Aiming to Achieve the Mid-term Business Plan “IBI 21”
- FY2019 Half Year Results -

Tatsuro Kosaka
President and CEO
CHUGAI PHARMACEUTICAL CO., LTD.

July 25/26, 2019

Important Reminder

Forward-Looking Statements

This presentation may include forward-looking statements pertaining to the business and prospects of Chugai Pharmaceutical Co., Ltd. (the “Company”). These statements reflect the Company’s current analysis of existing information and trends. Actual results may differ from expectations based on risks and uncertainties that may affect the Company’s businesses.

Core Results

Chugai discloses its results on a Core basis from 2013 in conjunction with its transition to IFRS. Core results are the results after adjusting non-recurring items recognized by Chugai to IFRS results, and are consistent with the Core concept disclosed by Roche. Core results are used by Chugai as an internal performance indicator, for explaining the status of recurring profits both internally and externally, and as the basis for payment-by-results, including return to shareholders.

Note: Amounts shown in this report are rounded to the nearest 0.1 billion yen
Variance and % are calculated based on the amounts shown.

FY2019 Half Year Financial Performance

- Significant year-on-year increase in revenues and operating profit
- Progress beyond our expectation due to strong sales of new products such as Tecentriq in addition to favorable Hemlibra related revenues in Japan and overseas

billion JPY	2018 Jan -Jun actual	2019 Jan - Jun actual	Growth		2019 Jan - Dec forecast	Progress (%)
Revenues	285.1	320.3	+35.2	+12.3%	592.5	54.1%
Sales	255.6	282.4	+26.8	+10.5%	528.0	53.5%
Domestic	191.1	210.0	18.9	+9.9%	389.1	54.0%
Overseas	64.5	72.4	+7.9	+12.2%	138.9	52.1%
Royalties and other operating income (ROOI)	29.5	37.9	+8.4	+28.5%	64.5	58.8%
Core Operating Profit	71.6	103.5	+31.9	+44.6%	143.0	72.4%
Core EPS (yen)	95.27	137.11	+41.84	+43.9%	198.00	69.2%

New Mid-Term Business Plan: 5 Strategies

Accelerate corporate and social development through innovation focused on innovative products

Create global growth drivers and maximize value

1 Value Creation

Realize innovative drug discovery
to cure and manage diseases

2 Value Delivery

Deliver patient-centric solutions
to maximize value of growth drivers

3 Promote advances in personalized healthcare

Realize the further advancement of PHC and innovate R&D process
by utilizing digital technology and data

Strengthen HR and infrastructure that support Chugai's business

4 Human capital and structural reform

Develop high-caliber HR talent that supports innovation,
and drastically reform costs, systems and processes

5 Strengthen sustainable platforms

Simultaneously realize company growth and sustainable social development

Major Achievements in FY2019 Half Year (1)

1. Value Creation / 2. Value Delivery / 3. Promote Advances in PHC

Progress in development projects [Strategy 1&2]

- Hemlibra: “Hemophilia A without inhibitors” (Approval in EU)
- Rozlytrek: “*NTRK*+ solid tumors” Approval, “*ROS1*+ NSCLC” Filing
- Nemolizumab: “Atopic dermatitis” Achievement of primary end point
- Telomelysin: Exclusive licensing and capital tie-up agreements
- Others: “Actemra CRS, Adult Still’s disease” Approval for additional indications
  “Alecensa ALCL” Filing for additional indication

Progress in PHC [Strategy 3]

- FMI business: “F1CDx cancer genomic profile” Launch, “Rozlytrek CDx” Approval

Digital and IT strategy reinforcement [Strategy 1-3]

- Establishment of Digital & IT Supervisory Division: Acceleration in value creation and process innovation

PHC: personalized health care
NSCLC: non-small cell lung cancer
CRS: cytokine release syndrome

ALCL：anaplastic large cell lymphoma
F1CDx: FoundationOne CDx

Steady progress in IBI 21 first year’s projects

Major Achievements in FY2019 Half Year (2)

4. Human Capital and Structural Reform / 5. Strengthen Sustainable Platforms

Human capital and structural reform [Strategy 4]

- Business transfer:
  - ✓ Long-Term Listed Products (Oxarol dermatological products, ULCERLMIN)
- Outsourcing:
  - ✓ Logistics operations (Mitsubishi Logistics Corporation)
  - ✓ Packaging operations (Under consideration of full outsourcing)
- Early retirement incentive program:
  - ✓ Providing support for employees seeking for a new life plan
  - ✓ Addressing the Company's management issues in the fast and dramatically changing business environment

Strengthen sustainable platforms [Strategy 5]

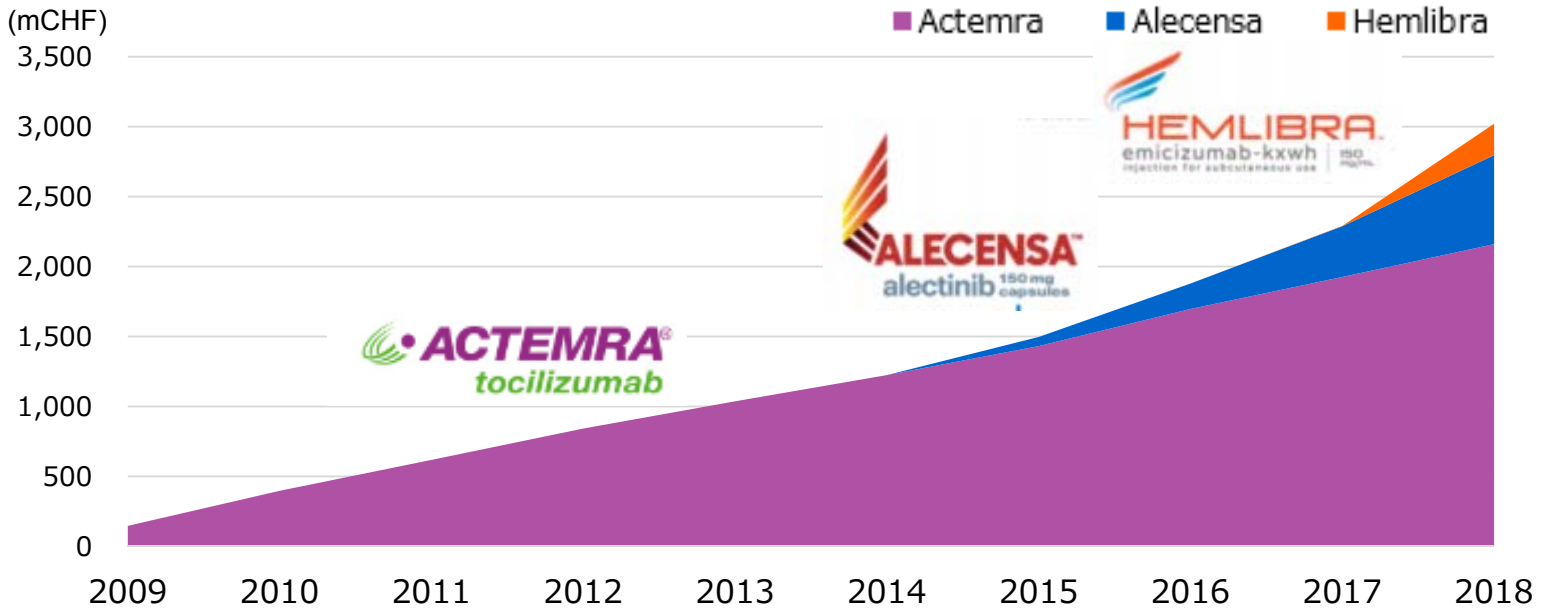
- Engagement with stakeholders:
  - ✓ Held an ESG meeting

IBI 21's core issues are progressing as planned

Sales Trend of In-house Global Products

The total of Roche's global sales* for three in-house products reached 300 billion yen at the end of last year.

IBI 21 outlook: While factoring in Actemra's maturation, we project dramatic growth in global sales of Alecensa and Hemlibra.



Roche's global sales / ( ) Chugai's sales**	Actemra	Alecensa	Hemlibra
Half year 2019	1,135 (188)	421 (105)	535 (82)
Full year 2018	2,160 (354)	637 (188)	224 (26)
Full year 2017	1,926 (304)	362 (147)	3 (-)

* Roche's global sales: In addition to Roche's worldwide sales, Chugai's sales are included. **Chugai's sales: Sum of Chugai's domestic sales and overseas sales from its territory (excluding export sales)
Graphs and tables are based on Roche's financial results in units of CHF 1 million.

