
Roche

Roche

HY 2018 results

Basel, 26 July 2018

This presentation contains certain forward-looking statements. These forward-looking statements may be identified by words such as ‘believes’, ‘expects’, ‘anticipates’, ‘projects’, ‘intends’, ‘should’, ‘seeks’, ‘estimates’, ‘future’ or similar expressions or by discussion of, among other things, strategy, goals, plans or intentions. Various factors may cause actual results to differ materially in the future from those reflected in forward-looking statements contained in this presentation, among others:

1 pricing and product initiatives of competitors;
2 legislative and regulatory developments and economic conditions;
3 delay or inability in obtaining regulatory approvals or bringing products to market;
4 fluctuations in currency exchange rates and general financial market conditions;
5 uncertainties in the discovery, development or marketing of new products or new uses of existing products, including without limitation negative results of clinical trials or research projects, unexpected side-effects of pipeline or marketed products;
6 increased government pricing pressures;
7 interruptions in production;
8 loss of or inability to obtain adequate protection for intellectual property rights;
9 litigation;
10 loss of key executives or other employees; and
11 adverse publicity and news coverage.

Any statements regarding earnings per share growth is not a profit forecast and should not be interpreted to mean that Roche’s earnings or earnings per share for this year or any subsequent period will necessarily match or exceed the historical published earnings or earnings per share of Roche.

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Group

Severin Schwan
Chief Executive Officer

HY 2018 performance

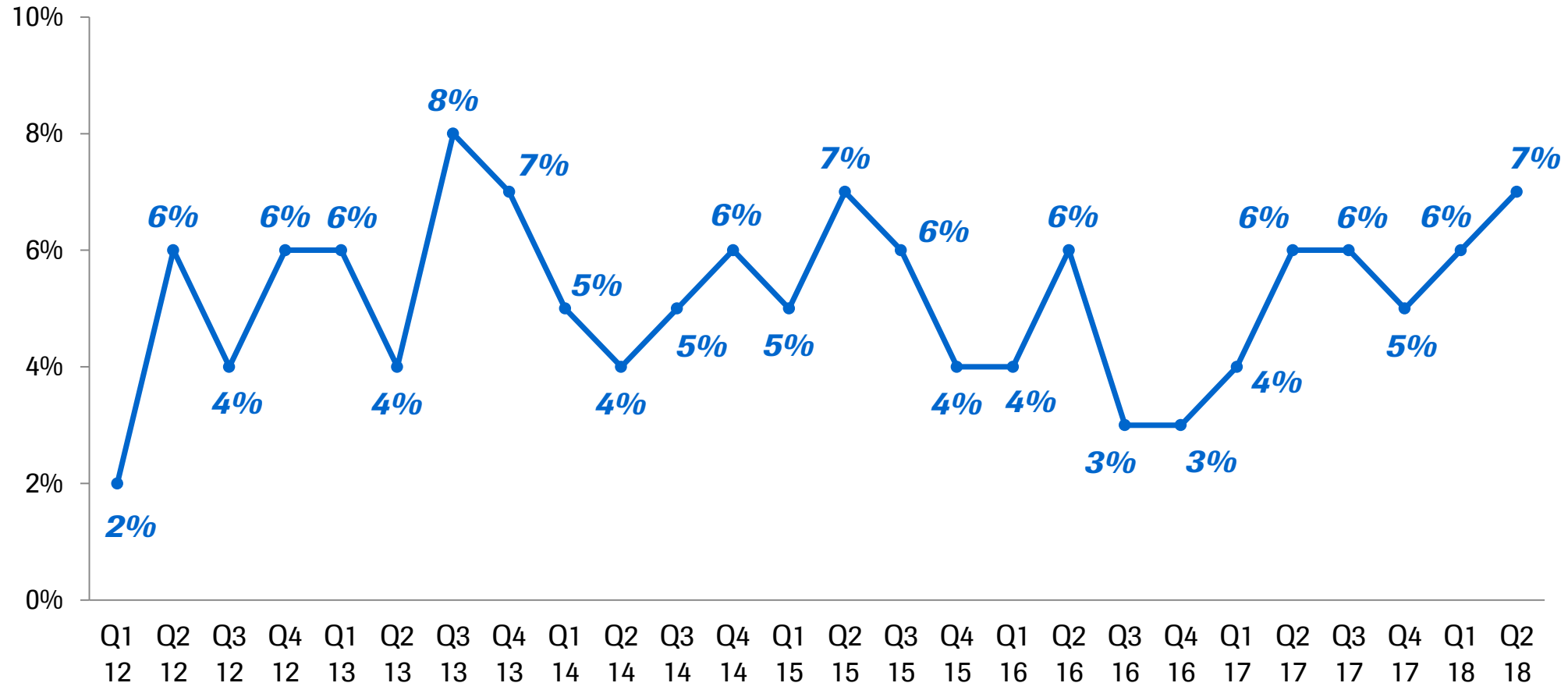
Outlook

HY 2018: Very strong sales growth in both divisions

	HY 2018 CHFbn	HY 2017 CHFbn	Change in % CHF	Change in % CER
Pharmaceuticals Division	**21.8**	20.5	**6**	**7**
Diagnostics Division	**6.3**	5.8	**8**	**6**
Roche Group	**28.1**	26.3	**7**	**7**

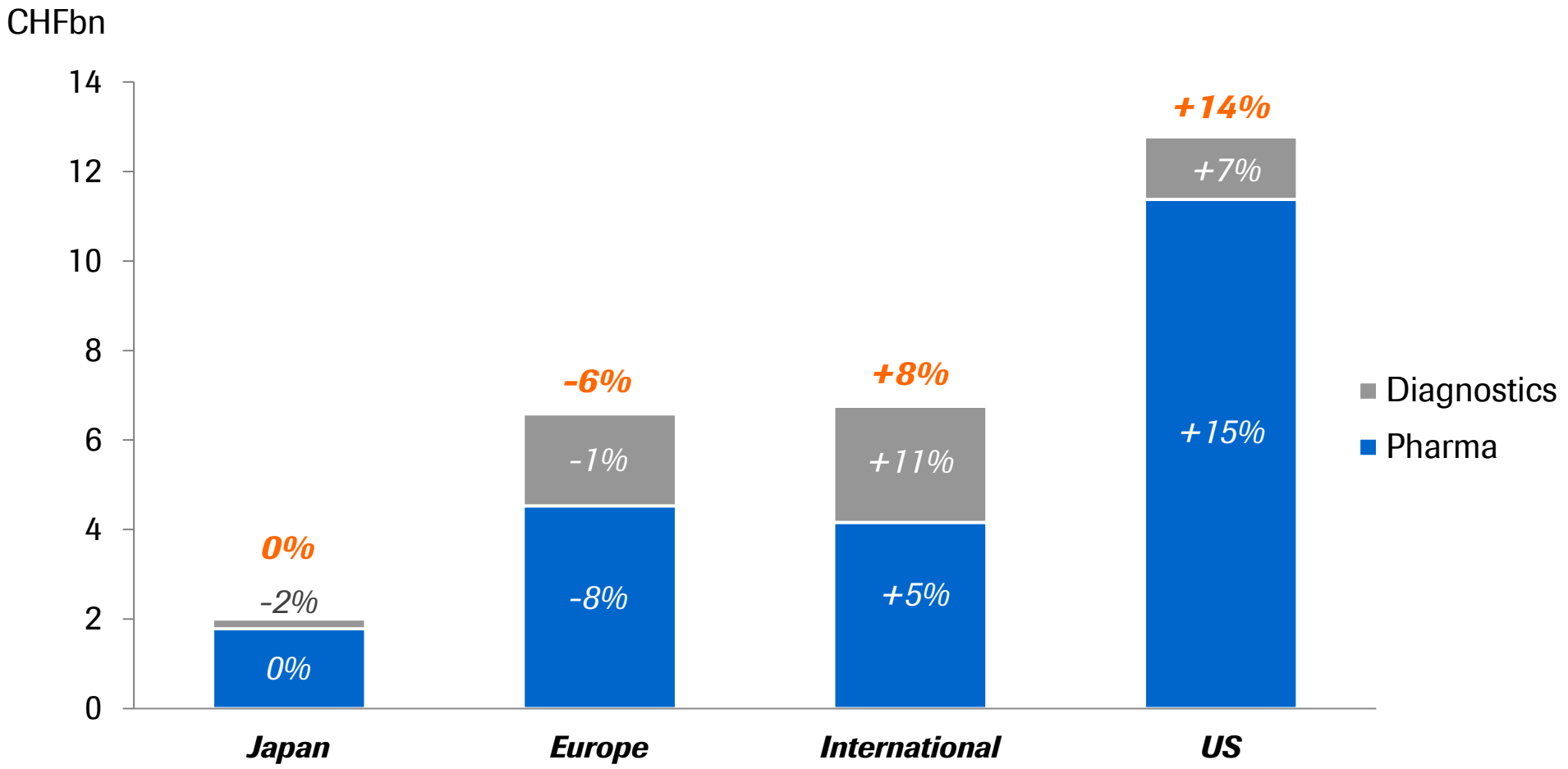
CER=Constant Exchange Rates

Q2 2018: Sales growth for the seventh consecutive year



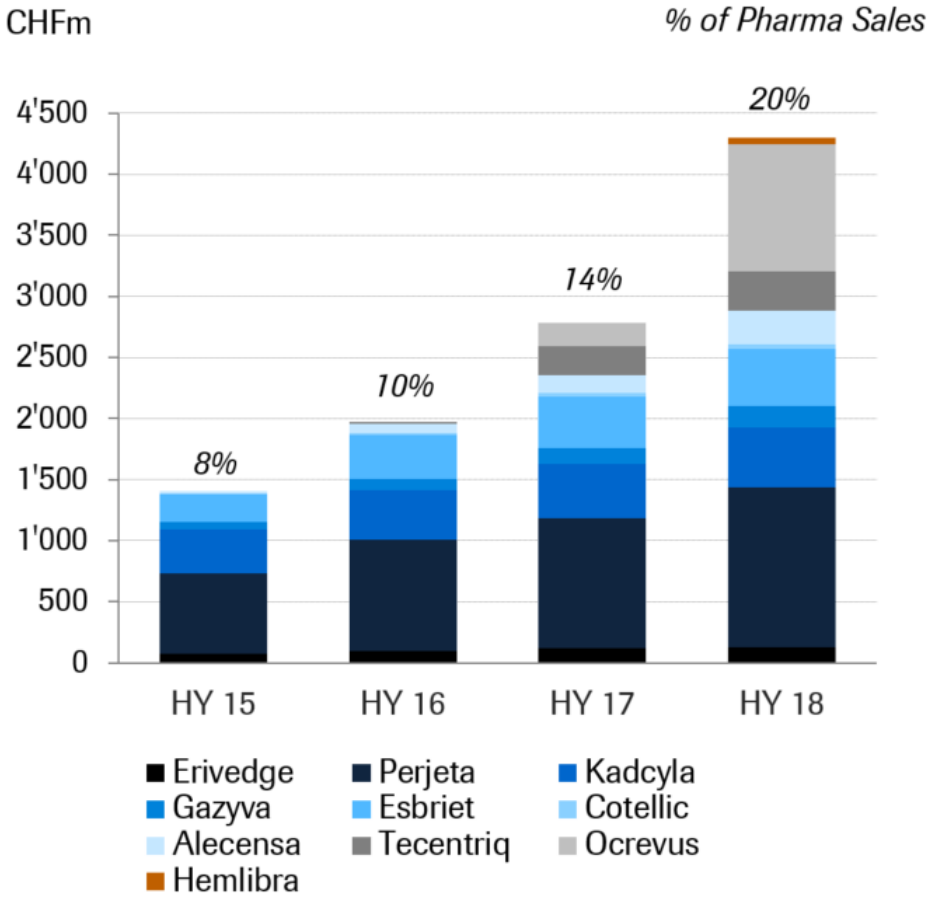
All growth rates at Constant Exchange Rates (CER)

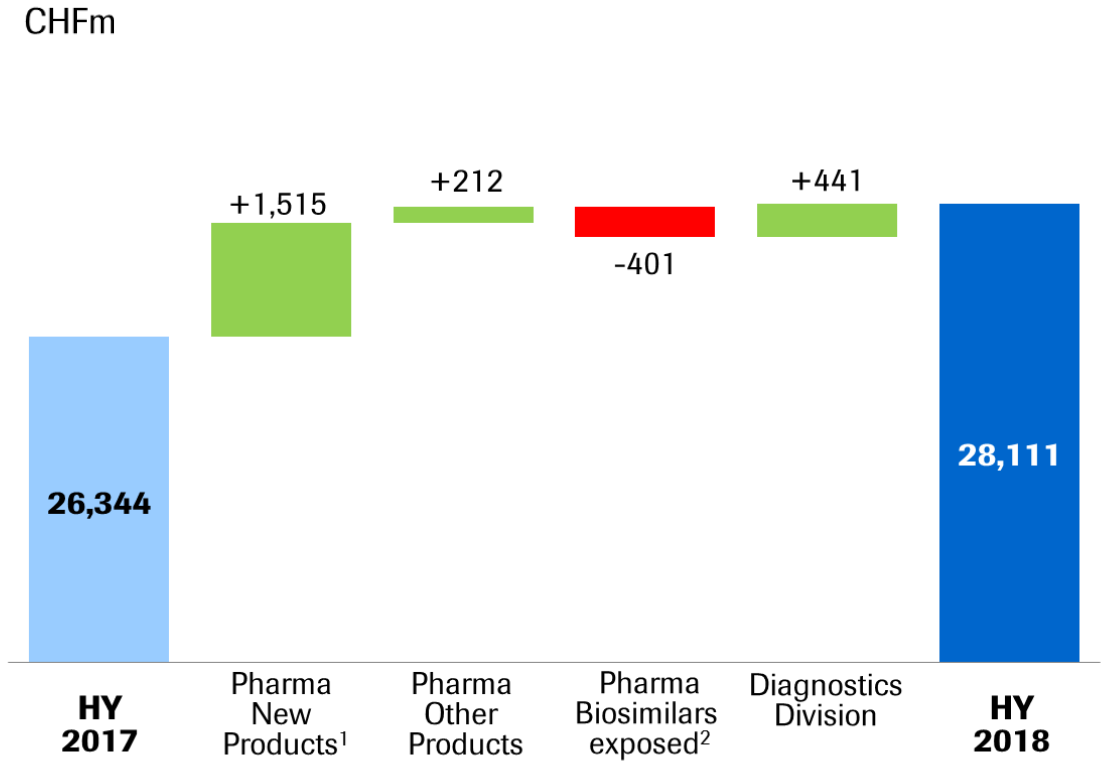
HY 2018: Strong sales growth in US and International



All growth rates at Constant Exchange Rates (CER)

HY 2018: New launches driving growth, offsetting biosimilars





[1] Erivedge, Perjeta, Kadcyla, Gazyva, Esbriet, Cotellic, Alecensa, Tecentriq, Ocrevus, Hemlibra
[2] MabThera in Europe and Japan, Herceptin in Europe

Roche significantly advancing patient care

BTD's and Priority reviews reflecting the quality of our research

22 *Breakthrough Therapy Designations*

Year	Molecule	Indication
2018	Tecentriq + Avastin	(HCC)
	Hemlibra	(Hemophilia A non-inhibitors)
	entrectinib	(ROS1+ NTRK+ solid tumors)
	balovaptan	(Autism spectrum disorders)
2017	polatuzumab vedotin + BR	(R/R DLBCL)
	Venclexta + LDAC	(1L unfit AML)
	Zelboraf	(BRAF-mutated ECD)
	Rituxan	(Pemphigus vulgaris)
2016	Actemra	(Giant cell arteritis)
	Alecensa	(1L ALK+ NSCLC)
	Ocrevus	(PPMS)
	Venclexta + HMA	(1L unfit AML)
	Venclexta + Rituxan	(R/R CLL)
2015	Actemra	(Systemic sclerosis)
	Tecentriq	(NSCLC)
	Venclexta	(R/R CLL 17p del)
	Hemlibra	(Hemophilia A inhibitors)
2014	Esbriet	(IPF)
	Lucentis	(Diabetic retinopathy)
	Tecentriq	(Bladder)
2013	Alecensa	(2L ALK+ NSCLC)
	Gazyva	(1L CLL)

5 *Current priority reviews granted*

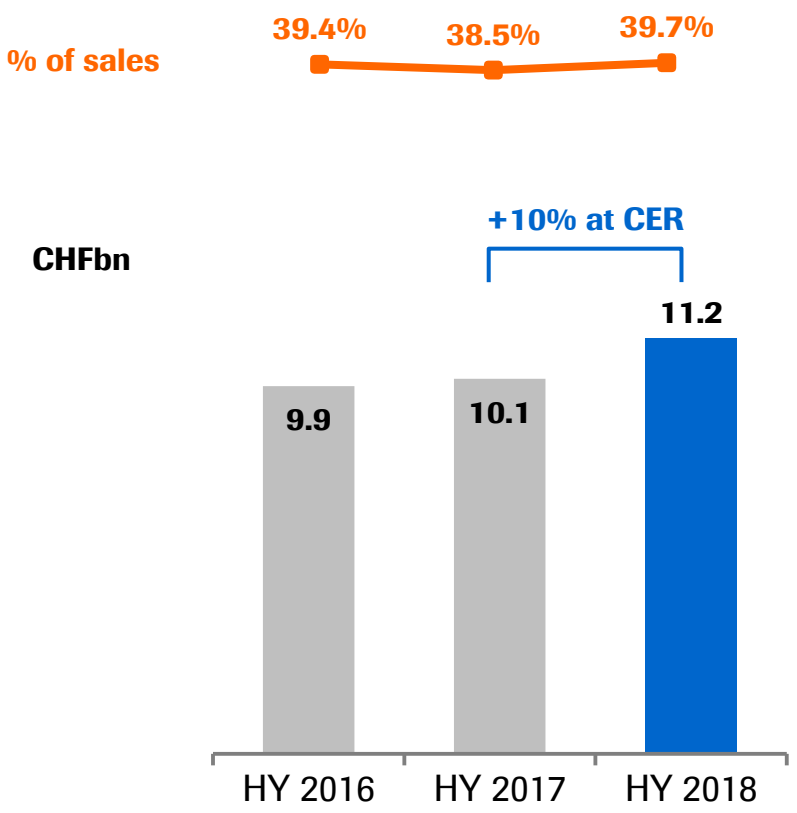
Year	Molecule	Indication
HY 2018	MabThera	(Pemphigus vulgaris)
	Hemlibra	(Hemophilia A non-inhibitors)
	baloxavir marboxil	(Influenza)
	Tecentriq + Avastin	(1L NSCLC)
	Xolair	(Pre filled syringe)

1 *Breakthrough Device Designation*

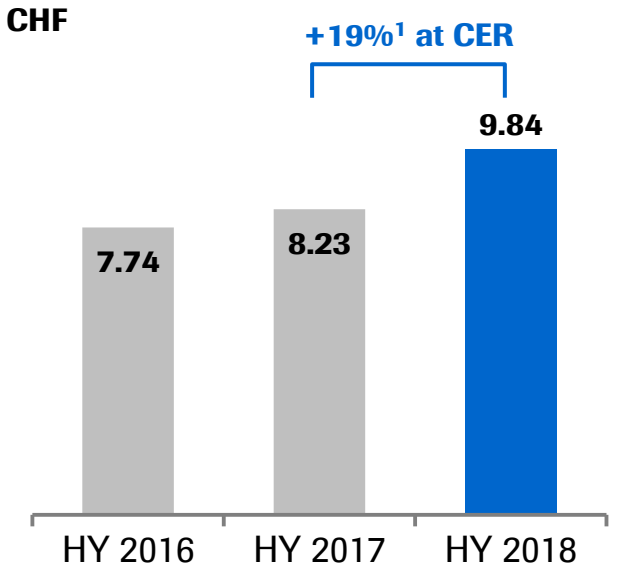
Year	Device	Indication
2018	Elecsys® β-Amyloid (1-42) Elecsys® Phospho-Tau (181P) Cerebro Spinal Fluid assays	(Alzheimer's disease)

HY 2018: Strong Core results, significant operating free cash flow

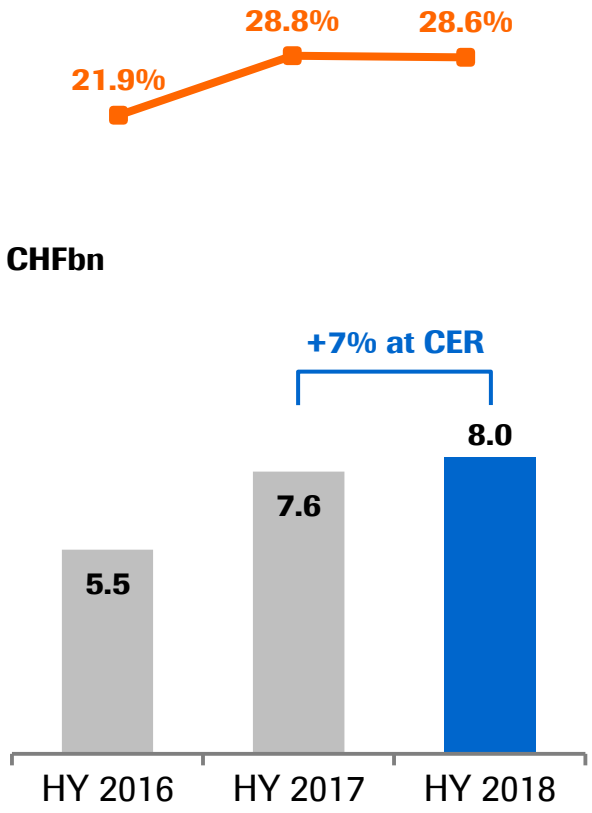
Operating profit



EPS



Operating free cash flow



CER=Constant Exchange Rates
[1]+8% at CER excl. US tax reform

Replace and extend the business

Through continuously improving standard of care

Replace existing businesses

MabThera/Rituxan	Gazyva, Venclexta, polatuzumab vedotin, Subcutaneous
Herceptin	Perjeta, Kadcyla, Subcutaneous
Avastin	Tecentriq, entrectinib
Lucentis	VA2, Port Delivery System
Tamiflu	baloxavir marboxil

Entering new franchises

MS:
Ocrevus

Hemophilia:
Hemlibra

CNS:
SMA, Autism, Huntington's, Alzheimer's

Achievements HY 2018

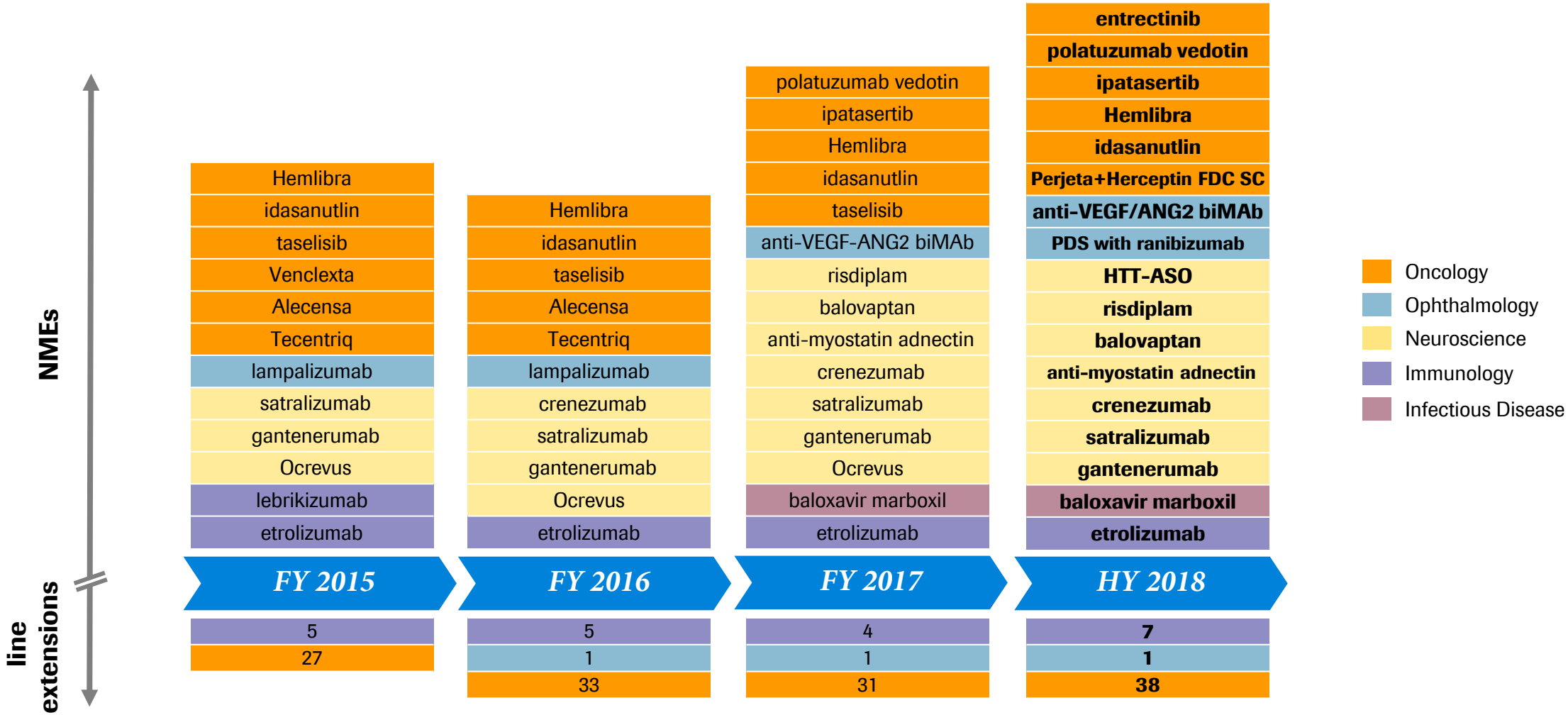
Ocrevus:	EU approval (RMS, PPMS)
Gazyva:	CLL11 (iNHL): OS vs Rituxan met
Hemlibra:	US/EU/Japan launch (inhibitor patients) HAVEN 3 (non-inhibitors) & 4 (Q4W) at WFH
Tecentriq:	IMpower150 (1L NSCLC): OS met IMpower130 (1L NSCLC): OS & PFS met IMpower131 (1L NSCLC): PFS met IMpower132 (1L NSCLC): PFS met IMpower133 (1L ES-SCLC): OS & PFS met IMmotion151 (1L mRCC): PFS met IMpassion130 (1L TNBC): PFS met; OS benefit
Perjeta:	EU approval eBC (APHINITY)
Venclexta:	US approval in R/R CLL, 1L AML early filing
baloxavir marboxil:	US filing, Ph III CAPSTONE2 positive
VA2:	Strong Ph II (BOULEVARD) data in DME
Port delivery:	Strong Ph II (LADDER) in wAMD

VA2=aVEGF/ANG2 biAB; MS=multiple sclerosis; SMA=spinal muscular atrophy; RMS=relapsing MS; PPMS=primary progressive MS; iNHL=indolent Non-Hodgkin`s lymphoma; NSCLC=non-small cell lung cancer; ES-SCLC=extensive stage small cell lung cancer; RCC=renal cell carcinoma; TNBC=triple negative breast cancer; eBC=early breast cancer; R/R CLL=relapsed/refractory chronic lymphocytic leukemia; DME=diabetic macular edema; wAMD=wet age-related macular degeneration

HY 2018 performance

Outlook

HY 2018: Record number of NMEs at pivotal stage



NME=new molecular entities; baloxavir marboxil (Cap Endonuclease inhibitor); risdiplam (SMN2 splicer); FDC=Fixed dose combination; SC=Subcutaneous; PDS=Port delivery system
For details on the indications and line extensions please consult the pipeline appendix

2018 outlook further raised

Sales growth to 'mid single digit' from 'low single digit' & EPS growth to 'mid teens' from 'high single digit'

Group sales growth[1]	• Mid single digit (from low single digit)
Core EPS growth[1]	• Broadly in line with sales, excl. US tax reform benefit • Mid teens incl. US tax reform (from high single digit)
Dividend outlook	• Further increase dividend in Swiss francs

[1] At Constant Exchange Rates (CER)

Pharmaceuticals Division

Daniel O'Day
CEO Roche Pharmaceuticals

HY 2018 results

Innovation

Outlook

HY 2018: Pharma sales

Strong growth in US due to new products, biosimilars impacting Europe

	HY 2018 CHFm	HY 2017 CHFm	Change in % CHF	Change in % CER
Pharmaceuticals Division	**21,847**	**20,521**	**6**	**7**
United States	11,378	10,185	12	15
Europe	4,528	4,539	0	-8
Japan	1,781	1,771	1	0
International	4,160	4,026	3	5

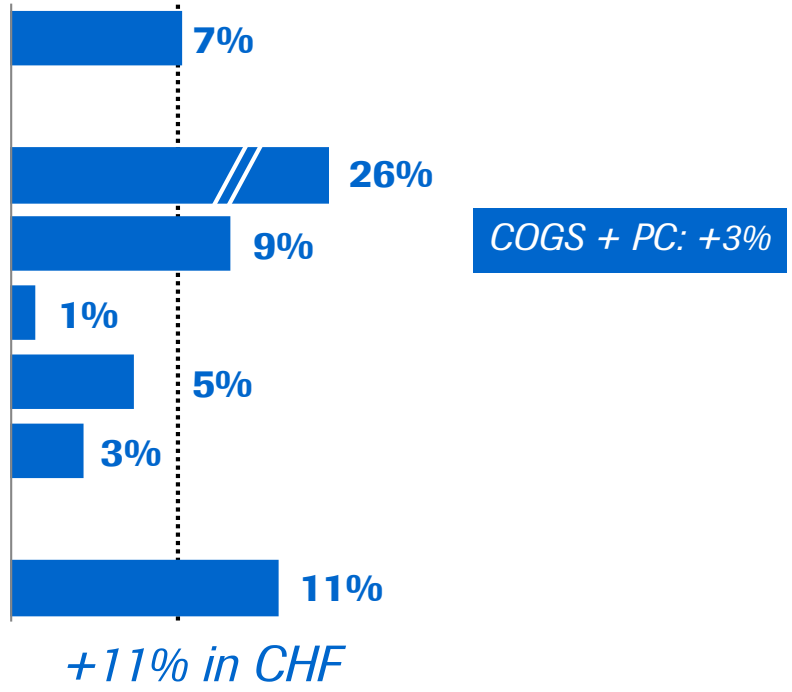
CER=Constant Exchange Rates

HY 2018: Pharma Division

Core operating profit driven by higher gross profit, increased ROOI and strong operating cost control

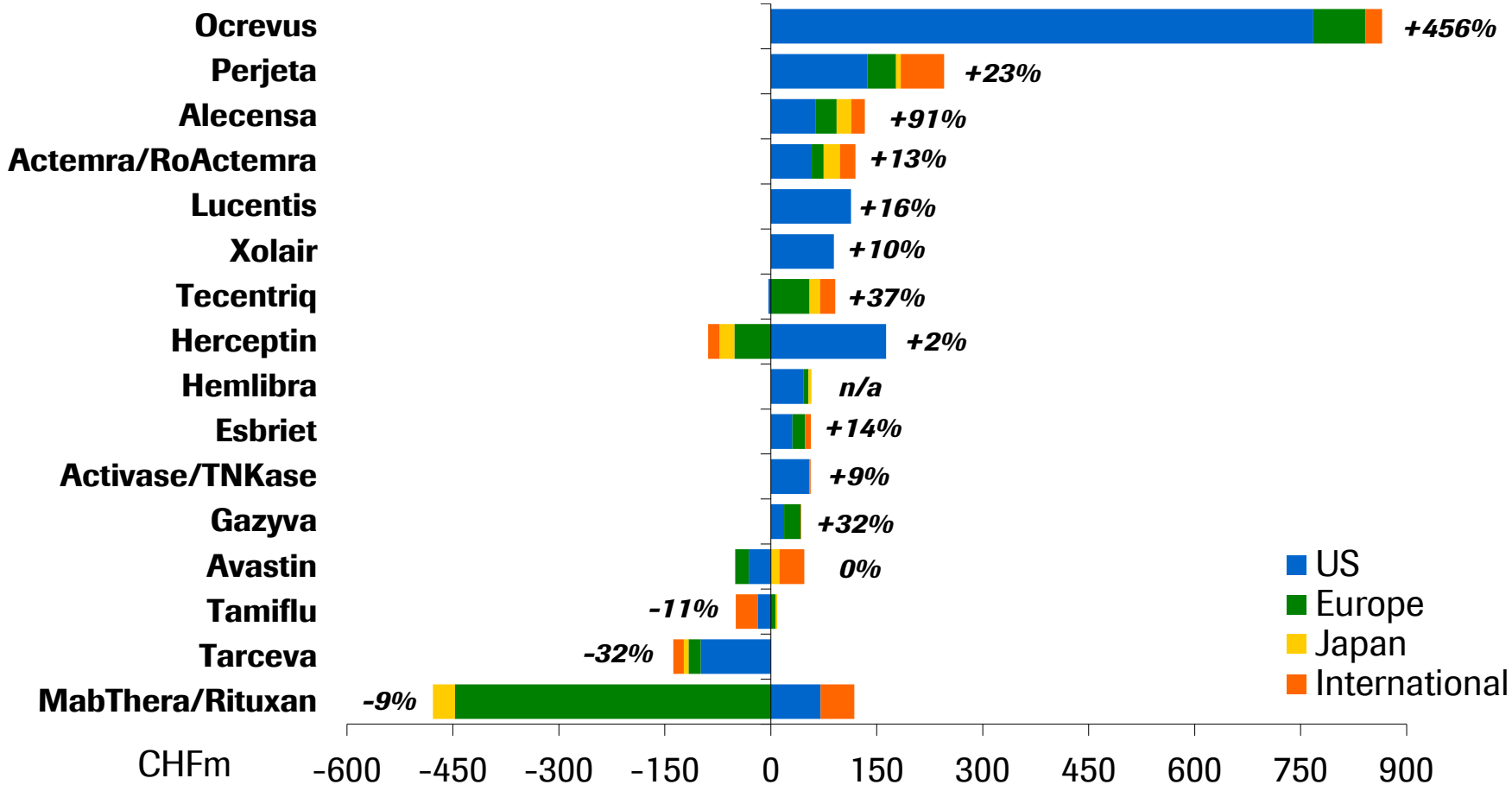
	HY 2018 CHFm	HY 2018 % sales
Sales	**21,847**	**100.0**
Royalties & other op. inc.	1,375	6.3
Cost of sales	-4,476	-20.5
M & D	-3,122	-14.3
R & D	-4,598	-21.0
G & A	-725	-3.3
Core operating profit	**10,301**	**47.2**

2018 vs. 2017 CER growth



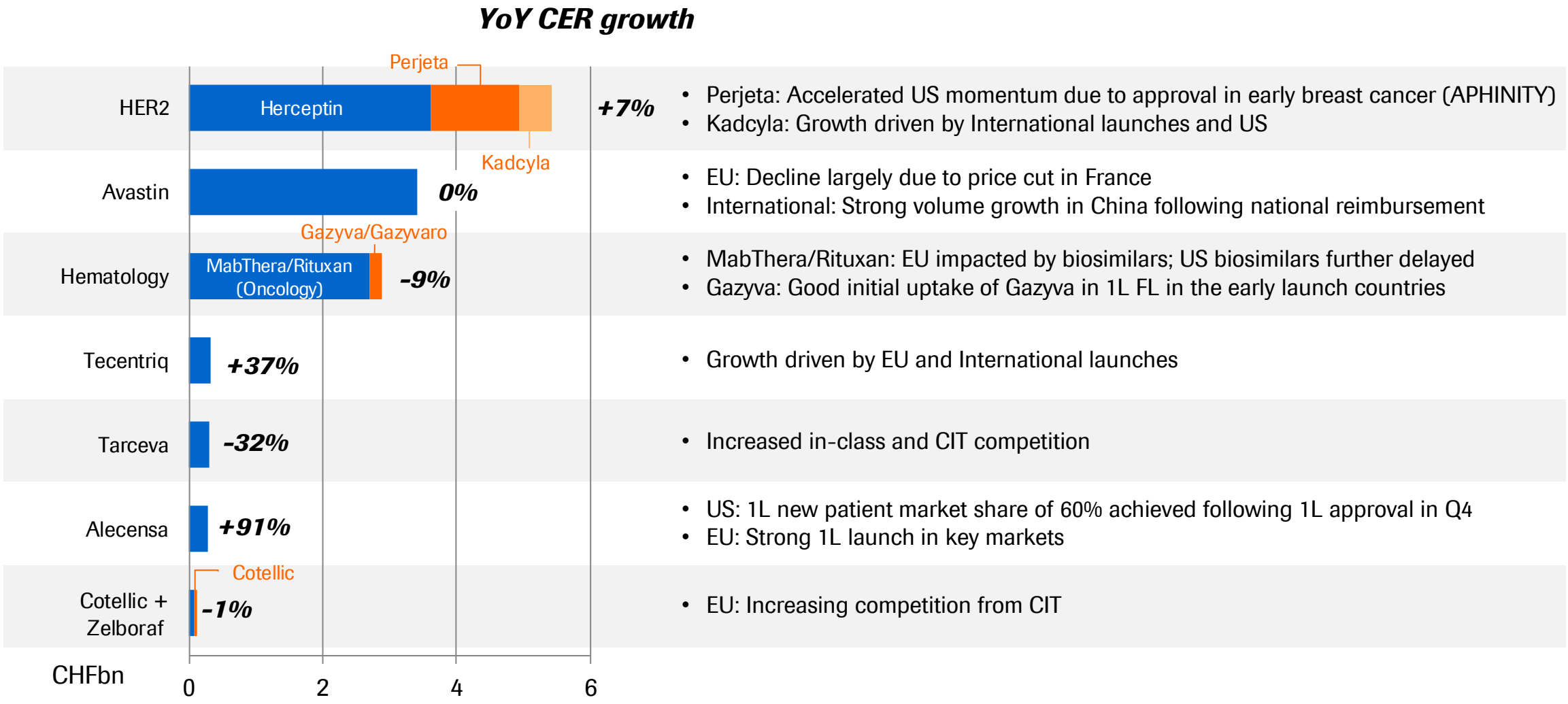
CER=Constant Exchange Rates; ROOI=Royalties & other operating income; COGS=costs of goods sold; PC=period costs

HY 2018: New products off to a very good start



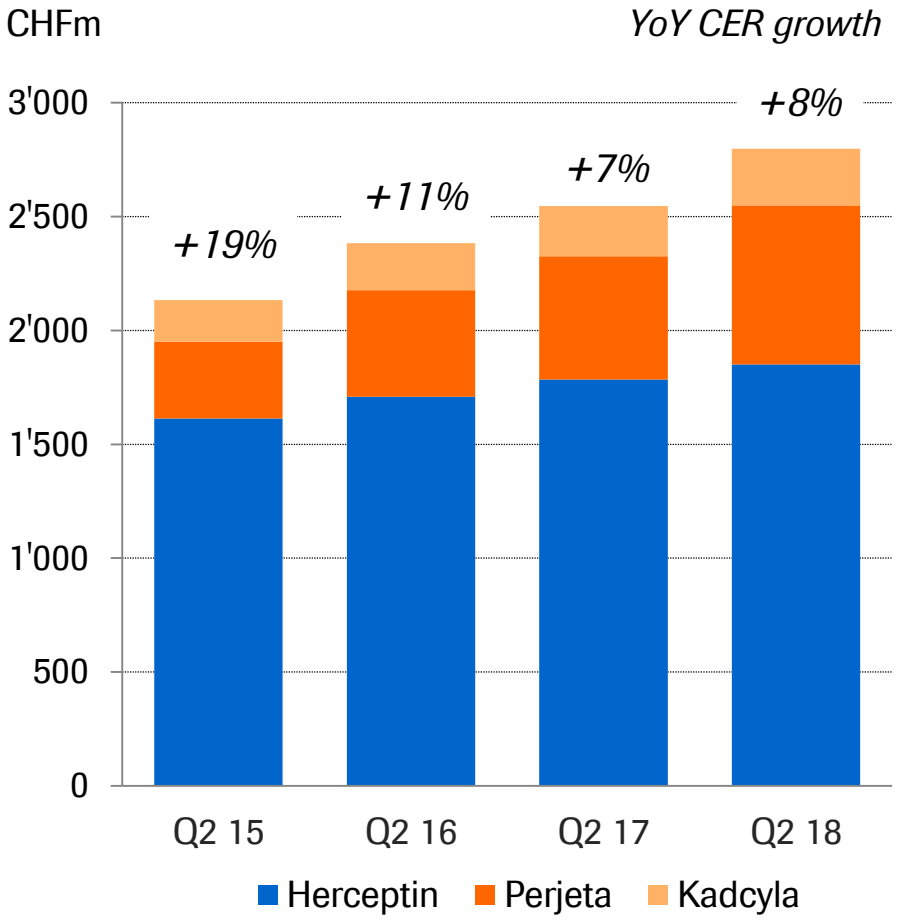
Absolute values and growth rates at Constant Exchange Rates (CER)

HY 2018: Oncology, recent launches performing well



CER=Constant Exchange Rates; HY 2018 Oncology sales: CHF 13.2bn; CER growth +1%; FL=follicular lymphoma; CIT= cancer immunotherapy

HER2 franchise: Growth driven by Perjeta and Kadcyla



HER2 franchise Q2 2018

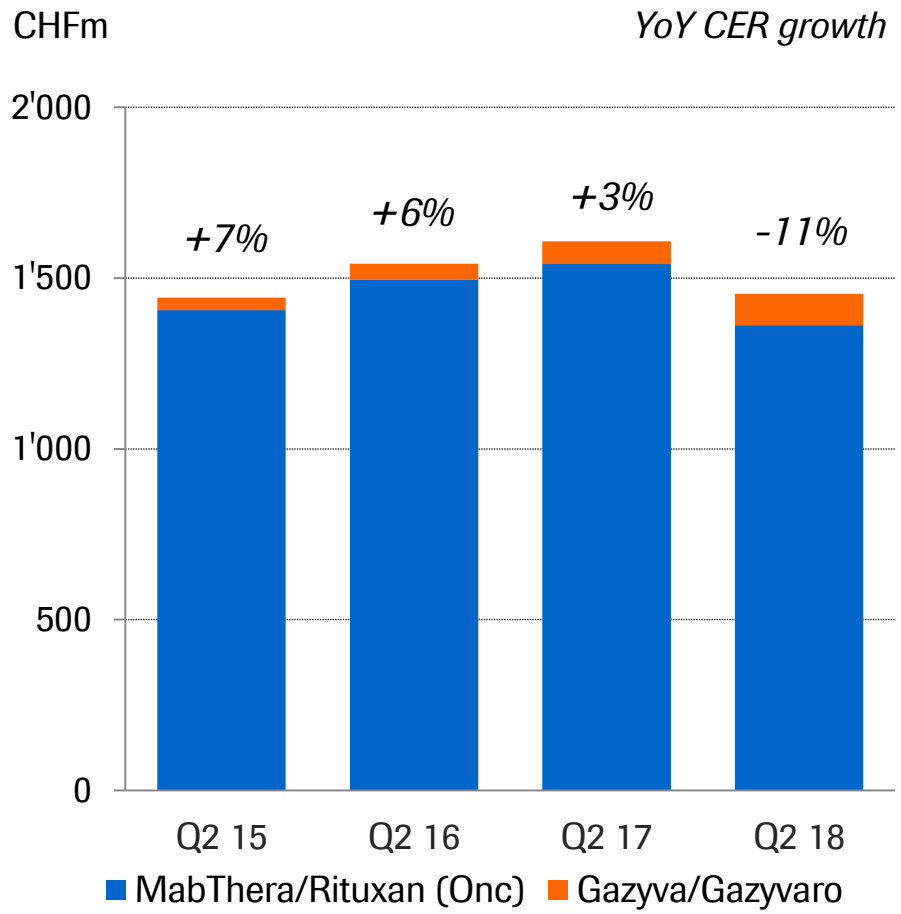
- Perjeta US (+36%): Accelerated growth driven by eBC following approval in the adjuvant setting (APHINITY)
- Perjeta in eBC on NCCN, ASCO, St. Gallen, and AGO (Germany) guidelines
- Herceptin EU (-7%): Pricing and first biosimilars
- Kadcyla (+11%) driven by US and International

Outlook 2018

- US: Continued Perjeta uptake in eBC
- EU: Accelerated Perjeta momentum following approval in the adjuvant setting (APHINITY) in June

CER=Constant Exchange Rates; eBC=early breast cancer; NCCN=National Comprehensive Cancer Network; AGO=Arbeitsgemeinschaft Gynäkologische Onkologie

Hematology: Entering the rejuvenation phase



Hematology Q2 2018

CD20 franchise

- MabThera (onc) EU (-50%): Biosimilar volume uptake
- Gazyva (+38%): Growth driven by 1L FL early launches

Venclexta*

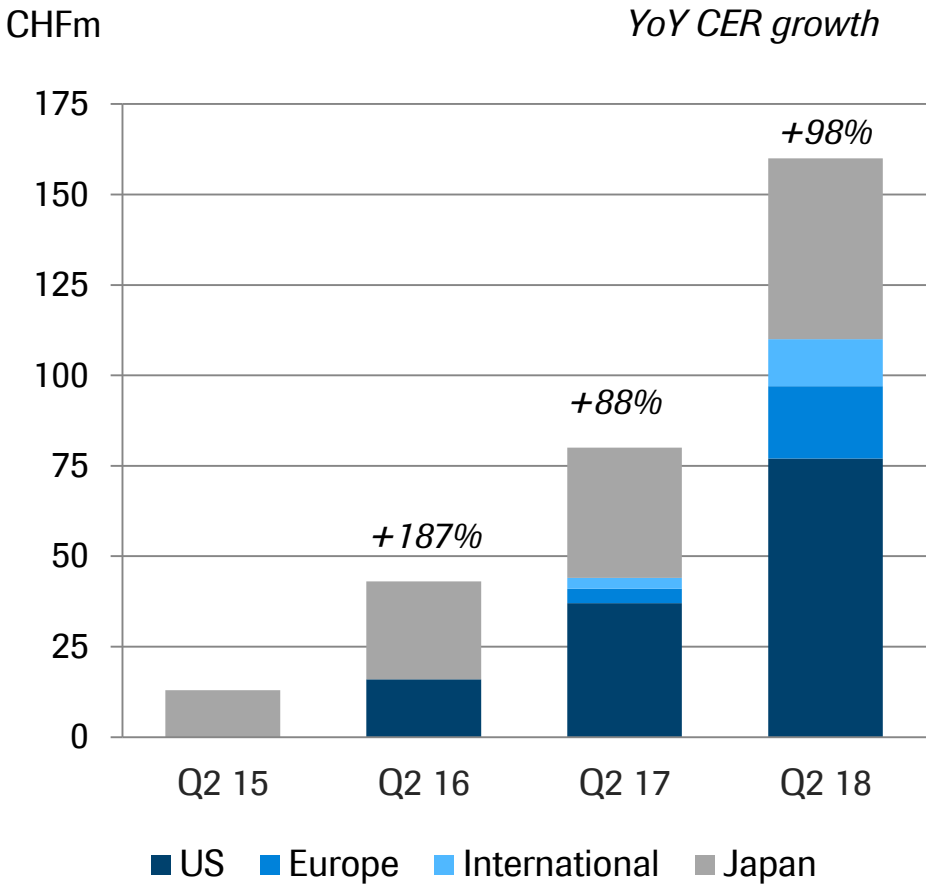
- Further accelerated growth in Q2 with >40% patient share in R/R CLL 17p del
- US approval in R/R CLL (MURANO) achieved in June
- Accelerated filing of Venclexta + HMA/LDAC in 1L unfit AML

Outlook 2018

- Ph III (CLL14) results for Gazyva + Venclexta in 1L CLL
- EU approval Venclexta + Rituxan in R/R CLL (MURANO)
- Accelerated filing of polatuzumab vedotin + BR in R/R DLBCL

CER=Constant Exchange Rates; FL=follicular lymphoma; R/R CLL=relapsed/refractory chronic lymphoid leukemia; HMA=hypomethylating agent; LDAC=low dose aracytarabine; AML=acute myeloid leukemia; BR=bendamustine+Rituxan; DLBCL=diffuse large B-cell lymphoma; * Venclexta sales are booked by partner AbbVie.

