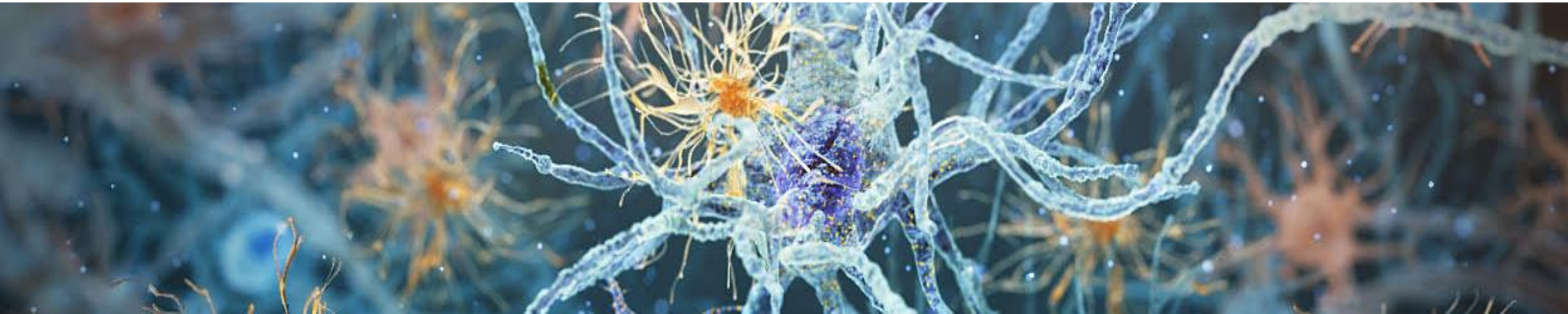
Roche Pharma Day 2020

14 September 2020



Roche Pharma Day 2020

Welcome

Karl Mahler | Head of Investor Relations and Roche Group Planning

Agenda

Welcome
Karl Mahler, Head of Investor Relations and Roche Group Planning

Pharma Strategy: Sustainable growth, more patient benefits, and less cost to society
Bill Anderson, CEO Roche Pharmaceuticals

Commercial Opportunities
Teresa Graham, Head Pharma Global Product Strategy (GPS)

Short break

Late Stage Pipeline Oncology & Non-malignant Hematology
Levi Garraway, Chief Medical Officer and Head Global Product Development

Late Stage Pipeline Neuroscience
Paulo Fontoura, Global Head Neuroscience and Rare Diseases Clinical Development

Late Stage Pipeline Immunology & Ophthalmology
Cristin Hubbard, Head I2O (Immunology, Infectious Diseases, Ophthalmology) GPS

Infectious Diseases: A close look at our HBV pipeline
John Young, Global Head of Infectious Diseases, pRED

Late Stage Infectious Diseases: Influenza & SARS-CoV-2
Cristin Hubbard, Head I2O (Immunology, Infectious Diseases, Ophthalmology) GPS

Q&A

36 Breakthrough Therapy Designations received since 2013

Reflecting the quality of our research

Year	Molecule	Indication
2020	***mosunetuzumab***	*3L+ FL*
	Tecentriq	*unresectable or metastatic ASPS*
	Esbriet	*uILD*
2019	***Gavreto***	*RET fusion-positive NSCLC*
	Gavreto	*RET mutation-positive MTC*
	Cotellic	*Histiocytic neoplasms*
	Gazyva	*Lupus nephritis*
	rhPentraxin-2 (PRM-151)	*IPF*
	Venclexta + Gazyva	*1L unfit CLL*
	Kadcyla	*Adjuvant HER2+ BC*
2018	***SPK-8011***	*Hemophilia A*
	Enspryng	*NMOSD*
	Xolair	*Food allergies*
	Tecentriq + Avastin	*1L HCC*
	Hemlibra	*Hemophilia A non-inhibitors*
	Rozlytrek	*NTRK+ solid tumors*
2017	***Polivy + BR***	*R/R DLBCL*
	Venclexta + LDAC	*1L unfit AML*
	Zelboraf	*BRAF-mutated ECD*
	Rituxan	*Pemphigus vulgaris*

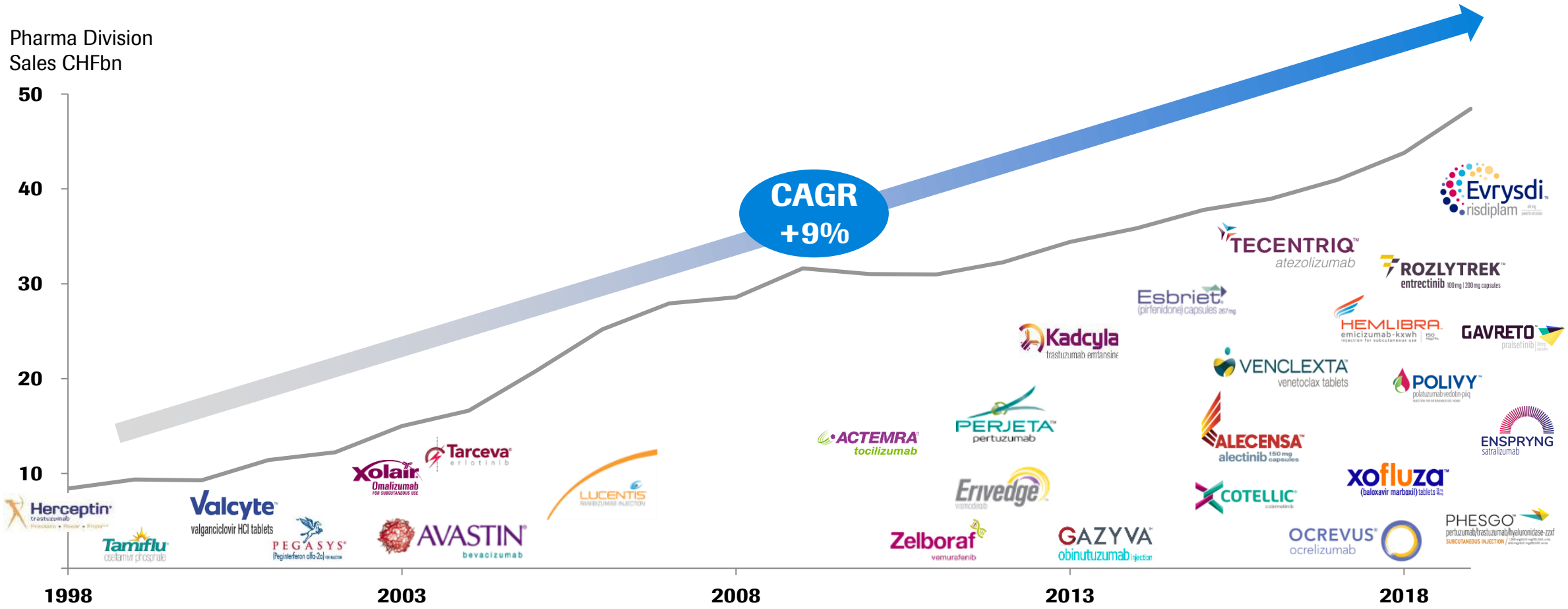
Roche Pharma Day 2020

Pharma Strategy: Sustainable growth, more patient benefits, and less cost to society

Bill Anderson | CEO Roche Pharmaceuticals

Roche has a strong track record of innovation

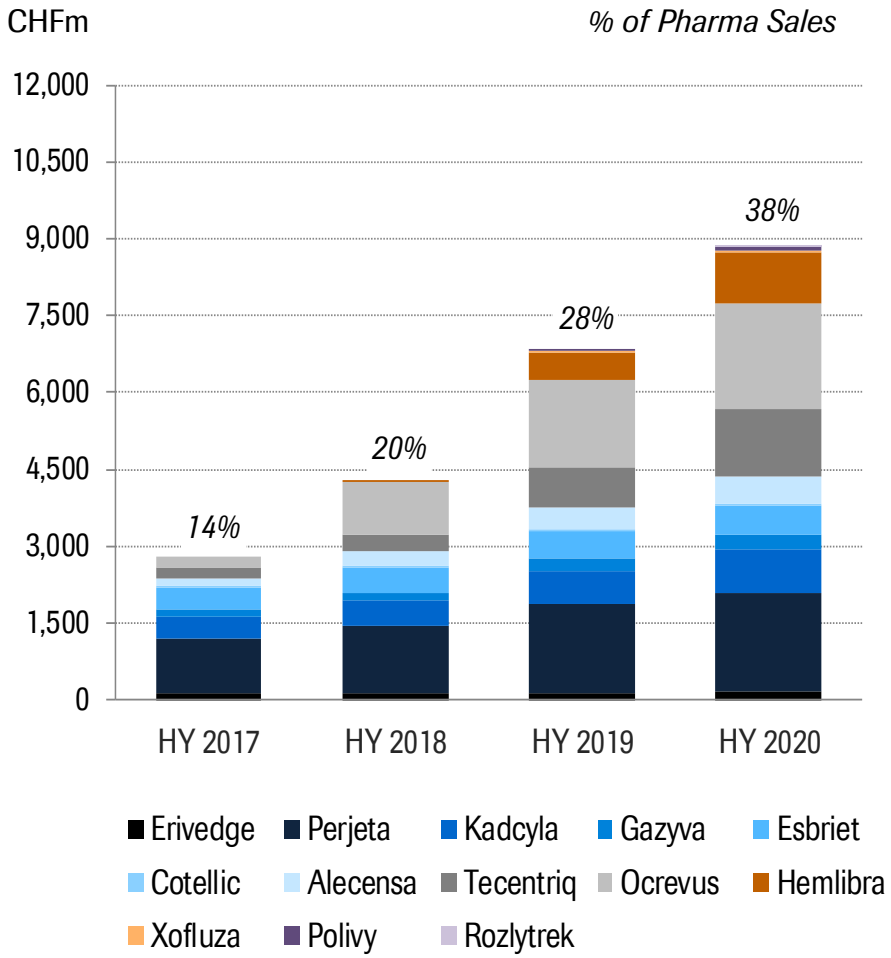
Industry leading medicines as basis for our continuous growth

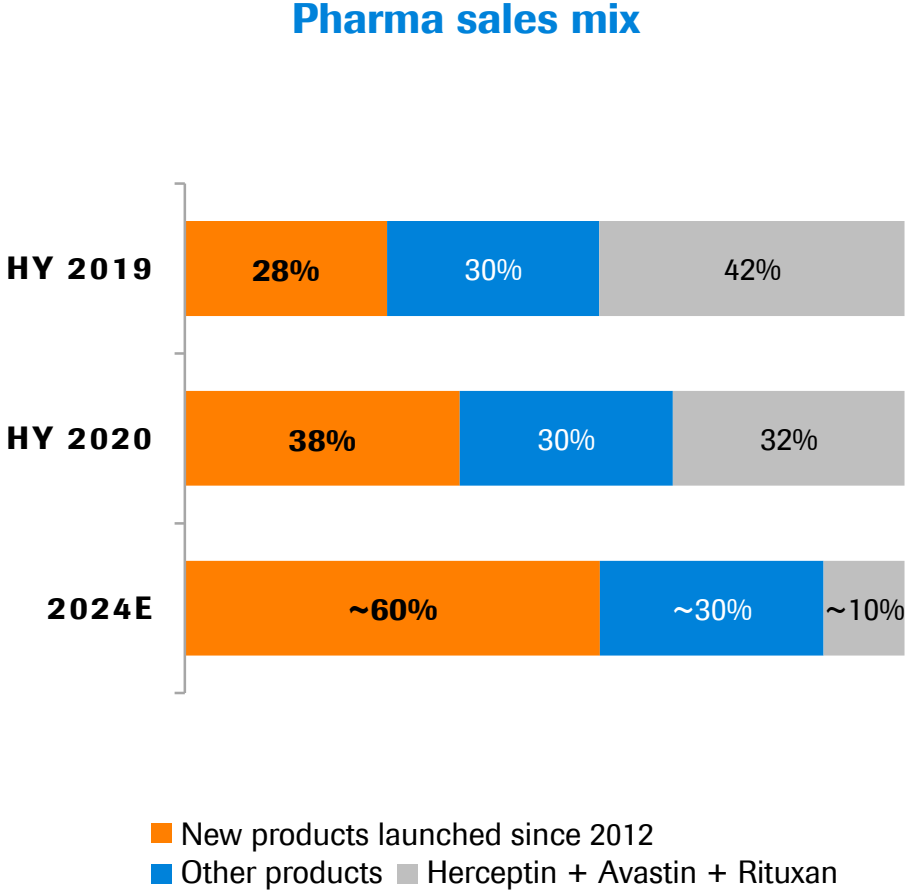


Sales excluding OTC at 2019 average exchange rates; Approved medicines shown do not represent the entire portfolio rather a selection, timeline reflects year of approval

Innovation driving portfolio rejuvenation

Increasing share of sales coming from recent launches



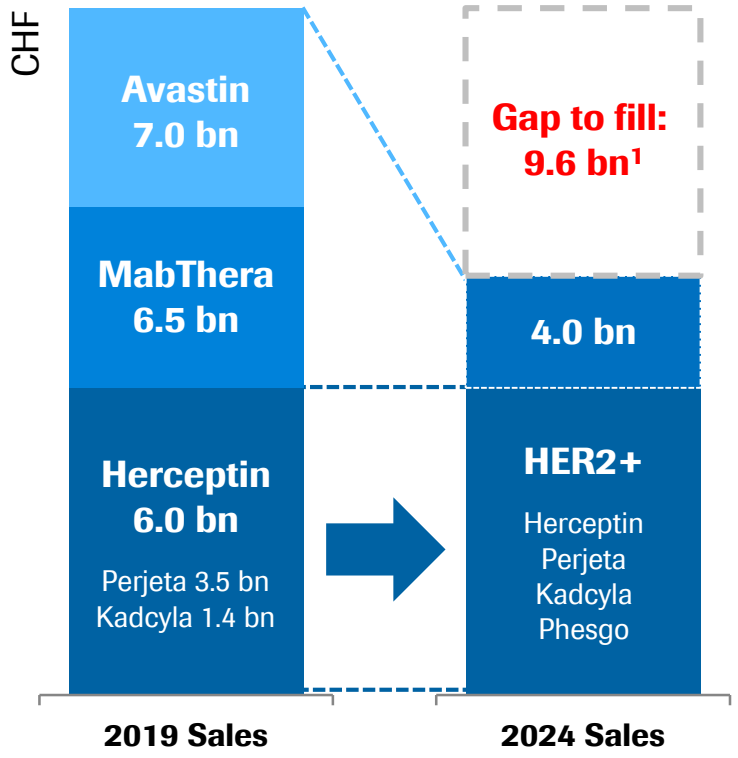


All absolute values are presented in CHFm reported

New product growth with strong momentum
Considerable optionality

Biosimilar gap (19-24)

***Sensitivity analysis**: Assuming conservative planning assumptions of 60-70% erosion from biosimilars*



Consensus sales growth (19-24)

Post-HY 2020 consensus survey

Ocrevus	3.1 bn
Tecentriq	4.1 bn
Hemlibra	3.0 bn
Gazyva	0.7 bn
Alecensa	0.8 bn
Polivy	1.1 bn
Enspryng	0.4 bn
Evrysdi	1.4 bn
Other in-market[2]	(0.3) bn
Pipeline value[3]	3.4 bn
Total	**17.7 bn**

Up-side potential to consensus above are:

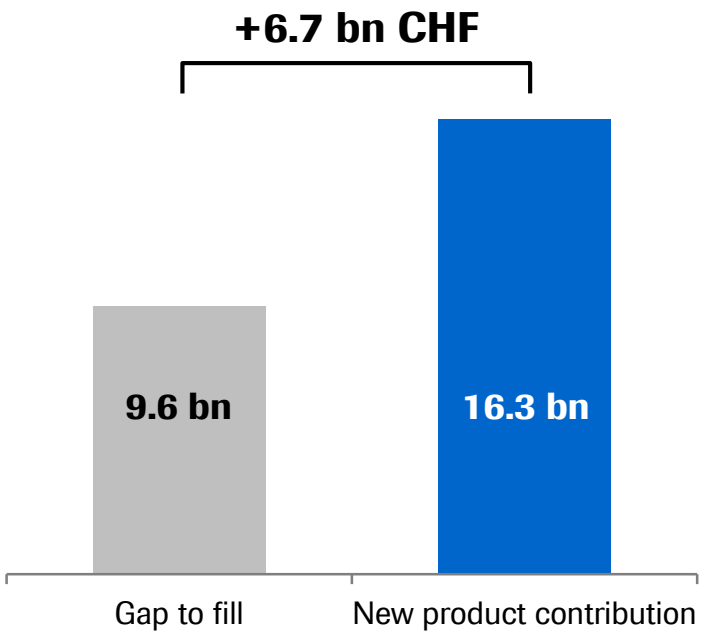
Oncology (Gavreto, mosunetuzumab, PI3Kαi, SERD), **Ophthalmology** (PDS), **Neuroscience** (gantenerumab, prasinezumab, SRP-9001), **Immunology** (Gazyva in lupus, rhPentraxin-2, crovalimab, etrolizumab in CD), **Infectious diseases** (REGN-COV2, chronic HBV)

[1] Gap value including the total HER2+ franchise change from 2019 to 2024; [2] Xolair, Pulmozyme, CellCept, Activase/TNKase, Actemra, Lucentis, Erivedge, Esbriet, Cotellic, Xofluza, Rozlytrek; [3] glofitamab, tiragolumab, ipatasertib, faricimab, tominersen

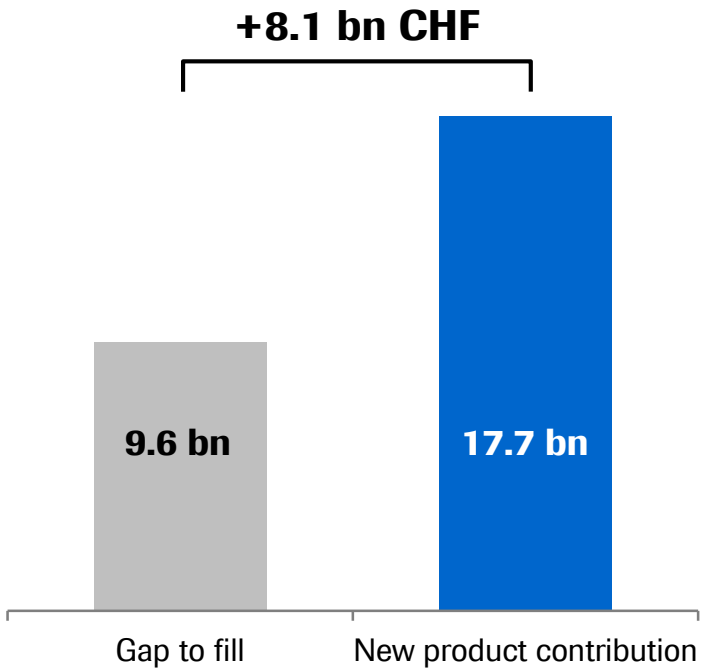
What has changed since our Pharma day a year ago?

Further increased confidence in delivering growth

2018–2023 consensus view[1]



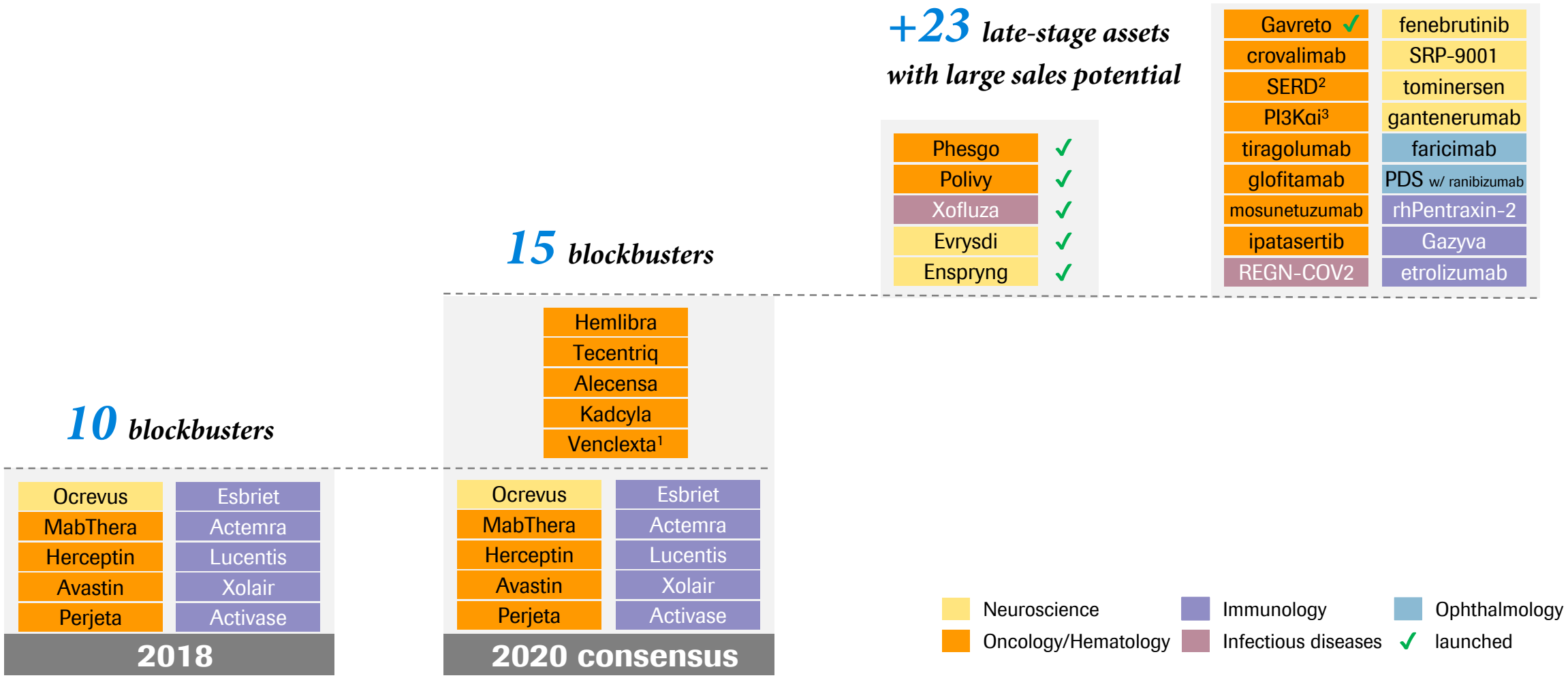
2019–2024 consensus view[2]



Strong new product contribution and ongoing launches driving growth

[1] Roche Post-HY 2019 consensus survey; [2] Roche Post-HY 2020 consensus survey

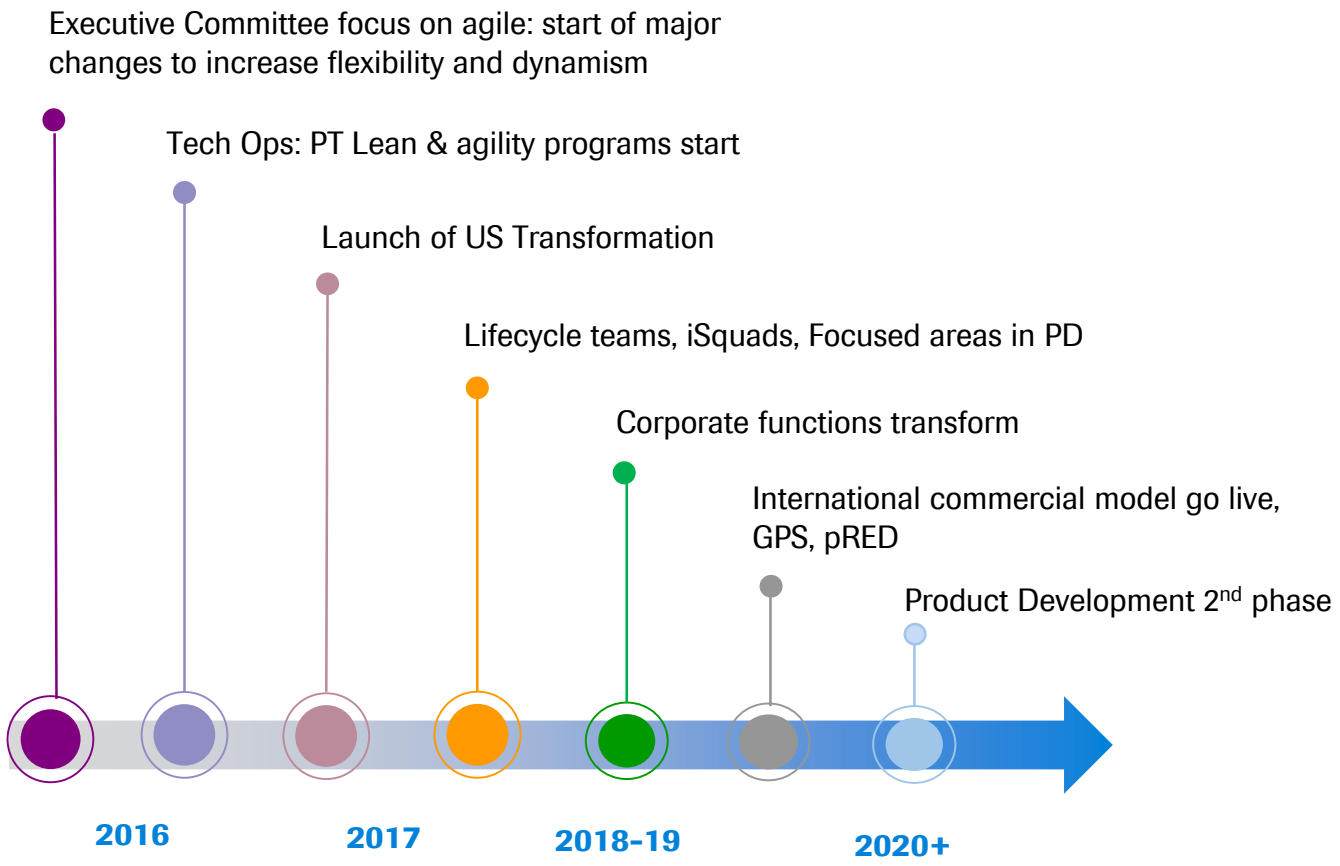
Strong commercial potential throughout late stage portfolio



[1] Venclexta sales are booked by partner AbbVie; [2] RG6171 (GDC-9545); [3] RG6114 (GDC-0077)

Transformation is a key enabler of our Pharma Vision

Guiding principles & decentralized execution for maximum impact



Guiding principles:

- From silos, functional and top down focus to small empowered accountable teams
- From internal/organization chart orientation to patient and external focus
- From leadership as command & control to setting a vision, architecting the system, coaching, and catalyzing change

In focus: The VITAL model

Dynamic resource allocation

Vision: Align work to our vision and purpose

Improve Performance: Lower costs for same output

Talent Flow: Move talents to highest priority work

Accountable to Peers: Share learnings to enhance decision making

Lucid to All: Transparency on results, accountable for continuous improvement

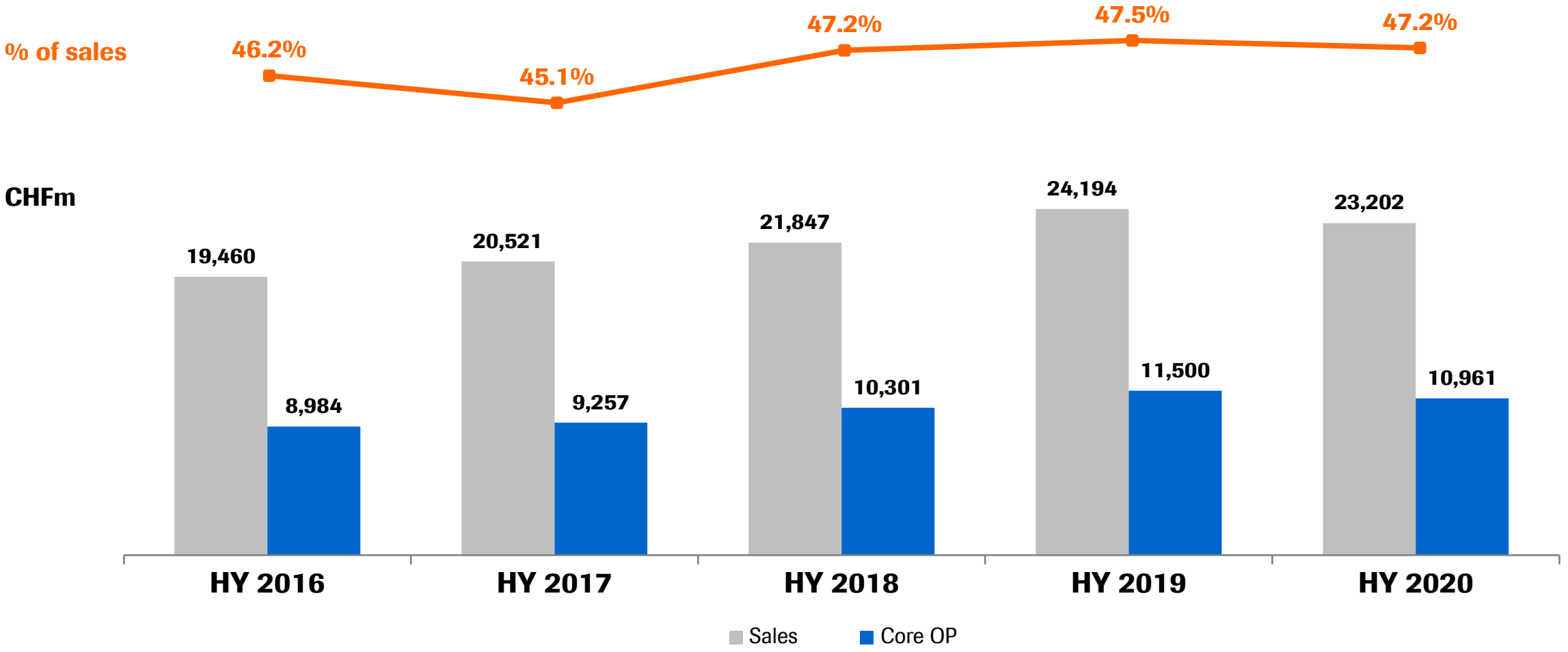
Increasing our productivity and financial flexibility

Pharma Technical (HY20 vs. HY16)	Pharma US (HY20 vs. HY16)	Pharma International (HY20 vs. HY16)	Pharma China (HY20 vs. HY16)	Pharma Development (HY20 vs. HY16)
Sales Volume growth +55%	Sales growth +34%	Sales growth +14%	Sales growth +110%	Late stage portfolio* +26%
Direct spend +1% and headcount -19%	OPEX +5% and headcount -19%	OPEX +10% and headcount -3%	OPEX +8% and headcount +25%	PD spend +23% and headcount +14%

Maturity of transformation efforts

* Project count growth

Strong profitability development despite challenging environment



All absolute values are presented in CHFm reported

Our Pharma Vision 2030

Providing more patient benefit at less cost to society

2030

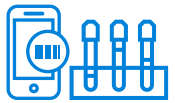
More patient benefit

1

Doubling of medical advances[1]

- Re-allocation of resources into R&D, while working on and protecting profitability
- R&D Mission Support

2



Significantly progress other patient benefits

- Integrated solutions and new engagement models
- Improved outcomes via enhanced disease management

Less cost to society

3

I.e.: Earlier, more targeted, efficacious & shorter interventions

- Breakthrough science and insights to reduce cost of disease
- Reducing societal costs beyond the cost of therapy

Transformation as a key enabler

[1] First approval of a new molecule in a new indication

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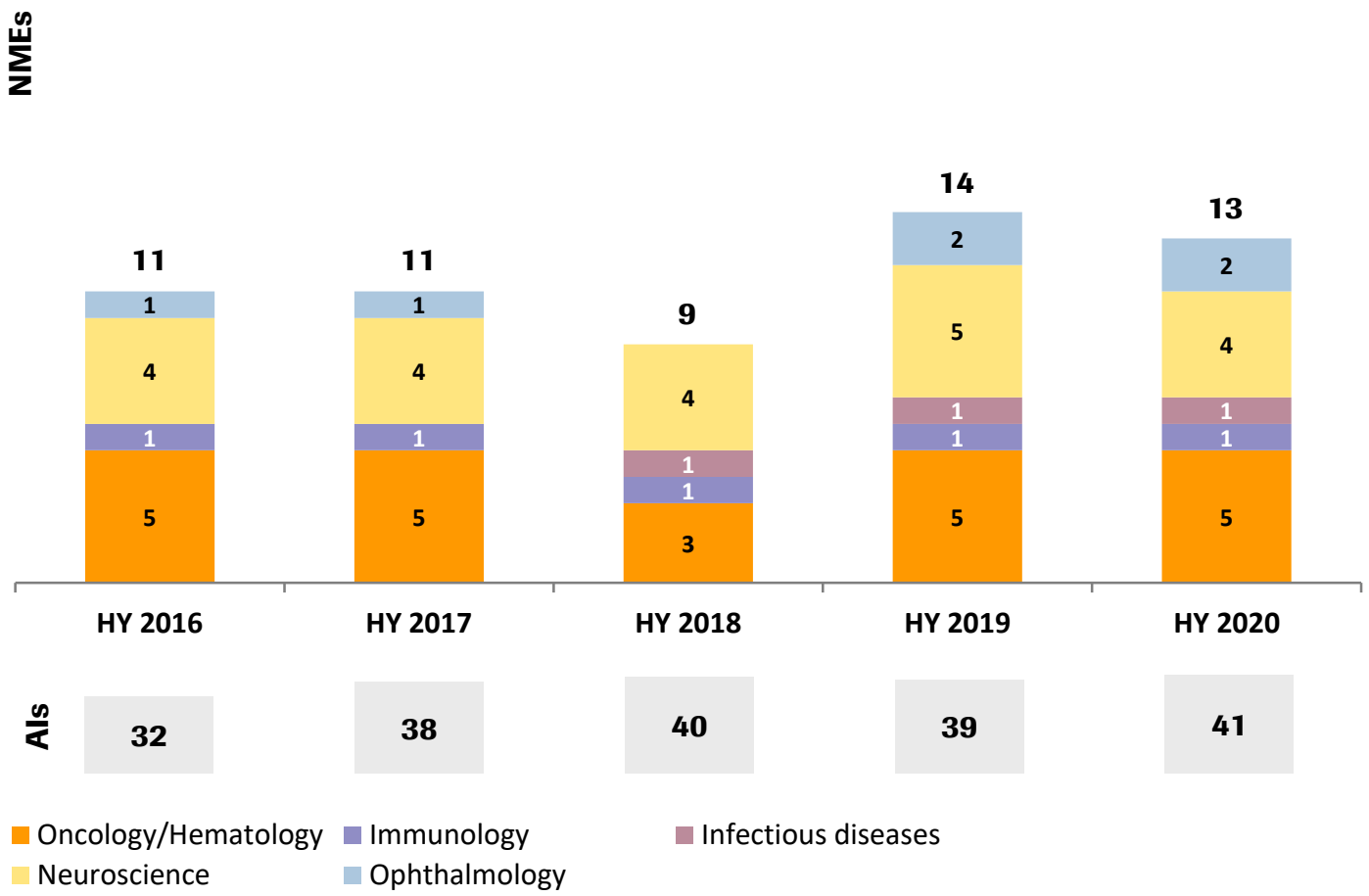
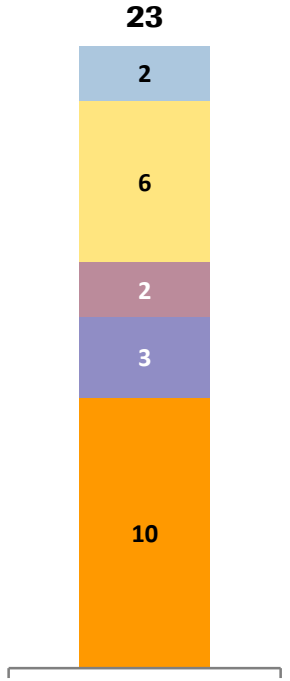
Invest in innovation: Assets in Ph III & registration

Strong momentum in the second half 2020



Outlook FY 2020



+10 NMEs to be added until year end

Gavreto *in RET+ NSCLC & thyroid cancer*

SERD *Ph III in 1L HR+ mBC*

glofitamab *Ph III in r/r DLBCL*

mosunetuzumab *Ph III in r/r FL*

crovalimab *Ph III in PNH*

REGN-COV2 *Ph III in COVID-19 (run by Regeneron)*

rhPentraxin-2 *Ph III in IPF*

Gazyva *Ph III in Lupus nephritis*

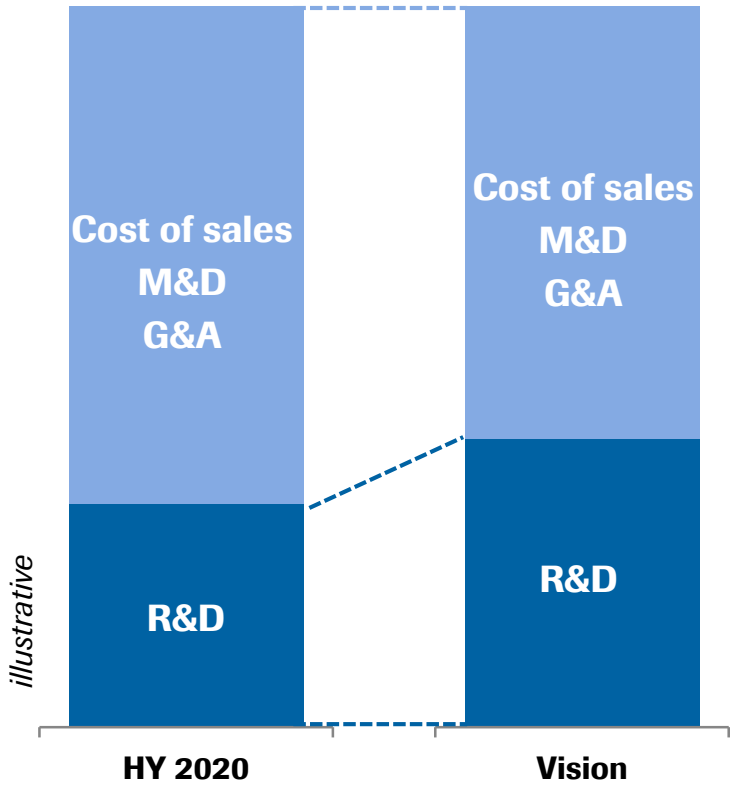
fenebrutinib *Ph III in RMS & PPMS*

SRP-9001 *Ph III in DMD (run by Sarepta)*

NME=new molecular entity; AI=additional indication

Strategic re-allocation of resources

Pharma cost structure



Principles for resource allocation

- Re-allocate resources into R&D while working on and protecting profitability
- Optimizing costs and efforts by
  - More targeted and often virtual stakeholder engagement
  - Personalized, digital content & services
- Improve performance by dynamic resource allocation (VITAL model)

Recent deals and partnerships[1]

Accelerate drug discovery and driving personalized healthcare

Early stage assets	Late stage assets	Research technologies	Digital & PHC

Early stage assets

- Dicerna (HBV)
- IONIS (tominersen)[2]
- Jecure Therapeutics (NLRP3 inhibitors)
- PTC Therapeutics (risdiplam)[2]
- Adaptive biotechnologies (T-cell therapies)
- 4DMT (choroideremia)

Late stage assets

- Sarepta Therapeutics (SRP-9001/DMD)
- Promedior (rhPentraxin-2)
- Blueprint Medicines (Gavreto)
- Regeneron (REGN-COV2)

Research technologies

- Spark Therapeutics (gene therapy; SPK-8011)
- Vividion Therapeutics (E3 ligases)
- santaris pharma a/s (RNA-targeting)
- jnana Therapeutics (SLC transporters)

Digital & PHC

- Foundation Medicine (molecular information)
- flatiron (electronic health records)
- Fred Hutch Cures Start Here (digital remote monitoring system)

78 new agreements in 2019

focused on

High disease burden / Promising targets / Novel enabling techologies

[1] Non-exhaustive overview; [2] at the time of licensing

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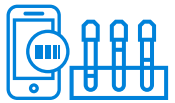

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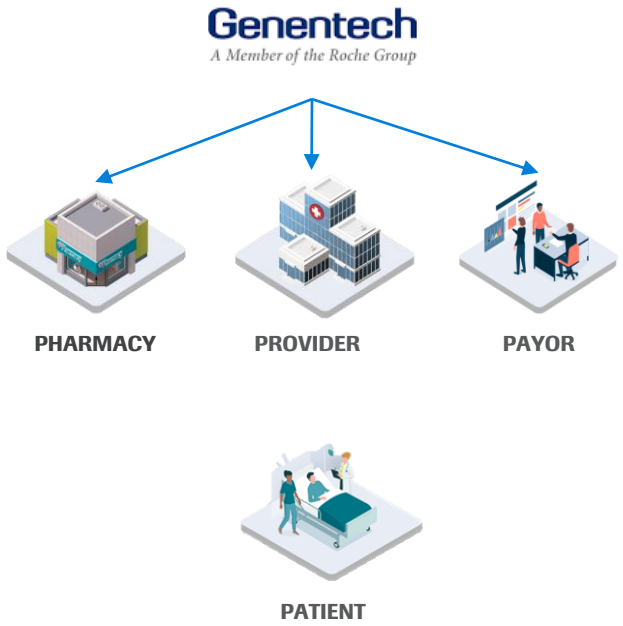
Go-to-market Model
Strategic shifts until 2030

	From	To
Engagement	"Mass field" largely in-person	More targeted and often virtual
Content	Static information	Personalized, digital content and services
Content release	Synchronized with field force cycles	Continuous and real-time
Customer targeting	Decided by sales representatives	Supported by advanced analytics
Conference	Physical attendance	Virtual and real-time exchange

Evolving customer engagement models: US

Early progress in "Pioneer" go-first areas

Old structure



New structure

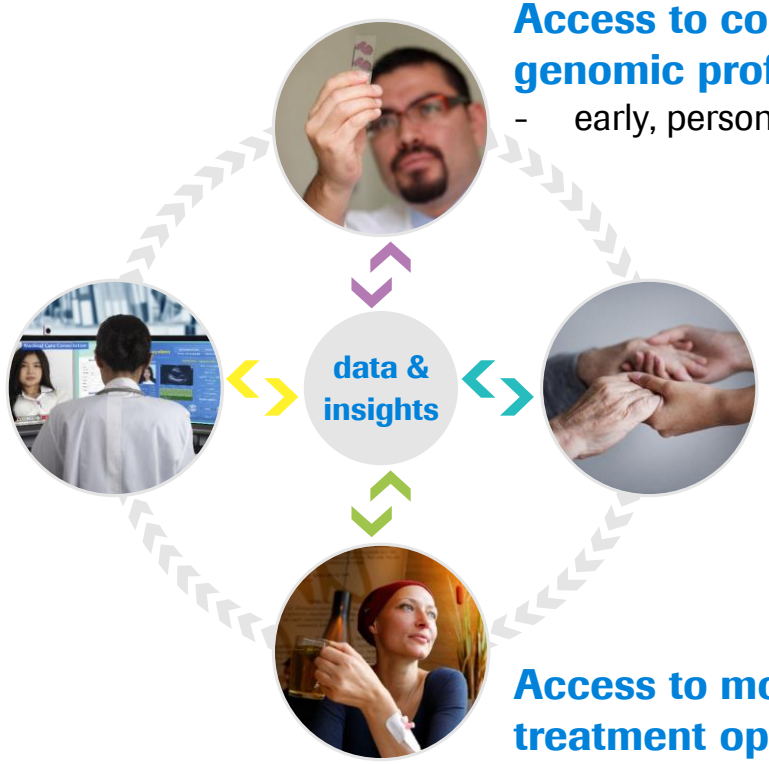
- Empower local decision making
- Providing integrated solutions

First large pharmaceutical company in US market to develop Eco-system approach

Delivering Integrated Solutions

Using data & insights to improve patient outcomes

Capturing clinical outcomes
- Leveraging RWD for regulatory filings, publications, policy change, innovative access models



Access to comprehensive genomic profiling (CGP)
- early, personalized diagnosis

Molecular tumor board (MTB) / clinical decision support (CDS)
- personalized care plan

Access to molecularly guided treatment options
- rapid therapy access and innovative access models

More patients on optimal therapy and creation of 'learning healthcare system'

PHC=personalized healthcare; RWD=real world data

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Responsible pricing strategy: Impact of medicines is at the core, while considering WHO's fair pricing dimensions

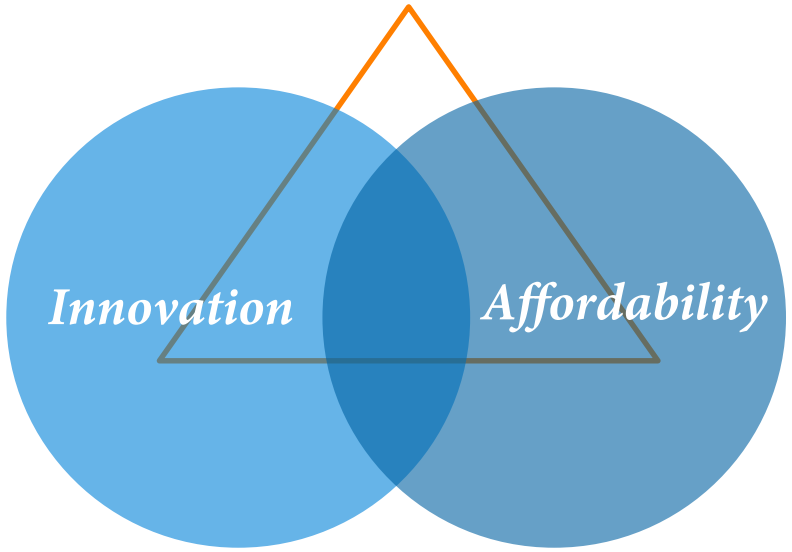
HEALTH IMPACT

Positive **impact** of medicine for **patients, healthcare systems** and **society**.