Key Activities for Future Growth

Active investment in research and production functions as a foundation of growth after IBI 21

Chugai Life Science Park Yokohama <Yokohama, Kanagawa pref.>

<Purpose>

Establish a global base for creating innovative new drugs at its highest quality (Consolidation of research laboratories)

<Total Investment>

127.3 billion yen (Expected completion year: 2022)

<Environmental aspects>

Design in harmony with the local community and incorporate environmental considerations such as energy saving measures and CO_2 reduction

Manufacturing building for small and middle molecule APIs <Fujieda, Shizuoka pref.>

<Purpose>

- ✓ Newly establish the manufacturing capability of middle molecule APIs for clinical studies
- ✓ Enhance the supply capacity of small molecule APIs for clinical studies

<Total Investment>

18.2 billion yen (Expected completion year: 2022)

<Environmental aspects>

Adopt advanced containment facility for highly active compounds

APIs: Active pharmaceutical ingredients

FY2019 Half Year Results

- Financial performance exceeded our expectation of full year forecast
- Development projects and structural reforms are progressing as planned
- Initiate key activities and upfront investments for future growth

Great start of IBI 21 towards achieving the mid-term business plan

FY2019 2Q Consolidated Financial Overview

Toshiaki Itagaki
Executive Vice President & CFO
CHUGAI PHARMACEUTICAL CO., LTD.

July 25/26, 2019

Core

2Q Results Summary

- **Significant year-on-year increase in revenues and operating profit**
- **Record-high Q2 revenues, operating profit and net income**
- **Strong progress vs. full-year forecast**

(Billions of JPY)	2019 Jan – Jun	Growth (year on year)		Forecast on Jan. 31 Progress
Revenues	**320.3**	**+35.2**	**+12.3%**	**54.1%**
Cost of sales cost to sales ratio	**-127.5** 45.1%	**+1.1** -5.2%pts	**-0.9%**	**50.5%**
Operating expenses	**-89.2**	**-4.3**	**+5.1%**	**45.3%**
Operating profit operating margin	**103.5** 32.3%	**+31.9** +7.2%pts	**+44.6%**	**72.4%**
Net income	**75.1**	**+22.5**	**+42.8%**	**Not disclosed**
EPS (JPY)	**137.11**	**+41.84**	**+43.9%**	**69.2%**

Year on Year (Core)

Financial Overview Jan - Jun

(Billions of JPY)	2018 Jan - Jun	2019 Jan - Jun	Growth	
Revenues	**285.1**	**320.3**	**+35.2**	**+12.3%**
Sales	255.6	282.4	+26.8	+10.5%
Domestic	191.1	210.0	+18.9	+9.9%
Overseas	64.5	72.4	+7.9	+12.2%
Royalties and other operating income	29.5	37.9	+8.4	+28.5%
Royalty and profit-sharing income	10.1	30.2	+20.1	+199.0%
Other operating income	19.5	7.6	-11.9	-61.0%
Cost of sales	-128.6	-127.5	+1.1	-0.9%
(cost to sales ratio)	50.3%	45.1%	-5.2%pts	-
Gross profit	**156.6**	**192.7**	**+36.1**	**+23.1%**
Operating expenses	-84.9	-89.2	-4.3	+5.1%
Operating profit	**71.6**	**103.5**	**+31.9**	**+44.6%**
(operating margin)	25.1%	32.3%	+7.2%pts	-
Financial account balance	-1.6	-1.3	+0.3	-18.8%
Income taxes	-17.5	-27.1	-9.6	+54.9%
Net income	**52.6**	**75.1**	**+22.5**	**+42.8%**
EPS (JPY)	95.27	137.11	+41.84	+43.9%

Domestic sales
Increase due to sales growth of new products as well as mainstay products

Overseas sales
Increase in export of Alecensa to Roche

Royalty and profit-sharing income
Increase in income for Hemlibra

Other operating income
Decrease due to one-time income in the previous year from the transfer of long-term listed products, etc.

Cost of sales
Cost to sales ratio improved due to a change in product mix, etc.

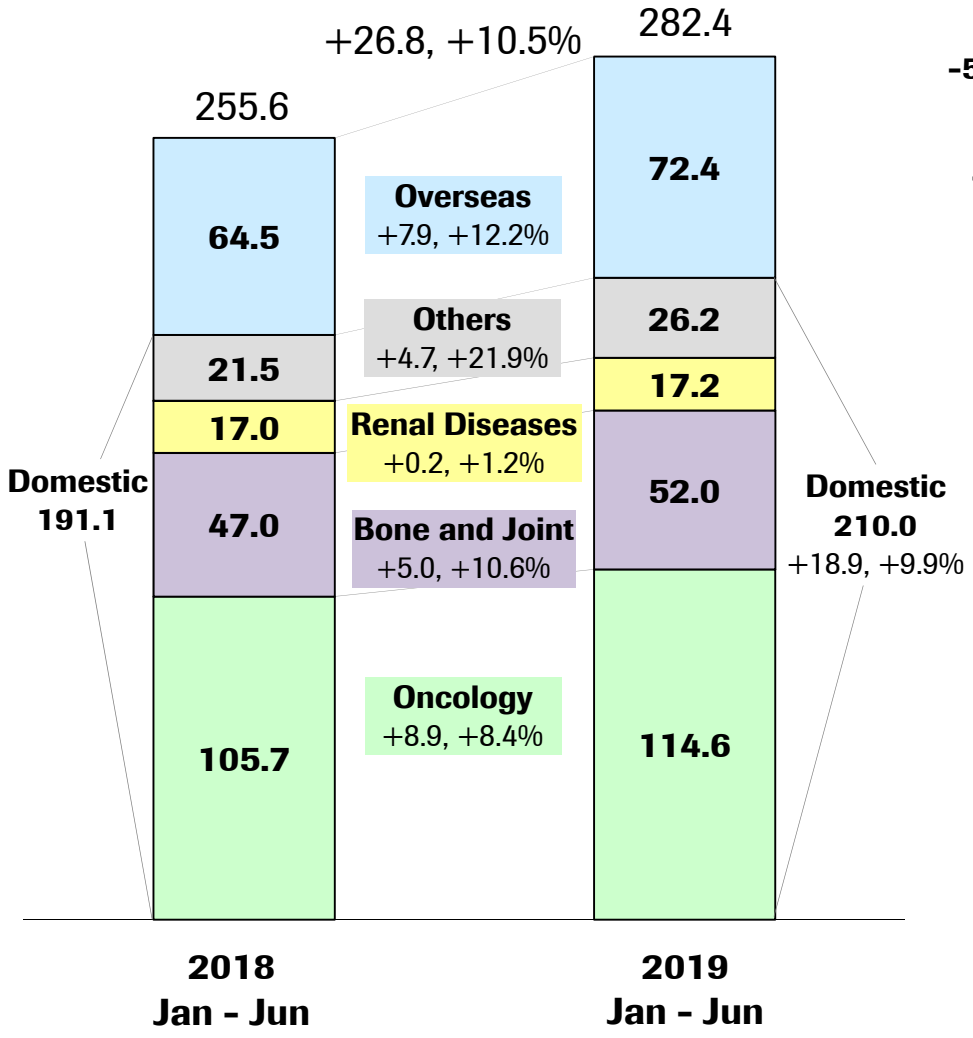
Operating expenses
Overall increase due to mainly increase of research and development expenses

Year on Year (Core)

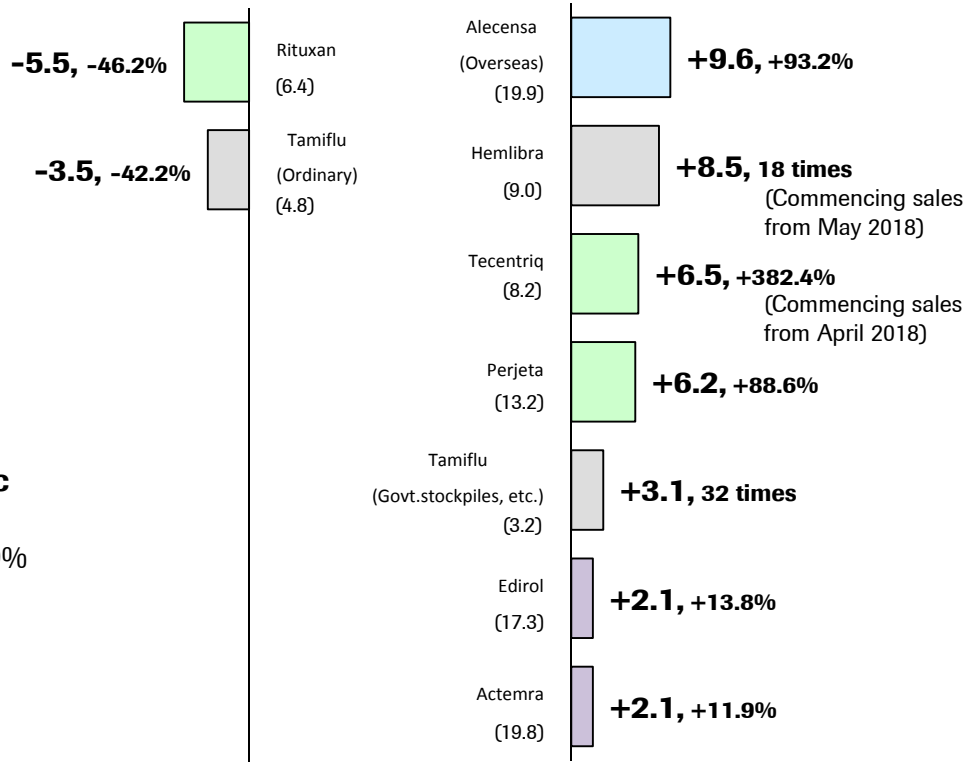
Sales Jan - Jun

Sales by Disease Area, Year on Year Comparisons

(Billions of JPY)