Alecensa: US market leadership in 1L ALK+ NSCLC achieved



Alecensa Q2 2018

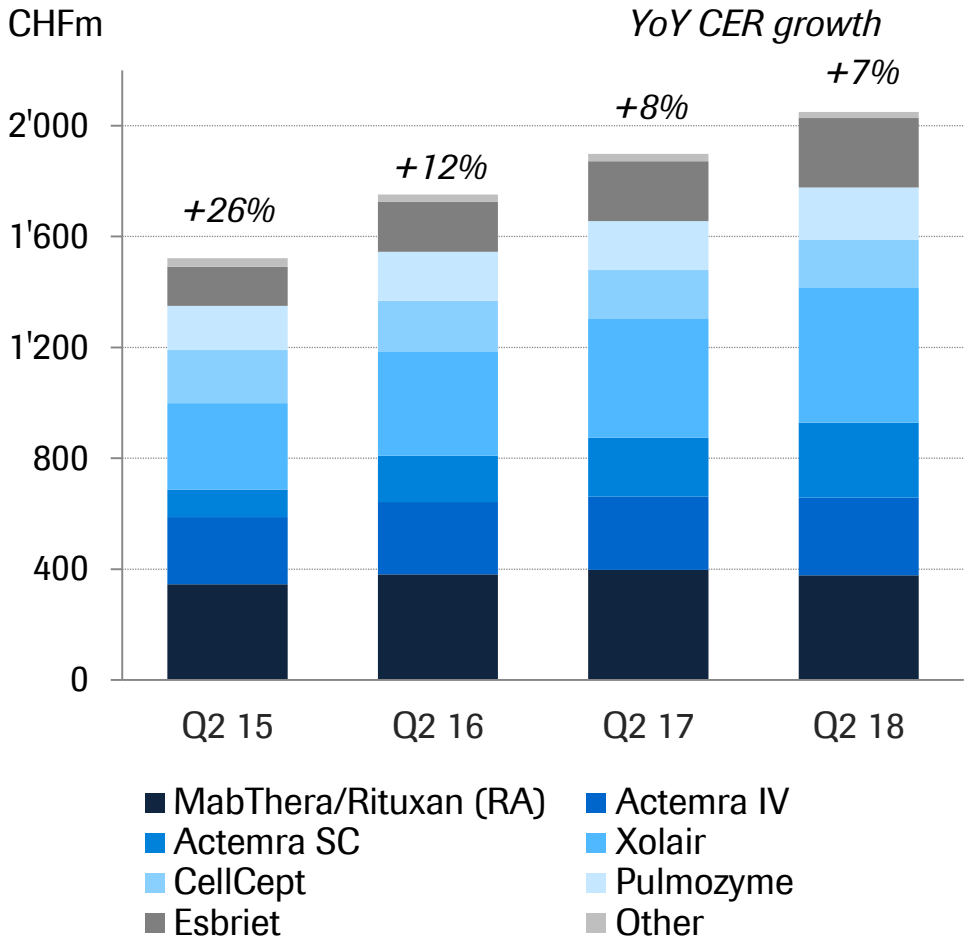
- US: New patient share of 60%
- EU: Strong launch in key markets
- ASCO: Updated mPFS for Alecensa of 34.8m vs 10.9m for crizotinib with a HR of 0.43

Outlook 2018

- Continued 1L momentum
- Ph III adjuvant study (ALINA) initiated

CER=Constant Exchange Rates: mPFS=median progression free survival; HR=hazard ratio

Immunology: Annualized sales of >CHF 8bn



Immunology Q2 2018

Esbriet (+15%)

- Penetration in mild to moderate patient segment increasing

Xolair (+14%)

- Growth driven by pediatric asthma, allergic asthma and CIU

Actemra (+13%)

- Launch in giant cell arteritis ongoing
- Auto-injector approved in the EU and Australia

Outlook 2018

- Strong growth expected with the exception of MabThera

CER=Constant Exchange Rates; CIU=chronic idiopathic urticaria

Ocrevus: Outstanding launch globally; 10% market share in US

Ocrevus Q2 2018

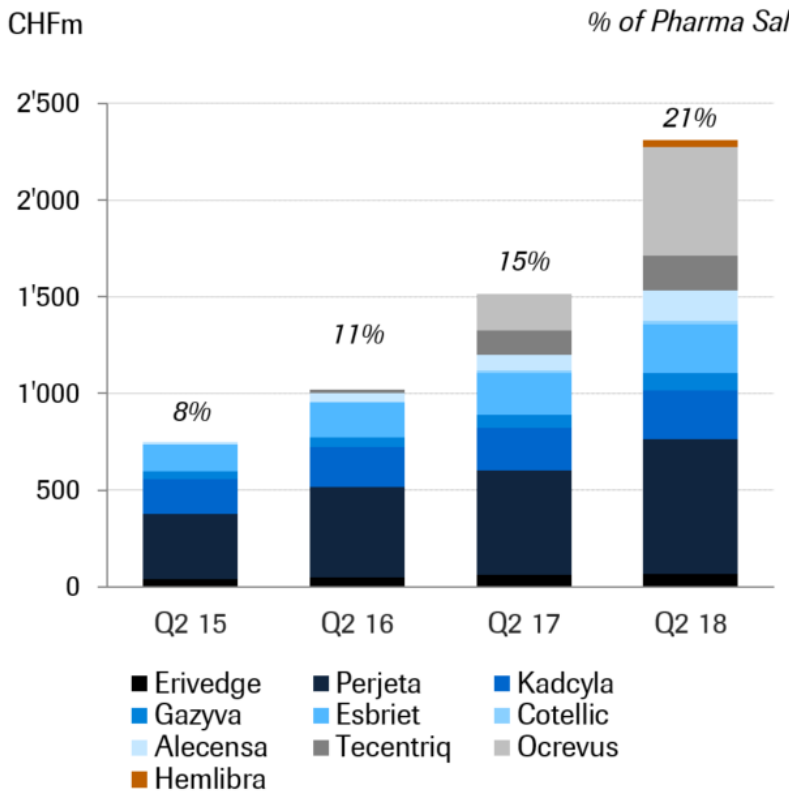
- Strong launches in EU and International
- US growing due to increasing number of returning and new patients

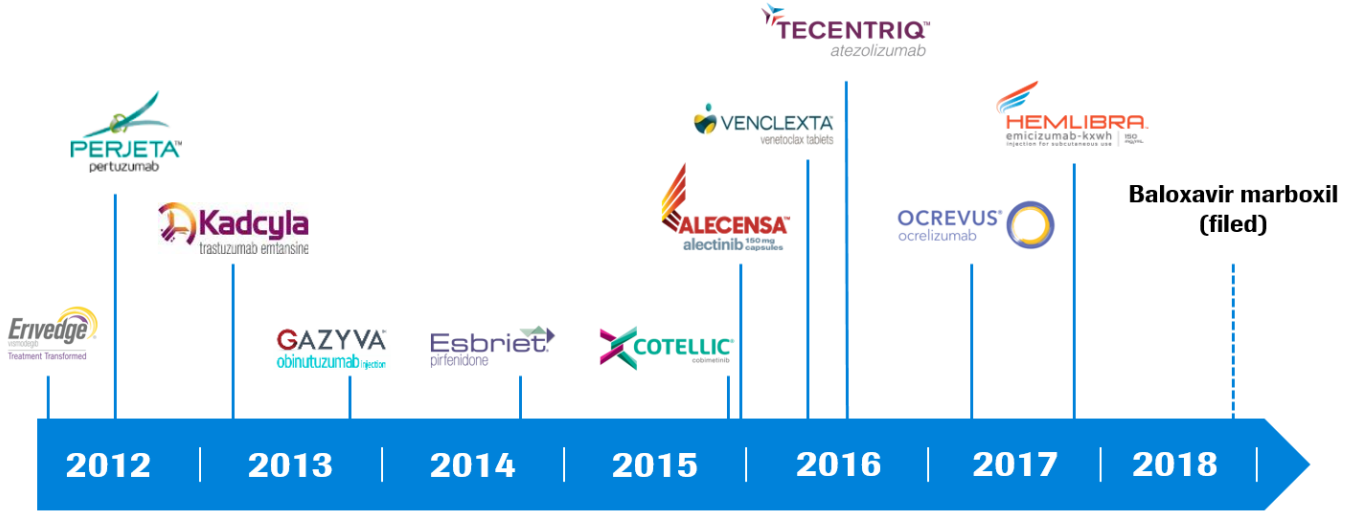
Outlook 2018

- Continued launches in EU and International
- Continuously moving into earlier use

Q2 2018: New products with annualized sales of >CHF 9bn*

96% of growth driven by new products





* Venclexta sales are booked by partner AbbVie.

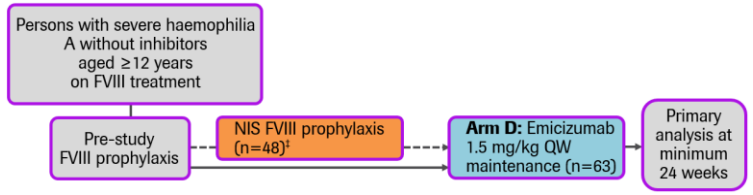
HY 2018 results

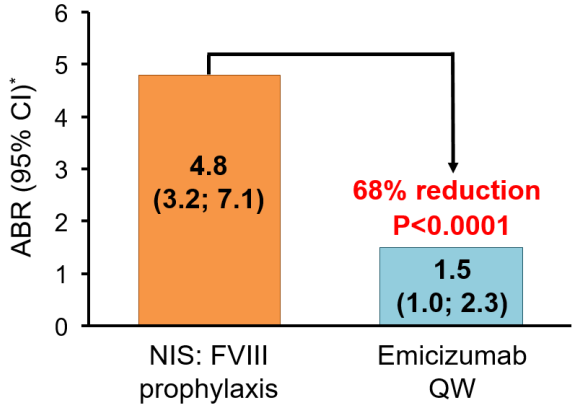
Innovation

Outlook

HAVEN 3: Intraindividual comparison of treated bleed

Hemlibra significantly reduced ABR vs prior FVIII prophylaxis





FDA BTD

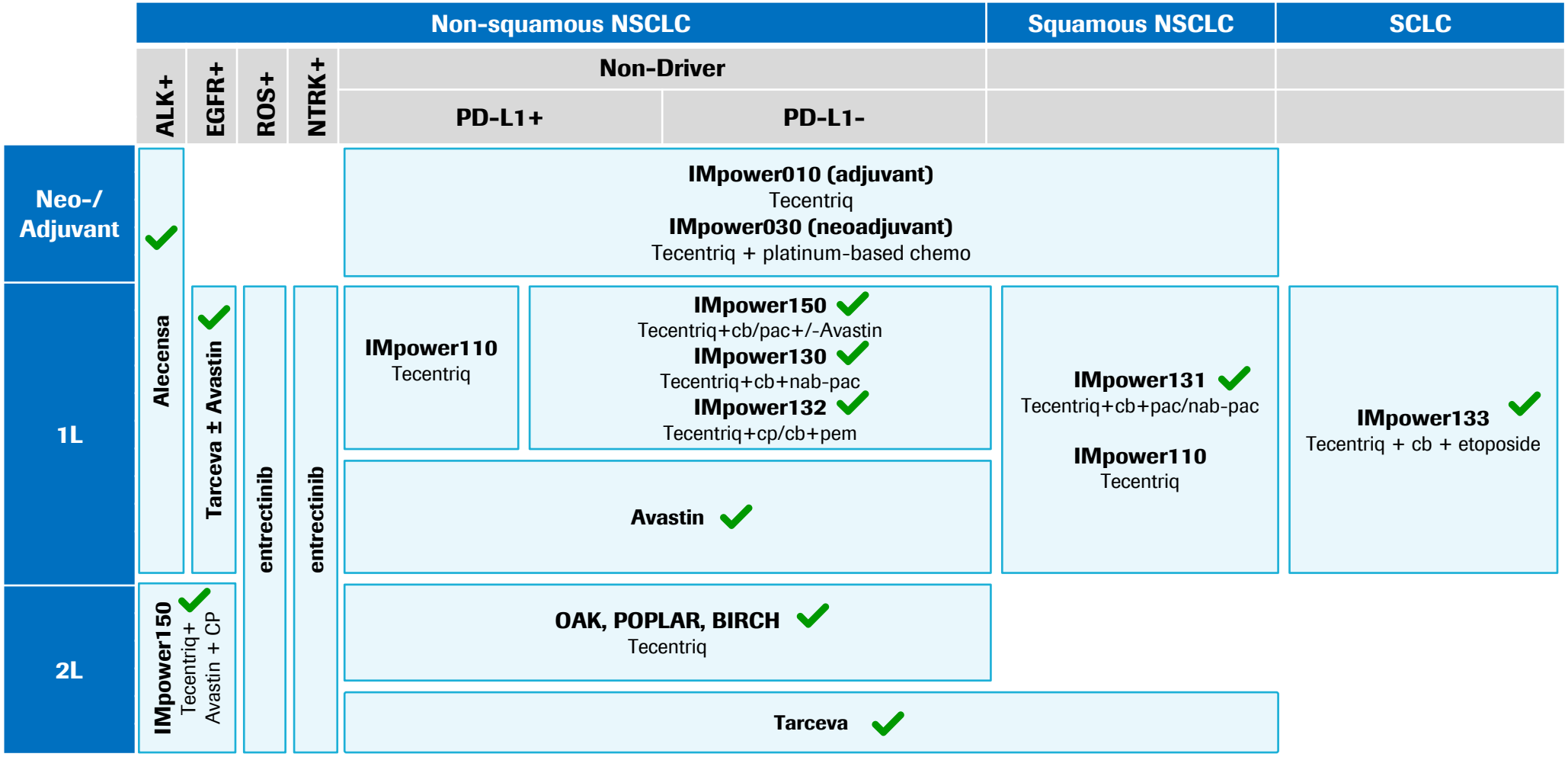
Endpoint	Arm D: Emicizumab 1.5 mg/kg QW n=48**	NIS: FVIII prophylaxis n=48
Duration of efficacy period, weeks	33.7 (20.1–48.6)	30.1 (5.0–45.1)
ABR, model based (95% CI)*	1.5 (1.0; 2.3)	4.8 (3.2; 7.1)
Reduction vs NIS FVIII RR, P-value	**68% reduction** 0.32, P<0.0001	—
Median ABR, calculated (IQR)	0.0 (0.0–2.1)	1.8 (0.0–7.6)
Patients with zero bleeds, % (95% CI)	54.2 (39.2; 68.6)	39.6 (25.8; 54.7)
Patients with 0–3 bleeds, % (95% CI)	91.7 (80.0; 97.7)	72.9 (58.2; 84.7)

- **Hemlibra prophylaxis resulted in a statistically significant reduction in treated bleeds of 68% compared to previous treatment with FVIII prophylaxis**
- **97.8% of patients preferred Hemlibra over prior FVIII prophylaxis**

Mahlangu J. et al., WFH 2018; *ABR calculated with negative binomial regression model; **Data from 48 patients in Arm D who participated in the NIS shown; For all patients in Arm D (n=63), ABR (95% CI) was 1.6 (1.1; 2.4) and 55.6% (95% CI, 42.5; 68.1) had zero bleeds; ABR=annualised bleeding rate; IQR=interquartile range; RR=rate ratio.

Evolving landscape in lung cancer

IMpower program: Initial read-outs completed

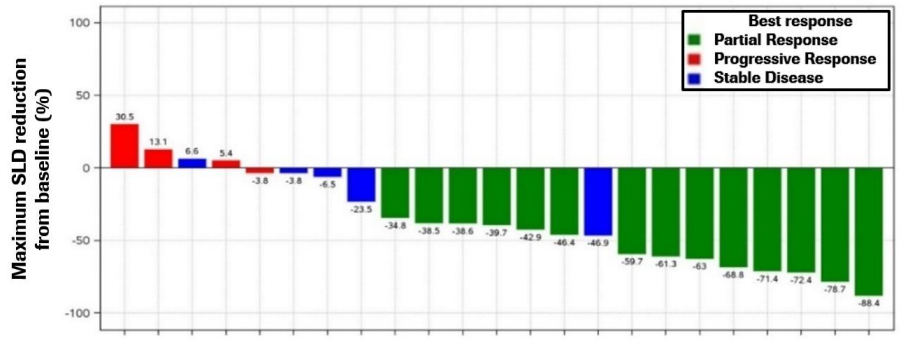


cb=carboplatin; pac=paclitaxel; nab-pac=nab-paclitaxel (Abraxane); cp=cisplatin; pem=pemetrexed

Tecentriq + Avastin in hepatocellular carcinoma (HCC)

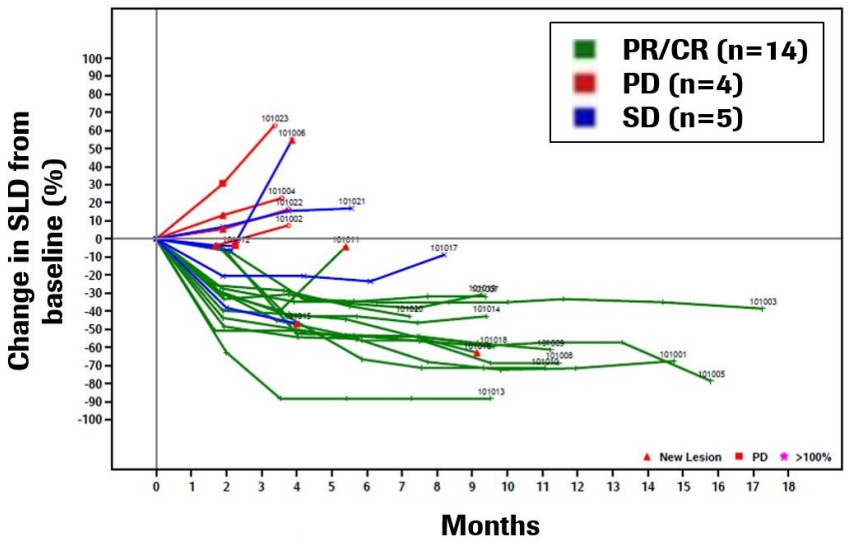
BTD granted based on encouraging PhIb data

Confirmed RECIST v1.1 responses to Tecentriq + Avastin*



	PFS rate %	OS rate %
6 month	65%	86%
12 month	60%	68%
mFU (range), months	10.3 (3.5-17.3)	

Tumor burden over time and response duration

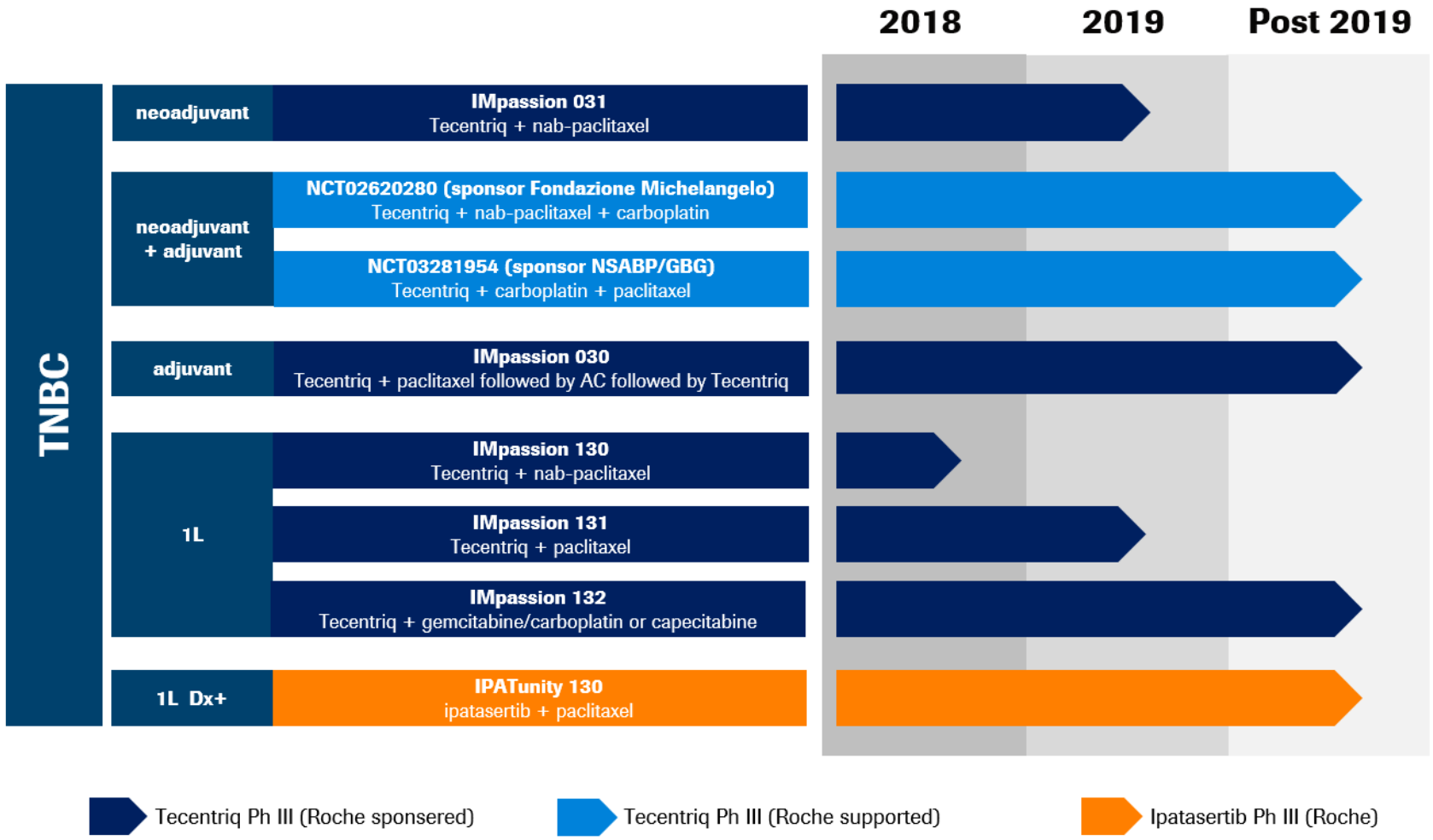


- **The combination of Tecentriq + Avastin shows promising early efficacy in patients with advanced HCC**
- **Confirmed ORR by RECIST v1.1 of 61% by INV; 10/14 responses ongoing >6m with 3 responses ongoing >12m**
- **Phase 3 (IMbrave150) of Tecentriq + Avastin vs. sorafenib ongoing**

Stein S. et al., ASCO 2018; *minimum follow-up 16 weeks, median follow-up (mFU) 10.3 months, evaluable patients (n=23); BTD=breakthrough therapy designation; PFS=progression free survival; OS=overall survival; ORR=overall response rate; SLD=sum of longest distance; PR=partial response; CR=complete response; PD=progressive disease; SD=stable disease

Tecentriq program in TNBC: 7 Ph III covering all treatment lines

IMpassion130: PFS co-primary endpoint met; encouraging OS benefit



✔ **(PFS met, encouraging OS benefit at interim)**

2018 ASCO ANNUAL MEETING

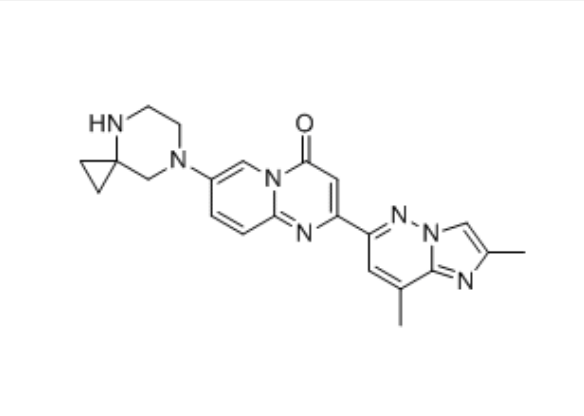
TNBC=triple negative breast cancer; OS=overall survival; PFS=progression free survival; Dx+=patients selected for PIK3CA/AKT1/PTEN-altered advanced TNBC

Risdiplam (SMN2 splicing modifier) in SMA

Early data from Ph II/III study in babies

2018 Annual SMA Conference
JUNE 14 - JUNE 17, 2018
HILTON ANATOLE HOTEL | DALLAS, TX

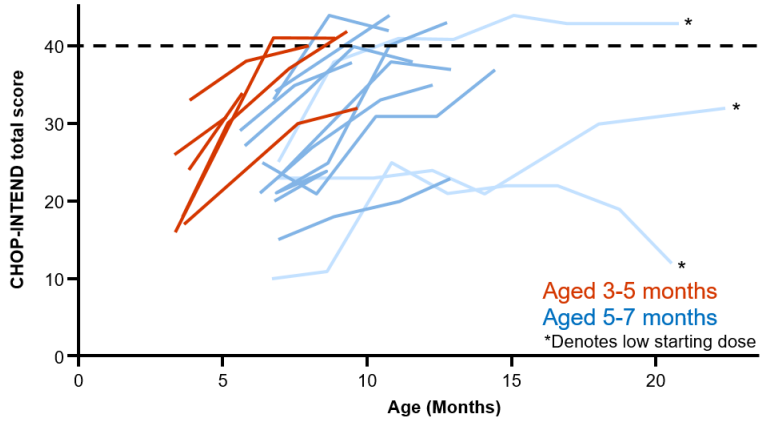
SMN2 splicing modifier



- Oral and systemically available SMN2 splicing modifier
- Durably increases SMN protein both in the CNS and in the periphery
- Potentially best in class efficacy profile
- To date well tolerated at all doses assessed

Phase II/III (FIREFISH) interim Part 1 data in Type 1 SMA:

CHOP-INTEND Score: Individual Patient Plots



Median change from baseline in CHOP-INTEND Score

	Aged 3-5 months	Aged 5-7 months	Overall
Day 56	**8.0** (n=6)	**4.5** (n=14)	**5.5** (n=20)
Day 119	**13.5** (n=4)	**11.0** (n=12)	**12.5** (n=16)
Day 182	**20.5** (n=2)	**11.0** (n=9)	**14.0** (n=11)

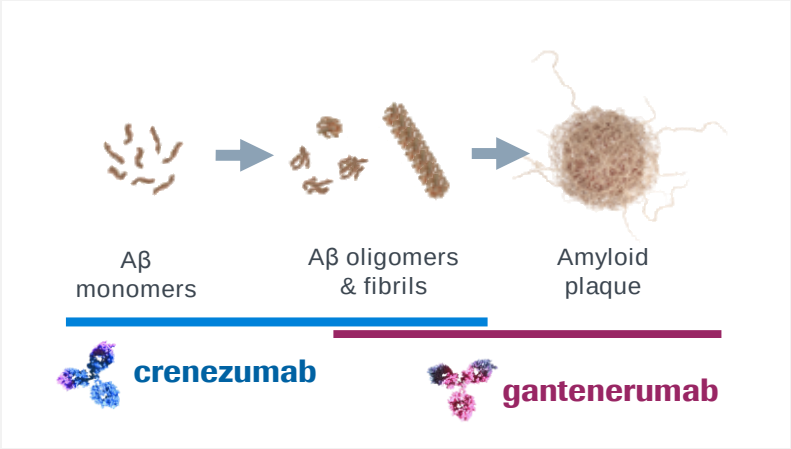
- 94% of patients treated for a minimum of 4 months had at least a 4-point improvement
- No patients have lost the ability to swallow or reached permanent ventilation
- Broadest clinical program including Type 1 to 3; Presymptomatic study starting in 2018
- Potential for filing in 2019

Khwaja O. et al., CureSMA 2018; SMA=spinal muscular atrophy; CHOP-INTEND=Children's Hospital of Philadelphia Infant Test of Neuromuscular Disorders (16-item 64-point motor assessment designed specifically to evaluate the motor skills of infants with SMA); *Event-Free Survival defined as patient being alive with no need for permanent assisted ventilation; Risdiplam in collaboration with PTC Therapeutics and the SMA Foundation

Anti-amyloid-β mAbs in Alzheimer`s disease

Target engagement data presented

Anti-amyloid-β mAbs



Crenezumab[1]

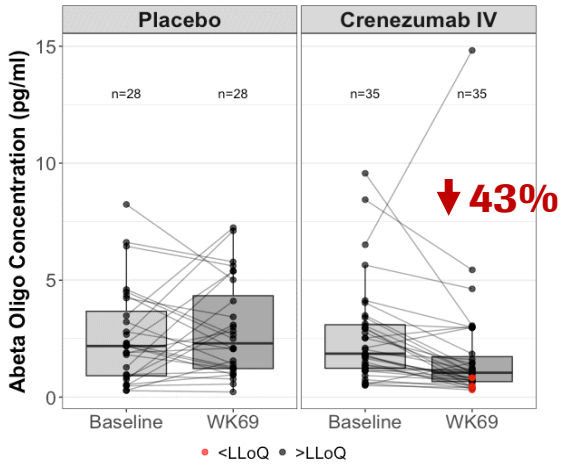
- Designed to neutralize neuro-toxic Aβ oligomers [3]
- Ph III fully recruited (CREAD program) [4,5,6]
- Final data expected in 2020

Gantenerumab[2]

- Targets aggregated Aβ forms; binds oligomers and plaques [7,8]
- Ph III started (GRADUATE program) [9,10]

Crenezumab (ABBY/BLAZE)

Aβ oligomer levels

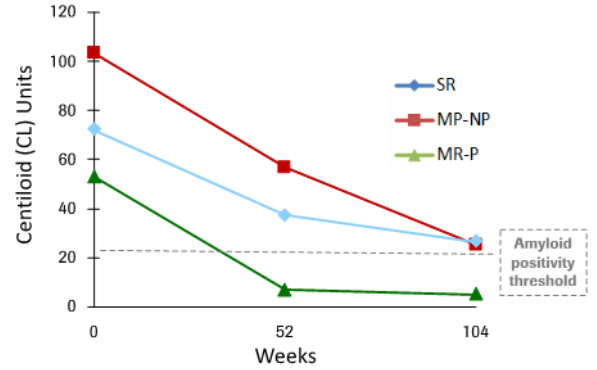


Yang T. et al., AAIC 2018

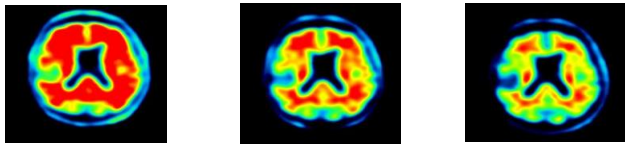
- Significantly reduces Aβ oligomer levels in CSF 43%, supplementing previous Ph II efficacy signals in mild AD sub-groups
- First DMT to demonstrate inhibition of Aβ oligomers in patients

Gantenerumab (OLE SR/MR)

Brain Aβ reduction over time



Example – brain amyloid PET of patient in OLE



Baseline | Week 52 | Week 104

Klein G. et al., AAIC 2018

- Nearly half of patients below threshold of Aβ positivity at 2yrs - many patients approaching Aβ floor level

1. In collaboration with AC Immune; 2. In collaboration with MorphoSys; 3. Adolfsson O, et al. J Neurosci 2012; 32:9677–9689; 4. NCT02670083; 5. NCT03114657; 6. Blaettler T, et al. AAIC 2016; 7. Bohrmann B, et al. J Alzheimer's Dis 2012; 8. Ostrowitzki S, et al. Arch Neurol 2012; 9. NCT03443973; 10. NCT03444870; Aβ=amyloid-β; mAb=monoclonal antibody; CSF=cerebrospinal fluid; AD=Alzheimer`s disease; DMT=disease modifying treatment; SR=Scarlet Road; MP-NP=Marguerite Road non-pretreated; MR-P=Marguerite Road pretreated; PET=Positron Emission Tomography; OLE=open label extension

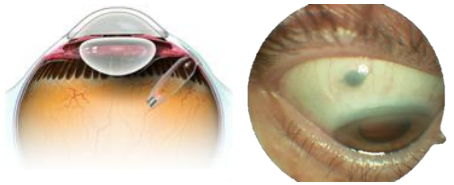
Port Delivery System (PDS) in ophthalmology

Reduces treatment burden, addresses key unmet need in wAMD

IR conference call August 2

ASRS American Society of Retina Specialists Vancouver, July 20-25

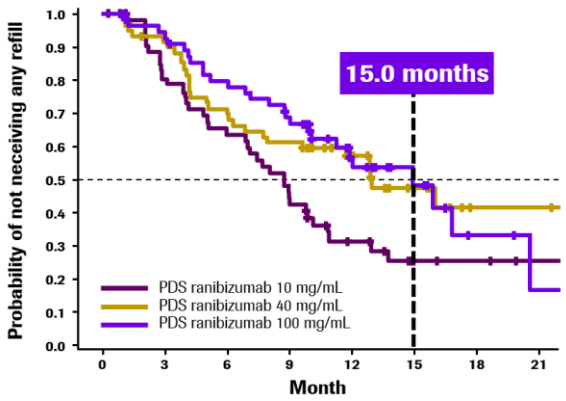
Port Delivery System



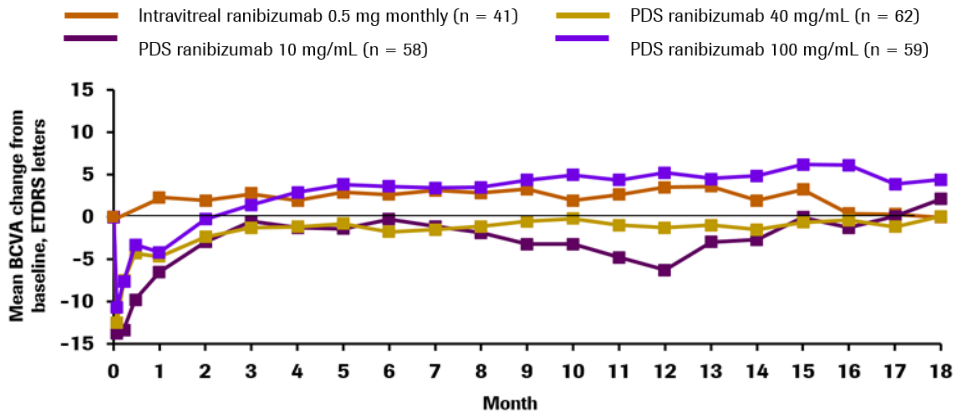
- Permanent, refillable intraocular implant
- Surgical insertion procedure
- In-office refills
- Customized formulation of ranibizumab

Phase II (LADDER) results:

Median time to first refill



Mean BCVA change from baseline, Patients previously treated with Anti-VEGF*



- Median time to first refill was 15m for 100mg/ml dose with ~80% patients ≥ 6m time to first refill
- BCVA and anatomic outcomes for PDS 100mg/mL comparable to monthly intravitreal (IVT) Lucentis
- PDS insertion/refill procedure well tolerated, systemic safety profile comparable to IVT Lucentis
- Ph III (ARCHWAY) using fixed dosing interval start in 2018

Awh C. et al., ASRS 2018; wAMD=wet age-related macular degeneration; *Patients received at least 2 and up to 9 aVEGF injections prior to baseline. BCVA=Best Corrected Visual Acuity; ETDRS=Early Treatment Diabetic Retinopathy Study; VEGF=vascular endothelial growth factor

HY 2018 results

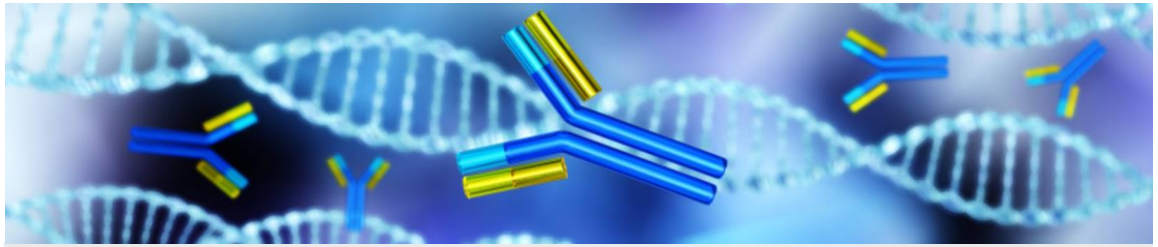
Innovation

Outlook

Upcoming conferences* and IR events 2018

ASRS annual meeting 2018, Vancouver
Ph II results of the Port Delivery System with ranibizumab

Roche Virtual Pipeline Event
Thursday, 2 August 2018, 16:00–17:00 CEST



Roche`s Late Stage Pipeline Event 2018

Roche Virtual Pipeline Event
Thursday, 13 September 2018, 14:00–16.00 CEST

Toronto, 23–26 Sep

Munich, 19–23 Oct

- **Tecentriq + cb + nab-pac (IMpower130):** Ph III in 1L non-sq NSCLC
- **Tecentriq + cp/cb + pem (IMpower132):** Ph III PFS in 1L non-sq NSCLC
- **Tecentriq + cb + etoposide (IMpower133):** Ph III data in 1L extensive stage SCLC
- **Tecentriq + nab-pac (IMpassion130):** Ph III in 1L TNBC
- **Tecentriq + Avastin (IMmotion151):** Ph III in 1L RCC
- **Tecentriq (B-F1RST):** Ph II blood TMB as predictive biomarker
- **Entrectinib (STARTRK2):** Ph II data from NTRK+ tumors
- **Entrectinib (STARTRK2):** Ph II data from ROS1+ tumors

* Planned submissions (to be confirmed); Outcome studies are event driven, timelines may change

2018: Key late-stage news flow*

	Compound	Indication	Milestone	
Regulatory	**Ocrevus**	RMS / PPMS	EU approval	✓
	Perjeta + Herceptin	Adjuvant HER2+ eBC	EU approval	✓
	Tecentriq + cb/pac +/- Avastin	1L non-sq NSCLC	US/EU filing	✓
	Tecentriq + Avastin	1L RCC	US/EU filing	
	Hemlibra	Hemophilia A inhibitors	EU approval	✓
	Hemlibra	Hemophilia A non-inhibitors	US/EU filing	✓
	Hemlibra	Every 4 weeks dosing inhibitors/non-inhibitors	US/EU filing	✓
	baloxavir marboxil	Acute uncomplicated influenza	US filing	✓
	Venclexta + Rituxan	R/R CLL	US/EU approval	✓
Phase III readouts	**Tecentriq + chemo**	1L non-sq NSCLC	Ph III IMpower130	✓
	Tecentriq + chemo	1L sq NSCLC	Ph III IMpower131	✓
	Tecentriq + chemo	1L non-sq NSCLC	Ph III IMpower132	✓
	Tecentriq + chemo	1L extensive-stage SCLC	Ph III IMpower133	✓
	Tecentriq + nab-pac	1L TNBC	Ph III IMpassion130	✓
	Tecentriq + Cotellic	2/3L CRC	Ph III IMblaze370 / COTEZO	✗
	Actemra	Systemic sclerosis	Ph III focuSSced	

Additional 2018 news flow:

- **Actemra**: Positive CHMP opinion for CAR T-cell induced cytokine release syndrom
- **MabThera/Rituxan**: US approval of pemphigus vulgaris
- **Avastin + carboplatin and paclitaxel**: US approval of 1L advanced OC following surgery
- **Gazyva + ibrutinib**: Positive Ph III results in 1L CLL (iLLUMINATE)
- **Venclexta + HMA/LDAC**: US filing of Ph1/2 results in 1L unfit AML

* Outcome studies are event-driven: timelines may change

Diagnostics Division

Roland Diggelmann
CEO Roche Diagnostics

HY 2018: Diagnostics Division sales

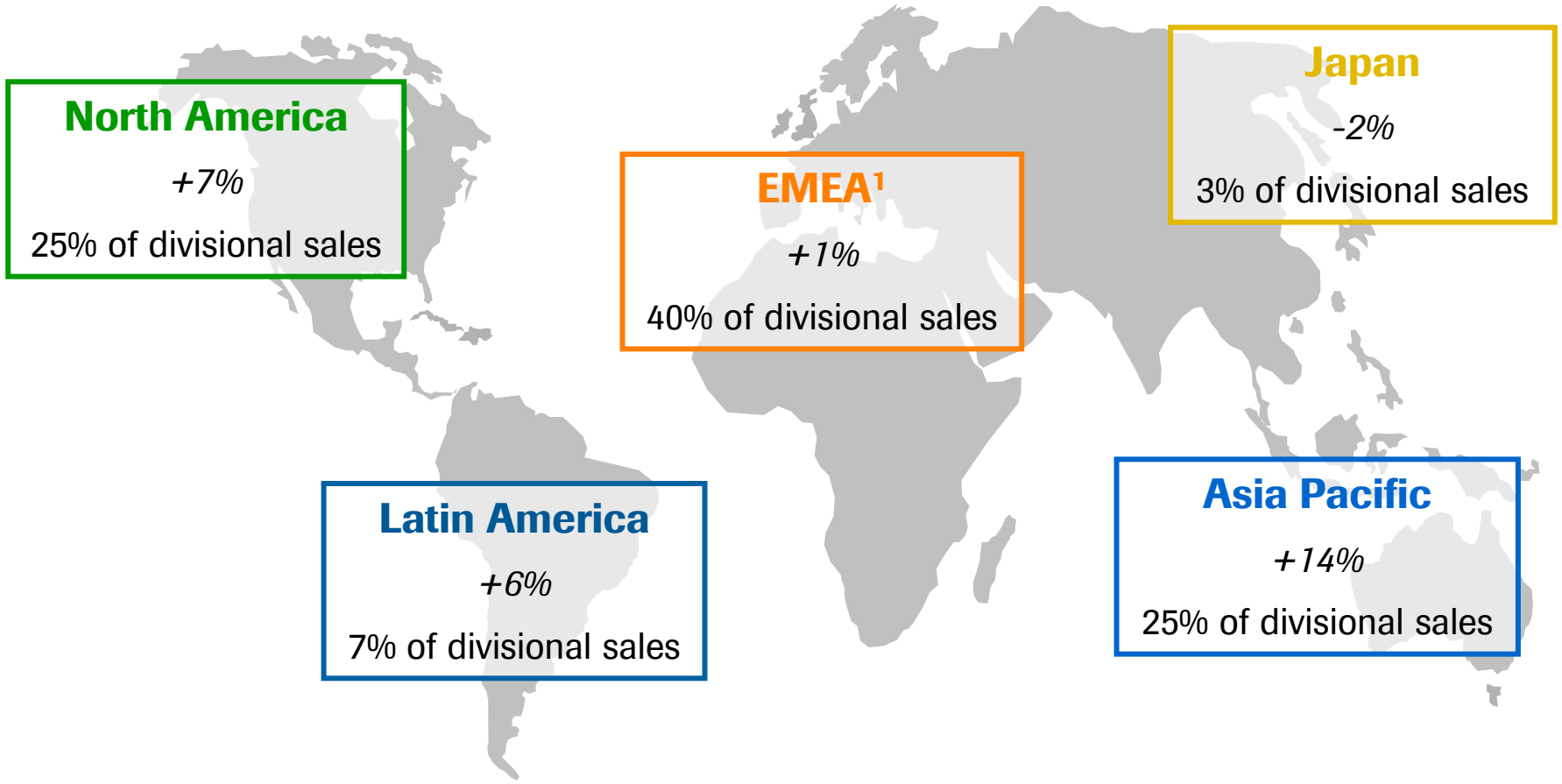
Strong growth driven by Centralised and Point of Care Solutions

	HY 2018 CHFm	HY 2017 CHFm	Change in % CHF	Change in % CER
Diagnostics Division	**6,264**	**5,823**	**8**	**6**
Centralised and Point of Care Solutions	3,755	3,456	9	6
Diabetes Care	991	962	3	1
Molecular Diagnostics	979	920	6	5
Tissue Diagnostics	539	485	11	11

CER=Constant Exchange Rates
Underlying growth of Molecular Diagnostics excluding sequencing business: +6%

HY 2018: Diagnostics regional sales

Growth driven by Asia Pacific and North America

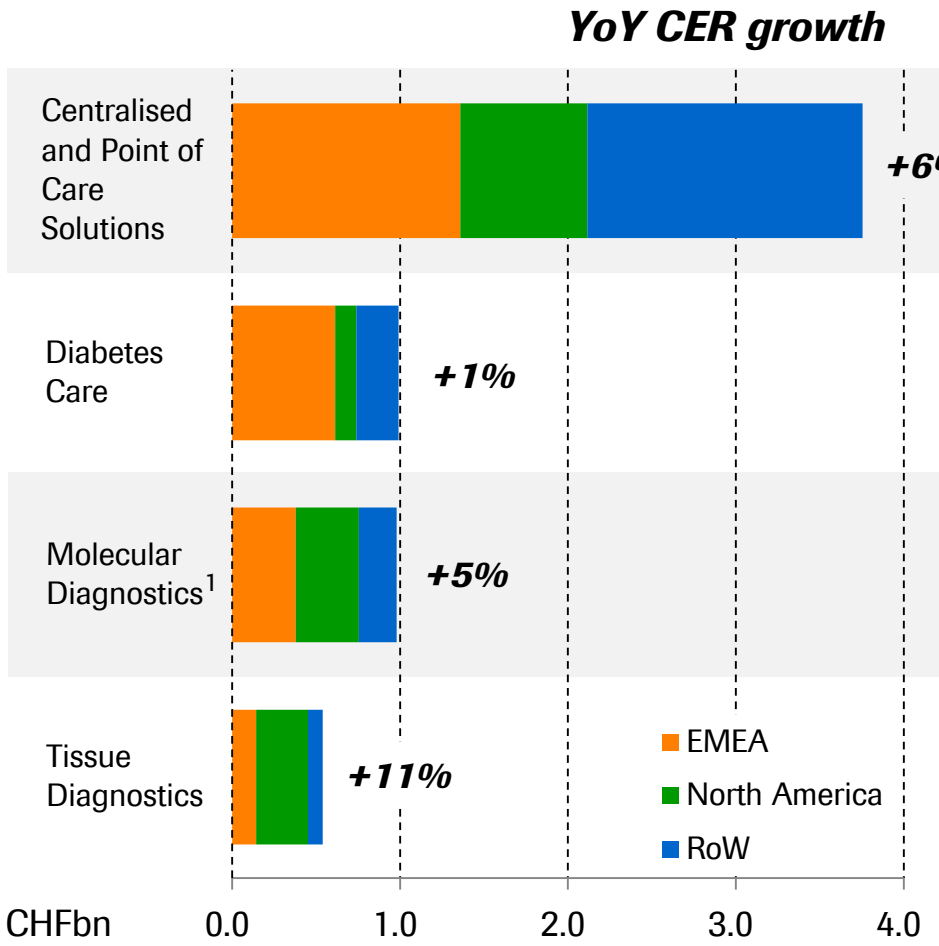


+14% growth in E7 countries[2]

[1] Europe, Middle East and Africa; [2] Brazil, China, India, Mexico, Russia, South Korea, Turkey
All growth rates at Constant Exchange Rates

HY 2018: Diagnostics Division highlights

Strong growth driven by Centralised and Point of Care Solutions



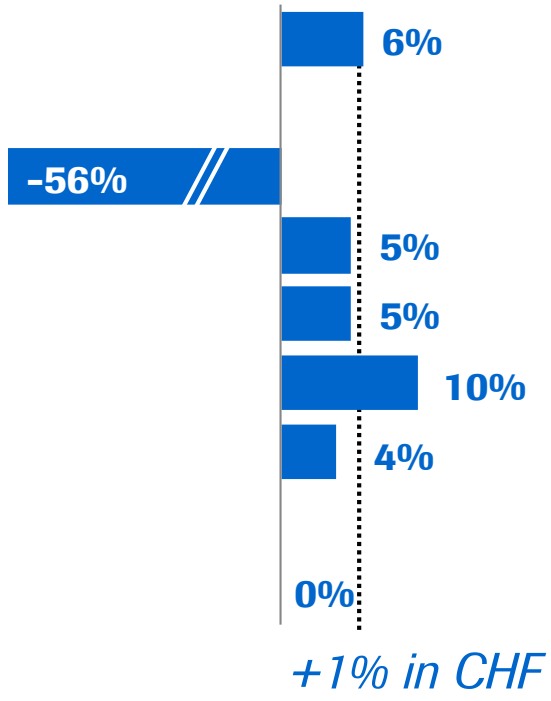
- Immunodiagnostics (+9%); clinical chemistry (+5%)
- Continued pricing and reimbursement pressures; BGM (+1%); IDS (-2%)
- Virology (+4%), HIV (+7%); HPV (+30%); cobas® Liat® (+229%)
- Advanced staining portfolio (+12%); primary staining (+16%)