FUTURE INNOVATION

Pricing strategy allows to **invest** into **high risk** and complex disease areas.

Meeting the needs of patients of tomorrow.



Innovation available for patients today and tomorrow

SYSTEM CONTEXT

Pricing reflects different **healthcare systems & regulatory environments**.

Make medicines as affordable as possible.

Responsible and innovative pricing solutions

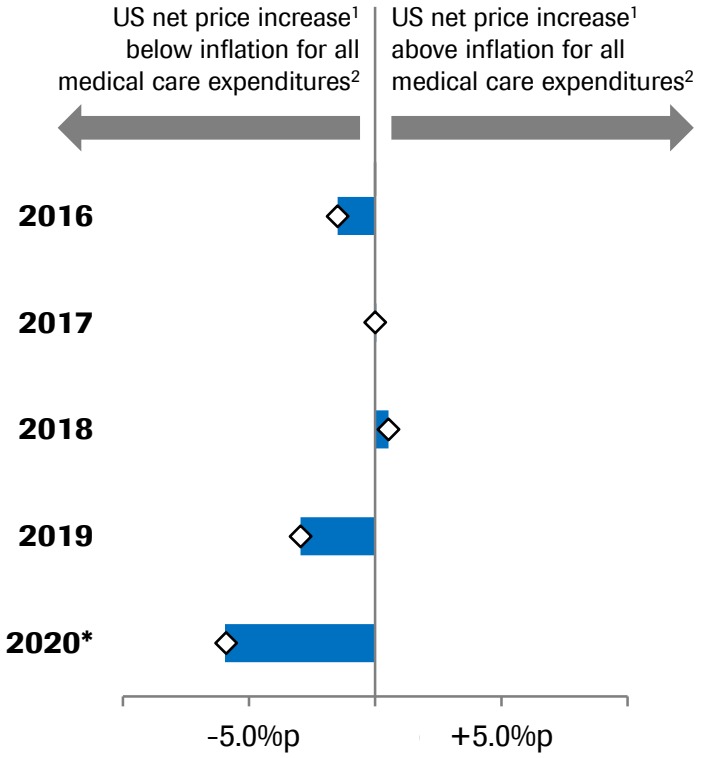
Recent examples of responsible pricing

OCREVUS® ocrelizumab — **~25%** **discount[3]** to Rebif list price in the US

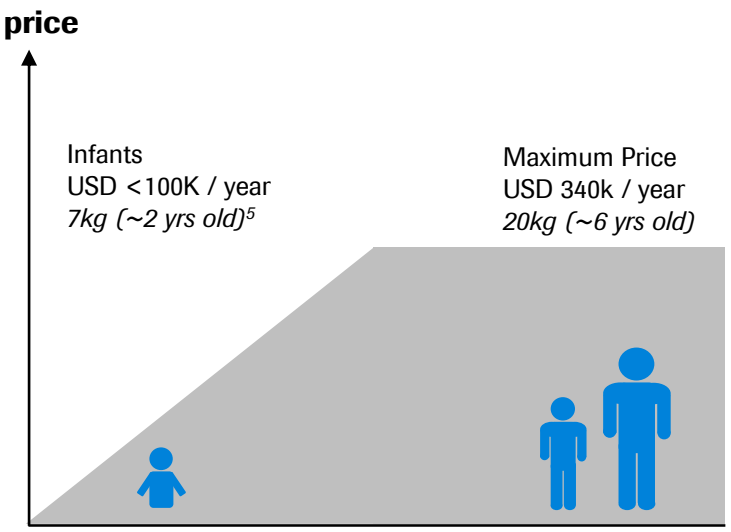
HEMLIBRA emicizumab-kxwh — **~50%** **discount[3]** to BPA prophylaxis in the US

ROZLYTREK™ entrectinib — **~50%** **discount[3]** to Vitrakvi list price in the US

Net price increases in line with medical inflation in the US



Price ceiling for Evrysdi



Evrysdi risdiplam — **~25%** **discount[4]** to Spinraza in the US

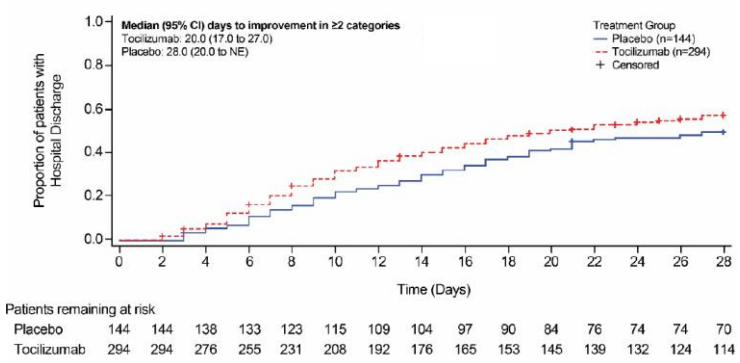
[1] Genentech's annual average net price increase in the U.S., weighted by sales; [2] for inflation CPI-U Medical Care is used for all medical care expenditures (incl. prescription and non-prescription drugs, medical supplies, physicians' services, hospital services, and health insurance) – source: U.S. Bureau of Labor Statistics (US BLS); [3] discount at launch; [4] discount over 5-yrs (at max Evrysdi price); [5] average infant weight from the FIREFISH trial; * TTM for CPI-U Medical Care in 2020

Costs to society

Reducing societal costs of disease beyond the cost of therapy

Actemra in COVID-19: Positive trend in time to hospital discharge

Time to hospital discharge/ready for discharge to day 28‡

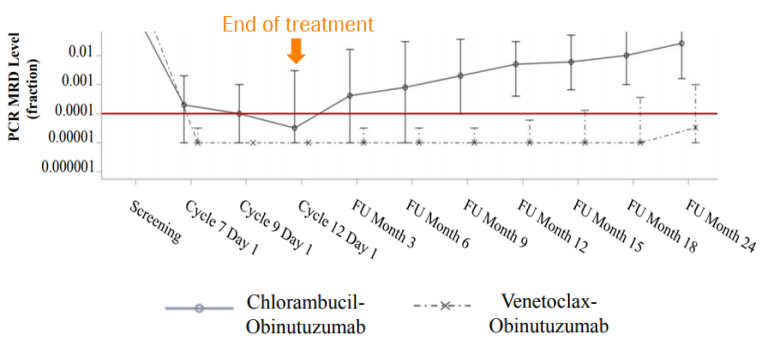


Median Time to Response:
TCZ=20.0 [17.0 to 27.0]; PBO=28.0 [20.0 to NE]

Potential for freeing up hospital capacity if confirmed in additional studies

Venclexta + Gazyva in CLL: Potential for shorter/curative treatment

Ph III (CLL14) results*



90% of MRD-negative patients remained in remission 2 years after treatment

Fixed treatment duration avoids long term side effects of chronic therapy & generates savings to HC system

Ocrevus in MS: Delaying the need for walking aid

Disability progression in patients with RMS

Consequences of reaching EDSS score ≥6.0 walking aid required

Expanding the time patients can live independently & continue working

‡ Rosas, et al., 2020, doi: https://doi.org/10.1101/2020.08.27.20183442; * Fischer, et al., ASH 2019; [1] Tomassini V, et al., MSJ 2019;25:1306–1315; [2] Kobelt G, et al., MSJ 2017;23:1123–1136; ICU=intensive care unit; CLL=Chronic lymphoid leukemia; MRD=minimal residual disease; HC=healthcare; RMS=relapsing multiple sclerosis; EDSS=Expanded Disability Status Scale; Venclexta in collaboration with AbbVie

Strong short- and mid-term news flow

Diversifying the late stage pipeline and setting new standards of care

Product	Indication	Filing	Population
tominersen	Huntington's	latest 2022	**~83k**
gantenerumab	Alzheimer's	2022	**~9,300k** (prodromal) **~3,600k** (mild)
SRP-9001	DMD	latest 2023	**~21k**
etrolizumab	Crohn's	2022	**~570k** (moderate/severe)
PDS	nAMD DME	2020 2022	**nAMD ~3,600k** **DME ~4,700k**
faricimab	DME nAMD	2021	
Actemra + remdesivir	COVID-19	2021	**n/a**
REGN-COV2	COVID-19	2021	**n/a**
crovalimab	PNH	2022	**~14k**

Product	Indication	Filing	Population
Gavreto	RET+ NSCLC	filed	**~2k** (Dx+)
	thyroid cancer	filed	**~6k** (Dx+)
Tecentriq	NeoAdj TNBC	2020	**~23k**
	Adj SCCHN	2021	**~8k**
	Adj RCC	2021	**~20k**
	(Neo)Adj NSCLC	2021/22	**~100k**
	Adj HCC	2022	**tbd**
Tecentriq + P+H	NeoAdj HER2+ BC	2021	**~40k**
ipatasertib	1L/2L TNBC	2020	**~11k** (Dx+)
	1L mCRPC	2020	**~100** (Dx+)
Polivy	1L DLBCL	2021	**~51k**
tiragolumab + T	1L SCLC	2022	**~57k**
mosunetuzumab	R/R FL	2021	**~3k**
glofitamab	R/R DLBCL	2022	**~24k**
Venclexta	R/R MM t(11;14)	2022	**~6k** (Dx+)
SERD (RG6171)	2L/3L mBC	2022	**~74k**

Neuroscience
Ophthalmology
Infectious diseases
Immunology
Oncology/Hematology

Source: Roche/Genentech, incidence/prevalence in the major markets (US, FR, DE, IT, ES, GB); DMD=duchenne muscular dystrophy; nAMD=neovascular age-related macular degeneration; DME=diabetic macular edema; NSCLC=non-small cell lung cancer; TNBC=triple-negative breast cancer; SCCHN=squamous cell carcinoma of the head and neck; RCC=renal cell carcinoma; HCC=hepatocellular carcinoma; mCRPC=metastatic castration resistant prostate cancer; DLBCL=diffuse large B-cell lymphoma; SCLC=small cell lung cancer; FL=follicular lymphoma; PNH=paroxysmal nocturnal hemoglobinuria

Replace and extend the business: Improve on the standard of care

Most significant pipeline advances in a year ever

Replace/extend existing businesses		Entering new franchises
MabThera/Rituxan	Gazyva, Venclexta, Polivy, mosunetuzumab, glofitamab	**Oncology:** Tecentriq (mUC, TNBC, SCLC, HCC, mM), ipatasertib (mCRPC), SERD (HR+ BC)
Herceptin	Perjeta, Kadcyla, Phesgo	**Hemophilia A:** Hemlibra
Avastin	Tecentriq, Alecensa, Rozlytrek, tiragolumab	**Neuroscience:** Ocrevus (RMS, PPMS) Enspryng (NMOSD), Evrysdi (SMA), tominersen (Huntington), gantenerumab (AD), SRP-9001 (DMD)
Lucentis	Port delivery system (PDS) faricimab	**Immunology:** etrolizumab (CD), Gazyva (Lupus nephritis)
Tamiflu	Xofluza	**Infectious diseases:** REGN-COV2 (COVID-19)

New pivotal trial starts in 2020

tiragolumab	*mNSCLC (SKYSCRAPER-01)* *ES-SCLC (SKYSCRAPER-02)* *stage III unresectable NSCLC (SKYSCRAPER-03)* *locally adv. esophageal cancer (SKYSCRAPER-07/08)*
PI3Kα (RG6114)	*HR+ mBC (INAVO120)*
SERD (RG6171)	*1L HR+ mBC, 2/3L mBC*
glofitamab	*2L+ DLBCL*
mosunetuzumab	*2L+ FL*
Venclexta	*1L fit AML, 1L fit CLL*
crovalimab	*PNH (COMMODORE 1/2)*
REGN-COV2	*COVID-19 treatment/prophylaxis*
Gazyva	*Lupus nephritis (REGENCY)*
rhPentraxin-2	*Idiopathic pulmonary fibrosis*
SRP-9001	*Duchenne muscular dystrophy*
fenebrutinib	*RMS (FENhance 1/2), PPMS (FENtrepid)*
Ocrevus higher dose	*RMS (MUSETTE), PPMS (GAVOTTE)*
PDS	*Diabetic retinopathy without CI-DME (PAVILION)*

Neuroscience · Immunology · Ophthalmology
Oncology/Hematology · Infectious diseases

mUC=metastatic urothelial carcinoma; TNBC=triple negative breast cancer; SCLC=small cell lung cancer; HCC=hepatocellular carcinoma; mM=metastatic melanoma; mCRPC=metastatic castration resistant prostate cancer; BC=breast cancer; RMS=relapsing multiple sclerosis; PPMS=primary progressive MS; NMOSD=neuromyelitis optica spectrum disorder; SMA=spinal muscular atrophy; AD=Alzheimer's disease; DMD=duchenne muscular dystrophy; CD=Crohn's disease; NSCLC=non-small cell lung cancer; ES-SCLC=extensive-stage small cell lung cancer; DLBCL=diffuse large B-cell lymphoma; FL=follicular lymphoma; AML=acute myeloid leukemia, CLL=chronic lymphocytic leukemia; MDS=myelodysplastic syndromes; PNH=paroxysmal nocturnal hemoglobinuria; CI-DME=center-involved diabetic macular edema

Late stage pipeline update

1. **Hematology franchise**
   - DLBCL: Polivy, glofitamab, mosunetuzumab
   - FL: mosunetuzumab, glofitamab, Polivy
   - AML: Venclexta
   - MM: Venclexta
   - MDS: Venclexta

2. **Breast Cancer franchise**
   - TNBC: Tecentriq, ipatasertib
   - HR+: SERD (RG6171), PI3Kα*i* (RG6114)
   - HER2+: Tecentriq

3. **Lung Cancer franchise**
   - NSCLC: Tecentriq, tiragolumab
   - SCLC: Tecentriq, tiragolumab
   - ALK+: Alecensa
   - ROS1+/NTRK+: Rozlytrek
   - RET+: Gavreto
   - KRAS *G12C*+: GDC-6063

4. **Other oncology**
   - CRPC: ipatasertib
   - Thyroid cancer: Gavreto
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   - Melanoma: Tecentriq, Cotellic, Zelboraf

5. **Non-malignant hematology**
   - Hemophilia A: Hemlibra
   - Hemophilia A: Factor VIII Gene Therapy
   - PNH: crovalimab

6. **Neuroscience**
   - MS: Ocrevus; fenebrutinib
   - SMA: Evrysdi
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   - Huntington's disease: tominersen
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   - IPF: rhPentraxin-2, Esbriet
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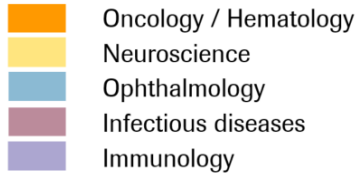
8. **Ophthalmology**
   - nAMD, DME, DR: Port Delivery System
   - nAMD, DME, RVO: faricimab

9. **Infectious diseases**
   - HBV: TLR7 agonist, CpAM, RG6346, RG6084
   - Influenza A/B: Xofluza
   - SARS-CoV2: Actemra
   - SARS-CoV2: REGN-COV2

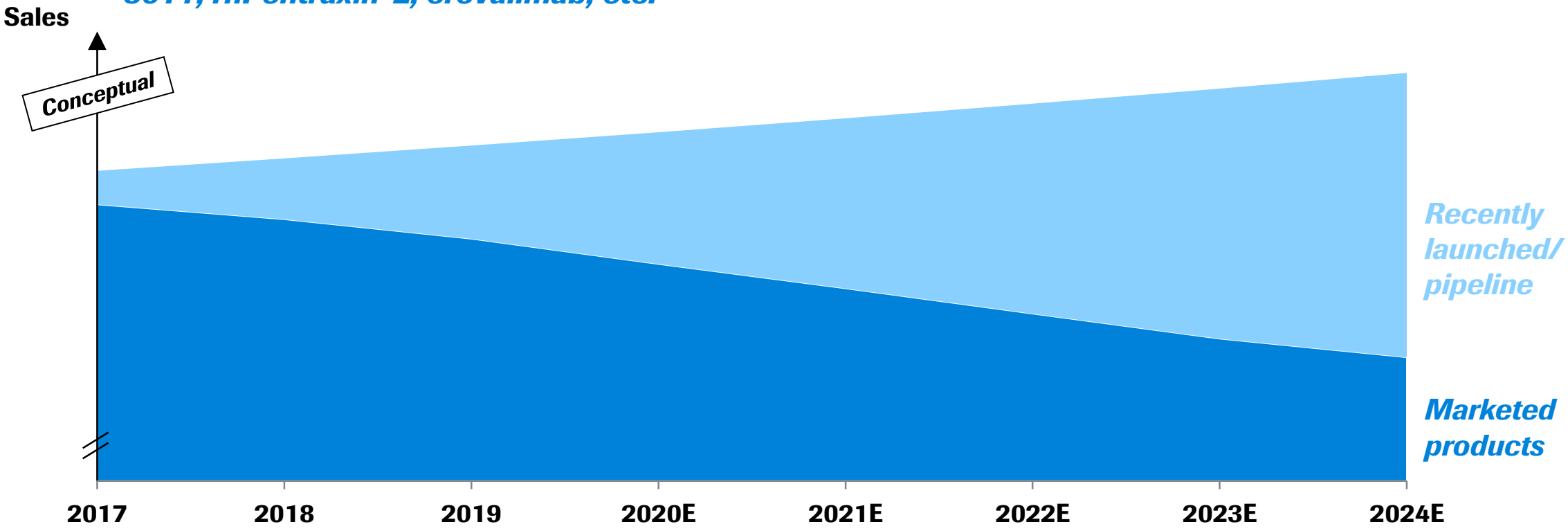


* For further information on target patient populations please consult the appendix; For further details on the late stage pipeline please consult the HY 20 results presentation appendix or visit the IR homepage

2020: Positive outlook re-iterated

NME launches

Ocrevus, Perjeta, Hemlibra, Tecentriq, Venclexta, Gazyva, Alecensa, Xofluza, Polivy, Rozlytrek, Phesgo, Evrysdi, Enspryng, Gavreto, ***mosunetuzumab, glofitamab, ipatasertib, PI3Kαi, SERD, tiragolumab, faricimab, PDS, tominersen, gantenerumab, prasinezumab, SRP-9001, SPK-8011, rhPentraxin-2, crovalimab, etc.***



Roche

Roche Pharma Day 2020

Commercial Opportunities

Teresa Graham | Head of Global Product Strategy

Supporting patient access during COVID-19

Expanding patient options to support continuity of care

ocrelizumab
OCREVUS
Home Infusion

Launched in Australia

Xolair Omalizumab
FOR SUBCUTANEOUS USE 75 mg • 150 mg

Home use filing accepted by FDA Aug 2020

FOUNDATION MEDICINE

At home liquid biopsy project initiated in Italy

Patients are self-isolating to minimise their risk of becoming infected with COVID-19

Ocrevus home infusion in partnership with View Health; Foundation Medicine Liquid biopsy in partnership with Egg s.r.l.

Oncology & non-malignant hematology

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Oncology / Hematology
Neuroscience
Ophthalmology
Infectious diseases
Immunology

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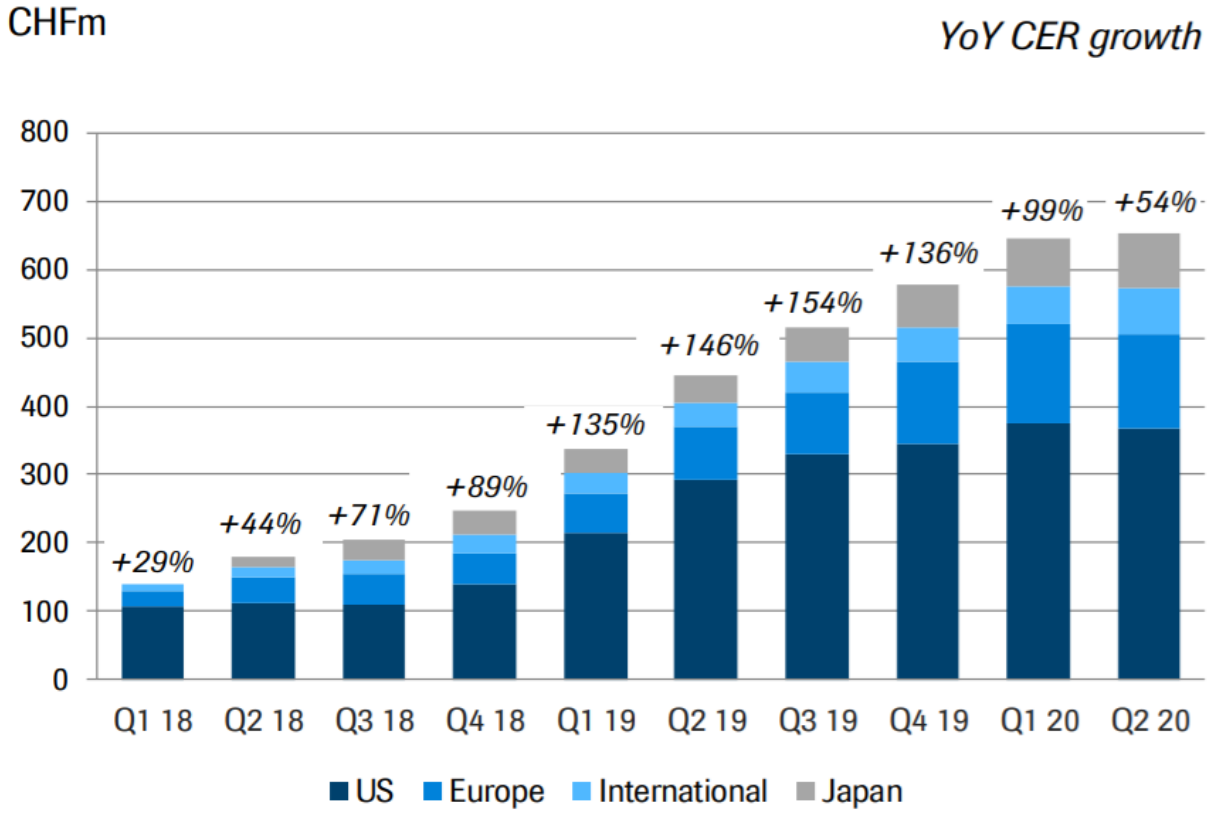
Tecentriq

Annualized sales >2b with significant growth opportunities ahead



1L combinations

1L SCLC, 1L TNBC, and 1L NSCLC continuing to drive growth ex-US; Launch of HCC next major growth driver with contributions from 1L mUC and BRAF+ Melanoma

Neoadjuvant / adjuvant

Continued readouts in early disease: TNBC, NSCLC, SCCHN, RCC, HCC, HER2+ BC

CIT combinations

Tecentriq + Tiragolumab has the potential to reset the standard of care in markets where PD-1/PD-L1 already established

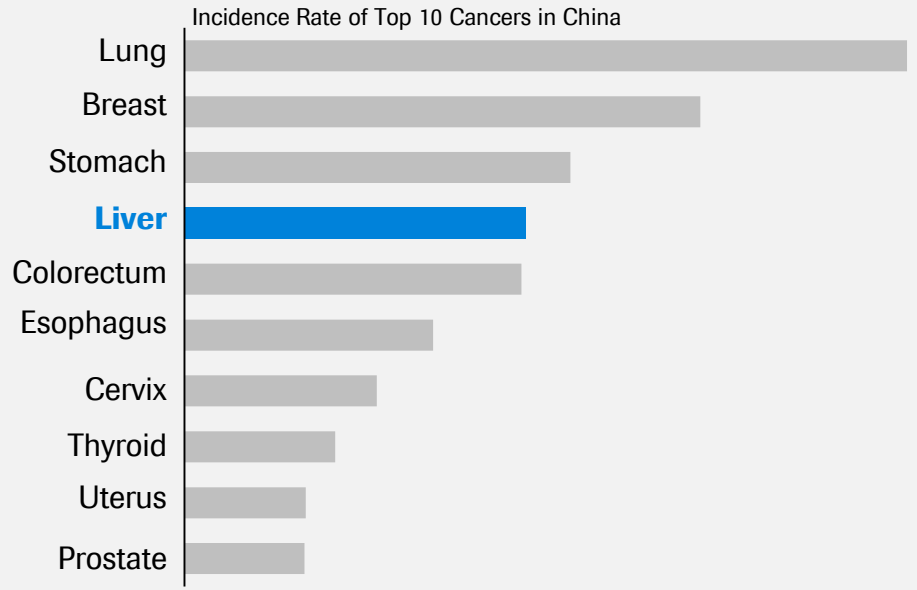
TNBC=Triple Negative Breast Cancer; SCLC=Small Cell Lung Cancer; NSCLC = Non-Small Cell Lung Cancer; HCC = Hepatocellular Carcinoma; mUC = metastatic urothelial carcinoma; BRAF mMel = BRAF mutant melanoma; SCCHN = head and neck squamous cell carcinoma; RCC= renal cell carcinoma

Tecentriq + Avastin: A new standard in HCC treatment

First new therapy with survival benefit in HCC in over a decade

TECENTRIQ atezolizumab

HCC is the fourth most common cancer in China



>750k people / year diagnosed with HCC globally

Tecentriq+Avastin approved in 25 countries.
Approval in China and EU expected early Q4

ESMO NCCN AASLD CNLC CSCO

All major global guidelines recommend T+A as a new SOC in HCC

Ongoing development in earlier lines and new combinations

Adjuvant	Intermediate	Unresectable	TML	New pipeline
T+A	T+A	T+A ✓	T+A	T+A+X

T+A = Tecentriq + Avastin; HCC = Hepatocellular Carcinoma; TML = tumor mutational load

Tecentriq in early disease

Curative potential for the largest number of patients

TECENTRIQ® atezolizumab

Breast 	✓ **Positive data in neoadjuvant TNBC will be shared with health authorities** • >50% of TNBC pts treated in neoadjuvant setting • Ongoing trials for Tecentriq in adjuvant TNBC and neoadjuvant HER2+ BC
Lung 	**Interim Ph III results for neoadjuvant and adjuvant NSCLC expected 2020/2021** • 25-35% of NSCLC patients have resectable disease
GI/GU 	**Trials initiated in NMIBC, adjuvant RCC, and adjuvant HCC** • >2.5x more patients with early UC than metastatic UC

Source: Roche US/EU5 epidemiology; TNBC=triple negative breast cancer; NSCLC=non-small cell lung cancer; NMIBC=non-muscle invasive bladder cancer; RCC=renal cell carcinoma

Tiragolumab (anti-TIGIT) development program

First program with randomized data showing benefit on top of PD-L1

6 randomized trials of tiragolumab + Tecentriq initiated

Trial	Indication	Market size
SKYSCRAPER-01	1L NSCLC: PD-L1 high	●○○
SKYSCRAPER-02	ES-SCLC	●●●
SKYSCRAPER-03	Stage III unresectable NSCLC	●●●
SKYSCRAPER-04	PD-L1+ Cervical Cancer	●○○
SKYSCRAPER-07	Locally advanced ESCC	●◐○
SKYSCRAPER-08	China 1L ESCC	●○○

●○○ Market Size: <500m ●◐○ Market Size: 500m-1b ●●● Market Size: >1b

Development stategy

1 Build on Tecentriq

2 Expand into early disease

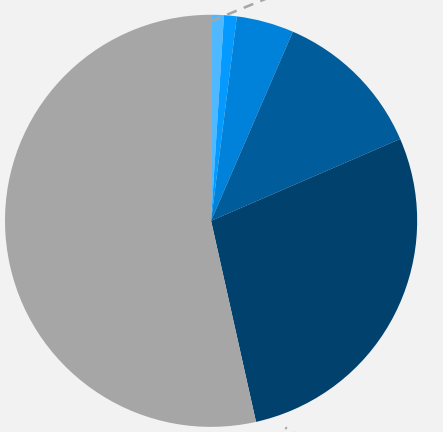
3 Compete in new indications

Additional trials ongoing in HCC, mUC, PDAC, and hematology (MM, NHL)

NSCLC=Non-Small Cell Lung Cancer; ES-SCLC=extensive stage small cell lung cancer; ESCC=esophageal squamous cell carcinoma; HCC=hepatocellular carcinoma; mUC=metastatic urothelial carcinoma; PDAC: Pancreatic ductal adenocarcinoma; MM=multiple myeloma; NHL=non-hodgkins lymphoma

Solid business case for oncogenic driver mutations

NSCLC



KRAS G12C	12%
KRAS Other	16%
EGFR	10%
EGFR ex20	1-2%
ALK	4-5% ✓
MET	2%
PIK3CA	5%
BRAF	2%
HER2	1%
RET	1-2% ✓
ROS1	1-2% ✓
NTRK	0.2% ✓

Rare mutations (≤2%) add up to ~10% of the lung cancer market: ~4bn

FOUNDATION MEDICINE flatiron NAVIFY®

High ORR and durable benefit drives long duration of therapy

- Alecensa PFS ~35m in 1L NSCLC vs. ~8m for PD-1/PD-L1; opportunity in early disease

NGS testing rate increasing with new technologies and therapeutics

- FMI liquid biopsy approved (30% of NSCLC patients with insufficient tissue for testing)

Lean and innovative trial design supported by Real World Data

- Comparative RWD for Rozlytrek submitted in US, Europe, Japan, and Canada
- B-FAST study with multiple driver mutation cohorts

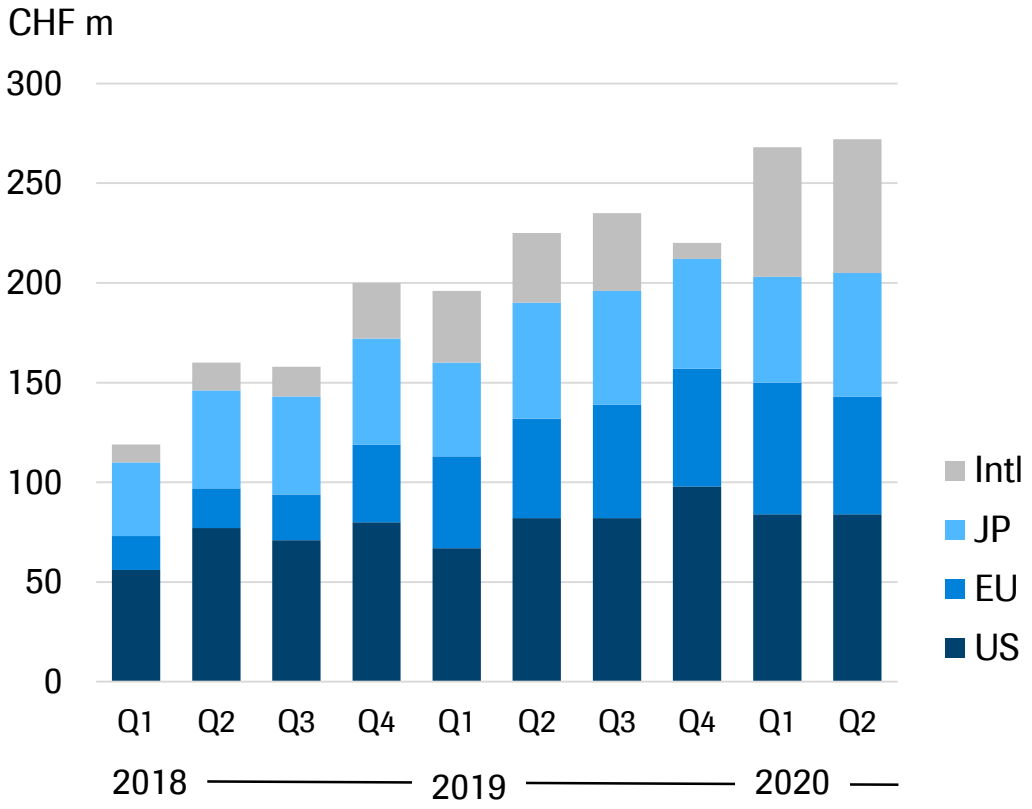
Pan-tumor potential across multiple programs

- TAPISTRY: tumor agnostic basket trial across multiple driver mutations and CIT

Source: Roche; NSCLC=Non-Small Cell Lung Cancer; NGS=next generation sequencing

Alecensa annualized sales >1b with further growth catalysts

Market leader with >70% market share in US, EU, Japan



China driving further growth in international markets

- Significant volume uptake in 2020, following NRDL reimbursement

Expanding into early disease

- ALINA trial in ALK+ adjuvant NSCLC has potential to address 25-35% of ALK+ NSCLC patients

Expanding testing to more patients

- B-FAST trial: Alecensa data in ALK+ patients tested by FMI liquid biopsy presented at ESMO

Tumor agnostic development

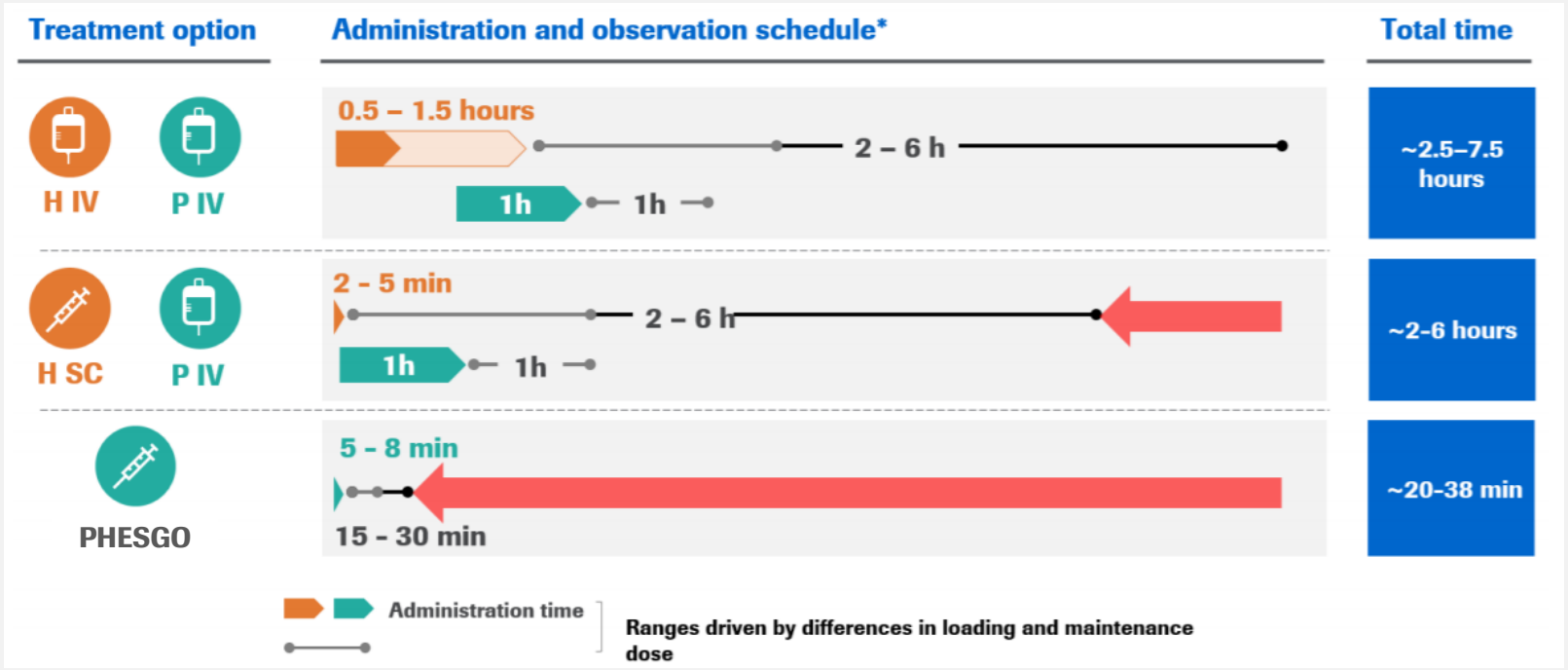
- Alecensa arm added to TAPISTRY basket trial: ALK fusion prevalence <1% (excluding NSCLC)

Source: Roche; NSCLC=Non-Small Cell Lung Cancer; NRDL=National Reimbursement Drug List; FMI=Foundation Medicine Inc.

