)
Phase	**Phase III** **ALTA-1L**	**Phase III** **ALTA-3**
# of Patients	N = 275	N = 246
Target Patients	ALK+ locally advanced or metastatic NSCLC patients who have not previously been treated with an ALK inhibitor	Patients with ALK+ locally advanced or metastatic NSCLC who have progressed on crizotinib
Arms/Intervention	• Arm A: Brigatinib 180 mg QD with 7-day lead-in at 90 mg • Arm B: Crizotinib 250 mg BID	• Arm A: Alunbrig 90 mg to 180 mg QD • Arm B: Alecensa 600 mg PO BID with food
Primary endpoint and key secondary endpoint(s)	Progression-Free Survival (PFS) as assessed by blinded Independent Review Committee (bIRC)	Progression-Free Survival (PFS) as assessed by blinded Independent Review Committee (bIRC)
Status	• Study start date: April 2016 • Primary completion date: June 2019 Publications: • Camidge DR, et al. N Engl J Med 2018;379(21): 2027-2039 • Camidge DR, Kim HR, Ahn MJ, et al. J Clin Oncol 2020;38: 1-13 • Garcia Campelo MR, et al. Ann Oncol 2020;31(suppl 4): 5844 • Popat S, Kim HR, et al. Ann Oncol 2020;31(suppl 4): S840-S841	• Study Start Date: April 2019 • Estimated primary completion date[1]: FY21

1. The primary endpoint, PFS, is event driven and changes in event rate can lead to a change in the primary completion date.

ICLUSIG (PONATINIB): *BCR-ABL INHIBITOR*

Study	NCT02467270	NCT03589326
Indication	Chronic myeloid leukemia (CML)	Ph+ acute lymphoblastic leukemia (ALL)
Phase	**Phase II** **OPTIC**	**Phase III** **Ph+ALLCON**
# of Patients	N = 276	N = 230 - 320
Target Patients	Patients with resistant chronic phase chronic myeloid leukemia	Patients with newly-diagnosed Ph+ ALL
Arms/Intervention	• Ponatinib 45 mg once daily • Ponatinib 30 mg once daily • Ponatinib 15 mg once daily	• Cohort A: Ponatinib/reduced intensity chemotherapy until progressive disease (PD) or stem cell transplant (SCT) • Cohort B: Imatinib/reduced intensity chemotherapy until PD or SCT
Primary endpoint and key secondary endpoint(s)	≤1% BCR-ABL1 at 12 months (time frame: 12 months)	Number of participants with Minimal Residual Disease (MRD) - Negative Complete Remission (CR) [Time frame: From Cycle 1 through Cycle 3 (approximately 3 months) (Cycle length is equal to 28 days)]
Status	• Study start date: June 2015 • Primary completion date: May 2020	• Study start date: August 2018 • Estimated primary completion date[1]: FY21

1. The primary endpoint, PFS, is event driven and changes in event rate can lead to a change in the primary completion date.

NINLARO (IXAZOMIB): *ORAL PROTEASOME INHIBITOR*

Study	NCT02181413	NCT02312258
Indication	Multiple myeloma (MM) maintenance post-stem cell transplant	Multiple myeloma (MM) maintenance non-stem cell transplant
Phase	**Phase III** **TOURMALINE-MM3**	**Phase III** **TOURMALINE-MM4**
# of Patients	N = 652	N = 761
Target Patients	Patients with multiple myeloma following autologous stem cell transplant	Patients with newly-diagnosed MM not treated with stem cell transplantation
Arms/Intervention	Arm A: Ixazomib • Cycles 1-4: Ixazomib 3.0 mg PO days 1, 8, 15 / 28-day cycle • Cycles 5-26: Ixazomib 3.0 or 4.0 mg PO days 1, 8, 15 / 28-day cycle Arm B: Placebo • Cycles 1-4: Placebo 3.0 mg PO days 1, 8, 15 / 28-day cycle • Cycles 5-26: Placebo 3.0 or 4.0 mg PO days 1, 8, 15 / 28-day cycle	Arm A: Ixazomib • Cycles 1-4: Ixazomib 3.0 mg PO days 1, 8, 15 / 28-day cycle • Cycles 5-26: Ixazomib 3.0 mg or 4.0 mg PO days 1, 8, 15 / 28-day cycle Arm B: Placebo • Cycles 1-4: Placebo 3.0 mg PO days 1, 8, 15 / 28-day cycle • Cycles 5-26: Placebo 3.0 or 4.0 mg PO days 1, 8, 15 / 28-day cycle
Primary endpoint and key secondary endpoint(s)	• Primary: Progression Free Survival (PFS) • Secondary: Overall Survival (OS)	• Primary: Progression Free Survival (PFS) • Secondary: Overall Survival (OS)
Status	• Study start date: July 2014 • Primary completion date: April 2018 • Interim OS analysis[1]: FY21; Final: FY24/25 Publications: • Dimopoulos MA, et al. Lancet. 2019 Jan 19;393(10168):253-264 • Kaiser M, et al. Ann Hematol. 2020 Aug;99(8): 1793-1804 • Hari P, et al. J Med Econ. 2018 Aug;21(8): 793-798 • Schjesvold F, et al. Eur J Haematol. 2020 May;104(5):443-458 • Goldschmidt H, et al. Leukemia. 2020 Nov;34(11): 3019-3027 • Paiva B, et al. Presentation at EHA 2020	• Study start date: April 2015 • Primary completion date: August 2019 • Interim OS analysis[1]: FY22; Final FY24 Publications: • Bringhen S, et al. Presentation at ASH 2020 • Paiva B, et al. Presentation at ASH 2020 • Dimopoulos MA, et al. https://ascopubs.org/doi/full/10.1200/JCO.20.02060

1. A key secondary analysis, OS, is event driven and changes in event rate can lead to a change in the interim and final analysis.

NINLARO (IXAZOMIB): *ORAL PROTEASOME INHIBITOR*

Study	NCT03173092
Indication	Non-transplant eligible patients with newly diagnosed multiple myeloma
Phase	**Phase IV** **MM6**
# of Patients	N = 160
Target Patients	Patients with multiple myeloma previously receiving a bortezomib-based induction. In-class (proteasome inhibitor) transition after 3 cycles of bortezomib-based therapy.
Arms/Intervention	• Ixazomib 4 mg + lenalidomide 25 mg + dexamethasone 40 mg • Transition from a bortezomib based regimen to IRD (ixazomib, lenalidomide, dexamethasone) may allow the long term proteasome inhibition to be maximized while maintaining a manageable safety profile.
Primary endpoint and key secondary endpoint(s)	Progression Free Survival (PFS). Key secondary endpoints: time to next therapy (TTNT), relative dose intensity (RDI) of the oral regimen, overall survival (OS), electronic patient reported outcomes (ePRO) and actigraphy (activity/sleep) data.
Status	• Study start date: September 2017 • Primary completion date: FY26

MOBOCERTINIB (TAK-788): *EGFR/HER2 EXON 20 INHIBITOR*

Study	NCT02716116	NCT04129502
Indication	2L NSCLC exon 20 insertion mutation	1L NSCLC exon 20 insertion mutation
Phase	**Registration enabling Phase II** **EXCLAIM**	**Phase III** **EXCLAIM-2**
# of Patients	N = 341	N = 318
Target Patients	2L+ NSCLC harboring EGFR in-frame exon 20 insertion mutations	1L NSCLC harboring EGFR in-frame exon 20 insertion mutations
Arms/Intervention	• Single arm: Mobocertinib 160 mg QD	• Arm A: Mobocertinib 160 mg QD • Arm B: Platinum-based chemotherapy
Primary endpoint and key secondary endpoint(s)	Confirmed ORR assessed by IRC	PFS as assessed by blinded Independent Review Committee (IRC)
Status	• Study start date: April 2016 • Primary completion date: May 2020	• Study start date: January 2020 • Estimated primary completion date[1]: FY21

1. The primary endpoint, PFS, is event driven and changes in event rate can lead to a change in the primary completion date.

PEVONEDISTAT (TAK-924):
NEDD8-ACTIVATING ENZYME (NAE) INHIBITOR

Study	NCT03268954	NCT04090736
Indication	HR MDS	Unfit AML
Phase	**Phase III** **PANTHER**	**Phase III** **PEVOLAM**
# of Patients	N = 450	N = 466
Target Patients	Patients with higher risk myelodysplastic syndromes (HR MDS), chronic myelomonocytic leukemia or low-blast acute myelogenous leukemia (LB AML)	Patients with acute myeloid leukemia (AML) not eligible for INTENSIVE chemotherapy
Arms/Intervention	• Arm A: Pevonedistat 20 mg/m^2 (IV) on days 1, 3, 5; Azacitidine (AZA) 75 mg/m^2 (SC) on a 5-on/2-off [weekend]/2-on schedule in 28-day cycles • Arm B: AZA 75 mg/m2 SC on a 5-on/2-off [weekend]/2-on schedule in 28-day cycle	• Arm A: Pevonedistat 20 mg/m^2 (IV) on days 1, 3, 5; Azacitidine (AZA) 75 mg/m^2 (SC) on a 5-on/2-off [weekend]/2-on schedule in 28-day cycles • Arm B: AZA 75 mg/m2 SC on a 5-on/2-off [weekend]/2-on schedule in 28-day cycle (IV AZA can be administered for any patients who have non-tolerated local reactions)
Primary endpoint and key secondary endpoint(s)	Primary: Event Free Survival (EFS) Secondary: Overall Survival (OS)	Overall Survival (OS)
Status	• Study start date: December 2017 • Estimated primary completion date[1]: FY20/21	• Study start date: August 2019 • Estimated primary completion date[2]: FY24

1. The primary endpoint, EFS, is event driven and changes in event rate can lead to a change in the primary completion date.
2. The primary endpoint, OS, is event driven and changes in event rate can lead to a change in the primary completion date.