Sales by Products, Year on Year Changes



Details of HER2 franchise (31.2) +6.4, +25.8%

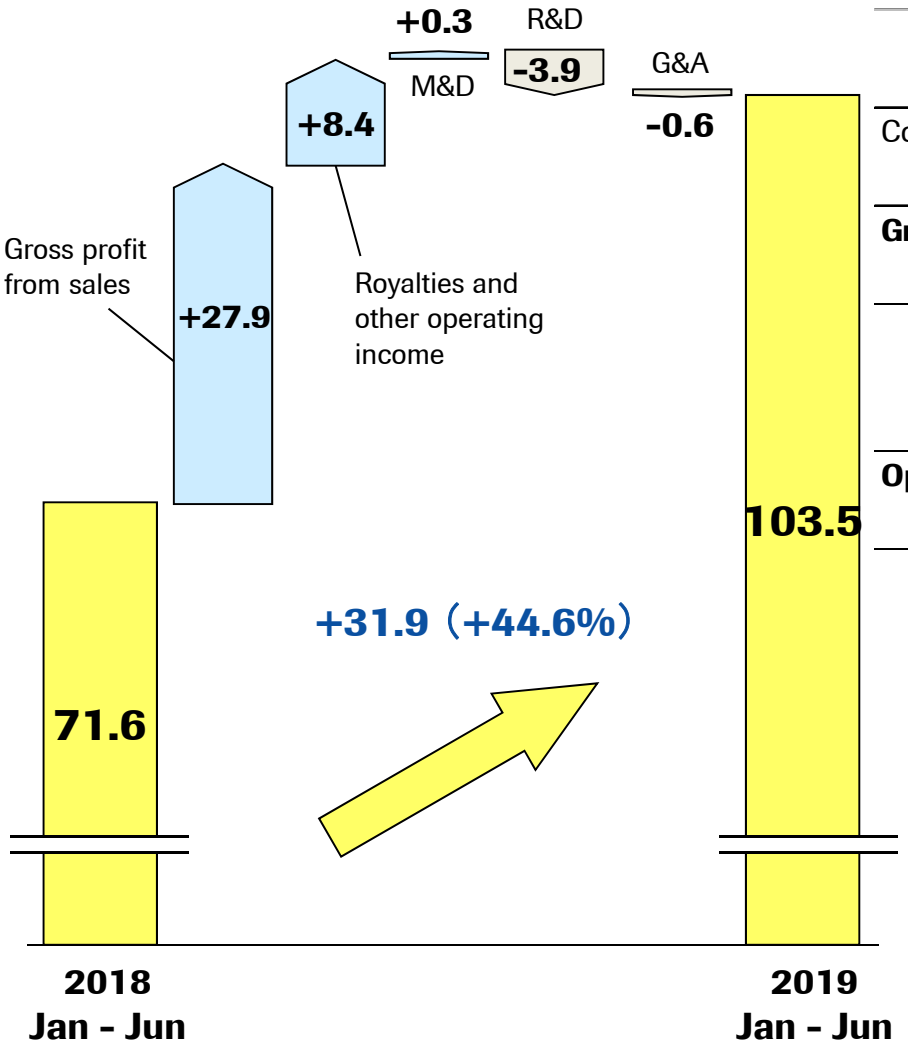
Herceptin	(13.6)	-0.2,	-1.4%
Perjeta	(13.2)	+6.2,	+88.6%
Kadcyla	(4.4)	+0.4,	+10.0%

( ): Actual sales in FY2019
%: Year-on-year percentage change

Year on Year (Core)

Operating Profit Jan - Jun

(Billion of JPY)



(Billions of JPY)	2018 Jan - Jun	2019 Jan - Jun	Growth
Revenues	**285.1**	**320.3**	**+35.2**
Sales	255.6	282.4	+26.8
Royalties and other operating income	29.5	37.9	+8.4
Cost of sales	-128.6	-127.5	+1.1
(cost to sales ratio)	50.3%	45.1%	-5.2%pts
Gross profit	**156.6**	**192.7**	**+36.1**
of which Sales	127.0	154.9	+27.9
Marketing and distribution	-33.2	-32.9	+0.3
Research and development	-44.0	-47.9	-3.9
General and administration	-7.8	-8.4	-0.6
Operating profit	**71.6**	**103.5**	**+31.9**
(operating margin)	25.1%	32.3%	+7.2%pts

Increase in gross profit from sales **+27.9**

In addition to the increase in sales, cost to sales ratio improved due to a change in product mix, etc. based on sales expansion of in-house products.

Increase in royalties and other operating income **+8.4**

Increase in income for Hemlibra

Increase in research and development expenses **-3.9**

Progress of projects, etc.

Year on Year (Core)

Financial Overview Apr - Jun

(Billions of JPY)	2018 Apr - Jun	2019 Apr - Jun	Growth	
Revenues	**137.7**	**166.0**	**+28.3**	**+20.6%**
Sales	130.8	144.7	+13.9	+10.6%
Domestic	98.3	110.7	+12.4	+12.6%
Overseas	32.6	34.0	+1.4	+4.3%
Royalties and other operating income	6.8	21.3	+14.5	+213.2%
Royalty and profit-sharing income	5.1	16.6	+11.5	+225.5%
Other operating income	1.8	4.7	+2.9	+161.1%
Cost of sales	-65.1	-63.9	+1.2	-1.8%
(cost to sales ratio)	49.8%	44.2%	-5.6%pts	-
Gross profit	**72.6**	**102.1**	**+29.5**	**+40.6%**
Operating expenses	-43.8	-46.5	-2.7	+6.2%
Operating profit	**28.8**	**55.7**	**+26.9**	**+93.4%**
(operating margin)	20.9%	33.6%	+12.7%pts	-
Financial account balance	-0.9	-0.6	+0.3	-33.3%
Income taxes	-6.6	-16.2	-9.6	+145.5%
Net income	**21.3**	**38.9**	**+17.6**	**+82.6%**
EPS (JPY)	38.75	70.95	+32.20	+83.1%

Domestic sales
Increase due to sales growth of new products as well as mainstay products

Overseas sales
Increase in export of Alecensa to Roche

Royalty and profit-sharing income
Increase in income for Hemlibra

Other operating income
Increase in milestone income

Cost of sales
Cost to sales ratio improved due to a change in product mix, etc.

Operating expenses
Overall increase due to increase of research and development expenses, general and administration expenses

vs. Forecast (Core)

Financial Overview Jan - Jun

(Billions of JPY)	Actual 2019 Jan - Jun	Forecast on Jan. 31 2019 Jan - Dec	Forecast on Jan. 31 Progress	2018 Progress *
Revenues	**320.3**	**592.5**	**54.1%**	**49.2%**
Sales	282.4	528.0	53.5%	48.4%
Domestic	210.0	389.1	54.0%	47.8%
Overseas	72.4	138.9	52.1%	50.4%
Royalties and other operating income	37.9	64.5	58.8%	56.8%
Royalty and profit-sharing income	30.2	53.5	56.4%	41.9%
Other operating income	7.6	11.0	69.1%	69.9%
Cost of sales	-127.5	-252.5	50.5%	49.1%
(cost to sales ratio)	45.1%	47.8%		
Gross profit	**192.7**	**340.0**	**56.7%**	**49.3%**
Operating expenses	-89.2	-197.0	45.3%	45.3%
Research and development	-47.9	-102.0	47.0%	46.7%
Operating profit	**103.5**	**143.0**	**72.4%**	**55.0%**
(operating margin)	32.3%	24.1%		
EPS (JPY)	137.11	198.00	69.2%	54.0%

* Jan – Jun progress versus Jan – Dec

Domestic sales
Steady progress due to sales growth of new products as well as mainstay products

Overseas sales
Progress nearly in line with forecast

Royalty and profit-sharing income
Income for Hemlibra progressed well in view of the forecast

Other operating income
Progress nearly in line with forecast

Cost of sales
Cost to sales ratio lower than forecast
A portion of royalties booked in the previous year and included in the current year forecast as well, was not recognized in the 1H of 2019

Operating expenses
Progress nearly in line with forecast

Billions of JPY

FX impact Jan – Jun 2019 FX impact vs. Assumption	
Revenue	**-1.3**
Sales	-0.4
Royalties and other operating income	-0.9
Cost of sales	+0.1
Expenses	+0.3
Operating profit	**-1.0**

vs. Forecast (Core)