Phesgo US approval

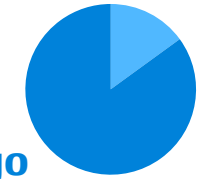
Approved by FDA in June, filed in EU

Administration and observation time reduced from 2.5–7.5 hours to 20–38 minutes



PHESGO™
pertuzumab/trastuzumab/hyaluronidase-zzxf
SUBCUTANEOUS INJECTION / 1,200 mg/600 mg/30,000 units 600 mg/600 mg/20,000 units

85%
of patients prefer Phesgo



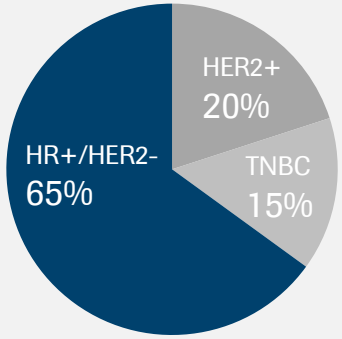
vs. standard IV administration

IV=intravenous; *Ranges driven by differences in loading and maintenance dose; Phesgo in collaboration with Halozyme

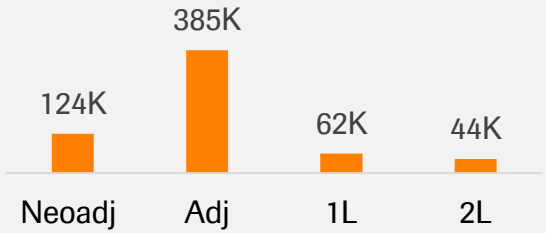
High unmet need remains across HR+/HER2- BC

Large addressable population for SERD and PI3K programs

HR+/HER2- BC



40% of HR+ patients have PI3K mutation



HR+/HER2- treated population (US/EU5)

Roche molecules targeting both early and metastatic disease

	eBC	1L mBC	2L/3L mBC
Endocrine Therapy Given until resistance or visceral disease present	**ET** +/- CDK4/6i	**ET** + CDK4/6i	**ET** monotherapy
SERD (RG6171)[1] Replace ET as standard of care in all settings	**RG6171** +/- CDK4/6i	**RG6171** + CDK4/6i	**RG6171** monotherapy
PI3Kαi (RG6114)[2] Combine with SOC In Pi3Km patients		**RG6114** + fulvestrant + CDK4/6i	

30% of patients become resistant to standard of care

ET=endocrine therapy; HR+ BC=hormone receptor positive breast cancer; TNBC=triple negative breast cancer; eBC=early breast cancer; mBC=metastatic breast cancer;
[1] GDC-9545; [2] GDC-0077

Polivy readout in 1L DLBCL in 2021

Opportunity to establish Polivy as standard of care in curative setting

POLIVY® polatuzumab vedotin

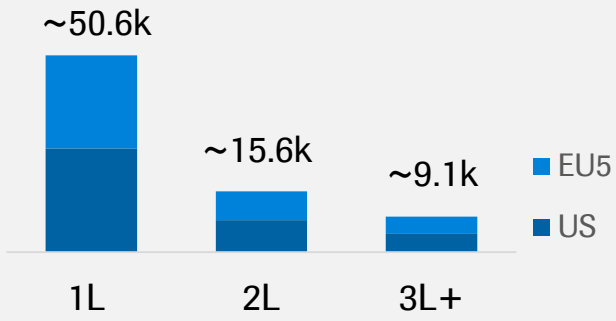
Rapid uptake in R/R DLBCL

Strong efficacy: only agent in R/R DLBCL with OS benefit

Well tolerated: combines with standard of care (BR); no unique safety monitoring requirements

Off the shelf: readily available; administered in any oncology facility, with no hospitalization required

POLARIX is the only Ph III trial in 1L DLBCL (non-biomarker)



1L DLBCL treated population is >3x the size of 2L

	Polivy+R/G-CHP (Ph Ib/II)	R-CHOP (GOYA trial)
ORR	89%	80%
CR	76%	34%

Ph Ib/II data in 1L DLBCL compares favorably to historical controls despite older population and sicker patients

Source: Roche/Genentech; Polivy in collaboration with Seattle Genetics; DLBCL=diffuse large B-cell lymphoma; BR = Rituxan + Bendamustine

Mosunetuzumab and glofitamab (CD20xCD3)

Potential first in class bispecifics in DLBCL and FL

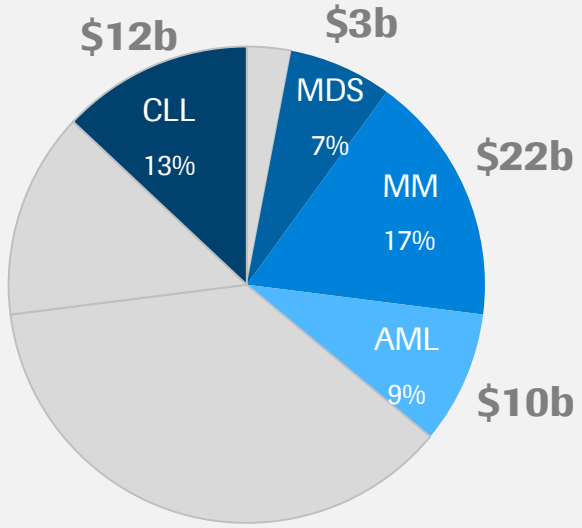
Indication	Unmet Need	Lead Program
R/R FL	Reduction of chemo and quality of life are important for patients	 **Mosunetuzumab** BTD in 3L+ FL; Ph III safety run-in initiated in 2L+ FL FDA BTD
R/R DLBCL	Highly aggressive disease: patient need for durable efficacy	 **Glofitamab** Glofitamab Ph III safety run-in initiated in combination with GemOx
1L DLBCL	High efficacy bar established; need therapy which is combinable	Chemo free regimens being explored in Ph Ib for both glofitamab and mosunetuzumab including combinations with Polivy, Gazyva, Tecentriq

Furthest advanced bispecific portfolio with >1000 patients dosed and randomized trials being initiated

Venclexta

Annualized sales >1bn driven by CLL and AML

Developing in indications with >$40B market size by 2025



Hematology market size estimate 2025

VENCLEXTA venetoclax tablets 10mg, 50mg, 100mg

✔ **1L CLL**
Fixed duration, chemo free regimen, with high MRD-negative responses

✔ **1L AML**
First new medicine in AML in 20 years; >40% US market share in 1L unfit patients

Multiple Myeloma
Ph III CANOVA trial underway in ~20% of patients with t11:14 translocation

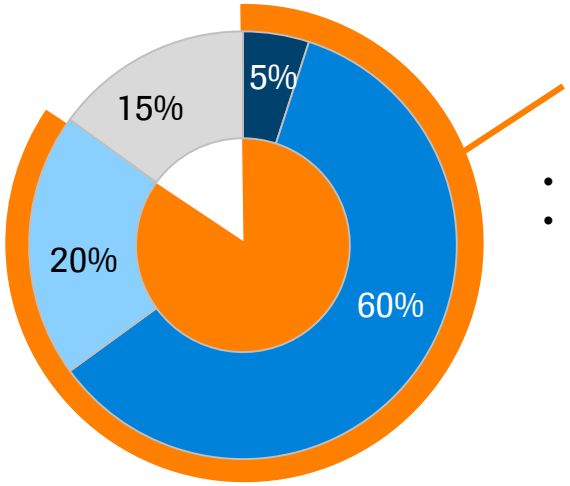
MDS
Encouraging early data in high unmet need population

Market size: Evaluate Pharma estimated market size 2025; CLL=Chronic lymphoid leukemia; DLBCL=Diffuse large B-cell lymphoma; iNHL=Indolent Non-Hodgkin's lymphoma; AML=Acute myeloid leukemia; MM=Multiple myeloma; MDS=Myelodysplastic syndrome; Venclexta in collaboration with AbbVie

Hemlibra is a transformational advance for Hemophilia A patients

Continued increase in patients with zero bleeds to >85% after 72 weeks

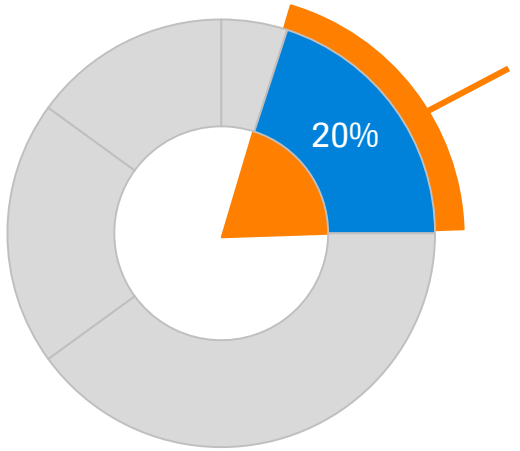
HEMLIBRA emicizumab-kxwh



~85%
Hemlibra target population

- US: Nearly 25% total market share
- 95% of patients surveyed preferred Hemlibra to their prior therapy

Gene therapy



~20%
Gene therapy eligible population

Adult patients with moderate-severe disease and no comorbidities (HIV/HCV/HVP/AAV+)

Ideal gene therapy target profile

- Works in all eligible patients
- Reliable and predictable expression of FVIII across all patients
- Long-term durability
- Manageable immune-modulatory regimen

Source: Treated patients, Hemlibra Epidemiology models 2018 PWHA=People with Hemophilia A

Ophthalmology

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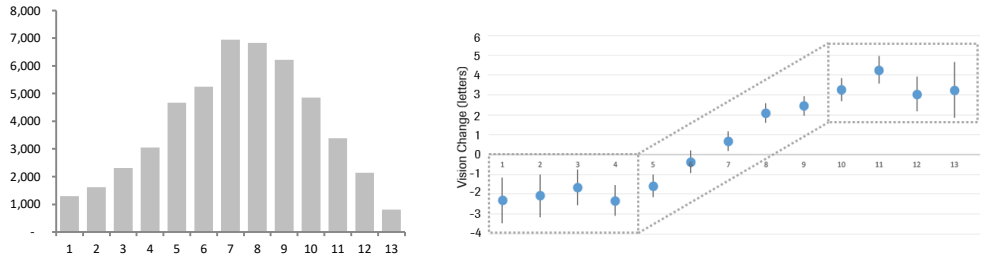
Port Delivery System (PDS)

Potential to improve real world outcomes with twice yearly dosing

Adherence to IVT therapies is low and infrequent dosing in the real world correlates with vision loss



Only 50% of patients can be extended to Q3M dosing with current IVT therapies

With PDS, nearly all patients can be maintained on 6m dosing, improving patient compliance and real world outcomes

- **PDS implant:** permanent, refillable intraocular implant. One-time ~30 min outpatient surgical procedure. Patients from Ph I study have had PDS implanted for >10 years.

- **Refill exchange:** twice yearly in-office refill of the device using proprietary needle assembly. Can only be refilled with proprietary formulation (not other molecules or biosimilars)

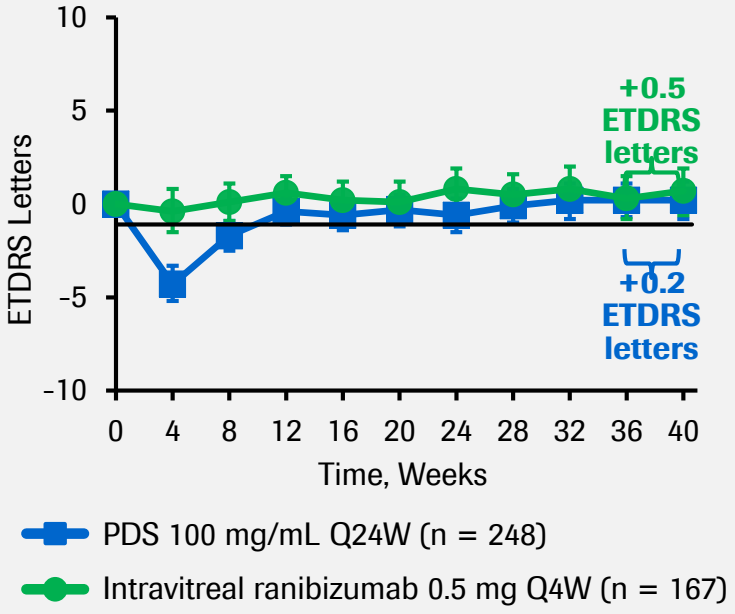
PDS, Port Delivery System with ranibizumab; IVT = intravitreal

PDS efficacy equivalent to monthly Lucentis for nearly all patients

Strong patient preference for PDS

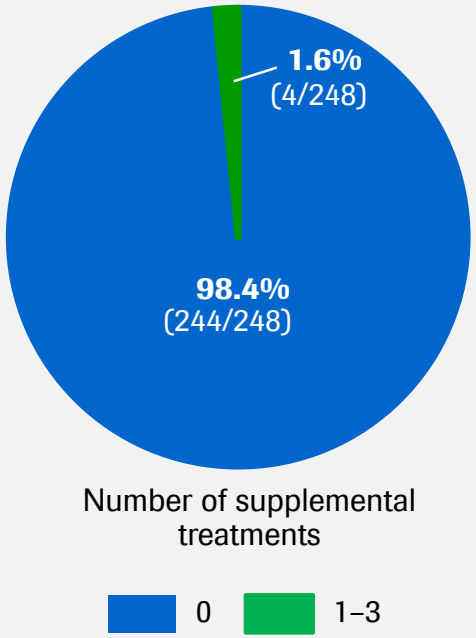
Equivalent vision

Adjusted mean BCVA change from baseline



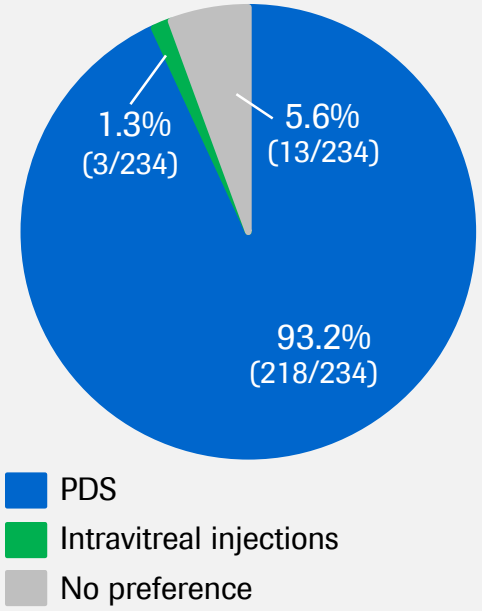
Treatment durability

Percentage of PDS patients who received supplemental treatment before first refill-exchange at week 24



Patient preference

Preference among patients in the PDS arm at week 40



BCVA, best-corrected visual acuity; PDS, Port Delivery System with ranibizumab

Preparing for a purposeful global launch in nAMD

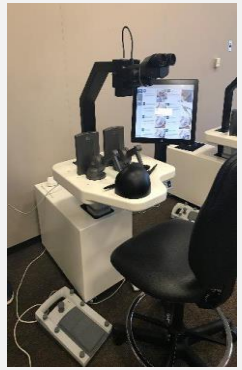
US launch planned for 2021, ex-US for 2022

Virtual reality training


THE WALL STREET JOURNAL.

Genentech Uses Virtual Reality to Train Eye Surgeons

Adopts technology in clinical trial for eye-implant procedure

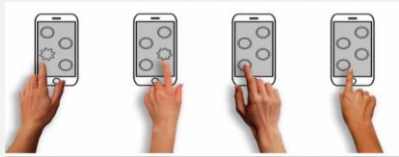


- Virtual reality (VR) technology enables preoperative training of surgeons on PDS procedures (implant insertion and refill)
- >200 US surgeons trained in Ph III across ~100 sites

Field-based support

- Surgical Device Liaisons (SDLs) support training on site, and facilitate peer to peer discussion and education
- Focus on ensuring consistency in outcomes and enhancing the patient experience

Remote vision monitoring



- App-based designed test to detect changes in vision in-between office visits
- Vision alerts sent to doctor
- Pilot programs underway

Global retina market growing to ~$14b by 2024

nAMD = neovascular age related macular degeneration

Neuroscience and Rare Diseases

1. **Hematology franchise**
   - DLBCL: Polivy, glofitamab, mosunetuzumab
   - FL: mosunetuzumab, glofitamab, Polivy
   - AML: Venclexta
   - MM: Venclexta
   - MDS: Venclexta

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   - Hemophilia A: Factor VIII Gene Therapy
   - PNH: crovalimab

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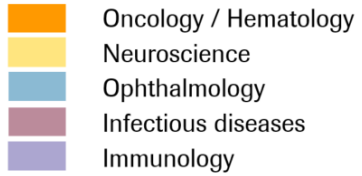

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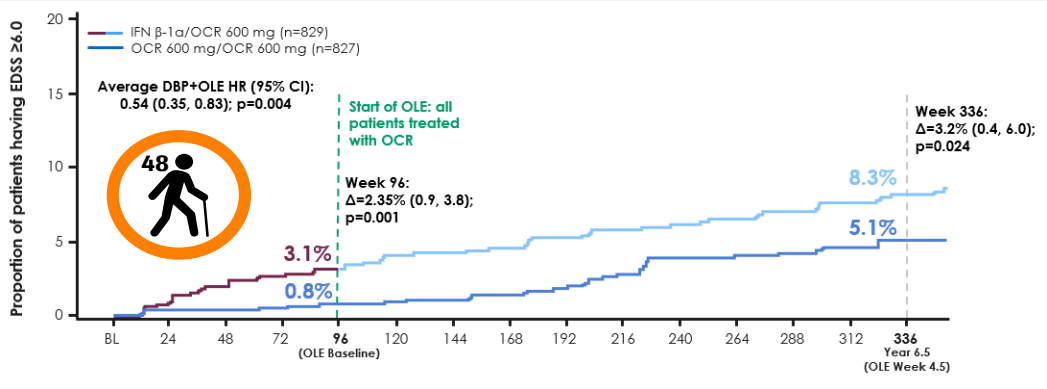
Ocrevus: Best in disease efficacy with robust, consistent, and sustained delay in disability progression

OCREVUS® ocrelizumab

Roche

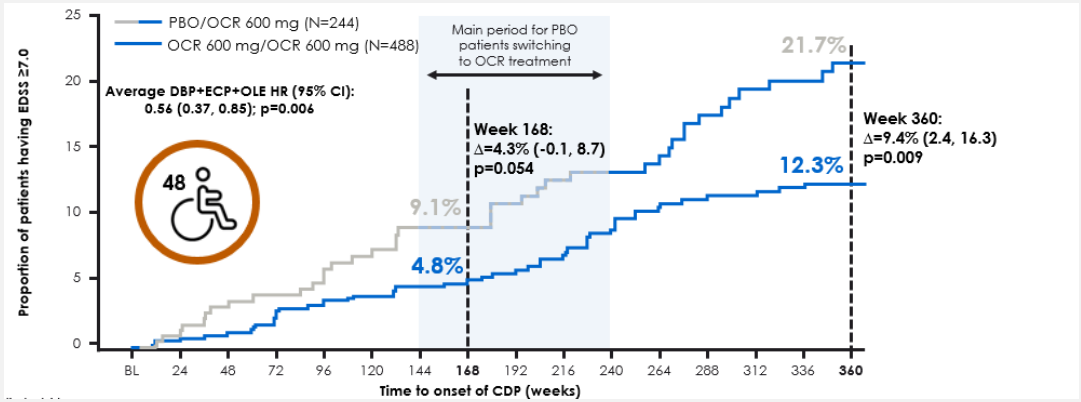
MS VIRTUAL 2020

Sustained effect on disease progression >6 yrs in RMS



- 46% lower risk of requiring a walking-aid in those patients who initiated OCR earlier vs delayed treatment (those switching from IFN β-1a)

Ocrevus is the only therapy approved in PPMS



- 44% lower risk of requiring a wheelchair in those patients who initiated OCR earlier vs delayed treatment (those switching from PBO)
- ~35% of US sales in PPMS

>170K patients treated with consistent and favorable benefit risk profile

Giovannoni G. et al, ACTRIMS-ECTRIMS 2020; Wolinsky J.S. et al, ACTRIMS-ECTRIMS 2020; RMS = relapsing multiple sclerosis; PPMS = primary progressive multiple sclerosis

Ocrevus twice yearly dosing drives better compliance

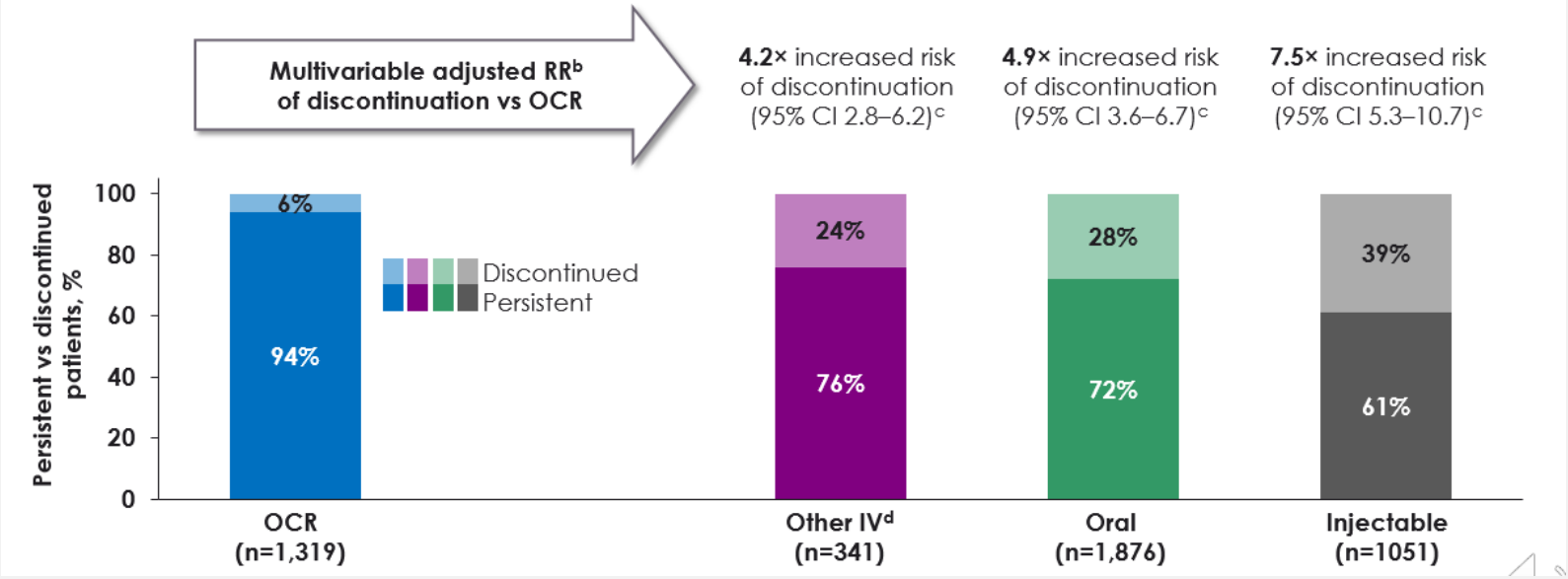
OCREVUS® ocrelizumab

Roche

MS VIRTUAL 2020

Total Yearly Dosing	
OCREVUS	x2
TECFIDERA	x730
AUBAGIO	x365
TYSABRI	x13
COPAXONE	x365 (or 156)
KESIMPTA	x12

>90% persistence/adherence after 1 yr; superior to oral and injectable medicines



- Superior persistence and adherence and the lowest discontinuation rate at both 12 and 18 months of follow-up compared with patients initiating other classes of MS DMTs
- Persistence and adherence to treatment are critical for achieving therapeutic goals in MS

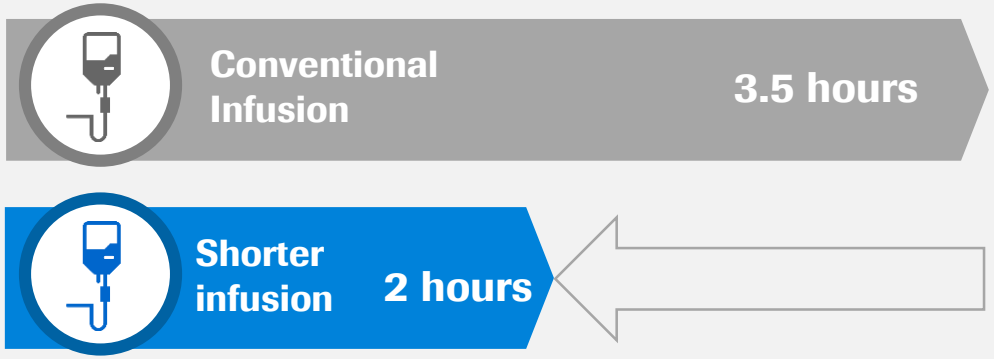
*Total yearly dosing after the first year; DMT = disease modifying therapy

Continuing to improve patient convenience with shorter infusion

Favorable access with no price increases since launch

OCREVUS® ocrelizumab

Ocrevus short infusion nearly halves administration time



Approved by EMA, FDA approval expected before end of the year

Ocrevus pricing in US results in broad access

$65k per year

- Priced ~32% below US market average WAC of $94k
- >80% RMS and 98% PPMS covered without step edits

Expansion in infusion options for patients

- Ocrevus has been infused in >46K locations in the US
- ~50% of infusions occur outside of the hospital

Total time requires pre-medication (30min-1hr and observation 1hr), * home administration in certain markets

Enspryng: First and only subcutaneous treatment for NMOSD

ENSPRYNG satralizumab

Significant unmet need still exists with NMOSD

- 200K patients worldwide
- 70-80% of patients are AQP4+
- Half of patients are blind or require a wheelchair within 5 yrs
- 40% of patients with NMOSD are first misdiagnosed as having MS
- 50% of patients treated with steroids/immunosuppressants

Approved in US, Canada, Japan, Switzerland

Additional applications are under review including the EU and China

FDA BTD

✓ **Highly effective**
- Comparable efficacy to best in disease treatments

✓ **Flexible and convenient**
- Q4w SC dosing at home
- Studied as monotherapy and in combination with immunosuppressants

✓ **Well tolerated safety profile**
- No black box warning; lower rate of infections incl. serious infections than placebo group

✓ **Competitively priced**
- Priced 72% below eculizumab and 27% below inebilizumab after first year

Evrysdi

Proven efficacy in infants, children and adults with SMA

Best-in-class efficacy and safety potential

Durably increases SMN protein in CNS and periphery

Out of 450+ patients studied, none withdrew from treatment due to treatment-related AEs

Broad population studied

Newborn to 60 years old, Type 1/2/3, naïve and pre-treated

Real world population that exhibits a broad range of disease severity & functional ability

Advantages of oral administration

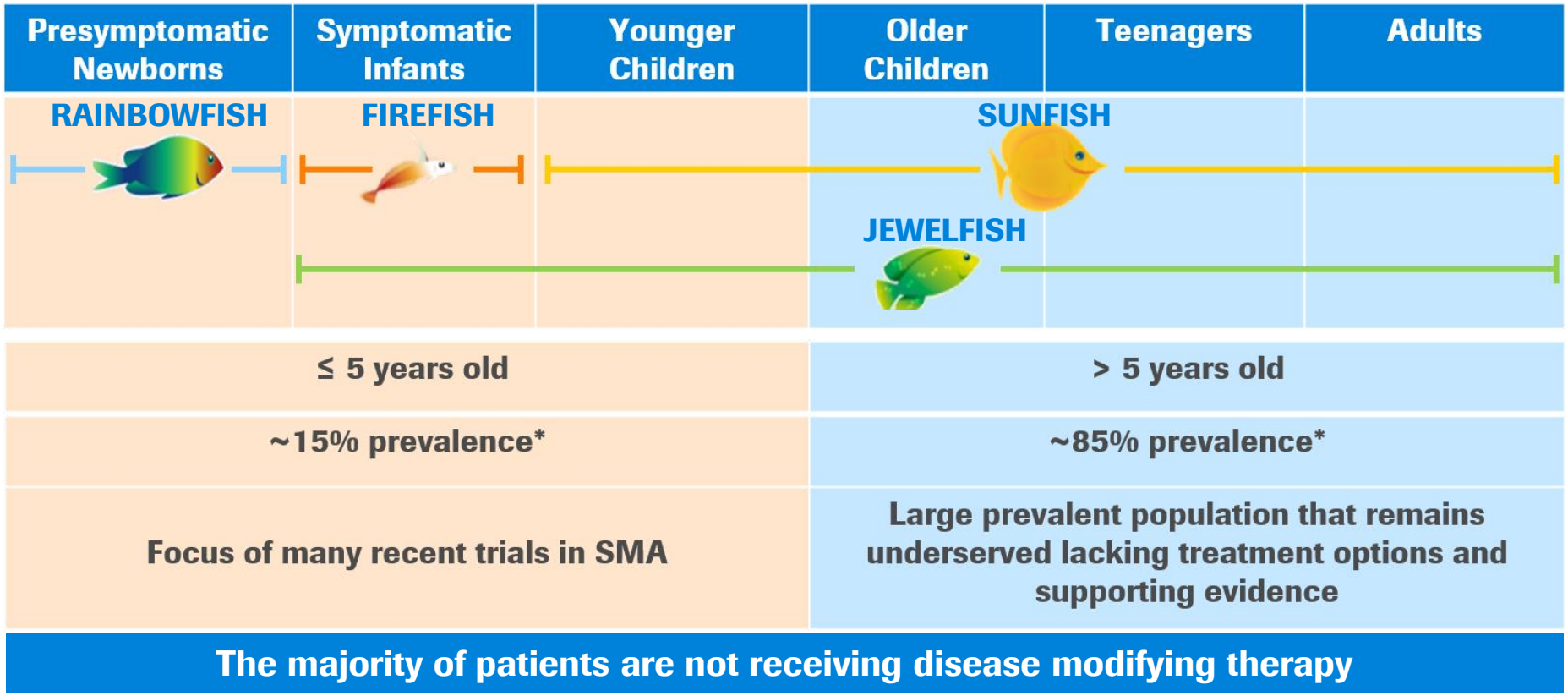
Oral liquid solution, administered at home

Delivered directly to patient, with contactless delivery

* Based on the average infant weight from the FIREFISH trial

Evrysdi: Evidence being generated across all SMA patients

Representative range of ages, type, prior treatment, disease severity



* Estimated 2020 prevalence in US and EU5

Successful virtual launch of Evrysdi in the US

SMA patients being treated across all segments

Broad uptake across segments in first month of approval

Patients treated with all SMA types
~25% of patients with Type I SMA

Treatment naïve and switch patients
Have treated pts switching from both Spinraza / Zolgensma

Broad range of ages
5m old infants to 70+ year old adults

Access supported by responsible pricing

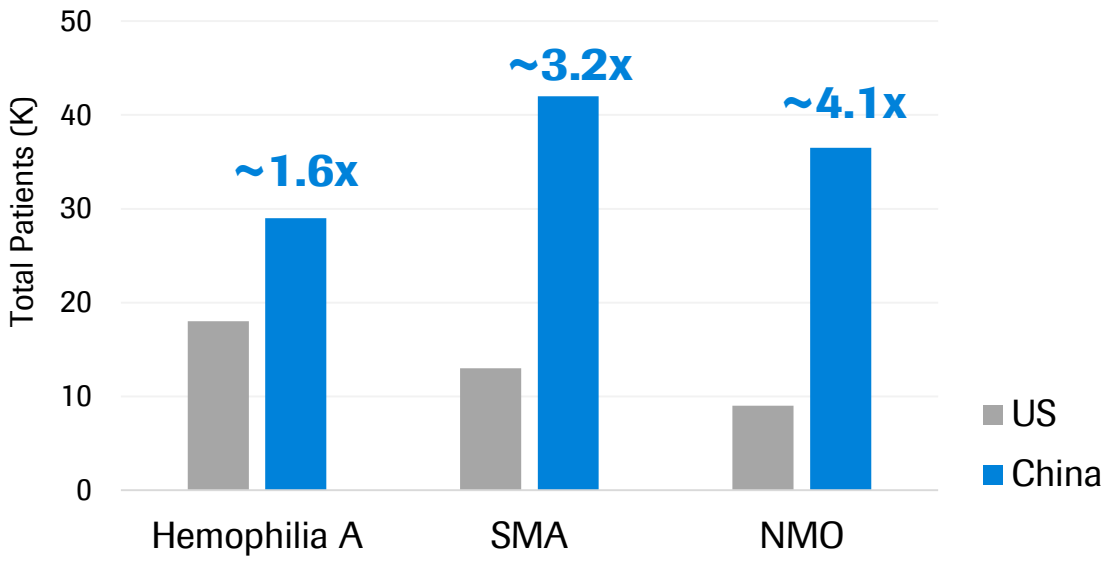
25% discount *to current SOC over 5-yrs (at max Evrysdi price)*

- No additional administration costs
- Commercial and state Medicaid plans moving fast to establish coverage policies

* Based on the average infant weight from the FIREFISH trial

Rare diseases present significant opportunity in China

Large populations of patients with rare diseases



China Rare Disease List established to enable faster filing and approval timelines

Evrysdi risdiplam

- China was the #1 enrolling country in FIREFISH Part II trial
- Regulatory submission completed in China with approval expected H1 2021

ENSPRYNG satralizumab

- Enspryng China filing dossier accepted with priority review
- NMOSD included on China Rare Disease List

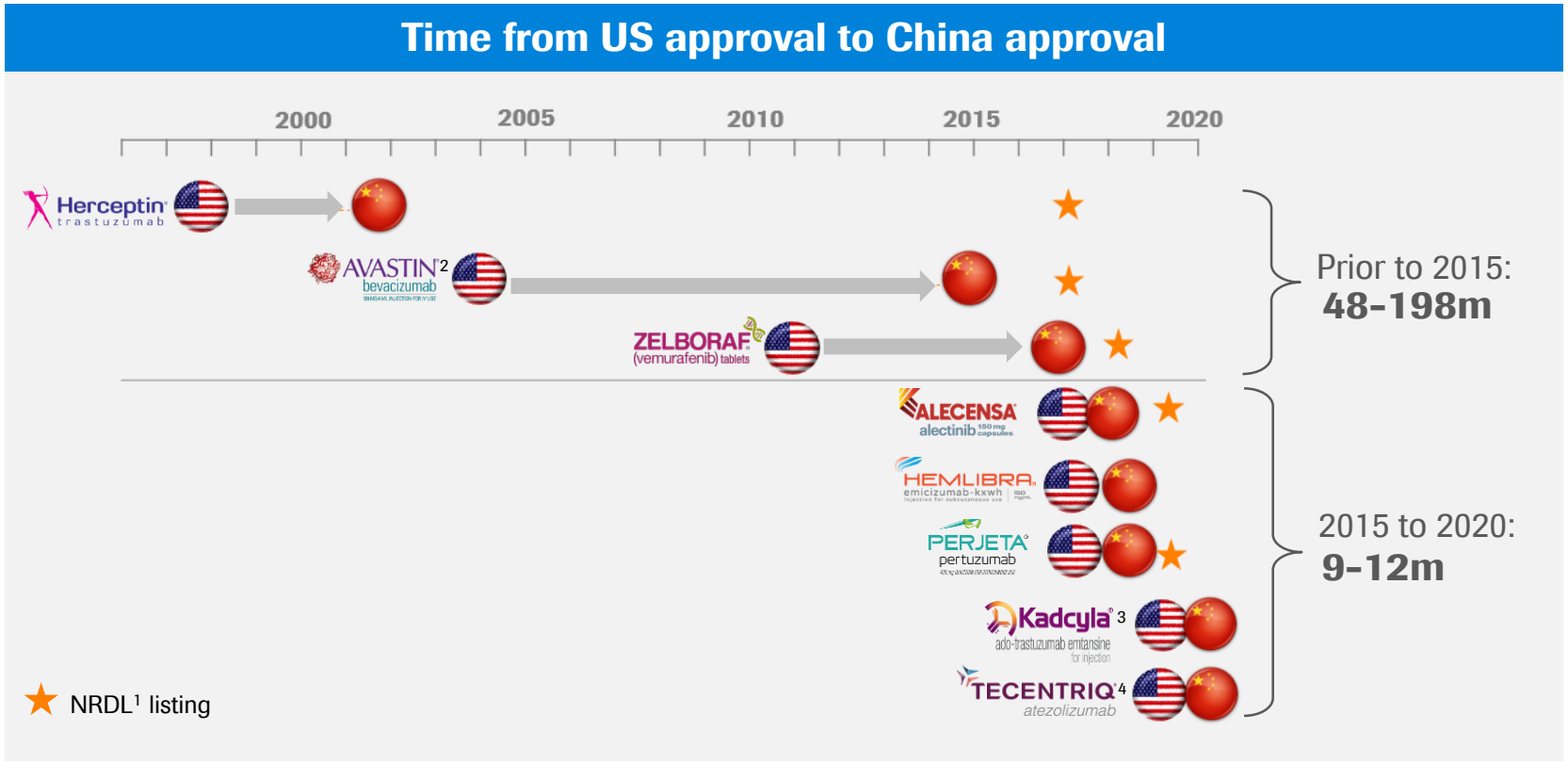
HEMLIBRA emicizumab-kxwh

- NRDL negotiations for Inhibitor expected in 2020
- Regulatory submission completed for Non-Inhibitor label expansion with approval expected in H1 2021

Source: McKinsey Report

Closing the approval gap in China

Bringing innovative medicines to Chinese patients faster



Tecentriq+Avastin 1L HCC approval expected in 2020 (within 5-6 months of US approval)

NRDL negotiations expected in 2020 for Kadycla, Tecentriq, Hemlibra

3-5x volume growth seen with other Roche medicines within 2 years of addition to NRDL

[1] NRDL: National Reimbursed Drug List; [2] Refers to Avastin Lung Cancer Indication; [3] Refers to Kadcyla Early Breast Cancer Indication; [4] Refers to Tecentriq Small Cell Lung Cancer Indication

Strong short- and mid-term news flow

Diversifying the late stage pipeline and setting new standards of care

Product	Indication	Filing	Market potential
tominersen	Huntington's	latest 2022	
gantenerumab	Alzheimer's	2022	
SRP-9001	DMD	latest 2023	
etrolizumab	Crohn's	2022	
PDS	nAMD DME	2020 2022	
faricimab	DME nAMD	2021	
Actemra + remdesivir	COVID-19	2021	
REGN-COV2	COVID-19	2021	
crovalimab	PNH	2022	

Product	Indication	Filing	Market potential
Gavreto	RET+ NSCLC	filed	
	thyroid cancer	filed	
Tecentriq	NeoAdj TNBC	2020	
	Adj SCCHN	2021	
	Adj RCC	2021	
	(Neo)Adj NSCLC	2021/22	
	Adj HCC	2022	
Tecentriq + P+H	NeoAdj HER2+ BC	2021	
ipatasertib	1L/2L TNBC	2020	
	1L mCRPC	2020	
Polivy	1L DLBCL	2021	
tiragolumab + T	1L SCLC	2022	
mosunetuzumab	R/R FL	2021	
glofitamab	R/R DLBCL	2022	
Venclexta	R/R MM t(11;14)	2022	
SERD (RG6171)	2L/3L mBC	2022	

Neuroscience
Immunology
Infectious diseases
Ophthalmology
Oncology/Hematology

Small: up to CHF 0.5 bn
medium= CHF 0.5 to CHF 1bn
large > CHF1bn

Source: Roche/Genentech, incidence/prevalence in the major markets (US, FR, DE, IT, ES, GB); DMD=duchenne muscular dystrophy; nAMD=neovascular age-related macular degeneration; DME=diabetic macular edema; NSCLC=non-small cell lung cancer; TNBC=triple-negative breast cancer; SCCHN=squamous cell carcinoma of the head and neck; RCC=renal cell carcinoma; HCC=hepatocellular carcinoma; mCRPC=metastatic castration resistant prostate cancer; DLBCL=diffuse large B-cell lymphoma; SCLC=small cell lung cancer; FL=follicular lymphoma; PNH=paroxysmal nocturnal hemoglobinuria

short break

Roche Late Stage Pipeline Event 2020

Late Stage Pipeline Oncology & Non-malignant Hematology

Levi Garraway, M.D., Ph.D. | Executive Vice President, Head of Global Product Development and Chief Medical Officer

Late stage pipeline update

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

Oncology / Hematology
Neuroscience
Ophthalmology
Infectious diseases
Immunology

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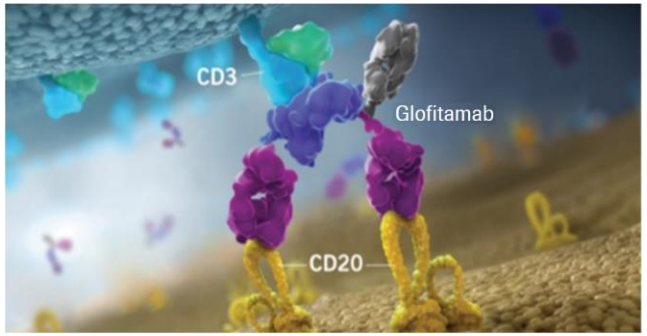
Hematology: Glofitamab in NHL

Potential for early filing in R/R DLBCL

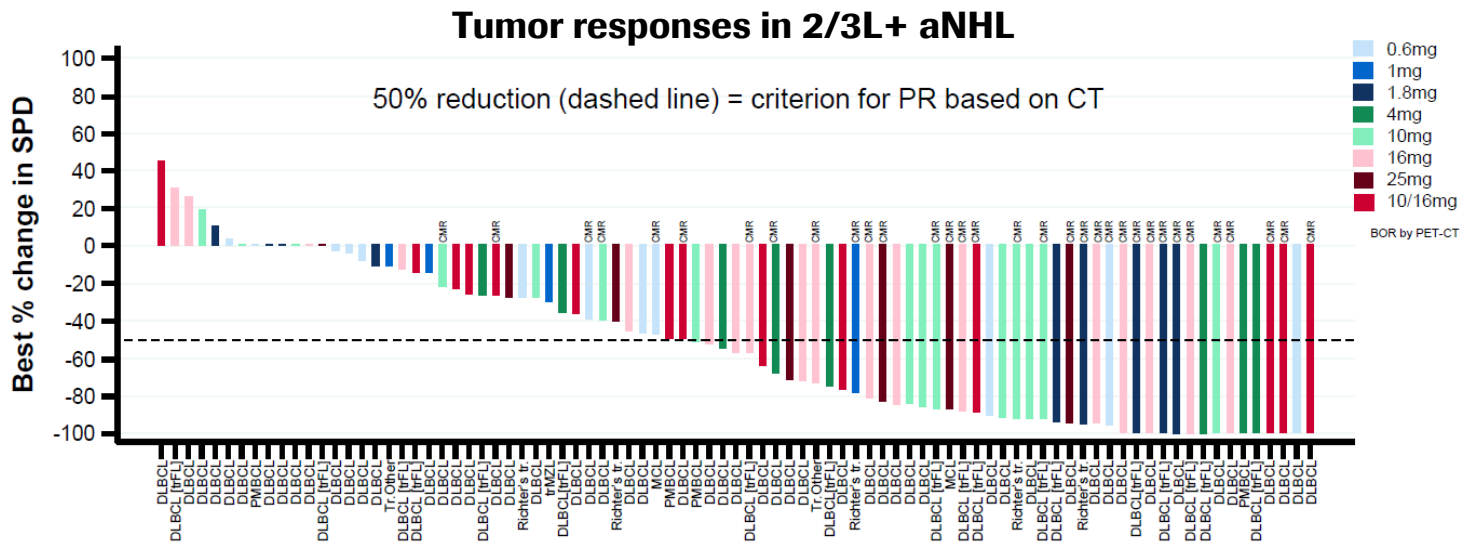
CD20 x CD3 program



Combination	Indication	Ph1	Ph2	Ph3
glofi+GemOx	2L+ DLBCL			
glofi	R/R DLBCL/FL			
glofi+G/R+CHOP	1L DLBCL			
glofi+T	R/R DLBCL/FL			
glofi+G	R/R FL			
glofi+P	R/R DLBCL			

- ~1000 Patients have been treated in the CD20xCD3 program (glofit and mosun)
- Initial registration potential for glofitamab in R/R DLBCL and for mosunetuzumab in R/R FL

Ph I (NP30179) dosing in R/R aNHL*



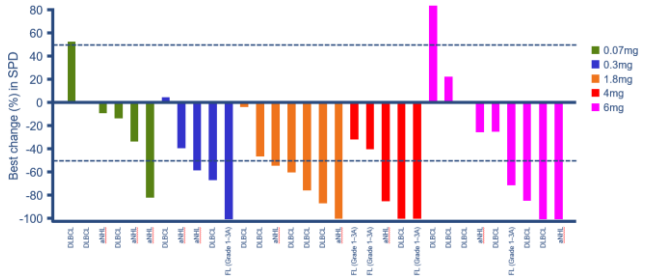
- The ≥10mg cohorts in R/R aNHL showed an ORR of 49.4% and a CR rate of 34.1%; CRs appeared durable with the mDOR not reached after a median follow up of 10.2m
- Good safety profile with manageable CRS confined to cycle 1
- Combination development with R-CHOP and Polivy in DLBCL on-going
- Ph III safety run-in for glofitamab + GemOx in 2L+ DLBCL initiated

Dickinson. M.J. et al, EHA 2020; aNHL=agressive non-Hodgkin's lymphoma; DLBCL=diffuse large B cell lymphoma; FL=follicular lymphoma; glofit=glofitamab; GemOx=gemcitabine, oxaliplatin; G=Gazyva; R-CHOP=Rituxan, cyclophosphamide, doxorubicin, vincristine, prednisone; P=Polivy; ORR=overall response rate; CR=complete response; mDOR=median duration of response; CRS=cytokine release syndrome; *Aggressive NHL includes primarily DLBCL, some transformed FL, PMBCL, MCL, transformed MZL and Richter's transformation

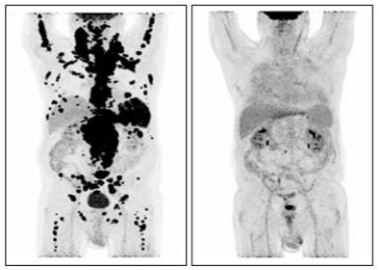
Hematology: Exploring feasible combinations

Initial efficacy and safety data show combination potential

Ph I results of glofitamab + Tecentriq in R/R NHL



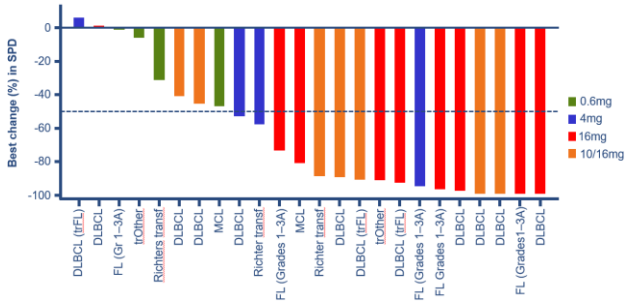
3L R/R DLBCL patient



Baseline | *CR after 2 doses glofitamab and 1 dose of Tecentriq*

- T-cell activation observed consistent with the hypothesized MOA of the combination
- Trend towards increased response rate was observed starting at glofitamab doses ≥1.8mg
- Manageable safety in R/R NHL

Ph I results of glofitamab + Gazyva in R/R NHL



0.6mg and 4mg cohorts combined				
n(%)		aNHL (N=8)	DLBCL (N=2)	FL (N=2)
ORR		1 (12.5)	0	1 (50.0)
	CR	1 (12.5)	0	1 (50.0)
	PR	0	0	0
16mg and 10/16mg cohorts combined				
n(%)		aNHL (N=14)	DLBCL (N=9)	FL (N=4)
ORR		10 (71.4)	5 (55.6)	3 (75.0)
	CR	8 (57.1)	4 (44.4)	3 (75.0)
	PR	2 (14.3)	1 (11.1)	0

- Highly promising activity in heavily pre-treated patients
- ORR and CR rates by investigator assessment were 54% (15/28 pts) and 46% (13/28); CR appear durable
- Safety profile consistent with known safety profiles of the individual drugs