TAK-007: *CD19 CAR NK*

Study	NCT03056339[1]
Indication	Relapsed refractory B-lymphoid malignancies
Phase	**Phase I**
# of Patients	N = 36
Target Patients	Patients with relapsed and refractory CD19+ B lymphoid malignances
Arms/Intervention	• Fludarabine 30 mg/m^2 by vein on days -5 to -3 • Cyclophosphamide 300 mg/m^2 by vein on days -5 to -3 • Mesna 300 mg/m^2 by vein on days -5 to -3 • iC9/CAR.19/IL15-Transduced CB-NK Cells: Infusion of iC9/CAR.19/IL15-transduced CB-NK cells on Day 0 by vein; starting dose: 10E5 • AP1903: If participant has graft-versus-host disease (GvHD) or cytokine release syndrome after the NK cell infusion, they will receive AP1903 0.4 mg/kg administered as an intravenous infusion.
Primary endpoint and key secondary endpoint(s)	Safety and efficacy
Status	• Study start date: June 2017 Publication: • Liu E, Marin D, Banerjee P, et al. N Engl J Med 2020;382(6): 545-553

 1. Trial managed by MD Anderson Cancer Center

TAK-981: *SUMO-ACTIVATING ENZYME[1] INHIBITOR*

Study	NCT03648372	NCT04074330
Indication	Solid tumors, hematologic malignancies	Non-Hodgkin's lymphoma (NHL)
Phase	**Phase I**	**Phase I/II**
# of Patients	N = 80	N = 130
Target Patients	Adult participants with advanced or metastatic solid tumors or relapsed/refractory hematologic malignancies	Patients with relapsed/refractory CD-20 positive NHL
Arms/Intervention	• TAK-981, intravenously, administered as 60 minute-infusion, once on Days 1, 4, 8, and 11 for 2 consecutive weeks, followed by 1 week rest in a 21-day treatment cycle	• Phase 1, aNHL/iNHL: TAK-981 (10-160 mg) + rituximab 375 mg/m^2 • Phase 2, Cohort A: r/r DLBCL progressed to CAR T-cell therapy • Phase 2, Cohort B: r/r DLBCL with no CAR T-cell prior therapy • Phase 2, Cohort C: r/r FL progressed to systemic therapies
Primary endpoint and key secondary endpoint(s)	Safety, tolerability and PK	Safety, tolerability and RP2D
Status	• Study start date: October 2018	• Study start date: October 2019

1. SUMO = Small ubiquitin-like modifier

TAK-981: *SUMO-ACTIVATING ENZYME[1] INHIBITOR*

Study	NCT04381650
Indication	Solid tumors
Phase	**Phase Ib/II**
# of Patients	N = 101
Target Patients	Patients with select advanced or metastatic solid tumors
Arms/Intervention	• Escalating doses of TAK-981 with starting dose of 40 mg, intravenous (IV) infusion, on Days 1, 4, 8 and 11 in each 21-day treatment cycle and pembrolizumab 200 mg, IV infusion, as a fixed dose every 3 weeks in 21-day treatment cycle until RP2D is determined (for a maximum of 24 months). • TAK-981 at RP2D as IV infusion on Days 1, 4, 8 and 11 in each 21-day treatment cycle up to disease progression or 12-months and pembrolizumab 200 mg IV infusion as a fixed dose every 3 weeks in 21-day treatment cycle for a maximum of 24 months.
Primary endpoint and key secondary endpoint(s)	Safety and tolerability
Status	• Study start date: August 2020

 1. SUMO = Small ubiquitin-like modifier

TAK-605: *ONCOLYTIC VIRUS ENCODING TRANSGENES FOR FLT3 LIGAND, ANTI-CTLA-4 ANTIBODY, AND IL-12 CYTOKINE*

Study	NCT04301011[1]
Indication	Solid tumors
Phase	**Phase I/IIa**
# of Patients	N = 84
Target Patients	Patients with advanced solid tumors
Arms/Intervention	• Arm A: TBio-6517 (TAK-605) dose escalation administered alone by direct injection into tumor(s) x 4. Booster injections of TBio-6517 are permitted for up to 24 months. • Arm B: TBio-6517 and pembrolizumab Dose escalation of TBio-6517 administered in combination with pembrolizumab. TBio-6517 will be directly injected into tumor(s) x 4. Booster injections of TBio-6517 are permitted for up to 24 months. Pembrolizumab will be administered beginning at Day 8 via intravenous (IV) infusion every 3 weeks for up to 24 months. • TBio-6517 and pembrolizumab in MSS-CRC Doses of TBio-6517 will be administered by direct injection into tumor(s) x 4 in combination with pembrolizumab beginning at Day 8 given every 3 weeks for up to 24 months in patients with microsatellite stable colorectal carcinoma (MSS-CRC). Booster injections of TBio-6517 are permitted for up to 24 months. • TBio-6517 and pembrolizumab in TNBC Doses of TBio-6517 will be administered by direct injection into tumor(s) x 4 in combination with pembrolizumab beginning at Day 8 given every 3 weeks for up to 24 months in patients with triple negative breast cancer (TNBC). Booster injections of TBio-6517 are permitted for up to 24 months.
Primary endpoint and key secondary endpoint(s)	Recommended Phase 2 dose (RP2D)
Status	• Study start date: August 2020

 1. Trial managed by Turnstone Biologics

TAK-573: *FIRST-IN-CLASS ANTI-CD38/ATTENUATED IFNα FUSION PROTEIN*

Study	NCT04157517	NCT03215030
Indication	Solid tumors	Relapsed/refractory multiple myeloma
Phase	**Phase I**	**Phase I/2**
# of Patients	N = 86	N = 151
Target Patients	Patients with locally advanced or metastatic solid tumors	Patients with relapsed/refractory multiple myeloma
Arms/Intervention	• TAK-573 0.1 to 6 milligram per kilogram (mg/kg), infusion, intravenously, once on Day 1 of each 21-days treatment cycle for up to 1 year. Administration of TAK-573 on Day 1 of each 21-days treatment cycle may also be evaluated.	• Phase 1 cohort: TAK-573 0.001 to 14 milligram per kilogram (mg/kg), infusion, intravenously, once on Days 1, 8, 15 and 22 of each 28-day treatment cycle up to 2 cycles, followed by once on Days 1 and 15 of each 28-day treatment cycle up to 4 cycles, followed by once on Day 1 of each 28-day treatment cycle until treatment discontinuation. • Phase 2 cohort: TAK-573 TBD as a single agent. Participants in at least 1 cohort will receive TAK-573 TBD and dexamethasone 40 mg, orally, once weekly of each 28-day treatment cycle until treatment discontinuation.
Primary endpoint and key secondary endpoint(s)	Safety and tolerability	Safety and tolerability
Status	• Study start date: December 2019	• Study start date: October 2017

TAK-676: *STING AGONIST*

Study	NCT04420884
Indication	Solid tumors
Phase	**Phase I**
# of Patients	N = 76
Target Patients	Adult patients with advanced or metastatic solid tumors
Arms/Intervention	• Arm 1: Dose escalating single agent TAK-676, starting with a safety lead-in at 0.1 mg IV on Days 1, 8, 15 in 21-day treatment cycles, and capping at 2.5 mg IV on Days 1, 8 and 15 in a 21-day cycle. • Arm 2: Dose escalating TAK-676 along the above parameters in combination with fixed dose pembrolizumab at 200 mg IV administered on D1 in a 21-day cycle.
Primary endpoint and key secondary endpoint(s)	• Primary endpoints: Safety and tolerability • Secondary objectives: Recommended Phase 2 dose (RP2D), overall response rate (ORR)
Status	• Study start date: July 2020

TAK-169: *ANTI-CD38 ANTIBODY-SLTA[1] TOXIN*

Study	NCT04017130
Indication	Relapsed or refractory multiple myeloma
Phase	**Phase I**
# of Patients	N = 102
Target Patients	Patients with relapsed or refractory multiple myeloma
Arms/Intervention	• Dose escalation arms: TAK-169 50 mcg/kg Once Weekly; TAK-169 100 mcg/kg Once Weekly; TAK-169 200 mcg/kg Once Weekly; TAK-169 335 mcg/kg Once Weekly; TAK-169 500 mcg/kg Once Weekly; TAK-169 665 mcg/kg Once Weekly; TAK-169 TBD Once Every Two Weeks; • Expansion arms: Daratumumab (R/R) cohorts (once weekly and once every 2 weeks TAK-169 administration) and an anti-CD38 therapy naive cohort (once weekly TAK-169 administration). The starting dose for each expansion cohort may be the MTD/RP2D[2] or a recommended dose below the MTD determined during dose escalation after review of the available safety, efficacy, PK, and PD data.
Primary endpoint and key secondary endpoint(s)	Safety, tolerability, PK and efficacy
Status	• Study start date: February 2020

1. SLTA = Shiga-like toxin A
2. MTD = Maximum tolerated dose. RP2D = Recommended phase 2 dose.

TAK-252: *PD1-FC OX40L ARC*

Study	NCT03894618[1]
Indication	Advanced solid tumors or lymphomas
Phase	**Phase I**
# of Patients	N = 87
Target Patients	Patients with advanced solid tumors or lymphomas
Arms/Intervention	• TAK-252 (SL-279252) is a first-in-class agonist redirected checkpoint (ARC) fusion protein (FP) consisting of the extracellular domains of human programmed cell death 1 (PD-1) and OX40L, linked by a central Fc domain (PD1-Fc-OX40L).
Primary endpoint and key secondary endpoint(s)	Safety, maximum tolerated dose (MTD). Recommended Phase 2 dose (RP2D), preliminary antitumor activity by iRECIST, immunogenicity and PK characterization of TAK-252
Status	• Study start date: March 2019