Sales Progress Jan - Jun

(Billions of JPY)	Actual 2019 Jan - Jun	Forecast 2019 Jan - Dec	Forecast Progress	2018 Progress *1
Sales	**282.4**	**528.0**	**53.5%**	**48.4%**
Domestic	**210.0**	**389.1**	**54.0%**	**47.8%**
Oncology	**114.6**	**215.9**	**53.1%**	**46.8%**
Avastin	46.7	89.4	52.2%	47.5%
Alecensa	11.1	25.1	44.2%	45.6%
Herceptin	13.6	24.0	56.7%	49.1%
Perjeta	13.2	21.2	62.3%	43.5%
Rituxan	6.4	13.5	47.4%	55.9%
Tecentriq	8.2	13.1	62.6%	18.7%
Xeloda	4.7	9.4	50.0%	48.8%
Kadcyla	4.4	9.1	48.4%	47.1%
Tarceva	2.5	5.6	44.6%	53.0%
Gazyva	1.5	1.8	83.3%	-
Alaglio	0.1	0.4	25.0%	33.3%
Bone and Joint	**52.0**	**103.1**	**50.4%**	**46.8%**
Actemra	19.8	38.2	51.8%	46.3%
Edirol	17.3	35.3	49.0%	46.2%
Bonviva	4.8	10.9	44.0%	46.8%
Suvenyl	3.6	6.1	59.0%	47.4%

(Billions of JPY)	Actual 2019 Jan - Jun	Forecast 2019 Jan - Dec	Forecast Progress	2018 Progress *1
Renal	**17.2**	**31.8**	**54.1%**	**46.8%**
Mircera	11.0	20.5	53.7%	45.9%
Oxarol	3.4	5.9	57.6%	47.9%
Others	**26.2**	**38.3**	**68.4%**	**57.3%**
Hemlibra	9.0	12.9	69.8%	16.7%
CellCept	4.6	9.0	51.1%	47.8%
Tamiflu(Ordinary use)	4.8	3.4	141.2%	82.2%
Tamiflu(Govt. stockpiles, etc.)	3.2	3.2	100.0%	20.0%
Foundation Medicine*2	0.0	0.2	0.0%	-
Overseas	**72.4**	**138.9**	**52.1%**	**50.4%**
Actemra	43.5	84.6	51.4%	55.7%
Export to Roche	42.6	82.7	51.5%	56.0%
Alecensa	19.9	36.6	54.4%	34.9%
Export to Roche	19.4	36.0	53.9%	34.6%
Neutrogin	5.0	9.5	52.6%	51.4%
Hemlibra	1.6	2.4	66.7%	52.2%
Export to Roche	1.6	2.4	66.7%	52.2%

*1 Jan – Jun progress versus Jan – Dec

*2 Foundation Medicine : Forecast announced on Jul 25

vs. 2018 Year End

Overview of Financial Position

(Billions of JPY)	2018 Dec	2019 Jun	Change
Trade accounts receivable	150.8	154.9	+ 4.1
Inventories	159.4	167.7	+ 8.3
Trade accounts payable	-35.9	-44.8	- 8.9
Other net working capital *1	-39.1	-33.1	+ 6.0
Net working capital	**235.1**	**244.6**	**+ 9.5**
Property, plant and equipment	222.4	243.8	+ 21.4
Right-of-use assets	-	11.5	+ 11.5
Intangible assets	22.7	22.4	- 0.3
Other long-term assets - net *2	25.1	27.7	+ 2.6
Long-term net operating assets	**270.1**	**305.5**	**+ 35.4**
Net operating assets	**505.3**	**550.1**	**+ 44.8**
Debt	-0.2	-	+ 0.2
Marketable securities	102.5	111.9	+ 9.4
Cash and cash equivalents	146.9	149.2	+ 2.3
Net cash	**249.2**	**261.0**	**+ 11.8**
Other non-operating assets - net *3	**2.1**	**-18.9**	**- 21.0**
Net non-operating assets	**251.3**	**242.1**	**- 9.2**
Total net assets	**756.5**	**792.2**	**+ 35.7**
Total assets	919.5	986.6	+ 67.1
Total liabilities	-163.0	-194.5	- 31.5

Increase in net working capital

Increase in inventories due to demand increase of new products almost offset by increase in trade accounts payable

Despite increase in accrued payable for establishment of Chugai Life Science Park Yokohama, etc., other net working capital increased due to increase of accrued receivable of royalties for Hemlibra, etc.

Increase in long-term net operating assets

Increase in property, plant and equipment due to the investment in the Chugai Life Science Park Yokohama, etc.

Increase in right-of-use assets by adoption of IFRS16

Decrease in other non-operating assets – net

Increase in lease liabilities by adoption of IFRS16, etc.

Equity ratio attributable to Chugai shareholders

End of June 2019	80.3%
End of December 2018	82.2%

FX rate to the JPY (end of period)

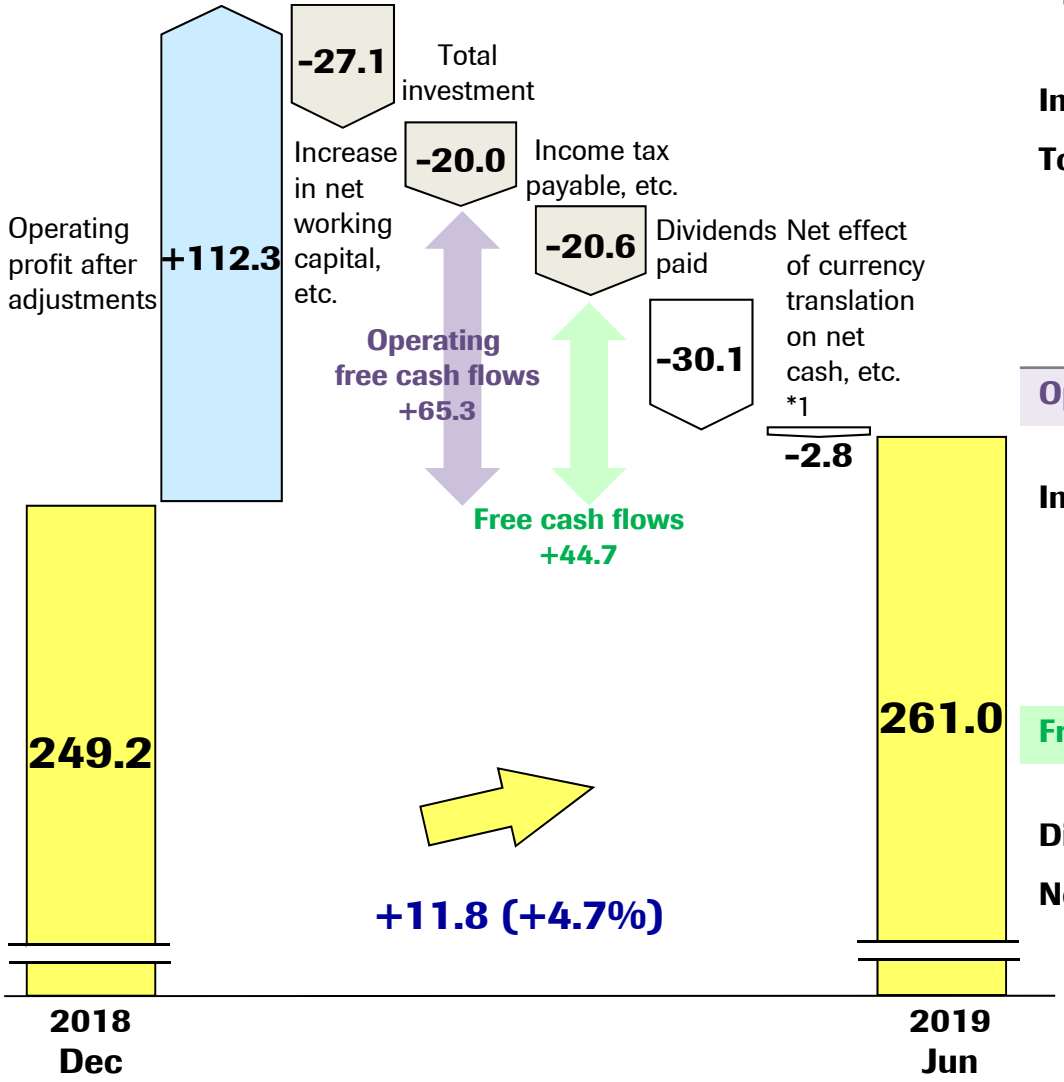
	2018 Dec	2019 Jun
1CHF	112.03	110.39
1EUR	126.13	122.56
1USD	110.28	107.80
1SGD	80.70	79.64

*1 Other net working capital: accrued receivable, accrued payable, accrued expenses, etc.
*2 Other long-term assets - net: long term prepaid expenses, long-term provisions, etc.
*3 Other non-operating assets - net: deferred income tax assets, accrued corporate tax, etc.

vs. 2018 Year End

Net Cash

(Billions of JPY)



Operating profit after adjustment	**+112.3**
Operating profit	+95.1
Increase in net working capital, etc.	**-27.1**
Total investment	**-20.0**
Property, plant and equipment	-10.1
Payment for lease liabilities	-4.5
Intangible assets	-5.4
Operating free cash flows	**+65.3**
Income tax payable, etc.	**-20.6**
Income tax payable	-18.2
Transfer pricing taxation	-1.5
Purchases of investment securities	-0.9
Free cash flows	**+44.7**
Dividends paid	**-30.1**
Net effect of currency translation on net cash, etc.	**-2.8**
Purchase of non-controlling interests	-2.3