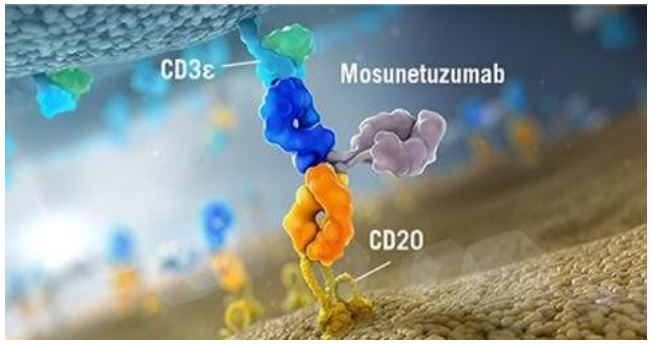
Further development work needed to identify most promising paths forward for chemo-free combinations

Hutchings, M., et al, ASH 2019; Morschhauser, F., et al, ASH 2019; NHL=Non-Hodgkin's lymphoma; DLBCL=Diffuse large B-cell lymphoma; FL=Follicular lymphoma; MOA=mechanism of action; ORR=overall response rate; CR=complete response; CRS=cytokine release syndrome

Hematology: Mosunetuzumab in NHL

Potential for early filing in R/R FL; SC data to be presented at ASH

CD20 x CD3 program

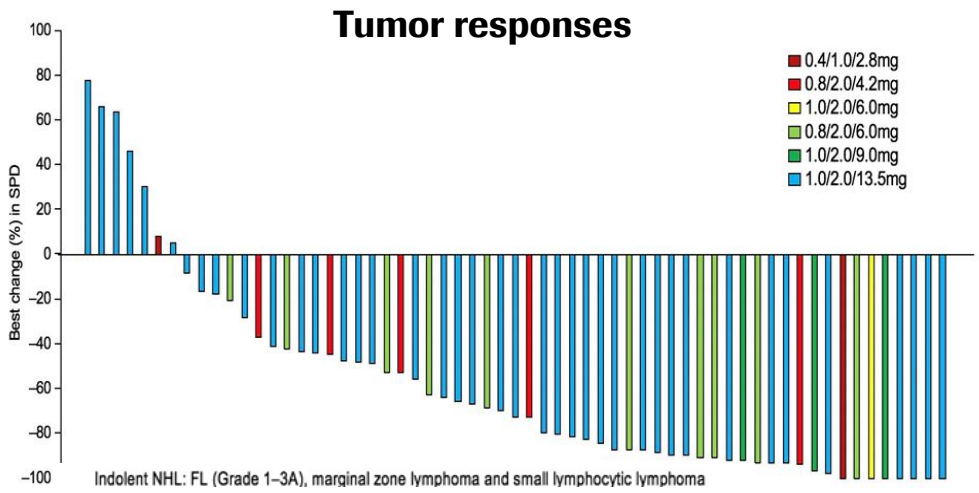


Combination	Indication	Ph1	Ph2	Ph3
mosun+len	R/R FL			
mosun+CHOP *	1L DLBCL			
mosun+CHP+P	1L DLBCL			
mosun *	R/R DLBCL/FL/MCL			
mosun *	1L/2L (unfit) DLBCL			
mosun	3L+ DLBCL/FL/ ibrutinib R/R MCL			
mosun+P	R/R DLBCL			
mosun+T	R/R DLBCL/FL			
mosun SC *	R/R DLBCL/FL			

* Data submitted to ASH 2020

Mosunetuzumab in 3L+ FL

FDA BTD



- Pooled data from 2.8mg to 13.5mg cohorts showed an ORR of 62.7% and CR of 43.3%; 82.8% patients remain in complete remission for up to 26m off initial treatment
- Overall CRS rate of 28.9% (predominantly fever Gr1) with only 1.1% CRS events of Gr≥3
- Ph III safety run-in for mosunetuzumab + lenalidomide in R/R FL initiated
- First Ph I data on mosunetuzumab SC to be presented at ASH 2020

Shuster, S.J., et al,, ASH 2019; NHL=non-Hodgkin's lymphoma; DLBCL=diffuse large B cell lymphoma; FL=follicular lymphoma; CHOP=cyclophosphamide, doxorubicin, vincristine, prednisone; P=Polivy; T=Tecentriq; mosun=mosunetuzumab; ORR=overall response rate; CR=complete response; CRS=cytokine release syndrome; R/R=relapsed/refractory; mDOR=median duration of response; SC=subcutaneous

Hematology: Venclexta in CLL, AML, MM, MDS

Ph III studies to be initiated in various indications

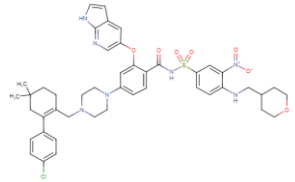
VENCLEXTA® venetoclax tablets 10mg, 50mg, 100mg

Roche

25TH EHA CONGRESS FRANKFURT, GERMANY JUNE 11 - 14, 2020

Venclexta progam

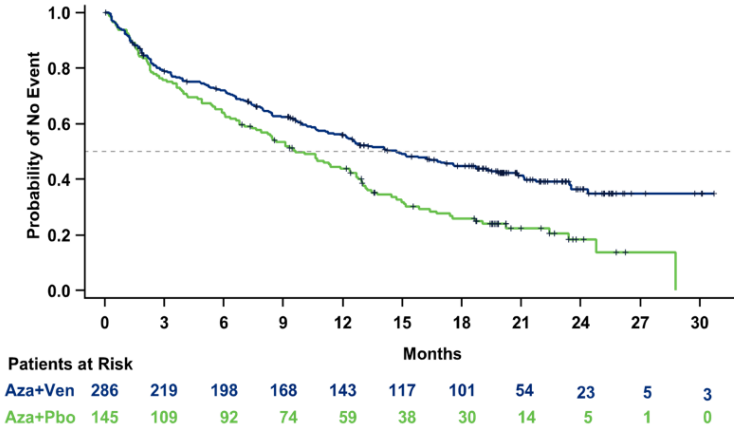
Bcl-2 inhibitor



	Combination	Indication	Ph1	Ph2	Ph3
NHL	V+P+G/R	R/R DLBCL/FL			
CLL	V+G	1L unfit CLL			✓
	V+R	R/R CLL			✓
	V	R/R CLL 17p			✓
	V	R/R CLL after ibru/idel			
	V+G	1L fit CLL			
MM	V+dex	t(11;14) R/R MM			
	V+carfilzomib+dex	t(11;14) R/R MM			
AML	V+aza	1L AML			✓
	V+LDAC	1L AML			✓
	V+AMG176	R/R AML			
	V+gilteritinib	R/R AML			
MDS	V+aza	1L MDS			
	V+/-aza	R/R MDS			
HR+BC	V+fulvestrant	2L+ HR+			

Ph III (VIALE-A) results in 1L unfit AML

Overall survival



No. of events/No. of patients (%)	Median duration of study treatment, months (range)	Median overall survival, months (95% CI)
161/286 (56)	7.6 (<0.1 – 30.7)	14.7 (11.9 – 18.7)
109/145 (75)	4.3 (0.1 – 24.0)	9.6 (7.4 – 12.7)

Hazard ratio: 0.66 (95% CI: 0.52 – 0.85), p<0.001

- Ph III (Viale-A) results in 1L unfit AML filed in US (RTOR) and EU
- Ph III (Viale-M) in 1L fit AML initiated
- Ph III (CristaLLo) in 1L fit CLL with MRD as primary endpoint started in Q2 2020
- Additional Ph III studies in AML and MDS planned

DiNArdo C.D. et al., EHA 2020; NHL=non-Hodgkin's lymphoma; CLL=chronic lymphoid leukemia; AML=acute myeloid leukemia; MM=multiple myeloma; MDS=myelodysplastic syndrome; mOS=median overall survival; HR=hazard ratio; V=Venclexta; P=Polivy; G=Gazyva; R=Rituxan; dex=dexamethasone; bor=bortezomib; aza=azacitidine; LDAC=low dose cytarabine; RTOR=real-time oncology review; Venclexta in collaboration with AbbVie

Late stage pipeline update

1. **Hematology franchise**
   - DLBCL: Polivy, glofitamab, mosunetuzumab
   - FL: mosunetuzumab, glofitamab, Polivy
   - AML: Venclexta
   - MM: Venclexta
   - MDS: Venclexta

2. **Breast Cancer franchise**
   - TNBC: Tecentriq, ipatasertib
   - HR+: SERD (RG6171), PI3Kαi (RG6114)
   - HER2+: Tecentriq

3. **Lung Cancer franchise**
   - NSCLC: Tecentriq, tiragolumab
   - SCLC: Tecentriq, tiragolumab
   - ALK+: Alecensa
   - ROS1+/NTRK+: Rozlytrek
   - RET+: Gavreto
   - KRAS *G12C*+: GDC-6063

4. **Other oncology**
   - CRPC: ipatasertib
   - Thyroid cancer: Gavreto
   - Esophageal cancer: tiragolumab
   - Melanoma: Tecentriq, Cotellic, Zelboraf

5. **Non-malignant hematology**
   - Hemophilia A: Hemlibra
   - Hemophilia A: Factor VIII Gene Therapy
   - PNH: crovalimab

6. **Neuroscience**
   - MS: Ocrevus; fenebrutinib
   - SMA: Evrysdi
   - NMOSD: Enspryng
   - AD: gantenerumab, anti-Tau, brain shuttle
   - Huntington's disease: tominersen
   - DMD: Micro-dystrophin Gene Therapy
   - Parkinson's disease: prasinezumab

7. **Immunology**
   - IPF: rhPentraxin-2, Esbriet
   - Myelofibrosis: rhPentraxin-2
   - Lupus nephritis: Gazyva
   - Crohn's disease: etrolizumab

8. **Ophthalmology**
   - nAMD, DME, DR: Port Delivery System
   - nAMD, DME, RVO: faricimab

9. **Infectious diseases**
   - HBV: TLR7 agonist, CpAM, RG6346, RG6084
   - Influenza A/B: Xofluza
   - SARS-CoV2: Actemra
   - SARS-CoV2: REGN-COV2

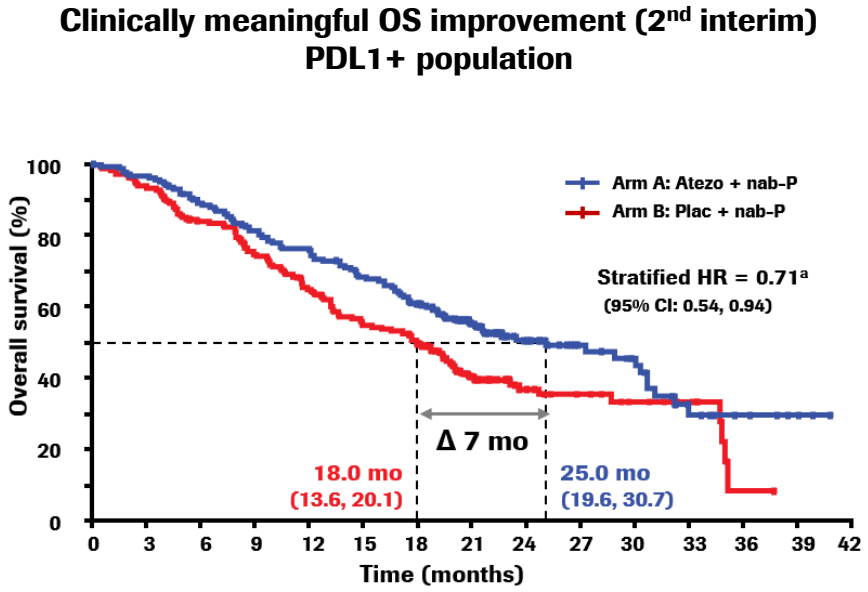
Oncology / Hematology
Neuroscience
Ophthalmology
Infectious diseases
Immunology

* For further information on target patient populations please consult the appendix; For further details on the late stage pipeline please consult the HY 20 results presentation appendix or visit the IR homepage

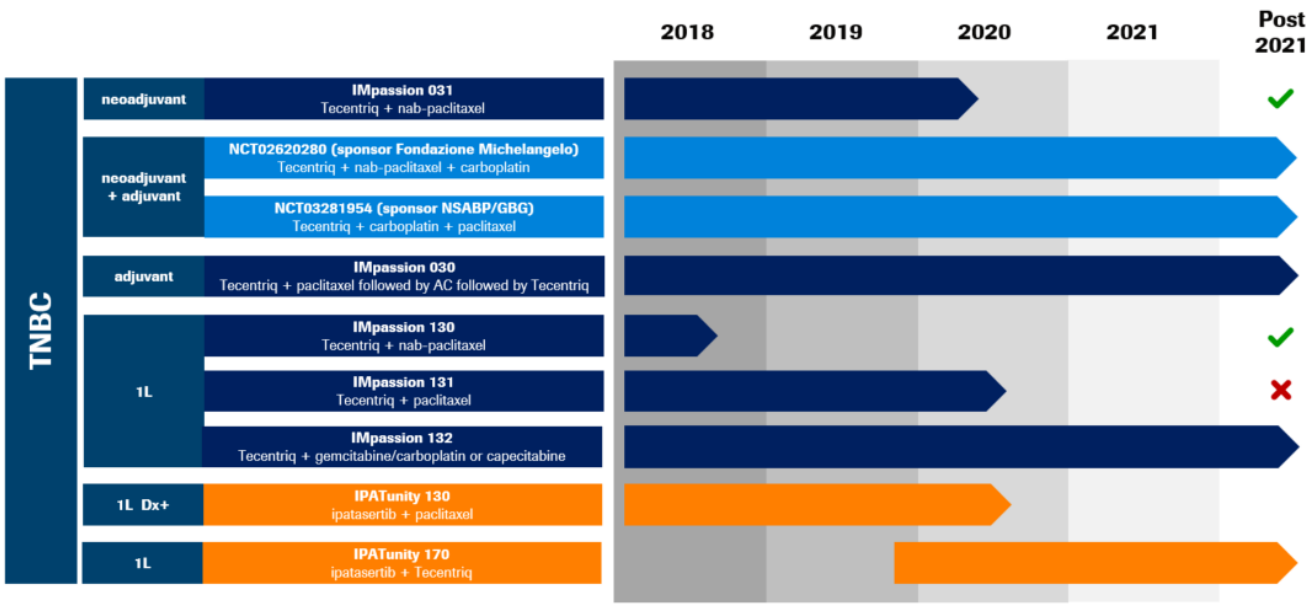
TNBC franchise: Tecentriq + nab-pac new SOC in 1L

Positive Ph III results in neoadjuvant

Ph III (IMpassion130) results in 1L



TNBC program covering all lines of treatment*



- Positive Ph III (IMpassion031) results for Tecentriq+nab-pac in neoadjuvant TNBC announced; data to be presented

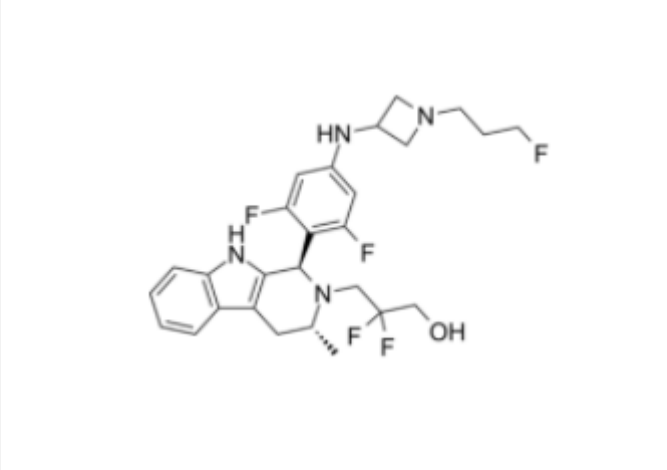
Schmid P, et al. ASCO 2019 (Data cutoff: January 2, 2019); Schmid P, et al. ESMO 2018; TNBC=triple negative breast cancer; nab-pac=nab-paclitaxel (Abraxane); HR=hazard ratio; OS=overall survival;
[a]Not formally tested due to pre-specified hierarchical analysis plan (data included in the EMA label); *Outcome studies are event-driven: timelines may change

HR+/HER2- franchise: Potentially best in class 3rd gen SERD

Strong efficacy as a single agent and in combination

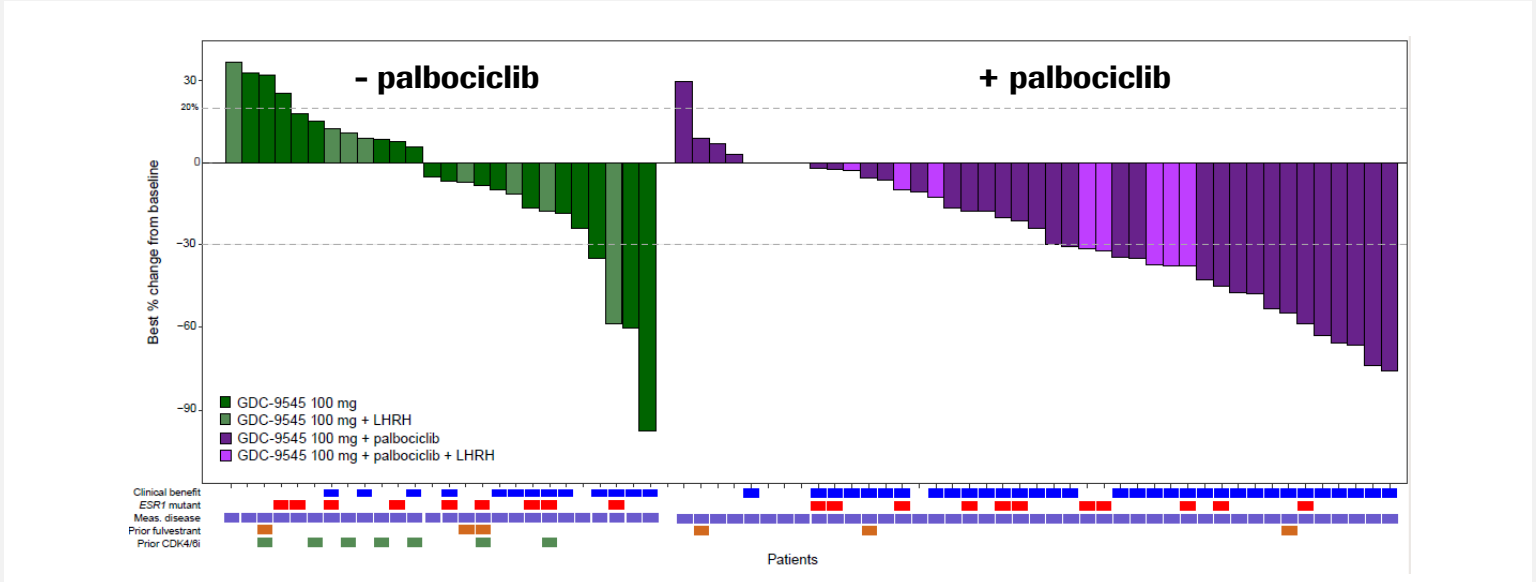
ASCO 20 Virtual

Selective ER degrader (SERD) RG6171 (GDC-9545)



- 3rd generation oral SERD
- Highly potent in vitro and improved efficacy in vivo versus previous SERDs
- High potency + minimal safety findings lead to wide nonclinical safety margins
- First SERD with positive combination data with a CDK4/6 inhibitor

Ph Ib results: Tumor responses RG6171 +/- palbociclib



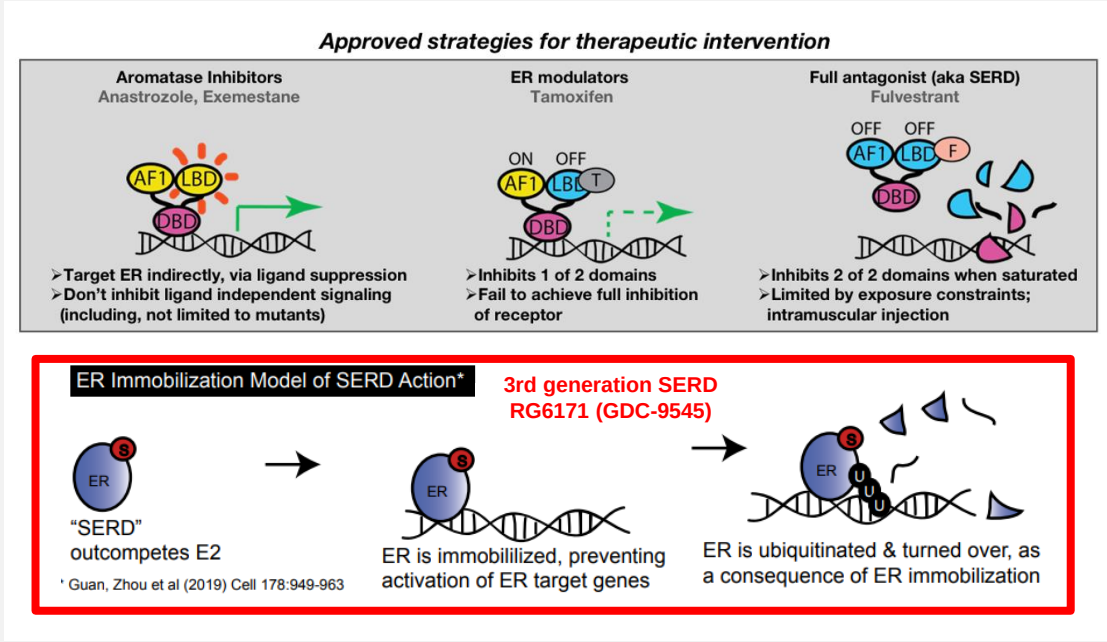
- Strong potentially best-in-class efficacy as single agent or in combination with a CDK4/6 inhibitor in pre-treated ER+ patients, regardless of ESR1 resistance mutations
- Well-tolerated up to doses of 100 mg daily
- Expansion cohort at 30 mg daily on-going given the promising efficacy with a clinical benefit rate of 50%*

Lim E. *et al*., ASCO 2020; Metcalfe C. *et al*., SABCS 2018; HR=hormone receptor; mBC=metastatic breast cancer; ER=estrogen receptor; LHRH=lutenizing hormone /releasing hormone; * At 30 mg no bradycardia events reported to date

HR+/HER2– franchise: Potentially best in class 3rd gen SERD

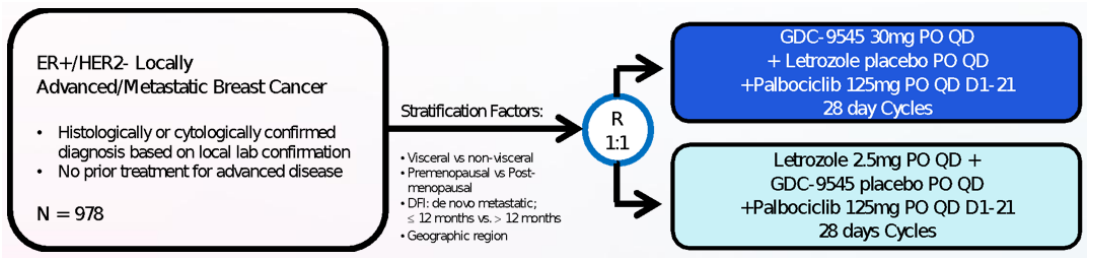
Ph III program in 1L+ and eBC initiated

3rd gen SERD: Overcoming fulvestrant limitations Improved MOA for a well established target



- RG6171 is a 3rd generation SERD with improved bioavailability and a novel MOA: Increased efficacy is due to "ER immobilization" which supressess transcriptional activity prior to ER degradation

Ph III trial design in 1L mBC



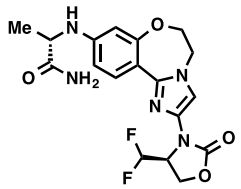
- Ph III RG6171 + palbociclib in 1L mBC to start in 2H 2020
- Ph II RG6171 + palbociclib in neoadjuvant started in Q3 2020; Ph III adjuvant study planned
- Pivotal Ph II RG6171 in 2/3L to start in Q4 2020; results expected in 2022

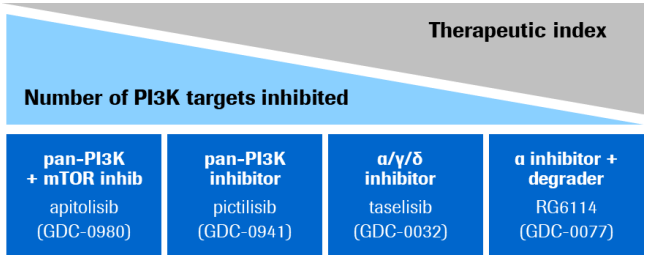
Guan J. and Zhou W. et al. (2019) Cell; HR=hormone receptor; mBC=metastatic breast cancer; ER=estrogen receptor; MOA=mechanism of action; L=line

HR+/HER2- franchise: PI3Kαi in *PIK3CA*-mutant tumors

Ph III for potentially best in class PI3Kα inhibitor started

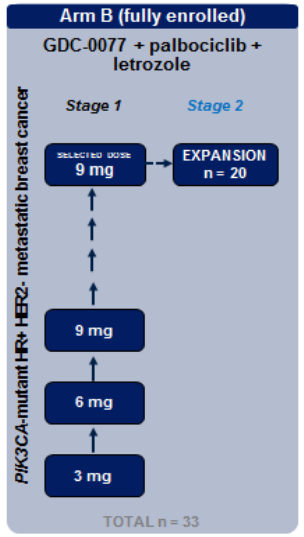
PI3Kα selective inhibitor + mutant PI3Kα degrader

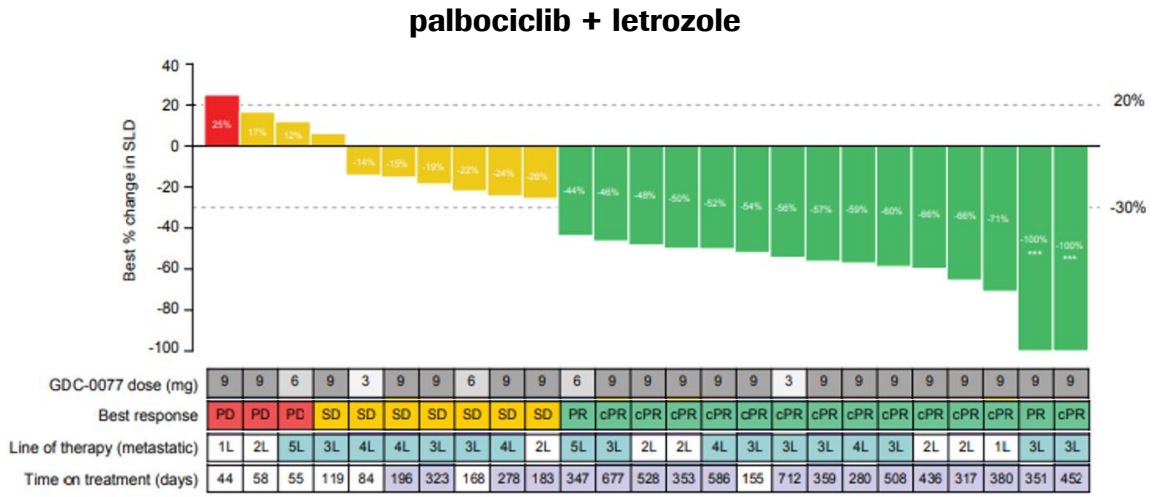




- Dual MOA: More potent and selective for PI3Kα + degrades mutant PI3Kα
- Greater safety margins
- Better in vivo efficacy
- Greater, more durable target inhibition
- Combinations with other therapies

Ph I (dose escalation and expansion cohort)





- Strong efficacy in on-going Ph I/Ib as single agent or as combo with ET (letrozole or fulvestrant) +/- palbociclib in patients with locally advanced or metastatic *PIK3CA*-mutant solid tumors
- Good safety as single agent or combined
- Ph III (INAVO120) RG6114* + palbociclib + fulvestrant in 1L *PIK3CA*-mutant HR+/HER2- mBC started in Q1 2020

Jhaveri, K., et al, SABCS 2019; Kalinsky K. et al., AACR 2020; ET=endocrine therapy; HR=hormone receptor; BC=breast cancer; ORR=overall response; * GDC-0077

Late stage pipeline update

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   - RET+: Gavreto
   - KRAS *G12C*+: GDC-6063

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   - Influenza A/B: Xofluza
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   - SARS-CoV2: REGN-COV2

Oncology / Hematology
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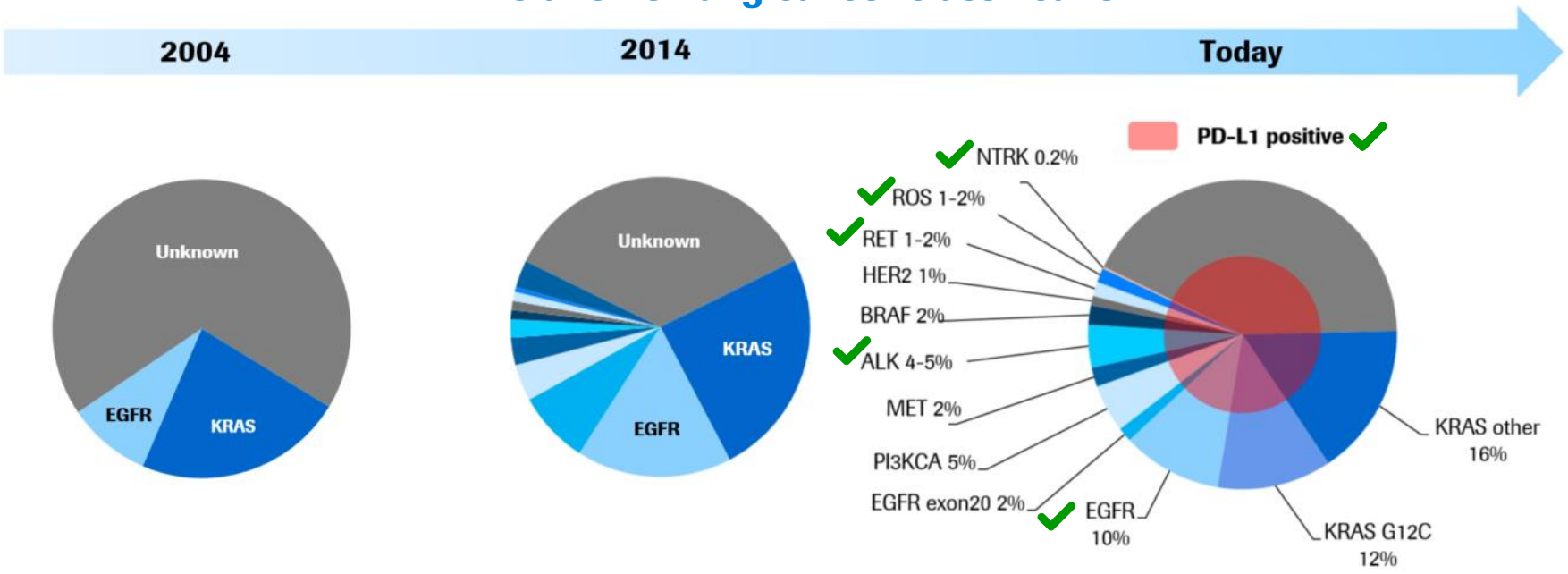
Lung franchise

Integrated value proposition for patient classification & care

Evolution of lung cancer classification



- Roche uniquely positioned to establish integrated PHC solutions
- Develop rare mutation agents faster and cheaper leveraging B-FAST, FMI, Flatiron, PHC
- Multiple lung pilots focused on integrated offerings underway (Taiwan, Croatia, Australia)

FoundationOne® CDx

FoundationOne® Liquid CDx

NAVIFY®

ALECENSA® alectinib

ENTRECTINIB

GAVRETO® pralsetinib

Tarceva® erlotinib

TECENTRIQ™ atezolizumab

AVASTIN® bevacizumab

tiragolumab

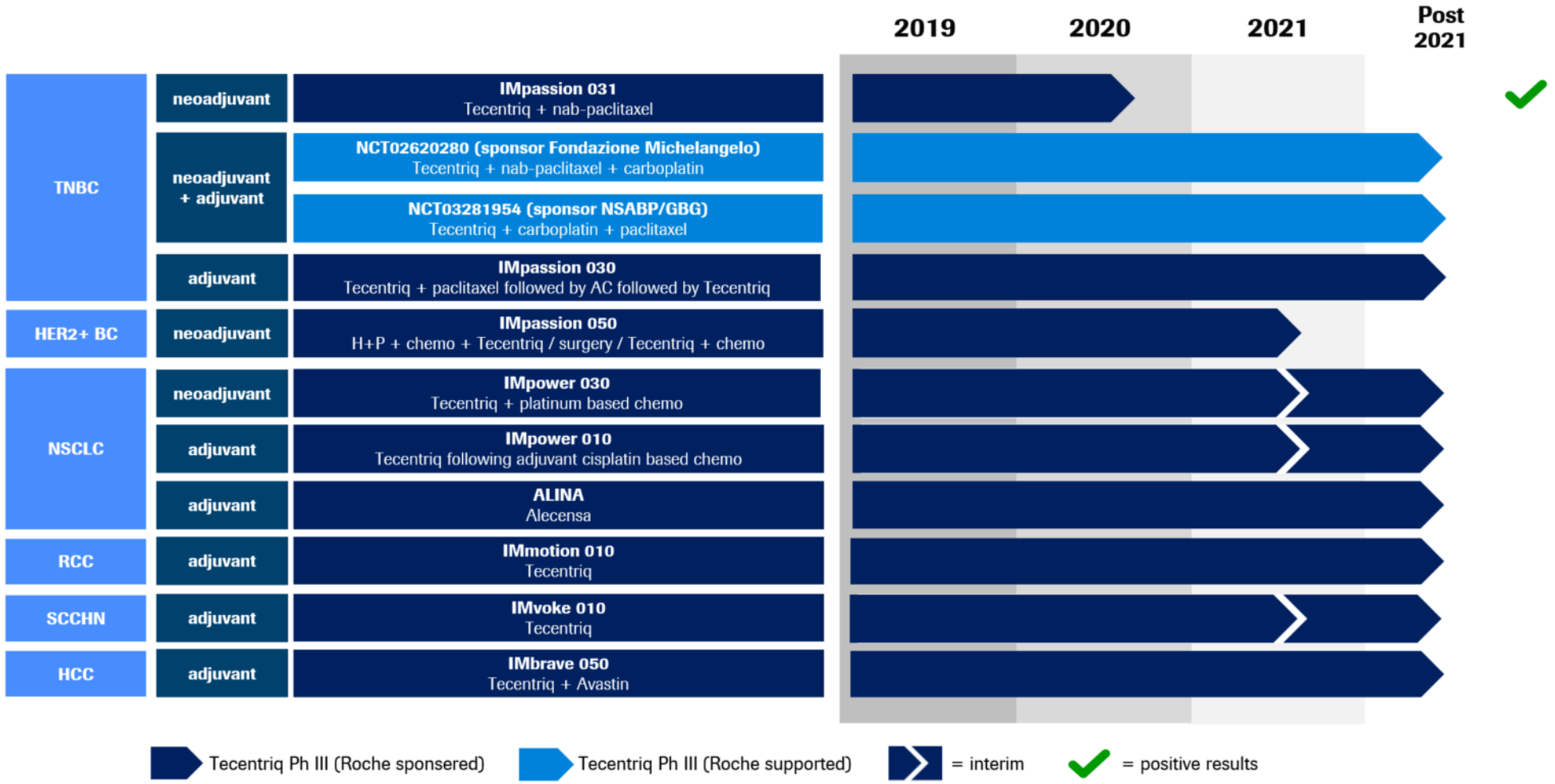
GDC-6036 (KRAS*G12C*)

PI3Kαi (RG6114)

Pao & Girard. Lancet Oncol 2011; Johnson, et al. ASCO 2013; FMI Database, Accessed November 2018 (all NSCLC).

Lung franchise: Overview adjuvant program

NSCLC, HER2+ BC, SCCHN reading out in 2021

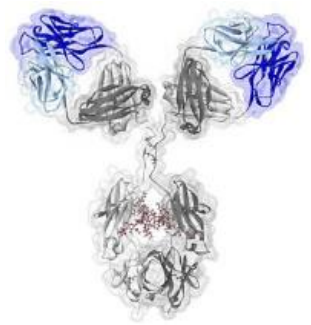


Lung franchise: Tiragolumab + Tecentriq in NSCLC & SCLC

Pivotal Ph III study in stage III NSCLC initiated

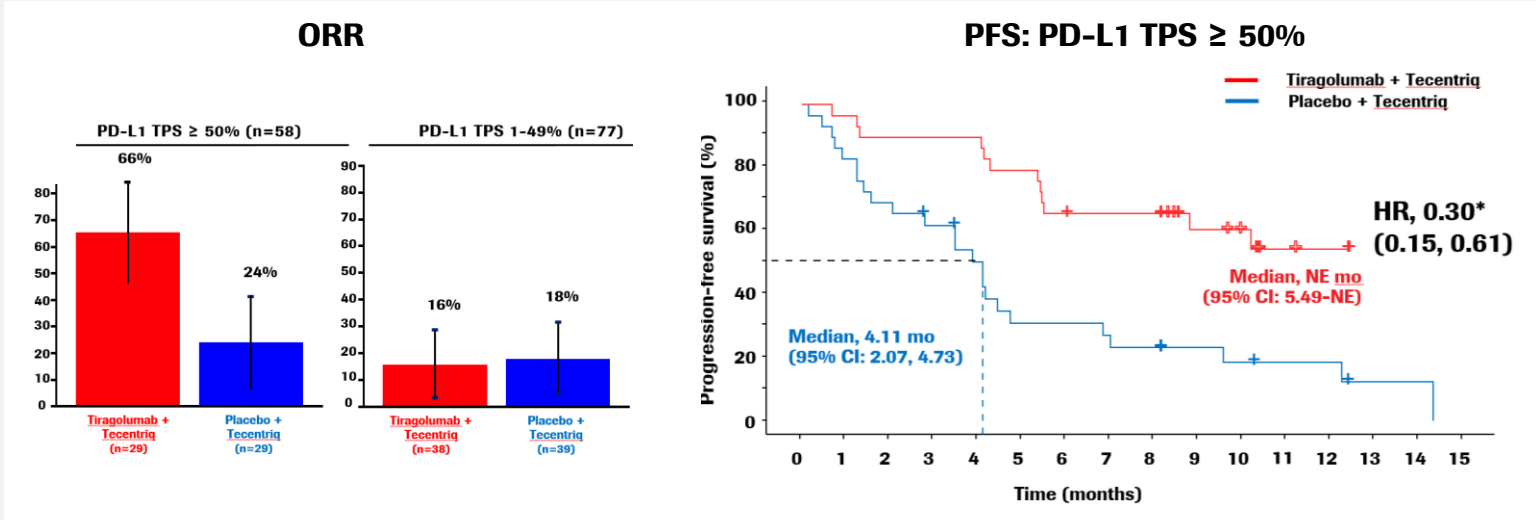
ASCO'20 Virtual

Anti-TIGIT mAb



- Fully human IgG1/kappa Ab with intact Fc region that blocks the binding of TIGIT to its receptor PVR
- Could restore anti-tumor response and could complement the activity of anti-PD-L1/PD-1 antibodies

Randomized Ph II (CITYSCAPE) in 1L NSCLC



- Tiragolumab + Tecentriq showed clinically meaningful improvement in ORR and PFS in the ITT population with a greater magnitude of improvement in the PD-L1 TPS ≥ 50% subgroup
- Tiragolumab + Tecentriq was well-tolerated with a safety profile similar to the control arm
- Ph III in 1L PDL1+ NSCLC (SKYSCRAPER-01), 1L ES-SCLC (SKYSCRAPER-02) and stage III NSCLC (SKYSCRAPER-03) on-going
- Ph II (CITYSCAPE) update including OS in 2021

Johnson et al. Cancer Cell 2014; Rodriguez-Abreu D. et al., ASCO 2020; Follow-up data cut-off: 02 December, 2019; Ab=antibodies; ORR=overall response rate; PFS=progression free survival; HR=hazard ratio; NE=non evaluable; ITT=intention-to-treat; TPS=tumor proportion score; ES-SCLC=extensive stage SCLC; OS=overall survival; * unstratified HR

Lung franchise: Gavreto new SOC in RET+ mNSCLC

Strong and durable responses including CNS disease control

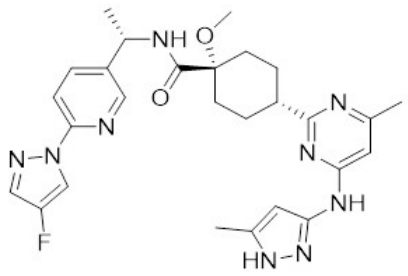
GAVRETO pralsetinib | Roche | blueprint MEDICINES

ASCO 20 Virtual

FDA approved

RET inhibitor

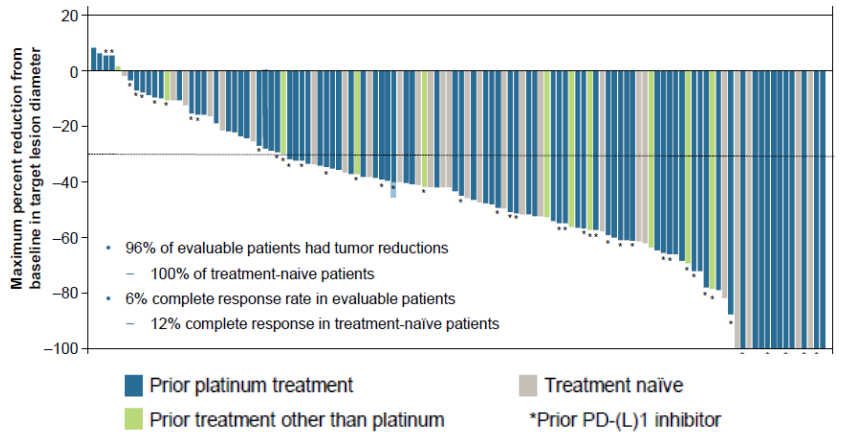
FDA BTD



- Oral small molecule kinase inhibitor
- Highly selective for RET fusions and mutations, including predicted resistence mutations
- Brain penetrant and CNS active
- ~1-2% of NSCLC patients with RET fusions, thereof ~40% with brain metastases

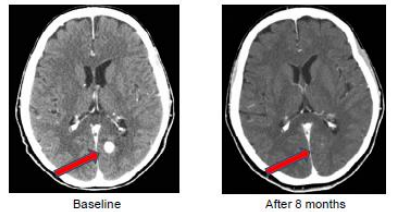
Ph I/II (ARROW) results in RET fusion+ mNSCLC

Tumor responses

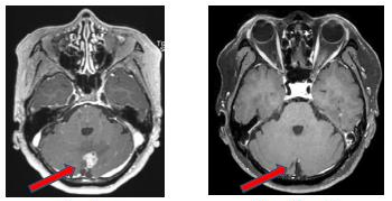


Gainor J. F. et al, ASCO 2020

CNS responses



(Courtesy of G. Curigliano)



(Courtesy of D.W Kim)

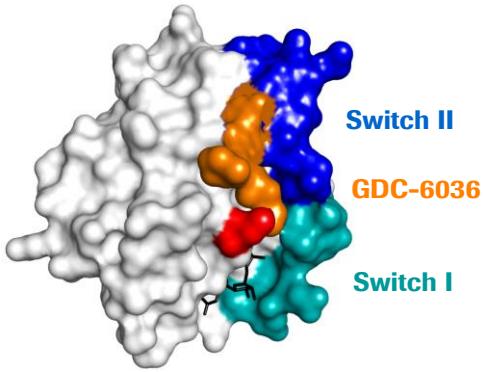
- 70% ORR in naive including 11% CR and 57% ORR in post-platinum patients including 6% CR*
- CNS ORR at 56% (n=9) including 33% CR; rapid and durable responses; mDOR not reached
- Well-tolerated across tumor types with most AEs of grade 1–2
- Ph III (AcceleRET Lung) in 1L advanced or metastatic RET+ NSCLC on-going
- US accelerated approval in RET+ mNSCLC achieved in Q3 2020; filed in the EU