 1. Trial managed by Shattuck Labs

TAK-102: *GPC3 CAR-T*

Study	NCT04405778[1]
Indication	Solid tumors
Phase	**Phase I**
# of Patients	N = 18
Target Patients	Adult patients with GPC3-expressing previously treated solid tumors
Arms/Intervention	• Cohort 1: 1 × 10^7 CAR (+) cells/body [starting dose] • Cohort 2: 1 × 10^8 CAR (+) cells/body • Cohort 3: 1 × 10^9 CAR (+) cells/body
Primary endpoint and key secondary endpoint(s)	• Primary endpoint: Incidence of dose-limiting toxicities, treatment-emergent adverse events (AEs) and AEs of clinical interest • Primary objective: To evaluate the safety and tolerability of TAK-102 and to determine the recommended Phase 2 dose of TAK-102
Status	• Study start date: July 2020

 1. In collaboration with Noile-Immune Biotech Inc. Enrollment in Japan.

TAK-940: *CD19 CAR-T*

Study	NCT04464200[1]
Indication	Relapsed/refractory B-cell cancers
Phase	**Phase I**
# of Patients	N = 30
Target Patients	Adult patients with relapsed or refractory B-dell malignancies
Arms/Intervention	• 19(T2)28z1xx CAR T cells Cohorts of 3-6 patients will be infused with escalating doses of 19(T2)28z1xx CAR T cells to establish the RP2D. There are 4 planned flat-dose levels: 25x10^6, 50 x 10^6, 100 x 10^6, and 200 x 10^6 CAR T cells and one de-escalation dose: 12.5 x 10^6 CAR T cells. A standard 3+3 dose escalation design will be implemented starting from dose 1.
Primary endpoint and key secondary endpoint(s)	Recommended Phase 2 dose (RP2D)
Status	• Study start date: August 2020

1. Trial managed by Memorial Sloan Kettering Cancer Center

OVERVIEW OF CLINICAL TRIAL SUMMARY

ONCOLOGY

RARE GENETIC & HEMATOLOGY

PLASMA-DERIVED THERAPIES

NEUROSCIENCE

VACCINES

GASTROENTEROLOGY (GI)

ADYNOVATE (TAK-660): *RECOMBINANT, PEGYLATED ANTIHEMOPHILIC FACTOR*

Study	NCT02615691
Indication	Hemophilia A
Phase	**Phase III**
# of Patients	N = 120
Target Patients	Previously untreated patients (PUPs) < 6 years with severe hemophilia A (FVIII < 1%)
Arms/Intervention	• Single group assignment
Primary endpoint and key secondary endpoint(s)	The primary objective is to determine safety including immunogenicity of Adynovate (TAK-660/BAX 855) based on the incidence of inhibitor development to FVIII (≥ 0.6 Bethesda unit (BU)/mL using the Nijmegen modification of the Bethesda assay). Safety 1. To determine the immunogenicity of Adynovate in terms of binding IgG and IGM antibodies to FVIII, PEG-FVIII and PEG 2. To determine the safety of Adynovate based on adverse events (AEs) and serious adverse events (SAEs) Hemostatic Efficacy 3. To assess the efficacy of prophylactic treatment with Adynovate 4. To characterize the efficacy of Adynovate in the control of bleeding episodes Pharmacokinetics 6. To determine the incremental recovery (IR) of Adynovate at baseline and over time 7. To determine half-life of Adynovate at baseline (optional)
Status	• Study start date: November 2015

VONVENDI (TAK-577): *RECOMBINANT VON WILLEBRAND FACTOR*

Study	NCT02973087	NCT02932618
Indication	Adult Prophylaxis	Pediatric On-demand and Elective Surgery
Phase	**Phase III**	**Phase III**
# of Patients	N = 22	N = 27 (On-demand) N = 12 (Elective Surgery)
Target Patients	Severe von Willebrand Disease	Severe von Willebrand Disease
Arms/Intervention	• Arm A: Transitioning from on-demand • Arm B: Switching from prophylactic treatment with pdVWF	• Arm A: On-demand • Arm B: Elective and emergency surgery
Primary endpoint and key secondary endpoint(s)	• Annual Bleed Rate (ABR) <= subject's historical ABR for spontaneous bleeding episodes • Key secondary endpoint: Additional efficacy of prophylactic treatment	• Hemostatic efficacy and safety of rVWF, with or without ADVATE, in the treatment and control of nonsurgical bleeding events • Key secondary endpoint: Hemostatic efficacy assessed after the last perioperative rVWF infusion
Status	• Study start date: October 2017 • Primary completion date: August 2020	• Study start date: October 2016 • Estimated primary completion date: FY22

TAKHZYRO (LANADELUMAB): *PLASMA KALLIKREIN (PKAL) INHIBITOR*

Study	NCT04070326	NCT04206605
Indication	Hereditary angioedema (HAE) pediatric	Non-histaminergic angioedema with normal C1-Inhibitor
Phase	**Phase III SPRING**	**Phase III CASPIAN**
# of Patients	N = 20	N = 75
Target Patients	Type I and Type II hereditary angioedema, ages 2 to <12 yo	Non-histaminergic bradykinin-mediated angioedema (BMA) with normal C1-inhibitor
Arms/Intervention	• Lanadelumab 150mg; q4wks ages 2 to < 6, q2wks ages 6 to <12 yo	• Lanadelumab 300mg q2wks
Primary endpoint and key secondary endpoint(s)	• Primary: Safety and pharmacokinetics • Key secondary: Clinical outcomes, pharmacodynamics	• Primary: Number of investigator-confirmed angioedema attacks during the treatment period of Day 0 through Day 182 • Key secondary: Number of participants achieving attack-free status during the treatment period of Day 0 through Day 182
Status	• Study start date: August 2019 • Estimated primary completion date: FY22	• Study start date: August 2020 • Estimated primary completion date: FY23

MARIBAVIR (TAK-620):
ORAL VIRAL PROTEIN KINASE INHIBITOR

Study	NCT02931539	NCT02927067
Indication	Treatment of Resistant/Refractory Post-Transplant Cytomegalovirus (CMV) Infection	Treatment of CMV infection in Hematopoietic Stem Cell Transplant Recipients
Phase	**Phase III**	**Phase III**
# of Patients	N = 351	N = 550
Target Patients	Treatment of CMV infection refractory or resistant to ganciclovir, valganciclovir, cidofovir or foscarnet in solid organ transplant (SOT) and stem cell transplant patients	Treatment of asymptomatic CMV infection in stem cell transplant patients
Arms/Intervention	Arm A: Maribavir Arm B: Investigator-assigned treatment	Arm A: Maribavir Arm B: Valganciclovir
Primary endpoint and key secondary endpoint(s)	• **Primary:** Confirmed clearance of plasma CMV DNA (CMV viremia clearance) at the end of Study Week 8 • **Secondary:** Achievement of CMV viremia clearance and resolution or improvement of tissue invasive CMV disease or CMV syndrome for subjects symptomatic at baseline or achievement of clearance of viremia and no symptoms of tissue invasive CMV disease or CMV syndrome for subjects asymptomatic at baseline at the end of Study Week 8, followed by maintenance of this treatment effect for an additional 8 weeks off treatment	• **Primary:** Confirmed clearance of plasma CMV DNA (CMV viremia clearance) at the end of Study Week 8 • **Secondary:** Maintenance of confirmed CMV viremia clearance achieved at the end of Study Week 8 through Week 16 having received exclusively a study-assigned treatment.
Status	• Study start date: December 2016 • Estimated primary completion date: FY20 • Papanicolaou GA, et al. Clin Infect Dis. 2019 Apr 8;68(8):1255-1264.	• Study start date: April 2017 • Estimated primary completion date: FY21 • Maertens J, et al. N. Engl J Med 2019;381:1136-47.

TAK-755: *REPLACEMENT OF THE DEFICIENT-ADAMTS13 ENZYME*

Study	NCT03393975	NCT03922308	NCT03997760
Indication	Congenital Thrombotic Thrombocytopenic Purpura (cTTP)	Immune Thrombotic Thrombocytopenic Purpura (iTTP)	Sickle Cell Disease
Phase	**Phase III**	**Phase II**	**Phase I**
# of Patients	N = 68	N = 30	N = 56
Target Patients	Patients diagnosed with severe cTTP in prophylactic and on-demand treatment	Adult patients diagnosed with iTTP	Adult patients with sickle cell disease at baseline health and during acute vaso-occlusive crisis (VOC)
Arms/Intervention	Prophylaxis Treatment Cohort: 6 + 6 months cross over of TAK-755 vs SoC followed by 6 months TAK-755 extension • **Arm 1:** TAK-755 + SOC • **Arm 2:** SOC + TAK-755 (Patients are eligible to enter the prophylaxis study upon completion of acute treatment)	• **Arm 1:** TAK-755 High dose + SOC • **Arm 2:** TAK-755 Low dose + SOC • **Arm 3:** Placebo + SOC	• **Part A**: TAK-755 administered at baseline health at 3 dose levels and with placebo • **Part B**: TAK-755 administered during acute VOC at 3 dose levels of 40, 80, and 160 IU/kg. • Placebo will be administered in an equivalent volume of the 3 dose levels of 40, 80, and 160 IU/kg during part A and part B
Primary endpoint and key secondary endpoint(s)	Incidence of acute TTP episodes in subjects receiving prophylactic treatment with either TAK-755 or SoC	ADAMTS-13 activity, ADAMTS-13 binding and inhibitory antibodies, Platelet count, and LDH levels	SAEs/AEs, adverse changes in vital signs and laboratory parameters, and incidence of binding and inhibitory antibodies to ADAMTS-13
Status	• Study start date: October 2017 • Estimated primary completion date: FY22	• Study start date: October 2019	• Study start date: October 2019