*1 Net effect of currency transactions on net cash, etc. = Transaction in own equity instruments + Purchase of non-controlling interests + Net effect of currency translation on net cash(*2)

*2 Results from using different types of exchange rates when consolidating overseas subsidiaries in financial statements, i.e. net cash using end of period exchange rate and free cash flows using average exchange rate. (Chugai defines this term based on International Accounting Standard (IAS) 7 and IAS 21)

Appendix

IFRS and Core Results Jan-Jun

(Billion JPY)	IFRS results 2019 Jan-Jun	Non-core items: Intangible assets	Non-core items: Others	Core results 2019 Jan-Jun
Revenues	**320.3**			**320.3**
Sales	282.4			282.4
Royalties and other operating income	37.9			37.9
Cost of sales	-128.0	+0.4		-127.5
Gross profit	**192.3**	**+0.4**		**192.7**
Operating expenses	**-97.3**	**+2.6**	**+5.4**	**-89.2**
Marketing and distribution	-35.8		+2.9	-32.9
Research and development	-51.8	+2.6	+1.3	-47.9
General and administration	-9.6		+1.2	-8.4
Operating profit	**95.1**	**+3.1**	**+5.4**	**103.5**
Financing costs	-0.1			-0.1
Other financial income (expense)	0.3			0.3
Other expense	-1.5			-1.5
Profit before taxes	**93.8**	**+3.1**	**+5.4**	**102.3**
Income taxes	-24.5	-0.9	-1.6	-27.1
Net income	**69.3**	**+2.1**	**+3.8**	**75.1**
Chugai shareholders	69.3	+2.1	+3.8	75.1

(Billions of JPY)

Non-Core items

Intangible assets	
Amortization	+0.6
Impairment	+2.5
Others	
Early retirement incentive program	+5.1
Restructuring	+0.3
Core net income attributable to Chugai shareholders	75.1

(Millions of shares)

Weighted average number of shares in issue used to calculate diluted earnings per share	548

(JPY)

Core EPS	137.11

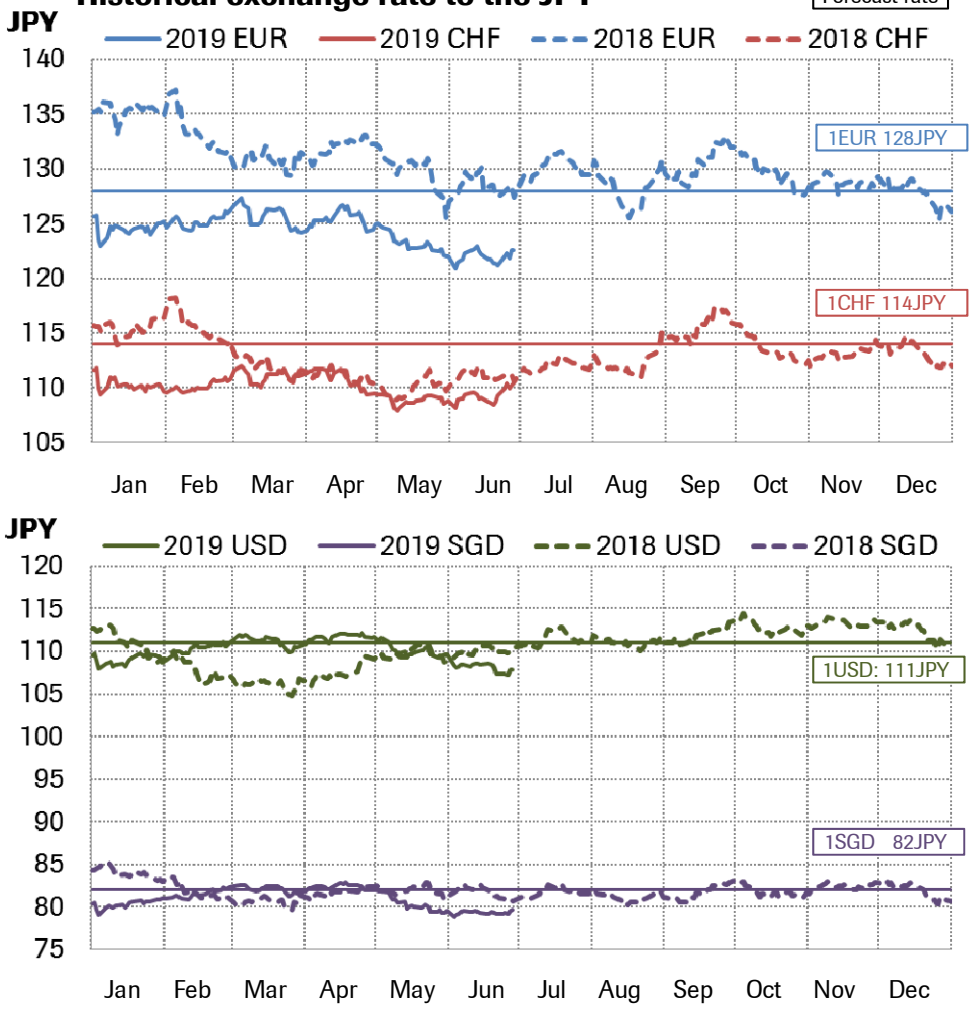
vs. Forecast (Core)

Impact from Foreign Exchange

(Billions of JPY)	FX impact Jan – Jun 2019 (FX impact vs. Assumption)	
Revenues	**-1.3**	
	Sales	-0.4
	Royalties and other operating income	-0.9
Cost of sales Operating expenses	Cost of sales Expenses	+0.1 +0.3
Operating profit	**-1.0**	

Actual / Forecast rate* (JPY)	2018 Jan - Jun Actual	2019 Jan -Dec Assumption	2019 Jan - Jun Actual
1CHF	112.52	114.00	110.09
1EUR	131.59	128.00	124.34
1USD	108.74	111.00	110.07
1SGD	81.97	82.00	80.99

[Reference]
Historical exchange rate to the JPY



* Actual: market average exchange rate for the period Jan - Jun

Overview of Development Pipeline

CHUGAI PHARMACEUTICAL CO., LTD.
Executive Vice President
Co-Head of Project & Lifecycle Management Unit
Dr. Yasushi Ito

July 25/26, 2019

Overview of Development Pipeline

Projects under Development (1)

As of July 25, 2019

	Phase I	Phase II	Phase III	Filed
Oncology	**CKI27** - solid tumors **GC33 / codrituzumab** - HCC★ **ERY974** - solid tumors **RG7421 / cobimetinib** - solid tumors **RG7802 / cibisatamab** - solid tumors **RG7828 / mosunetuzumab** - hematologic tumors		**RG3502 / Kadcyla** - breast cancer (adjuvant) **RG435 / Avastin** - RCC - HCC **RG7440 / ipatasertib** - prostate cancer - breast cancer **RG7596 / polatuzumab vedotin** - DLBCL **RG6264 (Herceptin+Perjeta)** - breast cancer (Fixed-dose combination, subcutaneous injection) **AF802 (RG7853) / Alecensa** - NSCLC (adjuvant) **RG7446 / Tecentriq** - NSCLC (adjuvant) - NSCLC (neoadjuvant) ★ - urothelial carcinoma - MIUC (adjuvant) - RCC - RCC (adjuvant) - early breast cancer - ovarian cancer - prostate cancer - HCC - HNC (adjuvant)	**RG7446 / Tecentriq** - breast cancer - SCLC **RG6268 / Rozlytrek** - NSCLC
Bone & Joint			**NRD101 / Suvenyl (China)** - knee osteoarthritis/shoulder periarthritis	**ED-71 / Edirol (China)** - osteoporosis
Renal	**EOS789** - Hyperphosphatemia			

In principle, completion of first dose is regarded as the start of clinical studies in each phase.

HCC: hepatocellular carcinoma
NSCLC: non-small cell lung cancer
SCLC: small cell lung cancer
MIUC: muscle invasive urothelial carcinoma
RCC: renal cell carcinoma
DLBCL: diffuse large B-cell lymphoma
HNC: head and neck carcinoma

Letters in orange: in-house projects
★: Projects with advances in stages since April 24, 2019
★: Multinational study managed by Chugai

Projects under Development (2)

As of July 25, 2019

	Phase I	Phase II	Phase III	Filed
Autoimmune	**RG7845 / fenebrutinib** - rheumatoid arthritis			
Neurology	**RG7935 / prasinezumab** - Parkinson's disease **GYM329 (RG6237)** - neuromuscular disease **RG7906** - psychiatric disorders **RG6100 (anti-tau MAb)** - Alzheimer's disease **RG7314 / balovaptan** - Autism Spectrum Disorder ★		**RG1450 / gantenerumab** - Alzheimer's disease **SA237 (RG6168) / satralizumab** - NMOSD ★ **RG6042 (HTT ASO)** - Huntington's disease **RG6206 (anti-myostatin adnectin)** - DMD (PII/III) **RG7916 / risdiplam** - spinal muscular atrophy(PII/III)	
Others	**PCO371** - hypoparathyroidism **AMY109** - endometriosis	**CIM331 / nemolizumab*** - pruritus in dialysis patients **SKY59 (RG6107) / crovalimab** - PNH (PI/II)	**RG7716 / faricimab** - DME - wAMD	