Gainor J. F. et al, ASCO 2020; *Data in the label; SOC=standard of care; CNS=central nervous system; BTD=break through designation; mNSCLC=metastatic non small cell lung cancer; MTC=medullary thyroid cancer; ORR=overall response rate; CR=complete response; mDOR=median duration of response; AE=adverse events; Gavreto (pralsetinib) in collaboration with Blueprint Medicines; Gavreto, Blueprint Medicines and associated logos are trademarks of Blueprint Medicines Corporation; Gavreto was discovered by Blueprint Medicines

Lung franchise: GDC-6036 (KRAS G12C inhibitor) in solid tumors

G12C driver mutations found in 12% of all NSCLC patients

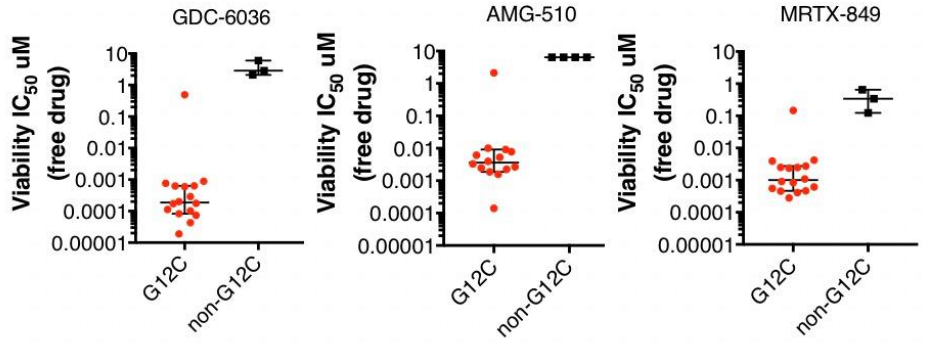
KRAS G12C inhibitor



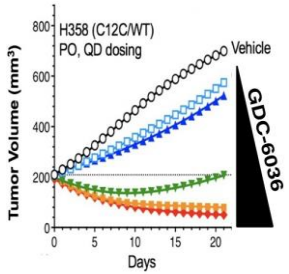
- Highly potent irreversible covalent inhibitor of the KRAS G12C mutant protein, which becomes locked in an inactive state
- Minimal safety findings leading to wide nonclinical safety margins

In vitro and *in vivo* tumor growth inhibition

***In vitro* cell line potency**



Tumor regression in G12C mutant xenograft mouse models



- GDC-6036 causes tumor growth inhibition in multiple patient derived KRAS G12C+ cell lines and in xenograft mouse models
- GDC-6036 synergizes with multiple targeted therapies; strong scientific rationale for combining with medicines that act on other parts of RAS pathway to deepen responses, extend duration of disease control, and limit treatment resistance.
- Ph I dose escalation and expansion in KRAS G12C+ solid tumors started in Q2 2020

Genentech unpublished results

Lung franchise: Blood-based NGS ctDNA assays

30% of lung cancer patients with insufficient biopsy material

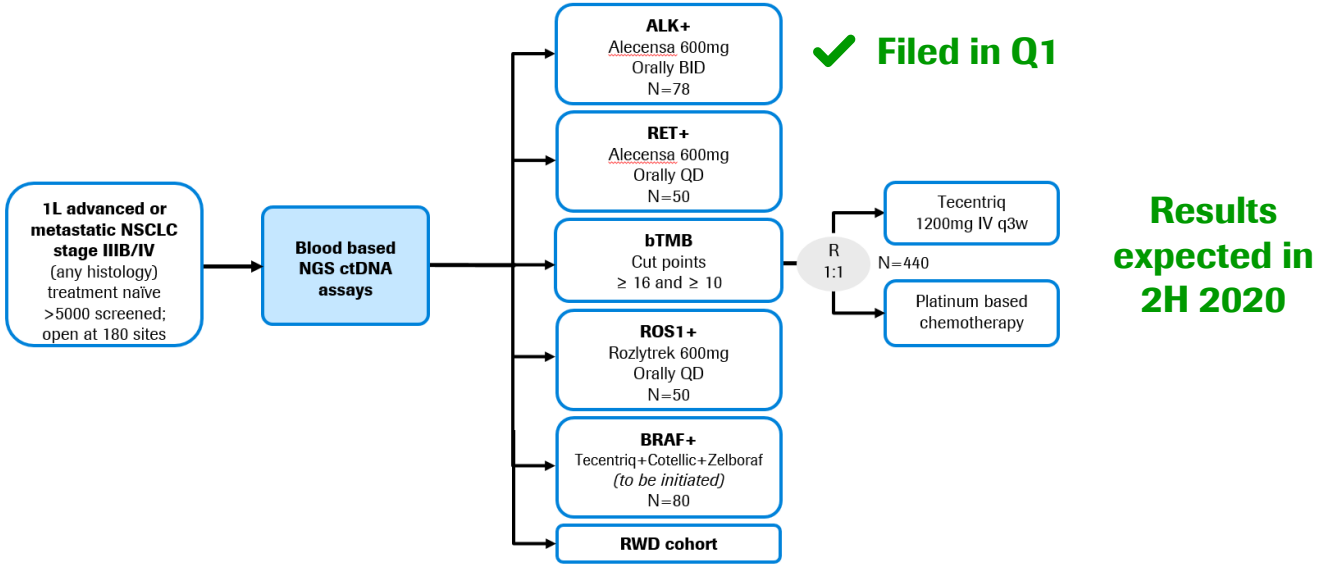
FOUNDATION MEDICINE

Roche

FDA Breakthrough device designation

FDA approved

Ph III trial design (B-FAST) for 1L treatment naive NSCLC



✔ **Filed in Q1**

Results expected in 2H 2020

- Allows for serial liquid biopsy testing to follow tumor evolution and resistance
- RWD cohort paired with NGS testing provides additional natural history & epidemiological data
- Primary endpoint in the ALK+ cohort met; filed in Q1 2020

Blood based biomarkers

FoundationOne®Liquid CDx

- ***Liquid biopsy test that detects the 4 main classes of genomic alterations (324 genes), bTMB, MSI***
- ***Comprehensive genomic profiling including resistance mutations or fusions in NSCLC***
- ***Guides therapy selection and clinical trials***

Mok T. et al., WCLC 2017; NGS=next generation sequencing; ctDNA=circulating tumor DNA; RWD=real world data; bTMB=blood tumor mutational burden; MSI=microsatellite instability

Late stage pipeline update

1. **Hematology franchise**
   - DLBCL: Polivy, glofitamab, mosunetuzumab
   - FL: mosunetuzumab, glofitamab, Polivy
   - AML: Venclexta
   - MM: Venclexta
   - MDS: Venclexta

2. **Breast Cancer franchise**
   - TNBC: Tecentriq, ipatasertib
   - HR+: SERD (RG6171), PI3Kαi (RG6114)
   - HER2+: Tecentriq

3. **Lung Cancer franchise**
   - NSCLC: Tecentriq, tiragolumab
   - SCLC: Tecentriq, tiragolumab
   - ALK+: Alecensa
   - ROS1+/NTRK+: Rozlytrek
   - RET+: Gavreto
   - KRAS *G12C*+: GDC-6063

4. **Other oncology**
   - CRPC: ipatasertib
   - Thyroid cancer: Gavreto
   - Esophageal cancer: tiragolumab
   - Melanoma: Tecentriq, Cotellic, Zelboraf

5. **Non-malignant hematology**
   - Hemophilia A: Hemlibra
   - Hemophilia A: Factor VIII Gene Therapy
   - PNH: crovalimab

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   - MS: Ocrevus; fenebrutinib
   - SMA: Evrysdi
   - NMOSD: Enspryng
   - AD: gantenerumab, anti-Tau, brain shuttle
   - Huntington's disease: tominersen
   - DMD: Micro-dystrophin Gene Therapy
   - Parkinson's disease: prasinezumab

7. **Immunology**
   - IPF: rhPentraxin-2, Esbriet
   - Myelofibrosis: rhPentraxin-2
   - Lupus nephritis: Gazyva
   - Crohn's disease: etrolizumab

8. **Ophthalmology**
   - nAMD, DME, DR: Port Delivery System
   - nAMD, DME, RVO: faricimab

9. **Infectious diseases**
   - HBV: TLR7 agonist, CpAM, RG6346, RG6084
   - Influenza A/B: Xofluza
   - SARS-CoV2: Actemra
   - SARS-CoV2: REGN-COV2

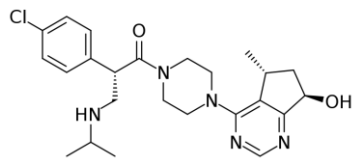
Oncology / Hematology
Neuroscience
Ophthalmology
Infectious diseases
Immunology

* For further information on target patient populations please consult the appendix; For further details on the late stage pipeline please consult the HY 20 results presentation appendix or visit the IR homepage

GU franchise: Ipatasertib in 1L mCRPC

Positive Ph III results for patients with PTEN loss

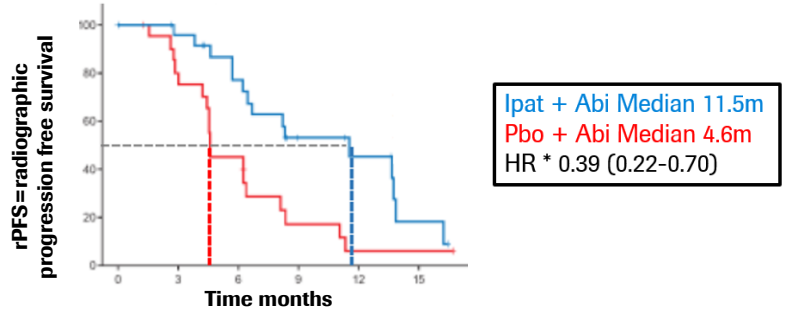
Highly selective AKT inhibitor



- Oral, highly specific inhibitor of all three activated isoforms of AKT and potentially preventing cancer cell growth and survival
- Clinical development in tumors with high frequency of PI3K/AKT pathway activation (CRPC, TNBC, HR+ mBC)

Ph II (A.MARTIN) results

rPFS (400mg dose) in PTEN loss patients



	ICR IHC		Ventana IHC		FISH		NGS	
	PTEN loss	PTEN non-loss	PTEN loss	PTEN non-loss	PTEN loss	PTEN non-loss	PTEN loss	PTEN non-loss
rPFS, mo								
Ipat	11.5	7.5	11.0	7.5	13.7	6.5	13.8	7.4
Pbo	4.6	5.6	4.6	5.7	6.5	5.6	6.2	4.5
rPFS HR [a]	0.39	0.84	0.50	0.74	0.67	0.77	0.24	0.52
90% CI	0.22-0.70	0.51-1.37	0.29-0.87	0.41-1.32	0.36- 1.24	0.50-1.20	0.10-0.60	0.25-1.13

Biomarker assay

Roche VENTANA PTEN (SP218)

- *IHC detection of PTEN protein loss in formalin-fixed, paraffin-embedded tissue*

FOUNDATION MEDICINE

- *Strong concordance to DNA technologies (NGS and FISH)*

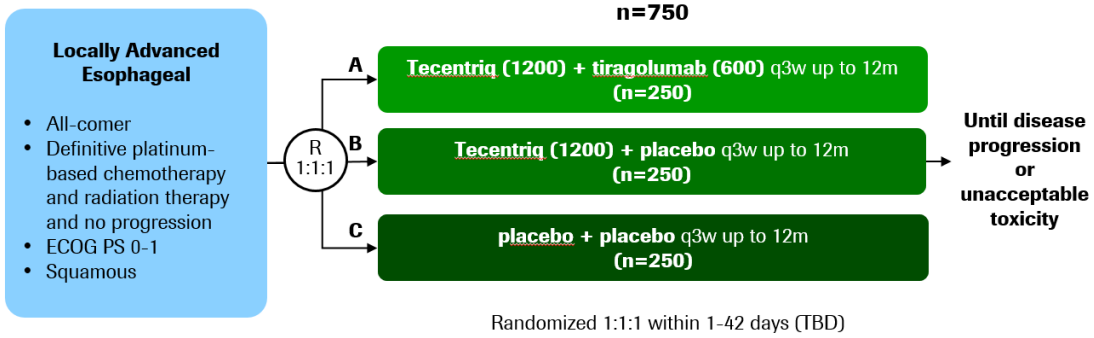
- Ph II: rPFS was prolonged in the ipatasertib 400 mg arm (8.2m vs 6.4m; HR=0.75); Dose-dependent improvement was observed in OS
- PTEN loss was associated with an improved rPFS outcome (HR of 0.39 at 400mg dose) as measured by NGS, FISH and IHC
- Ph III (IPATential150) met co-primary endpoint of rPFS in patients with PTEN loss

De Bono J.S. et al., ESMO 2016; mCRPC=metastatic castration resistent prostate cancer; rPFS=radiographic progression free survival; HR=hazard ratio; abi=abiraterone; OS=overall survival; NGS=next generation sequencing; FISH=fluorescence in situ hybridization; IHC=immunohistochemistry; * unstratified HR; 90% CI

GI franchise: Tiragolumab in esophageal cancer (EC)

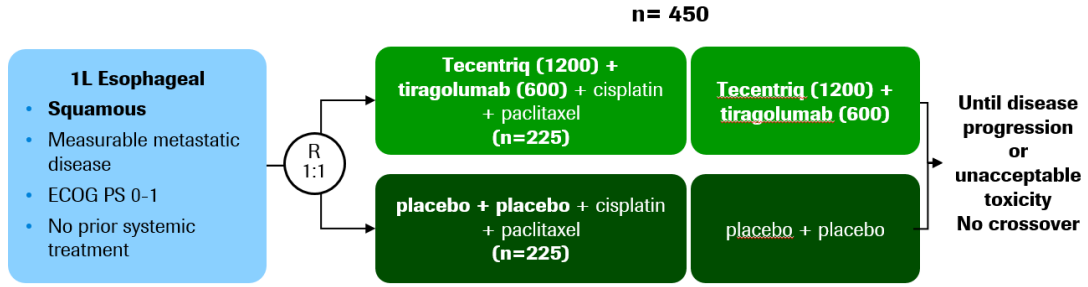
Pivotal Ph III studies initiated

Ph III trial design (SKYSCRAPER-07) in locally advanced EC



- 1EP: PFS A vs C; OS (hierarchical) A vs C; OS (hierarchical) B vs C
- 2EP: OS, PFS A vs B; PFS B vs C; ORR; DOR; safety; QoL

Ph III trial design (SKYSCRAPER-08) in 1L esophageal squamous cancers (ESCC)



- 1EP: OS; PFS
- 2EP: DOR; ORR; safety; QoL

- Preliminary Ph Ib safety and efficacy data in EC to be presented at upcoming conference
- Global development program with focus on Asia, especially China
- Ph III starts expected in 2020

Ab=antibodies; ORR=overall response rate; TPS=tumor proportion score; PFS=progression free survival; NE=non evaluable; ITT=intention-to-treat; * unstratified HR

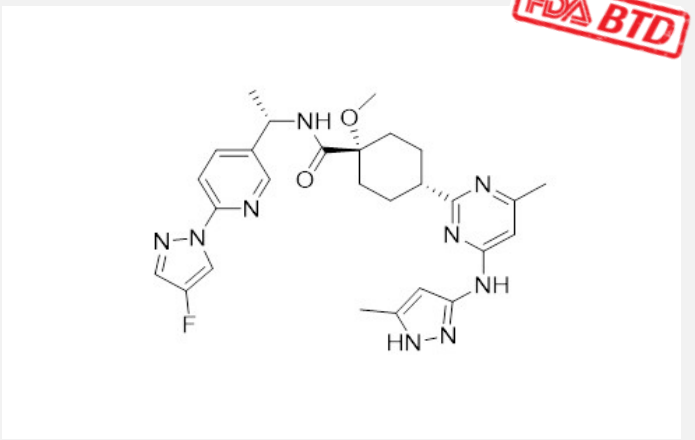
Thyroid cancer franchise: Gavreto in RET+ TC

Excellent efficacy and durability across thyroid cancer types

GAVRETO pralsetinib | Roche | blueprint MEDICINES

RET inhibitor

FDA BTD

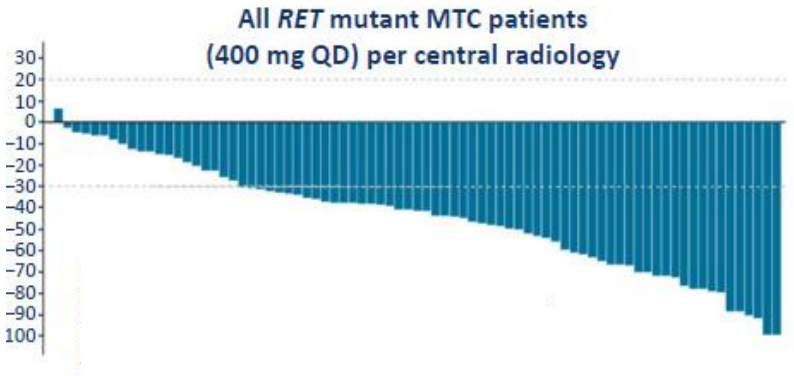


- Oral small molecule kinase inhibitor
- Highly selective for RET fusions and mutations, including predicted resistance mutations
- Brain penetrant and CNS active
- 90% of advanced MTC patients with RET activating mutations and ~10-20% of PTC patients with RET fusions

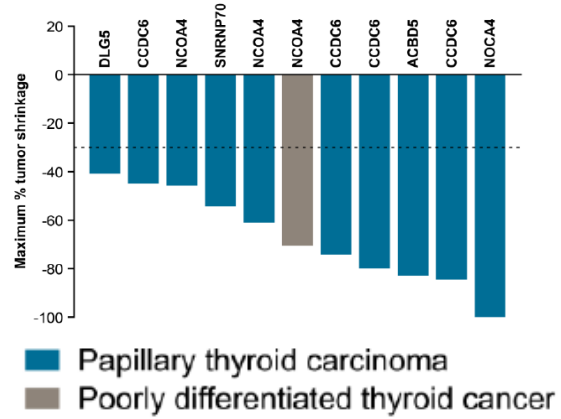
Ph I/II (ARROW) results

ASCO 20 Virtual

Tumor responses
RET mutation+ medullary TC (MTC)*



Tumor responses
other RET fusion+ TC



- RET+ MTC: ORR 74% in naive patients and 60% ORR in pretreated patients; mDOR not reached *
- RET+ TC: 91% ORR and 6-month DOR stands at 100%
- Registrational data on Ph I/II (ARROW) MTC results to be presented at ESMO
- Ph III (AcceleRET MTC) in MTC to start in H2 2020
- US priority review and RTOR for advanced or metastatic RET+ thyroid cancer on-going

* MTC data released by Blueprint Medicines on April 1, 2020; Subbiah V. et al, ASCO 2020; SOC=standard of care; TC=thyroid cancer; MTC=medullary thyroid cancer PTC=papillary thyroid cáncer; CNS=central nervous system; BTD=breakthrough therapy designation; RTOR=real time oncology review; ORR=overall response rate; mDOR=median duration of response; Gavreto (pralsetinib) in collaboration with Blueprint Medicines; Gavreto, Blueprint Medicines and associated logos are trademarks of Blueprint Medicines Corporation; Gavreto was discovered by Blueprint Medicines

Melanoma franchise: Tecentriq + Cotellic + Zelboraf

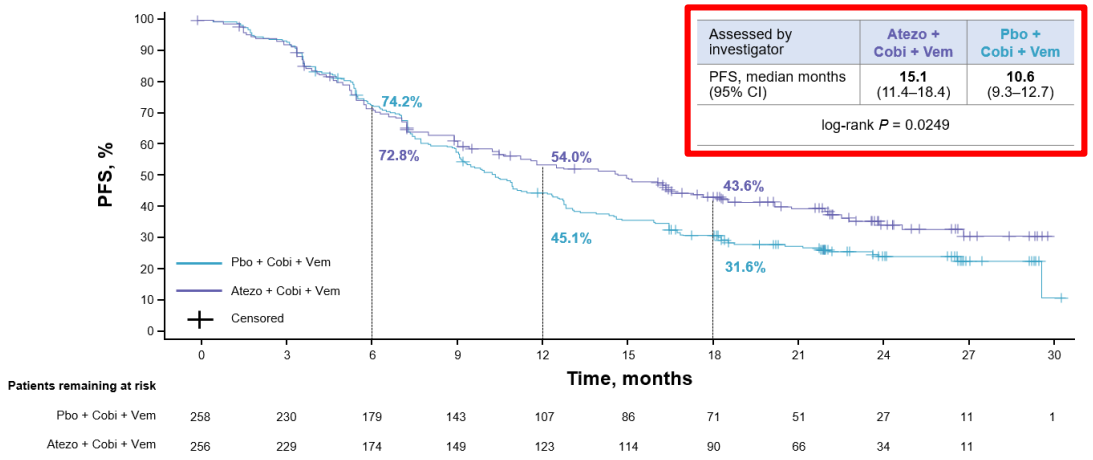
First CIT+targeted therapy in BRAF V600+ melanoma

AACR ANNUAL MEETING 2020
June 22 - 24, 2020
Virtual Meeting II, Sessions Available Online

FDA approved

Ph III (IMspire150/TRILOGY) results in BRAF+ melanoma

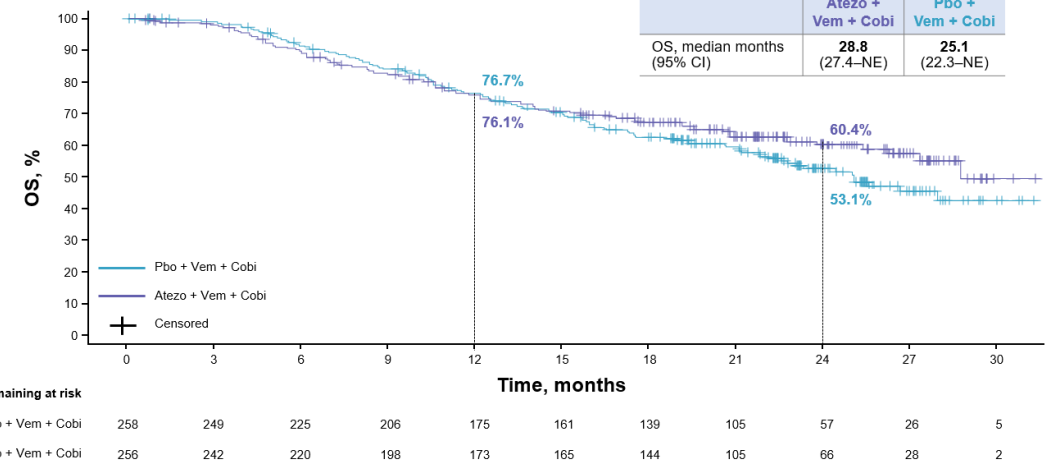
Investigator assesed PFS



Assessed by investigator	Atezo + Cobi + Vem	Pbo + Cobi + Vem
PFS, median months (95% CI)	**15.1** (11.4–18.4)	**10.6** (9.3–12.7)

log-rank $P = 0.0249$

Overall survival (OS)



	Atezo + Vem + Cobi	Pbo + Vem + Cobi
OS, median months (95% CI)	**28.8** (27.4–NE)	**25.1** (22.3–NE)

- Statistically significant and clinically meaningful improvement in investigator-assessed PFS (HR=0.78; 15.1m vs 10.6m) and clinically meaningful improvement in mDOR (21.0m vs 12.6m); no new safety signals were identified
- OS data not mature but favored triplet; next interim expected H1 2021
- FDA approval granted in Q2 2020 under priority review and being part of FDA's project Orbis

McArthur G.A. et al., AACR 2020; CIT=cancer immuno therapy; Atezo=atezolizumab (Tecentriq); CI=confidence interval; Cobi=cobimetinib (Cotellic); Pbo=placebo; Vem=vemurafenib (Zelboraf); PFS=progression free survival; Cotellic in collaboration with Exelixis; Zelboraf in collaboration with Plexxikon

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Oncology / Hematology
Neuroscience
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Infectious diseases
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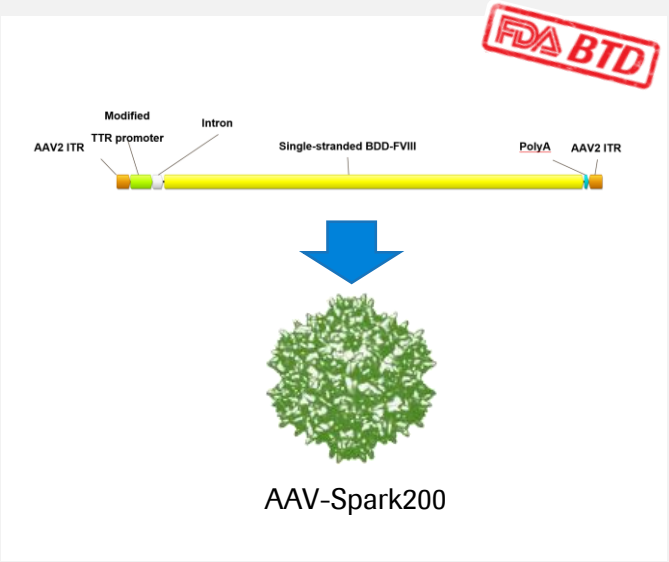
Non-malignant hematology: RG6357 (SPK-8011) in hem A

Early efficacy and safety data after 2 to 3.3 years of follow-up

Hemophilia A gene therapy

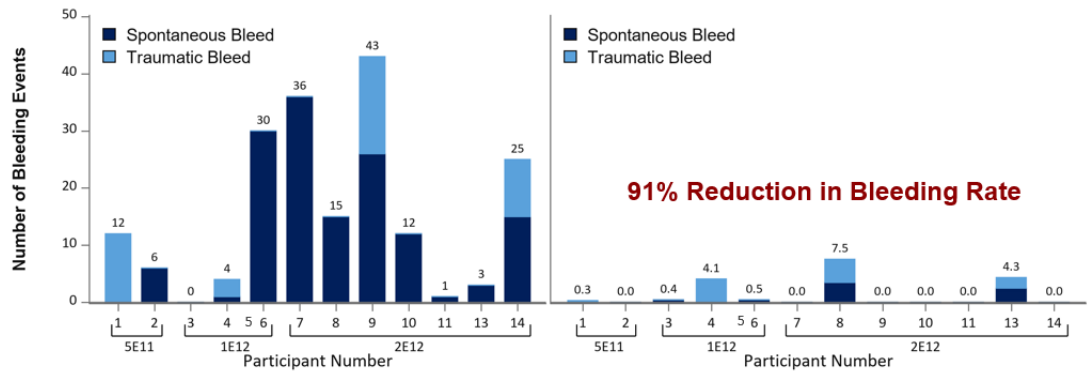


AAV-Spark200

- Bio-engineered adeno-associated viral (AAV) vector utilizing the AAV-LK03 capsid (Spark200)
- Contains a codon-optimized human factor VIII gene under the control of a liver-specific promoter

Ph I/II (SPK-8011) results

Annualized bleed rate (ABR) of participants with sustained expression (n=12)*



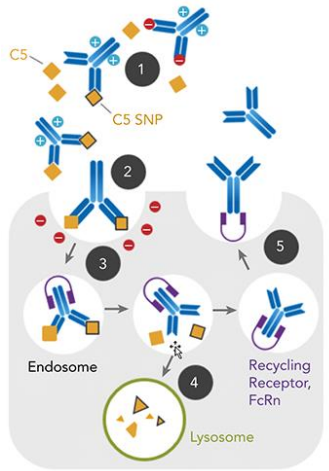
- Data from 5 participants in the $5x10^{11}$ and 1×10^{12} vg/kg dose cohorts and 7 participants in the $2x10^{12}$ vg/kg dose cohort showed a 91% ABR reduction and a 96 % reduction in FVIII infusions
- The 5 participants in the $5x10^{11}$ and $1x10^{12}$ vg/kg cohorts demonstrated durable and stable FVIII expression, had a clinically significant reduction in bleeding and factor use and showed an acceptable safety profile for 2 to 3.3 years of follow up
- Further dose optimization and selection of immunomodulatory regimen on-going
- Ph III to be initiated in 2021

George, L.A. et al, ISTH 2020; * Excludes 2 participants who lost expression

Non-malignant hematology: Crovalimab in PNH

Recycling Ab for maximal inhibition of C5

Anti-C5 mAb

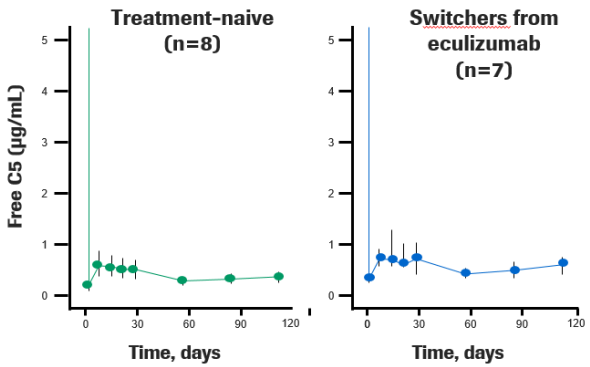


1. High affinity binding
2. Preferential Ab uptake of antigen-bound Ab (PI engineering)
3. Acid-sensitive antigen release
4. C5 degradation in the endosome
5. Ab recycling by FcRn engineering, protecting Abs from degradation

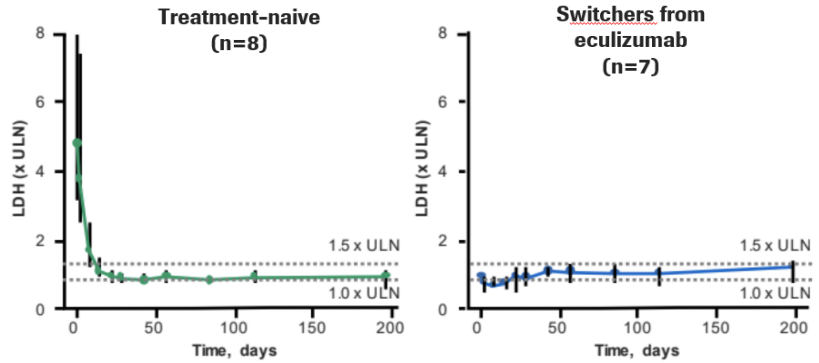
- Chugai engineered, anti complement component 5 (C5) recycling mAb[1–6]
- Engineered to enable maximal, long-lasting neutralization of C5 in complement mediated diseases
- Convenient SC Q4W dosing at home

Ph I/II (COMPOSER) results

Sustained low free C5 levels



Normalized LDH levels due to sustained hemolysis control

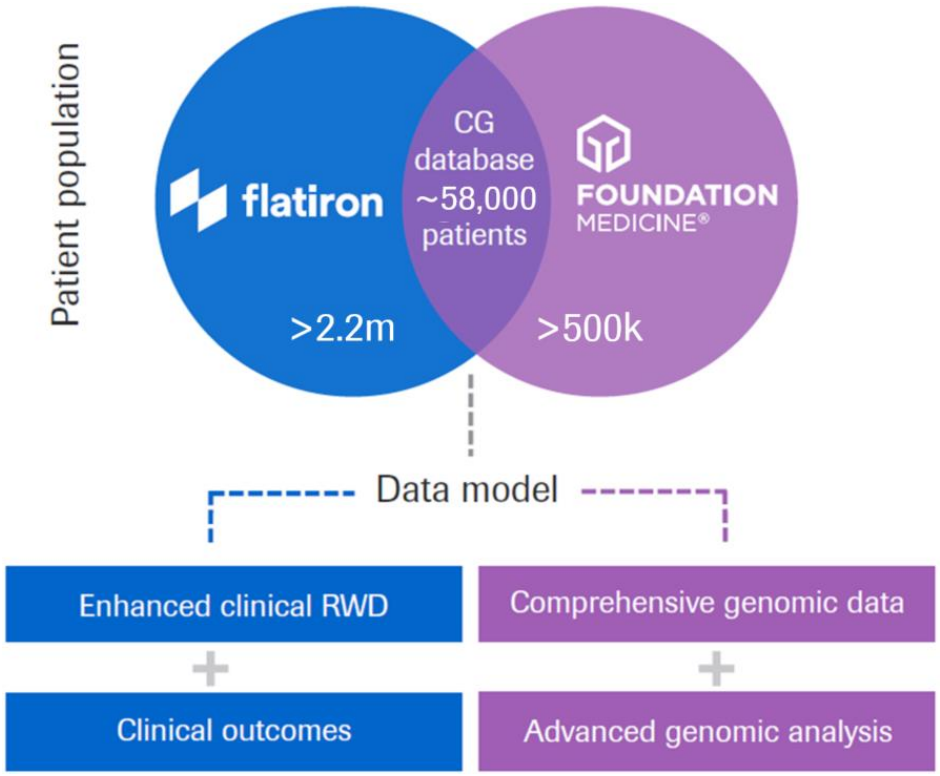


- Ph I/II (COMPOSER) results show complete complement inhibition and a well-tolerated safety profile in C5i-naive patients and eculizumab pre-treated patients[1]
- Efficacy was maintained over long-term treatment (44 patients treated for a median of 71 weeks) and breakthrough hemolysis events were infrequent[7]
- Ph III switch and naive studies (COMMODORE 1/2) in PNH to start in 2020
- Development in additional complement-mediated diseases is being explored

1. Röth A et al. Blood 2020;135:912–20; 2. Fukuzawa T et al. Sci Rep 2017;7:1080; 3. Sampei Z et al. PLoS One 2018;13:e0209509; 4. Röth A, Nishimura J. Centro Congressi Federico II 2019; 5. Röth A et al. ASH 2018; 6. Sostelly A et al. ASH 2019; 7. Röth A et al. EHA 2019; 8. Peffault de la Tour, R. et al. EHA 2020

Clinico-Genomic Database

Combining RWD and genomics drives R&D



Database R&D applications:

- Understanding genomics of rapidly progressive disease
- Natural history cohorts for defined populations (ALK, NTRK, EGFR, ROS-1, RET, KRAS, etc.), including patterns of metastatic spread
- Mechanisms of resistance
- Improved prognostic classifiers

Recent R&D examples:

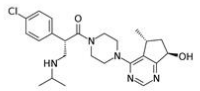
- Analysis found cumulative **incidence of brain metastases in patients with a certain mutation** is significantly higher than in patients with wild-type allele or other mutations; decision to develop brain-penetrant molecule as part of the broader development strategy
- Analysis of CGDB used to decipher a **molecular mechanism for checkpoint inhibitor resistance** and ultimately helped address a fundamental question that can potentially benefit many cancer immunotherapy projects

Linking advanced tumor genetics with clinical outcomes drives scientific hypothesis generation

RWD=real world data; CGDB=Clinico-Genomic Database

Our technology platforms keep expanding*

Small molecules

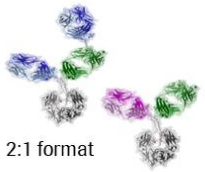


- Gavreto
- Alecensa
- ipatasertib
- RG6114
- RG6171
- KRAS G12C

Target oncogenes, induce apoptosis, supress tumor growth

- Evrysdi
- fenebrutinib
- ralmitaront
- TLR7 agonist
- GABA Aa5 PAM
- PTH1R agonist

Bi-specifics

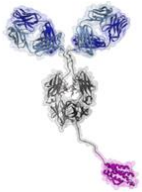


- mosunetuzumab
- glofitamab
- cibisatamab
- Her2 x CD3
- glypican-3 x CD3
- FcRH5 x CD3
- PD1 x TIM3
- PD1 x LAG3
- BCMA x CD16a

Engage and activate T cells to kill tumour cells

- Hemlibra
- faricimab
- FIXa x FX
- FGFR1 x KLB

Fusion protein



- FAP x IL2v
- PD1-IL2v
- CD19-4-1BBL
- FAP-4-1BBL
- MAGE-A4 ImmTAC
- IL15/IL15Ra-Fc

Amplify immune response

- brain shuttle gantenerumab
- IL22-Fc
- IgG-IL2

mAb

- tiragolumab
- CD25 mAb
- CD47 mAb
- selicrelumab
- codrituzumab

Amplify immune response

- Enspryng
- crovalimab
- gantenerumab
- prasinezumab
- semorinemab
- TLR4 mAb
- ST2 mAb
- REGN-CoV2

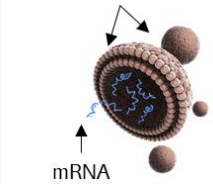
Antibody drug conjugate

- Polivy
- Kadcyla

Targeted toxic payload

- Anti-S.aureus TAC

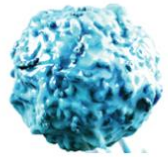
Personalized mRNA vaccine



- iNeST

Patient's neo-antigens for anti-tumour immune response

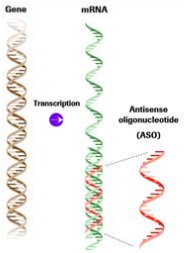
Personalized T cells



- programmed T cells

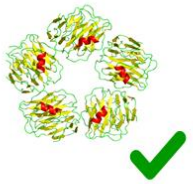
Patient's neo-antigens for anti-tumour immune response

RNA technologies



- tominersen
- UBE3A-LNA
- Factor B ASO
- HBV siRNA

Recombinant proteins



- Activase
- Pulmozyme
- rhPentraxin-2

Gene therapy

- Luxturna
- SPK-8011
- SPK-8016
- SPK-7001
- SRP-9001
- 4D-R110

= Oncology

= Products approved

* List of pipeline and launched molecules shown is not complete; iNeST=Individualized Neoantigen-Specific Therapy

Roche Late Stage Pipeline Event 2020

Late Stage Pipeline Neuroscience

Paulo Fontoura, M.D. Ph.D. | Senior Vice President, Global Head Neuroscience and Rare Diseases Clinical Development

Neuroscience and rare diseases portfolio

Strongly differentiated pipeline

Phase 1 (5 NMEs)		Phase 2 (3 NMEs)		Late Stage (4 NMEs)		Launched (3)		
RG6102	**brain shuttle gantenerumab** Alzheimer's	RG7935	**prasinezumab** Parkinson's	RG1450	**gantenerumab** Alzheimer's	RG1594	**Ocrevus** MS	
RG7816	**$GABA_A$ α5 PAM** Autism spectrum disorder	RG6100	**semorinemab (anti-Tau)** Alzheimer's	RG6042	**tominersen** Huntington's RD	RG7916	**Enspryng (satralizumab)** NMOSD RD	✓
RG7637	undisclosed	RG7906	**ralmitaront** Schizophrenia	SRP 9001	**microdystrophin gene therapy** DMD RD	RG7916	**Evrysdi (risdiplam)** SMA type 1/2/3 RD	✓
RG6091	**UBE3A-LNA** Angelman syndrome RD			RG7845	**fenebrutinib** MS			
RG6237	undisclosed							

✓ FDA approval in 2020

RD RD=Rare Diseases

Neuro-immunologic disorders | Neuro-degenerative disorders | Neuro-developmental disorders | Neuro-muscular disorders | Psychiatric disorders

Risdiplam is developed in collaboration with PTC therapeutics and the SMA Foundation; Tominersen (ASO HTT) is developed in collaboration with Ionis Pharmaceuticals; ALS=Amyotrophic lateral sclerosis; NMOSD=neuromyelitis optica spectrum disorders; DMD=Duchenne muscular dystrophy; MS=Multiple sclerosis

Late stage pipeline update

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   - DLBCL: Polivy, glofitamab, mosunetuzumab
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   - AML: Venclexta
   - MM: Venclexta
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   - nAMD, DME, RVO: faricimab

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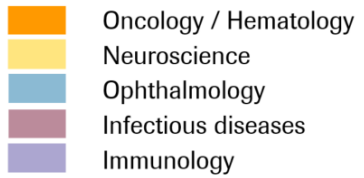
   - Influenza A/B: Xofluza
   - SARS-CoV2: Actemra
   - SARS-CoV2: REGN-COV2



* For further information on target patient populations please consult the appendix; For further details on the late stage pipeline please consult the HY 20 results presentation appendix or visit the IR homepage

MS franchise: Ocrevus shifting the standard of care

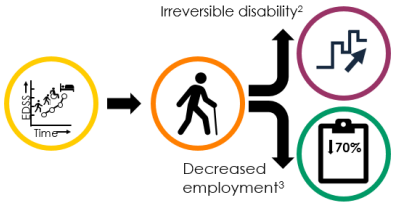
Robust, consistent, sustained impact on slowing disability progression

OCREVUS® ocrelizumab

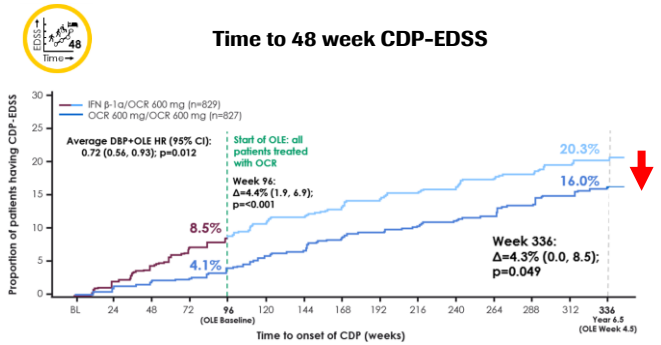
Roche

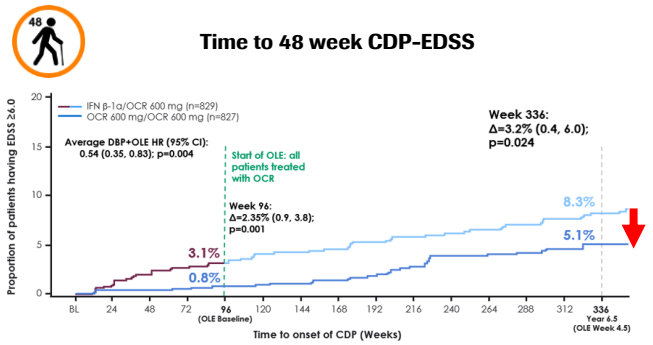
MS VIRTUAL 2020 ACTRIMS-ECTRIMS MEETING SEPTEMBER 11-13

RMS: Ph III (OPERA) 6.5-year follow-up

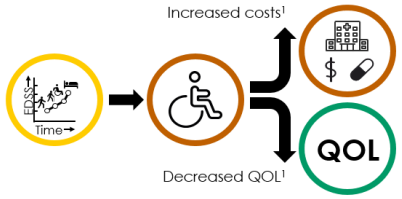


Reaching EDSS score ≥6.0, a key clinical disability milestone representing the requirement of a walking aid, which is associated with increased patient and societal burden