[1] Underlying growth of Molecular Diagnostics excluding sequencing business: +6%
CER=Constant Exchange Rates; EMEA=Europe, Middle East and Africa

HY 2018: Diagnostics Division

Core operating profit stable despite lower royalty income in HY1 2018

	HY 2018 CHFm	HY 2018 % sales
Sales	**6,264**	**100.0**
Royalties & other op. inc.	39	0.6
Cost of sales	-2,846	-45.5
M & D	-1,429	-22.8
R & D	-715	-11.4
G & A	-239	-3.8
Core operating profit	**1,074**	**17.1**



CER=Constant Exchange Rates

Preparing the launch of cobas® pro integrated solutions[1]

Next generation medium throughput SWA solution

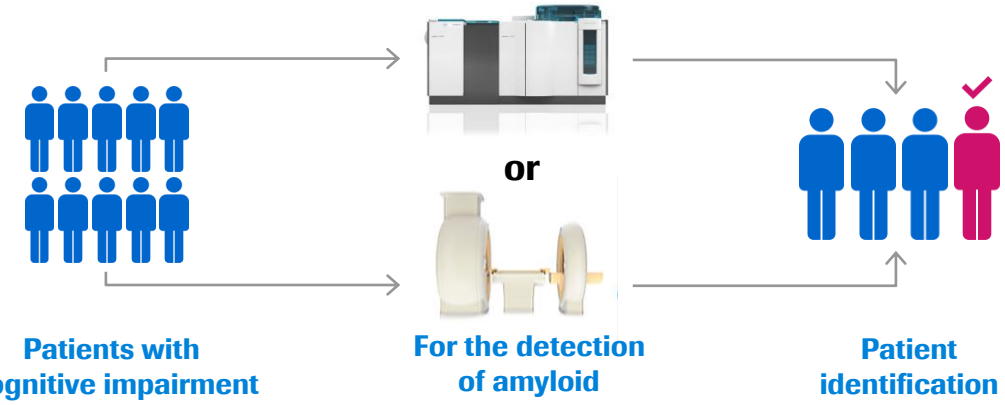
- Seamless integration into the Roche Integrated Core Lab
- Targeting medium to high throughput laboratories
- New clinical chemistry module cobas c 503 in combination with immunochemistry module cobas e 801
- Focus on simplification of laboratory routine while delivering excellent quality

[1] cobas® pro integrated solutions is launching in CE mark countries in Q3

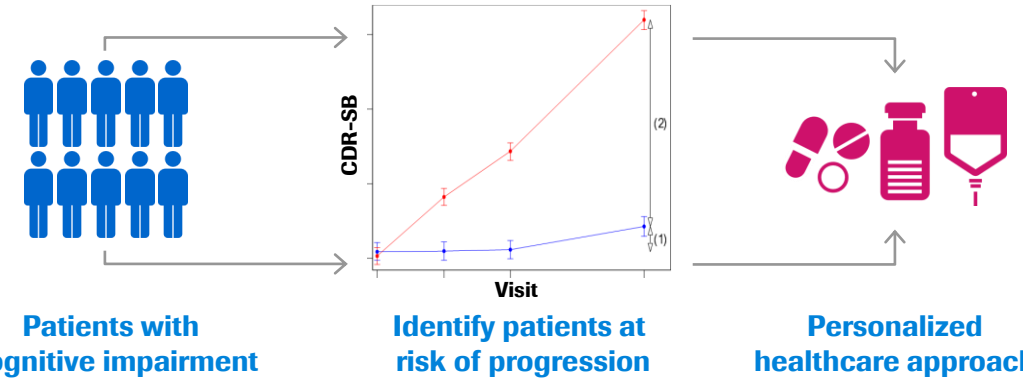
Alzheimer's Disease IVD tests[1] receive Breakthrough Device Designation from the FDA

PET Concordance Claim:
Elecsys® pTau/Abeta42 ratio is a reliable alternative to amyloid PET scan for amyloid detection with benefits of:

- **broader testing availability** via lab
- significant **cost benefit**



Progression Claim:
Identify patients at higher risk of progression of cognitive decline[2]



[1] Elecsys® β-Amyloid(1-42) (Abeta42) and Elecsys® Phospho-Tau (181P) (pTau) CSF (CSF=Cerebrospinal Fluid) assays; [2] defined by change in clinical score within a 2 year period
PET= Positron Emission Tomography, CDR-SB= clinical dementia ratio – sum of boxes

cobas® 6800/8800 systems driving growth in molecular

Main menu completion in 2018

Blood Screening		Infectious Diseases		Women's Health	
MPX	✓	HIV-1	✓	HPV (CE-IVD, US-IVD in 2019)	✓
WNV	✓	HBV, HCV	✓	CT/NG	✓
DPX	✓	CMV	✓	TV/MG (CE-IVD, US-IVD in 2019)	✓
HEV (Not available in the US)	✓	HIV-1/2 Qual (CE-IVD, US-IVD in 2019)	✓		
CHIKV/DENV (Not available in the US)	✓	MTB	**Launch 2018**		
Zika (US-IVD)	✓	MAI	**Launch 2018**		
Babesia (US-IND)	✓	RIF/INH	**Launch 2019**		
Babesia (US-IVD)	**Launch 2019**	EBV	**Launch 2019**		
		BKV	**Launch 2019**		

Installed instrument base: ~500

MPX – Multiplex detection of HIV-1, HIV-2, HCV and HBV; WNV - West Nile virus; DPX – duplex detection of parvovirus B19 and HAV; HEV - Hepatitis E virus; CHIKVV - chikungunya virus; DENV - Dengue virus; CMV – Cytomegalovirus; MTB - Mycobacterium tuberculosis; MAI - Mycobacterium avium-intracellulare infection; RIF – rifampicin; INH – isoniazid (detection of RIF/INH resistance in MTB positive samples); TV - Trichomonas vaginalis; MG - Mycoplasma genitalium; Babesia – detection of babesiosis caused by tick-born parasites; EBV - Epstein-Barr virus; BKV is a common post transplant opportunistic viral infection

Accu-Chek® Solo micropump received CE mark

Taking discreet and tube-free insulin pump therapy to the next level

Features and Benefits

- Modular design to detach and re-attach the pump
- Bolus buttons on the micropump for flexible bolus insulin delivery
- Handheld includes blood glucose monitoring and proven bolus advisor
- Quick access to key data via status screen on colored touch display
- Connecting to digital solutions as e.g. Accu-Chek Smart Pix

Market

- Insulin pump market worldwide growing at +3% (FY 2017)
- Patch pump segment showing strong growth with +29% (FY 2017)

Key launches 2018

	Area	Product	Market
Instruments/ Devices	**Central Laboratory**	cobas pro integrated solution – Serum Work Area solution for medium throughput to lower high throughout labs	CE
	Specialty Testing	cobas m 511 – World's first fully digital morphology analyzer and cell counter	US ✓
	Workflow	CCM connectivity to cobas c513 – Connection of cobas c 513 to CCM Automation System for high volume HbA1c testing	WW
	Tissue Dx	BenchMark ULTRA Plus – New and differentiated Advanced Staining System	CE
	Digital Pathology	VENTANA DP200 – Reliable low-volume scanner with superior image quality	CE ✓
	Diabetes Care	Accu-Chek Solo micropump – Small and tubeless insulin delivery device operated through a remote control which includes a blood glucose meter	CE ✓
Tests/ Assays	**Endocrinology**	IGFBP3 – Completion of the existing growth hormone menu of hGH and IGF-1	CE
	Infectious Diseases	Zika IgG – Highly specific immunoassay for the in vitro qualitative detection of IgG antibodies to Zika virus in human serum and plasma	CE ✓
	Microbiology	cobas CT/NG – Highest throughput CT/NG test on the market with workflow efficiency benefits	US ✓
		cobas 6800/8800 MTB/MAI – High volume solution for MTB/MAI testing; efficient approach to disease management (mixed testing) for infectious disease	CE
	Virology	Plasma Separation Card – Card-like sample collection device; separates plasma from whole blood; for use with CAP/CTM HIV-1 & cobas HIV-1 (6800/8800)	CE ✓
	Sequencing	AVENIO FFPET RUO oncology kits – 3 separate tissue based assay kits for solid tumors	WW
Software	**Decision Support**	NAVIFY Tumor Board v 1.x – EMR integration	WW ✓

Upcoming Diagnostics IR events 2018

70th AACC 2018, Chicago

Roche Analyst Event at Hilton Chicago
Tuesday, 31st July 2018

5:30 pm Registration desk opens
6:00 pm Start of meeting
7:15 pm End of meeting followed by buffet reception

Presenter/Panelists:
Roland Diggelmann, CEO Roche Diagnostics
Jack Phillips, Head of Roche Diagnostics North America
Paul Brown, Global Head of Roche Molecular Solutions
Thomas Schinecker, Global Head of Centralised and POC Solutions

Roche Diagnostics Investor Day at Rotkreuz, CH
Tuesday, 20st November 2018, *9AM-3PM*
Supported by Berenberg and Barclays

9:00 am Start of meeting
12:00 pm Lunch
1:00 pm Showroom tour of the integrated core laboratory

Presenter:
Roland Diggelmann, CEO Roche Diagnostics
Thomas Schinecker, Global Head of Centralised and POC Solutions
Tim Jäger, Global Head Diagnostics Information Solutions
Dietmar Kappelhoff, LCT leader high/mid volume systems

Finance

Alan Hippe
Chief Financial Officer

HY 2018 results

Focus on Cash

Outlook

HY 2018: Highlights

Business

- Sales growth of +7%[1] and Core operating profit up +10%[1]
- Core EPS growth +19%[1] and +8%[1] excl. US tax reform

Cash flow

- Significant cash generation (Operating Free Cash Flow of CHF 8.0bn, +7%[1])
- Net debt lower by CHF 2.5bn vs. June 30, 2017; higher by CHF 4.7bn vs. YE 2017 due to dividend payments and acquisitions

Net financial results

- Core net financial result improved by +7%[1]

IFRS

- Net income +33%[1] due to business growth and lower impairment of intangible assets

[1] At Constant Exchange Rates (CER)
[2] incl. amortisation of debt discount and net gains on interest rate derivatives

HY 2018: Group performance

Core OP growth (+10%) faster than sales growth (+7%), strong Core EPS growth (+19%)

	HY 2018 CHFm	HY 2017 CHFm	Change in % CHF	Change in % CER
Sales	**28,111**	**26,344**	**7**	**7**
Core operating profit	**11,162**	**10,135**	**10**	**10**
as % of sales	*39.7*	*38.5*		
Core net income	**8,679**	**7,187**	**21**	**20**
as % of sales	*30.9*	*27.3*		
Core EPS (CHF)	**9.84**	**8.23**	**20**	**19**
IFRS net income	**7,516**	**5,577**	**35**	**33**
Operating free cash flow	**8,042**	**7,589**	**6**	**7**
as % of sales	*28.6*	*28.8*		
Free cash flow	**5,966**	**5,605**	**6**	**7**
as % of sales	*21.2*	*21.3*		

+8% at CER excl. US tax reform

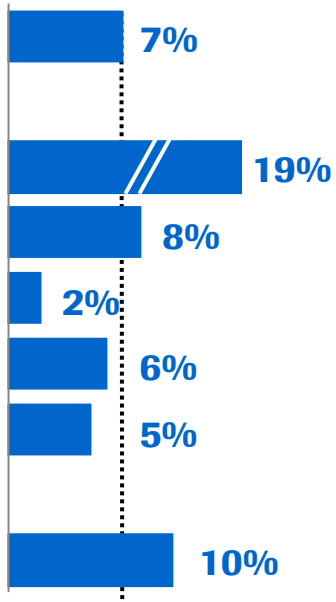
CER=Constant Exchange Rates

HY 2018: Group operating performance

Core operating profit growth of +10%

	HY 2018 CHFm	HY 2018 % sales
Sales	**28,111**	**100.0**
Royalties & other op. inc.	1,414	5.0
Cost of sales	-7,322	-26.0
M & D	-4,551	-16.2
R & D	-5,313	-18.9
G & A	-1,177	-4.2
Core operating profit	**11,162**	**39.7**

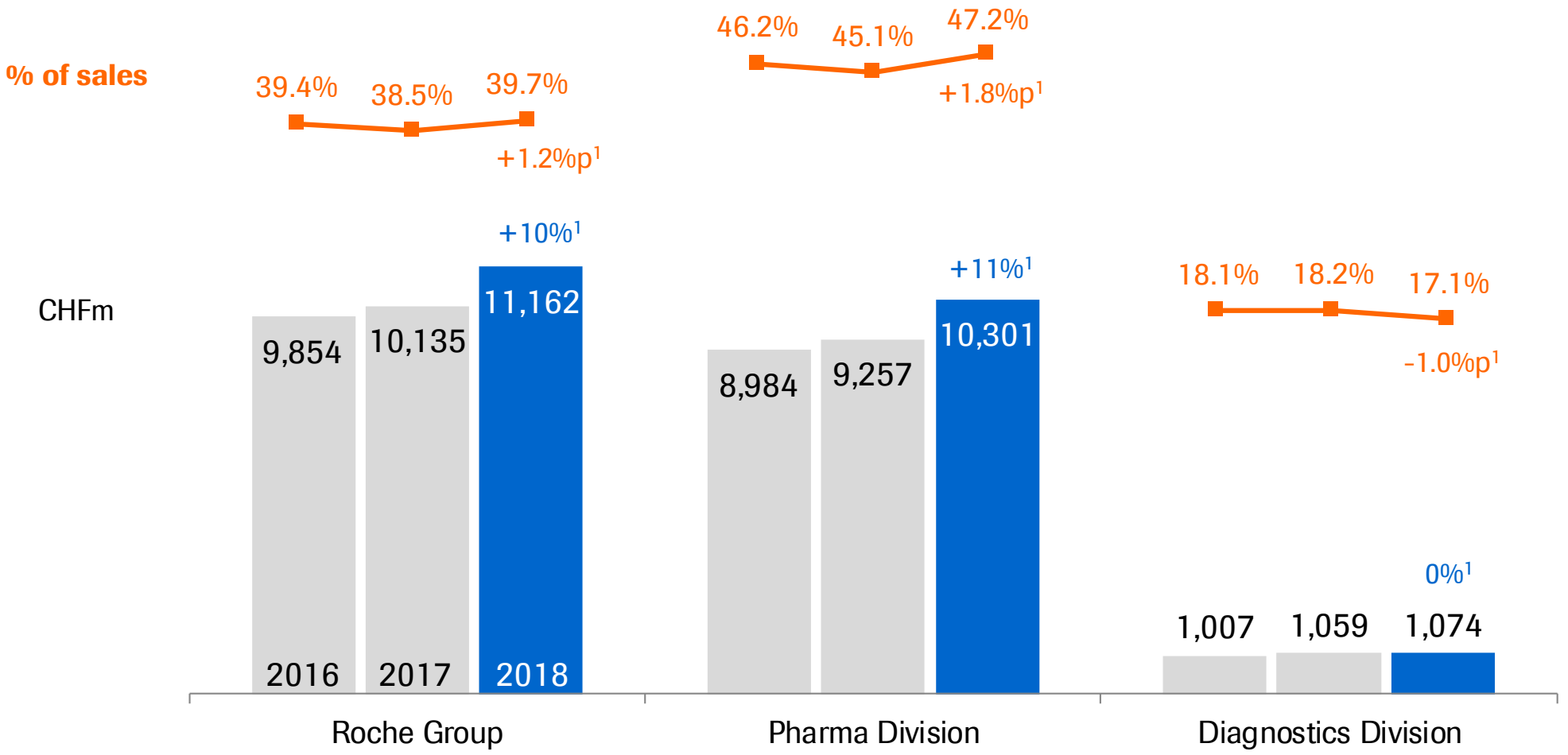
2018 vs. 2017
CER growth



+10% in CHF

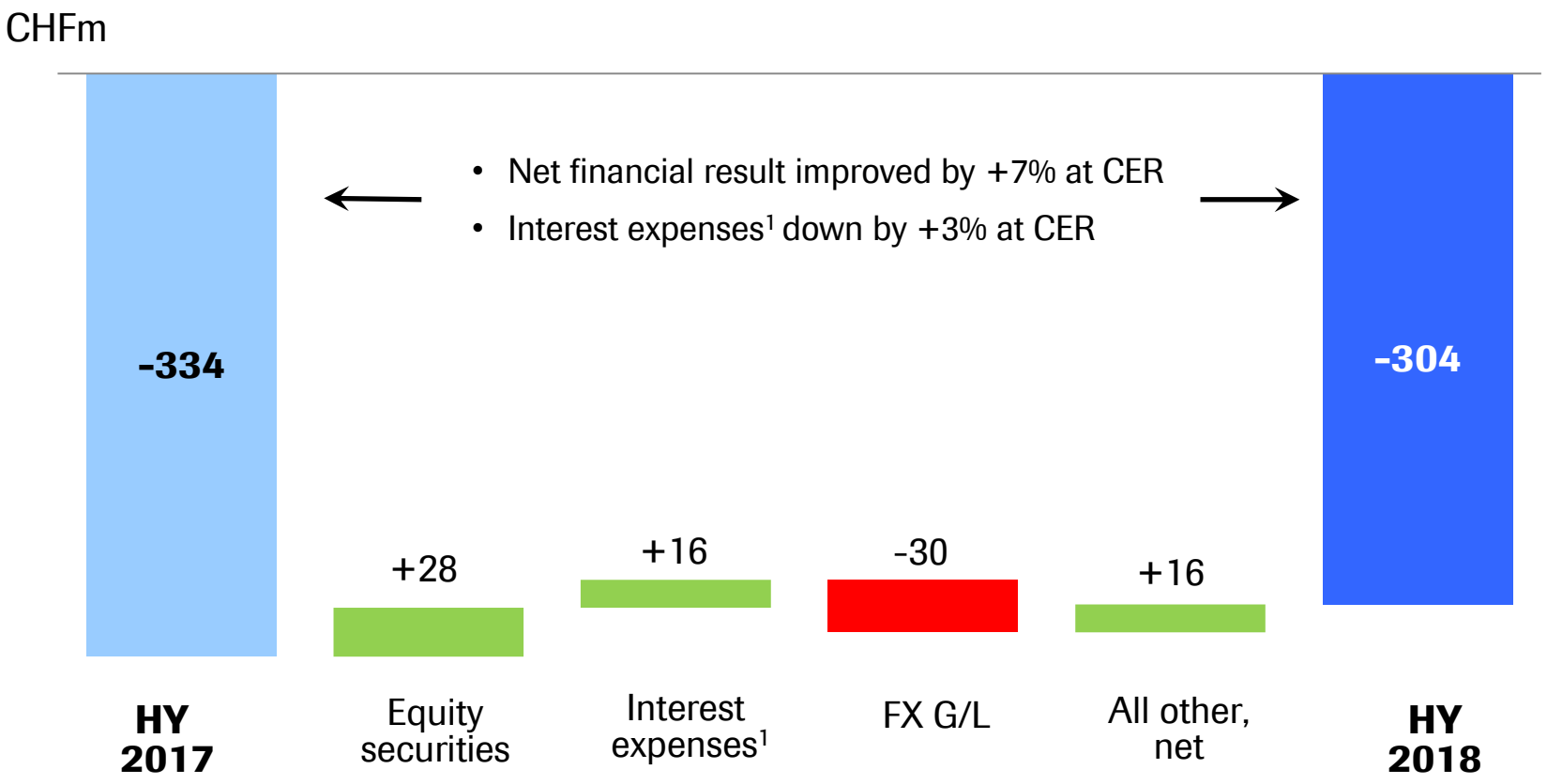
CER=Constant Exchange Rates

HY 2018: Strong Group Core operating profit and margin



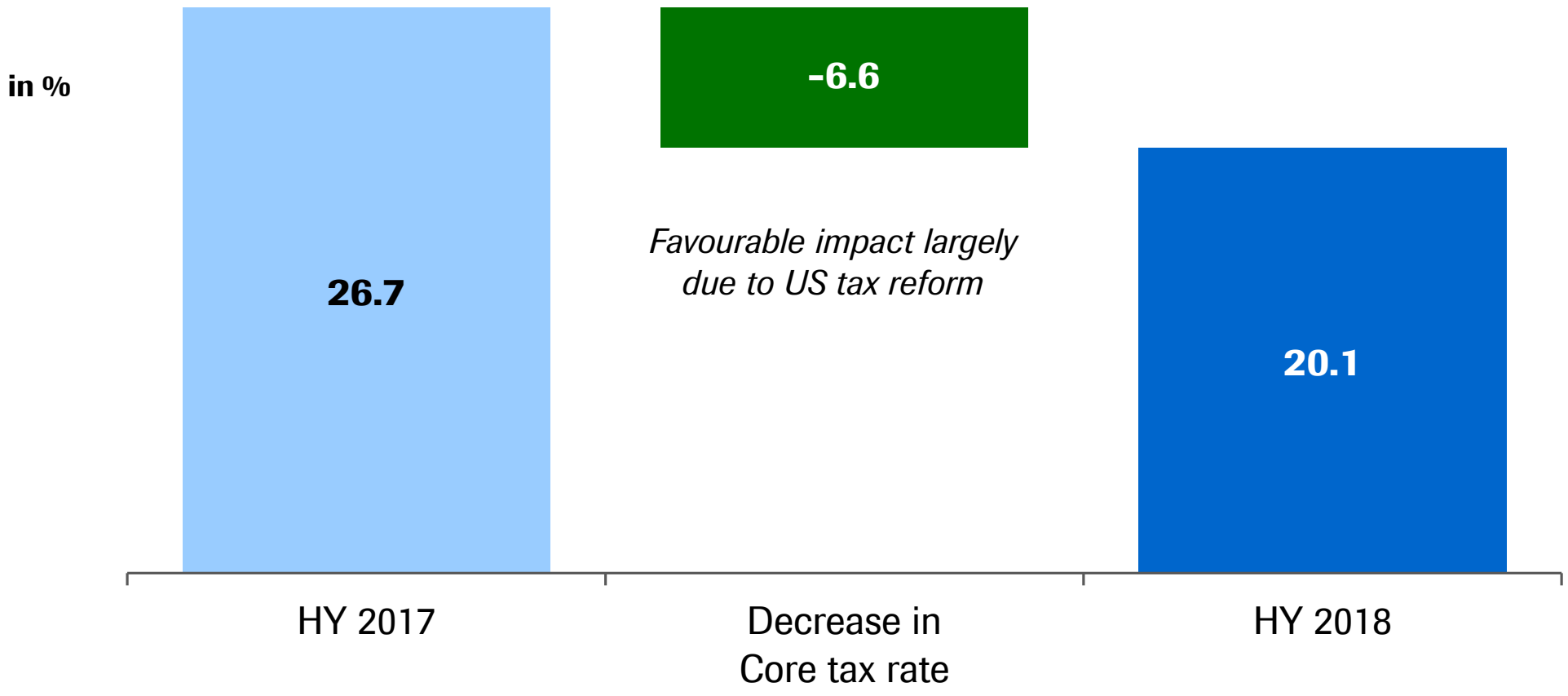
[1] At CER=Constant Exchange Rates

HY 2018: Core net financial result



CER=Constant Exchange Rates (avg full year 2017)
[1] incl. amortisation of debt discount and net gains on interest rate derivatives

HY 2018: Group Core tax rate decreased



HY 2018: Non-core items; IFRS result positively impacted by lower impairments of intangible assets

Half Year	2017	2018	CHFm	CHF	CER
Core operating profit	**10,135**	**11,162**	**+1,027**	**+10%**	**+10%**
Global restructuring plans	-321	-427	-106		
Amortisation of intangible assets	-906	-628	+278		
Impairment of intangible assets[1]	-1,475	-273	+1,202		
Alliances & Business Combinations	+197	+46	-151		
Legal & Environmental[2]	+165	-68	-233		
Total non-core operating items	-2,340	-1,350	+990		
IFRS operating profit	**7,795**	**9,812**	**+2,017**	**+26%**	**+25%**
Total financial result & taxes	-2,218	-2,296	-78		
IFRS net income	**5,577**	**7,516**	**+1,939**	**+35%**	**+33%**

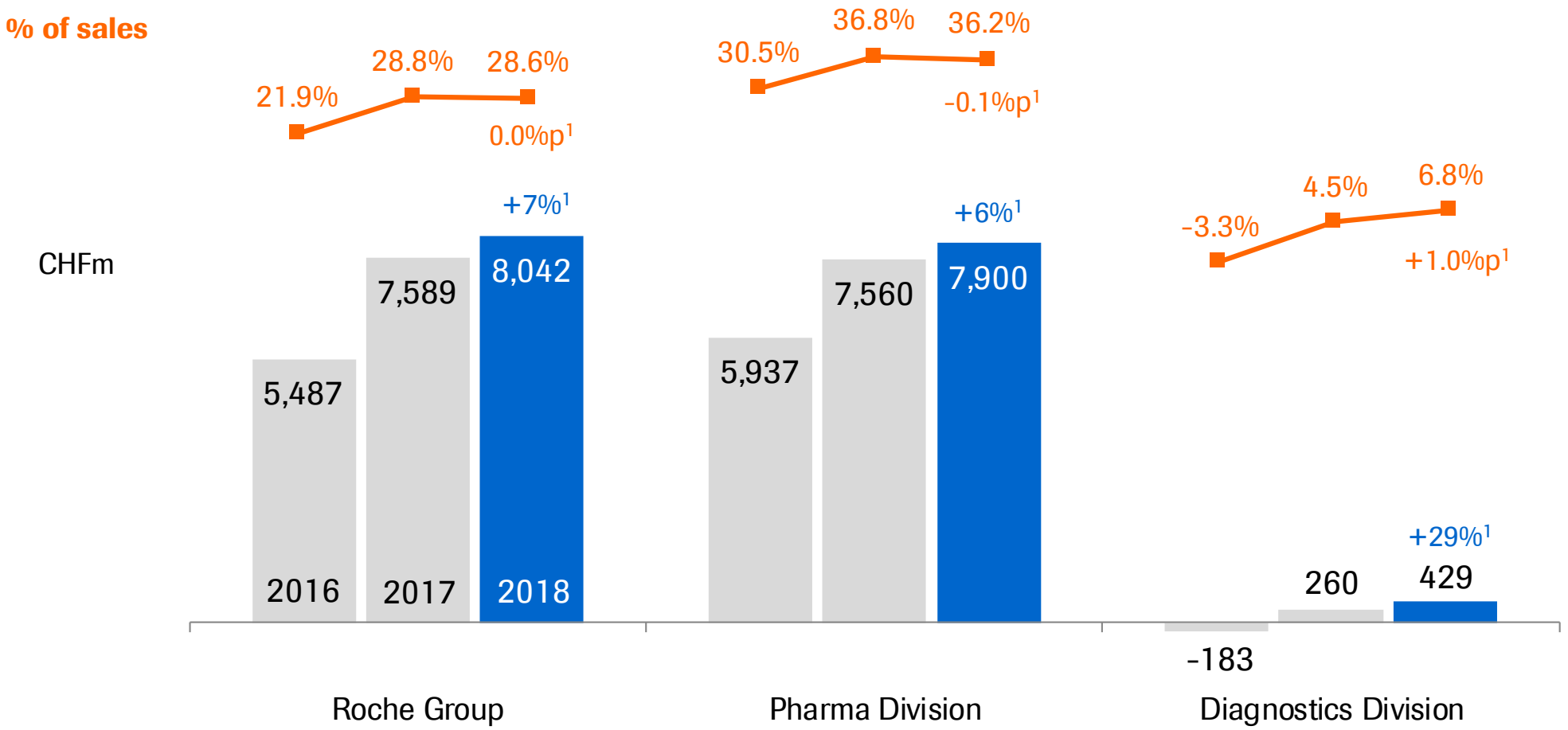
CER=Constant Exchange Rates
[1] incl. goodwill [2] incl. pension plan settlements

HY 2018 results

Focus on Cash

Outlook

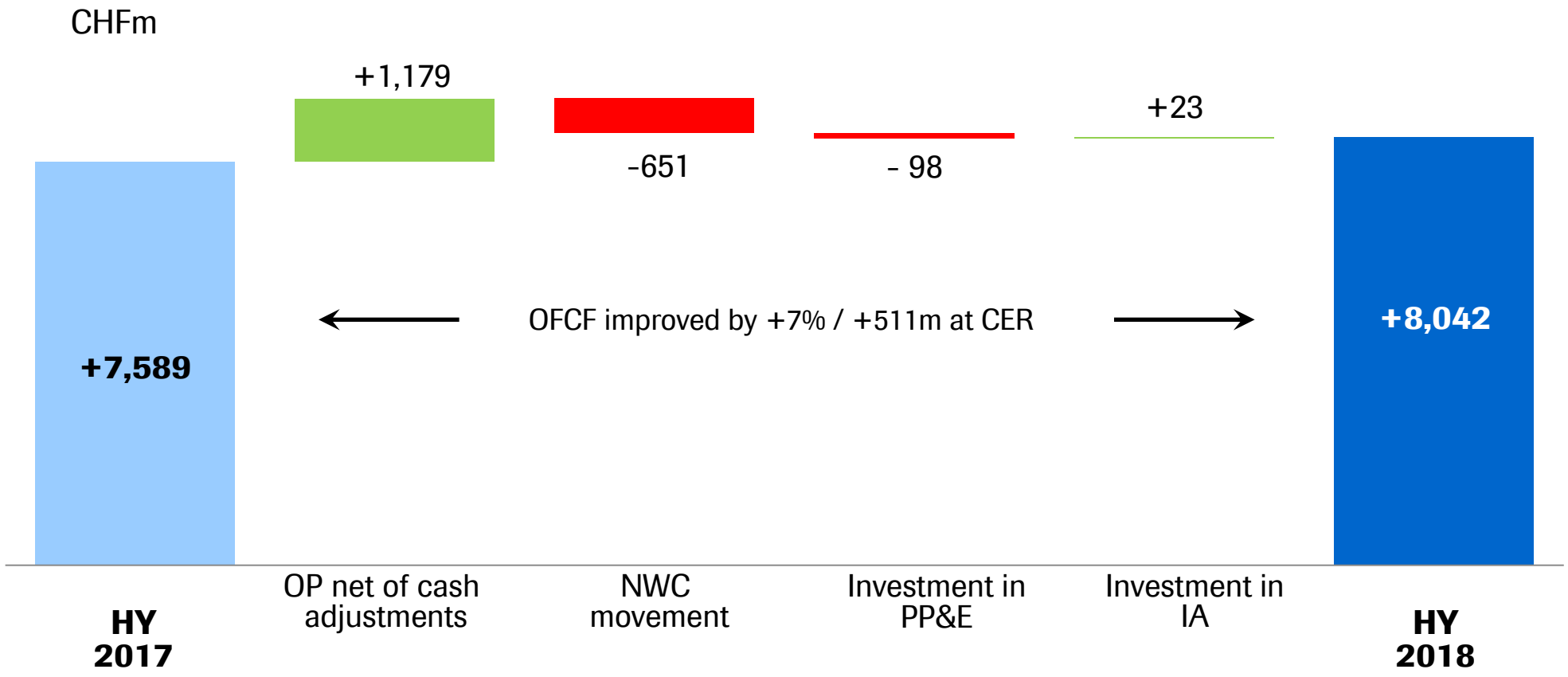
HY 2018: Strong operating free cash flow and margin



[1] At CER=Constant Exchange Rates

HY 2018: Operating Free Cash Flow (+7%)

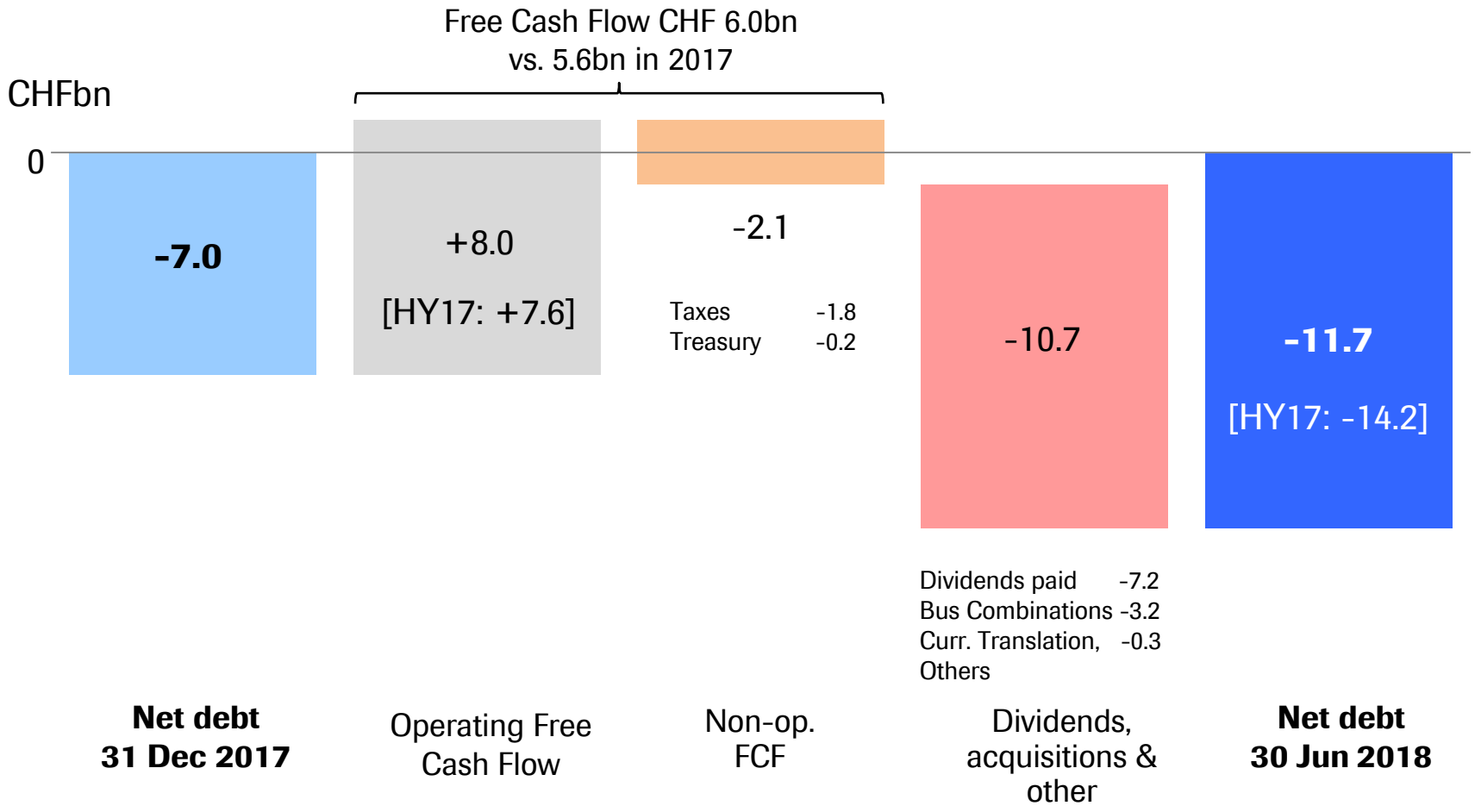
Higher than PY due to higher OP, new launches impacting NWC



CER = Constant Exchange Rates (avg full year 2017)
OP=operating profit; NWC=net working capital; PP&E=property, plant & equipment; IA=intangible assets

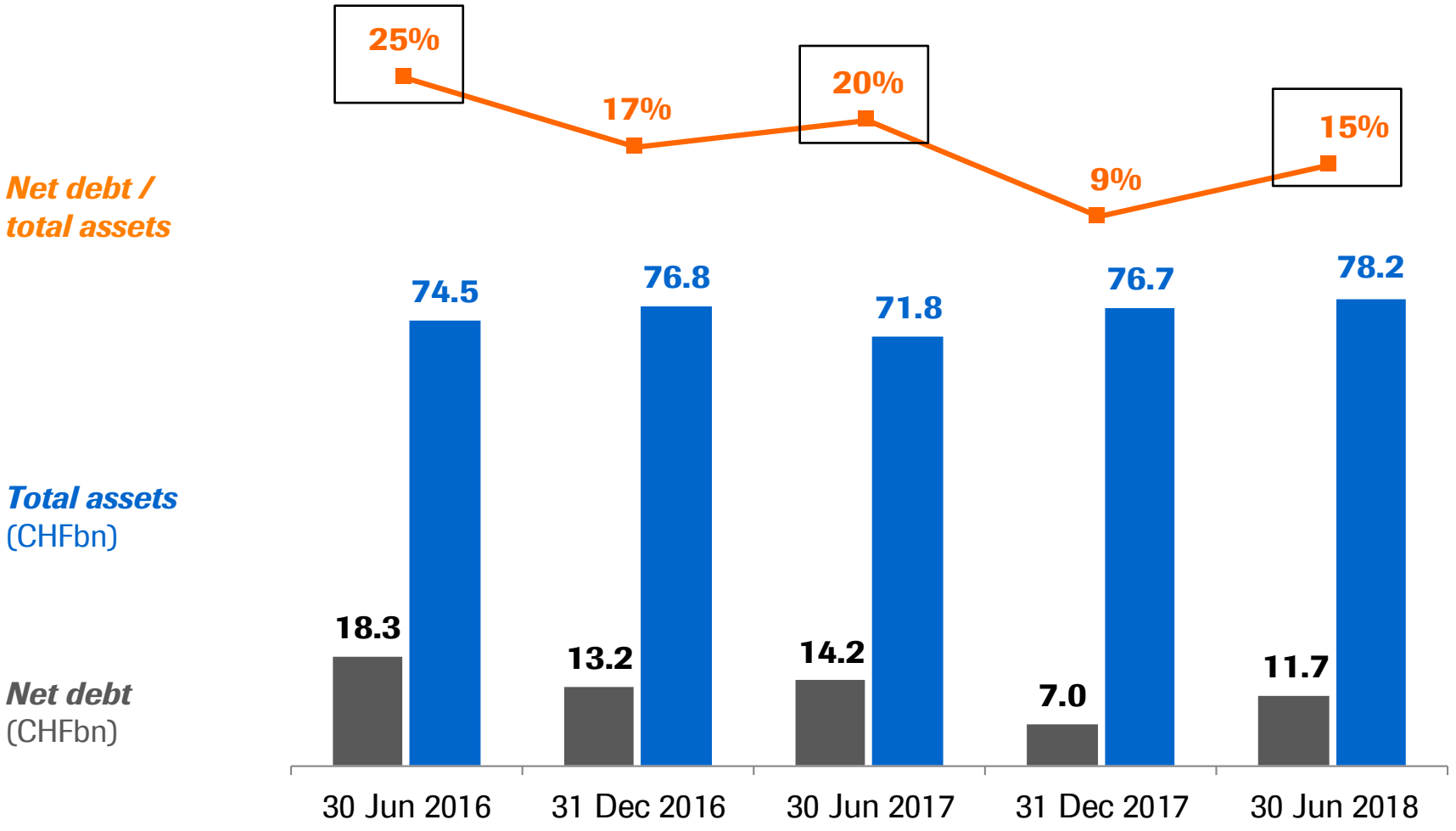
HY 2018: Group net debt development slightly up

Driven by dividends paid and acquisitions



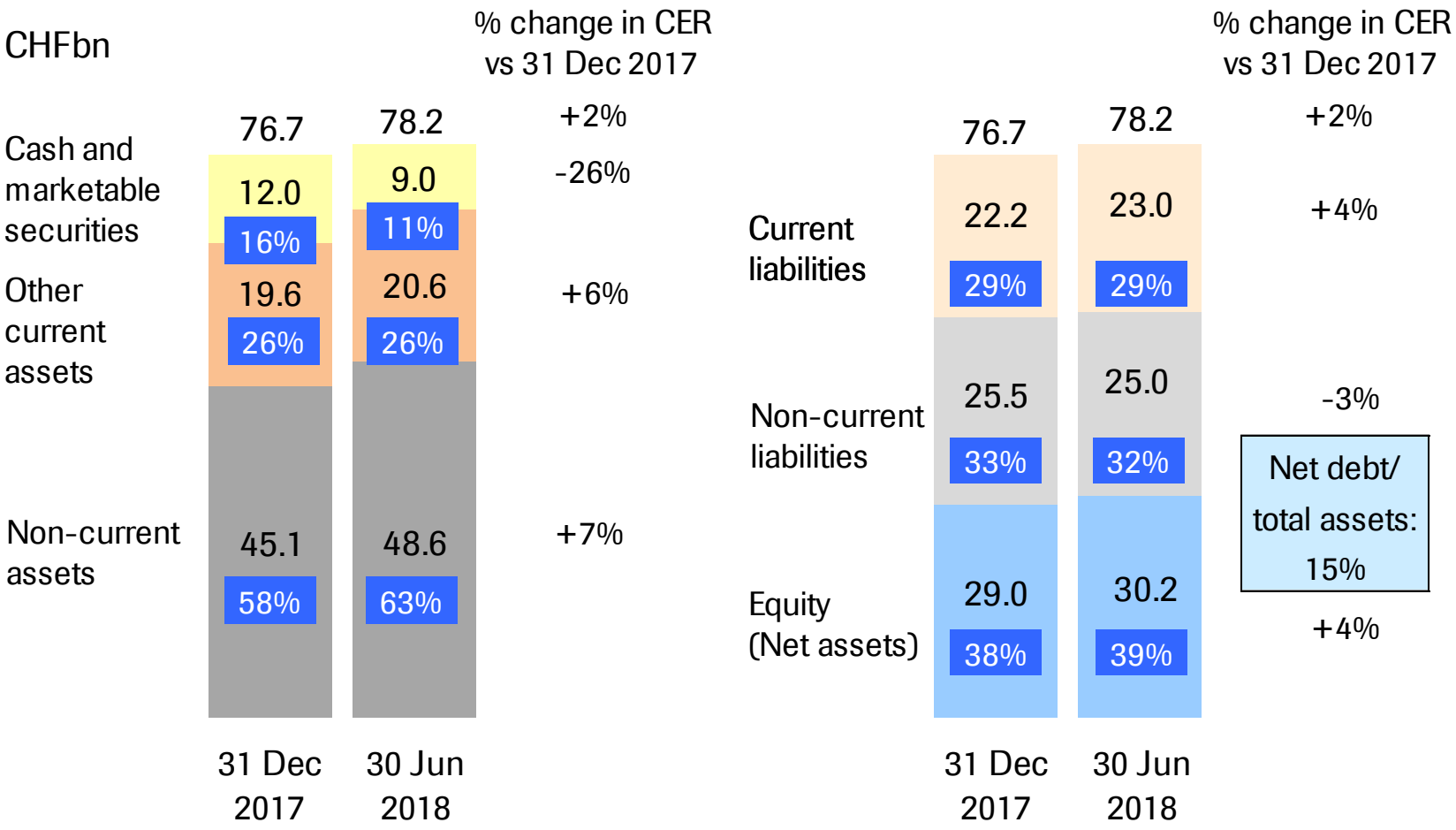
CER=Constant Exchange Rates (avg full year 2017)

Balance sheet: Improved net debt to total assets over years



Balance sheet 30 June 2018

Equity ratio at 39% (30 June 2017: 35%; 31 Dec 2017: 38%)



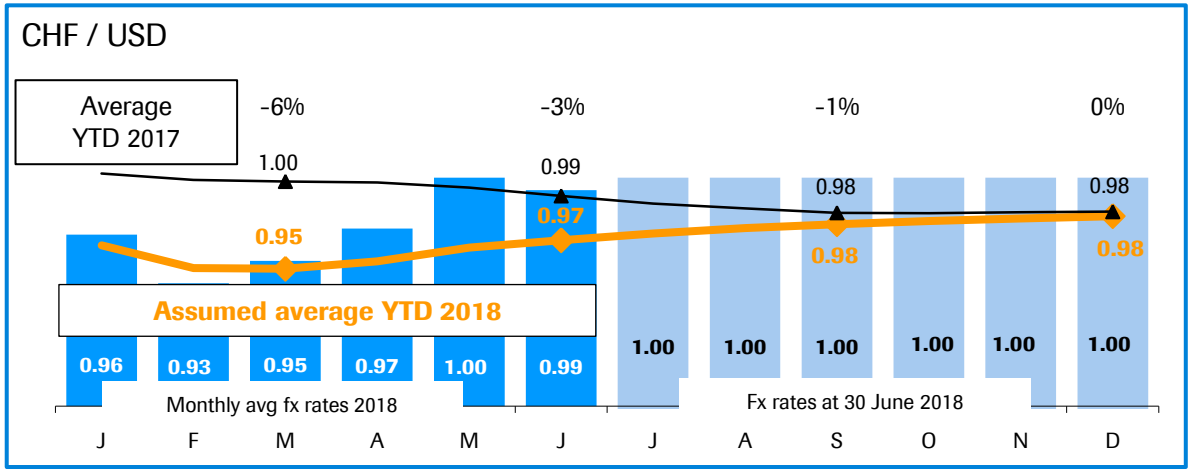
CER=Constant Exchange Rates (avg full year 2017)

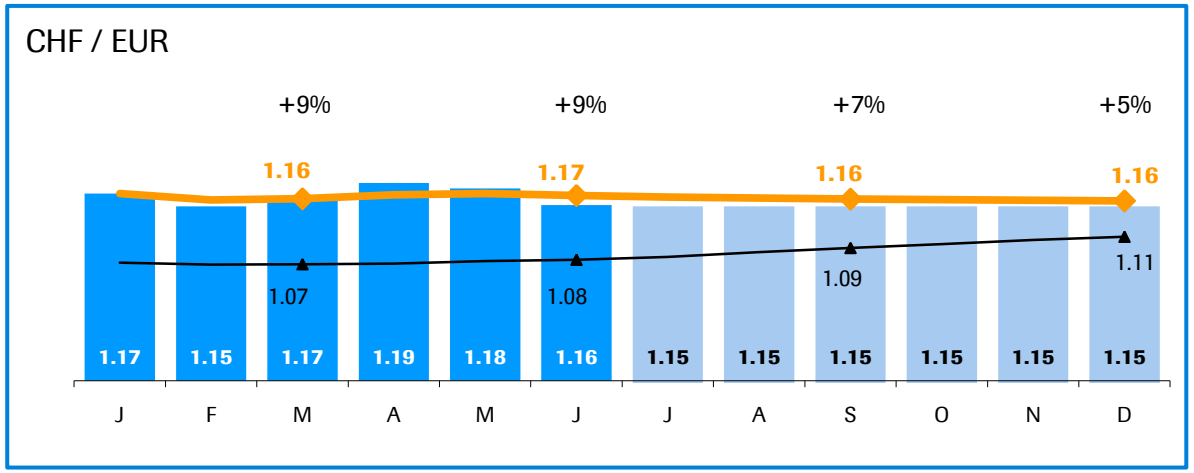
HY 2018 results

Focus on Cash

Outlook

Low currency impact expected in 2018





Assuming the 30 June 2018 exchange rates remain stable until end of 2018,
2018 impact is expected to be (%p):

	Q1	HY	Sep YTD	FY
Sales	**-1**	**0**	**1**	**1**
Core operating profit		**0**		**0**
Core EPS		**1**		**0**

2018 outlook further raised

Sales growth to 'mid single digit' from 'low single digit' & EPS growth to 'mid teens' from 'high single digit'

Group sales growth[1]	• Mid single digit (from low single digit)
Core EPS growth[1]	• Broadly in line with sales, excl. US tax reform benefit • Mid teens incl. US tax reform (from high single digit)
Dividend outlook	• Further increase dividend in Swiss francs

[1] At Constant Exchange Rates (CER)

Pipeline summary

Marketed products additional indications

Global Development late-stage trials

pRED (Roche Pharma Research & Early Development)

gRED (Genentech Research & Early Development)