In principle, completion of first dose is regarded as the start of clinical studies in each phase.

wAMD: wet age-related macular degeneration
DME: diabetic macular edema
DMD: Duchenne muscular dystrophy
NMOSD: neuromyelitis optica spectrum disorder
HTT ASO: Antisense oligonucleotide targeting *HTT* mRNA
PNH: paroxysmal nocturnal hemoglobinuria

Letters in orange: in-house projects
★: Projects with advances in stages since April 24, 2019
★: Multinational study managed by Chugai

* Atopic dermatitis is under development by licensees [Galderma (overseas) and Maruho (Japan)]

Key News Flows in Q2

Approved	**Actemra (Japan)**	Adult Still's Disease	May, 2019
	Rozlytrek	*NTRK*+ solid tumor	June, 2019
	F1 CDx	CDx for Rozlytrek (*NTRK*+ solid tumor)	June, 2019
Service Initiated	**F1 CDx**	Cancer genome profiling Assessing anticancer drug indications	June, 2019
Filed	**Alecensa (Japan)**	Recurrent or Refractory *ALK*+ ALCL	June, 2019
New to Pipeline	**Tecentriq**	NSCLC (neoadjuvant)	Global Phase 3 study
	balovaptan	Autism Spectrum Disorder	Phase 1 study
Development Discontinued	**Actemra (Japan)**	Systemic Sclerosis	-
Medical Conference	**Rozlytrek**	*NTRK*+ solid tumor, *ROS1*+ NSCLC	ASCO
	HER2 franchise	Breast cancer	ASCO, etc.
	Hemlibra	Hemophilia A	ISTH
Others	**Alecensa (Japan)**	Recurrent or Refractory *ALK*+ ALCL	Orphan Drug Designation

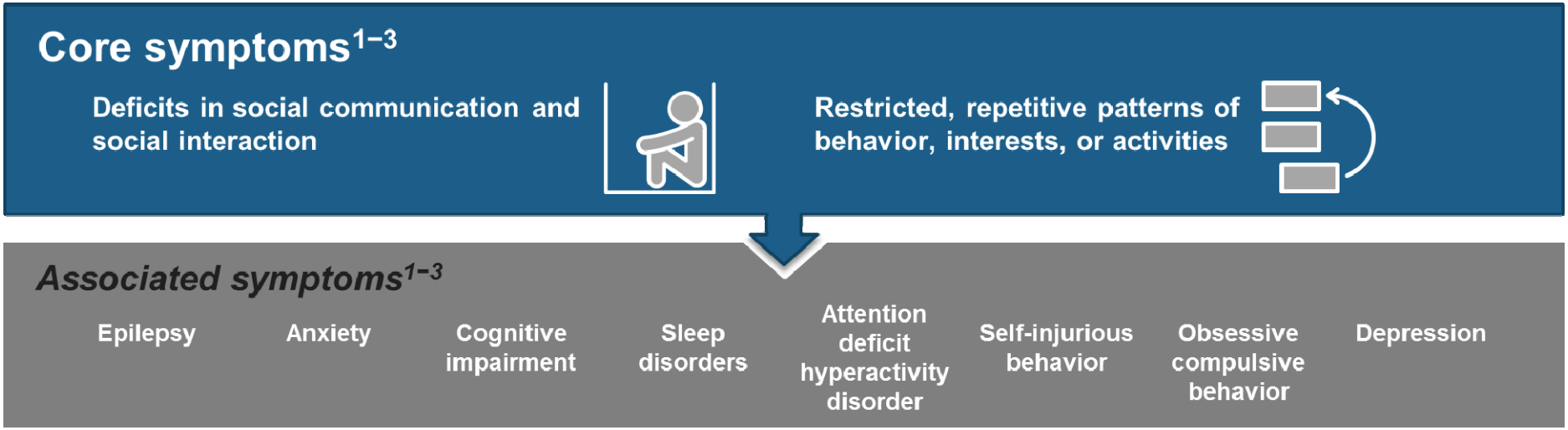
F1 CDx: FoundationOne CDx Cancer Genomic Profile
ALCL: Anaplastic large cell lymphoma
NSCLC: Non-small cell lung cancer
HER2 franchise: Herceptin/Perjeta/Kadcyla
ASCO: American Society of Clinical Oncology
ISTH: International Society on Thrombosis and Haemostasis

Letters in orange: in-house projects

RG7314 / balovaptan (1)
Vasopressin 1a Receptor Antagonist

Autism Spectrum Disorder (ASD)

- ASD is a lifelong neurodevelopmental disorder presenting impairments of social interaction and communication, repetitive behaviors (restricted interests) and associated symptoms
- Overall prevalence rate is estimated to be approximately 1%
- Multiple therapeutic agents exist for associated symptoms; however, none address the core symptoms of ASD



1. Farmer C, et al. *Drugs*. 2013;73:303–314; 2. Lord C, Jones RM, *J Child Psychol Psychiatry*. 2012;53:490–509; 3. Mazzone et al. *J Clin Med.* 2018;7:102.

RG7314 / balovaptan (2)
Vasopressin 1a Receptor Antagonist

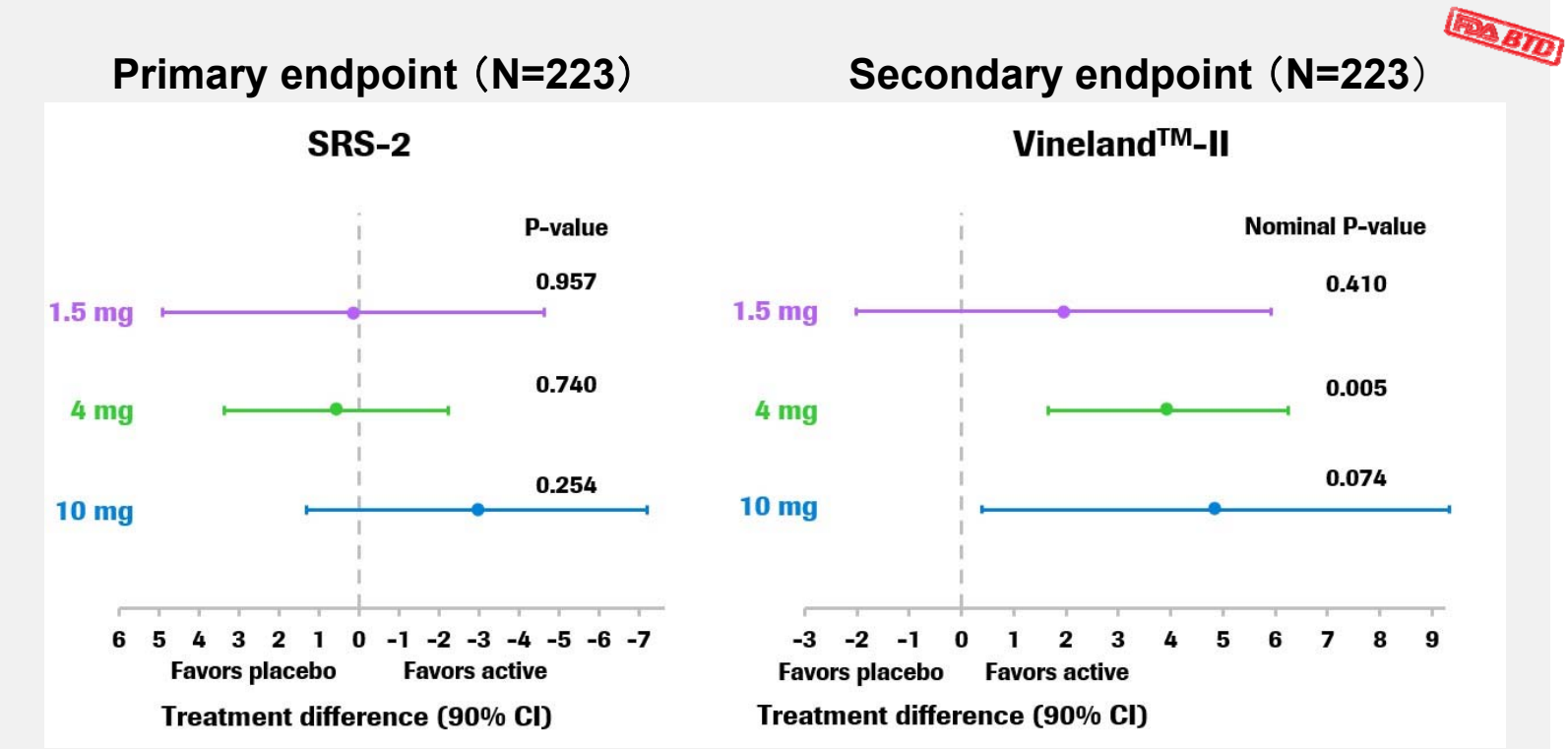
Mode of Action

- Vasopressin plays an important role in social behaviors and stress control via V1a receptors in the brain
- V1a antagonism has effects in the brain that may result in pro-social behaviors and has the potential to help with social and communication challenges of people with ASD