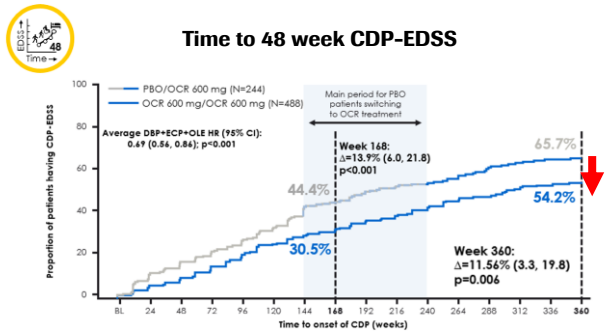


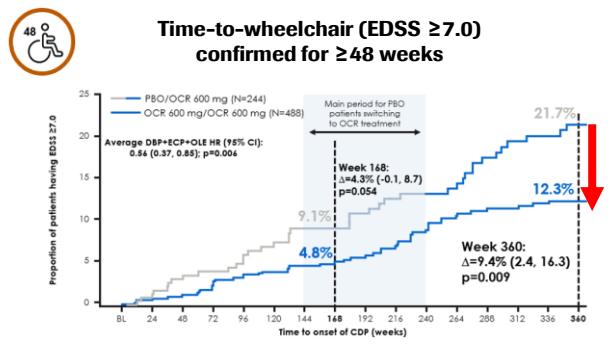


PPMS: Ph III (ORATORIO) 7-year follow-up



Reaching EDSS score ≥7.0, a key clinical disability milestone representing wheelchair confinement, has a major impact on patients' quality of life and associated treatment costs[1]





RMS patients on Ocrevus over 6.5 yrs had a 46% reduction in the risk of needing a walking aid vs those who switched over from IFN β-1α treatment at the end of the double-blind period (p=0.004)

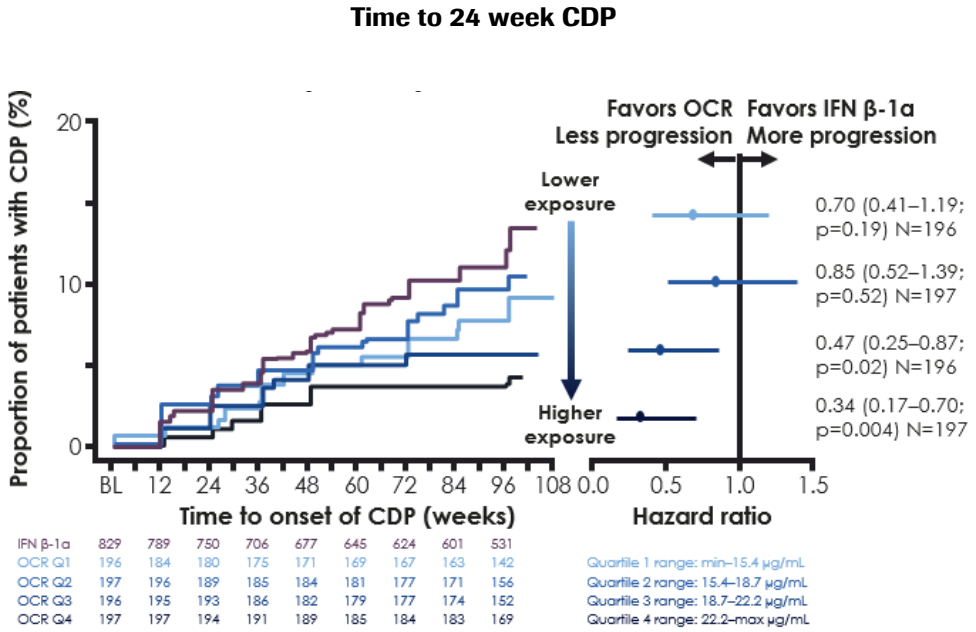
PPMS patients on Ocrevus over 7 yrs had a 44% reduction in the risk of needing a wheelchair (EDSS) vs those who switched over from IFN β-1α treatment at the end of the double-blind period (p=0.006)

Giovannoni G. et al, ACTRIMS-ECTRIMS 2020; Wolinsky J.S. et al, ACTRIMS-ECTRIMS 2020; 1. Kobelt G, *et al. Mult Scler* 2017;23:1123–1136; 2. Tomassini V, *et al. MSJ* 2019;25:1306–1315; 3. Kobelt G, *et al. MSJ* 2017;23:1123–1136 IFN=interferon; OCR=Ocrevus; RMS=relapsing multiple sclerosis; 24W-CDP=24 week-confirmed disability progression

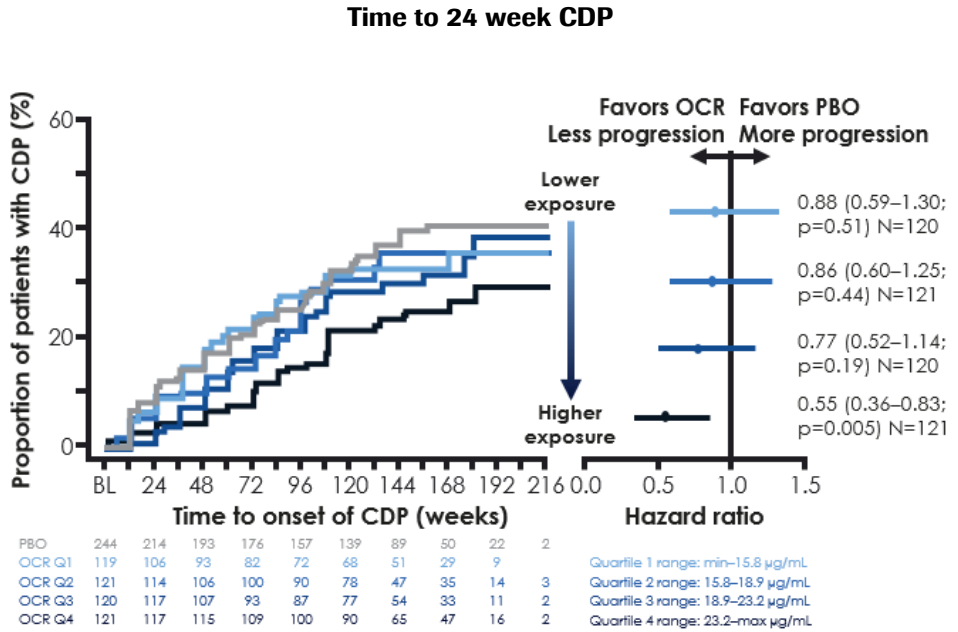
MS franchise: Scientific rationale for higher dose Ocrevus

Higher Ocrevus exposure reduces risk of disability progression

Exposure-response analysis in RMS



Exposure-response analysis in PPMS



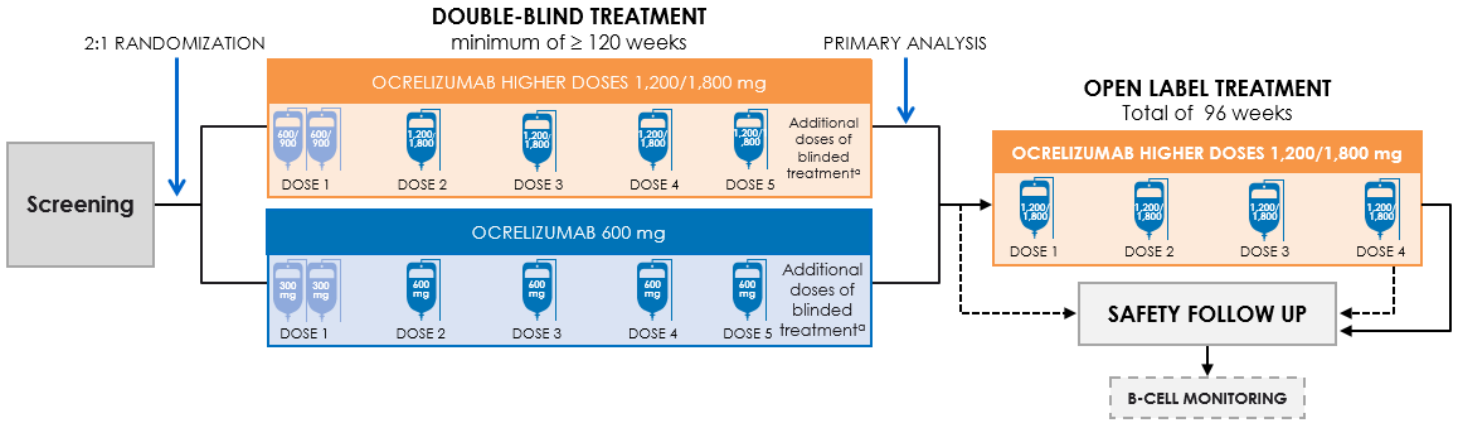
- Higher Ocrevus exposure was associated with lower B-cell levels and with greater control of disability progression without impacting safety

Hauser S.L. et al, ACTRIMS-ECTRIMS 2020; 24W-CDP=24 week confirmed disability progression; IFN=interferon; OCR=Ocrevus; PBO=placebo; RMS=relapsing multiple sclerosis; PPMS=primary progressive MS; Q=quartile

MS franchise: Higher dose Ocrevus

New Ph III program in RMS and PPMS planned to start in 2020

Ph III study design for Ocrevus higher dose versus 600 mg in RMS and PPMS



Study in patients with RMS (MUSETTE)

- Patient sample size, N=786
- Age: 18–55 years; EDSS score: 0–5.5
- Stratification for region, age, EDSS, weight

Study in patients with PPMS (GAVOTTE)

- Patient sample size, N=699
- Age: 18-55 years; EDSS score: 3–6.5
- Stratification for region, age, sex, weight

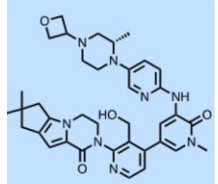
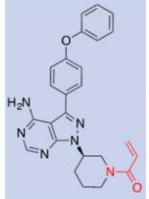
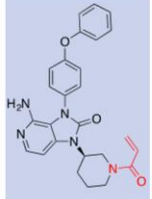
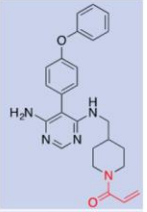
- Ocrevus showed a significant benefit on 12/24W-CDP, ARR, MRI measures in Ph III studies in RMS and PPMS and 7 year OLE
- Exposure/response analysis suggests a higher dose could further lower the risk of disability progression without compromising safety
- Two double-blind, randomized Ph III studies designed to test higher dose Ocrevus; selected higher dose, given every 24 weeks, is 1,200 mg for patients <75 kg or 1,800 mg for patients ≥75 kg
- Ph III (MUSETTE) in RMS and Ph III (GAVOTTE) in PPMS to start in 2020

Hauser S.L. et al, ACTRIMS-ECTRIMS 2020; 24W-CDP=24 week confirmed disability progression; AAR=annual relapse rate; MRI=magnetic resonance imaging; RMS=relapsing multiple sclerosis; PPMS=primary progressive MS; OLE=open label extension

MS franchise: Fenebrutinib in MS

Highly differentiated and potentially best-in-class BTKi in MS

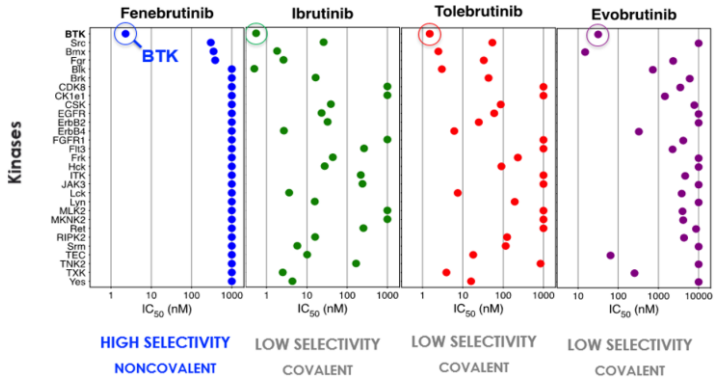
BTK inhibitor

Fenebrutinib (GDC-0853)	Ibrutinib	Tolebrutinib	Evobrutinib
Phase 3	Launched	Phase 3	Phase 3
MS	Oncology	MS	MS
			
Noncovalent, reversible	Covalent, irreversible	Covalent, irreversible	Covalent, irreversible
BTK IC_{50} 2 nM	1 nM	1 nM	32 nM
High selectivity	Low selectivity	Low selectivity	Low selectivity

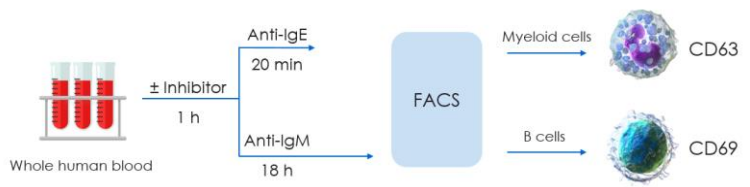
- Oral, highly selective and only reversible noncovalent BTK inhibitor
- Long residence time bound to BTK mimics the durable inhibition of a covalent inhibitor but without the safety risks of covalent BTK inhibition

Molecular and biological characterization

Kinase selectivity assay



B cell and myeloid cell activation assay



Whole human blood assay	Fenebrutinib[1]	Ibrutinib[1]	Tolebrutinib[2]	Evobrutinib[3]
Myeloid cell CD63 IC_{50}, nM	31	171	166	1660
B cell CD69 IC_{50}, nM	8	12	10	84

- Fenebrutinib's BTK inhibition potential and kinase selectivity were assessed in a panel of 219 human kinases. fenebrutinib was found to be highly BTK selective over other kinases which may reduce off target effects and improve safety
- Dual MOA: Fenebrutinib was shown to potently inhibit B cell and myeloid cell (macrophages, microglia) activation in whole human blood and thus may reduce both acute and chronic inflammation in MS, simultaneously

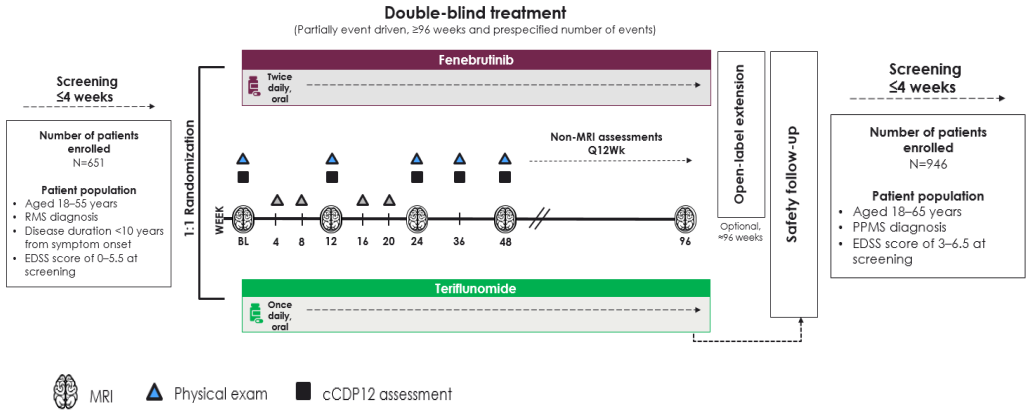
Johnson A. et al, ACTRIMS-ECTRIMS 2020; MS=multiple sclerosis; BTK=Bruton's tyrosine kinase; nM=nano molar; FACS=fluorescence-activated cell sorting

MS franchise: Fenebrutinib in MS

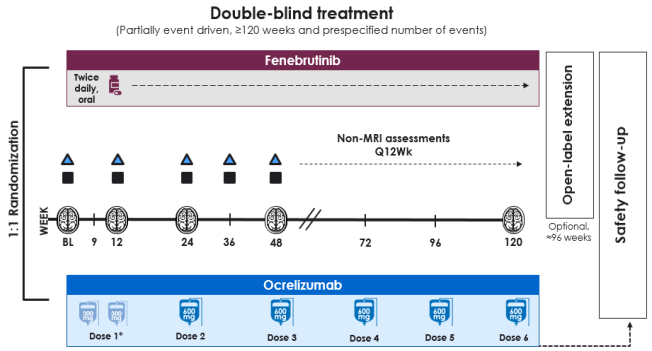
Ph III program to assess disease progression in RMS and PPMS

Ph III trial designs

Ph III RMS (FENhance)

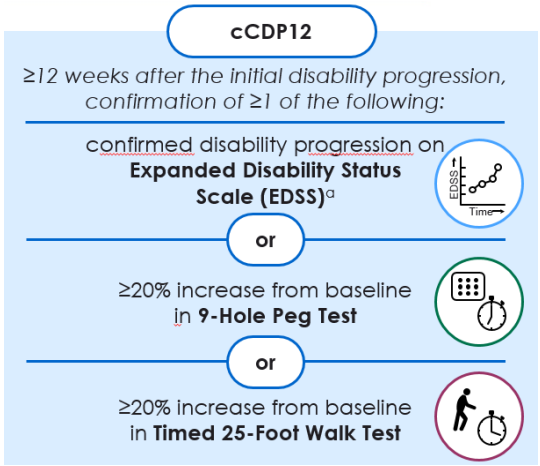


Ph III PPMS (FENtrepid)*



*First PPMS study against an active comparator

Primary endpoint



- Fenebrutinib has a well established safety profile due to 13 clinical studies with >1200 patients, thereof 535 patients exposed for >1year; generally well tolerated, mostly non-serious, mild and self-limiting AEs
- Primary endpoint is composite Confirmed Disability Progression 12 (cCDP12); co-primary endpoint in RMS is ARR
- cCDP12 provides a more thorough approach to disability progression, including EDSS (global assessment scale), 9HPT (hand function) and T25FWT (ambulation ability). cCDP12 assesses upper limb function and may detect disease progression earlier
- Ph III program in RMS and PPMS to start enrollment in 2020

Hauser S. L. et al, ACTRIMS-ECTRIMS 2020; MS=multiple sclerosis; RMS=relapsing MS; PPMS=primary progressive MS; BL=base line; Q12W=every 12 weeks; [a] Defined as an increase of ≥1 point from a baseline score of ≤5.5, or an increase of ≥0.5 points from a baseline score of >5.5; EDSS=Expanded Disability Status Scale; 9HPT=9-Hole Peg Test; T25FWT=Timed 25-Foot Walk Test; AE=adverse event

Late stage pipeline update

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   - DLBCL: Polivy, glofitamab, mosunetuzumab
   - FL: mosunetuzumab, glofitamab, Polivy
   - AML: Venclexta
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Oncology / Hematology
Neuroscience
Ophthalmology
Infectious diseases
Immunology

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SMA franchise: Evrysdi in type 1/2/3 SMA

Compelling benefit/risk profile in infants, children, adults

Evrysdi risdiplam

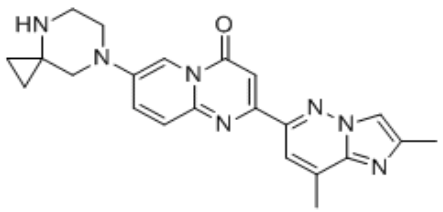
Roche

AAN 2020 Annual Meeting

FDA approved

SMN2 splicing modifier

EMA PRIME



- Efficacy in infants, children, adults
- Durably increases SMN protein throughout the CNS and in peripheral tissues
- Consistent safety profile in over 450 risdiplam-treated patients in trials
- First and only at-home treatment

FIREFISH part 2 results in type 1 SMA confirm highly competitive profile

The primary endpoint was met (P<0.0001)*

29%
(12/41)

of infants were sitting without support for 5 seconds at Month 12, as measured by the BSID-III

Risdiplam treatment led to a significant improvement in motor function† (P<0.0001)‡

Infants achieved motor milestones, such as sitting and standing§ that would never be seen in untreated infants

93%
(38/41)
of infants were alive and

85%
(35/41)
of infants were event free‖ at Month 12

95%
(36/38)

of infants alive maintained the ability to swallow after 12 months of treatment

49%
(20/41)

of all infants did not require hospitalization¶ during 12 months of treatment

No drug-related safety findings led to withdrawal in FIREFISH Part 2

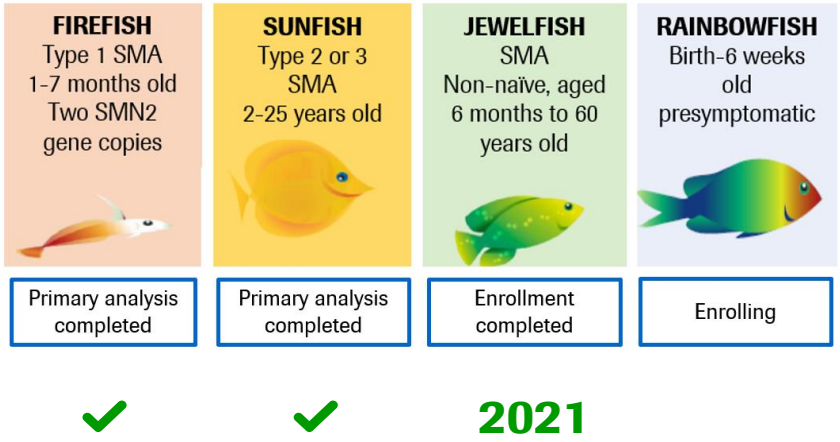
- Positive Ph III (FIREFISH part 2) in older, symptomatic type 1 infants
- Positive Ph III (SUNFISH part 2) the only placebo controlled study in a broad spectrum of type 2/3 patients (age 2-25)
- US approval achieved in Q3 2020; filed in EU, Brazil, Canada, China and 14 further countries

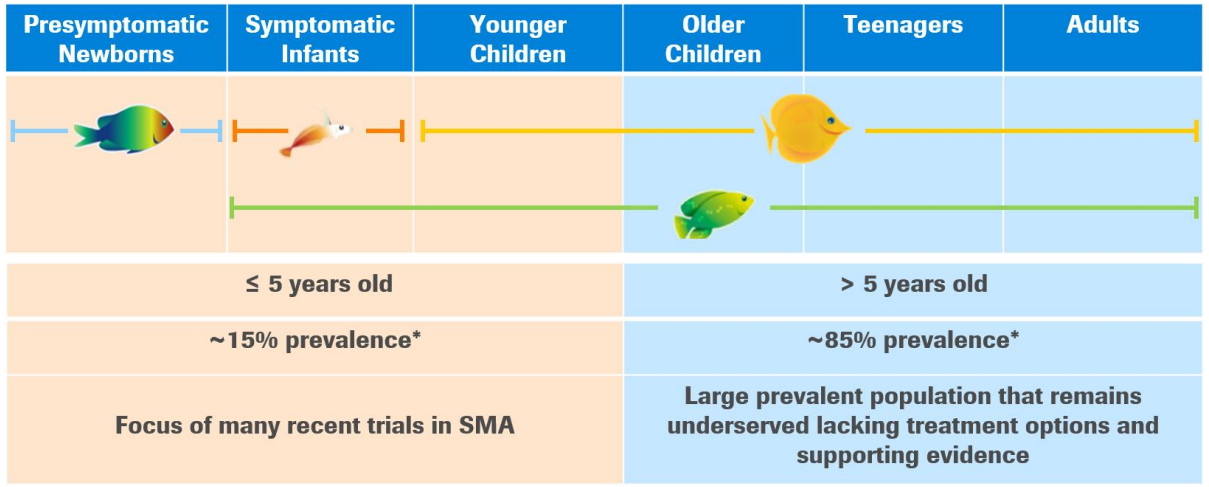
Servait L.. et al. AAN 2020; *Performance criterion=5%, exact binomial test. †As measured by CHOP-INTEND. ‡Performance criterion=12%, exact binomial test. §As measured by HINE-2; ‖Event-free in FIREFISH is defined as alive with no permanent ventilation (i.e. no tracheostomy or BiPAP ≥16 hours per day continuously for >3 weeks or continuous intubation >3 weeks, in the absence of, or following the resolution of, an acute reversible event). ¶Hospitalizations include hospital admissions ≥1 night; BiPAP, Bilevel Positive Airway Pressure; BSID-III, Bayley Scales of Infant and Toddler Development, Third edition; CHOP-INTEND, Children's Hospital of Philadelphia Infant Test of Neuromuscular Disorders; HINE-2, Hammersmith Infant Neurological Examination, Module 2.; Risdiplam in collaboration with PTC Therapeutics and the SMA Foundation

SMA franchise: Evrysdi in type 1/2/3 SMA

Additional data for switching patients and newborns

Broadest Ph III program in SMA on-going





- Ph III (JEWELFISH) switching study fully recruited (n=174); Prior treatments were olesoxime (n=74), Spinraza (n=73), Zolgensa (n=14); RG7800 (n=13); JEWELFISH exploratory efficacy to be reported after 1 year of follow-up in 2021
- Ph III (RAINBOWFISH) presymptomatic study enrollment on-going
- Evrysdi has the potential to become the treatment of choice for the majority of SMA patients as our broad clinical trial program covers the broad, real-world spectrum of people living with SMA – including under-served and under-represented patient populations

Risdiplam in collaboration with PTC Therapeutics and the SMA Foundation; * Estimated 2020 prevalence in US and EU5

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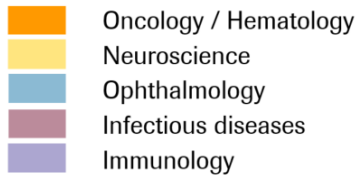

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Enspryng in NMOSD

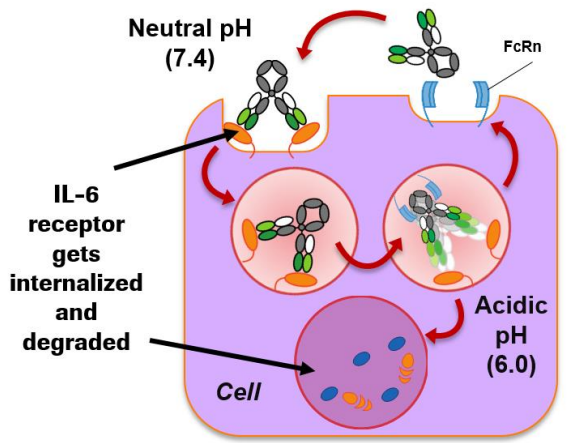
Significantly reduced frequency and severity of relapses

ENSPRYNG satralizumab-mwge subcutaneous injection 120 mg/mL

Roche

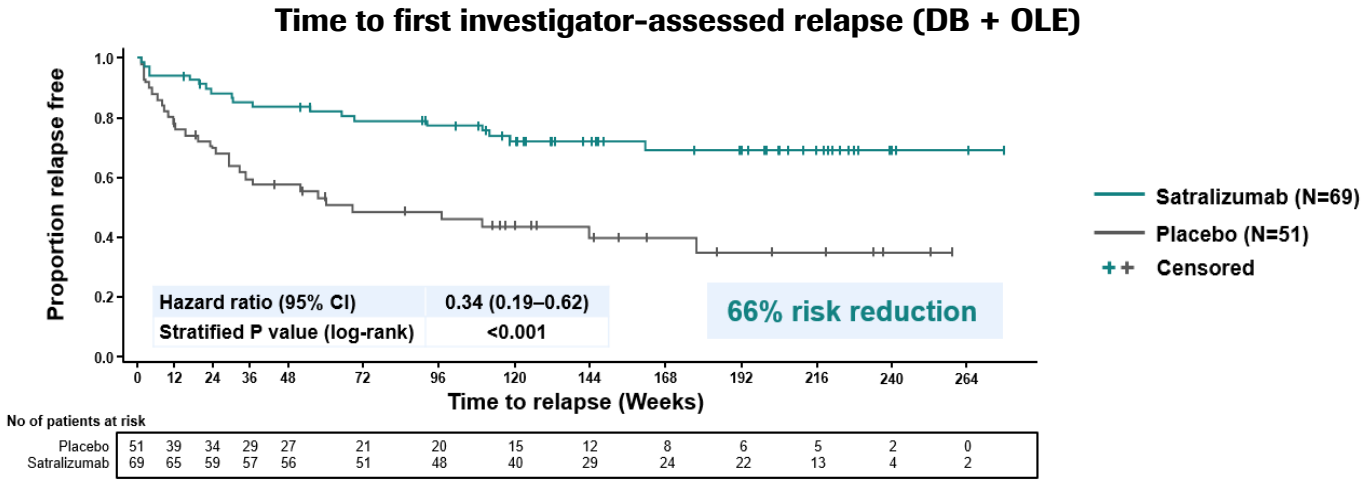
MS VIRTUAL 2020 ACTRIMS-ECTRIMS MEETING SEPTEMBER 11-13

Anti-IL-6 receptor mAb



- Recycling mAb with high-affinity to soluble and membrane-bound IL-6R
- Engineered to enable maximal inhibition of IL-6 signalling
- Convenient SC Q4W dosing at home

Ph III (SAkura) up to 5 year follow-up (AQP4+ patients)



- Continued risk reduction of relapse for up to 5 years; AQP4+ patients experiencing a 66% risk reduction, and all patients experiencing a 51% risk reduction vs those originally randomized to placebo; treatment associated with a significant reduction in severe relapses vs placebo
- Pooled longer-term data from the SAkura studies show a continued favorable safety profile
- Roche is actively exploring Enspryng in other rare indications where IL-6 is implicated

Greenberg B, et al. ACTRIMS-ECTRIMS Meeting (MSVirtual2020); Palace J, et al. ACTRIMS-ECTRIMS Meeting (MSVirtual2020); Greenberg B, et al. ACTRIMS-ECTRIMS Meeting (MSVirtual2020); NMOSD=neuromyelitis optica spectrum disorder; AQP4=aquaporin-4; DB+OLE=double-blind and open-label extension

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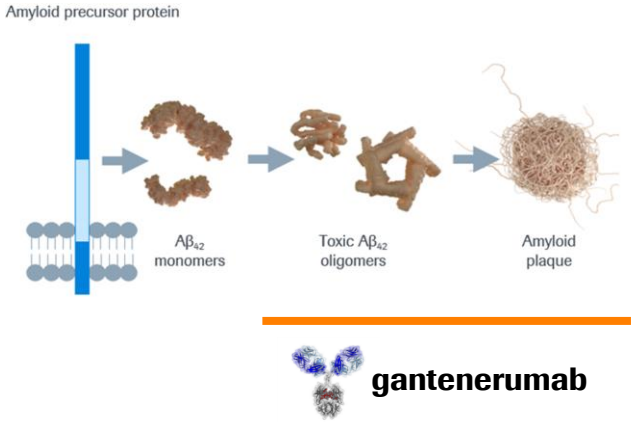
AD: Gantenerumab targeting Amyloid β (Aβ)

Strong target engagement and downstream biological impact

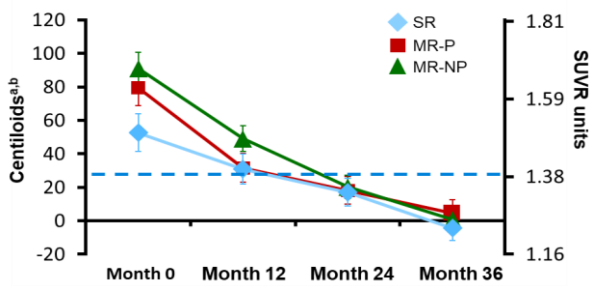
Anti-Aβ mAb



- Fully human, anti-Aβ mAb (IgG1) with high affinity to aggregated forms of Aβ
- Highest affinity for neurotoxic oligomers and plaques [1,2]
- SC administration enables flexibility of home administration

OLE shows robust Aβ removal*

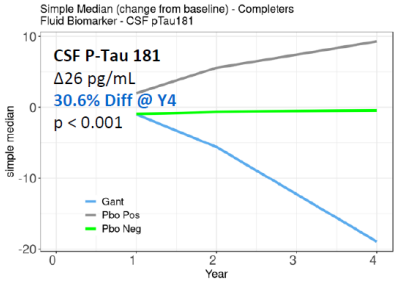
Aβ levels over 3 years



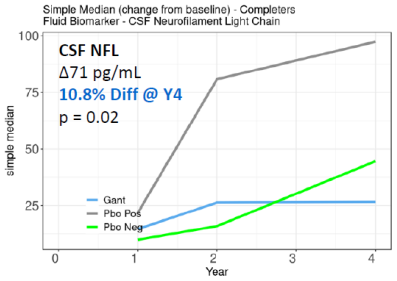
- Gantenerumab lowers Aβ below positivity threshold towards floor levels without plateau; at 3 years 80% of patients were Aβ-negative in OLE studies
- Gantenerumab reduces levels of downstream biomarkers (phosphorylated Tau) and blocks increases of markers of neurodegeneration (NfL) in patients with familial AD (DIAN-TU study)
- Ph III (GRADUATE 1/2) program with optimized exposure by dose (single dosing scheme) and duration (27 months of treatment) on-going; results expected in 2022

DIAN-TU shows downstream impact

CSF Phospho-Tau levels over 4 years



CSF NfL levels over 4 years

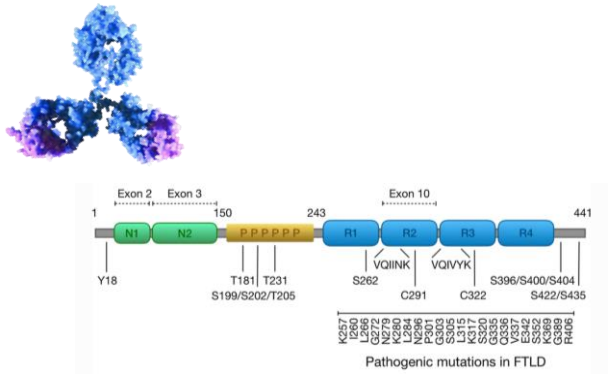


1. Bohrmann B, et al. J Alzheimer's Dis 2012; 2. Ostrowitzki S, et al. Arch Neurol 2012; Bateman R. J. et al, AAT-AD/PD 2020; Klein G et al, CTAD 2020; OLE=open label extension; NfL=neurofilament light chain; SC=subcutaneous; * OLE studies for the former Ph III studies SCarlet RoAD and Marguerite RoAD

AD: Semorinemab targeting anti-Tau

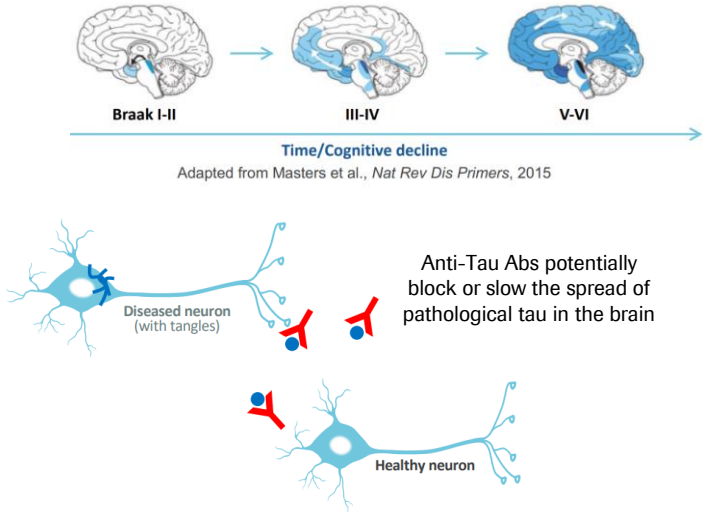
Ph II (TAURIEL) results for semorinemab expected in H2 2020

Anti-Tau mAb



- First-in-class humanized Ab
- Recognizes N-terminal epitope
- Targets all known isoforms of full length Tau independent of their phosphorylation status

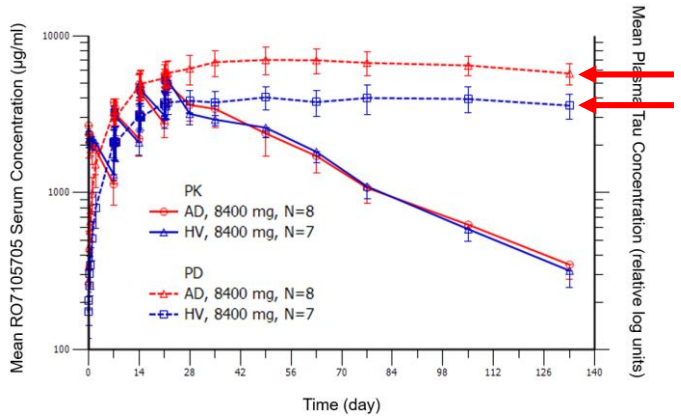
Proposed MOA



- No AEs associated with semorinemab in pre-clinical studies; safe and well tolerated in Ph I
- Robust biomarker development with two tau PET tracers in development
- Results from blinded portion of Ph II (TAURIEL) in prodromal-to-mild AD expected in H2 2020; primary endpoint includes CDR-SB; secondary endpoints include cognitive tests (ADAS-Cog13, RBANS Total Score) and functional tests (ADCS-ADL, Amsterdam iADL)
- Second Ph II (LAURIET) in patients with moderate AD on-going

Ph I (PK/PD) results

Plasma Tau conc in AD patients 2x higher than in HV after semorinemab administration

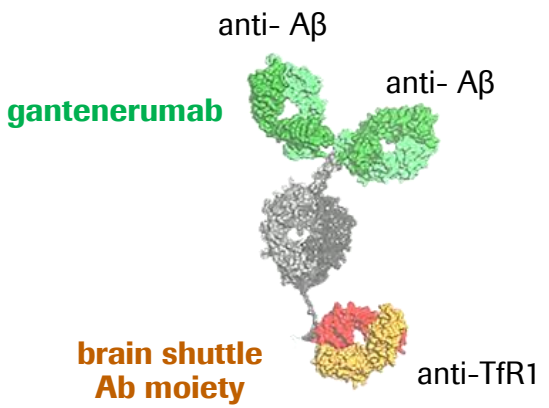


Teng E. et al. CTAD 2019; Kerchner et al. CTAD 2017; PD=pharmacodynamics; PK=pharmacokinetics; HV=healthy volunteer; AD=Alzheimer's disease; ADAS-Cog=Alzheimer's Disease Assessment Scale–Cognitive subscale; ADCS-ADL=Alzheimer's Disease Cooperative Study–Activities of Daily Living Inventory; Amsterdam iADL=Amsterdam Instrumental Activities of Daily Living scale; CDR-SB=Clinical Dementia Rating–Sum of Boxes; RBANS=Repeatable Battery for the Assessment of Neuropsychological Status; Semorinemab partnered with AC Immune; PET=positron emission tomography

AD: Gantenerumab brain shuttle (RG 6102)

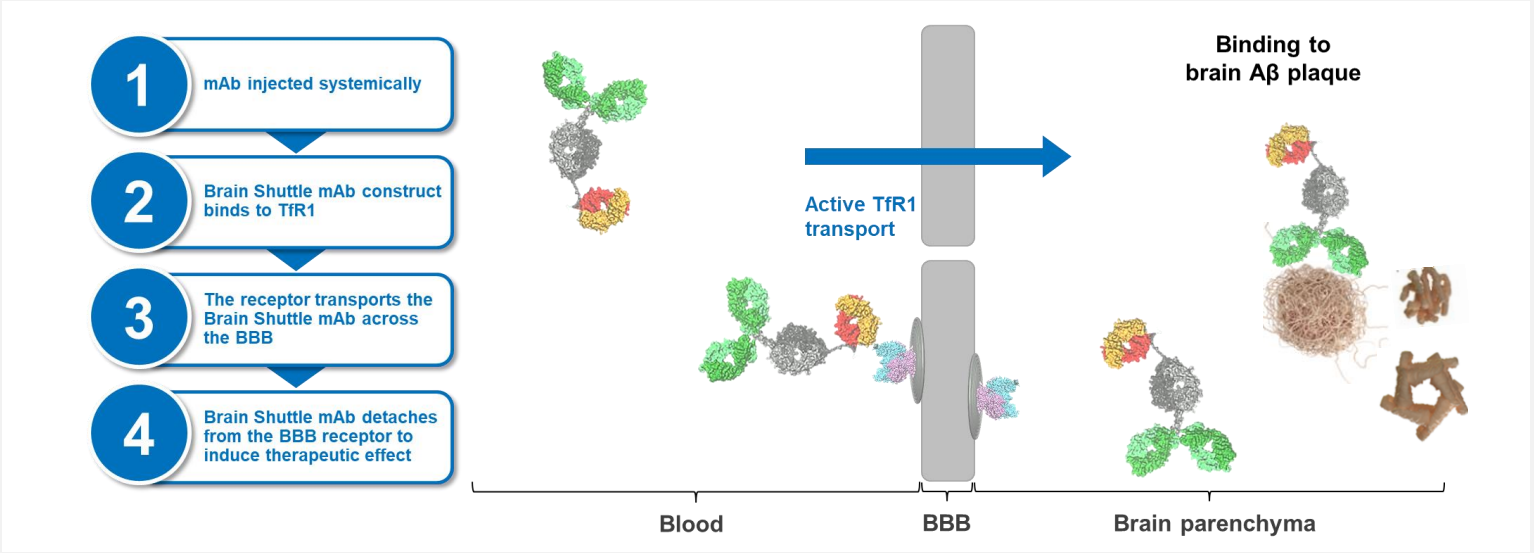
Vision: Superior target access leading to slowing of AD progression

Anti-Aβ-TfR1 fusion protein



- Gantenerumab with a novel transferrin receptor (TfR1) binding Ab moiety to achieve efficient transport over the BBB and target Aβ engagement in the brain
- Technology could also be applied to other CNS disorders

MOA: Superior brain access through brain shuttle technology



- Preclinical work provides in vitro and in vivo evidence that binding to the TfR1 receptor facilitates transcellular transport across the Blood Brain Barrier (BBB)
- The first brain shuttle mAb entered the clinic in 2019
- Preliminary Ph I PK/PD data are currently under evaluation to determine next steps

1. Niewoehner J, *et al. Neuron* 2014; 81:49–60; BBB=blood brain barrier; IgG=immunoglobulin G; mAb=monoclonal antibody; TfR1=transferrin receptor 1; Aβ=Amyloid β; CNS=central nervous system; PD=pharmacodynamics; PK=pharmacokinetics

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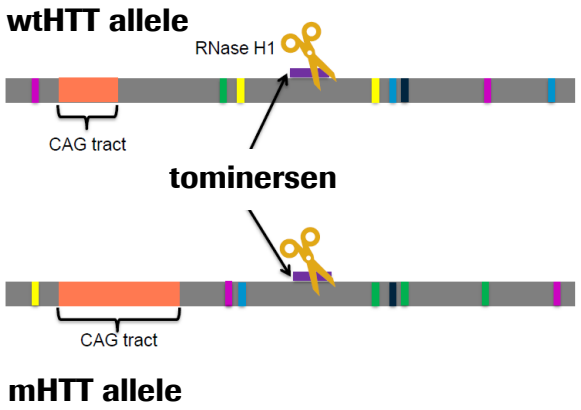
Tominersen (HTT-ASO) in Huntington's disease

First drug to reduce toxic mHTT

Antisense RNA

EMA PRIME

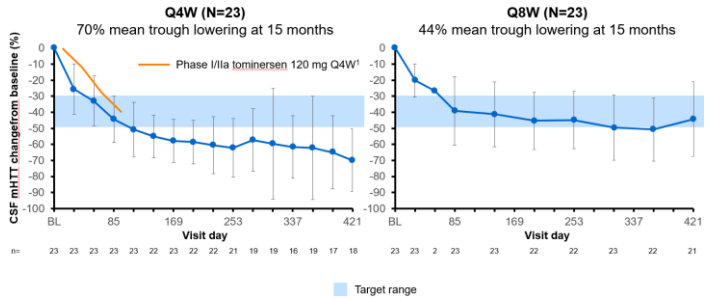


- Antisense drug binds to wtHTT and mHTT sequence leading to RNase H1 mediated degradation of wild-type and mutant HTT mRNA
- Addresses all patients