Roche Group HY 2018 results

Diagnostics

Foreign exchange rate information

Changes to the development pipeline
HY 2018 update

New to phase I

3 NMEs:
RG6123 NME – solid tumors
RG6194 NME - BC
RG7827 FAP-4-1BBL FP – solid tumors

New to phase II

New to phase III

1 NME transitioned from Ph1:
RG6264 Perjeta + Herceptin FDC SC – HER2+ BC

2 AIs:
RG6152 baloxavir marboxil – influenza, high risk
RG7446 Tecentriq + capecitabine or carbo/gem – 1L TNBC

New to registration

1 NME following filing in US:
RG6152 baloxavir marboxil - influenza

3 AIs following filing in US/EU:
RG6013 Hemlibra – hemophilia A w/o FVIII inh
RG6013 Hemlibra – Q4W hemophilia A
RG7446 Tecentriq + chemo + Avastin – 1L non-sq NSCLC

2 AIs following filing in US:
RG3648 Xolair PFS – asthma and CIU
RG7601 Venclexta + HMA/LDAC – 1L AML

1 AI following filing in EU:
RG1569 Actemra – CRS

Removed from phase I

2 NMEs:
RG7386 FAP-DR5 biMAb – solid tumors
RG7882 MUC16 ADC – ovarian cancer

4 AIs:
RG7446 Tecentriq + Cotellic – solid tumors
RG7446 Tecentriq + ipi/IFN – solid tumors
RG7446 Tecentriq + HMA – MDS
RG7446 Tecentriq + guadecitabine – AML

Removed from phase II

2 NMEs:
RG1678 bitopertin – beta thalassemia
RG6083 olesoxime – SMA

1 AI:
RG7604 taselisib + letrozole – (HER2-neg) BC neoadj

Removed by Chugai:
CHU URAT1 inh - gout

Removed from phase III

1 NME:
RG7604 taselisib + fulvestrant – ER+(HER2-neg) mBC

1 AI:
RG7446 Tecentriq + Cotellic – 3L CRC

Removed from registration

1 AI following US approval:
RG435 Avastin –ovarian cancer FL

1 AI following EU approval:
RG1273 Perjeta + Herceptin – HER2+ BC adj

Status as of July 26, 2018

Roche Group development pipeline

Phase I (45 NMEs + 22 AIs)

RG6026	CD20 TCB ± chemo ± T	heme tumors
RG6058	tiragolumab ± T	solid tumors
RG6109	-	AML
RG6114	mPI3K alpha inh	HR+ BC
RG6123	-	solid tumors
RG6146	BET inh combos	solid & heme tumors
RG6148	-	HER2 expressing BC
RG6160	-	multiple myeloma
RG6171	SERD (3)	ER+ (HER2neg) mBC
RG6180	personalized cancer vaccine ± T	oncology
RG6185	pan-RAF inh + Cotellic	solid tumors
RG6194	-	BC
RG7155	emactuzumab + T	solid tumors
	emactuzumab + selicrelumab	solid tumors
RG7159	anti-CD20 combos	heme tumors
RG7421	Cotellic + Zelboraf + T	melanoma
	Cotellic + T	2L BRAF WT mM
	Cotellic + T	RCC, bladder, head & neck ca
RG7440	ipatasertib + Taxane + T	TNBC
RG7446	Tecentriq (T)	solid tumors
	Tecentriq (T)	NMIBC
	T-based Morpheus platform	solid tumors
	T + Avastin + Cotellic	2/3L CRC
	T ± Avastin ± chemo	HCC, GC, PaC
	T + Tarceva/Alecensa	NSCLC
	T + anti-CD20 combos	heme tumors
	T ± lenalidomide ± daratumumab	MM
	T + K/HP	HER2+ BC
	T + radium 223	mCRPC
	T + rucaparib	ovarian ca
	T + Gazyva/tazemetostat	r/r DLBCL & FL
RG7461	FAP IL2v FP combos	solid tumors
RG7601	Venclexta + Cotellic/idasanutlin	AML
	Venclexta ± azacitadine	r/r MDS
RG7601	Venclexta + Cotellic + T	MM
RG7741	ChK1 inh	solid tumors
RG7802	CEA TCB ± T	solid tumors
RG7813	CEA IL2v FP* + T	solid tumors
RG7827	FAP-4-1BBL FP	solid tumors
RG7828	mosenutuzumab ± T	heme tumors
RG7876	selicrelumab + T	solid tumors
	selicrelumab + Avastin	solid tumors
CHU	Raf/MEK dual inh	solid tumors
CHU	glypican-3/CD3 biMAb	solid tumors
RG6069	anti-fibrotic agent	fibrosis
RG6107	C5 inh MAb	PNH
RG6151	-	asthma
RG6173	-	asthma
RG6174	-	inflammatory diseases
RG7835	-	autoimmune diseases
RG7880	IL-22Fc	inflammatory diseases
RG7990	-	asthma
RG6004	HBV LNA	HBV
RG6080	nacubactam	bact. infections
RG7854	TLR7 agonist (3)	HBV
RG7861	anti-S. *aureus* TAC	infectious diseases
RG7907	HBV CpAM (2) (Capsid)	HBV
RG7992	FGFR1/KLB MAb	metabolic diseases
RG6000	-	ALS
RG6029	Nav1.7 inh (2)	pain
RG6042	ASO	Huntington's
RG7816	GABA Aa5 PAM	autism
RG7906	-	psychiatric disorders
RG6147	-	geographic atrophy
CHU	PTH1 recep. ago	hypoparathyroidism
CHU	-	hyperphosphatemia
CHU	-	endometriosis

Phase II (17 NMEs + 9 AIs)

RG6268	entrectinib §	NSCLC ROS1+
	entrectinib §	NTRK1 pantumor
RG7388	idasanutlin	polycythemia vera
RG7421	Cotellic + Tecentriq ± taxane	TNBC
RG7440	ipatasertib	TNBC neoadj
RG7596	polatuzumab vedotin	r/r DLBCL & FL
RG7601	Venclexta + Rituxan	DLBCL
	Venclexta + Rituxan	r/r FL
	Venclexta + azacitadine	1L MDS
RG7686	codrituzumab	HCC
RG6125	Cadherin-11 MAb	RA
RG6149	ST2 MAb	asthma
RG7159	obinutuzumab	lupus
RG7625	Cat-S antag	autoimmune diseases
RG7845	fenebrutinib	RA, lupus, CSU
CHU	nemolizumab#	pruritus in dialysis patients
PRO	VAP-1 inh	inflammatory disease
NOV	TLR4 MAb	autoimmune diseases
RG1662	basmisanil	CIAS
RG6100	Tau MAb	Alzheimer's
RG7314	balovaptan	autism
RG7916	risdiplam §	SMA
RG7935	prasinezumab	Parkinson's
RG3645	Port Delivery System with ranibizumab	wAMD
RG7716	VEGF-ANG2 biMAb	wAMD
	VEGF-ANG2 biMAb	DME

See next page for legend

Status as of July 26, 2018

Roche Group development pipeline

Phase III (8 NMEs + 31 AIs)

RG3502	Kadcyla	HER2+ eBC
	Kadcyla + Perjeta	HER2+ eBC
RG6264	Perjeta + Herceptin FDC SC	HER2+ BC
RG7388	idasanutlin + chemo	AML
RG7440	ipatasertib + abiratorone	1L CRPC
	ipatasertib + chemo	1L TNBC/HR+ BC
RG7421	Cotellic +Zelboraf+T	1L BRAFm melanoma
	Cotellic + T	1L BRAF WT melanoma
RG7596	polatuzumab vedotin	1L DLBCL
RG7446	Tecentriq	NSCLC adj
	Tecentriq	MIBC adj
	Tecentriq Dx+	1L sq + non-sq SCLC
	Tecentriq	RCC adj
	T + nab-paclitaxel	1L non-sq NSCLC
	T + chemo + Avastin	1L ovarian cancer
	T + pemetrexed	1L non-sq NSCLC
	T + nab-paclitaxel	1L sq NSCLC
	T ± chemo	SCCHN adj
	T + paclitaxel	1L TNBC
	T + nab-paclitaxel	1L TNBC
	T + capecitabine or carbo/gem	1L TNBC
	T + nab-paclitaxel	TNBC neoadj
	T + Avastin	RCC
	T + Avastin	1L HCC
	T ± chemo	1L mUC
	T + chemo	1L extensive stage SCLC
	T + enzalutamide	CRPC
RG7446/RG7853	Tecentriq or Alecensa	1L NSCLC Dx+
RG7601	Venclexta + Gazyva	1L CLL
	Venclexta + bortezomib	MM
RG1569	Actemra	systemic sclerosis
RG3648	Xolair	nasal polyps
RG7413	etrolizumab	ulcerative colitis
	etrolizumab	Crohn's
RG6152	baloxavir marboxil	influenza, high risk
RG1450	gantenerumab	Alzheimer's
RG6168	satralizumab	NMO
RG6206	anti-myostatin adnectin	DMD
RG7412	crenezumab	Alzheimer's

Registration (1 NME + 9 AIs)

RG6013	Hemlibra	hemophilia A w/o FVIII inh
	Hemlibra	Q4W hemophilia A
RG7446	T + chemo + Avastin	1L non-sq NSCLC
RG7601	Venclexta + Rituxan[1]	r/r CLL
	Venclexta + HMA/LDAC[2]	1L AML
RG105	MabThera[1]	pemphigus vulgaris
RG1569	Actemra auto injector[3]	RA
RG1569	Actemra[1]	CRS
RG3648	Xolair PFS[4]	asthma & CIU
RG6152	baloxavir marboxil[4]	influenza

1. Approved in US
2. Filed in US based on Ph1 data (Ph3 ongoing)
3. Approved in EU
4. Filed in US

New Molecular Entity (NME)
Additional Indication (AI)
Oncology
Immunology
Infectious Diseases
CardioMetabolism
Neuroscience
Ophthalmology
Other

RG-No Roche/Genentech
CHU Chugai managed
PRO Proximagen managed
NOV Novimmune managed
RG1569 Branded as RoActemra (EU)

*INN: cergutuzumab amunaleukin
#out-licensed to Galderma and Maruho AD
§Ph2 pivotal
T=Tecentriq; TCB=T-cell bispecific
TDB=T-cell dependent bispecific
FDC=fixed-dose combination

Status as of July 26, 2018

NME submissions and their additional indications

Projects currently in phase II and III

2018		2019		2020		2021 and beyond			
RG6152	baloxavir marboxil ✓ influenza (US)	RG6168	satralizumab neuromyelitis optica	RG6206	anti-myostatin adnectin DMD	RG7388	idasanutlin polycythemia vera	RG1450	gantenerumab Alzheimer's
RG7596	polatuzumab vedotin r/r DLBCL	RG6268	entrectinib NSCLC ROS1+	RG7916	risdiplam SMA	RG7440	ipatasertib TNBC neoadj	RG1662	basmisanil CIAS
		RG6268	entrectinib NTRK1 pantumor	RG6264	Perjeta + Herceptin FDC SC HER2+ BC	RG7596	polatuzumab vedotin 1L DLBCL	RG6100	Tau MAb Alzheimer's
		RG7388	idasanutlin + chemo AML	RG7440	ipatasertib + abiratorone 1L CRPC			RG7314	balovaptan autism
				RG7440	ipatasertib +chemo 1L TNBC / HR+ BC			RG7412	crenezumab Alzheimer's
				RG7596	polatuzumab vedotin FL			RG7935	prasinezumab Parkinson's

RG3645	Port Delivery System with ranibizumab wAMD	RG6125	Cadherin-11 MAb RA
RG7716	VEGF/ANG2 biMAb wAMD	RG6149	ST2 MAb asthma
RG7716	VEGF/ANG2 biMAb DME	RG7413	etrolizumab ulcerative colitis
		RG7413	etrolizumab Crohn's
		RG7625	Cat S antag autoimmune diseases
		RG7845	fenebrutinib autoimmune diseases

✓ Indicates submission to health authorities has occurred
Unless stated otherwise submissions are planned to occur in US and EU

New Molecular Entity (NME)
Additional Indication (AI)
Oncology
Immunology
Infectious Diseases
CardioMetabolism
Neuroscience
Ophthalmology
Other
FDC =fixed-dose combination

Status as of July 26, 2018

AI submissions for existing products

Projects currently in phase II and III

RG6013	**Hemlibra ✓** hemophilia A FVIII non-inh
RG6013	**Hemlibra ✓** hemophilia A, Q4W
RG7601	**Venclexta + Rituxan (EU) ✓** r/r CLL
RG7601	**Venclexta +** HMA/LDAC **(US) ✓** 1L AML
RG7446	**Tecentriq + chemo + Avastin ✓** 1L non-sq NSCLC
RG7446	**Tecentriq + nab-paclitaxel** 1L sq NSCLC
RG7446	**Tecentriq + nab-paclitaxel** 1L non-sq NSCLC
RG7446	**Tecentriq + pemetrexed** 1L non-sq NSCLC
RG7446	**Tecentriq + chemo** 1L extens. stage SCLC
RG7446	**Tecentriq + Avastin** RCC
RG7446	**Tecentriq + nab-paclitaxel** 1L TNBC

RG105	**MabThera (EU) ✓** pemphigus vulgaris
RG1569	**Actemra** systemic sclerosis
RG1569	**Actemra auto injector (US)** RA ✓
RG1569	**Actemra (EU) ✓** CRS
RG3648	**Xolair PFS (US)✓** Asthma & CIU

RG7421	**Cotellic + Tecentriq** 1L BRAF WT melanoma
RG7421	**Cotellic + Tecentriq + Zelboraf** 1L BRAFmut melanoma
RG7446	**Tecentriq** 1L non-sq + sq NSCLC (Dx+)
RG7446	**Tecentriq + nab-paclitaxel** TNBC neoadj
RG7446	**Tecentriq + paclitaxel** 1L TNBC
RG7601	**Venclexta + Gazyva** 1L CLL
RG7601	**Venclexta + bortezomib** MM

RG3648	**Xolair** nasal polyps
RG3502	**Kadcyla** HER2+ eBC
RG3502	**Kadcyla + Perjeta** HER2+ eBC
RG7446	**Tecentriq ± chemo** 1L mUC
RG7446	**Tecentriq + enzalutamide** CRPC
RG7446	**Tecentriq + chemo + Avastin** 1L ovarian cancer

RG7159	**obinutuzumab** lupus nephritis
RG7421	**Cotellic + Tecentriq ± taxane** TNBC
RG7446/ RG7853	**Tecentriq or Alecensa** 1L NSCLC Dx+
RG7446	**Tecentriq** NSCLC adj
RG7446	**Tecentriq** MIBC adj
RG7446	**Tecentriq** RCC adj
RG7446	**Tecentriq + Avastin** 1L HCC
RG7446	**Tecentriq + chemo** SCCHN adj
RG7446	**Tecentriq + capecitabine or carbo/gem** TNBC
RG7601	**Venclexta + Rituxan** r/r FL
RG7601	**Venclexta + Rituxan** DLBCL
RG7601	**Venclexta + aza** 1L MDS

2018 | *2019* | *2020* | *2021 and beyond*

✓ Indicates submission to health authorities has occurred
Unless stated otherwise submissions are planned to occur in US and EU

New Molecular Entity (NME)
Additional Indication (AI)
Oncology
Immunology
Infectious Diseases
CardioMetabolism
Neuroscience
Ophthalmology
Other

Status as of July 26, 2018

Major granted and pending approvals 2018

	US		EU		Japan-Chugai	
Approved	RG3645	**Lucentis** 0.3 mg PFS DME/DR, Mar 2018	RG1594	**Ocrevus** PPMS & RMS, Jan 2018	RG6013	**Hemlibra** hemophilia A FVIII inh (ped/adults), Mar 2018
	RG435	**Avastin** Ovarian ca FL, Jun 2018	RG1273	**Perjeta + Herceptin** HER2+ BC adj, Jul 2018	RG7159	**Gazyva** CD20+ FL, Jul 2018
	RG7601	**Venclexta + Rituxan** r/r CLL, Jun 2018	RG6013	**Hemlibra** hemophilia A FVIII inh (ped/adults), Feb 2018	RG7446	**Tecentriq** 2L+ NSCLC, Jan 2018
	RG105	**Rituxan** pemphigus vulgaris, Jun 2018	RG1569	**Actemra auto injector** RA/GCA, Mar 2018		
Pending Approval	RG6013	**Hemlibra** hemophilia A FVIII non-inh, Filed Apr 2018	RG6013	**Hemlibra** hemophilia A FVIII non-inh, Filed Apr 2018	RG1273	**Perjeta + Herceptin** HER2+ BC adj, Filed Oct 2017
	RG6013	**Hemlibra** Q4W hemophilia A, Filed Apr 2018	RG6013	**Hemlibra** Q4W hemophilia A, Filed Apr 2018	RG6013	**Hemlibra** hemophilia A FVIII non-inh, Filed Apr 2018
	RG7446	**T + chemo + Avastin** 1L non-sq NSCLC, Filed Mar 2018	RG7446	**Tecentriq + chemo + Avastin** 1L non-sq NSCLC, Filed Feb 2018	RG6013	**Hemlibra** Q4W hemophilia A, Filed Apr 2018
	RG7601	**Venclexta + HMA/LDAC** 1L AML, Filed Jul 2018	RG7601	**Venclexta + Rituxan** r/r CLL, Filed Jan 2018	RG7446	**Tecentriq + other anti-tumor drugs** 1L NSCLC, Filed Mar 2018
	RG1569	**Actemra auto injector** RA, Filed Jan 2018	RG105	**MabThera** pemphigus vulgaris, Filed Feb 2018	RG1569	**Actemra** CRS, Filed May 2018
	RG3648	**Xolair PFS** Asthma & CIU, Filed Mar 2018	RG1569	**Actemra** CRS, Filed May 2018	RG1569	**Actemra** Adult Onset Still's disease, Filed May 2018
	RG6152	**baloxavir marboxil** Influenza, Filed Apr 2018				

New Molecular Entity (NME)
Additional Indication (AI)
Oncology
Immunology
Infectious Diseases
CardioMetabolism
Neuroscience
Ophthalmology
Other

Status as of July 26, 2018

Cancer immunotherapy pipeline overview

Phase I (13 NMEs + 27 AIs)

RG6026	CD20 TCB	heme tumors
RG6058	tiragolumab ± T	solid tumors
RG6123	-	solid tumors
RG6160	-	multiple myeloma
RG6180	personalized cancer vaccine ± T	oncology
RG6194	-	BC
RG7155	emactuzumab + T	solid tumors
	emactuzumab + selicrelumab	solid tumors
RG7421	Cotellic + Zelboraf + T	melanoma
	Cotellic + T	2L BRAF WT mM
	Cotellic + T	RCC, bladder, head & neck ca
RG7440	ipatasertib + Taxane + T	TNBC
RG7446	Tecentriq (T)	solid tumors
	Tecentriq (T)	NMIBC
	T-based Morpheus platform	solid tumors
	T + Avastin + Cotellic	2/3L CRC
	T ± Avastin ± chemo	HCC, GC, PaC
	T + Tarceva/Alecensa	NSCLC
	T + anti-CD20 combos	heme tumors
	T ± lenalidomide ± daratumumab	MM
	T + K/HP	HER2+ BC
	T + radium 223	mCRPC
	T + rucaparib	ovarian ca
	T + Gazyva/tazemetostat	r/r DLBCL & FL
RG7461	FAP IL2v FP combos	solid tumors
RG7601	Venclexta + Cotellic/idasanutlin	AML
	Venclexta + Cotellic + T	MM
RG7802	CEA TCB ± T	solid tumors
RG7813	CEA IL2v FP* + T	solid tumors
RG7827	FAP-4-1BBL FP	solid tumors
RG7828	mosenutuzumab ± T	heme tumors
RG7876	selicrelumab + T	solid tumors
	selicrelumab + Avastin	solid tumors
AMGN**	Tecentriq + talimogene laherp	TNBC, CRC
BLRX**	Tecentriq + BL-8040	AML, solid tumors
CRVS**	Tecentriq + CPI-444	solid tumors
EXEL**	Tecentriq + cabozantinib	solid tumors
HALO**	Tecentriq + PEGPH20	CCC, GBC
INO**	Tecentriq + INO5401+INO9012	bladder ca
KITE**	Tecentriq + KTE-C19	r/r DLBCL

MORPHEUS Platform - Phase Ib/II (5 AIs)

RG7446	T-based Morpheus	pancreatic cancer
	T-based Morpheus	gastric cancer
	T-based Morpheus	HR+ BC
	T-based Morpheus	NSCLC
	T-based Morpheus	2L TNBC

Phase II (5 AIs)

RG7421	Cotellic + Tecentriq ± taxane	TNBC
Gradalis**	Tecentriq + Vigil	ovarian ca
GTHX**	Tecentriq + trilaciclib	SCLC
IMDZ**	Tecentriq + NY-ESO-1	soft tissue sarcoma
SNDX**	Tecentriq + entinostat	TNBC

New Molecular Entity (NME)
Additional Indication (AI)
Oncology

RG-No Roche/Genentech
*INN: cergutuzumab amunaleukin
T=Tecentriq; TCB=T-cell bispecific
TDB=T-cell dependent bispecific

Phase III (21 AIs)

RG7421	Cotellic+Zelboraf+T	1L BRAFm melanoma
	Cotellic + T	1L BRAF WT melanoma
RG7446	Tecentriq	NSCLC adj
	Tecentriq	MIBC adj
	Tecentriq Dx+	1L sq + non-sq SCLC
	Tecentriq	RCC adj
	T + nab-paclitaxel	1L non-sq NSCLC
	T + chemo+ Avastin	1L ovarian cancer
	T + pemetrexed	1L non-sq NSCLC
	T + nab-paclitaxel	1L sq NSCLC
	T ± chemo	SCCHN adj
	T + paclitaxel	1L TNBC
	T + nab-paclitaxel	1L TNBC
	T + capecitabine or carbo/gem	1L TNBC
	T + nab-paclitaxel	TNBC neoadj
	T + Avastin	RCC
	T + Avastin	1L HCC
	T ± chemo	1L mUC
	T + chemo	1L extensive stage SCLC
	T + enzalutamide	CRPC
RG7446/RG7853	Tecentriq or Alecensa	1L NSCLC Dx+

Registration (1 AI)

RG7446	T + chemo + Avastin	1L non-sq NSCLC

** External collaborations: AMGN – Amgen oncolytic virus; BLRX - BioLine Rx CXCR4 antag; CRVS – Corvus ADORA2A antag; EXEL – Exelexis' TKI; Gradalis – EATC therapy; GTHX – G1 Therapeutics CDK4/6; HALO – Halozyme PEGPH20; IMDZ – Immune Design CMB305; INO - Inovio T cell activating immunotherapy (INO-5401), IL-12 activator (INO-9012); JNJ – Janssen CD38 MAb; KITE – Kite KTE-C19; SNDX – Syndax HDAC inh

Status as of July 26, 2018

Pipeline summary

Marketed products additional indications

Global Development late-stage trials

pRED (Roche Pharma Research & Early Development)

gRED (Genentech Research & Early Development)

Roche Group HY 2018 results

Diagnostics

Foreign exchange rate information

Hemlibra (emicizumab, RG6013, ACE910)

Factor VIII mimetic for treatment of hemophilia A

Indication	Hemophilia A		
Phase/study	**Phase I** Study in Japan	**Phase I/II** Study in Japan	**Non-interventional study**
# of patients	N=82	N=18	N=221
Design	▪ Enrolled 64 healthy volunteers and 18 patients	▪ Extension study in patients from ph 1	Non-interventional study evaluating bleeding incidence, health-related quality of life and safety in patients with hemophilia A and inhibitors to factor VIII under SoC treatment ▪ **Cohort A:** Adults and adolescents with FVIII Inhibitors ▪ **Cohort B:** Children with FVIII Inhibitors ▪ **Cohort C:** Adults and adolescents without FVIII Inhibitors
Primary endpoint	▪ Exploratory safety and efficacy	▪ Exploratory safety and efficacy	▪ Number of bleeds over time, sites of bleed, type of bleed
Status	▪ Recruitment completed Q2 2014 ▪ Data presented at ASH 2014	▪ Recruitment completed Q4 2014 ▪ Data presented at ISTH 2015 ▪ Extension data presented at WFH 2016	▪ Inhibitor cohort closed Q4 2015, except China ▪ FPI in non-inhibitor and pediatric subjects in Q1 2016 ▪ Cohort A presented at ASH 2016 and EAHAD 2017; Cohort B presented at ASH 2017 and WFH 2018; Cohort C presented at EAHAD and WFH 2018 ▪ Study completed
	▪ Breakthrough Therapy Designation granted by FDA Q3 2015		
CT Identifier	JapicCTI-121934	JapicCTI-132195	NCT02476942

In collaboration with Chugai

SoC=Standard of care; FVIII=Factor VIII; ASH=American Society of Hematology; ISTH=International Society on Thrombosis and Haemostasis; WFH=World Federation of Hemophilia; EAHAD=European Association for Haemophilia and Allied Disorders

Hemlibra (emicizumab, RG6013, ACE910)

Factor VIII mimetic for treatment of hemophilia A

Indication	Hemophilia A patients with inhibitors to factor VIII	Hemophilia A pediatric patients with inhibitors to factor VIII
Phase/study	**Phase III HAVEN 1**	**Phase III HAVEN 2**
# of patients	N=118	N=88
Design	Patients on episodic treatment prior to study entry: ▪ **Arm A:** Hemlibra prophylaxis ▪ **Arm B:** Episodic treatment (no prophylaxis) Patients on prophylaxis prior to study entry: ▪ **Arm C:** Hemlibra prophylaxis Patients on episodic treatment previously on non-interventional study: ▪ **Arm D:** Hemlibra prophylaxis	Patients on prophylactic or episodic treatment prior to study entry: ▪ **Cohort A:** Hemlibra prohylaxis qw ▪ **Cohort B:** Hemlibra prophylaxis q2w ▪ **Cohort C:** Hemlibra prophylaxis q4w
Primary endpoint	▪ Number of bleeds over 24 weeks	▪ Number of bleeds over 52 weeks
Status	▪ FPI Q4 2015, recruitment completed in Arms A and B Q2 2016 ▪ Primary and all secondary endpoints met Q4 2016 ▪ Results published in *NEJM* 2017 Aug 31;377(9):809-818	▪ FPI Q3 2016, recruitment completed Q2 2017 ▪ Positive interim results in Q2 2017 ▪ FPI cohorts B/C Q4 2017
	▪ Data presented at ISTH 2017, updated data presented at ASH 2017 ▪ Filed in US and EU in Q2 2017; granted accelerated assessment (EMA) and priority review (FDA) ▪ Approved in US Q4 2017 and EU Q1 2018	
CT Identifier	NCT02622321	NCT02795767

In collaboration with Chugai

ASH=American Society of Hematology; ISTH=International Society on Thrombosis and Haemostasis

Hemlibra (emicizumab, RG6013, ACE910)

Factor VIII mimetic for treatment of hemophilia A

Indication	Hemophilia A patients without inhibitors to factor VIII	Hemophilia A patients with and without inhibitors to Factor VIII, dosing every 4 weeks
Phase/study	**Phase III HAVEN 3**	**Phase III HAVEN 4**
# of patients	N=135	N=46
Design	Patients on FVIII episodic treatment prior to study entry: ▪ **Arm A:** Hemlibra prophylaxis qw ▪ **Arm B:** Hemlibra prophylaxis q2w ▪ **Arm C:** Episodic FVIII treatment; switch to Hemlibra prophylaxis possible after 24 weeks Patients on FVIII prophylaxis prior to study entry: ▪ **Arm D:** Hemlibra prophylaxis qw	Multicenter, open-label, non-randomized study to assess the efficacy, safety, pharmacokinetics, and pharmacodynamics of Hemlibra administered every 4 weeks. ▪ **Part 1:** Pharmacokinetic (PK) run-in part (N=6) ▪ **Part 2:** Expansion part (N=40)
Primary endpoint	▪ Number of bleeds over 24 weeks	▪ Number of bleeds over 24 weeks
Status	▪ FPI Q3 2016, recruitment completed Q2 2017 ▪ Study met primary and key secondary endpoints Q4 2017 ▪ FDA granted Breakthrough Therapy Designation April 2018 ▪ Data presented at WFH 2018 ▪ Filed in US (priority review) and EU in Q2 2018	▪ FPI Q1 2017, recruitment completed Q2 2017 ▪ PK run-in data at ASH 2017 ▪ Positive interim analysis outcome reported Q4 2017 ▪ Data presented at WFH 2018 ▪ Interim data filed in US and EU in Q2 2018
CT Identifier	NCT02847637	NCT03020160

In collaboration with Chugai

ASH=American Society of Hematology; WFH=World Federation of Hemophilia

Alecensa (alectinib, RG7853, AF802)

New CNS-active inhibitor of anaplastic lymphoma kinase

Indication	Treatment-naïve ALK-positive advanced NSCLC	ALK-positive advanced NSCLC in ALK inhibitor-naïve patients who are chemotherapy-naïve or have received one previous line of chemotherapy
Phase/study	**Phase III** **ALEX**	**Phase III** **J-ALEX/Japic CTI-132316** Japanese study
# of patients	N=286	N=207
Design	▪ **ARM A:** Alecensa 600mg BID ▪ **ARM B:** Crizotinib 250mg BID	▪ **ARM A:** Alecensa 300mg BID ▪ **ARM B:** Crizotinib 250mg BID
Primary endpoint	▪ Progression-free survival	▪ Progression-free survival
Status	▪ Recruitment completed Q3 2015 ▪ Primary endpoint met Q1 2017 ▪ Data presented at ASCO 2017 ▪ Results published in *NEJM* 2017 June; 377:829-838 ▪ CNS data presented at ESMO 2017	▪ Primary analysis positive ▪ Data presented at ASCO 2016 ▪ Breakthrough Therapy Designation granted by FDA Q3 2016 ▪ Results published in *Lancet* 2017 Jul; 390(10089):29–39
	▪ Approved in US Q4 2017 (priority review) and in EU Q4 2017	
CT Identifier	NCT02075840	JapicCTI-132316

In collaboration with Chugai

NSCLC=non-small cell lung cancer; ASCO=American Society of Clinical Oncology; ESMO=European Society for Medical Oncology

Cotellic (cobimetinib)

Selective small molecule inhibitor of MAPK kinase

Indication	First-line metastatic triple negative breast cancer	Advanced or metastatic squamous cell carcinoma of head and neck, urothelial carcinoma and renal cell carcinoma
Phase/study	**Phase II** **COLET**	**Phase Ib** **COTEST**
# of patients	N=160	N=120
Design	▪ **ARM A:** Cotellic plus paclitaxel ▪ **ARM B:** Placebo plus paclitaxel ▪ **ARM C:** Cotellic plus Tecentriq plus nab-paclitaxel ▪ **ARM D:** Cotellic plus Tecentriq plus paclitaxel	Cotellic plus Tecentriq in head and neck, bladder and renal cancer (cohorts for each cancer type in CPI naive and CPI experienced patients)
Primary endpoint	▪ Progression-free survival and safety	▪ Safety and overall response rate
Status	▪ FPI Q1 2015 ▪ FPI Arms C and D: Q4 2016 ▪ Data from Arm A and B presented at SABCS 2017	▪ FPI Q4 2017
CT Identifier	NCT02322814	NCT03264066

In collaboration with Exelixis
SABCS=San Antonio Breast Cancer Symposium

Cotellic (cobimetinib)

Selective small molecule inhibitor of MAPK kinase

Indication	First-line BRAFv600 mutation-positive metastatic or unresectable locally advanced melanoma	First-line BRAF-WT metastatic or unresectable locally advanced melanoma	Previously untreated metastatic melanoma BRAF mutation-positive	BRAF-WT metastatic or unresectable locally advanced melanoma after immunotherapy
Phase/study	**Phase III IMspire150 TRILOGY**	**Phase III IMspire170**	**Phase I**	**Phase Ib**
# of patients	N=500	N=500	N=70	N=102
Design	Double-blind, randomized, placebo-controlled study ▪ **ARM A:** Tecentriq plus Cotellic plus Zelboraf[1] ▪ **ARM B:** Placebo plus Cotellic plus Zelboraf[1]	▪ **ARM A:** Cotellic plus Tecentriq ▪ **ARM B:** Pembrolizumab	▪ Dose-finding study of Cotellic plus Tecentriq plus Zelboraf[1] and Tecentriq plus Zelboraf[1] combinations	▪ Preliminary efficacy of Cotellic plus Tecentriq in patients who have progressed on prior aPD-1 therapy
Primary endpoint	▪ Progression-free survival	▪ Progression-free survival and overall survival	▪ Safety and PK	▪ Objective response rate and disease control rate
Status	▪ FPI Q1 2017 ▪ Recruitment completed Q1 2018	▪ FPI Q4 2017	▪ FPI Q4 2012 ▪ Data presented at ESMO 2016	▪ FPI Q2 2017
CT Identifier	NCT02908672	NCT03273153	NCT01656642	NCT03178851

In collaboration with Exelixis; [1]Zelboraf In collaboration with Plexxikon, a member of Daiichi Sankyo Group
ESMO=European Society for Medical Oncology

Gazyva/Gazyvaro (obinutuzumab)

Oncology development program

Indication	Front-line indolent non-Hodgkin's lymphoma
Phase/study	**Phase III** **GALLIUM** Induction and maintenance study
# of patients	N=1,401
Design	▪ **ARM A:** G 1000mg IV + chemo followed by G maintenance ▪ **ARM B:** MabThera/Rituxan + chemo followed by MabThera/Rituxan maintenance *Chemotherapy:* ▪ For follicular lymphoma (FL): CHOP, CVP or bendamustine ▪ For non-FL: physician's choice
Primary endpoint	▪ Progression-free survival in FL patients (N=1,202)
Status	▪ Trial stopped at interim for efficacy (May 2016) ▪ Data presented at ASH 2016 ▪ Approved in EU Q3 2017 ▪ Approved by the FDA Q4 2017 after priority review ▪ Results published in *NEJM* 2017 Oct 5;377(14):1331-1344
CT Identifier	NCT01332968

In collaboration with Biogen

ASH=American Society of Hematology; CHOP=cyclophosphamide, doxorubicin, vincristine and prednisone; CVP=cyclophosphamide, vincristine and prednisolone

Kadcyla

First ADC for HER2-positive breast cancer

Indication	HER2-positive early breast cancer high-risk patients	Operable HER2-positive early breast cancer
Phase/study	**Phase III KATHERINE**	**Phase III KAITLIN**
# of patients	N=1,484	N=1,850
Design	▪ **ARM A:** Kadcyla 3.6mg/kg Q3W ▪ **ARM B:** Herceptin	Following surgery and antracycline-based therapy: ▪ **ARM A:** Herceptin 6mg/kg Q3W plus Perjeta 420 mg/kg Q3W plus chemo ▪ **ARM B:** Kadcyla 3.6mg/kg Q3W plus Perjeta 420mg/kg Q3W plus chemo
Primary endpoint	▪ Invasive disease-free survival	▪ Invasive disease-free survival
Status	▪ Recruitment complete Q4 2015 ▪ Data expected in 2018	▪ Recruitment complete Q2 2015 ▪ Data expected in 2019
CT Identifier	NCT01772472	NCT01966471

In collaboration with ImmunoGen, Inc.
ADC=antibody drug conjugate

Perjeta

First-in-class HER2 dimerization inhibitor

Indication	Adjuvant HER2-positive breast cancer	Neoadjuvant/adjuvant HER2-positive breast cancer	HER2-positive early breast cancer, subcutaneous coformulation
Phase/study	**Phase III APHINITY**	**Phase II BERENICE**	**Phase III FeDeriCa**
# of patients	N=4,803	N=401	N=500
Design	▪ **ARM A:** Perjeta (840mg loading, 420 q3w) + Herceptin for 52 weeks plus chemotherapy (6-8 cycles) ▪ **ARM B:** Placebo + Herceptin (52 weeks) plus chemotherapy (6-8 cycles)	*Neoadjuvant treatment:* ▪ **ARM A:** ddAC q2w x4 followed by wkly paclitaxel for 12 wks, with P+H x4 cycles ▪ **ARM B:** FEC plus P+H x4 followed by docetaxel plus P+H x4 *Adjuvant treatment:* ▪ P+H q3w to complete 1 year of HER2 therapy ▪ Hormonal and radiation therapy as indicated	Fixed-dose combination (FDC) of Perjeta (P) and Herceptin (H) for subcutaneous administration in combination with chemotherapy in the neoadjuvant/adjuvant setting ▪ **ARM A:** P IV+H IV+chemotherapy ▪ **ARM B:** FDC of PH SC+chemotherapy
Primary endpoint	▪ Invasive disease-free survival (IDFS)	▪ Safety	▪ Trough Serum Concentration (Ctrough) of Pertuzumab During Cycle 7
Status	▪ Primary endpoint met Q1 2017 ▪ Data presented at ASCO 2017 ▪ Filed in US and EU Q3 2017 ▪ Approved in US Q4 2017 (priority review) and EU Q2 2018	▪ Recruitment completed Q3 2015 ▪ Data presented at SABCS 2016	▪ FPI Q2 2018
CT Identifier	NCT01358877	NCT02132949	NCT03493854

ddAC=dose-dense doxorubicin plus cyclophosphamide; FEC=fluorouracil, epirubicin and cyclophosphamide;
ASCO=American Society of Clinical Oncology; SABCS=San Antonio Breast Cancer Symposium

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – lung cancer

Indication	1L non-squamous NSCLC		
Phase/study	**Phase III IMpower150**	**Phase III IMpower130**	**Phase III IMpower132**
# of patients	N=1,202	N=650	N=568
Design	▪ **ARM A:** Tecentriq plus paclitaxel plus carboplatin ▪ **ARM B:** Tecentriq plus Avastin plus paclitaxel plus carboplatin ▪ **ARM C:** Avastin plus paclitaxel plus carboplatin	▪ **ARM A:** Tecentriq plus nab-paclitaxel plus carboplatin ▪ **ARM B:** Nab-paclitaxel plus carboplatin	▪ **ARM A:** Tecentriq plus carboplatin or cisplatin plus pemetrexed ▪ **ARM B:** Carboplatin or cisplatin plus pemetrexed
Primary endpoint	▪ Progression-free survival and overall survival	▪ Progression-free survival and overall survival	▪ Progression-free survival and overall survival
Status	▪ FPI Q2 2015 ▪ Recruitment completed Q4 2016 ▪ Study met co-primary endpoint of PFS in Q4 2017 and OS in Q1 2018 ▪ PFS data presented at ESMO IO 2017 ▪ PFS subgroup data presented at AACR 2018 ▪ Filed in US Q1 2018 (priority review) and EU (Q1 2018) ▪ Data published in *NEJM* 2018 Jun 14;378(24):2288-2301	▪ FPI Q1 2015 ▪ Recruitment completed Q1 2017 ▪ Study met co-primary endpoint of OS and PFS in Q2 2018	▪ FPI Q2 2016 ▪ Recruitment completed Q2 2017 ▪ Study met co-primary endpoint of PFS in Jul 2018
CT Identifier	NCT02366143	NCT02367781	NCT02657434

NSCLC=non-small cell lung cancer; NSq=non-squamous; ESMO=European Society for Medical Oncology; AACR=American Association for Cancer Research

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – lung cancer

Indication	1L non-squamous and squamous NSCLC PD-L1-selected patients	1L squamous NSCLC	1L extensive-stage SCLC
Phase/study	**Phase III IMpower110**	**Phase III IMpower131**	**Phase III IMpower133**
# of patients	N=570	N=1,025	N=400
Design	▪ **ARM A:** Tecentriq monotherapy ▪ **ARM B:** *NSq*: carboplatin or cisplatin plus pemetrexed *Sq:* carboplatin or cisplatin plus gemcitabine	▪ **ARM A:** Tecentriq plus paclitaxel plus carboplatin ▪ **ARM B:** Tecentriq plus nab-paclitaxel plus carboplatin ▪ **ARM C:** Nab-paclitaxel plus carboplatin	▪ **ARM A:** Tecentriq plus carboplatin plus etoposide ▪ **ARM B:** Placebo plus carboplatin plus etoposide
Primary endpoint	▪ Overall survival	▪ Progression-free survival and overall survival	▪ Progression-free survival and overall survival
Status	▪ FPI Q3 2015 ▪ IMpower111 consolidated into IMpower110 Q3 2016 ▪ Recruitment completed Q1 2018	▪ FPI Q2 2015 ▪ Recruitment completed Q1 2017 ▪ Study met co-primary endpoint of PFS in Q1 2018 ▪ PFS data presented at ASCO 2018	▪ FPI Q2 2016 ▪ Orphan drug designation granted by FDA October 2016 ▪ Recruitment completed Q2 2017 ▪ Study met co-primary endpoints of OS and PFS in Q2 2018
CT Identifier	NCT02409342	NCT02367794	NCT02763579

NSCLC=non-small cell lung cancer; NSq=non-squamous; SCLC=small cell lung cancer; ASCO=American Society of Clinical Oncology

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – lung cancer

Indication	Adjuvant NSCLC	Neoadjuvant NSCLC
Phase/study	**Phase III** **IMpower010**	**Phase III** **IMpower030**
# of patients	N=1,127	N=302
Design	Following adjuvant cisplatin-based chemotherapy ▪ **ARM A:** Tecentriq ▪ **ARM B:** Best supportive care	▪ **ARM A:** Tecentriq + platinum-based chemotherapy ▪ **ARM B:** Platinum-based chemotherapy
Primary endpoint	▪ Disease-free survival	▪ Major pathological response (MPR)
Status	▪ FPI Q3 2015 ▪ Trial amended from PD-L1-selected patients to all-comers ▪ FPI for all-comer population Q4 2016	▪ FPI Q2 2018
CT Identifier	NCT02486718	NCT03456063

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – lung cancer

Indication	1L non-squamous NSCLC	2L metastatic NSCLC	Locally advanced or metastatic NSCLC (2L/3L)
Phase/study	**Phase II/III B-FAST**	**Phase III OAK**	**Phase II POPLAR**
# of patients	N=580	N=1,225	N=287
Design	▪ **Cohort A:** ALK + (Alecensa[1]) ▪ **Cohort B:** RET + (Dose finding and expansion of Alecensa[1]) ▪ **Cohort C:** bTMB-high (Tecentriq)	▪ **ARM A:** Tecentriq 1200mg q3w ▪ **ARM B:** Docetaxel	▪ **ARM A:** Tecentriq 1200mg q3w ▪ **ARM B:** Docetaxel
Primary endpoint	▪ Cohort A/B: Objective response rate ▪ Cohort C: Progression-free survival	▪ Overall survival	▪ Overall survival
Status	▪ FPI Q3 2017	▪ Data presented at ESMO 2016 ▪ Data filed with FDA Q3 2016 ▪ Results published in *Lancet* 2017 Jan; 389(10066):255–265 ▪ Data presented at ASCO 2017	▪ Data presented at ASCO 2015 (interim) and ECC 2015 (primary) ▪ Results published in *Lancet* 2017 Apr 30; 387 (10030):1837-46 ▪ Updated data presented at ASCO 2016
		▪ Approved in US Q4 2016 (priority review) and in EU Q3 2017	
CT Identifier	NCT03178552	NCT02008227	NCT01903993

[1]In collaboration with Chugai

NSCLC=non-small cell lung cancer; bTMB=Blood-based tumor mutational burden; ASCO=American Society of Clinical Oncology; ESMO=European Society for Medical Oncology; ECC=European Cancer Congress

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – lung cancer

Indication	Locally advanced or metastatic NSCLC PD-L1 positive	NSCLC
Phase/study	**Phase II BIRCH**	**Phase I**
# of patients	N=667	N=53
Design	Single arm study: ▪ Tecentriq 1200mg q3w	▪ Tecentriq plus Tarceva[1] or Alecensa
Primary endpoint	▪ Objective response rate	▪ Safety
Status	▪ Recruitment completed Q4 2014 ▪ Primary analysis presented at ECC 2015 ▪ Results published in *Journal of Clinical Oncology* 2017 Aug 20; 35(24):2781-2789 ▪ Approved in US Q4 2016 (priority review)	▪ FPI Q1 2014 ▪ FPI in Alecensa arm Q3 2015 ▪ Recruitment completed in Tarceva arm Q3 2015 ▪ Data from Tarceva presented at WCLC and ESMO Asia 2016
CT Identifier	NCT02031458	NCT02013219

[1]Tarceva is a registered trademark of OSI Pharmaceuticals, LLC, a subsidiary of Astellas US, LLC;
NSCLC=non-small cell lung cancer; ESMO=European Society for Medical Oncology; ECC=European Cancer Congress; WCLC=World Conference on Lung Cancer

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – SCCHN

Indication	Adjuvant squamous cell carcinoma of the head and neck
Phase/study	**Phase III** **IMvoke010**
# of patients	N=400
Design	▪ **ARM A:** Tecentriq 1200mg q3w ▪ **ARM B:** Placebo
Primary endpoint	▪ Event-free survival and overall survival
Status	▪ FPI Q1 2018
CT Identifier	NCT03452137

SCCHN=squamous cell carcinoma of the head and neck

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – UC

Indication	Locally advanced or metastatic urothelial bladder cancer	
Phase/study	**Phase III** **IMvigor211**	**Phase II** **IMvigor210**
# of patients	N=932	N=439
Design	Patients who progressed on at least one platinum-containing regimen will receive: ▪ **ARM A:** Tecentriq 1200mg q3w ▪ **ARM B:** Chemotherapy (vinflunine, paclitaxel or docetaxel)	▪ **Cohort 1:** Treatment-naive and cisplatin-ineligible patients ▪ **Cohort 2:** Patients with disease progression following or during platinum-containing treatment
Primary endpoint	▪ Overall survival	▪ Objective response rate
Status	▪ Recruitment completed Q1 2016 ▪ Data presented at EACR-AACR-SIC Special Conference 2017 ▪ Results published in *Lancet* in Dec 2017 [Epub ahead of print]	▪ Cohort 2: US accelerated approval Q2 2016; filed in EU Q2 2016 ▪ Cohort 2 results published in *Lancet* May 2016; 387(10031):p1909–1920 ▪ Updated data (Cohorts 1 and 2) presented at ESMO 2016 ▪ Cohort 1: Approved in US Q2 2017 (priority review)
	▪ Approved in EU Q3 2017	
CT Identifier	NCT02302807	NCT02951767 (Cohort 1), NCT02108652 (Cohort 2)

UC=urothelial carcinoma; ESMO=European Society for Medical Oncology; EACR-AACR-SIC=European Association for Cancer Research - American Association for Cancer Research - Italian Cancer Society

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – UC

Indication	Adjuvant high-risk muscle-invasive urothelial cancer PD-L1-positive patients	1L metastatic urothelial carcinoma	High-risk non-muscle-invasive bladder cancer
Phase/study	**Phase III IMvigor010**	**Phase III IMvigor130**	**Phase Ib/II**
# of patients	N=800	N=1,200	N=70
Design	After cystectomy: ▪ **ARM A:** Tecentriq monotherapy ▪ **ARM B:** Observation	▪ **ARM A:** Tecentriq plus gemcitabine and carboplatin or cisplatin ▪ **ARM B:** Tecentriq monotherapy ▪ **ARM C:** Placebo plus gemcitabine and carboplatin or cisplatin	▪ **Cohort 1a:** Tecentriq (BCG-unresponsive NMIBC) ▪ **Cohort 1b:** Tecentriq + BCG (BCG-unresponsive NMIBC) ▪ **Cohort 2:** Tecentriq + BCG (BCG-relapsing NMIBC) ▪ **Cohort 3:** Tecentriq + BCG (BCG-naive NMIBC)
Primary endpoint	▪ Disease-free survival	▪ Progression-free survival, overall survival and safety	▪ Safety and objective response rate
Status	▪ FPI Q4 2015	▪ FPI Q3 2016 ▪ FPI for Arm B (amended study) Q1 2017	▪ FPI Q2 2016
CT Identifier	NCT02450331	NCT02807636	NCT02792192

UC=urothelial carcinoma; BCG=Bacille Calmette-Guérin; NMIBC=non-muscle invasive bladder cancer