Stoop R. *Neuron*. 2012;6:142–159;
Ratni H, et al. *J Med Chem*. 2015;58:2275–2289.
Umbricht D, et al. *Neuropsychopharmacology*. 2017;42:1914–1923

VANILLA Study (P2) :
Efficacy of balovaptan in Adult ASD

- Primary endpoint (SRS-2) not met; however main secondary endpoint (Vineland™-II) met
- Vineland™-II selected and agreed upon with health authorities as primary endpoint in future studies
- Major adverse events: headache (placebo: 21.3%, treatment: 1.5mg 12.5%, 4mg 13.0%, 10mg 12.8%)



Bolognani F. et al., IMFAR 2017; SRS-2=social responsiveness scale-2; Vineland™-II=Vineland Adaptive Behavior Scale 2nd Edition

Note: No participation from Japanese facilities in this study

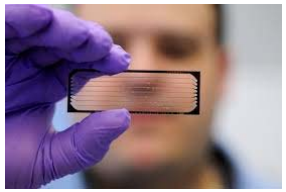
Source: Roche Full-Year Results 2017 presentation (partially modified)

"FoundationOne CDx × Rozlytrek" Approved
- To the Era of Advanced Personalized Healthcare Realization -

CHUGAI

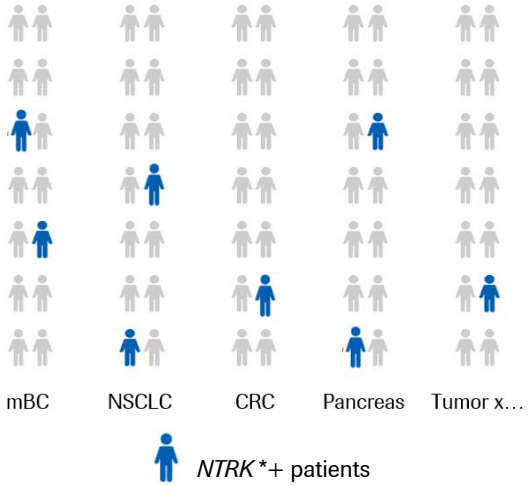
Roche Roche Group

Identify patients with targeted mutations



FoundationOne® CDx

Rozlytrek: Treat selected patients across different tumors



PMDA SAKIGAKE

EMA PRIME

FDA BTD

FoundationOne CDx supports indentification of rare tumor mutations

* NTRK = Neurotropic Tropomyosin Receptor Kinase

Note: Approved indication for Rozlytrek in Japan is treatment of *NTRK* fusion gene positive advanced and recurrent solid tumors

Source: Roche ESMO 2018 Audio Webcast presentation (partially modified)

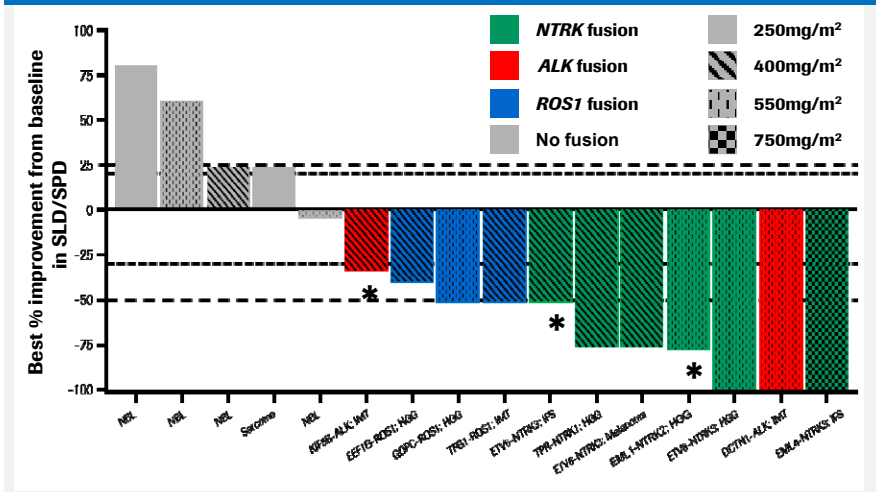
STARTRK-NG Study (P1/P1b) :

Efficacy of Rozlytrek in Children and Adolescents in *NTRK*, *ROS1* or *ALK* Fusion Gene Positive Solid Tumors

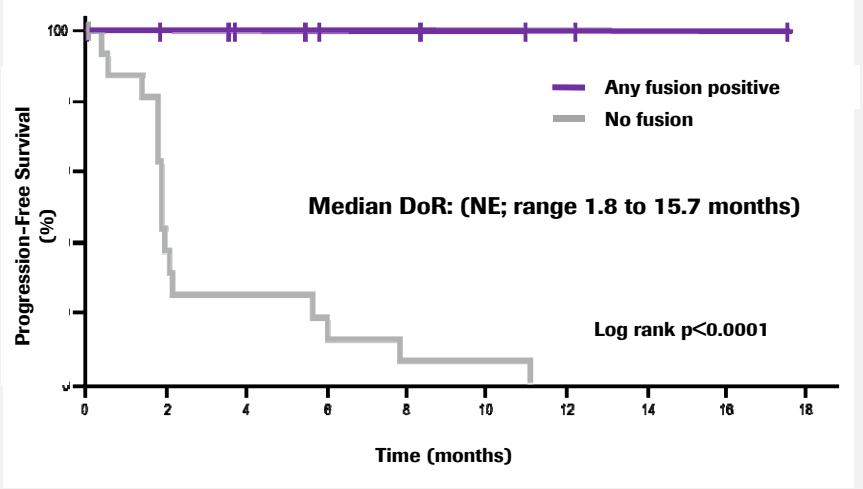
- All patients with *NTRK*, *ROS1* or *ALK* fusions showed durable responses without relapse (ORR 100%)
- 5 patients with primary high-grade CNS tumors were included, and 2 patients[1] showed complete responses
- Major adverse events: elevated creatinine (41%), weight gain (28%), dysgeusia (21%), ataxia/falling (<10%)

[1] complete responses in high-grade glioma, sarcoma

Response rate in pediatric solid tumors
ORR 100% in patients with fusions (11/11)[2]



PFS for all patients with and without gene fusion-positive solid tumors (n=29)



Data cut-off October 31, 2018; [2] Investigator assessed: includes only patients with measureable disease at baseline and tumor assessment; *unconfirmed response at time of data cut-off; Median duration of therapy was 85 days (6–592 days) for all patients; 56 days (6–338 days) for non-responders; and 281 days (56–592 days) for responders

CNS, central nervous system; SLD, sum of the longest diameters; SPD, sum of the products of diameters; NE, not estimable; ORR, overall response rate; PFS, progression-free survival

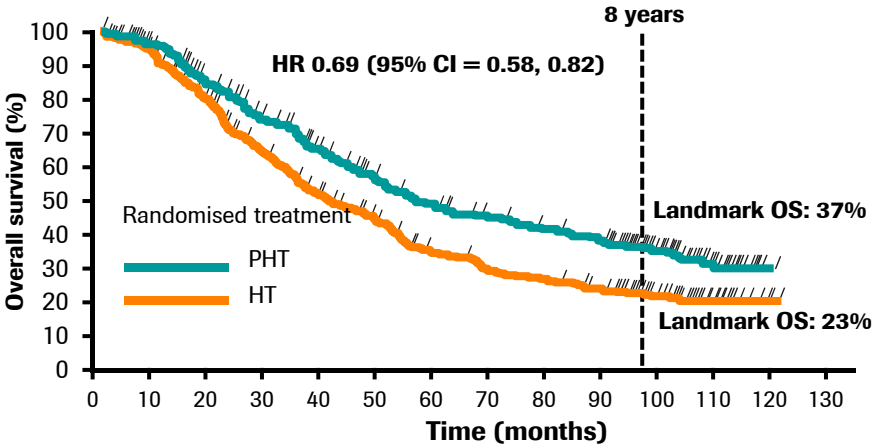
Note: No participation from Japanese facilities in this study

Source: ASCO 2019 presentation, Roche Analyst Event at ASCO 2019 presentation (partially modified)

Accumulated Efficacy Data in HER2 Franchise

■ **Efficacy data in HER2+ early/advanced breast cancer was presented**

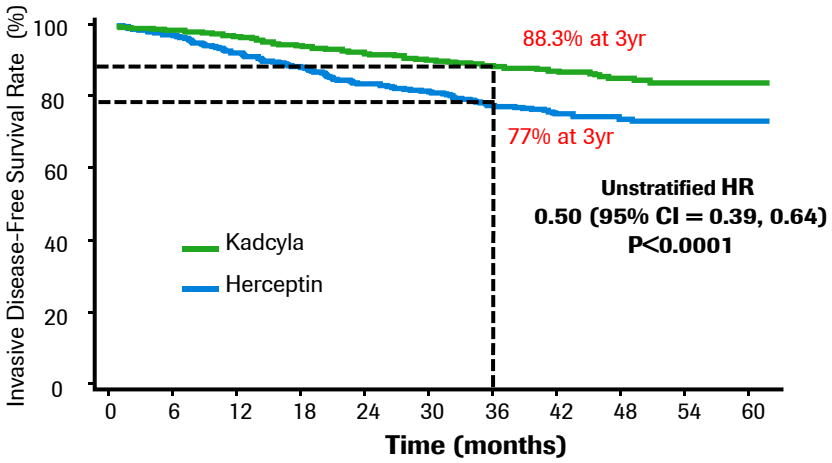
CLEOPATRA Study
1L HER2+ advanced breast cancer (1998-2019)