Ph II update

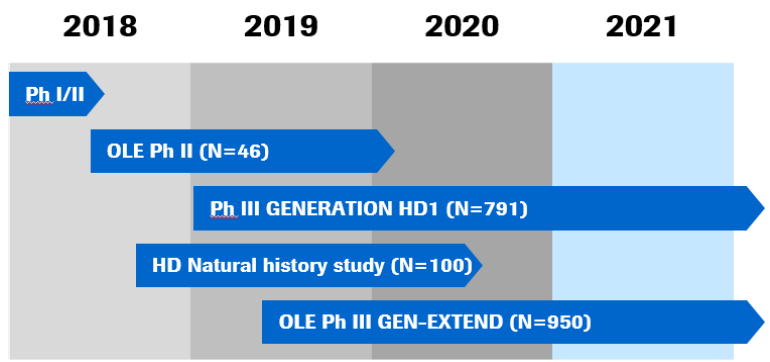
CHDI FOUNDATION February 24-27

mHTT CSF levels from 15 month OLE cut



- Preliminary analysis of 15 month OLE data show sustained lowering of CSF mHTT exceeds or achieves target reduction range of 30-50% (Q4W; Q8W)
- Safe and well tolerated with no dose-limiting toxicities identified and no patients discontinuing
- Ph III (GENERATION HD1) enrollment completed in Q2 2020; results expected in 2022
- Data from the Ph I/II and Ph III OLE studies and the HD Natural History study expected in 2021

Ph III program



Schobel SA. et al, Cure Huntington's Disease Initiative - 15th Huntington's Disease Therapeutics Conference CHDI 2020; mHTT=mutant huntingtin; wtHTT=wild-type huntingtin; CSF=cerebrospinal fluid; OLE=open-label extension; Q4W=every 4 weeks; Q8W=every 2 months; IT=intrathecal; HTT-ASO licensed from IONIS Pharmaceuticals

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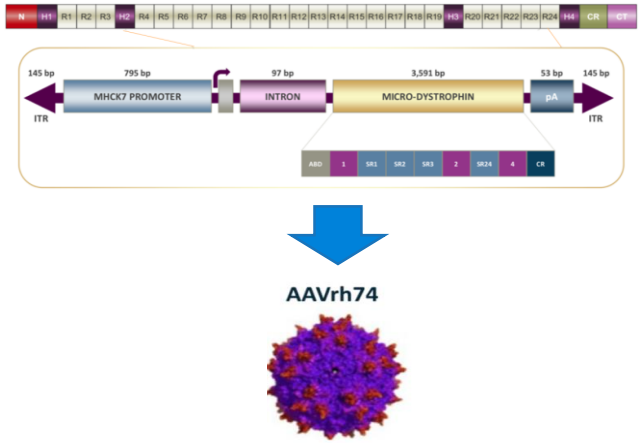
Micro-dystrophin Gene Therapy (SRP-9001) in DMD

Positive 1 year safety & efficacy data published in JAMA Neurology

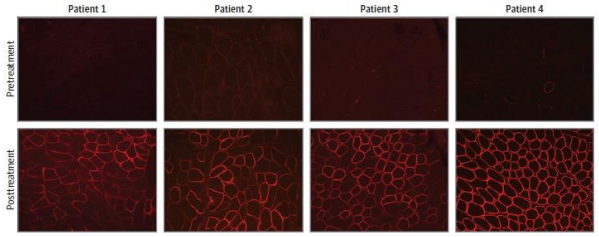
Micro-dystrophin gene therapy



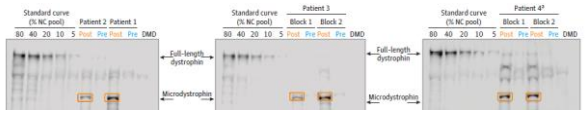
- AAVrh74 vector: low likelihood of pre-existing immunity and high tropism for skeletal & cardiac muscles
- Expression potentiated by the MHCK7 promoter in cardiac & skeletal muscles
- Transgene retains critical elements of dystrophin for a functional protein

Ph I/IIa open-label trial results (n=4)

Immunofluorescence staining



Western blot



North Star Ambulatory Assessment (NSAA)

Patient	Parameter	Baseline	Change from baseline at day 365
1	NSAA	18	7
	CK level, U/L	20 691	-46.48%
2	NSAA	19	8
	CK level, U/L	23 414	-55.18%
3	NSAA	26	2
	CK level, U/L	34 942	-81.66%
4	NSAA	19	5
	CK level, U/L	29 210	-85.75%

- 81.2% of muscle fibers expressing micro-dystrophin by immunohistochemistry with a mean intensity of 96% at the sarcolemma at 12-wks; adjusted for fat and fibrotic tissue Western blot showed a mean expression of 95.8%
- All patients showed improvements in NSAA score (mean, 5.5 points up to one year); therapy was well tolerated with minimal adverse events up to one year after treatment
- Planning for two global Ph III trials in ambulatory and non-ambulatory DMD patients are on-going

Mendell J. R. et al, JAMA Neurol. 2020 Jun 15; SRP-8011 partnered with Serepta; License and collaboration agreement with Sarepta Therapeutics in Duchenne Muscular Dystrophy (DMD), securing exclusive ex-US commercial rights to SRP-9001, their gene therapy for DMD, and the right to opt-in to their broader DMD portfolio outside of the US

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Prasinezumab in Parkinson's disease (PD)

Primary not met, but encouraging core PD motor signs

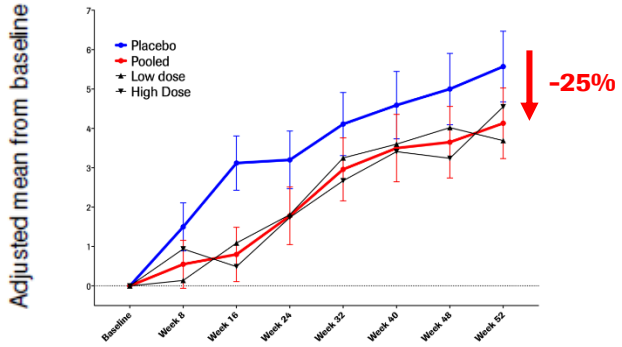
MDS Virtual Congress 2020
SEPTEMBER 12–SEPTEMBER 16

Anti-α-synuclein mAb

- Humanized mAb designed to target aggregated forms of α-synuclein
- Inhibiting cell-to-cell spreading of pathogenic forms of α-synuclein, resulting in slowing of PD progression

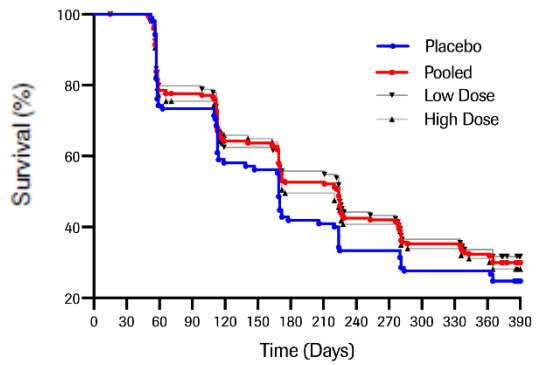
Ph II (PASADENA part 1) 52 weeks results

Change in MDS UPDRS part III



Pooled: −1.44, 80% CI=(-2.83, -0.06); **−25%**,
Low dose: −1.88, 80% CI=(-3.49, -0.27); **−34%**
High dose: −1.02, 80% CI= (-2.64, 0.61); **−18%**

Time to worsening of motor signs (+5pts MDS UPDRS part III)



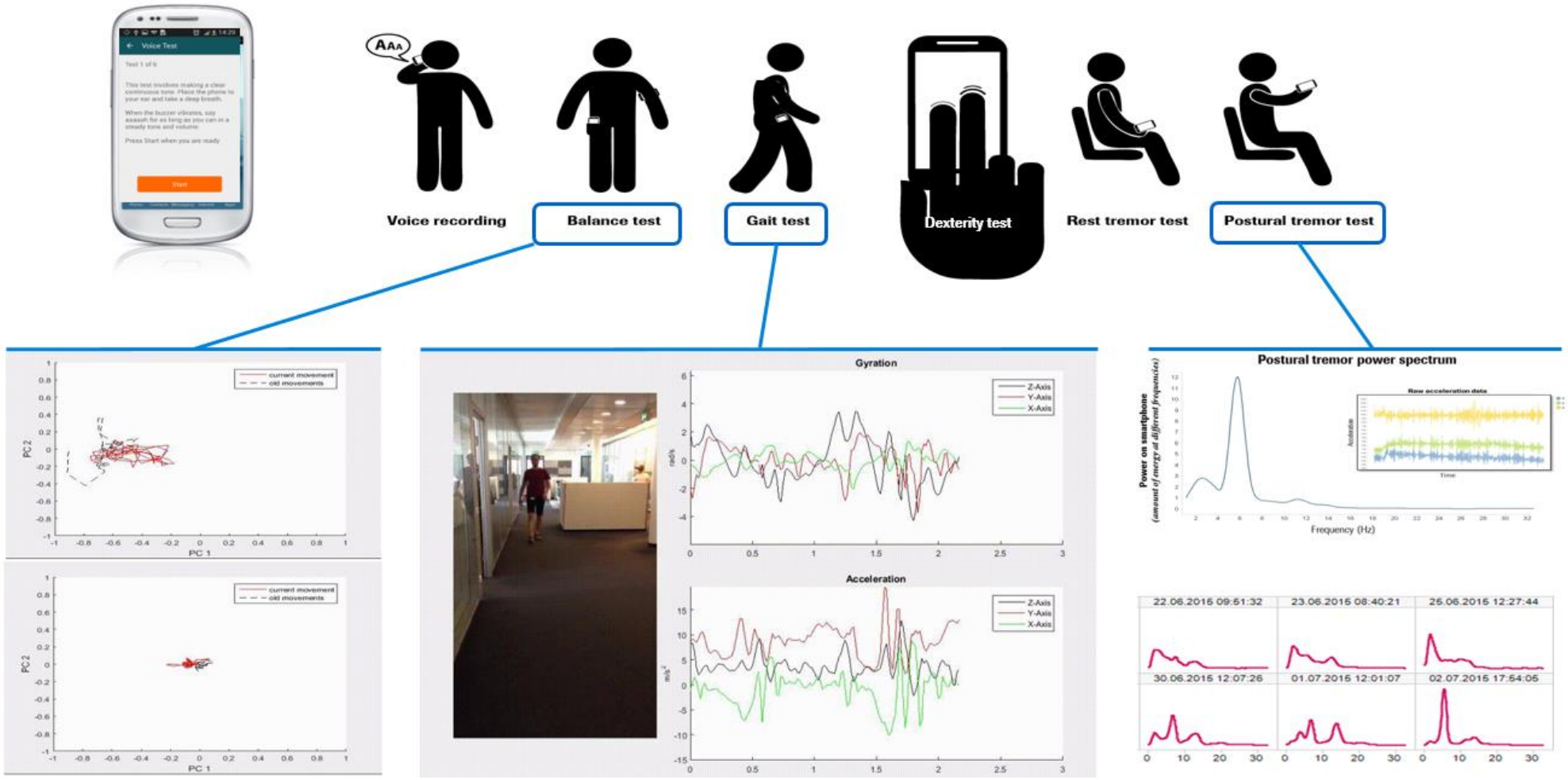
Pooled: HR 0.82, 80% CI=0.64 to 0.99
Low dose: HR 0.77, 80% CI=0.63 to 0.96
High dose: HR 0.87, 80% CI=0.70 to 1.07

- First Ph II (PASADENA) results were presented at MDS 2020 (poster session); additional results (including digital biomarker data) to be presented at the MDS presentation on Sep 15
- Study did not meet its primary endpoint (MDS UPDRS total score)
- Positive signals of efficacy on multiple pre-specified secondary assessments of motor function including motor signs (MDS UPDRS part III)
- Totality of data is being evaluated to determine next steps

Pagano, G et al, MDS poster 2020; MDS-UPDRS=Movement Disorder Society-Unified Parkinson's Disease Rating Scale (Sum of Parts I, II and III which assess non-motor [I and II] and motor [III] experiences in daily living); Prasinezumab partnered with Prothena Biosciences

Prasinezumab in Parkinson's disease

Digital biomarker active tests supporting clinical development



http://www.roche.com/media/store/roche_stories/roche-stories-2015-08-10.htm

Novel measurements & digital endpoints

Digital biomarkers - providing enhanced patient insights and novel endpoints

Apps, wearables and gaming devices

Digital biomarker program in neuroscience

Disease Area	Cognition	Hand Motor Function	Gait & balance	Vocalization	Activity & sociability
Parkinson	●	●	●	●	●
Huntington	●	●	●	●	●
SMA		●	●	●	
Multiple Sclerosis	●	●	●		●
Alzheimer	●			●	●
Autism	●			●	●
Schizophrenia					●

- Clinical trials utilizing mobiles, wearables and gaming devices
- More sensitive, precise and objective
- Continuous and longitudinal measurement captures episodic and rare events
- Reduced assessment burden and greater real-world relevance

Roche Pharma Day 2020

Late Stage Immunology, Ophthalmology & Infectious Disease

Cristin Hubbard | Senior Vice President, Immunology, Infectious Disease & Ophthalmology, Global Product Strategy

Late stage pipeline update

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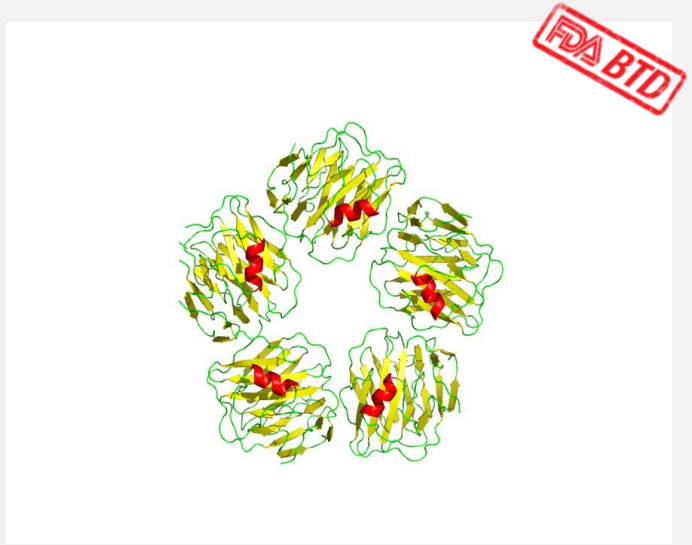
Recombinant human Pentraxin-2 in fibrotic diseases

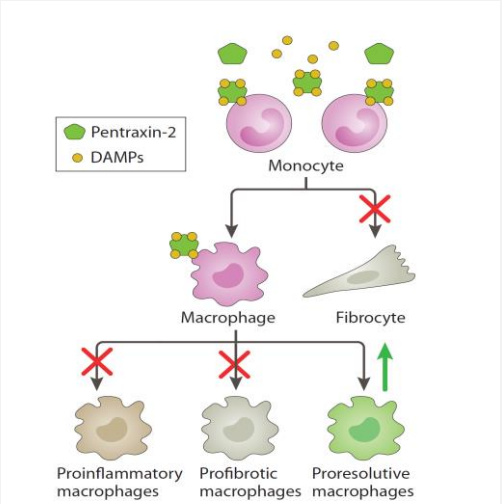
Evaluating new options to treat fibrosis in multiple diseases

Recombinant human pentraxin-2 (rhPTX-2)



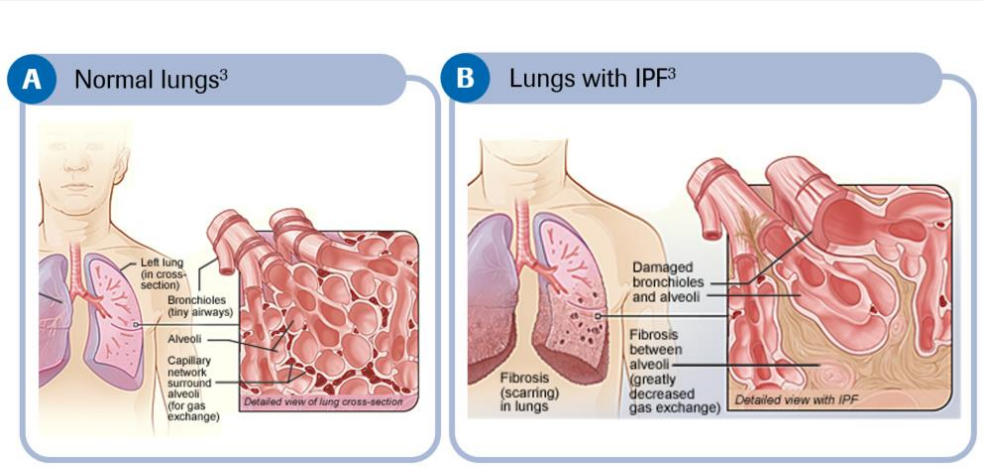
- First-in-class rhPTX-2
- PTX-2 is an immune regulatory protein that binds DAMPs with specificity for fibrotic tissue
- Received BTD for IPF

MOA: PTX-2 inhibits fibrosis formation



- PTX-2 binds monocytes and macrophages via the FcγR and shifts the balance of monocyte differentiation from pro-fibrotic macrophages, fibrocytes to pro-resolutive macrophages
- Serum PTX-2 levels are reduced in patients with IPF, myelofibrosis and other fibrotic diseases; low PTX-2 levels correlate with increased disease severity
- High unmet medical need remains for further slowing lung function decline on top of SOC

Fibrotic tissue in IPF



IPF=interstitial pulmonary fibrosis; PTX-2=pentraxin-2; DAMPs=damage-associated molecular patterns; MOA=mechanism of action; FcγR=Fcγ receptor; SOC=standard of care

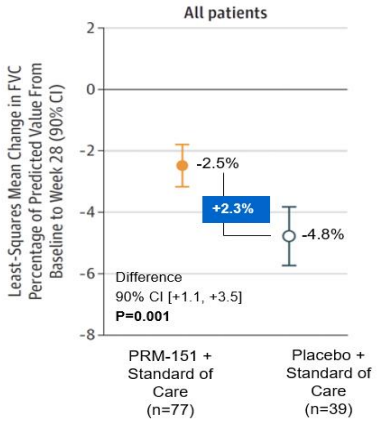
Recombinant human Pentraxin-2 in IPF

Efficacy as monotherapy or in combination with standard of care

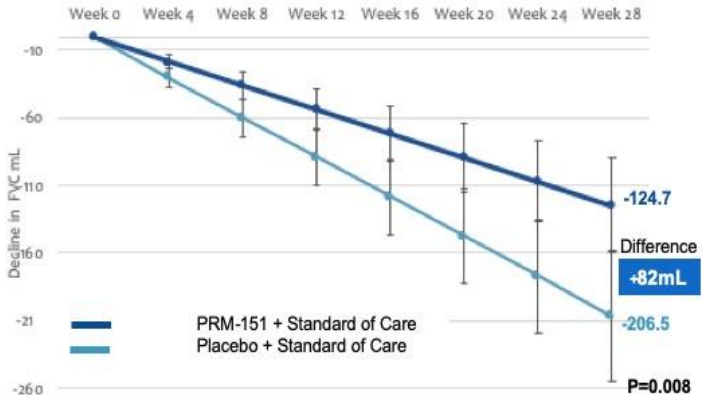
FDA BTD

Ph II results in IPF

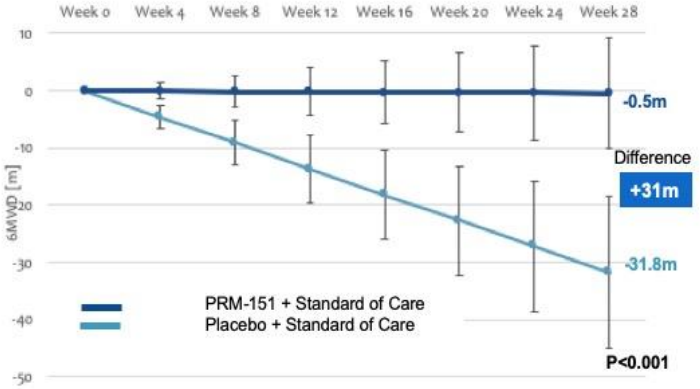
Mean change in FVC (%) from baseline to week 28



Change in FVC (mL) from baseline to week 28



Change in 6MWD (m) from baseline to week 28



- rhPTX-2 resulted in a significantly slower decline in lung function over 28 weeks vs placebo (-2.5% vs -4.8%); most patients received parallel treatment with SoC and no unexpected adverse events with combination treatment were noted
- Ph III (STARSCAPE) of rhPTX-2 + SOC (Esbriet or Ofev) in IPF to start in Q4 2020
- Ph II trial in myelofibrosis on-going; first results expected in Q4 2020

Raghu et al; JAMA 2018;319(22):2299-2307; IPF = interstitial pulmonary fibrosis, FVC = forced vital capacity; 6MWD = Six minute walk distance; SoC = standard of care; FPI = first patient in

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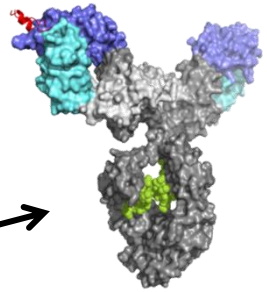
Gazyva in B-cell mediated diseases

Potential benefit in B-cell mediated diseases

Gazyva increases B-cell depletion

Type II anti-CD20 region
- Increased direct cell death
- Decreased CDC
- Reducted CD20 internalization

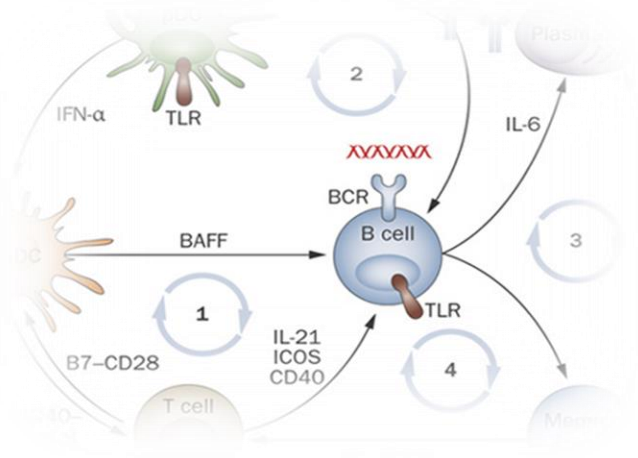
Glycoengineered Fc region
- Higher FcγR affinity
- Increased ADCC/ADCP



- Greater potency than Rituxan in depleting peripheral and tissue B-cells
- Recent studies suggest that tissue based B-cells play a major role in lupus nephritis and a more complete depletion is needed

Evaluating Gazyva in B-cell mediated diseases with high unmet need

- **Autoreactive B cells in LN:**
  - Secrete pathogenic autoantibodies & pro-inflammatory cytokines
  - Present self-antigens
  - Activate T cells

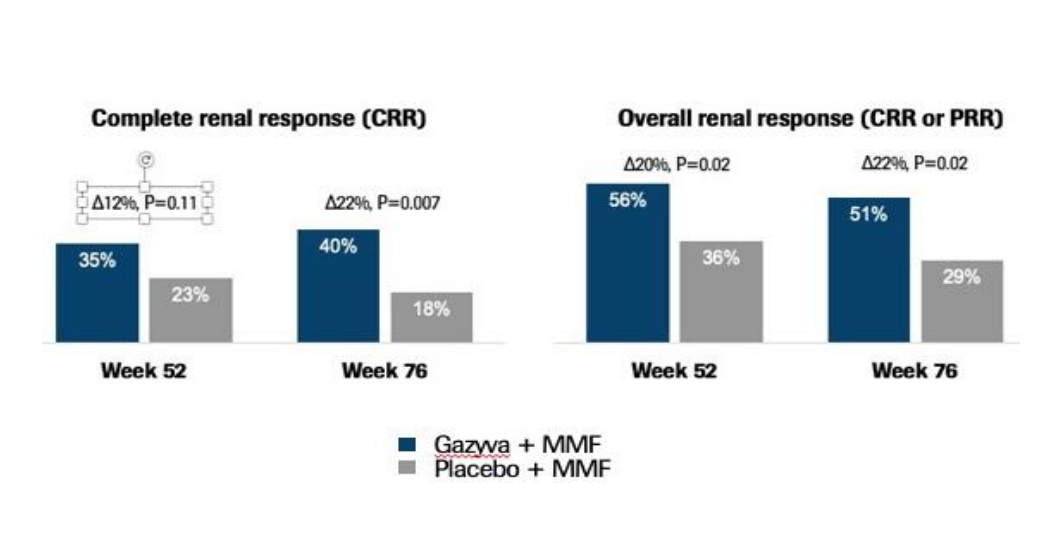


- ✓ Lupus nephritis (Ph III (REGENCY) to start in Q3 2020)
- ✓ Membranous nephropathy (Ph III expected to start H1 2021)
- Potential additional opportunities
  - Non-renal systemic lupus erythematosus
  - Several other diseases

Moessner et al., Blood, 2010; Niederfellner et al., Blood, 2011; Dalle et al., MCT, 2011; Jak et al., Blood, 2011; Alduaij et al., Blood, 2011; Lim et al., Blood, 2011; Honeychurch et al., Blood, 2012; Pievani et al., Blood, 2011; Bologna et al., JI, 2011; Braza et al., Haematologica, 2011; Patz et al., BJH, 2011; CDC=complement-dependent cytotoxicity; ADCC=antibody-dependent cell-mediated cytotoxicity; ADCP=antibody-dependant cellular phagocytosis; MOA=mechanism of action

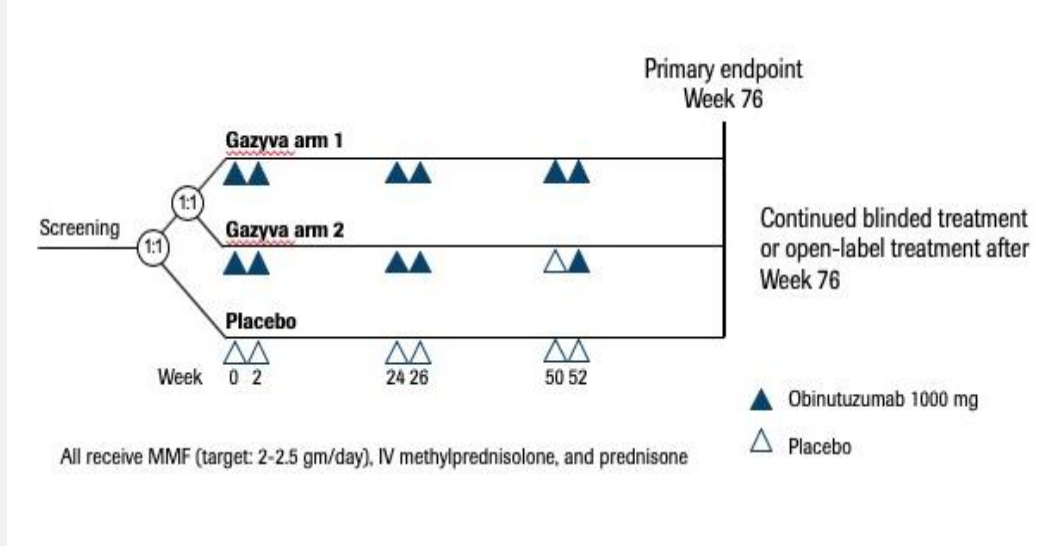
Gazyva in lupus nephritis (LN)
Ph III (REGENCY) to start in Q3 2020

Ph II (NOBILITY) results



- Ph II (NOBILITY) met both primary and key secondary endpoints with no new safety signals
- BTD for Gazyva in LN awarded by the FDA
- Ph II update (104 weeks) to be presented

Ph III trial design (REGENCY)



- Single pivotal Ph III to replicate Ph II (NOBILITY)
- Primary endpoint is complete renal response (CRR); secondary endpoints include partial clinical response (PRR)
- Ph III (REGENCY) to start in Q3 2020

Furie R. et al; ACR 2019; MMF=mycophenolate mofetil

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Inflammatory bowel disease (IBD) program on-going

Ph III program of etrolizumab in Crohn's Disease reading out in 2021

Ph III

Etrolizumab
- Gut-selective, dual α4β7/αEβ7 anti-integrin antibody
- Development of novel patient-reported outcome measures for UC and Crohn's disease continues

Ph II

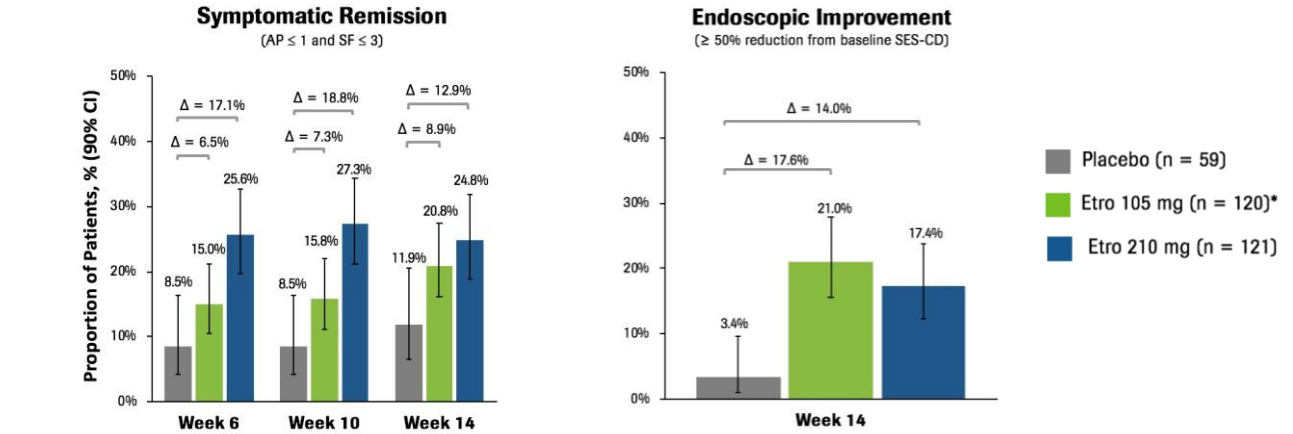
IL-22-Fc fusion protein
- Novel non-immunosuppressive MOA
- Restores and protects gut epithelium
- Ph IIb in UC ongoing; N~270

Ph I

RG6287
- Preserves epithelial cell survival
- Ph1 on-going

IgG-IL-2 fusion protein
- Promotes regulatory T-cell proliferation
- Ph Ib on-going

Etrolizumab in CD: Ph III (BERGAMOT) interim results



- >70% of patients in cohort 1 were TNF IR, representing a population with high unmet need; symptomatic remission was seen at week 6 and observed through week 14; clinically meaningful endoscopic improvement was demonstrated
- Well tolerated; frequency of adverse events comparable to placebo
- Ph III enrolling with final data expected in 2021

Sandborn et al; UEGW; October 2017; Barcelona, Spain; CD=crohn's disease; UC=ulcerative colitis; MOA=mechanism of action, TNF IR is defined as patients who are refractory to or intolerant of TNF inhibitors

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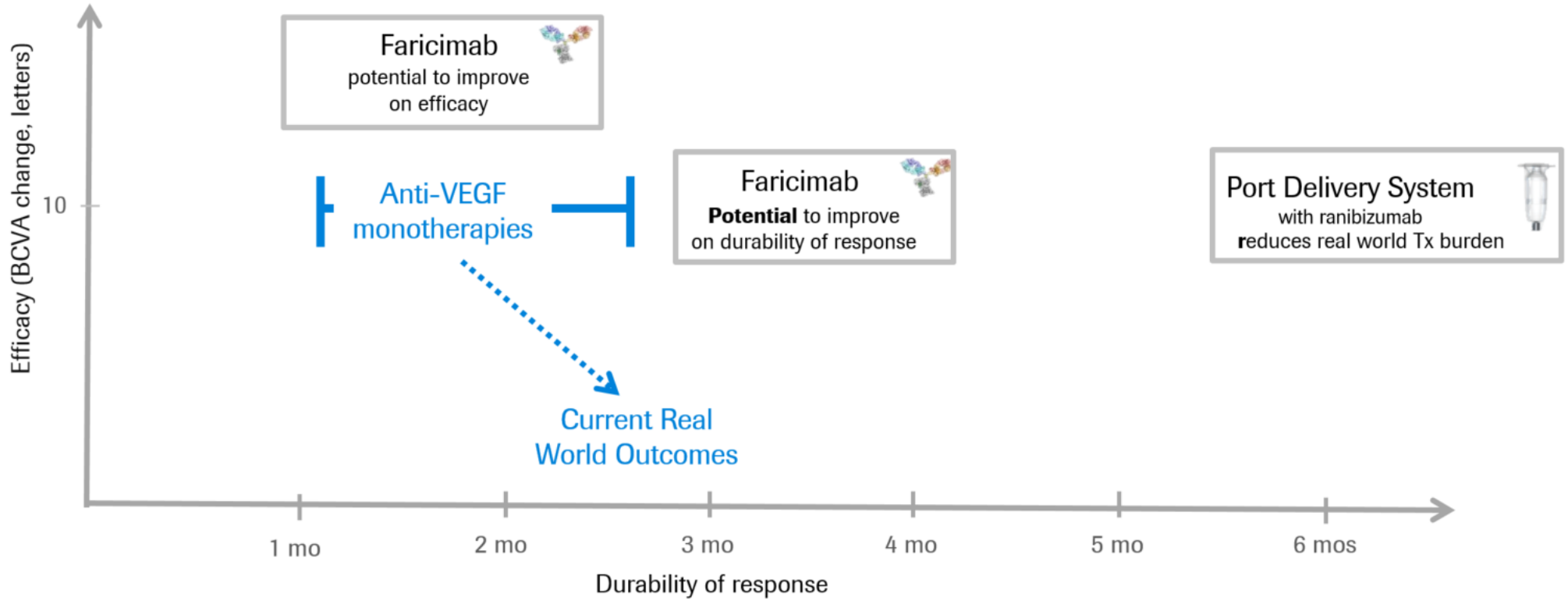
Late stage ophthalmology progressing rapidly

PDS and faricimab with the potential to address key unmet needs

Opportunity to differentiate on durability and improved efficacy

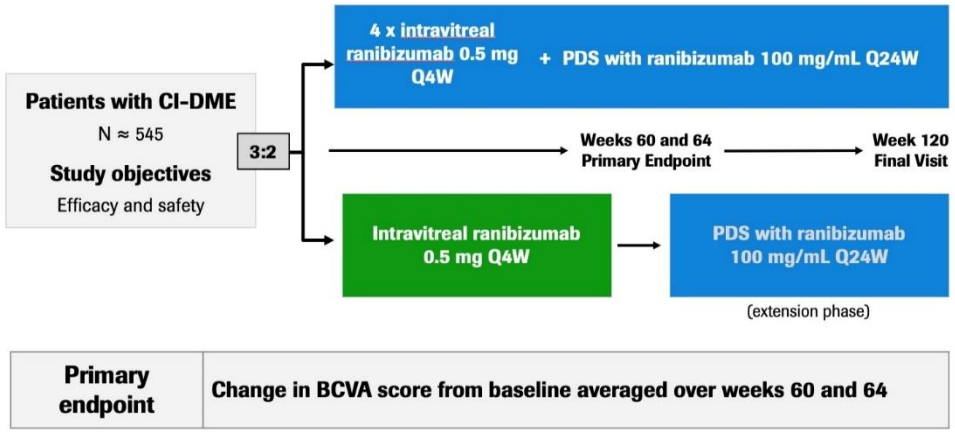


For illustrative purposes only

Port Delivery System (PDS) Platform

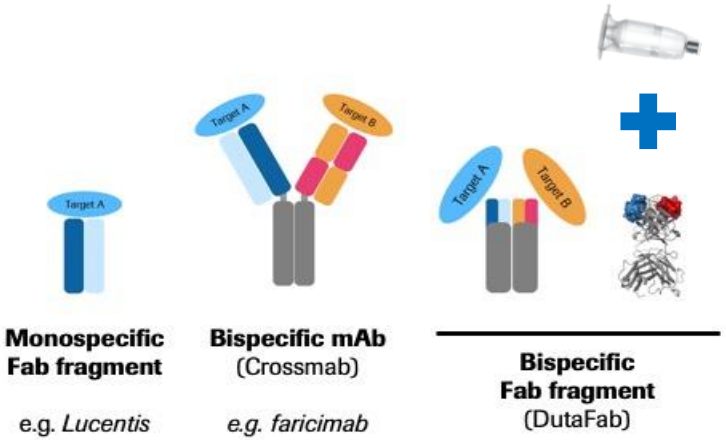
New indications and next generation bispecifics (DutaFabs)

Ph III trial design (PAGODA) in DME



- In the US and EU diabetic eye disease (DME, DR) is the leading cause of vision loss in working age adults
- Ph III (PAGODA) results in DME expected in H1 2022
- Ph III (PAVILION) in DR started in Q3 2020

DutaFabs: A new PDS compatible bispecific format



- DutaFabs are a novel bispecific Fab format significantly smaller than traditional full seized bispecific antibodies
- DutaFabs are compatible with the PDS technology, potentially enabling increased durability beyond Q6M
- 3 DutaFabs with novel dual MOAs in development

CI-DME= center-involved diabetic macular edema, DR=diabetic retinopathy; BCVA=best corrected visual acuity; mAb=monoclonal antibody; MOA=mechanism of action

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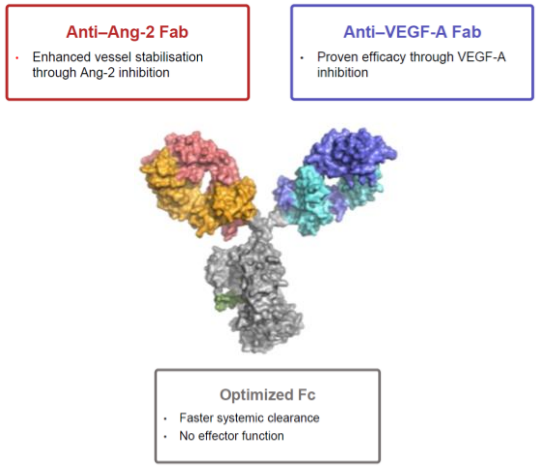
Faricimab in nAMD

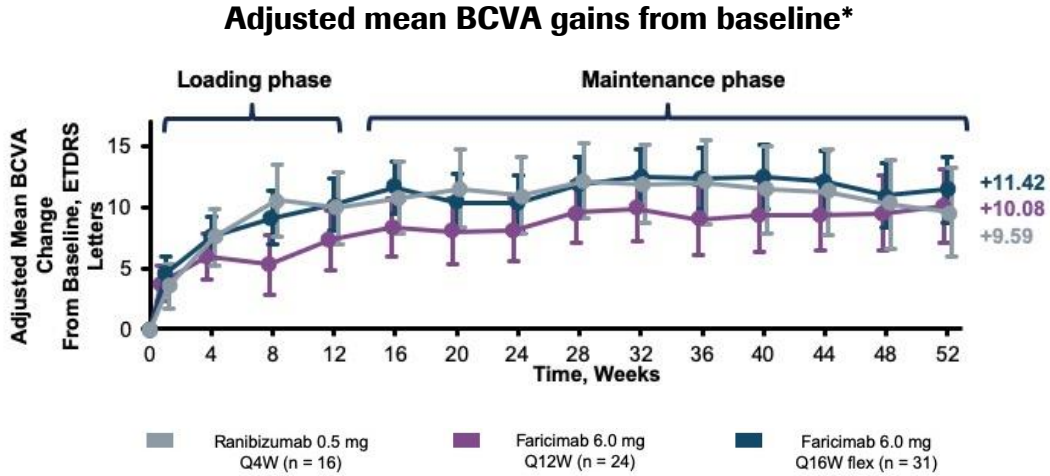
Potential to stabilize retinal vasculature and improve treatment durability

Anti-VEGF/Ang2 bispecific mAb



- First bispecific Ab in ophthalmology binding simultaneously to VEGF and Angiopoietin2 (Ang2)
- Ang2 inhibition may improve vascular stability and reduce retinal inflammation

Ph II (STAIRWAY) results in nAMD



- BCVA gains with faricimab Q16W flexible dose and Q12W comparable with ranibizumab Q4W
- 12 weeks after last loading dose 65% of patients had no disease activity and could potentially benefit from Q16W dosing
- Ph III (TENAYA and LUCERNE) enrollment completed; results expected Q1 2021

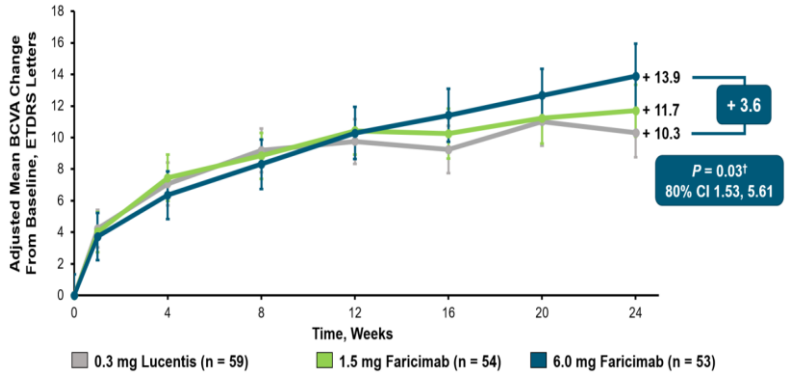
Khanani et al, AAO Subspecialty Day 2018; nAMD=neovascular age-related macular degeneration; VEGF= vascular endothelial growth factor; BCVA= best-corrected visual acuity; *Linear model adjusted for baseline BCVA, previous macular laser treatment status, BCVA category (≥ 64 letters vs ≤ 63 letters)

Faricimab in DME

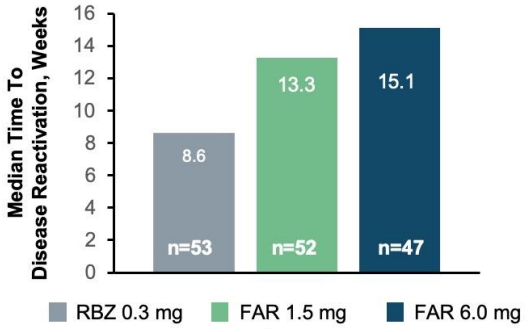
Potential for improved efficacy and durability

Ph II (BOULEVARD) results in DME

Adjusted mean BCVA gains from baseline*

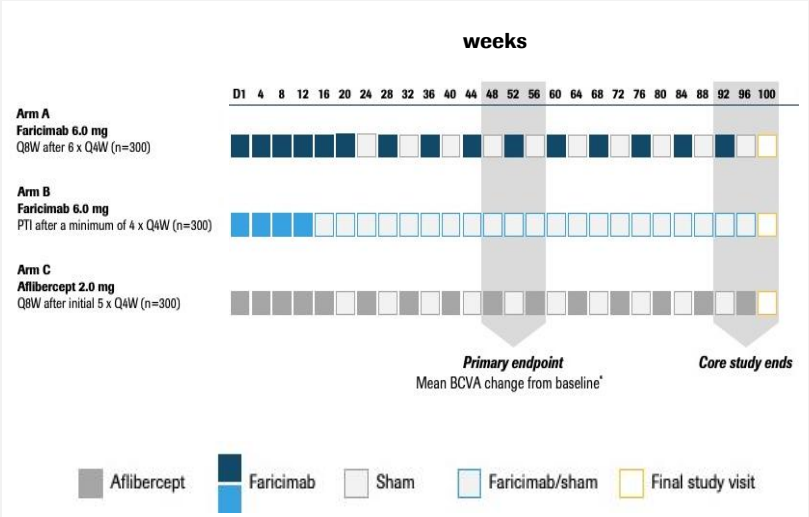


Median time to disease reactivation



- Robust BCVA efficacy gains with a mean of +13.9 letters from baseline
- Statistically significant gain of +3.6 letters over Lucentis
- Durability shown with median time to disease reactivation of 15.1 weeks for faricimab vs 8.6 weeks for Lucentis