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – renal cell cancer

Indication	Adjuvant renal cell carcinoma	Untreated advanced renal cell carcinoma	
Phase/study	**Phase III IMmotion010**	**Phase III IMmotion151**	**Phase II IMmotion150**
# of patients	N=664	N=900	N=305
Design	▪ **ARM A:** Tecentriq monotherapy ▪ **ARM B:** Observation	▪ **ARM A:** Tecentriq plus Avastin ▪ **ARM B:** Sunitinib	▪ **ARM A:** Tecentriq plus Avastin ▪ **ARM B:** Tecentriq; following PD: Tecentriq plus Avastin ▪ **ARM C:** Sunitinib; following PD: Tecentriq plus Avastin
Primary endpoint	▪ Disease-free survival	▪ Progression-free survival and overall survival (co-primary endpoint)	▪ Progression-free survival
Status	▪ FPI Q1 2017	▪ FPI Q2 2015 ▪ Recruitment completed Q4 2016 ▪ Study met co-primary endpoint (PFS in PD-L1+ patients) in Q4 2017 ▪ Data presented at ASCO GU 2018	▪ Recruitment completed Q1 2015 ▪ Presented at ASCO GU and AACR 2017 ▪ Updated data presented at ASCO 2017
CT Identifier	NCT03024996	NCT02420821	NCT01984242

ASCO GU=American Society of Clinical Oncology Genitourinary Cancers; AACR=American Association for Cancer Research; PD=progressive disease

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – prostate cancer

Indication	Metastatic castration-resistant prostate cancer	Metastatic castration-resistant prostate cancer
Phase/study	**Phase Ib**	**Phase III** **IMbassador250**
# of patients	N=45	N=730
Design	▪ Tecentriq plus radium-223 dichloride	▪ **ARM A:** Tecentriq plus enzalutamide ▪ **ARM B:** Enzalutamide
Primary endpoint	▪ Safety and tolerability	▪ Overall survival
Status	▪ FPI Q3 2016	▪ FPI Q1 2017 ▪ Recruitment completed Q2 2018
CT Identifier	NCT02814669	NCT03016312

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – colorectal cancer

Indication	Third-line advanced or metastatic colorectal cancer	2/3L metastatic colorectal cancer
Phase/study	**Phase III** **IMblaze370**	**Phase I**
# of patients	N=360	N=84
Design	▪ **ARM A:** Tecentriq plus Cotellic[1] ▪ **ARM B:** Tecentriq ▪ **ARM C:** Regorafenib	Open-label, single-arm, two-stage study with Cotellic[1] plus Tecentriq plus Avastin ▪ **Stage 1:** Safety run-in ▪ **Stage 2:** Dose-expansion with two cohorts; – Expansion – Biopsy
Primary endpoint	▪ Overall survival	▪ Safety
Status	▪ FPI Q2 2016 ▪ Recruitment completed Q1 2017 ▪ Did not meet primary endpoint of OS Q2 2018 ▪ Data presented at ESMO WCGI 2018	▪ FPI Q3 2016
CT Identifier	NCT02788279	NCT02876224

[1]Cotellic in collaboration with Exelixis
ESMO WCGI= ESMO World Congress on Gastrointestinal Cancer

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – HCC

Indication	1L Hepatocellular carcinoma
Phase/study	**Phase III** **IMbrave150**
# of patients	N=480
Design	▪ **ARM A:** Tecentriq plus Avastin ▪ **ARM B:** Sorafenib
Primary endpoint	▪ Overall survival and objective response rate
Status	▪ FPI Q1 2018
CT Identifier	NCT03434379

HCC=hepatocellular carcinoma

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – solid tumors

Indication	Solid tumors	Locally advanced or metastatic solid tumors
Phase/study	**Phase I**	**Phase I**
# of patients	N=370	N=660
Design	▪ **ARM A:** HCC: Tecentriq + Avastin ▪ **ARM B:** HER2-neg. GC: Tecentriq+Avastin+oxaliplatin+leucovorin+5-FU ▪ **ARM C:** PaC: Tecentriq + nab-paclitaxel + gemcitabine ▪ **ARM D:** HCC: Tecentriq + vanucizumab or Tecentriq + Avastin ▪ **ARM E:** Squamous cell mEC: Tecentriq + 5FU-Cis and Tecentriq + FOLFOX; adenocarcinoma mEC: Tecentriq + FOLFOX ▪ **ARM F:** HCC: Tecentriq vs Tecentriq + Avastin (randomized)	▪ Dose escalation study
Primary endpoint	▪ Safety	▪ Safety and PK
Status	▪ FPI Q2 2016 ▪ ARM D on hold ▪ FPI Arm E Q1 2017 ▪ FPI Arm F Q2 2018 ▪ Breakthrough Therapy Designation granted by FDA for HCC Jul 2018	▪ FPI Q2 2011 ▪ Initial efficacy data presented at ASCO 2013, data from bladder cohort presented at ASCO and ESMO 2014; TNBC cohort presented at AACR 2015; updated lung and bladder data presented at ASCO 2015; GBM data presented at SNO 2015; SCCHN data presented at ESMO 2017
CT Identifier	NCT02715531	NCT01375842

HCC=hepatocellular carcinoma; GC=gastric cancer; PaC=pancreatic cancer; mEC=metastatic esophageal cancer; CRC=colorectal cancer; TNBC=triple-negative breast cancer; GBM=glioblastoma multiforme; SCCHN=squamous cell carcinoma of the head and neck; AACR=American Association for Cancer Research; ASCO=American Society of Clinical Oncology; ESMO=European Society for Medical Oncology; SNO=Society for Neuro-Oncology;

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – breast cancer

Indication	Previously untreated metastatic triple negative breast cancer		
Phase/study	**Phase III IMpassion130**	**Phase III IMpassion131**	**Phase III IMpassion132**
# of patients	N=900	N=540	N=350
Design	▪ **ARM A:** Tecentriq plus nab-paclitaxel ▪ **ARM B:** Placebo plus nab-paclitaxel	▪ **ARM A:** Tecentriq plus paclitaxel ▪ **ARM B:** Placebo plus paclitaxel	▪ **ARM A:** Tecentriq plus capecitabine or carbo/gem ▪ **ARM B:** Placebo plus capecitabine or carbo/gem
Primary endpoint	▪ Progression-free survival and overall survival (co-primary endpoint)	▪ Progression-free survival	▪ Overall survival
Status	▪ FPI Q3 2015 ▪ Recruitment completed Q2 2017 ▪ Study met co-primary endpoint of PFS in Jul 2018	▪ FPI Q3 2017	▪ FPI Q1 2018
CT Identifier	NCT02425891	NCT03125902	NCT03371017

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – breast cancer

Indication	Metastatic and locally advanced early breast cancer (HER2-positive)	Neoadjuvant triple negative breast cancer	Adjuvant triple negative breast cancer
Phase/study	**Phase I**	**Phase III IMpassion031**	**Phase III IMpassion030**
# of patients	N=76	N=204	N=2300
Design	▪ **Cohort 1A (mBC):** Tecentriq plus Perjeta plus Herceptin ▪ **Cohort 1B (mBC):** Tecentriq plus Kadcyla[1] ▪ **Cohort 1F (mBC):** Tecentriq plus Perjeta plus Herceptin plus docetaxel ▪ **Cohort 2A (eBC):** Tecentriq plus Perjeta plus Herceptin ▪ **Cohort 2B (eBC):** Tecentriq plus Kadcyla[1] ▪ **Cohort 2C (expansion on cohort 1B):** Tecentriq plus Kadcyla[1]	▪ **ARM A:** Tecentriq plus nab-paclitaxel ▪ **ARM B:** Placebo plus nab-paclitaxel	▪ **ARM A:** Tecentriq + paclitaxel followed by AC followed by Tecentriq ▪ **ARM B:** Placebo + paclitaxel followed by AC followed by placebo
Primary endpoint	▪ Safety	▪ Percentage of participants with pathologic complete response (pCR)	▪ iDFS
Status	▪ FPI Q4 2015	▪ FPI Q3 2017 ▪ Recruitment completed Q2 2018	▪ FPI expected Q3 2018
CT Identifier	NCT02605915	NCT03197935	NCT03498716

[1] In collaboration with ImmunoGen, Inc.
eBC=early breast cancer; mBC=metastatic breast cancer

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – ovarian cancer

Indication	Front-line ovarian cancer	Advanced gynecological cancers and platinum-sensitive ovarian cancer
Phase/study	**Phase III IMaGYN050**	**Phase Ib**
# of patients	N=1,300	N=48
Design	▪ **ARM A:** Tecentriq plus carboplatin plus paclitaxel plus Avastin ▪ **ARM B:** Carboplatin plus paclitaxel plus Avastin	▪ **Part 1:** Dose finding Tecentriq plus rucaparib (CO-338)[1] ▪ **Part 2:** Expansion Tecentriq plus rucaparib (CO-338)[1]
Primary endpoint	▪ Progression-free survival and overall survival (co-primary endpoint)	▪ Safety
Status	▪ FPI Q1 2017	▪ FPI Q2 2017
CT Identifier	NCT03038100	NCT03101280

[1]Rucaparib in collaboration with Clovis

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – hematology

Indication	1L FL and 1L DLBCL	Relapsed or refractory FL	Relapsed or refractory FL and DLBCL	Multiple myeloma
Phase/study	**Phase I**	**Phase I**	**Phase I**	**Phase Ib**
# of patients	N=92	N=38	N=91	N≈214
Design	▪ Tecentriq plus Gazyva plus bendamustine ▪ Tecentriq plus Rituxan plus CHOP	▪ Tecentriq plus Gazyva plus lenalidomide	▪ **ARM 1:** Tecentriq plus Gazyva ▪ **ARM 2:** Tecentriq plus tazemetostat[1]	▪ **ARM D:** Tecentriq plus daratumumab[2] ▪ **ARM F:** Tecentriq plus pomalidomide plus daratumumab[2] *vs* dexamethasone plus pomalidomide plus daratumumab[2] (randomized)
Primary endpoint	▪ Safety and efficacy	▪ Safety and efficacy	▪ Safety	▪ Safety
Status	▪ FPI Q4 2015	▪ FPI Q4 2015	▪ FPI Q4 2014 ▪ FPI ARM 2 Q1 2017	▪ FPI Q3 2015 ▪ FPI daratumumab[2] cohorts Q3 2016 ▪ Arm A/B/C/E completed/terminated
CT Identifier	NCT02596971	NCT02631577	NCT02220842	NCT02431208

[1]Tazemetostat tested for r/r DLBCL in collaboration with Epizyme; [2]Daratumumab cohorts in collaboration with Janssen;
FL=follicular lymphoma; DLBCL=diffuse large B cell lymphoma

Venclexta (venetoclax, RG7601, ABT-199)

Novel small molecule Bcl-2 selective inhibitor – CLL

Indication	Untreated CLL patients with coexisting medical conditions	Relapsed or refractory CLL	Relapsed or refractory CLL with 17p deletion
Phase/study	**Phase III CLL14**	**Phase III MURANO**	**Phase II**
# of patients	N=432	N=391	N=100
Design	▪ **ARM A:** Venclexta plus Gazyva ▪ **ARM B:** Chlorambucil plus Gazyva	▪ **ARM A:** Venclexta plus Rituxan ▪ **ARM B:** Rituxan plus bendamustine	▪ Single-agent Venclexta
Primary endpoint	▪ Progression-free survival	▪ Progression-free survival	▪ Safety and maximum tolerated dose (MTD)
Status	▪ FPI Q4 2014 ▪ Recruitment completed Q3 2016	▪ Recruitment completed Q3 2015 ▪ Study met primary endpoint at interim analysis ▪ Data presented at ASH 2017 ▪ Filed in US Q4 2017 and EU Q1 2018 ▪ Data published in *NEJM* 2018; 378:1107–20 ▪ Updated data presented at ASCO 2018 ▪ Approved in US Q2 2018 (priority review)	▪ Breakthrough Therapy Designation granted by FDA Q2 2015 ▪ Approved in US Q2 2016 (priority review) and in EU Q4 2016
CT Identifier	NCT02242942	NCT02005471	NCT01889186

Joint project with AbbVie, in collaboration with The Walter and Eliza Hall Institute

CLL=chronic lymphocytic leukemia; ASH=American Society of Hematology; ASCO=American Society of Clinical Oncology

Venclexta (venetoclax, RG7601, ABT-199)

Novel small molecule Bcl-2 selective inhibitor – CLL

Indication	Relapsed or refractory CLL	Relapsed or refractory or previously untreated CLL	Relapsed or refractory or previously untreated CLL
Phase/study	**Phase II**	**Phase Ib**	**Phase Ib**
# of patients	N=120	N=100	N=90
Design	▪ Venclexta after ibrutinib therapy ▪ Venclexta after idelalisib therapy	▪ Venclexta in combination with MabThera/Rituxan and bendamustine	▪ Venclexta in combination with Gazyva
Primary endpoint	▪ Overall response rate	▪ Safety and maximum tolerated dose	▪ Safety and maximum tolerated dose
Status	▪ FPI Q3 2014 ▪ Data presented at ASH 2015 ▪ Updated data presented at ASCO 2016 ▪ Interim data published in *Lancet Oncology* 2018 Jan;19(1):65-75	▪ FPI Q2 2013 ▪ Data presented at ASH 2015	▪ FPI Q1 2014 ▪ Data presented at ASH 2015 and ASH 2017
CT Identifier	NCT02141282	NCT01671904	NCT01685892

Joint project with AbbVie, in collaboration with The Walter and Eliza Hall Institute

CLL=chronic lymphocytic leukemia; ASH=American Society of Hematology; ASCO=American Society of Clinical Oncology

Venclexta (venetoclax, RG7601, ABT-199)

Novel small molecule Bcl-2 selective inhibitor – NHL

Indication	Relapsed or refractory FL	B cell NHL and front-line DLBCL
Phase/study	**Phase II** **CONTRALTO**	**Phase I/II** **CAVALLI**
# of patients	N=165	N=248
Design	▪ **ARM A:** Venclexta plus Rituxan ▪ **ARM B:** Venclexta plus Rituxan plus bendamustine ▪ **ARM C:** Rituxan plus bendamustine	Phase I (dose finding, patients with B cell NHL): ▪ **ARM A:** Venclexta plus R-CHOP ▪ **ARM B:** Venclexta plus G-CHOP Phase II (expansion, patients with 1L DLBCL): ▪ Venclexta plus R-CHOP
Primary endpoint	▪ Overall response rate	▪ Safety and efficacy
Status	▪ FPI Q4 2014 ▪ Data presented at ASH 2016	▪ FPI Q2 2014 ▪ Data presented at ASCO 2016 and ASH 2016
CT Identifier	NCT02187861	NCT02055820

Oncology

Joint project with AbbVie, in collaboration with The Walter and Eliza Hall Institute

FL=follicular lymphoma; DLBCL=diffuse large B cell lymphoma; NHL=non-Hodgkin's lymphoma; CHOP=cyclophosphamide, doxorubicin, vincristine and prednisone; R=Rituxan/MabThera; G=Gazyva; ASH=American Society of Hematology; ASCO=American Society of Clinical Oncology

Venclexta (venetoclax, RG7601, ABT-199)

Novel small molecule Bcl-2 selective inhibitor – MM

Indication	Relapsed or refractory multiple myeloma			
Phase/study	**Phase III BELLINI**	**Phase I**	**Phase I**	**Phase Ib**
# of patients	N=240	N=66	N=212	N=65
Design	▪ **ARM A:** Venclexta plus bortezomib plus dexamethasone ▪ **ARM B:** Placebo plus bortezomib plus dexamethasone	Patients receiving bortezomib and dexamethasone as standard therapy: ▪ **Dose escalation cohort:** Venclexta plus bortezomib plus dexamethasone ▪ **Safety expansion cohort:** Venclexta plus bortezomib plus dexamethasone	▪ **Dose escalation cohort:** Venclexta dose escalation ▪ **Safety expansion cohort (t11:14):** Venclexta expansion ▪ **Combination:** Venclexta plus dexamethasone	▪ **Arm A:** Cotellic[1] ▪ **Arm B:** Cotellic[1] plus Venclexta ▪ **Arm C:** Cotellic[1] plus Venclexta plus Tecentriq
Primary endpoint	▪ Progression-free survival	▪ Safety and maximum tolerated dose	▪ Safety and maximum tolerated dose	▪ Safety and objective response rate
Status	▪ FPI Q3 2016 ▪ Recruitment completed Q4 2017	▪ FPI Q4 2012 ▪ Data presented at ASCO 2015 ▪ Updated data presented at ASCO 2016 and ASH 2016	▪ FPI Q4 2012 ▪ Data presented at ASCO 2015 ▪ Updated data presented at ASCO 2016 and ASH 2016	▪ FPI Q4 2017
CT Identifier	NCT02755597	NCT01794507	NCT01794520	NCT03312530

Joint project with AbbVie, in collaboration with The Walter and Eliza Hall Institute; [1]Cotellic in collaboration with Exelixis
MM=multiple myeloma; ASCO=American Society of Clinical Oncology; ASH=American Society of Hematology

Venclexta (venetoclax, RG7601, ABT-199)

Novel small molecule Bcl-2 selective inhibitor – AML

Indication	Treatment-naïve AML not eligible for standard induction therapy	
Phase/study	**Phase III Viale-A**	**Phase III Viale-C**
# of patients	N=400	N=175
Design	▪ **ARM A:** Venclexta plus azacitidine ▪ **ARM B:** Azacitidine	▪ **ARM A:** Venclexta plus low-dose cytarabine ▪ **ARM B:** Low-dose cytarabine
Primary endpoint	▪ Overall survival and percentage of participants with complete remission (CR)	▪ Overall survival
Status	▪ FPI Q1 2017	▪ FPI Q2 2017
CT Identifier	NCT02993523	NCT03069352

Joint project with AbbVie, in collaboration with The Walter and Eliza Hall Institute
AML=acute myeloid leukemia

Venclexta (venetoclax, RG7601, ABT-199)

Novel small molecule Bcl-2 selective inhibitor – AML

Indication	Treatment-naïve AML not eligible for standard induction therapy		Relapsed or refractory AML not eligible for cytotoxic therapy
Phase/study	**Phase Ib**	**Phase Ib/II**	**Phase Ib/II**
# of patients	N=212	N=92	N=140
Design	▪ Venclexta (dose escalation) plus decitabine ▪ Venclexta (dose escalation) plus azacitidine ▪ Venclexta (dose escalation) plus decitabine plus posaconazole	▪ Venclexta (dose escalation) plus low-dose cytarabine	Phase I (dose escalation): ▪ **ARM A:** Cotellic[1] plus Venclexta ▪ **ARM B:** Idasanutlin plus Venclexta Phase II (expansion): ▪ **ARM A:** Cotellic[1] plus Venclexta ▪ **ARM B:** Idasanutlin plus Venclexta
Primary endpoint	▪ Safety	▪ Safety, PK, PD and efficacy	▪ Safety and efficacy
Status	▪ FPI Q4 2014 ▪ Initial data presented at ASH 2015, updated data presented at ASCO 2016 and ASCO 2018 ▪ Breakthrough Therapy Designation granted by FDA Q1 2016	▪ FPI Q1 2015 ▪ Initial data presented at ASCO 2016, updated data presented at ASH 2016 and ASH 2017 ▪ Breakthrough Therapy Designation granted by FDA Q3 2017	▪ FPI Q1 2016 ▪ Data presented at ASH 2017
	▪ Filed in US Jul 2018		
CT Identifier	NCT02203773	NCT02287233	NCT02670044

Joint project with AbbVie, in collaboration with The Walter and Eliza Hall Institute; [1]Cotellic in collaboration with Exelixis
AML=acute myeloid leukemia; ASH=American Society of Hematology; ASCO=American Society of Clinical Oncology

Venclexta (venetoclax, RG7601, ABT-199)

Novel small molecule Bcl-2 selective inhibitor – MDS

Indication	Myelodysplastic syndromes after azacitidine failure	Treatment-naive myelodysplastic syndromes
Phase/study	**Phase Ib**	**Phase II**
# of patients	N=66	N=90
Design	Cohort 1: ▪ **ARM A:** Venclexta 400 mg ▪ **ARM B:** Venclexta 800 mg Cohort 2: ▪ **ARM A:** Venclexta plus azacitidine Study expansion: ▪ Venclexta or Venclexta plus azacitidine	▪ **ARM A:** Venclexta 400 mg plus azacitidine ▪ **ARM B:** Venclexta 800 mg plus azacitidine ▪ **ARM C:** Azacitidine
Primary endpoint	▪ Safety, efficacy, PK and PD	▪ Overall response rate
Status	▪ FPI Q1 2017	▪ FPI Q1 2017
CT Identifier	NCT02966782	NCT02942290

Joint project with AbbVie, in collaboration with The Walter and Eliza Hall Institute
MDS=myelodysplastic syndromes

Ocrevus (ocrelizumab, RG1594)

Humanized mAb selectively targeting CD20+ B cells

Indication	Relapsing multiple sclerosis (RMS)		Primary-progressive multiple sclerosis (PPMS)
Phase/study	**Phase III OPERA I**	**Phase III OPERA II**	**Phase III ORATORIO**
# of patients	N=821	N=835	N=732
Design	96-week treatment period: ▪ **ARM A:** Ocrelizumab 2x 300 mg iv followed by 600 mg iv every 24 weeks ▪ **ARM B:** Interferon β-1a	96-week treatment period: ▪ **ARM A:** Ocrelizumab 2x 300 mg iv followed by 600 mg iv every 24 weeks ▪ **ARM B:** Interferon β-1a	120-week treatment period: ▪ **ARM A:** Ocrelizumab 2x 300 mg iv every 24 weeks ▪ **ARM B:** Placebo
Primary endpoint	▪ Annualized relapse rate at 96 weeks versus Rebif	▪ Annualized relapse rate at 96 weeks versus Rebif	▪ Sustained disability progression versus placebo by Expanded Disability Status Scale (EDSS)
Status	▪ Primary endpoint met Q2 2015, OLE ongoing ▪ Primary data presented at ECTRIMS 2015 ▪ Updated data presented at AAN and ECTRIMS 2017, AAN and EAN 2018 ▪ Results published in *NEJM*, 2017 Jan 19;376(3):221-234		▪ Primary endpoint met Q3 2015 ▪ Primary data presented at ECTRIMS 2015, updated data presented at AAN and ECTRIMS 2017, AAN and EAN 2018 ▪ Results published in *NEJM*, 2017 Jan 19;376(3):209-220
	▪ Approved in US Q1 2017 and EU Q1 2018		
CT Identifier	NCT01247324	NCT01412333	NCT01194570

OLE=Open label extension; ECTRIMS=European Committee for Treatment and Research in Multiple Sclerosis; AAN=Annual Meeting of the American Academy of Neurology; EAN=European Academy of Neurology

Actemra/RoActemra

Interleukin-6 receptor inhibitor

Indication	Systemic sclerosis	Giant cell arteritis
Phase/study	**Phase III focuSSced**	**Phase III GiACTA**
# of patients	N=210	N=250
Design	Blinded 48-week treatment with weekly dosing: ▪ **ARM A:** Actemra SC 162mg ▪ **ARM B:** Placebo SC Open-label weekly dosing at weeks 49 to 96: ▪ Actemra SC 162mg	Part 1: 52-week blinded period ▪ **ARM A:** Actemra SC 162mg qw plus 26 weeks prednisone taper ▪ **ARM B:** Actemra SC 162mg q2w plus 26 weeks prednisone taper ▪ **ARM C:** Placebo plus 26 weeks prednisone taper ▪ **ARM D:** Placebo plus 52 weeks prednisone taper Part II: ▪ 104-wk open label extension: patients in remission followed off of the study drug; Patients with active disease receive open label Actemra SC 162mg qw
Primary endpoint	▪ Change in modified Rodnan skin score (mRSS) at week 48	▪ Proportion of patients in sustained remission at week 52
Status	▪ FPI Q4 2015, recruitment completed Q1 2017 ▪ Breakthrough Therapy Designation granted by FDA Q1 2015 ▪ Data in house	▪ Primary and key secondary endpoints met Q2 2016 ▪ Breakthrough Therapy Designation granted by FDA Q3 2016 ▪ Data presented at ACR 2016 ▪ Filed globally Q4 2016; approved in US Q2 2017 and in EU Q3 2017 ▪ Results published in *NEJM*, 2017 Jul 27;377(4):317-328
CT Identifier	NCT02453256	NCT01791153

In collaboration with Chugai
ACR=American College of Rheumatology

MabThera/Rituxan

Immunology development program

Indication	Moderate to severely active pemphigus vulgaris		Relapsing ANCA-associated vasculitis
Phase/study	**Phase III PEMPHIX**	**Phase III Ritux 3**	**Phase III MAINRITSAN**
# of patients	N=132	N=90	N=117
Design	▪ **ARM A:** Rituxan ▪ **ARM B:** Mycophenolate mofetil	▪ **ARM A:** Rituxan ▪ **ARM B:** General corticotherapy	▪ **ARM A:** Rituxan ▪ **ARM B:** Azathioprine
Primary endpoint	▪ Proportion of patients who achieve sustained complete remission	▪ Number of patients with pemphigus controlled 24 months after the start of Rituxan treatment and with both cutaneous and mucosal lesions healing after 6 months of Rituxan treatment	▪ Number of major relapse at the end of the maintenance treatment (18 months + 10 months follow-up)
Status	▪ FPI Q2 2015 ▪ Breakthrough Therapy Designation granted by FDA in Q1 2017 ▪ Results published in *Lancet* 2017 Mar; 389(10083): p2031–2040 ▪ Recruitment completed Q4 2017	▪ FPI Q3 2009 ▪ Results published in *Lancet* 2017 May 20;389(10083):2031–2040	▪ FPI Q4 2008 ▪ Results published in *NEJM* 2014;371(19):1771–80
	▪ Approved in US Q2 2018 based on Roche-supported randomized controlled IST Ritux 3		
CT Identifier	NCT02383589	NCT00784589	NCT00748644

IST=Investigator sponsored trial

Obinutuzumab (GA101, RG7159)

Immunology development program

Indication	Lupus nephritis
Phase/study	**Phase II** **NOBILITY**
# of patients	N=120
Design	▪ **ARM A:** Obinutuzumab 1000mg IV plus mycophenolate mofetil ▪ **ARM B:** Placebo IV plus mycophenolate mofetil
Primary endpoint	▪ Percentage of participants who achieve complete renal response (CRR)
Status	▪ FPI Q4 2015 ▪ Recruitment completed Q4 2017
CT Identifier	NCT02550652

In collaboration with Biogen

Xolair

Humanized mAb that selectively binds to IgE

Indication	Chronic rhinosinusitis with nasal polyps	
Phase/study	**Phase III** **POLYP 1**	**Phase III** **POLYP 2**
# of patients	N=120	N=120
Design	Placebo-controlled study of Xolair in adult patients with chronic rhinosinusitis with nasal polyps (CRSwNP) who have had an inadequate response to standard-of-care treatments: ▪ **ARM A:** Xolair every 2 weeks or every 4 weeks ▪ **ARM B:** Placebo	Placebo-controlled study of Xolair in adult patients with chronic rhinosinusitis with nasal polyps (CRSwNP) who have had an inadequate response to standard-of-care treatments: ▪ **ARM A:** Xolair every 2 weeks or every 4 weeks ▪ **ARM B:** Placebo
Primary endpoint	▪ Change from baseline in average daily nasal congestion score (NCS) at week 24 ▪ Change from baseline in nasal polyp score (NPS) to week 24	▪ Change from baseline in average daily nasal congestion score (NCS) at week 24 ▪ Change from baseline in nasal polyp score (NPS) to week 24
Status	▪ FPI Q4 2017	▪ FPI Q4 2017
CT Identifier	NCT03280550	NCT03280537

In collaboration with Novartis

Port Delivery System with ranibizumab

First-ever eye implant to achieve sustained delivery of a biologic medicine

Indication	wAMD
Phase/study	**Phase II** **LADDER**
# of patients	N=220
Design	▪ Four-arm study: Lucentis monthly intravitreal control vs three ranibizumab formulations delivered via implant
Primary endpoint	▪ Time to first refill
Status	▪ FPI Q3 2015 ▪ Recruitment completed Q3 2017 ▪ Positive primary data presented at ASRS 2018
CT Identifier	NCT02510794

In collaboration with Forsight and Novartis
wAMD=wet age-related macular degeneration

Pipeline summary

Marketed products additional indications

Global Development late-stage trials

pRED (Roche Pharma Research & Early Development)

gRED (Genentech Research & Early Development)

Roche Group HY 2018 results

Diagnostics

Foreign exchange rate information

Entrectinib (RG6268, RXDX-101)

CNS-active and selective inhibitor of NTRK/ROS1

Indication	Locally Advanced or Metastatic tumors with ROS1 gene rearrangement	Locally Advanced or Metastatic tumors with NTRK1/2/3 gene rearrangement	Pediatric tumors with NTRK 1/2/3, ROS-1, or ALK rearrangement
Phase/study	**Phase II STARTRK2**	**Phase II STARTRK2**	**Phase I/Ib STARTRK - NG**
# of patients	N~300 total	N~300 total	N~80
Design	Single Arm with Baskets based on tumor type and genomic alteration status	Single Arm with Baskets based on tumor type and genomic alteration status	Single Arm with Baskets based on tumor type and genomic alteration status
Primary endpoint	▪ Objective response rate	▪ Objective response rate	▪ Maximum tolerated dose (MTD) and recommended phase II dose (RP2D)
Status	▪ FPI Q1 2016	▪ FPI Q1 2016	▪ FPI Q2 2016
	Breakthrough Therapy Designation granted by FDA (Q2 2017), PRIME Designation granted by EMA (Q1 2018) and Sakigake Designation granted by MHLW (Q4 2017) for NTRK fusion-positive, locally advanced or metastatic solid tumors		
CT Identifier	NCT02568267	NCT02568267	NCT02650401

Idasanutlin (RG7388)

Small molecule MDM2 antagonist

Indication	Relapsed/refractory AML	Polycythemia vera
Phase/study	**Phase III MIRROS**	**Phase II**
# of patients	N=440	N=20
Design	▪ **ARM A:** Idasanutlin plus cytarabine ▪ **ARM B:** Placebo plus cytarabine	Single-arm study of idasanutlin monotherapy in participants with hydroxyurea (HU)-resistant/intolerant Polycythemia vera (PV)
Primary endpoint	▪ Overall survival	▪ Composite response at week 32 for participants with splenomegaly at baseline ▪ Hematocrit (Hct) control without phlebotomy at week 32 for participants without splenomegaly at baseline
Status	▪ FPI Q4 2015	▪ FPI Q1 2018
CT Identifier	NCT02545283	NCT03287245

Ipatasertib (RG7440, GDC-0068)

Highly selective small molecule inhibitor of Akt

Indication	1L castration-resistant prostate cancer	2L castration-resistant prostate cancer	1L metastatic gastric or gastroesophageal junction adenocarcinoma
Phase/study	**Phase III** **IPATential150**	**Phase II** **A.MARTIN**	**Phase II** **JAGUAR**
# of patients	N=1,100	N=262	N=153
Design	▪ **ARM A:** Ipatasertib plus abiraterone ▪ **ARM B:** Placebo plus abiraterone	▪ **ARM A:** Ipatasertib 400 mg plus abiraterone ▪ **ARM B:** Ipatasertib 200 mg plus abiraterone ▪ **ARM C:** Placebo plus abiraterone	▪ **ARM A:** Ipatasertib plus mFOLFOX6 ▪ **ARM B:** Placebo plus mFOLFOX6
Primary endpoint	▪ Progression-free survival	▪ Progression-free survival	▪ Progression-free survival
Status	▪ FPI Q2 2017	▪ Recruitment completed Q4 2014 ▪ ITT data presented at ASCO 2016 ▪ Biomarker data at ESMO 2016	▪ Recruitment completed Q4 2014 ▪ Data showed no benefit in treated vs control group Q2 2016
CT Identifier	NCT03072238	NCT01485861	NCT01896531

In collaboration with Array BioPharma

ASCO=American Society of Clinical Oncology; ESMO=European Society for Medical Oncology; mFOLFOX6=modified FOLFOX (folinic acid, fluorouracil, oxaliplatin)

Ipatasertib (RG7440, GDC-0068)

Highly selective small molecule inhibitor of Akt

Indication	1L TNBC and HR+ breast cancer	1L TNBC	Neoadjuvant TNBC	TNBC
Phase/study	**Phase III** **IPATunity130**	**Phase II** **LOTUS**	**Phase II** **FAIRLANE**	**Phase Ib**
# of patients	N=450	N=120	N=150	N=120
Design	Cohort 1: Dx+ 1L TNBC (N=249) ▪ **Arm A:** Ipatasertib plus paclitaxel ▪ **Arm B:** Placebo plus paclitaxel Cohort 2: Dx+ HR+ mBC (N=201) ▪ **Arm A:** Ipatasertib plus paclitaxel ▪ **Arm B:** Placebo plus paclitaxel	▪ **ARM A:** Ipatasertib plus paclitaxel ▪ **ARM B:** Placebo plus paclitaxel	▪ **ARM A:** Ipatasertib plus paclitaxel ▪ **ARM B:** Placebo plus paclitaxel	Study of ipatasertib plus Tecentriq plus taxane ▪ **Arm A:** Ipatasertib plus Tecentriq plus paclitaxel ▪ **Arm B:** Ipatasertib plus Tecentriq plus nab-paclitaxel
Primary endpoint	▪ Progression-free survival	▪ Progression-free survival	▪ Pathologic complete response (pCR)	▪ Safety and efficacy
Status	▪ FPI Q1 2018	▪ Recruitment completed Q1 2016 ▪ Data presented at ASCO 2017 and ASCO 2018 ▪ Data published in *Lancet Oncology* 2017 Aug 8. pii: S1470-2045(17)30450-3	▪ FPI Q1 2015 ▪ Recruitment completed Q2 2017 ▪ Data presented at AACR 2018	▪ FPI Q1 2018
CT Identifier	NCT03337724	NCT02162719	NCT02301988	

In collaboration with Array BioPharma

TNBC=triple-negative breast cancer; ASCO=American Society of Clinical Oncology; AACR=American Association for Cancer Research

Polatuzumab vedotin (RG7596)

ADC targeting CD79b to treat B cell malignancies

Indication	Non-Hodgkin's lymphoma	Relapsed or refractory FL and DLBCL	1L DLBCL
Phase/study	**Phase II ROMULUS**	**Phase Ib/II**	**Phase III POLARIX**
# of patients	N=246	N=224	N=875
Design	▪ **Arm A:** Pinatuzumab vedotin plus Rituxan ▪ **Arm B:** Polatuzumab vedotin plus Rituxan ▪ **Arm C:** Polatuzumab vedotin plus Rituxan ▪ **Arms E, G, H:** Polatuzumab vedotin plus Gazyva	▪ **PIb:** Dose escalation ▪ **PhII:** Polatuzumab vedotin plus BR vs. BR ▪ **PhII expansion:** Polatuzumab vedotin plus Gazyva (non-randomized)	▪ **ARM A:** Polatuzumab vedotin plus R-CHP ▪ **ARM B:** R-CHOP
Primary endpoint	▪ Safety and anti-tumor activity	▪ Safety and response by PET/CT	▪ Progression-free survival
Status	▪ FPI in Gazyva arms Q1 2015 ▪ Recruitment completed Q3 2016 ▪ Updated data presented at ASCO, ICML and EHA 2015 ▪ Updated data presented at ASH 2016	▪ FPI Q4 2014 ▪ Recruitment completed Q3 2016 ▪ Data presented at ASH 2016, ICML and EHA 2017 ▪ PRIME Designation (Q2 2017) and Breakthrough Therapy Designation (Q3 2017) granted for r/r DLBCL ▪ Pivotal randomized Ph2 in r/r DLBCL presented at ASH 2017 ▪ Additional data presented at ASCO and EHA 2018	▪ FPI Q4 2017
CT Identifier	NCT01691898	NCT02257567	NCT03274492

In collaboration with Seattle Genetics

ADC=antibody–drug conjugate; DLBCL=diffuse large B cell lymphoma; FL=follicular lymphoma; r/r=Relapsed or refractory; ASH=American Society of Hematology; ICML=international Conference on Malignant Lymphoma; EHA=European Hematology Association; BR=bendamustine and Rituxan; R-CHP=Rituxan, cyclophosphamide, hydroxydoxorubicin, prednisone; R-CHOP=Rituxan, cyclophosphamide, doxorubicin, vincristine, and prednisone

Polatuzumab vedotin (RG7596)

ADC targeting CD79b to treat B cell malignancies

Indication	Relapsed or refractory FL or DLBCL	
Phase/study	**Phase I/II**	**Phase I/II**
# of patients	N=116	N=116
Design	▪ **Dose escalation cohort:** Polatuzumab vedotin plus Gazyva plus Venclexta[1] ▪ **Expansion cohort DLBCL:** Polatuzumab vedotin plus Rituxan plus Venclexta[1] ▪ **Expansion cohort FL:** Polatuzumab vedotin plus Gazyva plus Venclexta[1]	▪ **Dose escalation cohort:** Polatuzumab vedotin plus Gazyva plus lenalidomide ▪ **Expansion cohort DLBCL:** Polatuzumab vedotin plus Rituxan plus lenalidomide ▪ **Expansion cohort FL:** Polatuzumab vedotin plus Gazyva plus lenalidomide
Primary endpoint	▪ Percentage of participants with CR	▪ Percentage of participants with CR
Status	▪ FPI Q1 2016	▪ FPI Q1 2016
CT Identifier	NCT02611323	NCT02600897

In collaboration with Seattle Genetics; [1]Joint project with AbbVie, in collaboration with The Walter and Eliza Hall Institute
ADC=antibody–drug conjugate; FL=follicular lymphoma; DLBCL=diffuse large B cell lymphoma; CR=complete response

Balovaptan (RG7314)

Small molecule antagonist of the V1A vasopressin receptor

Indication	Autism Spectrum Disorder		
Phase/study	**Phase II VANILLA**	**Phase II aV1ation**	**Phase III V1aduct**
# of patients	N=223	N=300	N=350
Design	▪ Multi-center, randomized, double-blind, placebo-controlled proof-of-concept study in individuals with ASD	▪ Multi-center, randomized, double-blind, placebo-controlled proof-of-concept study in pediatrics (5-17 yrs) with ASD	Study in Adults (≥18 ys) with ASD with a 2-year open-label extension: ▪ **Arm A:** Balovaptan 10mg/day ▪ **Arm B:** Placebo
Primary endpoint	▪ Safety and efficacy	▪ Safety and efficacy	▪ Change from baseline at week 24 on the Vineland Adaptive Behavior Scales (Vineland-II) two-domain composite (2DC) score
Status	▪ FPI Q3 2013 ▪ Data presented at IMFAR 2017 ▪ Breakthrough Therapy Designation granted by FDA Q1 2018	▪ FPI Q4 2016	▪ FPI expected Q3 2018
CT Identifier	NCT01793441	NCT02901431	NCT03504917

ASD=Autism spectrum disorder; IMFAR=International Meeting For Autism Research

Crenezumab (RG7412)

Humanized mAb targeting all forms of Aβ

Indication	Prodromal to mild Alzheimer's disease	
Phase/study	**Phase III CREAD 1**	**Phase III CREAD 2**
# of patients	N=750	N=750
Design	▪ **ARM A:** Crenezumab IV 60mg/kg q4w ▪ **ARM B:** Placebo IV q4w	▪ **ARM A:** Crenezumab IV 60mg/kg q4w ▪ **ARM B:** Placebo IV q4w
Primary endpoint	▪ CDR-SB at 105 weeks	▪ CDR-SB at 105 weeks
Status	▪ FPI Q1 2016 ▪ Recruitment completed Q4 2017	▪ FPI Q1 2017 ▪ Recruitment completed Jul 2018
CT Identifier	NCT02670083	NCT03114657

In collaboration with AC Immune

Aβ=amyloid-beta; CDR-SB=Clinical Dementia Rating, Sum of Boxes

Crenezumab (RG7412)

Humanized mAb targeting all forms of Aβ

Indication	Alzheimer's disease	Mild to moderate Alzheimer's disease	Alzheimer's Prevention Initiative (API) Colombia
Phase/study	**Phase II** **BLAZE** Biomarker study	**Phase I**	**Phase II** Cognition study
# of patients	N=91	N=72	N=252
Design	▪ **ARM A:** Crenezumab SC ▪ **ARM B:** Crenezumab IV ▪ **ARM C:** Placebo	▪ **ARM A/B**: Crenezumab dose level I & placebo ▪ **ARM C/D**: Crenezumab dose level II & placebo ▪ **ARM E/F**: Crenezumab dose level III & placebo	▪ **ARM A:** 100 carriers receive crenezumab SC ▪ **ARM B:** 100 carriers receive placebo ▪ **ARM C:** 100 non-carriers receive placebo
Primary endpoint	▪ Change in brain amyloid load from baseline to week 69	▪ Safety (incidence and nature of MRI safety findings) and PK	▪ Change on Alzheimer's Prevention Initiative (API) Composite Cognitive Test total score
Status	▪ Recruitment completed Q3 2012 ▪ Cognition data presented at AAIC 2014 ▪ Exploratory amyloid PET analysis suggests reduced amyloid accumulation in ARM B ▪ Biomarker data presented at CTAD 2014	▪ FPI Q1 2015 ▪ Recruitment completed Q3 2016 ▪ Interim data presented at CTAD 2016 ▪ Data presented at AD/PD and AAN 2017, AAN 2018	▪ FPI Q4 2013 ▪ Recruitment completed Q1 2017
CT Identifier	NCT01397578	NCT02353598	NCT01998841

In collaboration with AC Immune

Aβ=amyloid-beta; AAIC=Alzheimer's Association International Conference; CTAD= Clinical Trials on Alzheimer's Disease; AD/PD=Alzheimer's & Parkinson's Diseases Congress; AAN=American Academy of Neurology; MRI=Magnetic resonance imaging

Gantenerumab (RG1450)

Fully human mAb binding aggregated forms of Aβ

Indication	Prodromal to mild Alzheimer's disease	
Phase/study	**Phase III GRADUATE 1**	**Phase III GRADUATE 2**
# of patients	N=760	N=760
Design	104-week subcutaneous treatment period ▪ **ARM A:** Gantenerumab ▪ **ARM B:** Placebo	104-week subcutaneous treatment period ▪ **ARM A:** Gantenerumab ▪ **ARM B:** Placebo
Primary endpoint	▪ Change in CDR-SB at 2 years	▪ Change in CDR-SB at 2 years
Status	▪ FPI Q2 2018	▪ FPI expected Q3 2018
CT Identifier	NCT03443973	NCT03444870

In collaboration with MorphoSys AG

Aβ=amyloid-beta; CDR-SB=Clinical Dementia Rating, Sum of Boxes

Gantenerumab (RG1450)

Fully human mAb binding aggregated forms of Aβ

Indication	Prodromal Alzheimer's disease	Mild Alzheimer's disease
Phase/study	**Phase II/III** **SCarlet RoAD**	**Phase III** **Marguerite RoAD**
# of patients	N=799	N=1,000
Design	104-week subcutaneous treatment period ▪ **ARM A:** Gantenerumab (225 mg) ▪ **ARM B:** Gantenerumab (105 mg) ▪ **ARM C:** Placebo	104-week subcutaneous treatment period ▪ **ARM A:** Gantenerumab ▪ **ARM B:** Placebo
Primary endpoint	▪ Change in CDR-SB at 2 years ▪ Sub-study: change in brain amyloid by PET at 2 years	▪ Change in ADAS-Cog and CDR-SB at 2 years (co-primary)
Status	▪ Phase I PET data: *Archives of Neurology*, 2012 Feb;69(2):198-207 ▪ Recruitment completed Q4 2013 ▪ Dosing stopped due to futility Q4 2014 ▪ Data presented at AAIC 2015 ▪ FPI in open label extension study Q4 2015 ▪ OLE data presented at CTAD 2017, AD/PD and AAN 2018	▪ FPI Q1 2014 ▪ Recruitment stopped Q4 2015 ▪ FPI Q1 2016 for open label extension ▪ OLE data (MRI) presented at CTAD 2017, AD/PD and AAN 2018
CT Identifier	NCT01224106	NCT02051608

In collaboration with MorphoSys AG

Aβ=amyloid-beta; CDR-SB=Clinical Dementia Rating, Sum of Boxes; ADAS-cog=Alzheimer's Disease Assessment Scale cognitive subscale; AAIC=Alzheimer's Association International Conference; CTAD=Clinical Trials on Alzheimer's Disease; AD/PD=Alzheimer's & Parkinson's Diseases Congress; AAN=American Academy of Neurology; MRI=Magnetic resonance imaging

RG6206

Myostatin-inhibiting adnectin fusion protein

Indication	Duchenne Muscular Dystrophy	
Phase/study	**Phase I/II**	**Phase II/III**
# of patients	N=40	N=159
Design	▪ Randomized, double-blind, placebo-controlled, multiple ascending dose study in ambulatory boys with Duchenne muscular dystrophy	Randomized, double blind, placebo-controlled study in ambulatory boys age 6-11 years with duchenne muscular dystrophy ▪ **ARM A:** RG6206 low dose ▪ **ARM B:** RG6206 high dose ▪ **ARM C:** Placebo
Primary endpoint	▪ Safety	▪ Change from baseline in the 4 stair climb velocity after 48 weeks
Status	▪ FPI Q4 2015 ▪ 24 week data presented at BPNA and AAN 2018	▪ FPI Q3 2017
CT Identifier	NCT02515669	NCT03039686

BPNA=British Paediatric Neurology Asscoiation; AAN=American Academy of Neurology

Risdiplam (RG7916)

Oral SMN2 splicing modifier

Indication	Spinal muscular atrophy		
Phase/study	**Phase II FIREFISH**	**Phase II SUNFISH**	**Phase II JEWELFISH**
# of patients	N=21 (Part 1), 40 (Part 2)	N=51 (Part 1), 168 (Part 2)	N=24
Design	Open-label study in infants with type 1 spinal muscular atrophy ▪ **Part 1 (dose-finding):** At least 4 weeks ▪ **Part 2 (confirmatory):** 24 months	Randomized, double-blind, placebo-controlled study in adult and pediatric patients with type 2 or type 3 spinal muscular atrophy ▪ **Part 1 (dose-finding):** At least 12 weeks ▪ **Part 2 (confirmatory):** 24 months	▪ Open-label single arm study in adolescents and adults (12-60 years) with SMA type 2 and 3 previously treated with SMN2 targeting therapy
Primary endpoint	▪ Safety, tolerability, PK, PD and efficacy	▪ Safety, tolerability, PK, PD and efficacy	▪ Safety, tolerability and PK
Status	▪ FPI Q4 2016, FPI Part 2 Q1 2018 ▪ Data of Part 1 presented at AAN 2018 and Cure SMA 2018	▪ FPI Q4 2016, FPI Part 2 Q4 2017 ▪ Data of Part 1 presented at Cure SMA, WMS 2017 and AAN 2018	▪ FPI Q1 2017 ▪ Data presented at AAN 2018
	Orphan drug designation granted by FDA Q1 2017		
CT Identifier	NCT02913482	NCT02908685	NCT03032172

In collaboration with PTC Therapeutics and SMA Foundation
AAN=American Academy of Neurology; WMS=World Muscle Society

Etrolizumab (RG7413)

Humanized mAb against beta 7 integrin

Indication	Ulcerative colitis patients who are TNF-naïve		
Phase/study	**Phase III** **HIBISCUS I** Induction study	**Phase III** **HIBISCUS II** Induction study	**Phase III** **GARDENIA** Sustained remission study
# of patients	N=350	N=350	N=720
Design	▪ **ARM A:** Etrolizumab 105mg SC q4w plus adalimumab placebo SC ▪ **ARM B:** Etrolizumab placebo SC plus adalimumab SC ▪ **ARM C:** Etrolizumab placebo SC plus adalimumab placebo SC	▪ **ARM A:** Etrolizumab 105mg SC q4w plus adalimumab placebo SC ▪ **ARM B:** Etrolizumab placebo SC plus adalimumab SC ▪ **ARM C:** Etrolizumab placebo SC plus adalimumab placebo SC	Time on treatment 54 weeks ▪ **ARM A:** Etrolizumab 105mg SC q4w plus placebo IV ▪ **ARM B:** Placebo SC q4w plus inflixumab IV
Primary endpoint	▪ Induction of remission compared with placebo as determined by the Mayo Clinic Score (MCS) at week 10	▪ Induction of remission compared with placebo as determined by the Mayo Clinic Score (MCS) at week 10	▪ Proportion of patients in sustained clinical remission as determined by Mayo Clinic Score (MCS) at weeks 10, 30 and 54
Status	▪ FPI Q4 2014	▪ FPI Q4 2014	▪ FPI Q4 2014
CT Identifier	NCT02163759	NCT02171429	NCT02136069