* OS: Kaplan–Meier method
HR, 95% CI: stratified Cox proportional hazards model
CI, confidence interval; H, Herceptin; HR, hazard ratio;
P, PERJETA; T, docetaxel

KATHERINE Study
Adjuvant HER2+ breast cancer without pCR[1] (2013-2018)

[1] Pathological complete response after neoadjuvant therapy



* IDFS: Kaplan–Meier method
HR, 95% CI: stratified Cox proportional hazards model

Note: No participation from Japanese facilities in the KATHERINE study

HER2 franchise: Herceptin/Perjeta/Kadcyla
OS: overall survival
IDFS: Invasive Disease Free Survival Rate

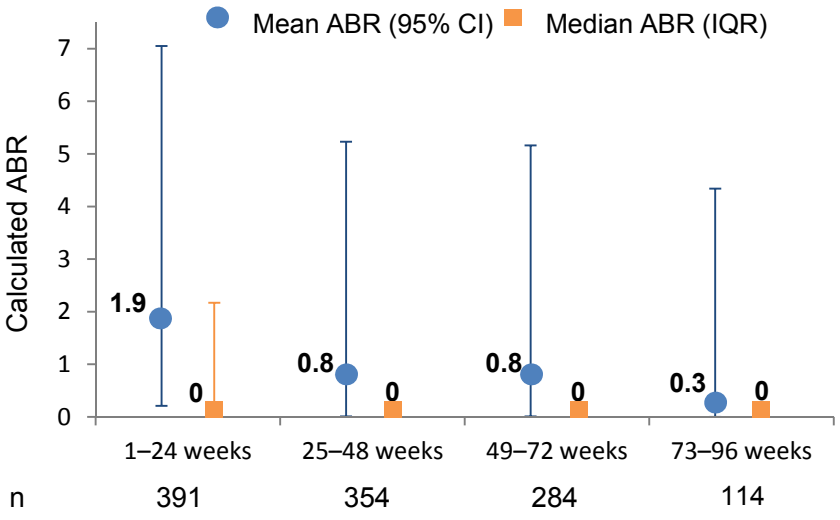
Source: ASCO 2019 presentation, Roche Analyst Event at ASCO 2019 presentation (partially modified)
This slide is not intended to compare the study results between clinical trials

Long-term Follow-up Data of HAVEN 1-4 Studies

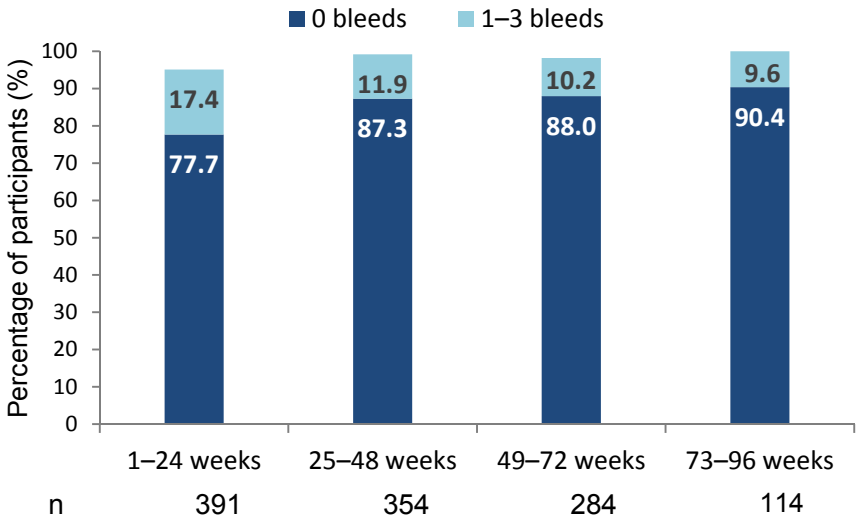
Hemlibra prophylaxis maintained low treated bleed rates for long-term

- Model-based ABR* for treated bleeds was 1.5 (95% CI, 1.20-1.84) over the median 83-week duration of exposure
- Over 87% of participants had no treated joint bleeds** from week 25
- Major adverse events: Injection site reactions (26.8%)

Treated bleed ABRs† over consecutive 24-week treatment intervals (N=400)



Proportions of participants with 0 or 1-3 treated joint bleeds over time (N=400)



* Calculated using negative binomial regression; † Based on calculated ABRs
ABR, annualised bleed rate; CI, confidence interval
** Either spontaneous or due to injury/trauma

Source: ISTH 2019 presentation

Projected Submissions (Post PoC NMEs and Products)

as of July 25, 2019

CHUGAI

Roche Roche Group

Filed

- TECENTRIQ (RG7446) SCLC
- EDIROL (ED-71) Osteoporosis (China)
- TECENTRIQ (RG7446) Breast Cancer
- Rozlytrek (RG6268) NSCLC (ROS1+)

	NME	line extension
in-house	■	□
in-licensed	■	□

NSCLC: non-small cell lung cancer
RCC: renal cell carcinoma
SCLC: small cell lung cancer
MIUC: muscle invasive urothelial carcinoma
HCC: hepatocellular carcinoma
HNC: head and neck carcinoma
DLBCL: diffuse large B-cell lymphoma
NMOSD: neuromyelitis optica spectrum disorder
wAMD: wet age-related macular degeneration
FDC: fixed-dose combination
sc: subcutaneous injection

2019	2020	2021	2022 and beyond
satralizumab (SA237/RG6168) NMOSD	TECENTRIQ (RG7446) Ovarian Cancer	TECENTRIQ (RG7446) HCC	RG6264 (FDC, sc) Breast cancer	nemolizumab* (CIM331) Pruritus in Dialysis Patients
		TECENTRIQ (RG7446) Prostate Cancer	polatuzumab vedotin (RG7596) DLBCL	faricimab (RG7716) wAMD
SUVENYL (NRD101) Knee Osteoarthritis /Shoulder Periarthritis (China)	AVASTIN (RG435) RCC	risdiplam (RG7916) Spinal Muscular Atrophy	TECENTRIQ (RG7446) Early Breast Cancer	ipatasertib (RG7440) Prostate Cancer	faricimab (RG7716) Diabetic Macular Edema
KADCYLA (RG3502) Breast Cancer (adjuvant)	TECENTRIQ (RG7446) RCC	RG6206 Duchenne Muscular Dystrophy	TECENTRIQ (RG7446) Urothelial Carcinoma	TECENTRIQ (RG7446) HNC (adjuvant)	HTT ASO (RG6042) Huntington's Disease
	TECENTRIQ (RG7446) MIUC (adjuvant)	ipatasertib (RG7440) Breast Cancer	TECENTRIQ (RG7446) NSCLC (neoadjuvant)	AVASTIN (RG435) HCC	gantenerumab (RG1450) Alzheimer's Disease
					ALECENSA (AF802/RG7853) NSCLC (adjuvant)
					TECENTRIQ (RG7446) RCC (adjuvant)
					TECENTRIQ (RG7446) NSCLC (adjuvant)

*Atopic dermatitis is under development by licensees [Galderma (overseas) and Maruho (Japan)]

Updates on the Development Requests for Unapproved Drugs/Indications

Review Committee of Development Requests for Unapproved Drugs/Indication

- 1st round requests: all approved (ten indications, including additional dosages and administrations of eight products)
- 2nd round requests: all approved (three indications of three products)
- 3rd round requests: requests were made for three indications of three products, including additional dosages and administrations, and two of them were approved

Product	Indication	Current Status
Avastin®	Additional dosage and administration for ovarian cancer	Submitted company opinion and waiting for evaluation by the committee

- 4th round requests: requests were made for four indications of four products, and one of them was approved

Product	Indication	Current Status
Xeloda®	Neuroendocrine tumor	Submitted company opinion and waiting for evaluation by the committee
Avastin®	Cerebral edema induced by radiation necrosis	Submitted company opinion and waiting for evaluation by the committee
Neutrogin®	Combination treatment with chemotherapy including fludarabine for relapsed/refractory AML	Submitted company opinion and waiting for evaluation by the committee

Remain unchanged from January 31, 2019

Contacts: Corporate Communications Dept.

Media Relations Group

Tel: +81 (0)3-3273-0881 Fax: +81 (0)3-3281-6607
e-mail: pr@chugai-pharm.co.jp

Tomoko Shimizu, Hiroshi Araki, Chisato Miyoshi, Yayoi Yamada,
Shumpei Yokoyama

Investor Relations Group

Tel: +81 (0)3-3273-0554 Fax: +81 (0)3-3281-6607
e-mail: ir@chugai-pharm.co.jp

Toshiya Sasai, Takayuki Sakurai, Tomoyuki Shimamura,
Sachiyo Yoshimura