Ph III trial design (YOSEMITE, RHINE)



- Primary endpoint: Mean BCVA △ from baseline at 1yr; arm B to evaluate personalized treatment interval of Q12W or Q16W
- Ph III data expected in Q4 2020
- Ph III in RVO to start in 2021

Sahni et al, Ophthalmology 2019;126:1155-1170; DME=diabetic macular edema; BCVA= best-corrected visual acuity; *Linear model adjusted for baseline BCVA, previous macular laser treatment status, BCVA category (≥ 64 letters vs ≤ 63 letters); RVO= retinal vein occlusion

Roche Pharma Day 2020

Infectious Diseases: A close look at our HBV pipeline

John Young | Global Head of Infectious Diseases, pRED

Late stage pipeline update

1. **Hematology franchise**
   - DLBCL: Polivy, glofitamab, mosunetuzumab
   - FL: mosunetuzumab, glofitamab, Polivy
   - AML: Venclexta
   - MM: Venclexta
   - MDS: Venclexta

2. **Breast Cancer franchise**
   - TNBC: Tecentriq, ipatasertib
   - HR+: SERD (RG6171), PI3Kαi (RG6114)
   - HER2+: Tecentriq

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   - ROS1+/NTRK+: Rozlytrek
   - RET+: Gavreto
   - KRAS *G12C*+: GDC-6063

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   - CRPC: ipatasertib
   - Thyroid cancer: Gavreto
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   - IPF: rhPentraxin-2, Esbriet
   - Myelofibrosis: rhPentraxin-2
   - Lupus nephritis: Gazyva
   - Crohn's disease: etrolizumab

8. **Ophthalmology**
   - nAMD, DME, DR: Port Delivery System
   - nAMD, DME, RVO: faricimab

9. **Infectious diseases**
   - HBV: TLR7 agonist, CpAM, RG6346, RG6084
   - Influenza A/B: Xofluza
   - SARS-CoV2: Actemra
   - SARS-CoV2: REGN-COV2

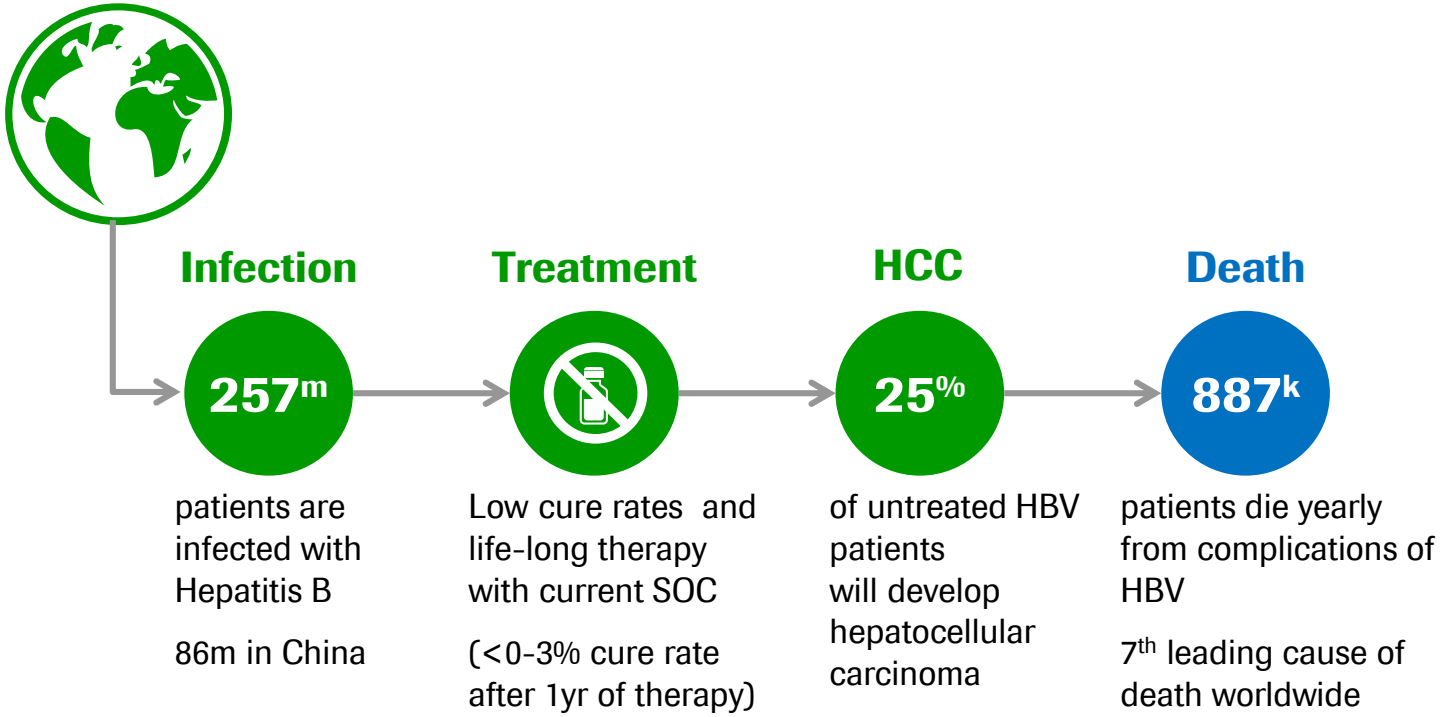
Oncology / Hematology
Neuroscience
Ophthalmology
Infectious diseases
Immunology

* For further information on target patient populations please consult the appendix; For further details on the late stage pipeline please consult the HY 20 results presentation appendix or visit the IR homepage

Hepatitis B: High global unmet need

High burden of disease with life-threatening complications

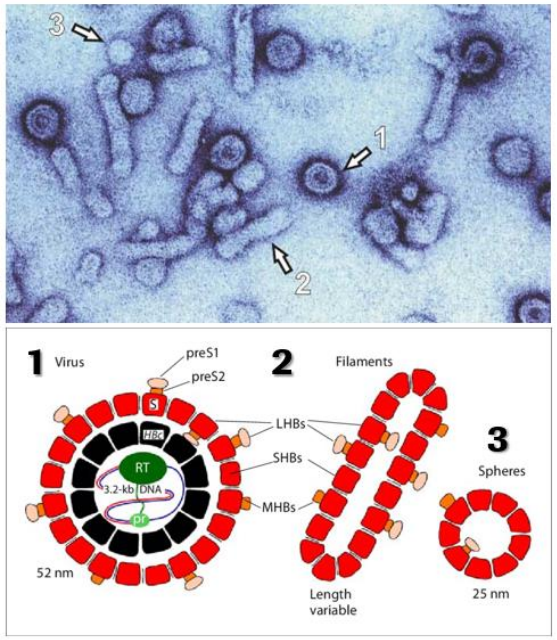
Hepatitis B Virus (HBV)



Reference: WHO July 2018

Hepatitis B surface Antigen (HBsAg) loss is the most important endpoint for functional cure with finite treatment duration

HBsAg detection



- Total HBsAg is quantatively measured by Immunoassay (Elecsys HBsAg II quant II, Roche)

HBsAg decline associated with signitifcantly improved patient outcomes

	Relative Risk	Lower limit	Upper limit	P-value
Liver decompensation	**0.28**	0.13	0.59	0.001
HCC	**0.30**	0.20	0.44	<0.001
Transplant/Death	**0.22**	0.13	0.39	<0.001
Composite first clinical event	**0.31**	0.23	0.43	<0.001

- Meta-analysis of 28 studies with nearly 190,000 chronic HBV patients
- Clear association between HBsAg seroclearance and improved outcome
- HBsAg seroclearance as primary endpoint in clinical trials supported

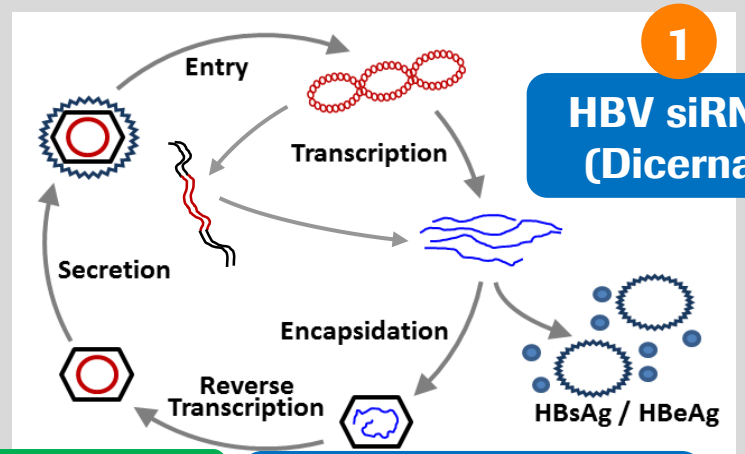
Figure: Gerlich HG Dig Dis. 2010; https://www.klinikum.uni-heidelberg.de/zentrum-fuer-infektiologie/molecular-virology/research-area/hbv/1-morphology-genome-organization; table: Anderson et al. Clin Gastroenterol Hepatol 2020; in press, online available at https://doi.org/10.1016/j.cgh.2020.05.041; HCC=hepatocellular carcinoma

Roche HBV strategy

Combining antiviral and immunomodulatory agents

Antiviral agents

HBV life cycle



1 HBV siRNA (Dicerna)

Nucleos(t)ide

CpAM (Core protein Allosteric Modulator) 2

Immunomodulators

Virus mediated suppression

Novel Immunomodulator

3 TLR7 Agonist

Peg-IFNα

Activation

Standard of Care

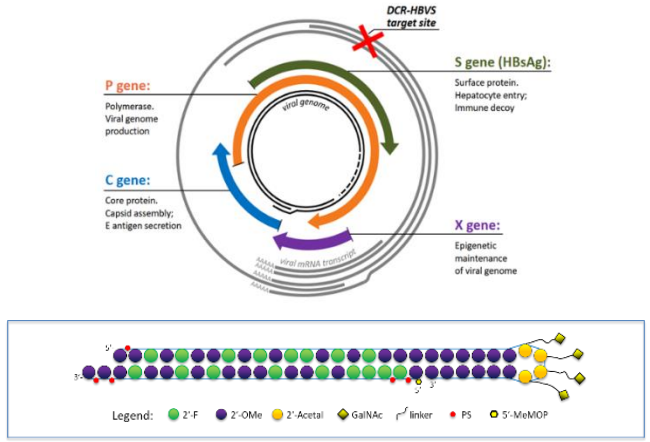
Functional cure

1

HBV siRNA (RG6346)

Inhibiting HBV gene expression by targeting the viral genome

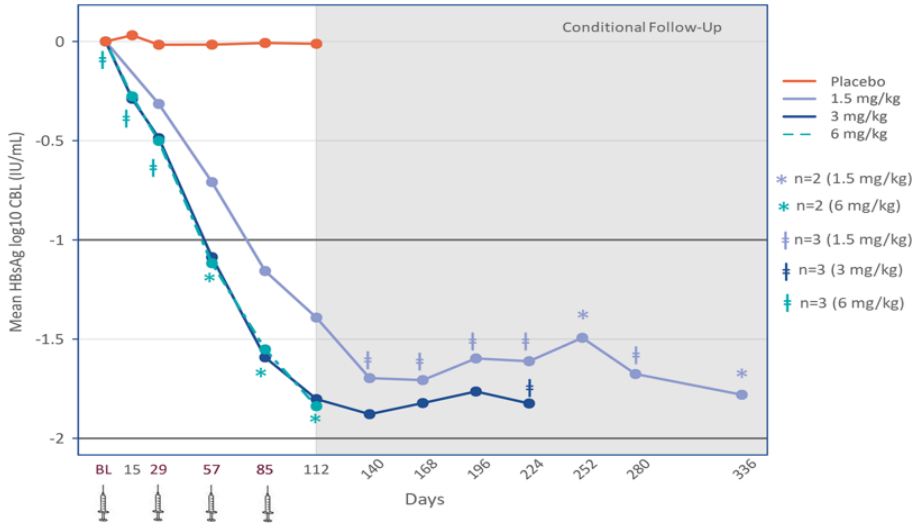
siRNA simultaneously inhibiting multiple HBV genes



- Proprietary liver-targeted RNAi technology (GalXC™) with unique 'tetraloop' folded design
- Designed to inhibit HBV gene expression through targeting of S open reading frame of the HBV genome

Ph I (dose finding) interim results

HBsAg decline in patients receiving siRNA (RG6346) + nucleos(t)ide*



- Durable HBsAg decline up to day 336
- 6 out of 10 patients, who completed day 112, had HBsAg < 100 IU/mL
- Safe and well tolerated

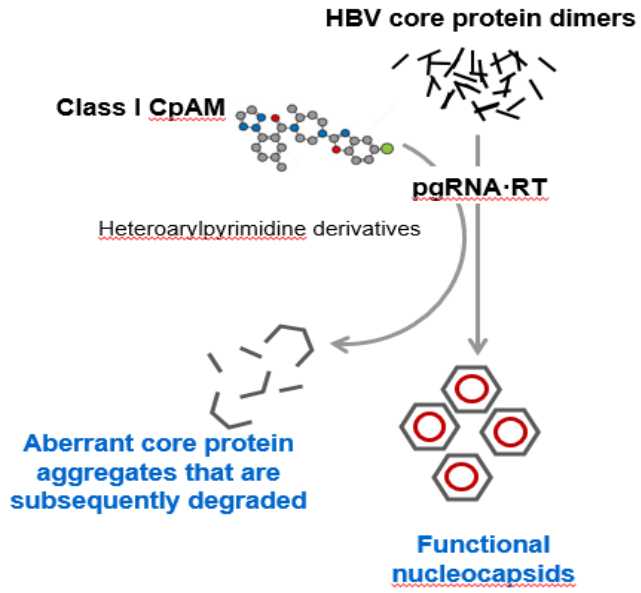
* Interim analysis from 25 June 2020 data cutoff; https://investors.dicerna.com/static-files/0507fc43-4023-4a40-92fb-0c06b9c4a4b7; In collaboration with Dicerna

2

CpAM (RG7907)

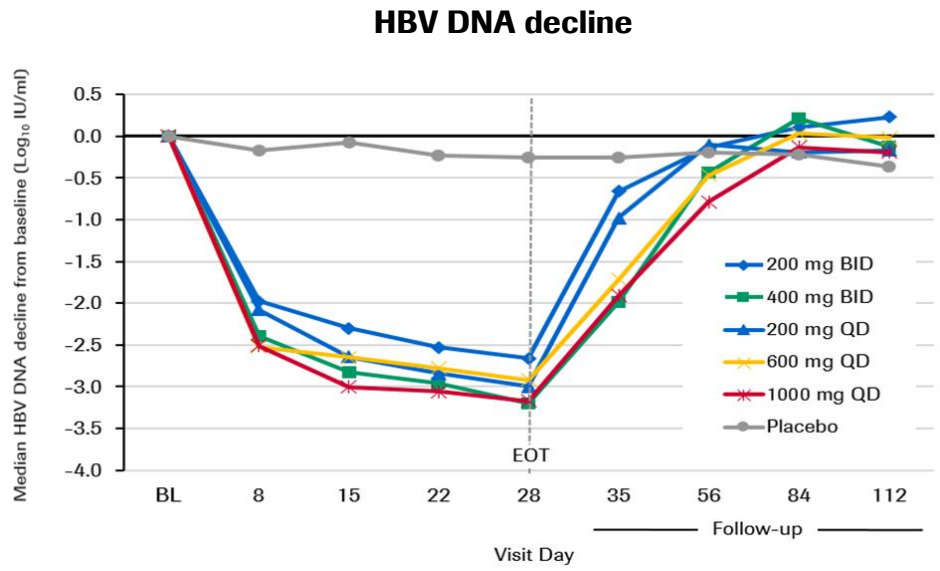
Leads to incorrect assembly of HBV core protein followed by degradation

Core protein allosteric modulator (CpAM)



- Effective against all major HBV genotypes
- Showing successful HBsAg reduction in preclinical mouse model

Ph I (dose finding)



- Strong HBV DNA decline in all patients within first week of treatment
- 81% (13/16) HBeAg-negative patients achieved HBV DNA levels below LLOQ (20 IU/ml)

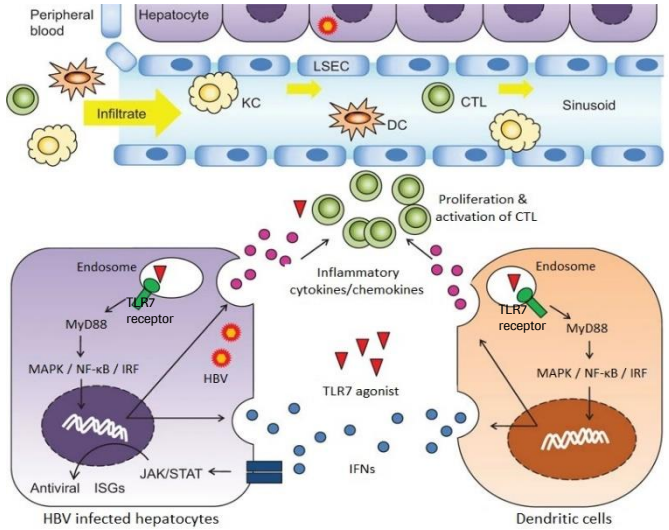
EASL 2019 poster FRI-219; HBeAg=Hepatitis B e-antigen; LLOQ=lower limit of quantification

3

TLR7 agonist (RG7854)

Stimulating innate and adaptive antiviral response via TLR7 pathway

Toll like receptor 7 (TLR7) agonist



- TLR7 detects single-stranded viral RNA and mediates anti-viral cytokine production and dendritic cell activation
- Unique double pro-drug selectively activated in the liver

Ph I (dose finding) results

Dose (mg)	ISG15		OAS1	
	Fraction responding	Geometric mean fold change (range)	Fraction responding	Geometric mean fold change (range)
Placebo	0/16	-	0/16	-
3	1/8	2.4 (2.4–2.4)	0/8	-
10	0/8	-	0/8	-
20	1/8	2.6 (2.6–2.6)	0/8	-
40	1/8	2.9 (2.9–2.9)	0/8	-
60	1/8	2.6 (2.6–2.6)	2/8	2.4 (2.0–2.9)
100	6/8	5.9 (2.3–29.3)	5/8	3.8 (1.9–6.9)
140	8/8	11.6 (2.3–48.0)	8/8	5.5 (2.2–18.1)
170	8/8	11.2 (2.5–132.2)	8/8	5.5 (2.0–19.0)

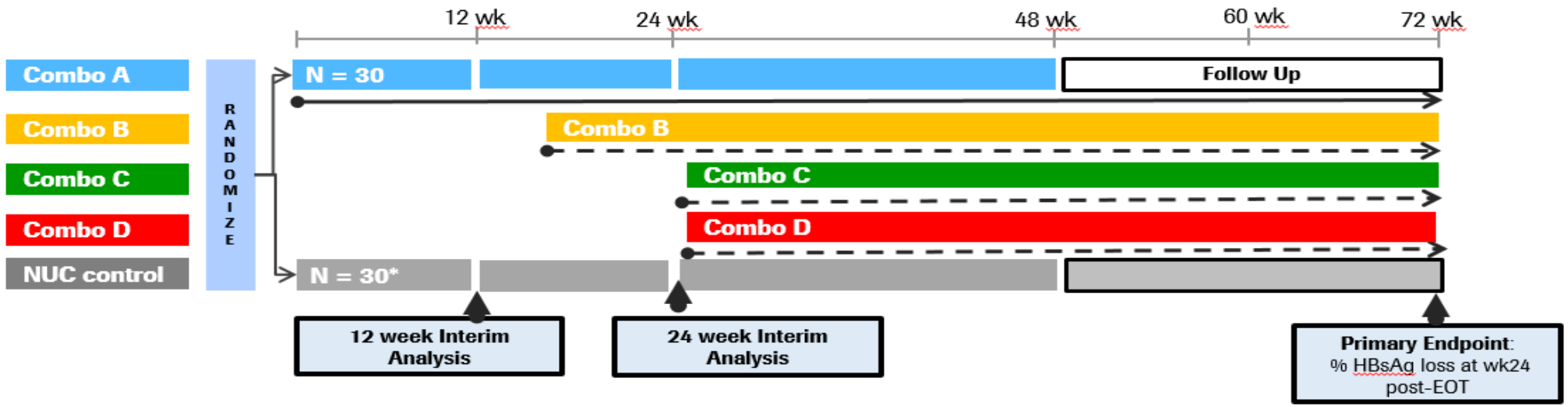
- Dose dependent immunomodulatory activity established
- TLR7 activation induces mRNA expression of interferon-inducible genes (e.g. ISG15, OAS1) first observed at 100 mg dose and plateaued at 170 mg dose

Modified from Ma Z et al. Cell Mol Immunol 2015, 12(3):273-82; Gane E et al. EASL 2018; ISG15=Interferon-stimulated gene 15; OAS1=2'-5'-oligoadenylate synthetase 1

Highly adaptive HBV combination platform

Screening novel drug combinations efficiently

Combination platform trial design



- Nimble and adaptive platform for Ph II screening with shared control arm
- First interim analysis after 12 weeks; second interim analysis after 24 weeks; interim analysis helps inform combos B, C and D
- Opportunity to seamlessly add and terminate different drug combinations

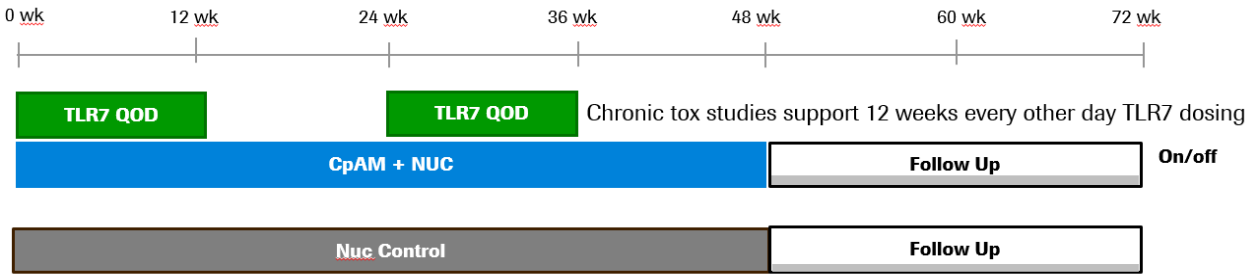
2 + 3

CpAM + TLR7 agonist in HBV

First combination to move into Ph II testing

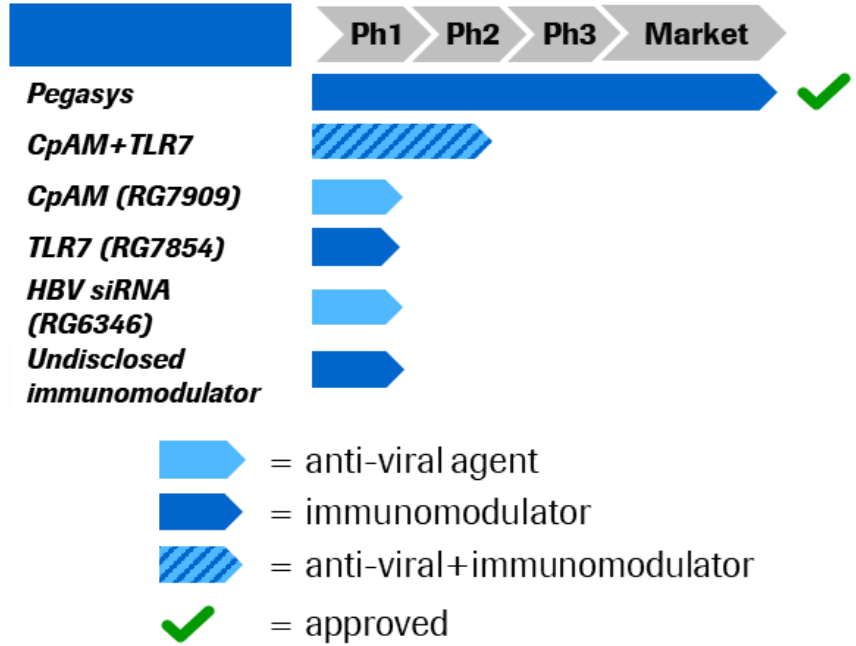
Ph II combination trial design

Randomized, open-label, global trial to evaluate efficacy and safety of CpAM + TLR7



- Ph II combination trial (n=60) started in Q3 2020
- First 12-week interim analysis planned for Q2 2021
- A 4th HBV program molecule (undisclosed novel immunomodulator) moved into Ph I testing

Overview HBV development program



Roche Pharma Day 2020

Late Stage Immunology, Ophthalmology and Infectious Disease

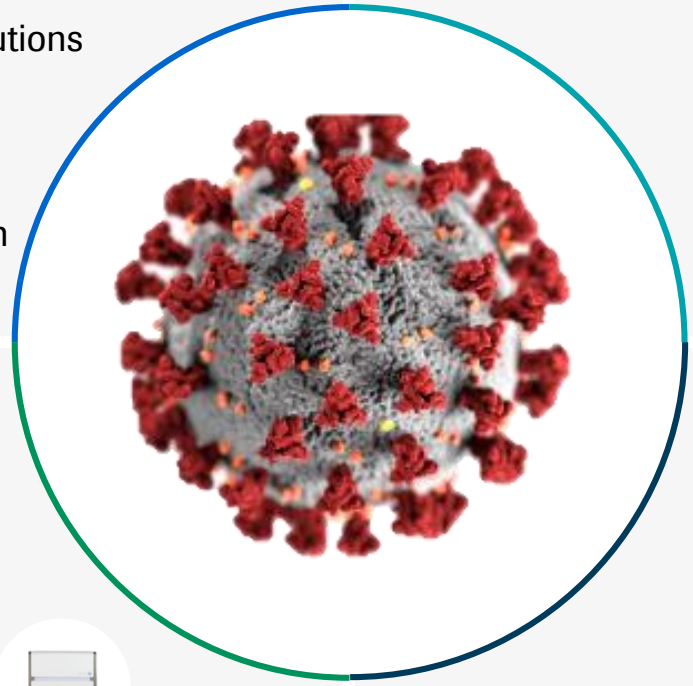
Cristin Hubbard | Senior Vice President Immunology, Infectious Disease & Ophthalmology, Global Product Strategy

Roche's response to the pandemic

Commitment every step of the way

Diagnostics

- Research & development for best-in-class solutions
- Deliver high quality diagnostics with flexible throughput
- Strong local support and partnership
- Holistic disease and patient-oriented approach



- SARS-CoV-2 PCR, Ab & rapid antigen test
- SARS-CoV-2/Influenza A/B differentiation test
- Other routine and diagnostic tests

Pharma

- Innovative therapies with various MOAs
- World-leading biologics manufacturing capacity
- Strong partnerships with healthcare ecosystems across the globe

- Xofluza
- Actemra
- REGN-COV2 nAB cocktail

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Oncology / Hematology
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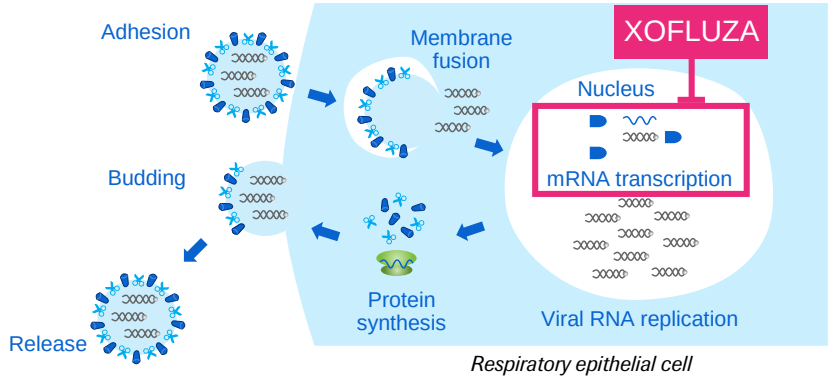
Xofluza in influenza A/B

Ph III studies «prevention of transmission» and infants on-going

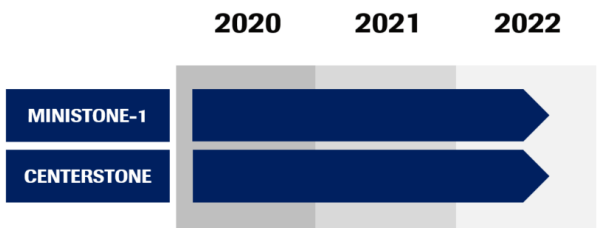
FDA emergency use authorization

CAP dependent endonuclease inhibitor



- First-in-class small molecule inhibiting viral RNA replication; stops viral shedding + reduces viral load significantly faster than the current SOC
- Oral, single-dosing
- Safety similar to placebo
- Activity against Tamiflu-resistant and avian strains (H7N9, H5N1)

Ph III development



- Ph III (miniSTONE-1) for infants <1yr; results expected in 2022
- Ph III (CENTERSTONE) for prevention of influenza transmission; results expected 2022
- Xofluza approved for healthy people in 24 countries; Global filings for high-risk patients, pediatrics, post-exposure prophylaxis on-going
- FDA emergency use authorization for the cobas SARS-CoV-2 + Influenza A/B test with a single sample, obtained in Q3 2020

SARS-CoV-2 & Influenza A/B test for cobas 6800/8800

cobas® 6800
1,440 results in 24 hours

cobas® 8800
4,128 results in 24 hours

Davis, et al. Virology J 2014; Eisfeld, et al. Nat Rev Microbiol 2015; Kawaguchi, et al. ESWI 2017; von Itzstein. Nat Rev Drug Discov 2007; MOA=mechanism of action; SOC=standard of care; Baloxavir marboxil co-developed with Shionogi with Roche holding worldwide license excluding Japan and Taiwan

Actemra in severe COVID-19 associated pneumonia

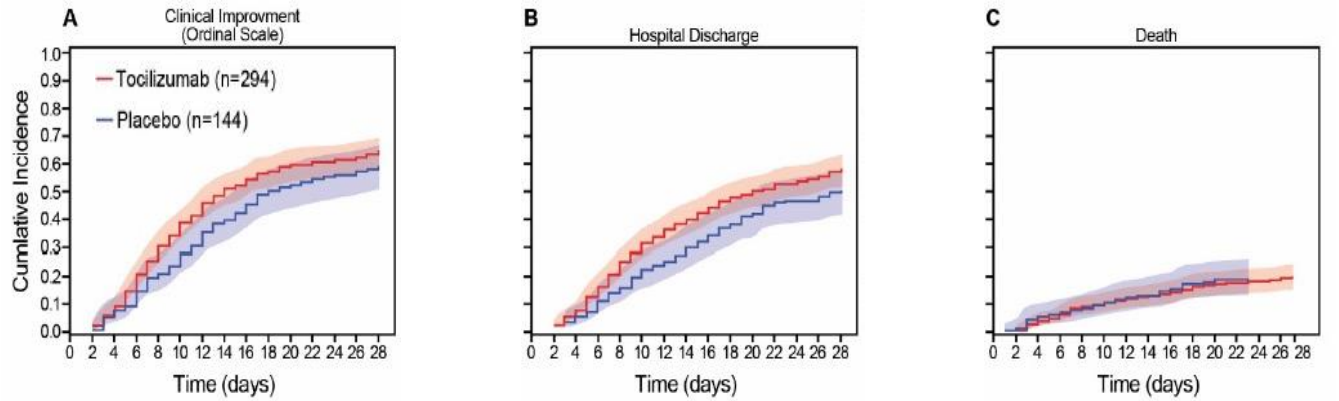
Ph III COVACTA: Primary and key secondary endpoints not met

Anti-IL6 receptor mAb

- Initially approved in RA and GCA
- Approved for CAR T-cell-induced cytokine release syndrome
- Ph III program (REMDACTA, EMPACTA, MARIPOSA, J-COVACTA) in COVID-19 associated pneumonia on-going*

Ph III (COVACTA) in severe COVID-19 associated pneumonia[1]

Key secondary endpoints



- Ph III (COVACTA) did not meet its primary endpoint of improved clinical status of patients or key secondary endpoint of reduced mortality at day 28
- Potentially clinically meaningful benefits in time to hospital discharge and duration of ICU stay
- Ph III (REMDACTA) results for Actemra + remdesivir expected in Q4 2020

1 Rosas I, et al; submitted to NEJM Aug 2020; available on medRxiv Aug 2020; RA = rheumatoid arthritis; GCA=giant cell arteritis;CAR T=chimeric antigen receptor T-cell; ICU=intensive care unit; *Additional studies are ongoing and might expand the findings of COVACTA and address outstanding scientifically and medically relevant questions regarding the risk/benefit profile of tocilizumab in COVID-19 in more narrowly defined patient populations and in conjunction with current treatments

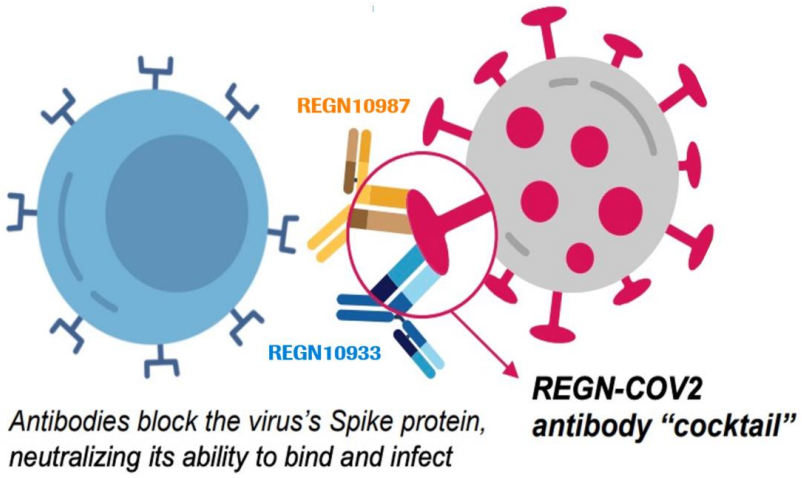
Neutralizing antibodies (nAbs) against SARS-CoV2

Promising for treatment and prophylaxis

Roche

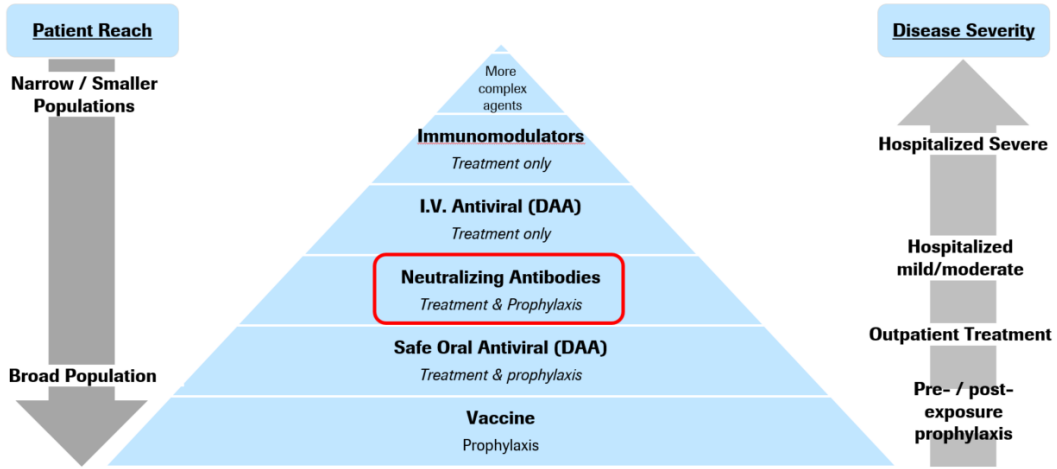
REGENERON

REGN-COV2 (nAb cocktail)



- Two potent, virus-neutralizing Abs binding non-competitively to the critical receptor-binding domain of the virus's spike protein
- The virus would need to have multiple simultaneous mutations at multiple genetic sites in order to escape the nAb cocktail, which is an unlikely scenario*

nAb cocktails for treatment & prophylaxis



Currently enrolling trials:

- Ph II/III study in hospitalized COVID-19 patients
- Ph II/III study in non-hospitalized COVID-19 patients
- Ph I multidose study in adult volunteers (pre-exposure)
- Ph III prophylaxis of housemates of infected individuals **
- First results expected in September 2020

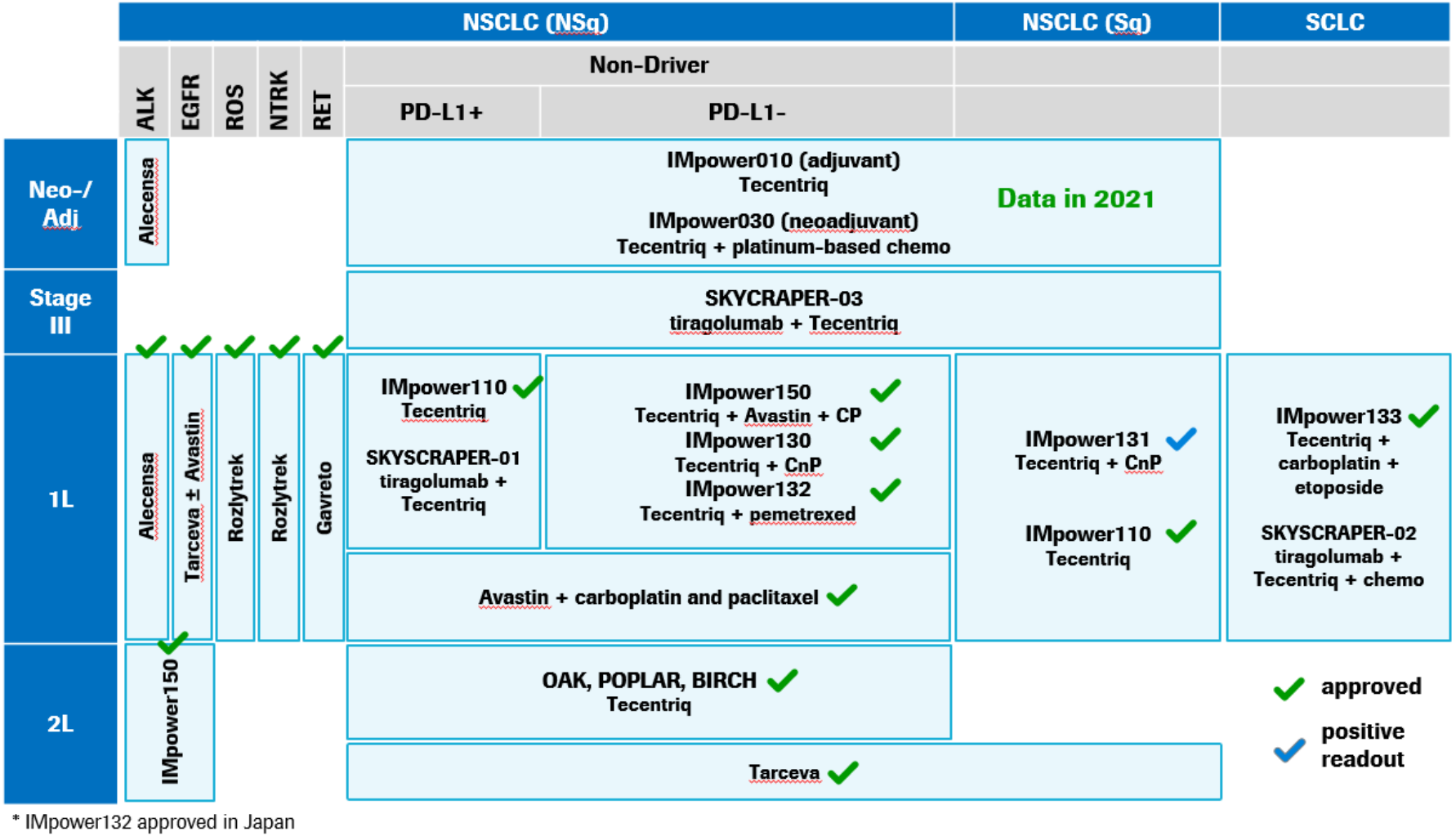
* A. Baum et al., Science 10.1126/science.abd0831 (2020); In collaboration with Regeneron; ** In collaboration with NIAID

Doing now what patients need next

Roche Virtual Late Stage Pipeline Event 2020
Appendix

Lung cancer franchise overview

Expanding coverage throughout lung cancer

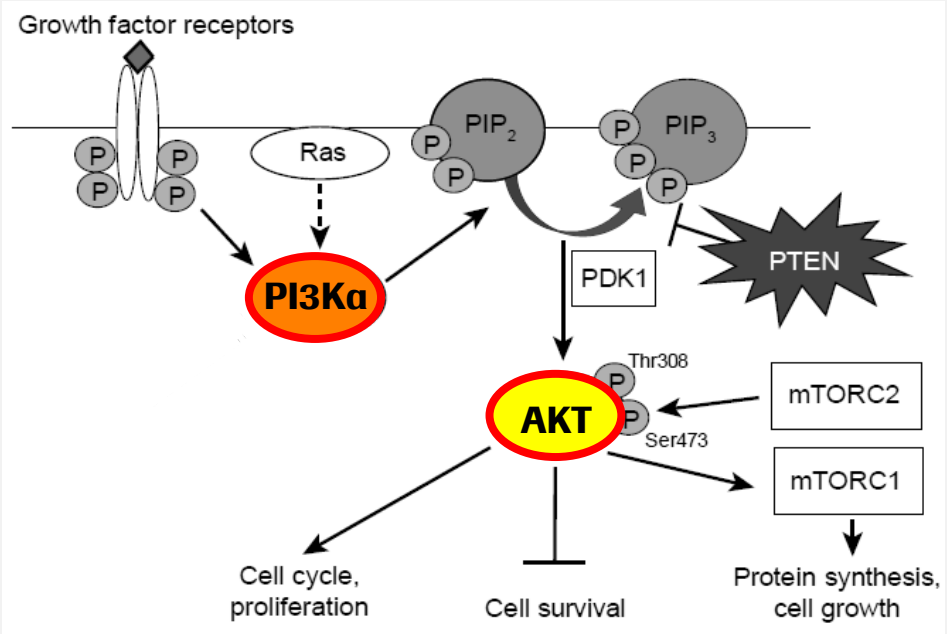


* IMpower132 approved in Japan

NSq=non-squamous; Sq=squamous

PI3K/AKT is the most frequently altered pathway in cancer

PI3K pathway



Frequency of PI3K mutations across tumor types

Tumor type	*PIK3CA* mutation
HR+ Breast Cancer	~40%
Ovarian	~33%
Endometrial	~25%
HER2+ Breast Cancer	~25%
Colon	~20%
Bladder	~20%
Cervix	~20%
HNSCC	~15%
TNBC	~8%
Gastric	~7%

14 million cancer patients diagnosed annually world wide, ~17% are *PIK3CA* mutant ~2.4M patients

HR+ = hormone receptor positive; HNSCC= head and neck squamour cell carcinoma; TNBC = triple negative breast cancer

Doing now what patients need next