TAK-611: *RHASA[1] ENZYME REPLACEMENT THERAPY FOR MLD, INTRATHECAL (IT)*

Study	NCT01887938	NCT03771898
Indication	Treatment of patients with motor symptoms in Metachromatic Leukodystrophy (MLD)	Treatment of patients with motor symptoms in Metachromatic Leukodystrophy (MLD)
Phase	**Phase I/II Extension Trial (Of HGT-MLD-070)**	**Registration Enabling Phase IIb**
# of Patients	N = 23	N = 42
Target Patients	Children with Metachromatic Leukodystrophy (MLD)	Late Infantile Metachromatic Leukodystrophy (MLD)
Arms/Intervention	Open Label with 4 Cohorts: • Cohort 1 – 10 mg dose level • Cohort 2 – 30 mg dose level • Cohort 3 – 100 mg dose level • Cohort 4 – 100 mg dose level (Process B)	Open Label with 6 Groups: • Group A - GMFC-MLD level of 1 or 2 • Group B - GMFC-MLD level of 3 • Group C - GMFC-MLD level of 4 • Group D - younger siblings of enrolled subjects, and have the same ASA allelic constitution • Group E - GMFC-MLD level of 1 or 2 (≥12 to <18 mons of age) • Group F - GMFC-MLD level of 5 or 6
Primary endpoint and key secondary endpoint(s)	Primary - Safety will be measured by the following endpoints: • Reporting of treatment-emergent adverse events (TEAEs) • Change from baseline in clinical laboratory testing (serum chemistry including liver function tests, hematology, and urinalysis) • Change from baseline in vital signs, physical examinations, and CSF chemistry (including cell counts, glucose, albumin, and protein) • Determination of the presence of anti-HGT-1110 antibodies in CSF and/or serum	Primary - The primary efficacy endpoint is response in Group A, defined as maintenance of gross motor function at 2 years (Week 106), evaluated as no greater than 2 levels decline from baseline in GMFC-MLD. If suitable controls cannot be matched despite the sponsor's best efforts, change from baseline results of GMFC-MLD at Week 106 may be compared with a prespecified objective threshold to evaluate primary efficacy for this study.
Status	• Study start date: May 2013	• Study start date: May 2019 • Estimated primary completion date: FY22

1. rhASA = recombinant human arylsulfatase A

TAK-609: *CNS REPLACEMENT OF THE DEFICIENT-IDS[1] ENZYME, INTRATHECAL (IT)*

Study	NCT01506141	NCT02412787
Indication	Hunter Syndrome with Cognitive Impairment	Hunter Syndrome with Cognitive Impairment
Phase	**Phase I/II** **HGT-HIT-045**	**Phase II/III** **HGT-HIT-094**
# of Patients	N = 14	N = 56
Target Patients	Pediatric participants that completed HGT-HIT-045 with Hunter syndrome and cognitive Impairment	Pediatric participants that completed study HGT-HIT-094 to continue receiving Elaprase treatment in conjunction with IdS IT or to continue receiving Elaprase treatment and begin concurrent IT treatment for those that did not receive IdS IT treatment in study HGT-HIT–094.
Arms/Intervention	All participants will receive Idursulfase-IT once monthly at the dose used in study HGT-HIT-045 via intrathecal drug delivery device (IDDD).	All 56 participants will receive 10 mg of IdS IT once every 28 days. Participants who are younger than 3 years of age will receive an adjusted dose of 7.5 mg (>8 months to 30 months of age) and 10 mg (>30 months to 3 years of age).
Primary endpoint and key secondary endpoint(s)	Extension study of HGT-HIT-045 evaluating long-term safety and clinical outcomes of intrathecal idursulfase in conjunction with intravenous Elaprase	An open label extension of study HGT-HIT-094 evaluating long term safety and clinical outcomes of intrathecal idursulfase administered in conjunction with Elaprase
Status	• Study start date: August 2010, recruitment completed Publication: • Muenzer J, et al. *Genet. Med.* 2016 Jan; 18(1):73-81.	• Study start date: October 2015, recruitment completed

 1. IdS = iduronate-2-sulfatase

MEZAGITAMAB (TAK-079): *ANTI-CD38 ANTIBODY*

Study	NCT04278924	NCT04159805
Indication	Persistent/Chronic Primary Immune Thrombocytopenia (ITP)	Myasthenia Gravis
Phase	**Phase II**	**Phase II**
# of Patients	N = 54	N = 36
Target Patients	Patients ≥18 years of age with persistent/chronic primary ITP	Patients ≥18 years of age with generalized Myasthenia Gravis

Arms/Intervention	• Part A: 2 dose groups and placebo added to stable background therapy
	  • Arm A1: Matching placebo (n = 12 patients)
	  • Arm A2: TAK-079 100 mg (n = 12 patients)
	  • Arm A3: TAK-079 300 mg (n = 12 patients)
	• Part B: Following interim analysis. 1 dose group and placebo (600 mg) added to stable, standard background therapy.
	  • Arm B1: Matching placebo (n = 6 patients)
	  • Arm B2: TAK-079 600 mg (n = 12 patients)
		• 2 dose groups and placebo added to stable background therapy
		  • TAK-079 300 mg (n = 12 patients)
		  • TAK-079 600 mg (n = 12 patients)
		  • Matching placebo (n = 12 patients)

Primary endpoint and key secondary endpoint(s)	The primary endpoint is the percentage of patients with TEAEs including Grade 3 or higher events, SAEs, and AEs leading to TAK-079 discontinuation.	The primary endpoint is the percentage of patients with TEAEs including Grade 3 or higher events, SAEs, and AEs leading to TAK-079 discontinuation.
Status	• Estimated study start date: Late FY2020	Study start date: January 2020

MECASERMIN RINFABATE (TAK-607): *REPLENISHES INSULIN LIKE GROWTH FACTOR-1, IV*

Study	NCT03253263
Indication	Disease Complications of Extremely Premature Infants
Phase	**Phase IIb**
# of Patients	N = 477
Target Patients	Extremely premature infants (birth>23 weeks to < 28 weeks of gestational age)
Arms/Intervention	3 Arms 1:1:1 Ratio • ~159 subjects randomized to continuous IV infusion of SHP607 250 µg/kg/24 hours • ~159 subjects randomized toto continuous IV infusion of SHP607 400 µg/kg/24 hours • ~159 subjects randomized to standard neonatal care
Primary endpoint and key secondary endpoint(s)	Time to final weaning off respiratory technology support (RTS) from Day 1 (i.e., randomization) through 12 months corrected age (CA)
Status	• Study start date: May 2019

OBIZUR (TAK-672): *RECOMBINANT ANTIHEMOPHILIC FACTOR, PORCINE SEQUENCE*

Study	NCT02895945
Indication	Congenital Hemophilia A with Inhibitors (CHAWI) patients who are undergoing major or minor elective surgical, dental, or other invasive procedures
Phase	**Phase III**
# of Patients	N = 12
Target Patients	CHAWI patients
Arms/Intervention	• Single arm study with individualized loading and subsequent dosing
Primary endpoint and key secondary endpoint(s)	• Primary endpoint: Global Hemostatic Efficacy Assessment Score • Secondary endpoints: Blood loss, blood transfusions, and bleeding episodes
Status	• Study start date: May 2017

OVERVIEW OF CLINICAL TRIAL SUMMARY

- ONCOLOGY
- RARE GENETIC & HEMATOLOGY
- PLASMA-DERIVED THERAPIES
- **NEUROSCIENCE**
- VACCINES
- GASTROENTEROLOGY (GI)

TAK-994: *OREXIN 2R AGONIST, ORAL*

Study	NCT04096560	NCT04551079
Indication	Narcolepsy with or without cataplexy (NT1 or NT2)	Acute sleep phase delay paradigm in healthy male participants
Phase	**Phase II** **SPARKLE-1501**	**Phase I**
# of Patients	N = up to 202	N = 18
Target Patients	Patients with Narcolepsy Type 1 (with cataplexy, NT1) or Narcolepsy Type 2 (without cataplexy, NT2)	Healthy male participants
Arms/Intervention	• **Part A:** Patients with NT1 treated for 28 days (TAK-994 dose 1 or placebo in 2:1 ratio). Second cohort with dose 2 TBD. • **Part B:** Dose ranging study in NT1 for 56 days (TAK-994 dose 1-3 or placebo in 1:1:1:1 ratio) • **Part C:** China specific cohort in NT1 for 56 days (TAK-994 or placebo in 2:1 ratio) • **Part D:** Patients with NT2 treated for 28 days (TAK-994 or placebo in 2:1 ratio). Second cohort with dose 2 TBD.	Randomization to 1 of 3 treatment sequences with a washout period of at least 7 days in between each treatment period: • TAK-994 Dose A, Placebo, and TAK-994 Dose B • TAK-994 Dose B, TAK-994 Dose A, and Placebo • Placebo, TAK-994 Dose B, and TAK-994 Dose A
Primary endpoint and key secondary endpoint(s)	• Maintenance of Wakefulness Test (MWT) • Epworth Sleepiness Scale (ESS) • Weekly Cataplexy Rate (WCR)	• Maintenance of Wakefulness Test (MWT) • Safety, PK/PD
Status	• Study start date: July 2020	• Study start date: September 2020