Etrolizumab (RG7413)

Humanized mAb against beta 7 integrin

Indication	Ulcerative colitis patients who are TNF-naïve and refractory or intolerant to immunosuppressant and/or corticosteroid treatment	Ulcerative colitis patients who are refractory or intolerant of TNF inhibitors	Moderate to severe ulcerative colitis patients
Phase/study	**Phase III** **LAUREL** Maintenance study	**Phase III** **HICKORY** Induction and maintenance study	**Phase III** **COTTONWOOD** Open label extension study
# of patients	N=350	N=800	N=2,625
Design	Induction phase: ▪ **ARM A:** Open label etrolizumab 105mg SC q4w Maintenance study: ▪ **ARM B:** Etrolizumab 105mg SC q4w ▪ **ARM C:** Placebo	Cohort 1 (open-label): ▪ **ARM A:** Etrolizumab induction + placebo maintenance ▪ **ARM B:** Etrolizumab induction + maintenance Cohort 2 (blinded): ▪ **ARM A:** Etrolizumab induction + maintenance ▪ **ARM B:** Placebo induction + maintenance	▪ Patients who were previously enrolled in etrolizumab phase II and phase III studies and meet recruitment criteria will receive etrolizumab 105 SC q4w
Primary endpoint	▪ Maintenance of remission (at week 62) among randomized patients in remission at Week 10 as determined by the Mayo Clinic Score (MCS)	▪ Clinical Remission (Mayo Clinic Score, MCS) at Week 14 ▪ Remission maintenance (by MCS, at Week 66) among patients with remission at Week 14	▪ Long-term efficacy as determined by partial Mayo Clinic Score (pMCS), incidence of adverse events
Status	▪ FPI Q3 2014	▪ FPI Q2 2014 ▪ First data presented at ECCO 2017 ▪ Open label induction and endoscopy data presented at UEGW 2017	▪ FPI Q3 2014
CT Identifier	NCT02165215	NCT02100696	NCT02118584

ECCO=European Crohn's and Colitis Organisation; UEGW=United European Gastroenterology Week

Etrolizumab (RG7413)

Humanized mAb against beta 7 integrin

Indication	Moderately to severely active Crohn's disease	Moderately to severely active Crohn's disease
Phase/study	**Phase III** **BERGAMOT**	**Phase III** **JUNIPER** Open label extension study for BERGAMOT
# of patients	N=1,150	N=900
Design	▪ **ARM A:** Etrolizumab SC 210 mg (induction only) ▪ **ARM B:** Etrolizumab SC 105 mg and maintenance ▪ **ARM C:** Placebo	▪ Etrolizumab SC 105mg q4w
Primary endpoint	▪ Induction and maintenance of clinical remission	▪ Safety
Status	▪ FPI Q1 2015 ▪ Cohort 1 data presented at UEGW 2017	▪ FPI Q2 2015
CT Identifier	NCT02394028	NCT02403323

UEGW=United European Gastroenterology Week

Baloxavir marboxil (RG6152, S-033188)

Small molecule, novel CAP-dependent endonuclease inhibitor

Indication	Influenza	
Phase/study	**Phase III CAPSTONE-1**	**Phase III CAPSTONE-2**
# of patients	N=1,436	N=2,157
Design	▪ Randomized, double-blind study of a single dose of baloxavir marboxil compared with placebo or Tamiflu 75 mg twice daily for 5 days in otherwise healthy patients with influenza	▪ Randomized, double-blind study of a single dose of baloxavir marboxil compared with placebo or Tamiflu 75 mg twice daily for 5 days in patients with influenza at high risk of influenza complications
Primary endpoint	▪ Time to alleviation of symptoms	▪ Time to improvement of influenza symptoms
Status	▪ FPI Q4 2016, recruitment completed Q1 2017 ▪ Primary endpoint met Q3 2017 (time to alleviation of symptoms versus placebo) ▪ Filed in US Q2 2018 (priority review)	▪ FPI Q1 2017, recruitment completed Q1 2018 ▪ Primary endpoint met Q3 2018 (time to improvement of influenza symptoms versus placebo)
CT Identifier	NCT02954354	NCT02949011

RG7716

Bispecific antibody to simultaneously bind Ang-2 and VEGF-A

Indication	Neovascular age related macular degeneration (nAMD)		Center-involving diabetic macular edema (CI-DME)
Phase/study	**Phase II AVENUE**	**Phase II STAIRWAY**	**Phase II BOULEVARD**
# of patients	N=271	N=75	N=210
Design	▪ **ARM A:** SoC (Lucentis), q4w ▪ **ARM B:** 1.5 mg RG7716, q4w ▪ **ARM C:** 6mg RG7716, q4w ▪ **ARM D:** 6mg RG7716, q4w / q8w ▪ **ARM E:** SoC q4w x 3 doses, switch group to 6 mg RG7716 q4w	▪ **ARM A:** SoC (Lucentis), q4w ▪ **ARM B:** 6mg RG7716, q>8w (short interval duration) ▪ **ARM C:** 6mg RG7716, q>8w (long interval duration)	▪ **ARM A:** SoC (Lucentis), 0.3 mg q4w ▪ **ARM B:** 1.5mg RG7716, q4w ▪ **ARM C:** 6mg RG7716, q4w
Primary endpoint	▪ Change from baseline BCVA after 32 weeks	▪ Change from baseline BCVA at Week 40	▪ Mean change from baseline BCVA at week 24
Status	▪ FPI Q3 2015 ▪ Recruitment completed Q1 2017	▪ FPI Q1 2017 ▪ Recruitment completed Q1 2017	▪ FPI Q2 2016 ▪ Recruitment completed Q1 2017 ▪ Data presented at Angiogenesis 2018
CT Identifier	NCT02484690	NCT03038880	NCT02699450

BCVA=best corrected visual acuity; SoC=standard of care

Roche pRED

Pipeline summary

Marketed products additional indications

Global Development late-stage trials

pRED (Roche Pharma Research & Early Development)

gRED (Genentech Research & Early Development)

Roche Group HY 2018 results

Diagnostics

Foreign exchange rate information

Oncology development programs
Small molecules

Molecule	BET inhibitor (RG6146, TEN-010)		
Indication	**Relapsed/refractory MM**	**Relapsed/refractory DLBCL**	**Advanced ovarian cancer and triple negative breast cancer**
Phase/study	**Phase Ib**	**Phase Ib**	**Phase Ib**
# of patients	N=86	N=94	N=30
Design	Dose escalation and cohort expansion study: ▪ **Part 1:** RG6146 monotherapy ▪ **Part 2:** RG6146 in combination with daratumumab	▪ Dose escalation and cohort expansion study of the doublet or triplet combination with RG6146 plus Venclexta[1] ± Rituxan	▪ Dose escalation and expansion study of RG6146 plus Tecentriq
Primary endpoint	▪ Safety and efficacy	▪ Safety and efficacy	▪ Safety and efficacy
Status	▪ FPI Part 1 Q2 2017	▪ FPI Q3 2017	▪ FPI Q4 2017
CT Identifier	NCT03068351	NCT03255096	NCT03292172
Collaborator	Tensha acquisition		

[1]Joint project with AbbVie, in collaboration with The Walter and Eliza Hall Institute
MM=multiple myeloma; DLBCL=diffuse large B cell lymphoma

Oncology development programs
Monoclonal antibodies

Molecule	Codrituzumab (Glypican-3 MAb GC33, RG7686)		
Indication	**Metastatic liver cancer (hepatocellular carcinoma)**	**2L Metastatic liver cancer (hepatocellular carcinoma)**	**Metastatic liver cancer (hepatocellular carcinoma)**
Phase/study	**Phase Ib**	**Phase II**	**Phase Ib**
# of patients	N=40-50	N=185	N=20
Design	▪ Study US Monotherapy ▪ Study Japan Monotherapy ▪ Dose escalation study in combo with SOC	▪ Adaptive design study Double blind randomized 2:1, RG7686:placebo ▪ Patients are stratified according to the level of GPC-3 expression in tumor	▪ Dose escalation and expansion study in combination with Tecentriq
Primary endpoint	▪ Safety and tolerability	▪ Progression-free survival	▪ Safety and tolerability
Status	▪ Recruitment completed Q4 2013 ▪ Data presented at ASCO 2014 ▪ Further steps under evaluation	▪ Recruitment completed Q1 2013 ▪ Data presented at ASCO 2014 ▪ Further steps under evaluation	▪ Recruitment completed Q3 2017 (Japan and Taiwan)
	Monotherapy development on hold		
CT Identifier	NCT00746317, NCT00976170	NCT01507168	JapicCTI-163325
Collaborator	Chugai		

ASCO=American Society of Clinical Oncology

Oncology development programs

Monoclonal antibodies

Molecule	Emactuzumab (CSF-1R MAb, RG7155)	
Indication	**Solid tumors**	
Phase/study	**Phase I**	**Phase I**
# of patients	N=310	N=146
Design	Emactuzumab in combination with Tecentriq ▪ **Part 1:** Dose escalation ▪ **Part 2:** Expansion	Emactuzumab in combination with selicrelumab (CD40 MAb) ▪ **Part 1:** Dose escalation ▪ **Part 2:** Expansion
Primary endpoint	▪ Safety	▪ Safety, PK and PD
Status	▪ FPI Q1 2015	▪ FPI Q2 2016
CT Identifier	NCT02323191	NCT02760797

Oncology development programs

Monoclonal antibodies

Molecule	FAP-IL2v FP (RG7461)		
Indication	**Solid tumors**	**1L Renal call carcinoma**	**Solid tumors**
Phase/study	**Phase I**	**Phase Ib**	**Phase Ib**
# of patients	N=60	N=110	N=40
Design	▪ **Part A:** Dose escalation study (monotherapy) ▪ **Part B:** Dose escalation and extension in combination with trastuzumab (HER2+ breast cancer) ▪ **Part C:** Dose escalation and extension in combination with cetuximab (head & neck cancer)	**Part I:** Dose escalation ▪ Arm A: FAP-IL2v plus Tecentriq; ▪ Arm B: FAP-IL2v plus Tecentriq plus Avastin **Part II:** Dose expansion ▪ Arm A: FAP-IL2v plus Tecentriq; ▪ Arm B: FAP-IL2v plus Tecentriq plus Avastin	FAP-IL2v plus Tecentriq ▪ **Arm A:** 2L NSCLC (checkpoint inhibitor naive) ▪ **Arm B:** 2L+ NSCLC (CPI experienced)
Primary endpoint	▪ Safety, PK/PD and efficacy (Part B/C only)	▪ Safety, PD and efficacy	▪ Safety, PD and efficacy
Status	▪ FPI Q4 2015 ▪ FPI Part B/C Q4 2017	▪ FPI Q1 2017	▪ FPI Q1 2018
CT Identifier	NCT02627274	NCT03063762	NCT03386721

Oncology development programs
Monoclonal antibodies

Molecule	**Vanucizumab** (ANG2-VEGF biMAb, RG7221)	**Cergutuzumab amunaleukin** (CEA-IL2v, RG7813)
Indication	**Solid tumors**	**Solid tumors**
Phase/study	**Phase I**	**Phase Ib**
# of patients	N≈132	N=75
Design	▪ Multiple ascending dose study with extension cohorts in solid tumors to assess the PD effects and platinum-resistant ovarian cancer ▪ Dose escalation of vanucizumab plus Tecentriq	▪ **Part 1:** Dose escalation of RG7813 in combination with Tecentriq ▪ **Part 2:** Dose expansion of RG7813 in combination with Tecentriq
Primary endpoint	▪ Safety and PK	▪ Safety, efficacy, PK and PD
Status	▪ FPI Q4 2012 ▪ Data presented at ASCO 2014 (Dose escalation), ASCO 2015 (ovarian cancer cohort), ECC 2015 (biomarker/imaging) ▪ FPI in combination arm Q2 2016 ▪ Results published *Clin Cancer Res.* 2017 Dec 7. 1588.2017	▪ FPI in Q2 2015
CT Identifier	NCT01688206	NCT02350673

ASCO=American Society of Clinical Oncology; ECC=European Cancer Congress

Oncology development programs
Monoclonal antibodies

Molecule	CEA TCB (RG7802)	
Indication	**CEA-positive solid tumors**	
Phase/study	**Phase Ia**	**Phase Ib**
# of patients	N≈286 (DE & DF)	N=410
Design	▪ **Part I:** Dose escalation of RG7802 ▪ **Part II:** Dosing strategy ▪ **Part III:** Assessment of schedule ▪ **Part IV:** Dose and schedule expansion	▪ **Part I:** RG7802 dose escalation plus Tecentriq ▪ **Part II:** Expansion at defined dose and schedule
Primary endpoint	▪ Safety, Efficacy, PK and PD	▪ Safety, Efficacy, PK and PD
Status	▪ FPI Q4 2014 ▪ Data presented at ASCO 2017	▪ FPI Q1 2016 ▪ Data presented at ASCO 2017
CT Identifier	NCT02324257	NCT02650713

TCB=T-cell bispecific; ASCO=American Society of Clinical Oncology

Oncology development programs
Monoclonal antibodies

Molecule	CD20 TCB (RG6026)		
Indication	**Relapsed or refractory B cell non-Hodgkin's lymphoma**		**Non-Hodgkin's lymphoma**
Phase/study	**Phase I**	**Phase Ib**	**Phase Ib**
# of patients	N>50 (+40+20)	N=140	Part I: 15-60 Part II: ~66-104
Design	**Cohort 1:** Single-agent dose escalation study ▪ Initial dose escalation (N>50) ▪ Expansion cohort in r/r DLBCL (N=40) ▪ Expansion cohort in r/r FL (N=20) *All patients will receive pretreatment with a single dose of Gazyva (1000mg)* **Cohort 2:** RG6026 + Gazyva	▪ Dose escalation and expansion of RG6026 plus Tecentriq	▪ **Part I:** Dose-finding for the combination of RG6026 plus G/R CHOP in r/r FL ▪ **Part II:** Dose expansion RG6026 plus G/R-CHOP or R-CHOP in 1L DLBCL
Primary endpoint	▪ Safety	▪ Safety	▪ Safety
Status	▪ FPI Q1 2017	▪ FPI Q2 2018	▪ FPI Q1 2018
CT Identifier	NCT03075696	NCT03533283	NCT03467373

TCB=T-cell bispecific; DLBCL=diffuse large B cell lymphoma; FL=Follicular lymphoma

Oncology development programs
Monoclonal antibodies

Molecule	**Selicrelumab** (CD40 MAb, RG7876)	
Indication	**Solid tumors**	**Solid tumors**
Phase/study	**Phase Ib**	**Phase Ib**
# of patients	N=270	N=170
Design	▪ **Part I:** Selicrelumab single dose escalation in combination with Tecentriq ▪ **Part II:** Selicrelumab plus Tecentriq combination extension in CRC, HNSCC and cpi-experienced NSCLC	▪ **Part I:** Selicrelumab dose escalation in combination with vanucizumab ▪ **Part II:** Selicrelumab dose expansion in combination with Avastin
Primary endpoint	▪ Safety, PD and efficacy	▪ Safety, PD and efficacy
Status	▪ FPI Part 1 Q4 2014 ▪ FPI Part 2 Q4 2017	▪ FPI Q1 2016 ▪ Selicrelumab + vanucizumab arm is no longer recruiting patients
CT Identifier	NCT02304393	NCT02665416

CRC=colorectal cancer; HNSCC=head and neck squamous cell carcinoma; NSCLC=non-small cell lung cancer; CPI=checkpoint inhibitor; MAb=monoclonal antibody

Oncology development programs
Monoclonal antibodies

Molecule	NME (RG6123)	FAP-4-1BBL FP (RG7827)
Indication	**Solid tumors**	**Solid tumors**
Phase/study	**Phase I**	**Phase I**
# of patients	N=125	N=200
Design	▪ Dose escalation of single agent RG6123	▪ **Part 1:** Single agent dose escalation ▪ **Part 2:** Combo dose escalation with Tecentriq ▪ **Part 3:** Combo expansion with Tecentriq
Primary endpoint	▪ Safety, efficacy, PK and PD	▪ Safety, efficacy, PK and PD
Status	▪ FPI Jul 2018	▪ FPI Q2 2018
CT Identifier	NCT03539484	

ASCO=American Society of Clinical Oncology; ECC=European Cancer Congress; ESMO=European Society for Medical Oncology; FP=antibody fusion protein

Neuroscience development programs

Molecule	Basmisanil (GABRA5 NAM, RG1662)	NME (RG7906)
Indication	Cognitive impairment associated with schizophrenia	Psychiatric disorders
Phase/study	Phase II	Phase I
# of patients	N=180	N=164
Design	For 24 weeks patients will receive: ▪ **ARM A:** RG1662 80mg twice daily ▪ **ARM B:** RG1662 240mg twice daily ▪ **ARM C:** Placebo	▪ **Part 1:** Adaptive single ascending dose in healthy volunteers. Single-center, randomized, placebo-controlled, parallel study ▪ **Part 2:** Adaptive multiple ascending dose in healthy volunteers. Single-center, randomized, double-blind, placebo-controlled, parallel study
Primary endpoint	▪ Efficacy (cognitive function), PK, safety and tolerability	▪ Safety, tolerability, PK and PD
Status	▪ FPI Q4 2016	▪ FPI Q1 2016 ▪ Part 1 completed, Part 2 completed
CT Identifier	NCT02953639	NCT02699372

Neuroscience development programs

Parkinson's disease and Autism

Molecule	prasinezumab (anti-αSynuclein, RG7935, PRX002)	GABA-Aa5 PAM (RG7816)	
Indication	**Parkinson's disease**	**Autism**	
Phase/study	**Phase II PASADENA**	**Phase I**	**Phase I**
# of patients	N=300	N=105	N=15
Design	▪ Randomized, double-blind, placebo-controlled study to evaluate the efficacy of prasinezumab in participants with early PD with a 52-week blinded extension	▪ Randomized, double-blind, adaptive single-ascending-dose SAD/MAD/FE study in healthy volunteers	▪ PET study to assess occupancy of brain alpha5-Containing GABAA receptors of RG7816 using [11C] Ro15-4513 following single oral doses in healthy participants
Primary endpoint	▪ Change from baseline in Movement Disorder Society-Unified Parkinson's Disease Rating Scale (MDS-UPDRS) total score (sum of Parts I, II, and III) at week 52	▪ Safety and tolerability	▪ Percentage of brain alpha5-Containing GABA-A receptors occupied by RG7816, plasma concentrations of RG7816
Status	▪ FPI Q2 2017 ▪ Ph1 data published online in *JAMA Neurol.* 2018 Jun 18	▪ FPI Q4 2017	▪ FPI Q2 2018
CT Identifier	NCT03100149		NCT03507569
Collaborator	Prothena		

PD=Parkinson's disease; SAD=single ascending dose; MAD=multiple ascending dose; FE=food effect; PET=positron emission tomography

Neuroscience development programs

Huntington's disease

Molecule	HTT ASO (RG6042)	
Indication	**Huntington's disease**	
Phase/study	**Phase I/IIa**	**Phase II OLE**
# of patients	N=46	N=46
Design	▪ Multiple ascending doses of HTT-ASO administered intrathecally to adult patients with early manifest Huntington's disease	▪ Patients from Phase I are enrolled into OLE
Primary endpoint	▪ Safety, tolerability, PK and PD	▪ Longer term safety, tolerability, PK and PD
Status	▪ FPI Q3 2015 ▪ Data presented at CHDI 2018 and AAN 2018	▪ FPI Q1 2018
CT Identifier	NCT02519036	NCT03342053
Collaborator	Ionis	

OLE=open label extension

Infectious diseases development programs

Molecule	**nacubactam** (DBO beta lactamase inhibitor, RG6080, OP0595)
Indication	**Complicated urinary tract infection**
Phase/study	**Phase I**
# of patients	N=20
Design	▪ Open label, one treatment, one group study, to investigate the PK of nacubactam and meropenem in patients with cUTI
Primary endpoint	▪ PK
Status	▪ FPI Q3 2017 ▪ Study completed
CT Identifier	NCT03174795
Collaborator	Meiji and Fedora

cUTI=complicated urinary tract infection

Infectious diseases development programs

Chronic hepatitis B

Molecule	TLR7 agonist (3) (RG7854)	HBV LNA (RG6004)	Capsid inhibitor CAPi (2) (RG7907)
Indication	Chronic hepatitis B	Chronic hepatitis B	Chronic hepatitis B
Phase/study	Phase I	Phase I	Phase I
# of patients	N=140	N=160	N=128
Design	▪ Healthy volunteer and chronic hepatitis B patient study	▪ Healthy volunteer and chronic hepatitis B patient study	▪ Healthy volunteer and chronic hepatitis B patient study
Primary endpoint	▪ Safety, PK and PD	▪ Safety, PK and PD	▪ Safety, PK and PD
Status	▪ FPI Q4 2016	▪ FPI Q1 2017	▪ FPI Q4 2016
CT Identifier	NCT02956850	NCT03038113	NCT02952924

LNA=locked nucleic acid

Immunology development programs

Molecule	Cathepsin S inhibitor (CAT-S inh, RG7625)	Cadherin 11 MAb (RG6125)
Indication	Primary Sjögren's syndrome	Rheumatoid Arthritis
Phase/study	**Phase II**	**Phase IIa/b**
# of patients	N=75	N≈250
Design	▪ **ARM A:** RG7625 ▪ **ARM B:** Placebo	Phase IIa (PoC) ▪ **ARM A:** RG6125 ▪ **ARM B:** Placebo Phase IIb (DRF) ▪ **ARM A, B, C:** RG6125 ▪ **ARM D:** Placebo
Primary endpoint	▪ Percentage of participants with a clinically relevant decrease in European League Against Rheumatism (EULAR) Sjögren's Syndrome Disease Activity Index (ESSDAI) Score	▪ Primary Endpoint at Week 12: proportion of patients achieving a ACR50 response at week 12 using RG6125 as adjunct therapy to MTX + anti-TNFalpha compared to MTX + anti-TNFalpha plus placebo
Status	▪ FPI Q3 2016 ▪ Recruitment completed Q1 2017	▪ FPI Q4 2016
CT Identifier	NCT02701985	NCT03001219

PoC=proof of concept; DRF=dose range finding; MTX=methotrexate

Immunology development programs

Molecule	C5 inh MAb (RG6107, SKY59)	IgG-IL2 FP (RG7835)
Indication	Paroxysmal nocturnal hemoglobinuria	Autoimmune diseases
Phase/study	**Phase I/II COMPOSER**	**Phase I**
# of patients	N=49	N=40
Design	Healthy volunteers and treatment naïve/pretreated patients with PNH ▪ **Part 1:** Single ascending dose study in healthy subjects ▪ **Part 2:** Intra-patient single ascending dose study in PNH patients ▪ **Part 3:** Multiple-dose study in PNH patients	▪ A randomized, adaptive, investigator/subject blind, single ascending dose, placebo-controlled study of subcutaneously administered RO7049665 (RG7835) in healthy volunteers
Primary endpoint	▪ Safety, PK and PD	▪ Safety, PK and PD
Status	▪ Part 1: FPI Q4 2016 ▪ Part 2/3: FPI Q2 2017 ▪ Nonclinical data published in *Scientific Reports* 2017 Apr; 7(1):1080	▪ FPI Q3 2017
CT Identifier	NCT03157635	NCT03221179
Collaborator	Chugai	

PNH=paroxysmal nocturnal hemoglobinuria

Pipeline summary

Marketed products additional indications

Global Development late-stage trials

pRED (Roche Pharma Research & Early Development)

gRED (Genentech Research & Early Development)

Roche Group HY 2018 results

Diagnostics

Foreign exchange rate information

Oncology development programs
Monoclonal antibodies

Molecule	**mosunetuzumab** (CD20 TDB, RG7828)	**tiragolumab** (anti-TIGIT, RG6058, MTIG7192A)	
Indication	**Hematologic tumors**	**Solid tumors**	**NSCLC**
Phase/study	**Phase I**	**Phase I**	**Phase II**
# of patients	N=665	N=300	N=120
Design	▪ Dose escalation study of RG7828 as single agent and in combination with Tecentriq ▪ Expansion cohorts for r/r FL, r/r DLBCL and r/r MCL	▪ **Phase Ia:** Dose escalation and expansion of tiragolumab ▪ **Phase Ib:** Dose escalation and expansion Tecentriq plus tiragolumab	▪ Tecentriq plus tiragolumab
Primary endpoint	▪ Safety, tolerability, dose/schedule, PK, and response rates	▪ Safety, tolerability, PK variability and preliminary efficacy	▪ Overall response rate and progression-free survival
Status	▪ FPI Q3 2015	▪ FPI Q2 2016	▪ FPI expected Q3 2018
CT Identifier	NCT02500407	NCT02794571	NCT03563716

TDB=T cell dependent bispecific; FL=follicular lymphoma; DLBCL=diffuse large B cell lymphoma; MCL=mantle cell lymphoma; r/r=relapsed/refractory

Oncology development programs

Monoclonal antibodies

Molecule	NME (RG6160)	NME (RG6194)
Indication	**Relapsed/refractory multiple myeloma**	**Metastatic HER2-expressing cancers**
Phase/study	**Phase I**	**Phase I**
# of patients	N=80	N=449
Design	▪ Dose escalation and expansion of single agent	▪ Dose escalation and expansion of single agent RG6194
Primary endpoint	▪ Safety and tolerability	▪ Safety and tolerability
Status	▪ FPI Q3 2017	▪ FPI Q2 2018
CT Identifier	NCT03275103	NCT03448042

Oncology development programs

Antibody–drug conjugates

Molecule	NME (RG6109)	NME (RG6148)
Indication	**AML**	**HER2+ Breast cancer**
Phase/study	**Phase I**	**Phase I**
# of patients	N=110	N=55
Design	Dose escalation and expansion study: ▪ **ARM A:** RG6109 monotherapy in r/r AML ▪ **ARM B:** RG6109 + azacitidine in 1L AML patients not eligible for intensive induction chemotherapy	▪ Dose escalation and expansion study
Primary endpoint	▪ Safety and PK	▪ Safety and PK
Status	▪ FPI Q4 2017	▪ FPI Q2 2018
CT Identifier	NCT03298516	NCT03451162

AML=acute myeloid leukemia; r/r=relapsed/refractory

Oncology development programs

Small molecules

Molecule	ChK1 inhibitor (RG7741, GDC-0575)	SERD (3) (RG6171, GDC-9545)	PI3K inhibitor (RG6114, GDC-0077)
Indication	**Solid tumors**	**Metastatic ER+ HER2-neg. breast cancer**	**PIK3CA mutant solid tumors and metastatic ER+ HER2- breast cancer**
Phase/study	**Phase I**	**Phase I**	**Phase I**
# of patients	N=112	N=130	N=156
Design	▪ **Stage 1:** Dose escalation ▪ **Stage 2:** Cohort expansion	▪ Dose escalation and expansion at recommended phase II dose (RP2D) ▪ Single agent and in combination with palbociclib and/or luteinizing hormone–releasing hormone (LHRH) agonist	Monotherapy and in combination with SoC (letrozole; letrozole plus palbociclib; fulvestrant) ▪ **Stage 1:** Dose escalation ▪ **Stage 2:** Expansion
Primary endpoint	▪ Safety and PK	▪ Safety	▪ Safety, tolerability and PK
Status	▪ FPI Q2 2012	▪ FPI Q4 2017	▪ FPI Q4 2016 ▪ Preclinical/molecule discovery data presented at AACR 2017
CT Identifier	NCT01564251	NCT03332797	NCT03006172
Collaborator	Array BioPharma		

AACR=American Association for Cancer Research; SoC=standard of care

Oncology development programs

Cancer vaccines

Molecule	**Personalized Cancer Vaccine (PCV)** (RG6180)
Indication	**Locally advanced or metastatic solid tumors**
Phase/study	**Phase Ia/Ib**
# of patients	N=572
Design	Open-label, multicenter, global study ▪ **Phase Ia:** Dose escalation of RG6180 as single agent ▪ **Phase Ib:** Dose escalation, exploration and expansion trial of RG6180 in combination with Tecentriq
Primary endpoint	▪ Safety, tolerability, PK and immune response
Status	▪ FPI Q4 2017
CT Identifier	NCT03289962
Collaborator	BioNTech

Neuroscience development programs

gRED Genentech Research & Early Development

Molecule	Nav1.7 (2) (RG6029, GDC-0310)	DLK inhibitor (RG6000, GDC-0134)	Anti-Tau (RG6100)
Indication	**Pain**	**Amyotrophic lateral sclerosis**	**Prodromal to mild Alzheimer's disease**
Phase/study	**Phase I**	**Phase I**	**Phase II Tauriel**
# of patients	N=95	N=82	N=360
Design	▪ Randomized, placebo-controlled, double-blind study in healthy volunteers	▪ Randomized, double-blind, placebo-controlled, multicenter, single and multiple ascending dose study	▪ Randomized, double-blind, placebo-controlled, multi-center efficacy and safety study
Primary endpoint	▪ Safety, tolerability and PK of single and multiple doses	▪ Safety, tolerability, and PK of single and multiple doses	▪ Safety, CDR-SB score from baseline to week 72
Status	▪ FPI Q3 2015	▪ FPI Q2 2016	▪ FPI Q4 2017
CT Identifier	NCT02742779	NCT02655614	NCT03289143
Collaborator	Xenon Pharmaceuticals Inc.		AC Immune

CDR-SB=Clinical Dementia Rating, Sum of Boxes

Immunology development programs

gRED Genentech Research & Early Development

Molecule	IL-22Fc (RG7880)		
Indication	**Inflammatory diseases**	**Diabetic foot ulcer**	**Inflammatory bowel disease**
Phase/study	**Phase Ib**	**Phase Ib**	**Phase II**
# of patients	N=90	N=72	N=270
Design	▪ Multiple ascending dose study with healthy volunteer and patient cohorts	▪ Multiple ascending dose study in patients with neuropathic diabetic foot ulcers that do not respond adequately to standard wound care	IL-22 FC compared with vedolizumab and with placebo in the treatment of participants with moderate to severe UC ▪ **Part A:** Induction of clinical remission ▪ **Part B:** Durability of clinical remission
Primary endpoint	▪ Safety and tolerability	▪ Safety and tolerability	▪ Percentage of participants with clinical remission at week 8
Status	▪ FPI Q2 2016	▪ FPI Q4 2016 ▪ Recruitment completed Q2 2018	▪ FPI expected Q3 2018
CT Identifier	NCT02749630	NCT02833389	NCT03558152

UC=Ulcerative Colitis

Immunology development programs

Molecule	ST2 MAb (RG6149, AMG 282, MSTT1041A)	NME (RG7990, BITS7201A)	NME (RG6069, GDC-3280)
Indication	**Asthma**	**Mild atopic asthma**	**Interstitial lung disease**
Phase/study	**Phase IIb ZENYATTA**	**Phase I**	**Phase I**
# of patients	N=515	N=80	N=80
Design	Add-on therapy for the treatment of high-need, uncontrolled asthma in adults (50-week subcutaneous treatment period): ▪ **ARM A:** RG6149 (70 mg) ▪ **ARM B:** RG6149 (210mg) ▪ **ARM C:** RG6149 (490mg) ▪ **ARM D:** Placebo	▪ Single and multiple ascending dose study with healthy volunteer and patient cohorts	▪ Randomized, double-blind, placebo-controlled, ascending, single and multiple oral dose study
Primary endpoint	▪ Percentage of participants with asthma exacerbations	▪ Safety and tolerability	▪ Safety, tolerability and PK
Status	▪ FPI Q3 2016 ▪ Recruitment completed Apr 2018	▪ FPI Q2 2016	▪ Study completed Q1 2016
CT Identifier	NCT02918019	NCT02748642	NCT02471859
Collaborator	Amgen	Novimmune SA	

Immunology development programs

Molecule	NME (RG6151, GDC-0214)	NME (RG6173, MTPS9579A)	NME (RG6174, GDC-0334)
Indication	**Asthma**	**Asthma**	**Inflammatory disease**
Phase/study	**Phase I**	**Phase I**	**Phase I**
# of patients	N=84	N=70	N=106
Design	▪ Single and multiple ascending dose study with healthy volunteer and patient cohorts	▪ Single and multiple ascending dose study of MTPS9579A in healthy adult subjects	▪ Single and multiple ascending dose study of GDC-0334 and the effect of food on the pharmacokinetics of GDC-0334 in healthy adult participants
Primary endpoint	▪ Safety, tolerability and biomarker for target engagement (FeNO reduction)	▪ Safety, tolerability and PK	▪ Safety, tolerability, PK of single doses and multiple doses
Status	▪ FPI Q4 2017	▪ FPI Q1 2018	▪ FPI Q4 2017
CT Identifier	ACTRN12617001227381p		NCT03381144

Immunology development programs

Molecule	fenebrutinib (BTKi, RG7845, GDC-0853)	
Indication	**Rheumatoid arthritis**	
Phase/study	**Phase II ANDES**	**Phase II Open label extension**
# of patients	N=578	N=578
Design	Randomized, double-blind, parallel group study in rheumatoid arthritis patients ▪ **Cohort 1:** Fenebrutinib vs adalimumab in patients with inadequate response to previous MTX ▪ **Cohort 2:** Fenebrutinib vs placebo in patients with inadequate response to previous TNF	Patients enter the study after completing 12 weeks of treatment in the ANDES Randomized study: ▪ 200mg BID of fenebrutinib for 52 weeks
Primary endpoint	▪ ACR 50 and safety	▪ ACR 50 and safety
Status	▪ FPI Q3 2016 ▪ Recruitment completed Q1 2018	▪ FPI Q4 2016 ▪ Recruitment completed Q2 2018
CT Identifier	NCT02833350	NCT02983227

MTX=methotrexate

Immunology development programs

Molecule	fenebrutinib (BTKi, RG7845, GDC-0853)	
Indication	**Moderate to severe active systemic lupus erythematosus**	
Phase/study	**Phase II**	**Phase II Open label extension**
# of patients	N=240	N=240
Design	Randomized, double-blind, placebo-controlled study in active systemic lupus erythematosus patients ▪ **ARM A:** Fenebrutinib (high dose) ▪ **ARM B:** Fenebrutinib (low dose) ▪ **ARM C:** Placebo	▪ Open-Label extension study of patients previously enrolled in study GA30044 to evaluate the long-term safety and efficacy of fenebrutinib
Primary endpoint	▪ Systemic Lupus Erythematosus Responder Index (SRI)-4 response at week 48	▪ Systemic Lupus Erythematosus Responder Index (SRI)-4 response at week 48
Status	▪ FPI Q1 2017 ▪ Recruitment completed Q2 2018	▪ FPI Q1 2018
CT Identifier	NCT02908100	NCT03407482

Immunology development programs

Molecule	**fenebrutinib** (BTKi, RG7845, GDC-0853)
Indication	**Chronic spontaneous urticaria**
Phase/study	**Phase II**
# of patients	Cohort 1: N=41 Cohort 2: N=120
Design	Randomized, double-blind, placebo-controlled study in patients with CSU refractory to H1 anti-histamines *Cohort 1:* ▪ **ARM A:** Fenebrutinib ▪ **ARM B:** Placebo *Cohort 2:* ▪ **ARM A:** Fenebrutinib high dose ▪ **ARM B:** Fenebrutinib mid dose ▪ **ARM C:** Fenebrutinib low dose ▪ **ARM D:** Placebo
Primary endpoint	▪ Change from baseline in the Urticaria Activity Score over 7 days (UAS7) at day 57
Status	▪ FPI Q2 2017
CT Identifier	NCT03137069

CSU=chronic spontaneous urticaria

Infectious diseases development programs

Molecule	**Anti-*S. aureus* TAC** (RG7861)
Indication	**Serious infections caused by *Staphylococcus aureus***
Phase/study	**Phase Ib**
# of patients	N=24
Design	▪ Establish safety and PK in patients (*S. aureus* bacteremia)
Primary endpoint	▪ Safety and PK
Status	▪ FPI Q3 2017
CT Identifier	NCT03162250
Collaborator	Seattle Genetics, Symphogen

TAC=THIOMAB™ antibiotic conjugate

Ophthalmology development programs

Molecule	NME (RG6417)
Indication	Geographic atrophy
Phase/study	Phase I
# of patients	N≈44
Design	Open-label study of RG6417 following single and multiple intravitreal administrations in patients with GA secondary to AMD ▪ **Stage 1:** Single dose-escalation (SAD) ▪ **Stage 2:** Multiple-dose (MD) stages
Primary endpoint	▪ Safety and tolerability
Status	▪ FPI Q3 2017
CT Identifier	NCT03295877

GA=geographic atrophy; AMD=age-related macular degeneration

Metabolic diseases development programs

Molecule	FGFR1/KLB MAb (RG7992)	
Indication	**Metabolic diseases**	
Phase/study	**Phase Ia**	**Phase Ib**
# of patients	N=79	N=140
Design	Healthy volunteer study ▪ Randomized, blinded, placebo-controlled, single ascending dose of RG7992	Obese type 2 diabetes ▪ Randomized, blinded, placebo-controlled, multiple ascending dose of RG7992
Primary endpoint	▪ Safety and tolerability	▪ Safety, tolerability and PK
Status	▪ FPI Q4 2015 ▪ Recruitment completed Q1 2017	▪ FPI Q1 2017
CT Identifier	NCT02593331	NCT03060538

FGFR1=fibroblast growth factor receptor 1; KLB=β-Klotho

Pipeline summary

Marketed products additional indications

Global Development late-stage trials

pRED (Roche Pharma Research & Early Development)

gRED (Genentech Research & Early Development)

Roche Group HY 2018 results

Diagnostics

Foreign exchange rate information

HY 2018: Geographical sales split by divisions and Group*

CHFm	HY 2017	HY 2018	% change CER
Pharmaceuticals Division	**20,521**	**21,847**	**+7**
United States	10,185	11,378	**+15**
Europe	4,539	4,528	**-8**
Japan	1,771	1,781	**0**
International	4,026	4,160	**+5**
Diagnostics Division	**5,823**	**6,264**	**+6**
United States	1,345	1,400	**+7**
Europe	1,922	2,057	**-1**
Japan	220	216	**-2**
International	2,336	2,591	**+11**
Group	**26,344**	**28,111**	**+7**
United States	11,530	12,778	**+14**
Europe	6,461	6,585	**-6**
Japan	1,991	1,997	**0**
International	6,362	6,751	**+8**

* Geographical sales split shown here does not represent operational organization
CER=Constant Exchange Rates

Pharma Division sales HY 2018

Top 20 products

	Global		US		Europe		Japan		International	
	CHFm	% CER	CHFm	% CER	CHFm	% CER	CHFm	% CER	CHFm	% CER
Herceptin	3,624	2	1,494	12	1,076	-5	123	-15	931	-2
MabThera	3,454	-9	2,127	3	525	-47	105	-23	697	7
Avastin	3,418	0	1,442	-2	933	-2	404	3	639	6
Perjeta	1,313	23	626	27	438	11	63	12	186	46
Actemra / RoActemra	1,049	13	411	16	347	5	164	16	127	20
Ocrevus	1,040	456	939	406	78	-	-	-	23	*
Xolair	928	10	928	10	-	-	-	-	-	-
Lucentis	818	16	818	16	-	-	-	-	-	-
TNKase / Activase	652	9	626	9	-	-	-	-	26	8
Kadcyla	484	9	178	7	186	1	35	7	85	34
Esbriet	472	14	335	10	114	20	-	-	23	51
Pulmozyme	357	3	239	-1	67	0	-	-	51	32
CellCept	333	-6	54	-16	90	-5	38	5	151	-4
Tecentriq	320	37	219	-2	60	*	15	-	26	405
Tamiflu	320	-11	164	-10	22	47	75	3	59	-35
Tarceva	298	-32	126	-44	61	-23	39	-15	72	-17
Alecensa	279	91	133	87	37	*	86	32	23	439
Mircera	248	4	-	-	39	-17	95	-3	114	22
Xeloda	216	-7	17	-34	9	-32	54	3	136	-3
Madopar	182	9	-	-	55	6	7	-6	120	12

CER=Constant Exchange Rates

* over 500%

Pharma Division sales HY 2018

New products

	Global		US		Europe		Japan		International	
	CHFm	% CER	CHFm	% CER	CHFm	% CER	CHFm	% CER	CHFm	% CER
Erivedge	126	6	76	-1	37	11	-	-	13	43
Perjeta	1,313	23	626	27	438	11	63	12	186	46
Kadcyla	484	9	178	7	186	1	35	7	85	34
Gazyva	177	32	93	24	63	65	-	-	21	3
Esbriet	472	14	335	10	114	20	-	-	23	51
Cotellic	32	9	9	17	18	-4	-	-	5	57
Alecensa	279	91	133	87	37	*	86	32	23	439
Tecentriq	320	37	219	-2	60	*	15	-	26	405
Ocrevus	1,040	456	939	406	78	-	-	-	23	*
Hemlibra	57	-	46	-	7	-	4	-	-	-
Total	**4,300**	**55**	**2,654**	**66**	**1,038**	**34**	**203**	**32**	**405**	**62**

CER=Constant Exchange Rates

* over 500%

Pharma Division CER sales growth[1] in %

Global top 20 products

	Q2/17	Q3/17	Q4/17	Q1/18	Q2/18
Herceptin	4	0	6	2	2
MabThera	3	1	-3	-8	-11
Avastin	0	-4	1	-2	1
Perjeta	16	17	22	18	28
Actemra / RoActemra	12	13	14	13	13
Ocrevus	-	-	-	-	195
Xolair	13	17	15	7	14
Lucentis	-5	8	-11	6	27
TNKase / Activase	12	15	0	8	10
Kadcyla	7	10	12	6	11
Esbriet	19	3	17	13	15
Pulmozyme	-1	8	10	0	6
CellCept	-4	-8	-1	-8	-4
Tecentriq	*	104	65	29	44
Tamiflu	110	-61	-52	11	-75
Tarceva	-15	-16	-21	-32	-31
Alecensa	88	100	99	81	98
Mircera	-2	-2	3	5	4
Xeloda	5	-4	-28	-2	-11
Madopar	10	10	14	3	16

CER=Constant Exchange Rates

[1] Q2-Q4/17 vs. Q2-Q4/16; Q1-Q2/18 vs. Q1-Q2/17

* over 500%

Pharma Division CER sales growth[1] in %

Top 20 products by region

	US				Europe				Japan				International			
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Herceptin	3	16	13	11	-2	6	-3	-7	0	-1	-10	-19	0	-5	-8	4
MabThera	9	6	4	3	-16	-26	-44	-50	7	5	-11	-33	1	0	11	4
Avastin	-5	1	-3	-1	-8	-3	-3	-1	5	5	2	4	-5	1	2	9
Perjeta	10	18	18	36	20	21	13	8	22	15	11	12	35	45	34	56
Actemra / RoActemra	18	16	15	17	7	12	9	2	12	15	14	18	16	16	15	25
Ocrevus	-	-	-	163	-	-	-	-	-	-	-	-	-	-	-	*
Xolair	17	15	7	14	-	-	-	-	-	-	-	-	-	-	-	-
Lucentis	8	-11	6	27	-	-	-	-	-	-	-	-	-	-	-	-
TNKase / Activase	15	0	8	11	-	-	-	-	-	-	-	-	16	5	14	4
Kadcyla	7	15	2	12	2	3	1	1	2	6	1	12	53	29	33	35
Esbriet	3	11	8	12	-7	17	21	19	-	-	-	-	113	263	61	43
Pulmozyme	4	11	-10	7	-6	1	-4	5	-	-	-	-	50	15	69	4
CellCept	-41	-29	-19	-14	-2	-1	-5	-4	14	14	6	3	4	9	-8	-1
Tecentriq	99	48	5	-7	130	*	*	*	-	-	-	-	-	301	357	434
Tamiflu	-83	-70	10	-100	-88	-81	45	118	63	36	14	-96	-29	-45	2	-59
Tarceva	-13	-24	-41	-46	-27	-18	-23	-22	-9	-11	-23	-9	-19	-19	-24	-10
Alecensa	113	112	66	107	*	*	*	349	44	39	27	36	-	-	500	403
Mircera	-	-	-	-	-12	-14	-17	-17	3	-1	-1	-5	-2	16	19	25
Xeloda	-38	-94	38	-54	5	-25	-32	-33	-1	5	0	6	-1	11	-3	-3
Madopar	-	-	-	-	5	6	6	5	1	2	-9	-3	13	20	3	23

CER=Constant Exchange Rates

[1] Q3-Q4/17 vs. Q3-Q4/16; Q1-Q2/18 vs Q1-Q2/17

* over 500%

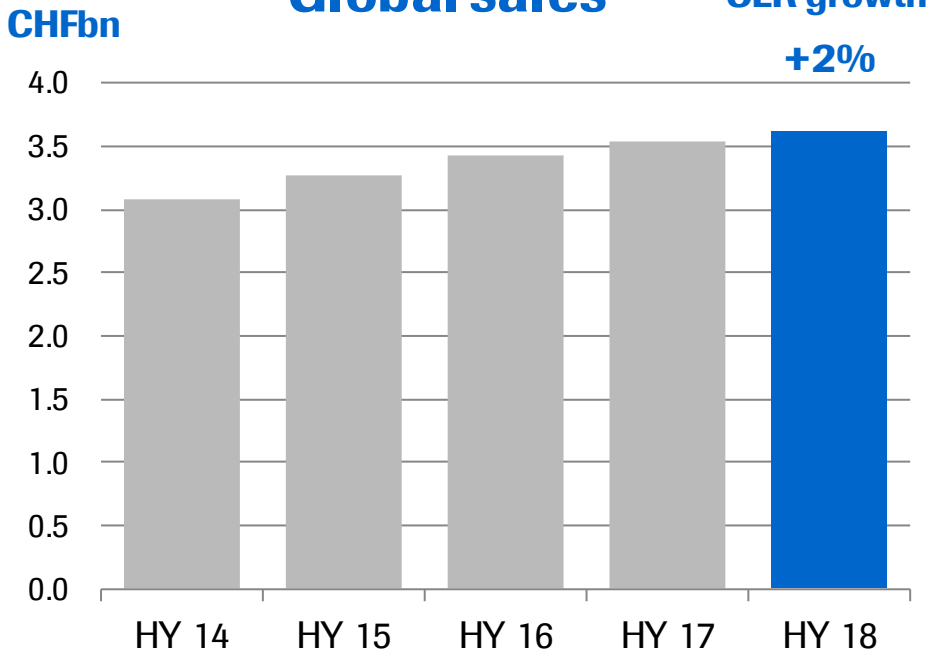
CER sales growth (%)
Quarterly development

	2017 vs. 2016				2018 vs. 2017	
	Q1	Q2	Q3	Q4	Q1	Q2
Pharmaceuticals Division	**3**	**7**	**6**	**6**	**7**	**7**
United States	6	10	12	12	15	15
Europe	1	0	-5	-5	-7	-8
Japan	-2	2	6	6	0	0
International	1	8	2	3	5	6
Diagnostics Division	**6**	**4**	**6**	**4**	**5**	**7**
Roche Group	**4**	**6**	**6**	**5**	**6**	**7**