TAK-925: *OREXIN 2R AGONIST, IV*

Study	NCT03332784	NCT03748979
Indication	Narcolepsy type 1	Narcolepsy type 1 and Narcolepsy type 2
Phase	**Phase I**	**Phase I**
# of Patients	N = 58	N = 57
Target Patients	Patients with narcolepsy type 1 and healthy volunteers	Patients with narcolepsy type 1, patients with narcolepsy type 2 and healthy volunteers
Arms/Intervention	• **Part 1:** Healthy participants and healthy elderly participants • **Part 2:** Patients with narcolepsy type 1: TAK-925 5 mg, 11.2 mg, 44.8mg or placebo with cross-over	• **Part A:** Healthy participants • **Part B:** TAK-925 (Dose Levels 11mg, 44mg) vs. placebo in NT1 patients • **Part C:** TAK-925 (Dose Levels 44mg, 112mg) vs. placebo in NT2 patients • **Part A':** TAK-925 (Dose Levels 112mg) in healthy participants.
Primary endpoint and key secondary endpoint(s)	Sleep Latency in Maintenance of Wakefulness Test (MWT) Karolinska Sleepiness Scale (KSS)	Sleep Latency in Maintenance of Wakefulness Test (MWT) Epworth Sleepiness Scale (ESS)
Status	• Study start date: November 2017 • Study primary completion date: September 2018 Publication: https://www.professionalabstracts.com/ws2019/iPlanner/#/presentation/1832	• Study start date: November 2018 • Study primary completion date: October 2019 Publication: https://onlinelibrary.wiley.com/toc/13652869/2020/29/S1

TAK-925: *OREXIN 2R AGONIST, IV*

Study	NCT04091425	NCT04091438
Indication	Excessive Daytime sleepiness in subjects with Obstructive Sleep Apnea	Idiopathic Hypersomnia
Phase	**Phase 1**	**Phase 1**
# of Patients	N = 25	N = 40
Target Patients	Patients with obstructive sleep apnea who are experiencing excessive daytime sleepiness despite adequate use of CPAP	Patients with Idiopathic Hypersomnia (IH)
Arms/Intervention	• 3 period, 3 treatment crossover: TAK-925 High Dose, Low dose and placebo	• 2 period, 2 treatment crossover: TAK-925 and placebo
Primary endpoint and key secondary endpoint(s)	• Maintenance of Wakefulness Test (MWT) • Karolinska Sleepiness Scale (KSS)	• Maintenance of Wakefulness Test (MWT) • Karolinska Sleepiness Scale (KSS) • Safety, PK/PD
Status	• Study start date: November 2019 • Study primary completion date: April 2020 • Results in-house awaiting publication at a future conference	• Study start date: January 2020

SOTICLESTAT (TAK-935): *CH24H INHIBITOR, ORAL*

Study	NCT03650452[1]
Indication	Dravet Syndrome (DS) and Lennox–Gastaut syndrome (LGS)
Phase	**Phase II** **ELEKTRA**
# of Patients	N = 141
Target Patients	Pediatric patients between the ages of 2 and < 18 years of age with the diagnosis of DS or LGS demonstrating ≥3 convulsive or ≥4 drop seizures, respectively, per month during the 3 months immediately prior to screening
Arms/Intervention	• 51 DS subjects (1:1 soticlestat:placebo randomization ratio) • And 90 LGS subjects (1:1 soticlestat:placebo randomization ratio)
Primary endpoint and key secondary endpoint(s)	Primary: Percent change from baseline in seizure frequency (convulsive for DS and drop for LGS) Key secondary endpoints: • Clinician's Clinical Global Impression of Severity and Change • Caregiver Global Impression of Change (GI-C) responses • Plasma 24*S*-hydroxycholesterol (24HC) levels • Safety and tolerability endpoints
Status	• Study start date: August 2018 • Study completion date: July 2020 • Press release August 25, 2020: https://www.takeda.com/newsroom/newsreleases/2020/phase-2-elektra-study-of-soticlestat-tak-935ov935-meets-primary-endpoint-reducing-seizure-frequency-in-children-with-dravet-syndrome-or-lennox-gastaut-syndrome/

 1. In collaboration with Ovid Therapeutics Inc.

WVE-120101/120102: *MHTT ASO*

Study	NCT03225833[1]	NCT03225846[1]
Indication	Huntington's Disease	Huntington's Disease
Phase	**Phase I/II** **PRECISION-HD1**	**Phase I/II** **PRECISION-HD2**
# of Patients	N = 60	N = 60
Target Patients	Adult patients with early manifest Huntington's disease (HD) who carry a targeted single nucleotide polymorphism (SNP) rs362307 (SNP1)	Adult patients with early manifest Huntington's disease (HD) who carry a targeted single nucleotide polymorphism (SNP) rs362331 (SNP2)
Arms/Intervention	• WVE-120101 (2 mg) or placebo • WVE-120101 (4 mg) or placebo • WVE-120101 (8 mg) or placebo • WVE-120101 (16 mg) or placebo • WVE-120101 (32 mg) or placebo	• WVE-120102 (2 mg) or placebo • WVE-120102 (4 mg) or placebo • WVE-120102 (8 mg) or placebo • WVE-120102 (16 mg) or placebo • WVE-120102 (32 mg) or placebo
Primary endpoint and key secondary endpoint(s)	Primary outcome: Safety Secondary: • Pharmacokinetics (PK), Pharmacodynamics (PD) of single and multiple doses (Concentration of mutant huntingtin (mHTT) protein in CSF) • Clinical effect: Total Functional Capacity (TFC) Other outcome measures: UHDRS, short Problems Behavior Assessment (PBA-s), magnetic resonance Imaging	Primary outcome: Safety Secondary: • Pharmacokinetics (PK), Pharmacodynamics (PD) of single and multiple doses (Concentration of mutant huntingtin (mHTT) protein in CSF) • Clinical effect: Total Functional Capacity (TFC) Other outcome measures: UHDRS, short Problems Behavior Assessment (PBA-s), magnetic resonance Imaging
Status	Study start date: July 2017	Study start date: July 2017

 1. Trial managed by Wave Life Sciences

TAK-341[1]: *ALPHA-SYNUCLEIN ANTIBODY, IV*

Study	NCT03272165	NCT04449484
Indication	Parkinson's Disease	Parkinson's Disease
Phase	**Phase I**	**Phase I**
# of Patients	N = 48	N = 36
Target Patients	Healthy volunteers	Patients with Parkinson's Disease
Arms/Intervention	• TAK-341 (MEDI1341) IV at a single ascending dose • Placebo IV	Three cohorts of 12 patients treated over 8 weeks with three 60 minute IV infusions • Dose A of TAK-341/MEDI1341 over 8 weeks, with 4 weeks intervals • Dose A of TAK-341/MEDI1341 over 8 weeks, with 4 weeks intervals • Matched placebo over 8 weeks, with 4 weeks intervals
Primary endpoint and key secondary endpoint(s)	• Safety and tolerability • Secondary endpoint: PK and PD (alpha-synuclein concentrations in plasma and CSF)	• Safety and tolerability
Status	• Study start date: October 2017	• Study start date: August 2020

 1. Trials managed by AstraZeneca

OVERVIEW OF CLINICAL TRIAL SUMMARY

- ONCOLOGY
- RARE GENETIC & HEMATOLOGY
- PLASMA-DERIVED THERAPIES
- NEUROSCIENCE
- VACCINES
- **GASTROENTEROLOGY (GI)**

ENTYVIO (VEDOLIZUMAB): *GUT-SELECTIVE ANTI-α4β7 INTEGRIN MAB*

Study	NCT03657160	NCT02620046
Indication	Graft-versus-Host Disease (GvHD) prophylaxis IV	Ulcerative Colitis (UC) or Crohn's disease (CD) subcutaneous (SC)
Phase	**Phase III**	**Phase III**
# of Patients	N = 558	N = 692
Target Patients	Patients undergoing allogeneic hematopoietic stem cell transplantation (Allo-HSCT) in the prophylaxis of intestinal acute GvHD (aGvHD)	Patients with UC or CD who received vedolizumab SC in a prior vedolizumab SC study – long-term open-label extension
Arms/Intervention	• **Arm 1:** Vedolizumab 300 mg at Days -1 (baseline), +13, +41, +69, +97, +125, and +153 • **Arm 2:** Placebo at Days -1 (baseline), +13, +41, +69, +97, +125, and +153	• **Group A:** Vedolizumab SC 108 mg Q2W - patients from studies VISIBLE 1 (NCT02611830) and VISIBLE 2 (NCT02611817) who completed the Maintenance Period (Week 52) or were not randomized into Maintenance Period and achieved response at Week 14 after having received a third vedolizumab IV infusion at Week 6 • **Group B:** Vedolizumab SC 108 mg QW - patients from studies VISIBLE 1 and VISIBLE 2 who withdrew early from the Maintenance Period due to treatment failure or patients from current study who enrolled on Q2W dosing but experienced treatment failure while on study and were dose escalated to QW dosing.
Primary endpoint and key secondary endpoint(s)	Intestinal aGvHD-free survival by Day +180 after Allo-HSCT	Percentage of participants with study drug related treatment emergent adverse events (AEs) and serious AEs Key secondary endpoints: long term clinical response and remission rates for UC and CD
Status	• Study start date: February 2019 • Estimated primary completion date: FY22	• Study start date: April 2016

ENTYVIO (VEDOLIZUMAB): *GUT-SELECTIVE ANTI-α4β7 INTEGRIN MAB*

Study	NCT03196427
Indication	Ulcerative Colitis or Crohn's disease in pediatric patients IV
Phase	**Phase II (Long-term safety study)**
# of Patients	N = 90
Target Patients	Pediatric patients with Ulcerative Colitis or Crohn's disease between 2 to 17 years old at the time of randomization for Study NCT03138655.
Arms/Intervention	• **Arm 1** (≥30 kg weight cohort): Vedolizumab 300 mg or 200 mg (Q8W) • **Arm 2** (<30 kg weight cohort): Vedolizumab 150 mg or 100 mg (Q8W)
Primary endpoint and key secondary endpoint(s)	Percentage of participants with Treatment-Emergent Adverse Events (TEAEs)
Status	• Phase 2 start date: July 2018 • Study completion date: May 2020 • Pediatric Phase 3 to start 2021