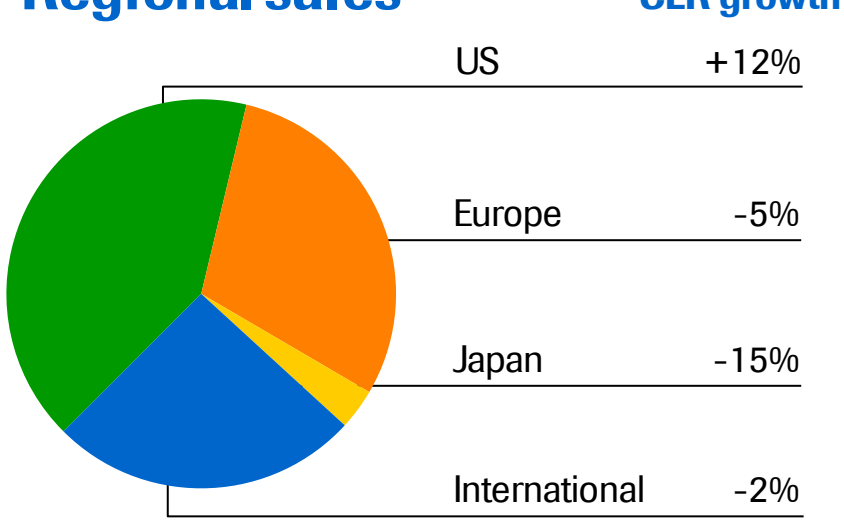
CER=Constant Exchange Rates

Herceptin

Global sales



Regional sales



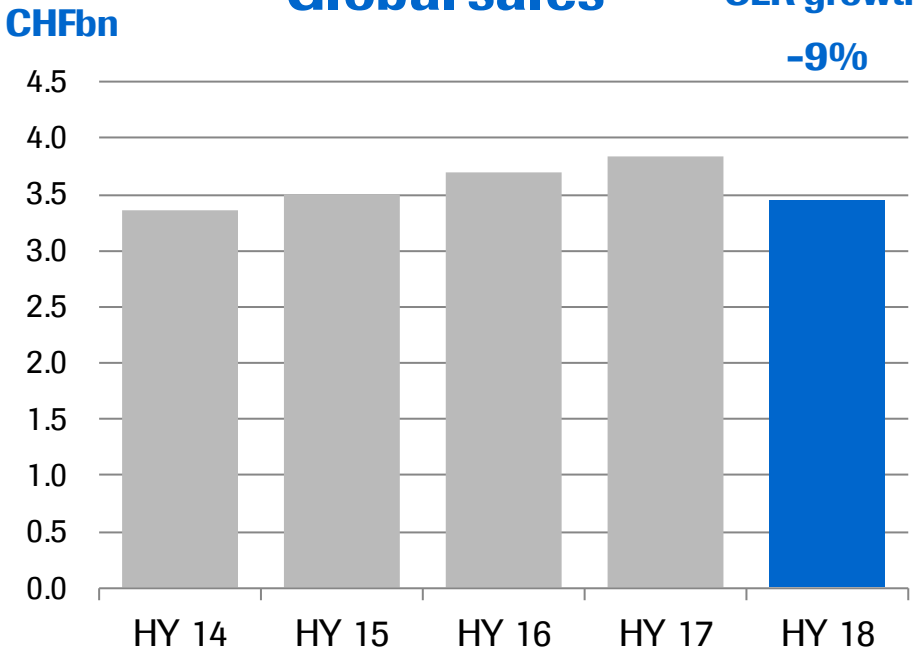
HY 2018 sales of CHF 3,624m

- US: Impacted by lower sales reserves and longer duration
- EU: First impact of biosimilar launches
- Japan: First biosimilar in mGC approved
- International: Higher sales in LATAM off-set by price decline in China

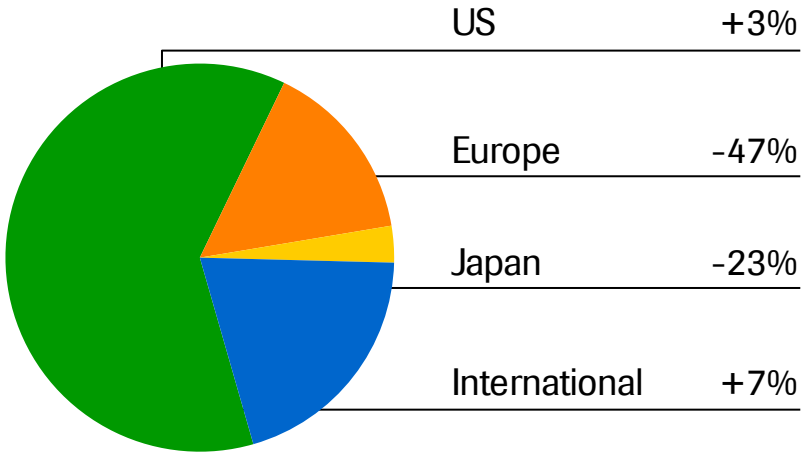
CER=Constant Exchange Rates

MabThera/Rituxan

Global sales



Regional sales



HY 2018 sales of CHF 3,454m

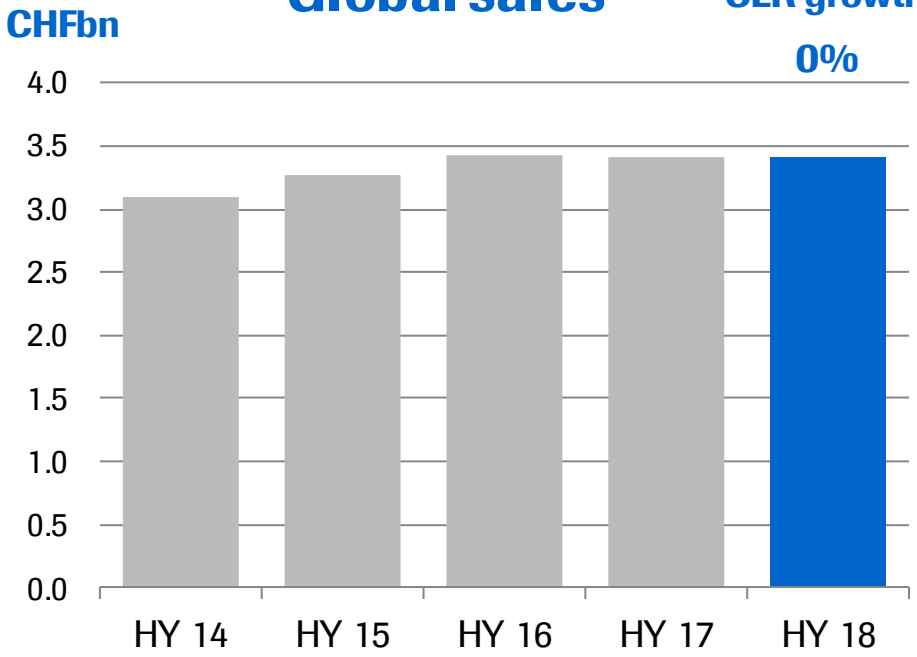
- US: Growth driven by volume and pricing
- EU: Decline due to biosimilars
- Japan: First biosimilar launched in January and impact from mandatory price cut
- International: Growth driven by all regions, especially by China where volume growth offsets price reduction

CER=Constant Exchange Rates

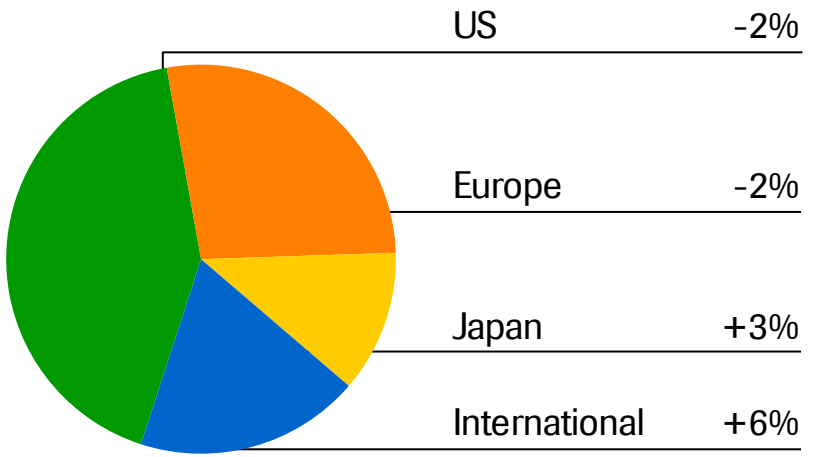
Avastin

Global sales

CER growth 0%



Regional sales



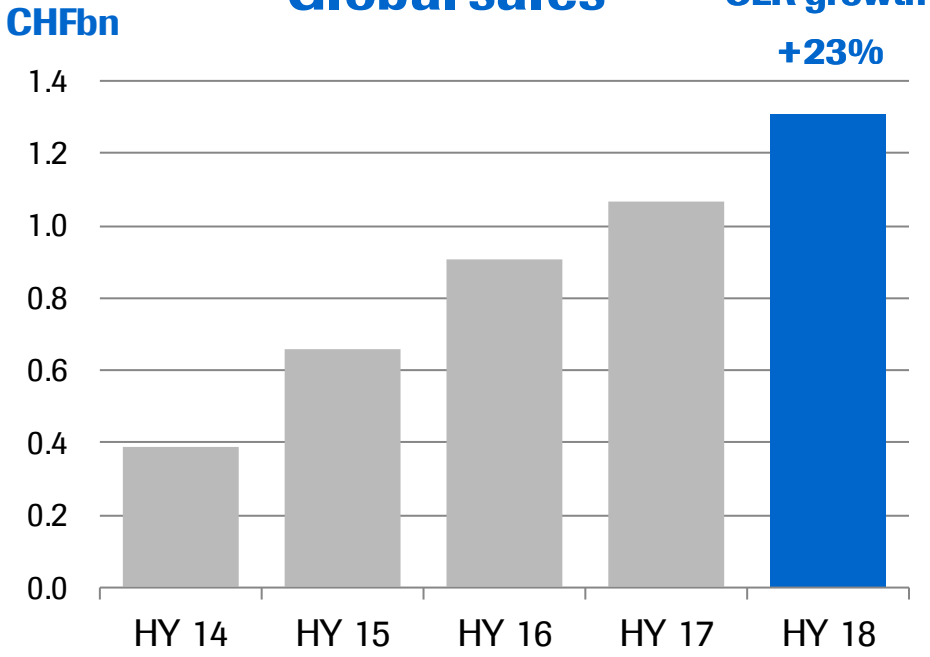
HY 2018 sales of CHF 3,418m

- US: Sales decline due to cancer immunotherapy competition
- EU: Sales decline driven by BC delisting and price decline in France
- International: Growth mainly driven by China in 1L lung and colorectal cancer

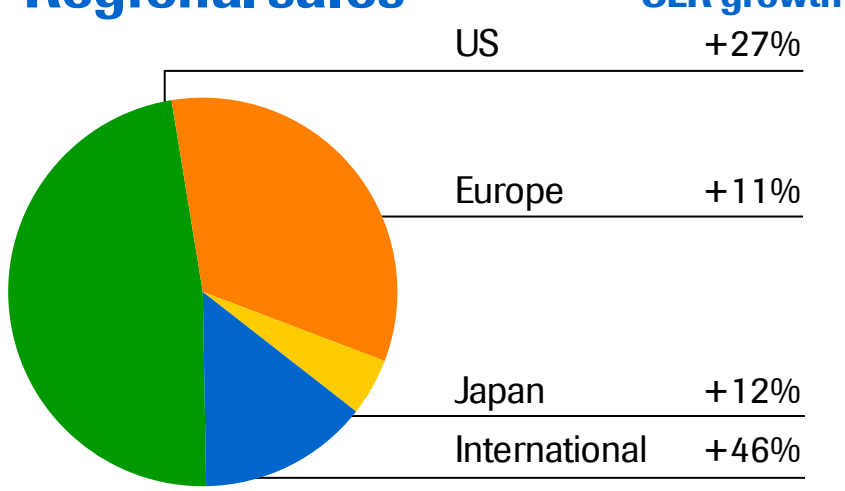
CER=Constant Exchange Rates

Perjeta

Global sales



Regional sales



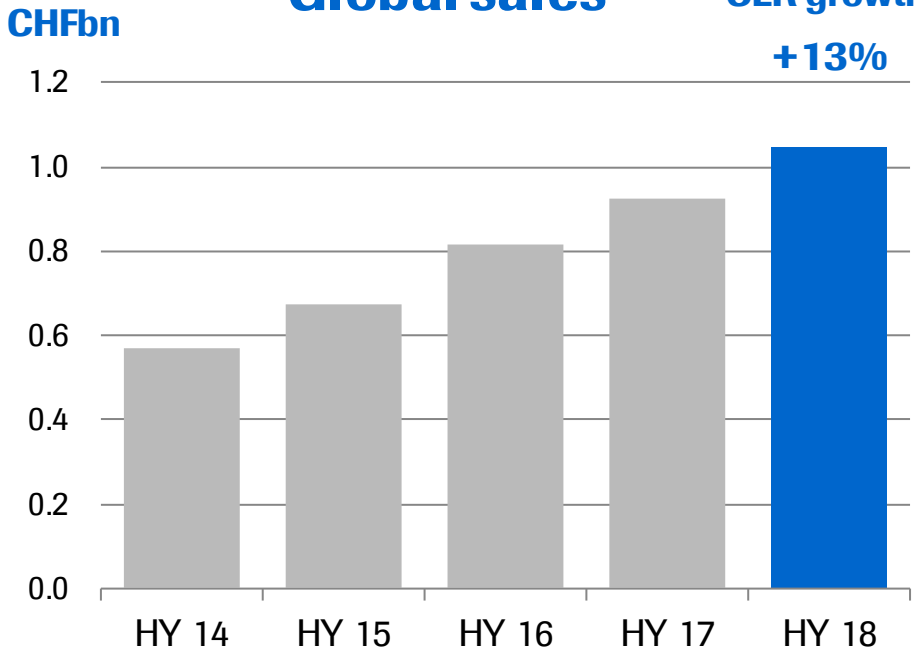
HY 2018 sales of CHF 1,313m

- US: Accelerated growth driven by eBC following the APHINITY approval in Q4 17
- EU: Growth driven by neoadjuvant and 1L mBC in all key markets; APHINITY approval in June achieved
- International: Strong growth in all regions

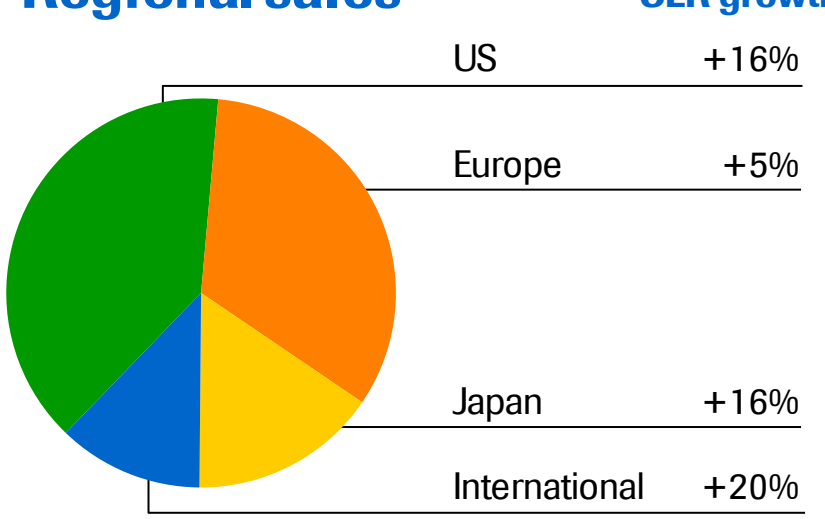
CER=Constant Exchange Rates

Actemra/RoActemra

Global sales



Regional sales



HY 2018 sales of CHF 1,049m

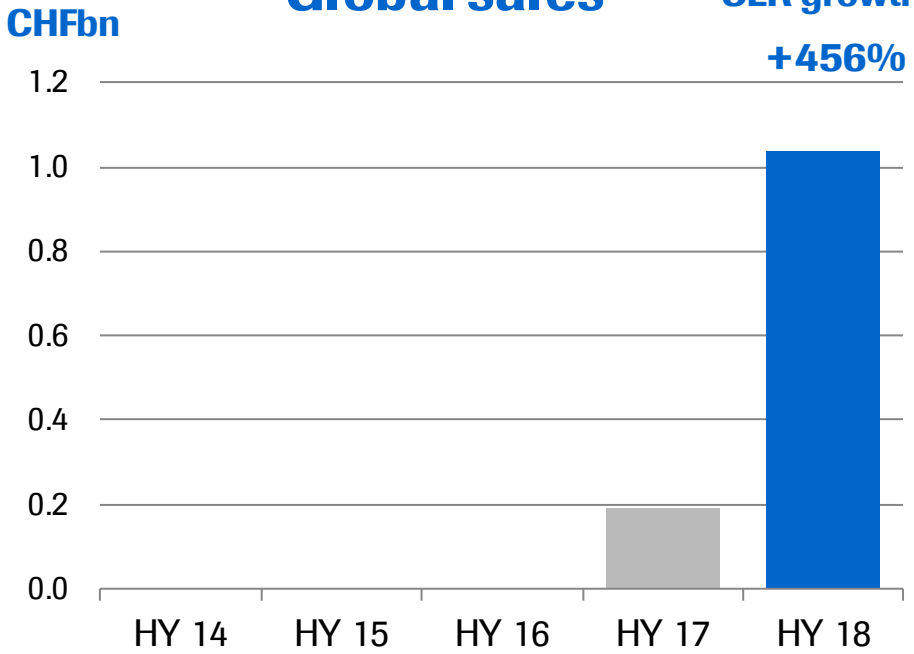
- US: Growth driven by Giant Cell Arteritis (GCA) launch and continued SC uptake
- EU: Market leadership in monotherapy (including 1L) achieved; Growth driven by GCA; Autoinjector approved in Q1 18
- International: Growth driven by all regions

CER=Constant Exchange Rates

Ocrevus

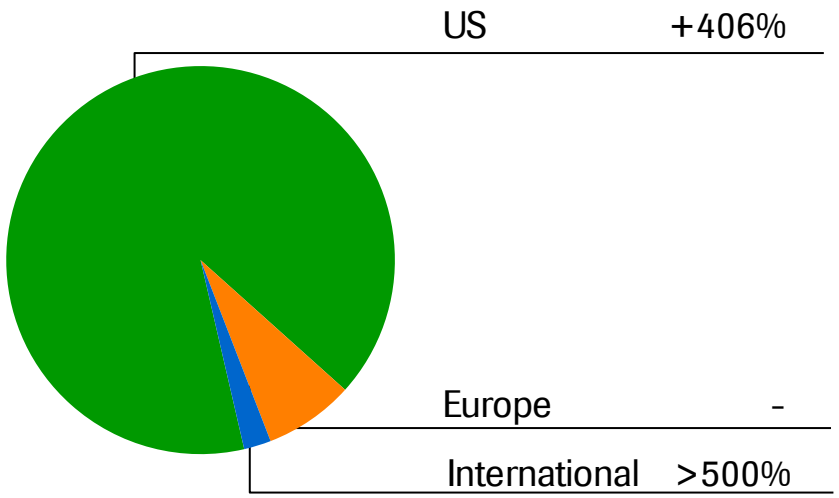
Global sales

CER growth +456%



Regional sales

CER growth

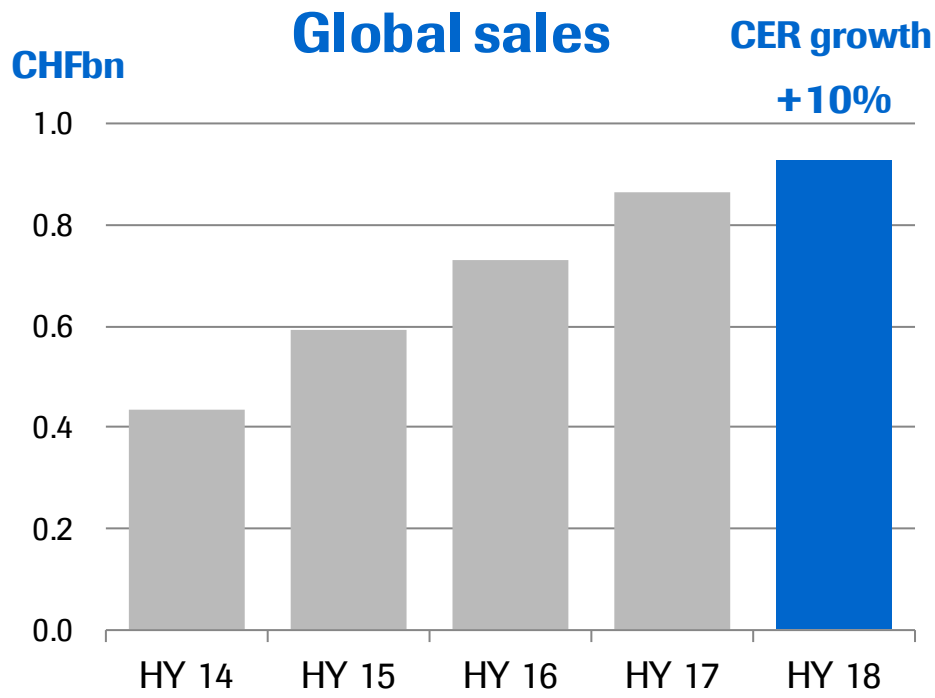


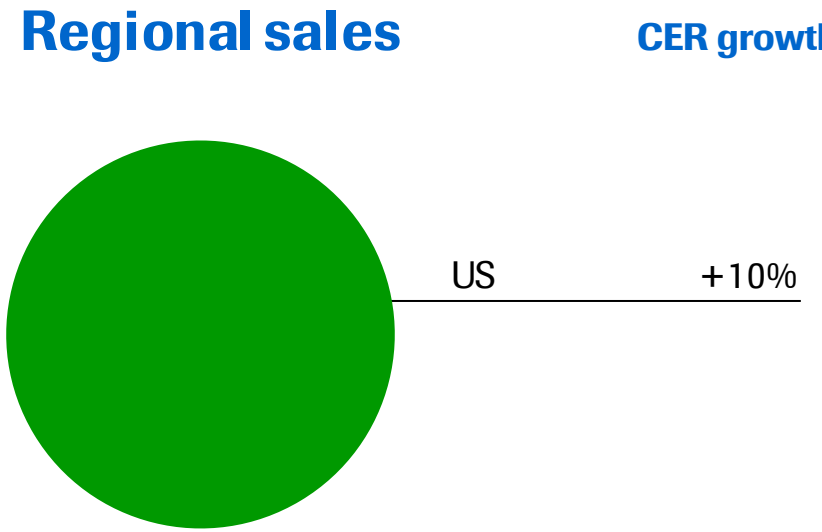
HY 2018 sales of CHF 1,040m

- US: Growth due to an increasing number of returning patients and new patients; Moving into earlier lines
- Europe: Very successful early launches in Germany and Switzerland

CER=Constant Exchange Rates

Xolair



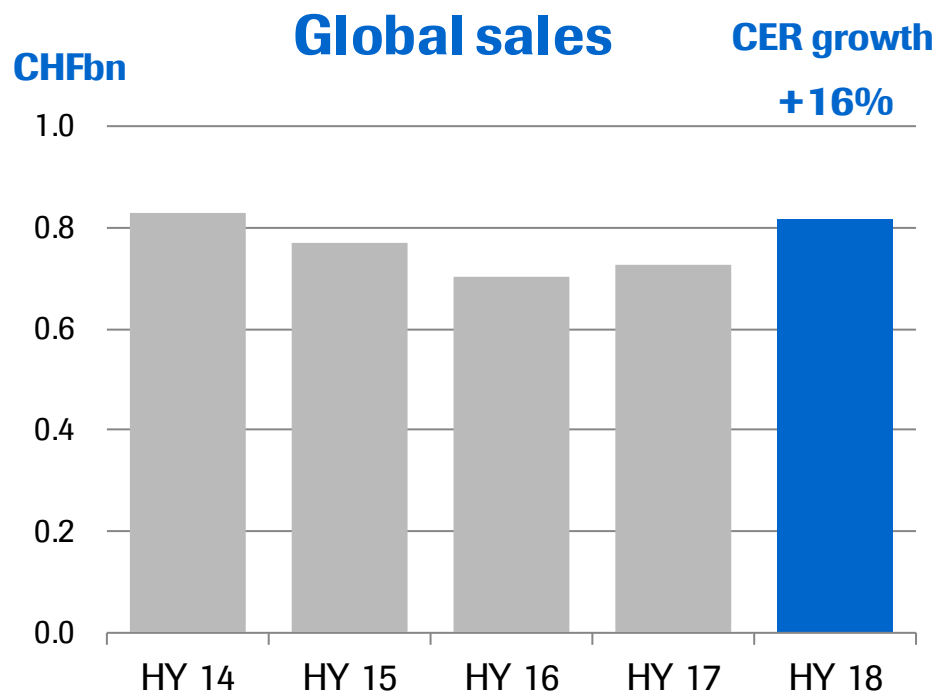


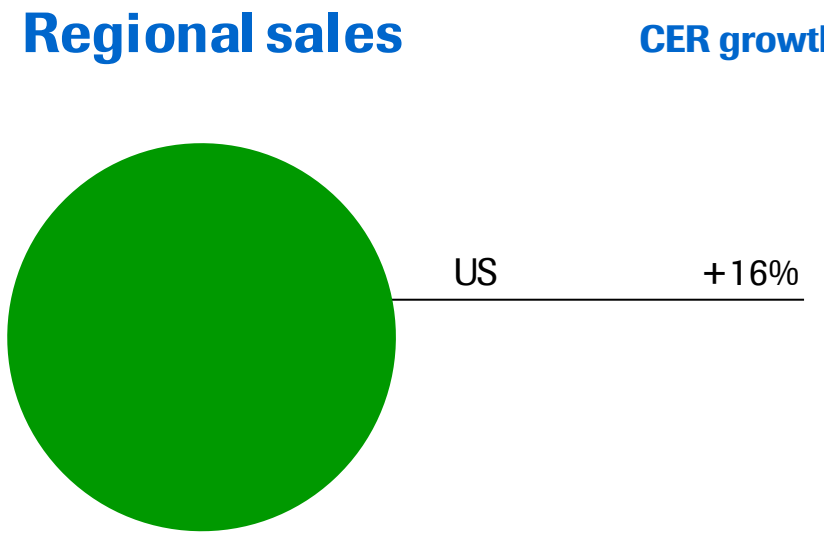
HY 2018 sales of CHF 928m

- Sterile injection water supply issue resolved in Q2
- Growth driven by pediatrics asthma launch, allergic asthma and chronic idiopathic urticaria

CER=Constant Exchange Rates

Lucentis



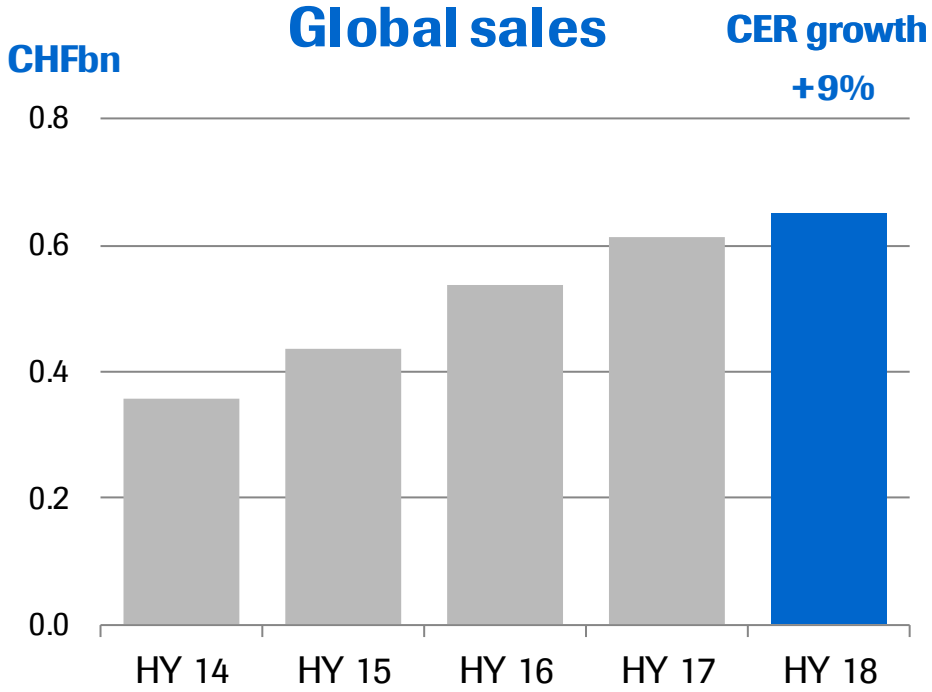


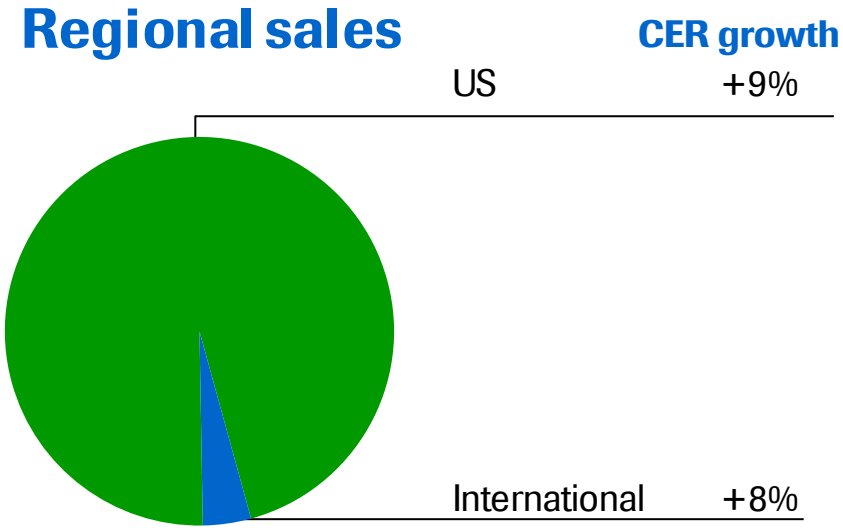
HY 2018 sales of CHF 818m

- Accelerated growth after first prefilled syringe launched for wAMD and macular edema after retinal vein oclusion
- First-in-class launches in mCNV and DR w/o DME on-going
- Market share gains in all approved indications

CER=Constant Exchange Rates

TNKase / Activase





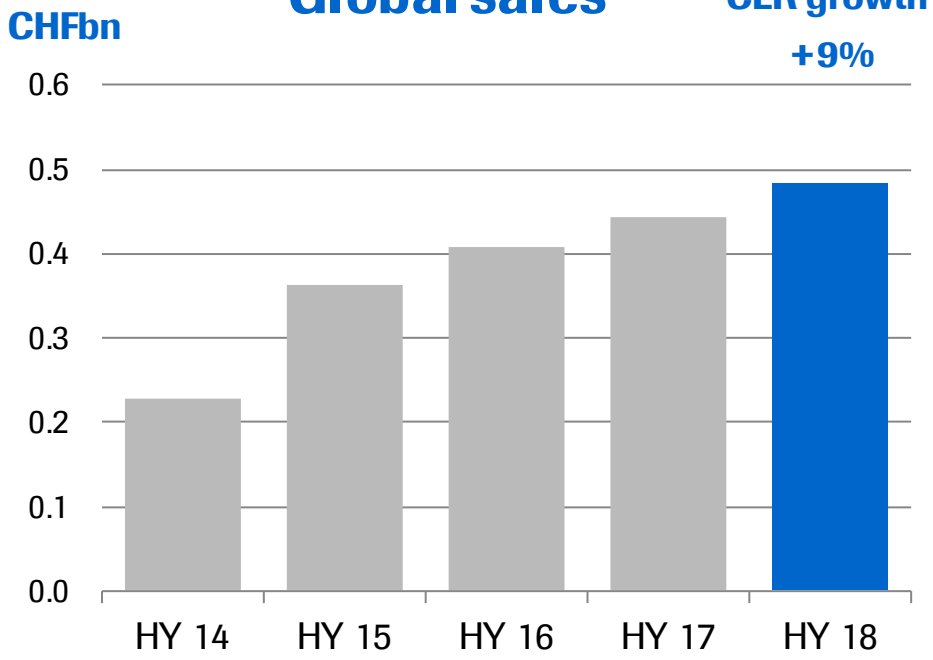
HY 2018 sales of CHF 652m

- US: Growth driven by demand

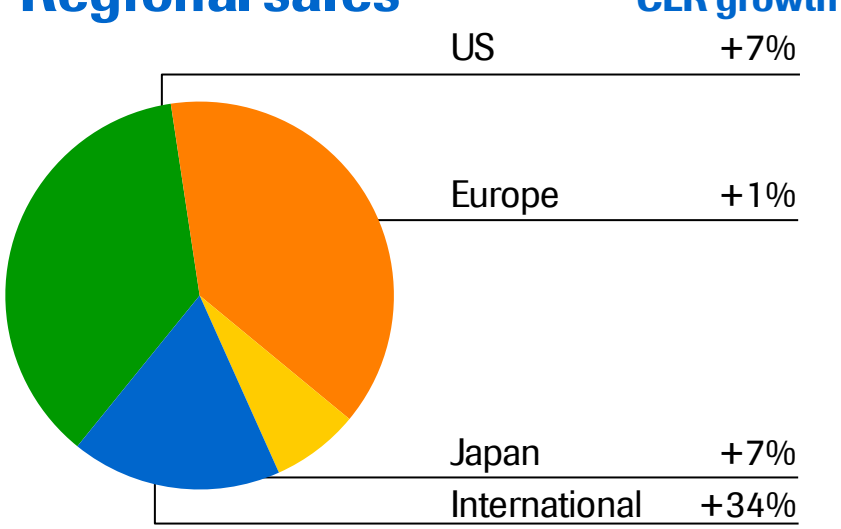
CER=Constant Exchange Rates

Kadcyla

Global sales



Regional sales

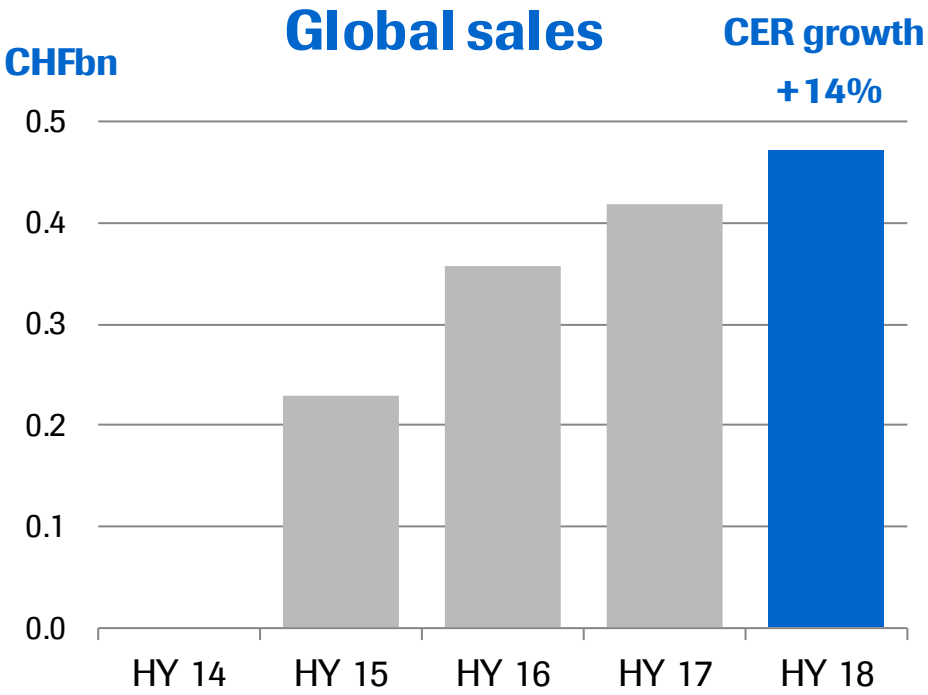


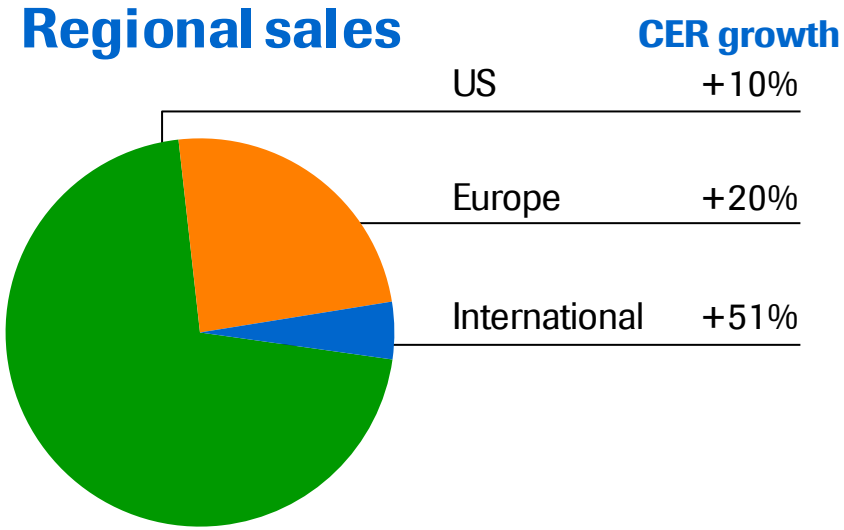
HY 2018 sales of CHF 484m

- US/EU: Increasing patient shares in 2L mBC
- International: Growth driven by all regions as roll-out progresses

CER=Constant Exchange Rates

Esbriet



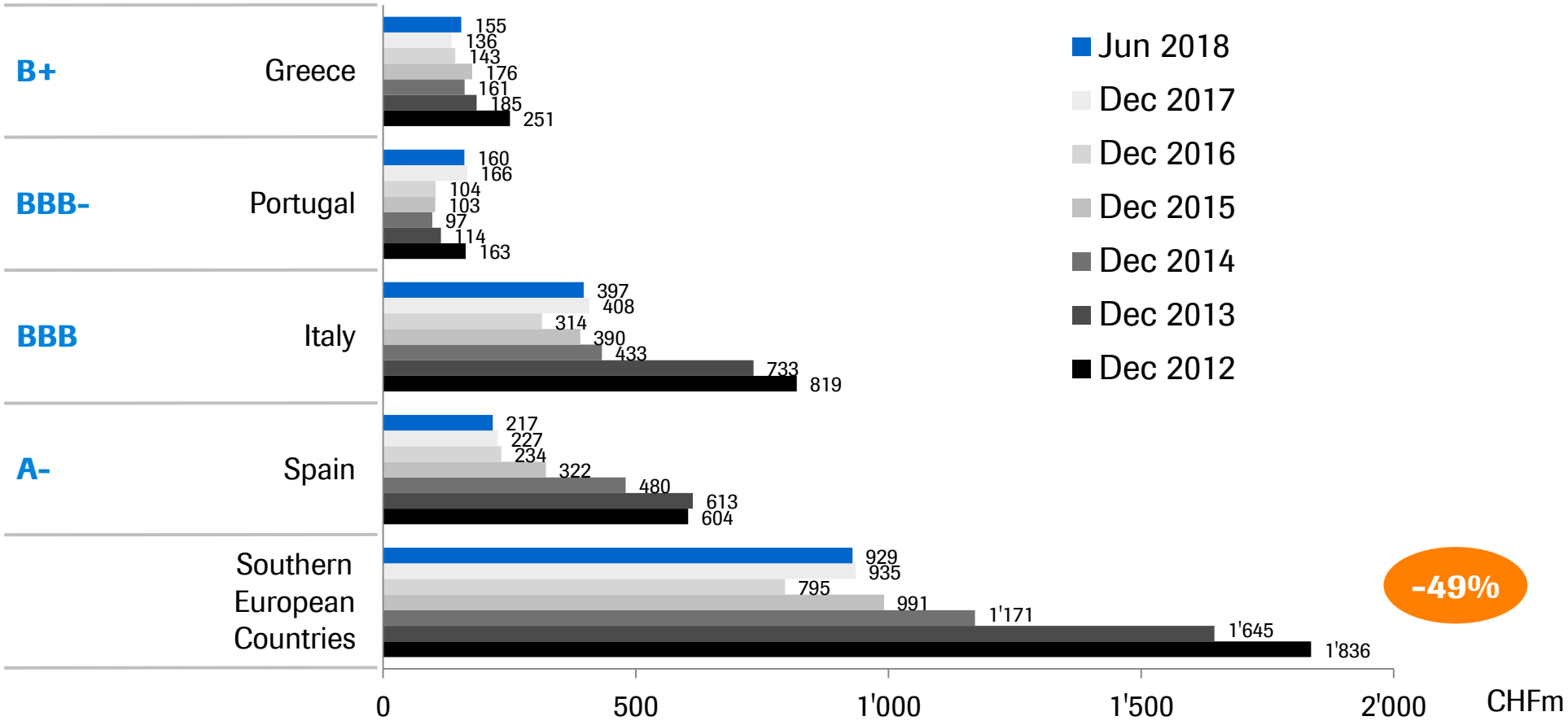


HY 2018 sales of CHF 472m

- US: Growth driven by continued penetration in moderate and mild patients
- EU: Growth driven by continued penetration in moderate and mild patients
- Overall market leadership in US and EU5 maintained

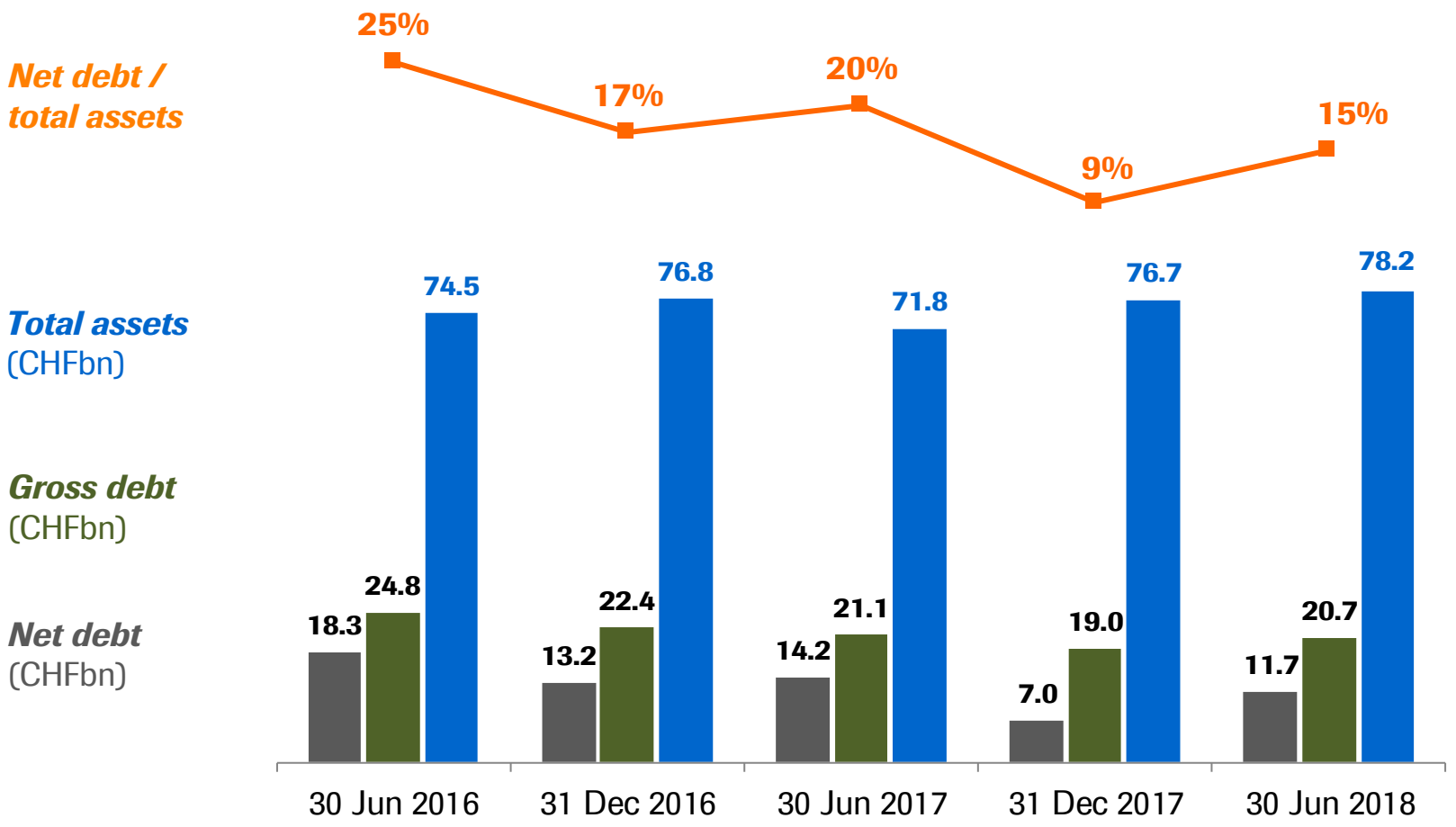
CER=Constant Exchange Rates

HY 2018: Accounts receivable in Southern Europe decreased by –49% since Dec 2012



Sovereign country ratings from Standard & Poor's, as of 9 July 2018

Balance sheet: Gross debt, Net debt and Total assets



Pipeline summary

Marketed products additional indications

Global Development late-stage trials

pRED (Roche Pharma Research & Early Development)

gRED (Genentech Research & Early Development)

Roche Group HY 2018 results

Diagnostics

Foreign exchange rate information

HY 2018: Diagnostics Division CER growth

By Region and Business Area (vs. 2017)

	Global		North America		EMEA[1]		RoW	
	CHFm	% CER growth	CHFm	% CER growth	CHFm	% CER growth	CHFm	% CER growth
Centralised and Point of Care Solutions	3,755	6	758	6	1,358	2	1,639	11
Diabetes Care	991	1	126	9	613	-5	252	10
Molecular Diagnostics	979	5	376	6	379	5	224	5
Tissue Diagnostics	539	11	310	10	142	11	87	18
Diagnostics Division	**6,264**	**6**	**1,570**	**7**	**2,492**	**1**	**2,202**	**11**

CER=Constant Exchange Rates

[1] Europe, Middle East and Africa

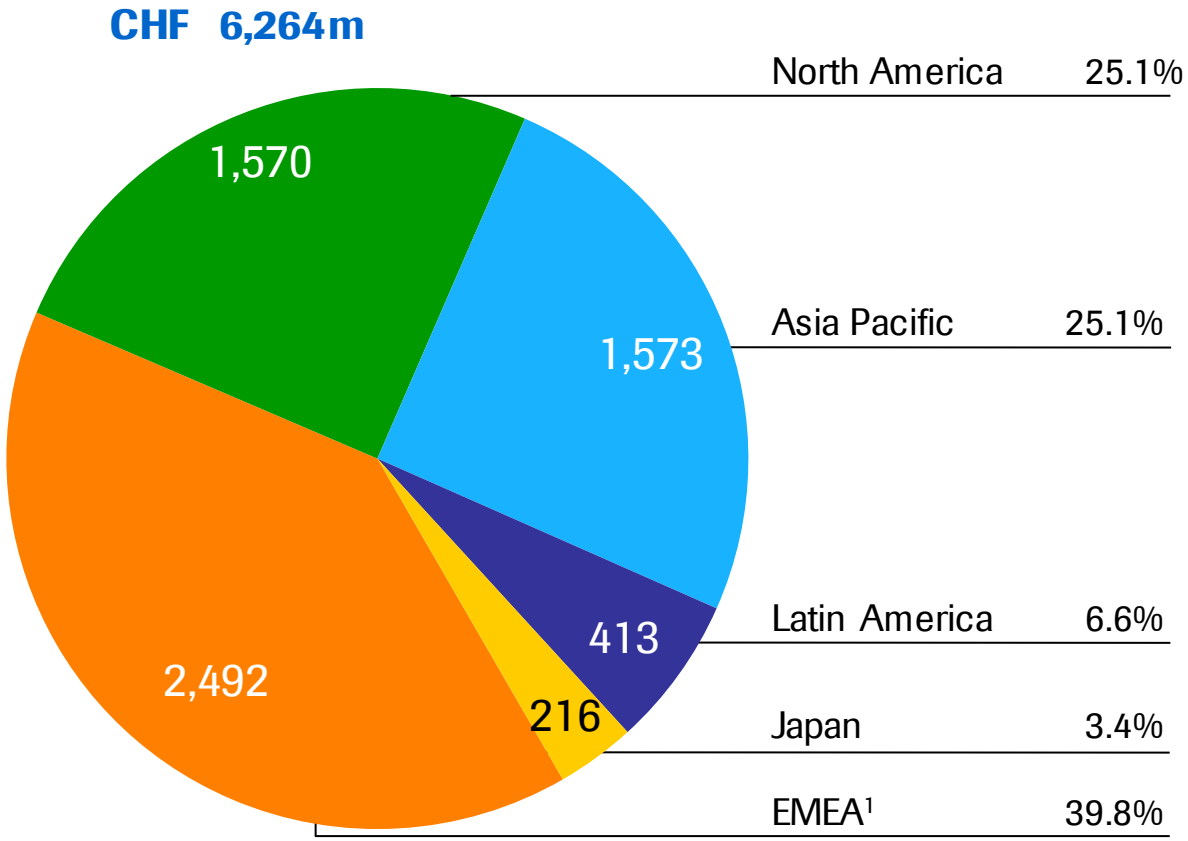
Diagnostics Division quarterly sales and CER growth[1]

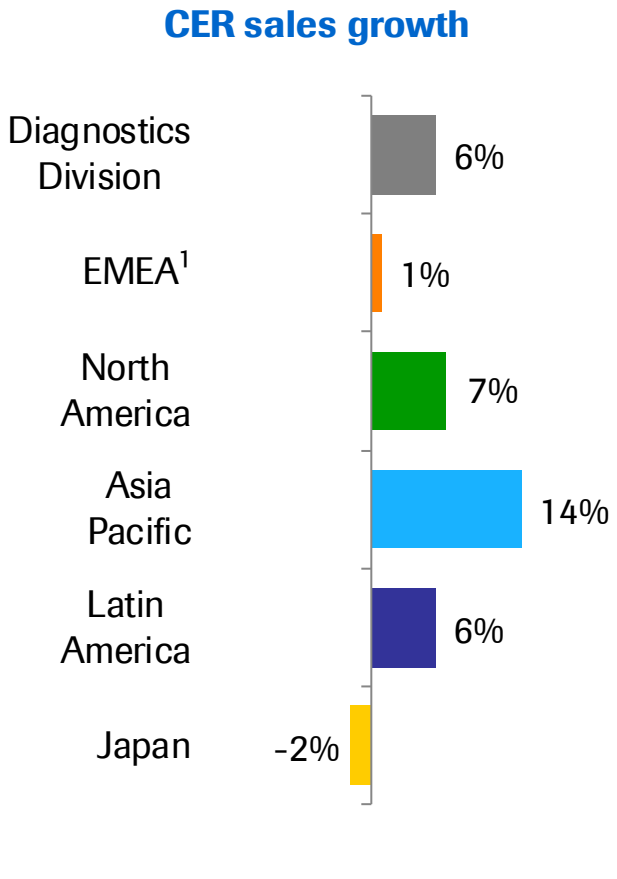
	Q1 17		Q2 17		Q3 17		Q4 17		Q1 18		Q2 18	
	CHFm	% CER	CHFm	% CER	CHFm	% CER	CHFm	% CER	CHFm	% CER	CHFm	% CER
Centralised and Point of Care Solutions	1,641	9	1,815	7	1,755	7	1,968	7	1,716	4	2,039	9
Diabetes Care	447	1	515	-7	502	2	501	-9	478	5	513	-3
Molecular Diagnostics	441	-2	479	4	468	6	532	5	468	6	511	4
Tissue Diagnostics	236	15	249	12	250	13	280	6	249	7	290	15
Dia Division	**2,765**	**6**	**3,058**	**4**	**2,975**	**6**	**3,281**	**4**	**2,911**	**5**	**3,353**	**7**

CER=Constant Exchange Rates
[1] versus same period of prior year

HY 2018: Diagnostics Division sales

Growth driven by Asia Pacific and North America

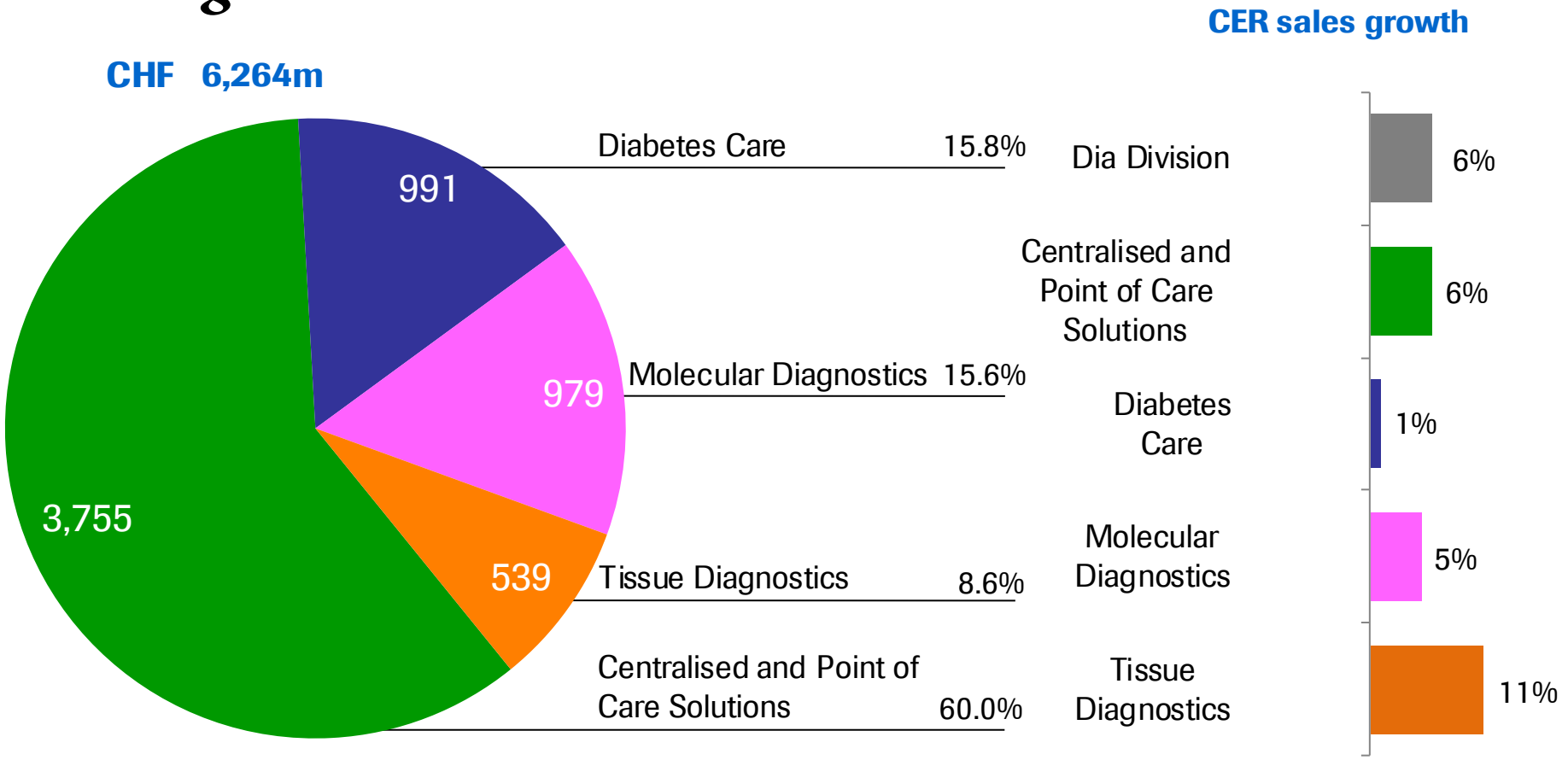




CER=Constant Exchange Rates
[1] Europe, Middle East and Africa

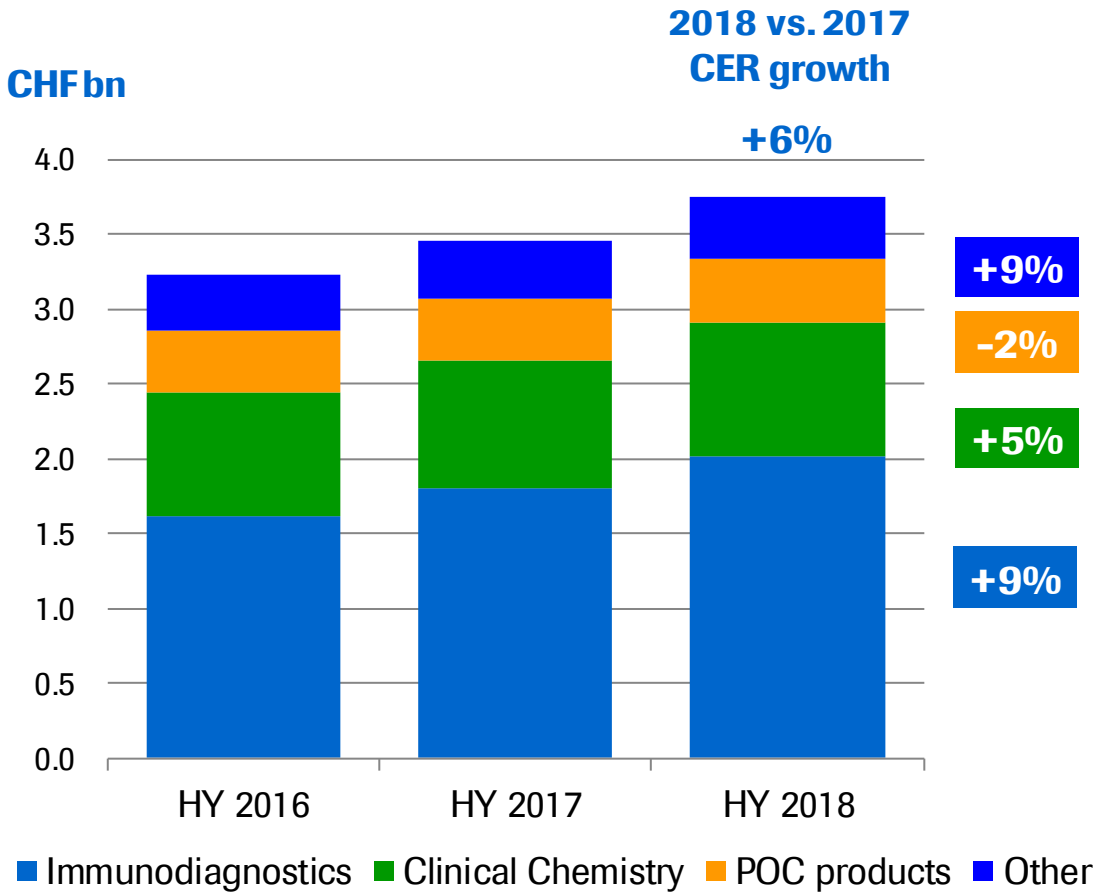
HY 2018: Diagnostics Division sales

Strong growth driven by Centralised and Point of Care Solutions and Tissue Diagnostics



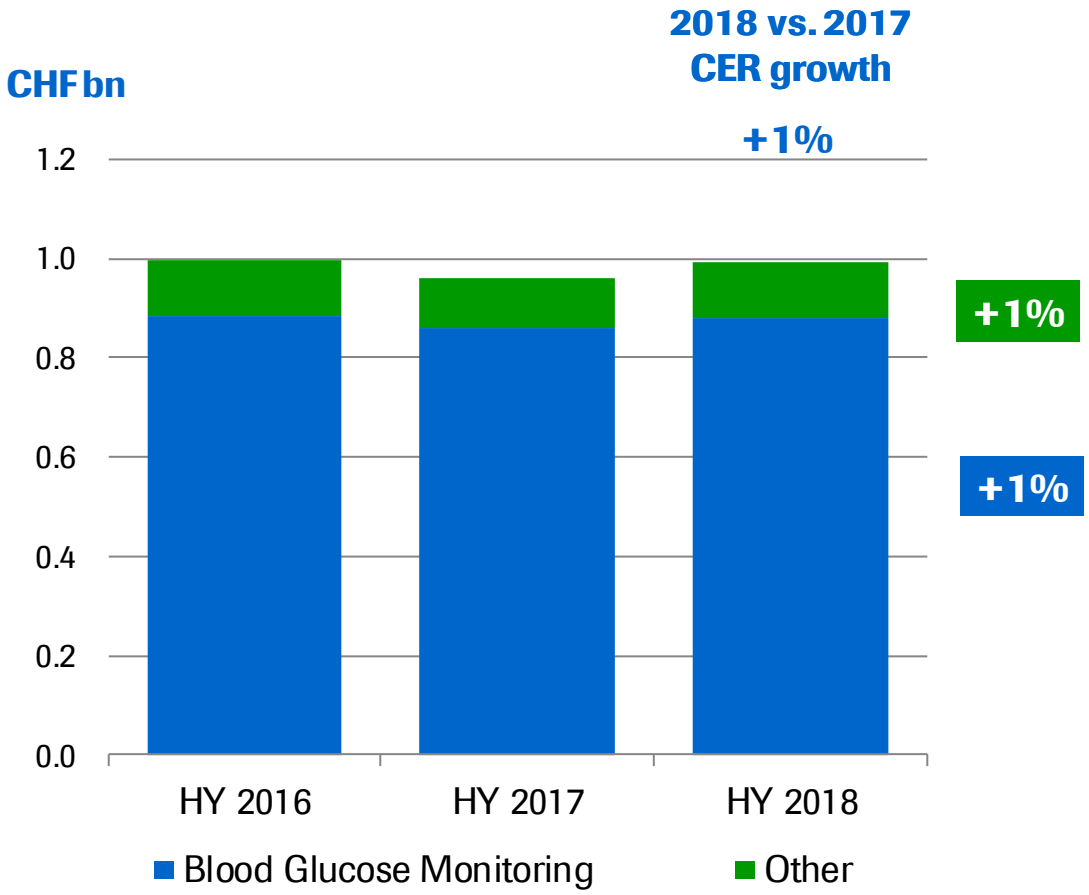
CER=Constant Exchange Rates

Centralised and Point of Care Solutions



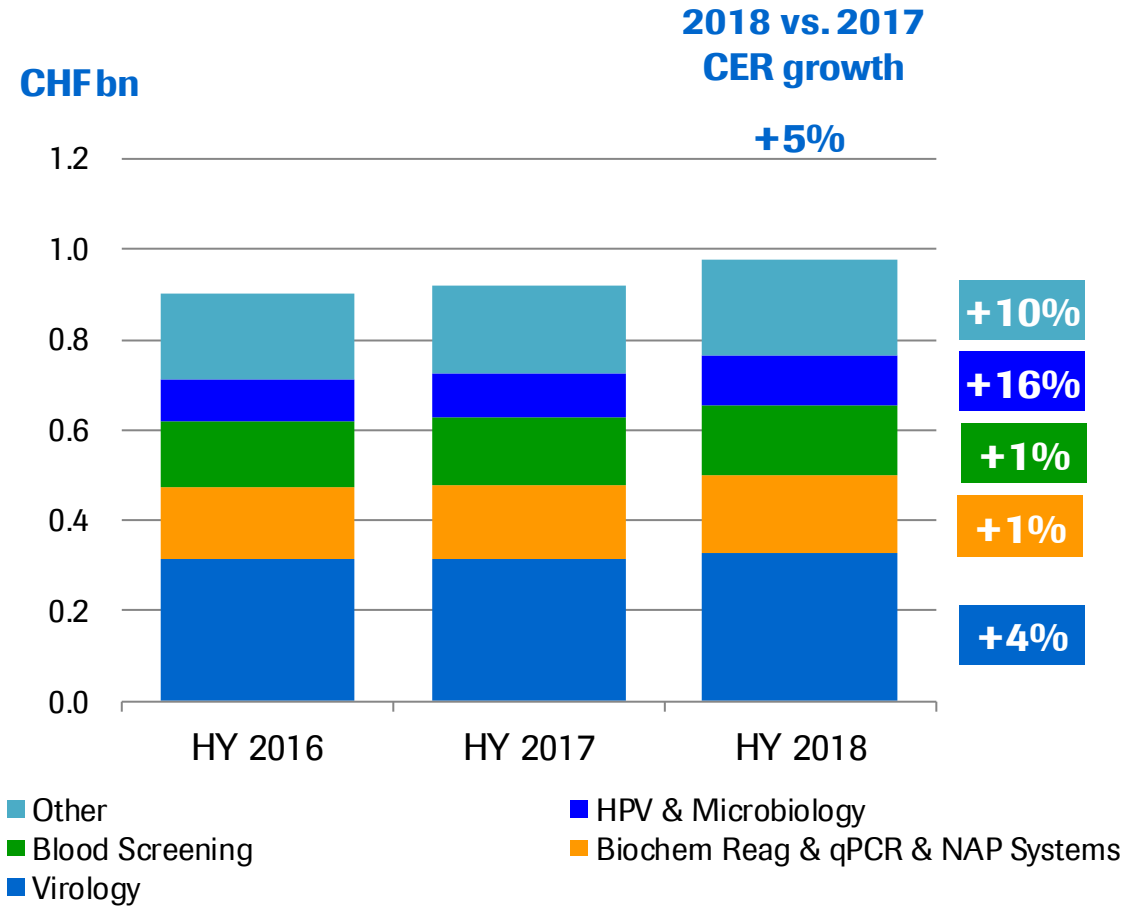
CER=Constant Exchange Rates

Diabetes Care



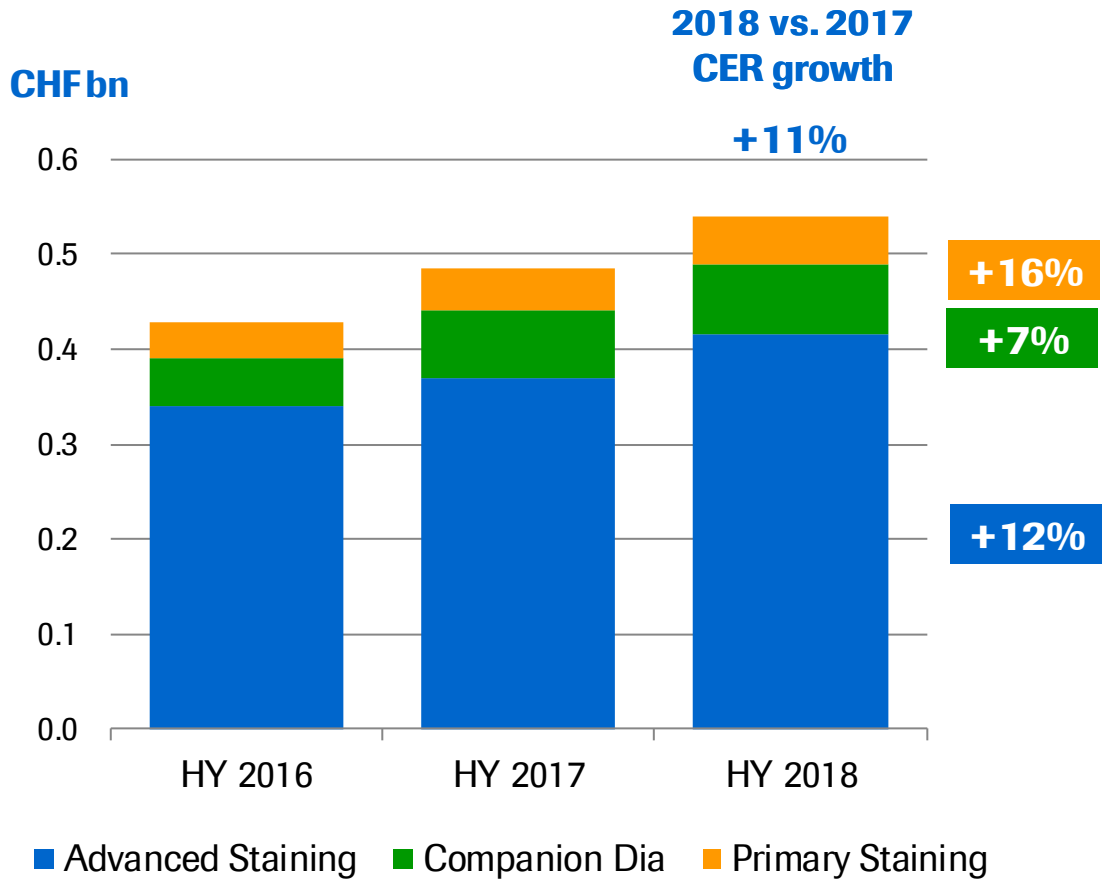
CER=Constant Exchange Rates

Molecular Diagnostics



CER=Constant Exchange Rates

Tissue Diagnostics



CER=Constant Exchange Rates

Pipeline summary

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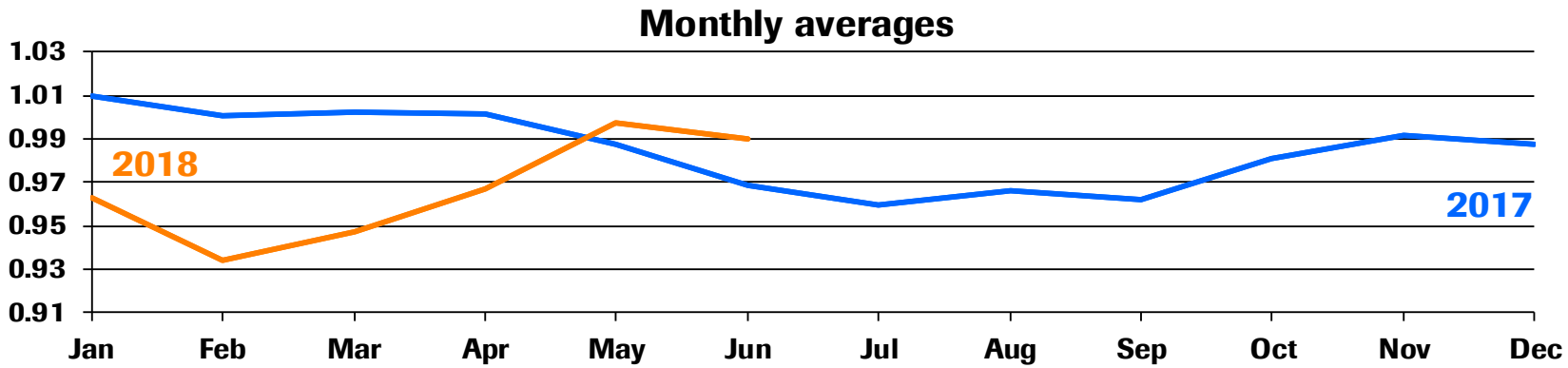
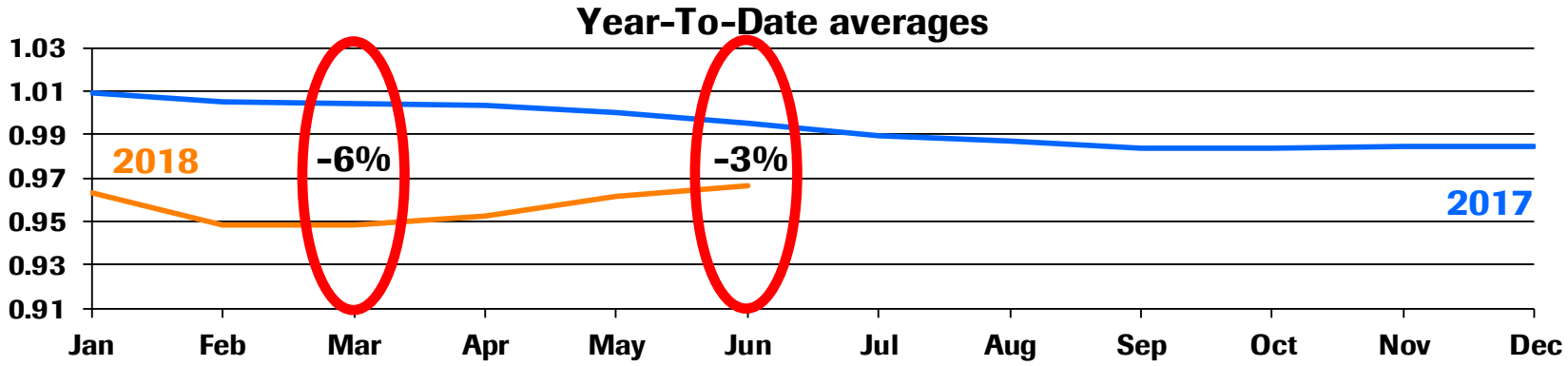
Roche Group HY 2018 results

Diagnostics

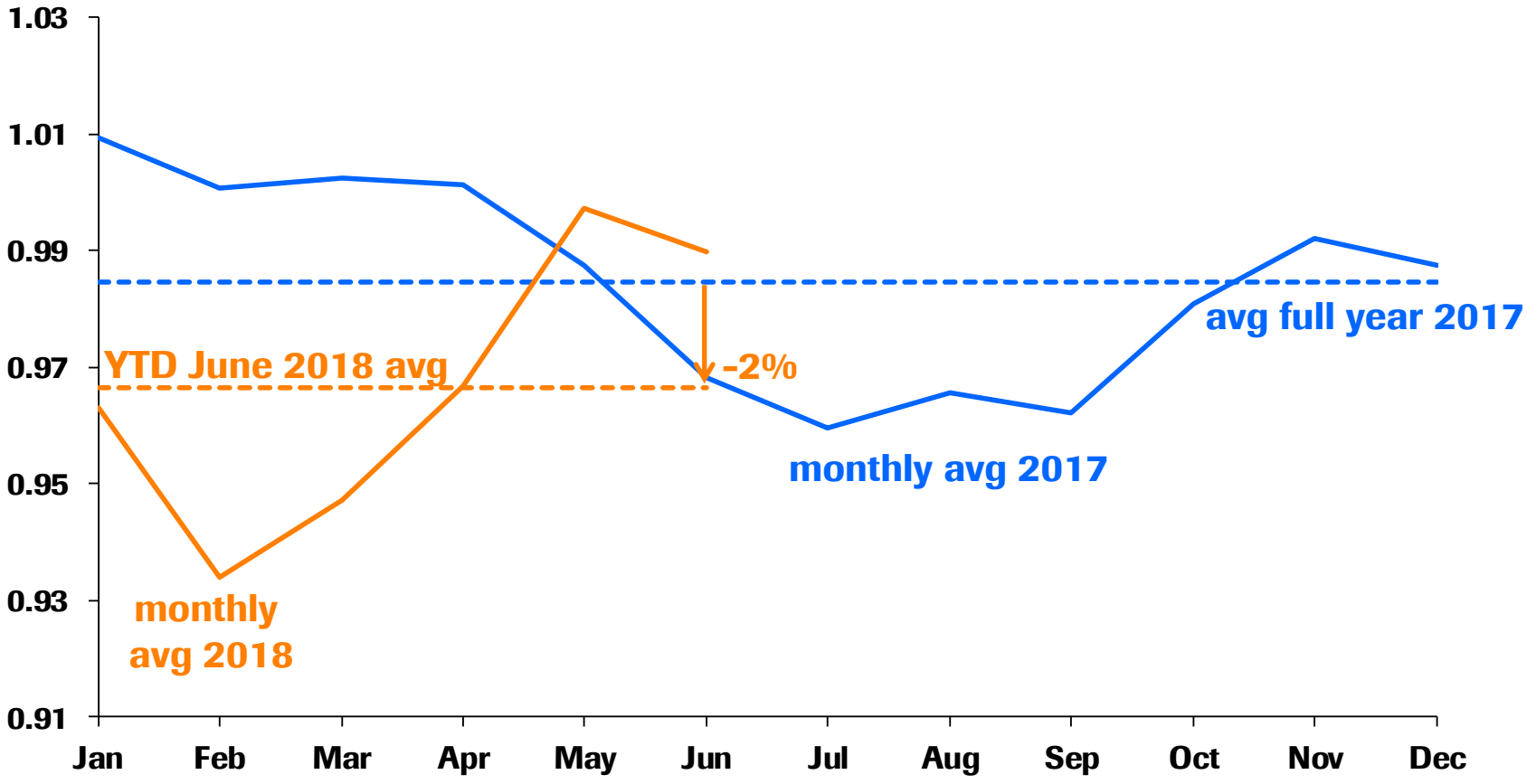
Foreign exchange rate information

CHF / USD

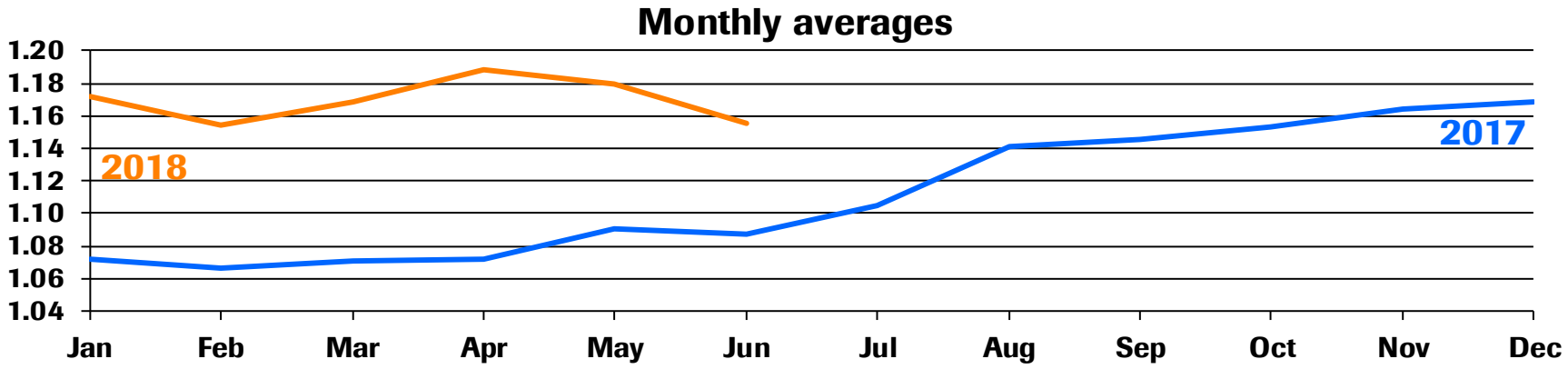

Monthly averages
1.03
1.01
0.99
0.97
0.95
0.93
0.91
2018
2017
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

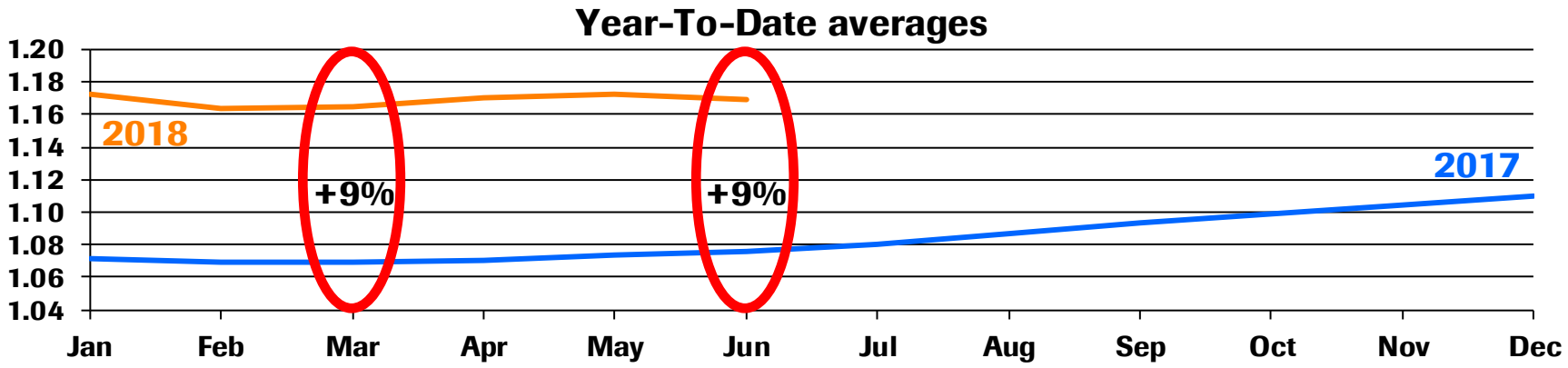

Year-To-Date averages
1.03
1.01
0.99
0.97
0.95
0.93
0.91
2018
-6%
-3%
2017
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

CHF / USD

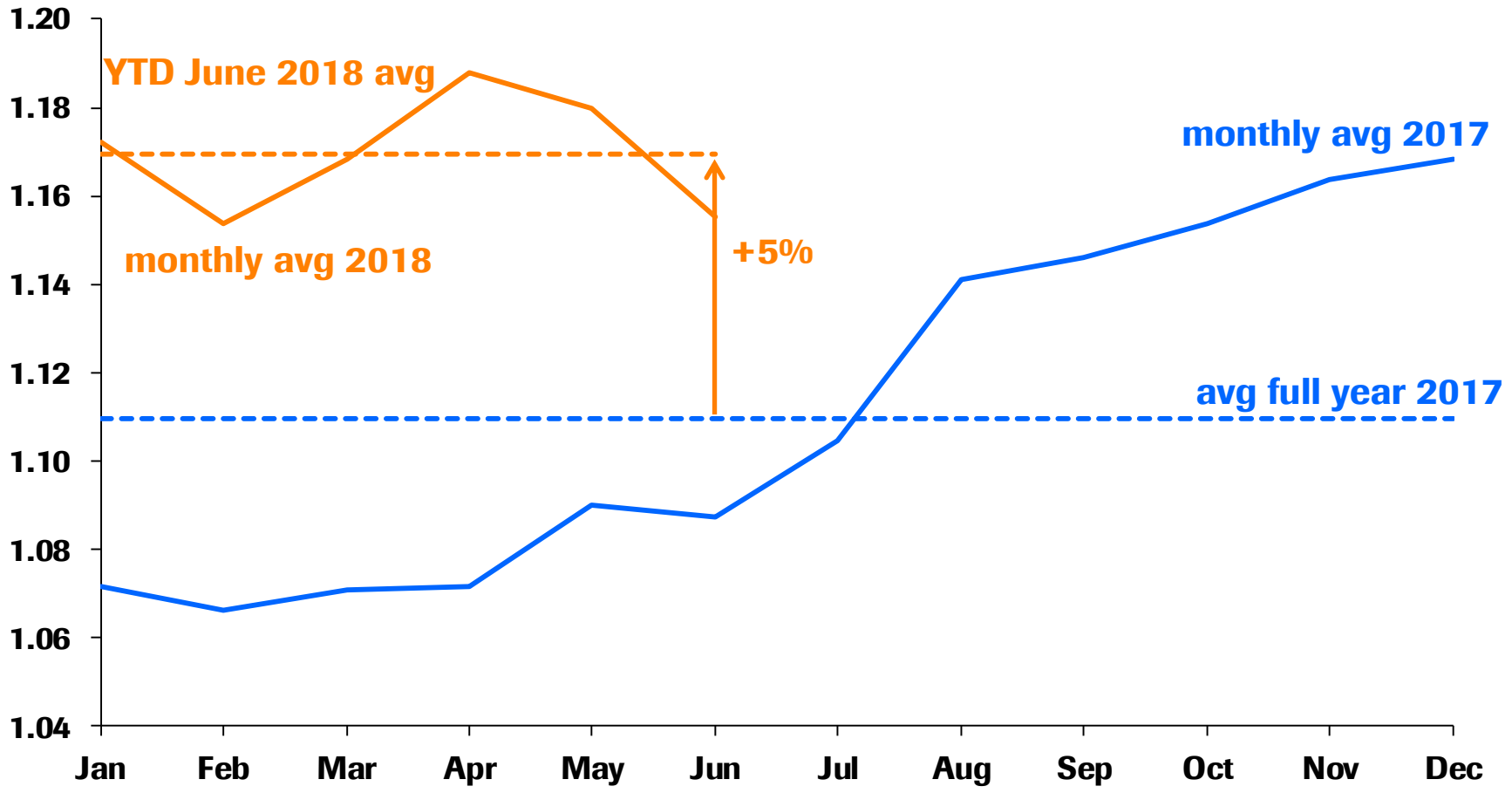

1.03
1.01
0.99
0.97
0.95
0.93
0.91
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
YTD June 2018 avg
-2%
avg full year 2017
monthly avg 2017
monthly
avg 2018

CHF / EUR


Monthly averages
1.20
1.18
1.16
1.14
1.12
1.10
1.08
1.06
1.04
2018
2017
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

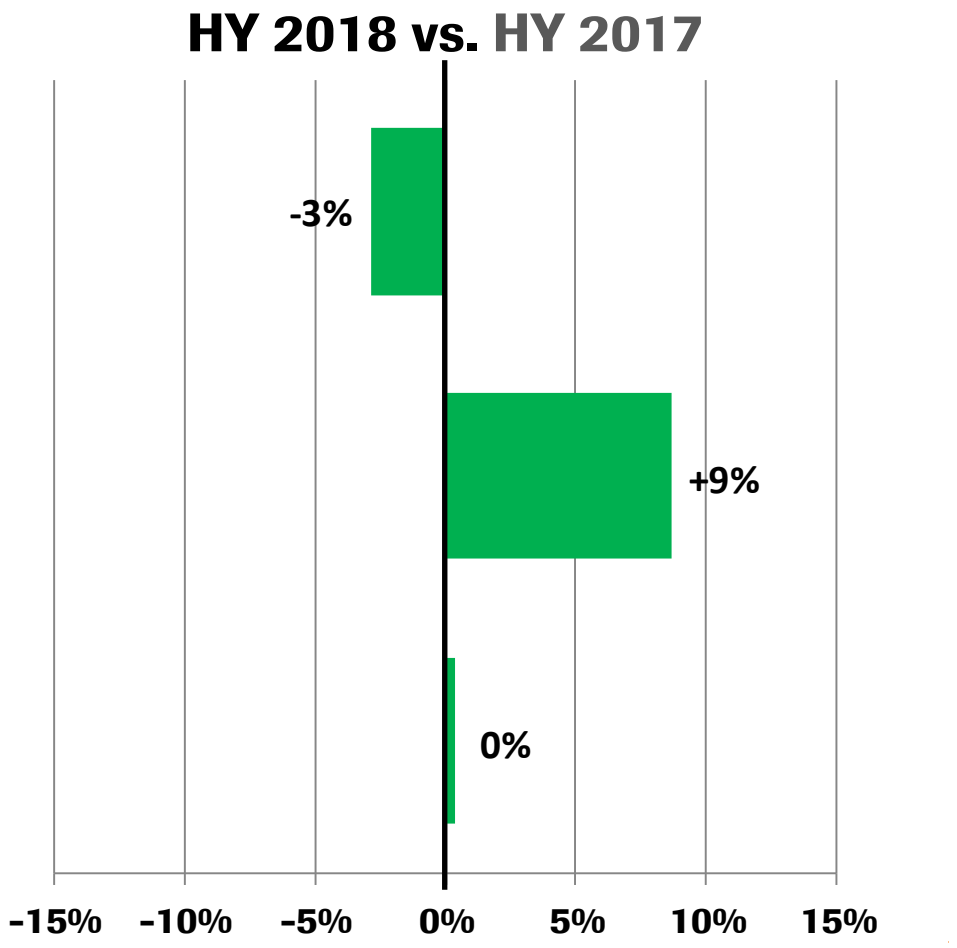

Year-To-Date averages
1.20
1.18
1.16
1.14
1.12
1.10
1.08
1.06
1.04
2018
+9%
+9%
2017
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

CHF / EUR


1.20
1.18
1.16
1.14
1.12
1.10
1.08
1.06
1.04
YTD June 2018 avg
monthly avg 2018
+5%
monthly avg 2017
avg full year 2017
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

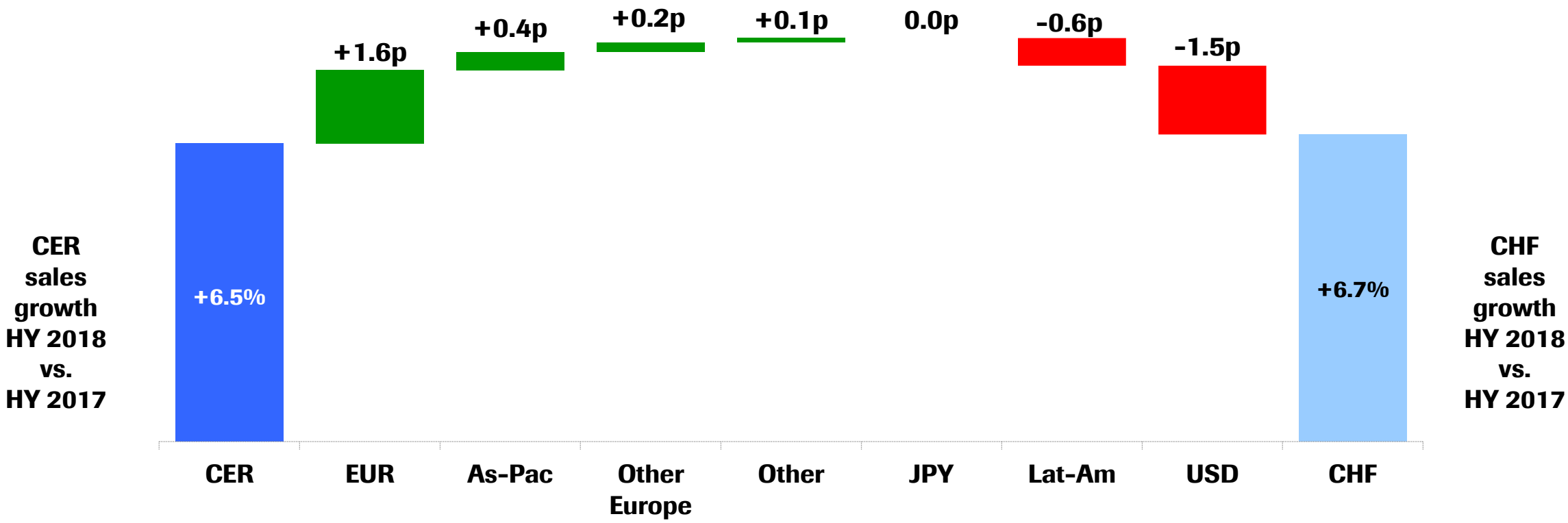
Average CHF exchange rates

	HY 2018	HY 2017
USD	0.97	0.99
EUR	1.17	1.08
JPY	0.89	0.89



Exchange rate impact on sales growth

Positive impact from EUR, partially offset by USD

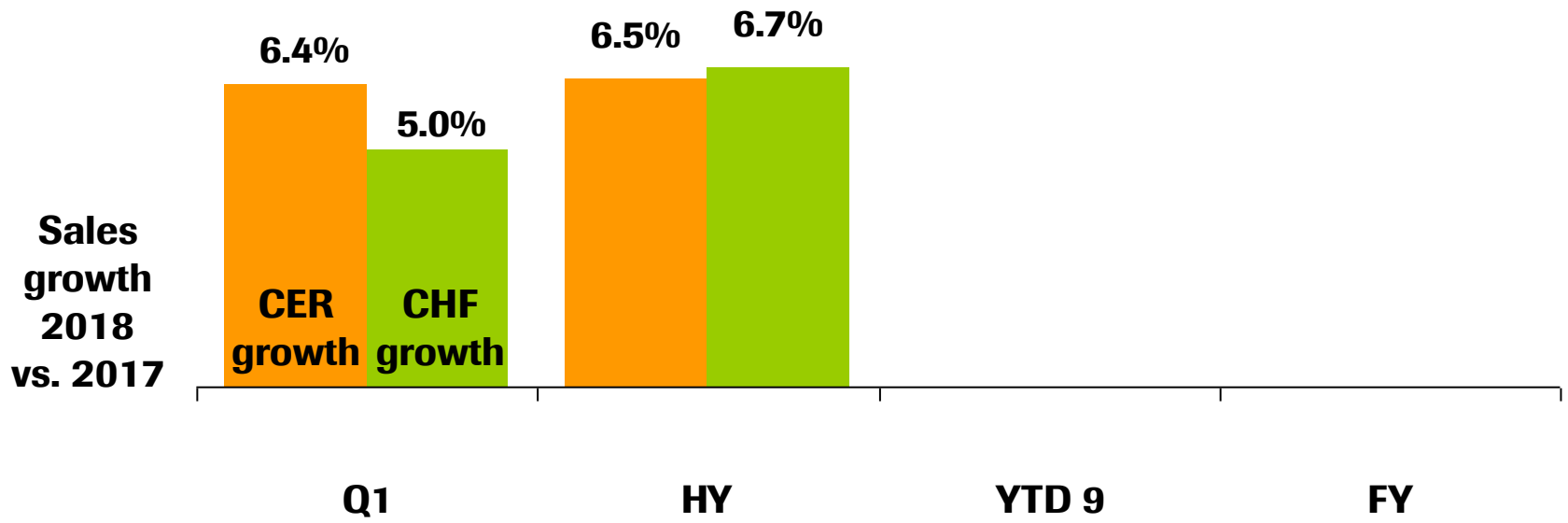


CER = Constant Exchange Rates (avg full year 2017)

Exchange rate impact on sales growth

In HY 2018 positive impact of EUR and JPY, partially offset by USD

Development of average exchange rates versus prior year period		
CHF / USD	-5.6%	-2.9%
CHF / EUR	+8.9%	+8.7%
CHF / JPY	-1.0%	+0.4%
Difference in CHF / CER growth	-1.4%p	+0.2%p



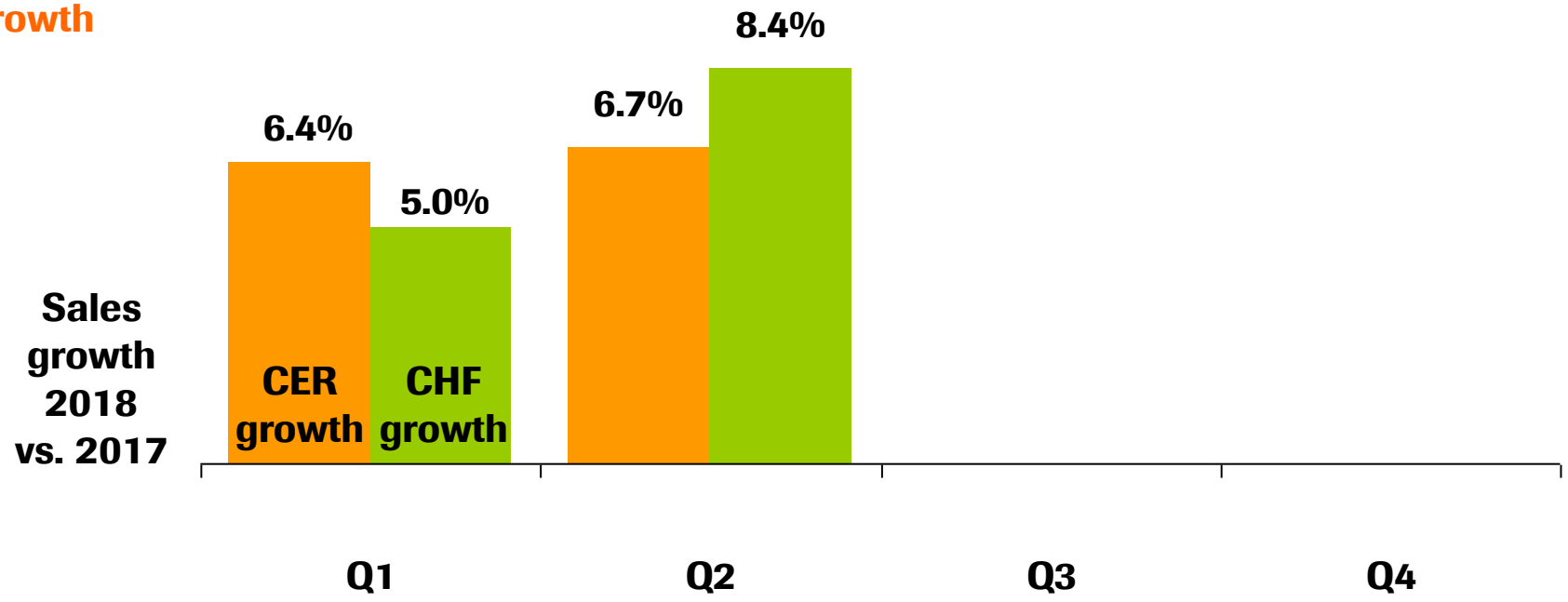
CER=Constant Exchange Rates

Exchange rate impact on sales growth

In Q2 2018 positive impact of EUR and JPY, partially offset by USD

Development of average exchange rates versus prior year period

CHF / USD	-5.6%	-0.1%
CHF / EUR	+8.9%	+8.4%
CHF / JPY	-1.0%	+1.7%
Difference in CHF / CER growth	-1.4%p	+1.7%p



CER=Constant Exchange Rates

Doing now what patients need next