ALOFISEL/CX601 (DARVADSTROCEL): *ALLOGENEIC EXPANDED ADIPOSE-DERIVED STEM CELLS (ASC)*

Study	NCT03279081
Indication	Complex perianal fistula(s) in patients with Crohn's disease
Phase	**Phase III** **ADMIRE-CD II**
# of Patients	N = 554
Target Patients	Patients with Crohn's disease who have complex perianal fistula(s), previously treated and have shown an inadequate response to immunosuppressants, anti TNF, ustekinumab
Arms/Intervention	• Arm 1: Cx601, adult allogeneic expanded adipose-derived stem cells (eASC 120 million cells (5 million cells per milliliter)) administered once by intralesional injection • Arm 2: Placebo-matching eASCs cells administered once by intralesional administration
Primary endpoint and key secondary endpoint(s)	**Primary: Combined Remission, defined as:** • The clinical assessment of closure of all treated external openings at week 24, and • Absence of collections >2 cm (in at least 2 dimensions) confirmed by blinded central MRI assessment at Week 24. **Key Secondary:** • Clinical Remission at weeks 24 and 52 • Time to Clinical Remission at weeks 24 and 52
Status	• Study start date: September 2017 • Estimated primary completion date: FY22

VONOPRAZAN: *POTASSIUM-COMPETITIVE ACID BLOCKER, ORAL*

Study	NCT04198363
Indication	Acid related disease (adjunct to Helicobacter pylori eradication)
Phase	**Phase III** **China**
# of Patients	N = 510
Target Patients	Helicobacter pylori (HP)-positive participants who require HP eradication
Arms/Intervention	• Experimental: Vonoprazan 20 mg in combination with bismuth containing quadruple therapy • Active Comparator: Esomeprazole 20 mg in combination with bismuth containing quadruple therapy
Primary endpoint and key secondary endpoint(s)	Percentage of Helicobacter pylori positive (HP+) participants with successful HP eradication at week 4 post-treatment
Status	• Study start date: April 2020 • Estimated primary completion date: FY21

TAK-721: *GLUCOCORTICOSTEROID, ORAL*

Study	NCT03245840
Indication	Eosinophilic Esophagitis (EoE)
Phase	**Phase III**
# of Patients	N = 133
Target Patients	Subjects with EoE who have completed participation in both the SHP621-301 and SHP621-302 studies – extension study
Arms/Intervention	Open Label Study: • Budesonide oral suspension (BOS) (0.2 milligrams/mL) 2mg twice daily
Primary endpoint and key secondary endpoint(s)	To evaluate the long term safety and tolerability of budesonide oral suspension ・# of participants with treatment-emergent adverse events (TEAEs) ・# of participants with clinically relevant changes in physical examinations, vital signs and clinical laboratory assessments ・Change from baseline in bone mineral density (BMD) for adolescents assessed by dual-energy x-ray absorptiometry (DXA) scan ・Change from baseline in adrenocorticotropic hormone (ACTH) stimulation level
Status	• Study start date: October 2017

TAK-951: *PEPTIDE AGONIST, SC*

Study	NCT04486950	NCT04557189
Indication	Nausea & Vomiting	Nausea & Vomiting
Phase	**Phase I**	**Phase IIa**
# of Patients	N = 40	N = 100
Target Patients	Healthy participants	Surgical patients under general anesthesia with 3 or more Apfel risk factors
Arms/Intervention	• Cohort 1: TAK-951 20 mcg or matching placebo infusion (intravenous (IV)) over 60 minutes • Cohort 2: TAK-951 (dose TBD) or matching placebo infusion (IV) over 60 minutes • Cohort 3: TAK-951 (dose TBD) or matching placebo infusion (IV) < 60 minutes	• **Group A:** Ondansetron placebo-matching intravenous (IV) injection, once immediately before induction of anesthesia and prophylaxis followed by TAK-951 4 mg subcutaneous (SC) injection once 30 to 45 mins before the end of surgery; • **Group B:** Ondansetron IV 4 mg once immediately before induction of anesthesia followed by TAK-951 placebo-matching injection SC administered 30 to 45 minutes before the end of surgery
Primary endpoint and key secondary endpoint(s)	Safety and tolerability of IV administered TAK-951 in healthy participants	Complete response in the immediate postoperative period (time frame: 6 hours post surgery) Percentage of participants with complete response, defined as no emesis (vomiting or retching) and no need for rescue therapy (indicated if vomiting/retching and/or nausea score ≥4 or upon participant's request), will be reported. The severity of nausea will be scored using a self-reported, 11-point numerical Verbal Rating Scale (VRS), where 0 represents "no nausea" and 10 represents the "worst nausea possible." Significant nausea is defined as a VRS score ≥4
Status	• Study start date: July 2020	• Study start date: October 2020

TAK-906: *DOPAMINE D2/D3 RECEPTOR ANTAGONIST, ORAL*

Study	NCT03544229
Indication	Gastroparesis
Phase	**Phase II**
# of Patients	N = 205
Target Patients	Patients who have symptomatic idiopathic or diabetic gastroparesis.
Arms/Intervention	• TAK-906 5 mg capsule BID: approximately 25 subjects prior to discontinuation of randomization into this dose arm • TAK-906 25 mg capsule BID: n = 60 • TAK-906 50 mg capsule BID: n = 60 • Placebo capsule BID: n = 60
Primary endpoint and key secondary endpoint(s)	To assess the efficacy of treatment with 2 dose levels of TAK-906 in adult subjects with gastroparesis compared with placebo during 12 weeks of treatment
Status	• Study start date: October 2018

TAK-954: *5-HT4-HYDROXYTRYPTAMINE RECEPTOR AGONIST, IV*

Study	NCT03827655
Indication	Post-Operative Gastrointestinal Dysfunction (POGD)
Phase	**Phase II**
# of Patients	N = 180
Target Patients	Participant is scheduled to undergo a laparoscopic-assisted or open partial small- or large-bowel resection.
Arms/Intervention	• Regimen 1: Placebo (NS 100 mL infusion over 60 minutes) pre-operation and daily post-operation until return of upper and lower GI function (ie, resolution of POGD) or for up to 10 days. • Regimen 2: TAK-954 (0.1 mg/100 mL infusion over 60 minutes) pre-operation and daily post-operation until return of upper and lower GI function or for up to 10 days. • Regimen 3: TAK-954 (0.5 mg/100 mL infusion over 60 minutes) pre-operation and daily post-operation until return of upper and lower GI function or for up to 10 days. • Regimen 4: TAK-954 (0.1 mg/100 mL infusion over 60 minutes) pre-operation and daily placebo infusions post-operation until return of upper and lower GI function or for up to 10 days. • Regimen 5: TAK-954 (0.5 mg/100 mL infusion over 60 minutes) pre-operation and daily placebo infusions post-operation until return of upper and lower GI function or for up to 10 days.
Primary endpoint and key secondary endpoint(s)	To assess the efficacy and safety of intravenous (IV) TAK-954 for accelerating the recovery of GI function post-surgery in patients undergoing open or laparoscopic-assisted partial small- or large-bowel resection.
Status	• Study start date: March 2018

SIBOFIMLOC (TAK-018): *FIMH ANTAGONIST, ORAL*

Study	NCT03943446
Indication	Prevention of the Recurrence of Postoperative Crohn's Disease (CD)
Phase	**Phase II**
# of Patients	N = 96
Target Patients	Documented diagnosis of CD confirmed by endoscopic biopsy before resection or by tissue obtained at resection.
Arms/Intervention	• Cohort 1: TAK-018 0.30 g Low Dose BID for up to 26 weeks • Cohort 2: TAK-018 1.5 g High Dose BID for up to 26 weeks • Placebo
Primary endpoint and key secondary endpoint(s)	% of participants with endoscopic recurrence of CD as assessed by Rutgeerts Grading Scale at Week 26
Status	• Study start date: August 2020

OVERVIEW OF CLINICAL TRIAL SUMMARY

- ONCOLOGY
- RARE GENETIC & HEMATOLOGY
- **PLASMA-DERIVED THERAPIES**
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- GASTROENTEROLOGY (GI)

HYQVIA (TAK-771): *IVIG WITH RECOMBINANT HUMAN HYALURONIDASE, SC*

PDT

Study	NCT02549170	NCT02955355
Indication	Chronic Inflammatory Demyelinating Polyradiculoneuropathy (CIDP)	Chronic Inflammatory Demyelinating Polyradiculoneuropathy (CIDP)
Phase	**Phase III**	**Phase III**
# of Patients	N = 174	N = 120
Target Patients	Adult subjects with a confirmed diagnosis of CIDP and who have remained on a stable dosing regimen of IV immunoglobulin G (IGIV) therapy for at least 12 weeks prior to screening.	Adult subjects who have completed Epoch 1 of Study NCT02549170 without CIDP worsening.
Arms/Intervention	• Epoch 1: SC Treatment Period – Double blind assignment of HYQVIA/HyQvia or 0.25% albumin placebo solution with rHuPH20 6 months or until relapse. • Epoch 2: IV Treatment Period - Open-label phase providing IGIV for subjects who meet relapse criteria during Epoch 1.	• Subjects remain on same dosing regimen they were administered in Epoch 1 of study 161403 (1 to 2 g/kg body weight every 4 weeks). The first infusion will be at the subject's full dose; there will be no ramp-up of dose.
Primary endpoint and key secondary endpoint(s)	To evaluate the efficacy of HYQVIA/HyQvia as a maintenance therapy for CIDP to prevent relapse of neuromuscular disability and impairment. Safety and tolerability.	To evaluate the long-term safety, tolerability, and immunogenicity of HYQVIA/HyQvia.
Status	• Study start date: April 2016 • Estimated primary completion date: FY21/22	• Study start date: December 2016

HYQVIA (TAK-771): *IVIG WITH RECOMBINANT HUMAN HYALURONIDASE, SC*

PDT

Study	NCT03277313	NCT03116347
Indication	Primary Immunodeficiency Diseases (PIDD)	Primary Immunodeficiency Diseases (PIDD)
Phase	**Phase III**	**Phase IV**
# of Patients	N = 44	N = 42
Target Patients	Pediatric subjects with primary immunodeficiency diseases in the US	Pediatric subjects with primary immunodeficiency diseases in the EU

Arms/Intervention	Single-Group:
	• Epoch 1: HyQvia SC dose and ramp up for all patients; up to 6 weeks duration; patients were previously treated with IVIG or other SC immunoglobulin
	• Epoch 2: HYQVIA treatment (final dosing); 1-3 years
	  • For IV-pre-treated subjects: every three or four weeks, depending on the subject's previous IV dosing schedule.
	  • For SC-pre-treated subjects: every three or four weeks, at the discretion of investigator and subject.
	• Epoch 3: Safety Follow-Up: up to 1 year, if needed
		Single-Group:
		• Epoch 1: HyQvia SC dose and ramp up for patients previously not treated with HyQvia
		• Epoch 2: HyQvia dose once every three or four weeks
		  • For IV-pretreated subjects: every three or four weeks, depending on the subject's previous IV dosing schedule.
		  • For SC-pretreated subjects: every three or four weeks, at the discretion of investigator and subject
		  • For HyQvia pre-treated subjects: No change in frequency of administration
		• Epoch 3: Safety Follow-Up: up to 1 year, if needed

Primary endpoint and key secondary endpoint(s)	Primary: Efficacy - rate of acute serious bacterial infections per participant per year. Secondary: Safety, tolerability, immunogenicity, efficacy, PK, health-related Quality of Life.	Primary: Safety Secondary: Tolerability, immunogenicity, efficacy, health-related Quality of Life.
Status	• Study start date: September 2017 • Estimated primary completion date: FY23	• Study start date: June 2017 • Estimated primary completion date: FY23

GLASSIA (TAK-670): *HUMAN ALPHA1-PROTEINASE INHIBITOR, IV*

Study	NCT02525861
Indication	Chronic augmentation and maintenance therapy in adults with clinically evident emphysema due to severe congenital deficiency of Alpha1-Proteinase Inhibitor (A1PI)
Phase	**Phase III/IV**
# of Patients	N = 36
Target Patients	A1PI deficient subjects
Arms/Intervention	• Arm 1: GLASSIA lot with particle loads representing the high end within the normal range observed in GLASSIA lots manufactured • Arm 2: GLASSIA lot with particle loads representing the low end within the normal range observed in GLASSIA lots manufactured
Primary endpoint and key secondary endpoint(s)	1. To evaluate the effectiveness of the use of 5-micron in-line filter on the safety and potential immunogenicity of GLASSIA. 2. To determine the effects of weekly IV augmentation therapy with GLASSIA at a dosage of 60 mg/kg BW on antigenic and functional A1PI levels in epithelial lining fluid (ELF) in subjects with congenital A1PI deficiency. 3. To collect additional safety information for GLASSIA.
Status	• Study start date: April 2016 • Primary completion date: July 2020

COVIG-19: *ANTI-COVID-19 HYPERIMMUNE INTRAVENOUS GLOBULIN*

Study	NCT04546581[1]
Indication	Treatment of COVID-19 in hospitalized patients with moderate disease
Phase	**Phase III**
# of Patients	N = 500
Target Patients	Adult hospitalized COVID-19 patients with moderate disease with duration of symptoms ≤ 12 days
Arms/Intervention	• Arm A: Hyperimmune globulin to SARS-CoV-2 (hIVIG)[2] single dose of 400 mg/kg body weight, to a maximum dose of 40 g or 400 mL (i.e. capped at a body weight of 100kg) + remdesivir • Arm B: Placebo (normal saline) + remdesivir
Primary endpoint and key secondary endpoint(s)	Primary endpoint: Clinical Status at Day 7 According to a 7-point Ordinal Outcome Scale 7. Death 6. End-organ failure 5. Life-threatening end-organ dysfunction; 4. Serious end-organ dysfunction; 3. Moderate end-organ dysfunction; 2. Limiting symptoms due to COVID-19; 1. No limiting symptoms due to COVID-19 (Outcome is reported as the percent of participants in each of 7 categories) Key secondary endpoints: mortality, adverse events, and days of hospitalization
Status	• Study start date: October 2020 • Estimated primary completion date: Q4FY20

1. Sponsor: The National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health (NIH)
2. Arm A represents hIVIG produced by four manufacturers (Takeda, CSL, Grifols, and Emergent). The hIVIG products will be pooled for the planned efficacy and safety analyses.

OVERVIEW OF CLINICAL TRIAL SUMMARY

- ONCOLOGY
- RARE GENETIC & HEMATOLOGY
- PLASMA-DERIVED THERAPIES
- NEUROSCIENCE
- VACCINES
- GASTROENTEROLOGY (GI)

TAK-003: *LIVE ATTENUATED TETRAVALENT VACCINE FOR PREVENTION OF DENGUE DISEASE*

VBU

Study	NCT02747927
Indication	The prevention of dengue disease caused by any dengue virus serotype in individuals 4 years to 60 years of age
Phase	**Phase III** **Tetravalent Immunization against Dengue Efficacy Study (TIDES)**
# of Patients	N = 20,100
Target Patients	Healthy children aged 4 to 16-year-old in dengue-endemic countries in Latin America and Asia
Arms/Intervention	• Randomized 2:1 to receive either TAK-003 or placebo on Day 1 and Day 90

Primary endpoint and key secondary endpoint(s)	• Efficacy: Onset of protection 30 days post 2nd dose in all (seronegative and seropositive)
	  • Primary endpoint: ≥70% efficacy against all symptomatic dengue fever caused by any strain
	  • Secondary endpoints:
	  – ≥70% efficacy individual strains
	  – ≥60% efficacy in seronegatives
	• Safety:
	  • Comparable to other live attenuated viral vaccines (e.g. MMR, YF, Varicella)
	  • No disease enhancement in partially protected individuals

Status	• Study start date: September 2016 • Primary completion date: July 2018 • Estimated completion date: FY24/25 (following booster evaluation) • 24 month data presented November 2020 at American Society of Tropical Medicine and Hygiene Annual Meeting Publication: • Biswal S, et al. *N Engl J Med.* 2019; 381:2009-2019. • Biswal S, et al. Lancet. 2020; 395(10234):1423-1433.

TAK-214: *NOROVIRUS GI.1/GII.4 BIVALENT VIRUS-LIKE PARTICLE VACCINE*

VBU

Study	NCT02669121	NCT03039790
Indication	For active immunization for the prevention of acute gastroenteritis caused by norovirus (NoV)	For active immunization for the prevention of acute gastroenteritis caused by norovirus (NoV)
Phase	**Phase II**	**Phase II**
# of Patients	N = 4176	up to N = 575
Target Patients	Healthy adults (18 to 49 years of age)	Healthy adults >18 years who received at least one dose of NoV GI.1/GII.4 Bivalent Virus-Like Particle Vaccine in previous studies NOR-107, NOR-210 and NOR-204
Arms/Intervention	• Arm 1: NoV 15µg GI.1/50µg GII.4 bivalent virus-like particle (VLP) vaccine, 0.5 mL intramuscularly (IM), once, on Day 1 • Arm 2: NoV vaccine placebo-matching solution (0.9% sodium chloride), 0.5 mL intramuscularly (IM), once, on Day 1	• No NoV vaccine injection administered. • Long-Term Immunogenicity Follow-up Trial of Adult and Elderly Subjects (followed up to 5y post-primary vaccination). • Vaccine formulation according to parent trials.
Primary endpoint and key secondary endpoint(s)	• Primary endpoint: Percentage of Participants with Moderate or Severe Acute Gastroenteritis (AGE) Occurring >7 Days After Dosing Due to GI.1 or GII.4 NoV Strains (excluding Co-infection due to Salmonella, Shigella, or Campylobacter) • Key secondary: Percentage of Participants with Moderate or Severe AGE Occurring >7 Days After Dosing Due to Any NoV Strains (including/excluding Co-infection) and Due to GI.1 or GII.4 NoV Strains (including Co-infection)	• Primary endpoint: Geometric Mean Blocking Titers 50 percent (%) (GMBT50) of Anti-norovirus GI.1 VLP / GII.4 VLP Antibodies as measured by the histo-blood group antigen (HBGA) blocking assay. • Secondary endpoint: Geometric Mean Titers (GMT) of Anti-norovirus GI.1 VLP / GII.4 VLP Antibodies as measured by total immunoglobulin (pan-Ig) enzyme-linked immunoassay (ELISA).
Status	• Study start date: February 2016 • Study primary completion date: June 2018 Publication: • Sherwood J, et al. *Vaccine* 2020; 38(41):6442-6449.	• Study start date: February 2017

TAK-426: *PURIFIED INACTIVATED ZIKA VIRUS VACCINE PIZV*

Study	NCT03343626
Indication	For active immunization for prevention of disease caused by Zika virus (ZIKV)
Phase	**Phase I**
# of Patients	N = 271
Target Patients	Healthy Adult Participants aged 18-49-years of age
Arms/Intervention	• Placebo: TAK-426 placebo-matching injection, intramuscular, once on Days 1 and 29 • Low Dose: PIZV 2 microgram (mcg) (PIZV 0.5 milliliter (mL), 2 mcg antigen, injection, intramuscular, once on Days 1 and 29) • Medium Dose: PIZV 5 mcg (PIZV 0.5 mL, 5 mcg antigen, injection, intramuscular, once on Days 1 and 29) • High Dose: PIZV 10 mcg (PIZV 0.5 mL, 10 mcg antigen, injection, intramuscular, once on Days 1 and 29)
Primary endpoint and key secondary endpoint(s)	Safety, immunogenicity and dose ranging study
Status	• Study start date: November 2017 • Presentation at ASTHM 2019 (Htay Htay Han #215, #1948) • https://www.astmh.org/ASTMH/media/2019-Annual-Meeting/ASTMH-2019-Abstract-Book.pdf

Appendix
Reconciliation Tables, Glossary

DEFINITION OF CORE AND UNDERLYING GROWTH

Takeda uses the concept of Underlying Growth for internal planning and performance evaluation purposes.

Underlying Growth compares two periods (fiscal quarters or years) of financial results under a common basis and is used by management to assess the business. These financial results are calculated on a constant currency basis using a full year plan rate and exclude the impacts of divestitures and other amounts that are unusual, non-recurring items or unrelated to our ongoing operations. Although these are not measures defined by IFRS, Takeda believes Underlying Growth is useful to investors as it provides a consistent measure of our performance.

Takeda uses "**Underlying Revenue Growth**", "**Underlying Core Operating Profit Growth**", and "**Underlying Core EPS Growth**" as key financial metrics.

Underlying Revenue represents revenue on a constant currency basis and excluding non-recurring items and the impact of divestitures that occurred during the reporting periods presented.

Underlying Core Operating Profit represents Core Operating Profit (as defined below) on a constant currency basis and further adjusted to exclude the impacts of divestitures that occurred during the reporting periods presented.

Core Operating Profit represents net profit adjusted to exclude income tax expenses, the share of profit or loss of investments accounted for using the equity method, finance expenses and income, other operating expenses and income, amortization and impairment losses on acquired intangible assets and other items unrelated to Takeda's core operations, such as purchase accounting effects and transaction related costs.

Underlying Core EPS represents net profit based on a constant currency basis, adjusted to exclude the impact of divestitures, items excluded in the calculation of Core Operating Profit, and other non-operating items (e.g. amongst other items, fair value adjustments and the imputed financial charge related to contingent consideration) that are unusual, non-recurring in nature or unrelated to Takeda's ongoing operations and the tax effect of each of the adjustments, divided by the outstanding shares (excluding treasury shares) as of the end of the comparative period.

RECONCILIATION FROM REPORTED TO CORE/UNDERLYING CORE FY2014 FULL YEAR

Billion yen	FY2013	FY2014	Growth
Revenue	**1,691.7**	**1,778.8**	**+5.1%**
Fx effects	6.0	(40.0)	
Divestments	(22.1)	(16.0)	
Underlying Revenue	**1,675.7**	**1,721.9**	**Underlying Growth +2.8%**
Operating Profit	**139.3**	**-129.3**	**—**
Actos one off		274.1	
Amortization of intangibles	119.7	123.8	
Impairment of intangibles	23.1	63.5	
Disposal of unused property	(6.7)	(32.8)	
Restructuring costs	21.7	31.2	
Contingent consideration	5.6	(51.3)	
Litigation costs, etc.	11.6	9.2	
Core Earnings	**314.2**	**288.3**	**-8.2%**
Fx effects	3.0	13.8	
Divestments and other	(16.1)	(7.3)	
Underlying Core Earnings	**301.1**	**294.9**	**Underlying Growth -2.1%**

RECONCILIATION FROM REPORTED TO CORE/UNDERLYING CORE FY2019 FULL YEAR

(BN JPY)	REPORTED	REPORTED TO CORE ADJUSTMENTS							CORE	CORE TO UNDERLYING CORE ADJ.		UNDERLYING CORE
		Amortization & impairment of intangible assets	Other operating income/ expense	Shire acquisition related costs	Shire purchase accounting adjustments	Swiss Tax Reform	Teva JV related accounting adjustments	Others		FX	Divestitures	
Revenue	3,291.2								3,291.2	102.4	-30.5	
Cost of sales	-1,089.8				199.5				-890.3	-27.9	5.0	
Gross Profit	2,201.4				199.5				2,400.9	74.4	-25.5	
SG&A expenses	-964.7			5.5	2.4				-956.8	-29.0		
R&D expenses	-492.4			10.4	0.1				-481.9	-8.9		
Amortization of intangible assets	-412.1	87.0			325.1				—			
Impairment losses on intangible assets	-43.3	43.3							—			
Other operating income	60.2		-46.0				-14.2		—			
Other operating expenses	-248.7		113.3	135.4					—			
Operating profit	100.4	130.3	67.3	151.2	527.1		-14.2		962.2	36.5	-25.5	
Margin	3.1%								29.2%			**28.9%**
Financial income/expenses	-137.2			7.1	14.4			-20.1	-135.7	5.3		
Equity income/loss	-24.0						32.2		8.2	-0.0		
Profit before tax	-60.8	130.3	67.3	158.3	541.6		18.0	-20.1	834.7	41.8	-25.5	
Tax expense	105.0	-31.7	-10.8	-29.2	-98.2	-94.6	-5.5	-67.5	-232.4	-10.0	5.9	
Non-controlling interests	-0.0								-0.0			
Net profit	44.2	98.7	56.5	129.1	443.4	-94.6	12.5	-87.6	602.2	31.8	-19.6	
EPS (yen)	28								387	21	-13	**395**
Number of shares (millions)	1,557								1,557			1,555

 Note: FY2019 Underlying Core results reflect divestiture adjustments applied in FY2019 Underlying calculation which was disclosed on May 13, 2020.

GLOSSARY OF ABBREVIATIONS

Regional Abbreviations:
CN: China; EU: Europe; JP: Japan; US: United States of America

AD	Alzheimer's disease
ADC	antibody drug conjugate
ADHD	attention deficit hyperactivity disorder
AHA	acquired hemophilia A
ALK	anaplastic lymphoma kinase
ALCL	anaplastic large-cell lymphoma
AML	acute myeloid leukemia
ASCT	autologous stem cell transplant
ARD	acid-related diseases
BLA	biologics license application
BBB	blood brain barrier
BMA	bradykinin mediated angioedema
BTK	Bruton's tyrosine kinase
BOS	budesonide oral suspension
CAR-T	Chimeric antigen receptor-T
CD	Crohn's disease
CHAWI	congenital hemophilia A with inhibitors
CIAS	cognitive impairment associated with schizophrenia
CIDP	chronic inflammatory demyelinating polyradiculoneuropathy
CLL	Chronic lymphocytic leukemia
CML	chronic myeloid leukemia
CMML	chronic myelomonocytic leukemia
CMV	Cytomegalovirus
CSF	cerebrospinal fluid
CNS	central nervous system
CPF	Complex perianal fistulas
CRL	complete response letter
CRPS	complex regional pain syndrome
CTCL	cutaneous T-cell lymphoma
cTTP	congenital thrombotic thrombocytopenic purpura
DAAO	D-amino acid oxidase
DEE	developmental and epileptic encephalopathies
DLBCL	diffuse large B-cell lymphoma
DU	duodenal ulcer
Dx	diagnosis
EDS	excessive daytime sleepiness
EE H	erosive esophagitis healing
EE M	erosive esophagitis maintenance
EFI	enteral feeding intolerance
EGFR	epidermal growth factor receptor
EOE	eosinophilic esophagitis
ESCC	esophageal squamous-cell carcinoma
FL	front line
FSI	first subject in
GCC	guanylyl cyclase C
GERD	gastroesophageal reflux disease
GI	gastrointestinal
GnRH	gonadotropin-releasing hormone
GU	gastric ulcer
GvHD	graft versus host disease
HAE	hereditary angioedema
H2H	head to head
HCC	hepatocellular carcinoma
HemA	hemophilia A
HER2	human epidermal growth factor receptor 2
HL	Hodgkin's lymphoma
HR MDS	higher-risk myelodysplastic syndromes
IBD	inflammatory bowel disease
IND	investigational new drug
iNHL	Indolent non-Hodgkin's lymphoma
I/O	immuno-oncology
iTTP	immune thrombotic thrombocytopenic purpura
IV	intravenous
iPSC	induced pluripotent stem cells
L-ASA	low dose aspirin
LBD	Lewy body dementia
LB AML	low-blast acute myeloid leukemia
LSD1	Lysine specific demethylase 1
LCM	lifecycle management
mAb	monoclonal antibody
MAOB	monoamine oxidase B
MG	myesthenia gravis
MLD	metachromatic leukodystrophy
MM	multiple myeloma
NAE	NEDD8 activating enzyme
ND	newly diagnosed
NDA	new drug application
Neg	negative
NERD	non-erosive reflux disease
NHL	non-Hodgkin's lymphoma
NK	natural killer
NME	new molecular entity
NSCLC	non-small cell lung cancer
NSCT	non stem cell transplant
NS	negative symptoms
NT1	Narcolepsy Type 1
ORR	overall response rate
PARP	poly (ADP-ribose) polymerase
PBS	phosphate buffered saline
PCAB	potassium competitive acid blocker
Ph+ ALL	Philadelphia chromosome-positive acute lymphoblastic leukemia
PID	primary immunodeficiency
PK	pharmacokinetics
POC	proof of concept
POGD	post-operative gastrointestinal dysfunction
POI	post-operative ileus
PTCL	peripheral T-cell lymphoma
PTH	parathyroid hormone
R/R	relapsed/refractory
RCC	renal cell cancer
RTK	receptor tyrosine kinase
sALCL	systemic anaplastic large cell lymphoma
SBS	short bowel syndrome
SC	subcutaneous formulation
SCD	sickle cell disease
SCT	stem cell transplant
SCZ	schizophrenia
SID	secondary immunodeficiency
SLE	systemic lupus erythematosus
sq	squamous
STING	stimulator of interferon genes
SUMO	small ubiquitin-related modifier
TESD	treatment emergent sexual dysfunction
TKI	tyrosine kinase inhibitor
TRD	treatment resistant depression
UC	ulcerative colitis
vWD	von Willebrand disease