# Q1 Results (Jan - Mar 2022) Conference Call

## CHUGAI PHARMACEUTICAL CO., LTD.

25 April 2022

# 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. Chugai’s recognition of non-recurring items may differ from that of Roche due to the difference in the scale of operations, the scope of business and other factors. 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.

Note:

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

# Agenda

| | | |
|---|---|---|
| 01 | FY2022 Q1 Overview | **Dr. Osamu Okuda**<br>President & CEO |
| 02 | FY2022 Q1 Consolidated Financial Overview (Core) | **Toshiaki Itagaki**<br>Director, Executive Vice President & CFO |
| 03 | Overview of Development Pipeline | **Tetsuya Yamaguchi**<br>Executive Vice President, Head of Project & Lifecycle Management Unit |

# FY2022 Q1 Overview

**Dr. Osamu Okuda**

President & CEO

FY2022 Q1 Overview

# Financial Overview

- **Significant YoY increase in revenues and profits due to an increase in new products such as RON and exports to Roche etc.**
- **No change in the earnings forecast after April, and full-year revenues and profits are expected to increase in line with the initial forecast**

| Core (billions of JPY) | 2021 Jan -Mar actual | 2022 Jan -Mar actual | Growth | | 2022 Jan - Dec forecast | Progress (%) |
|---|---|---|---|---|---|---|
| **Revenues** | **168.8** | **268.6** | **+99.8** | **+59.1%** | **1150.0** | **23.4%** |
| Domestic sales | 94.9 | 161.7 | +66.8 | +70.4% | 646.3 | 25.0% |
| Overseas sales | 35.4 | 81.0 | +45.6 | +128.8% | 385.2 | 21.0% |
| ROOI | 38.6 | 25.9 | -12.7 | -32.9% | 118.5 | 21.9% |
| **Operating profit** | **65.4** | **98.9** | **+33.5** | **+51.2%** | **440.0** | **22.5%** |
| Operating margin | 38.7% | 36.8% | -2.6%pts | | 38.3% | - |
| **Net income** | **48.4** | **70.6** | **+22.2** | **+45.9%** | **312.5** | **22.6%** |
| **EPS (yen)*** | **29.42** | **42.91** | **+13.49** | **+45.9%** | **190.00** | **22.6%** |

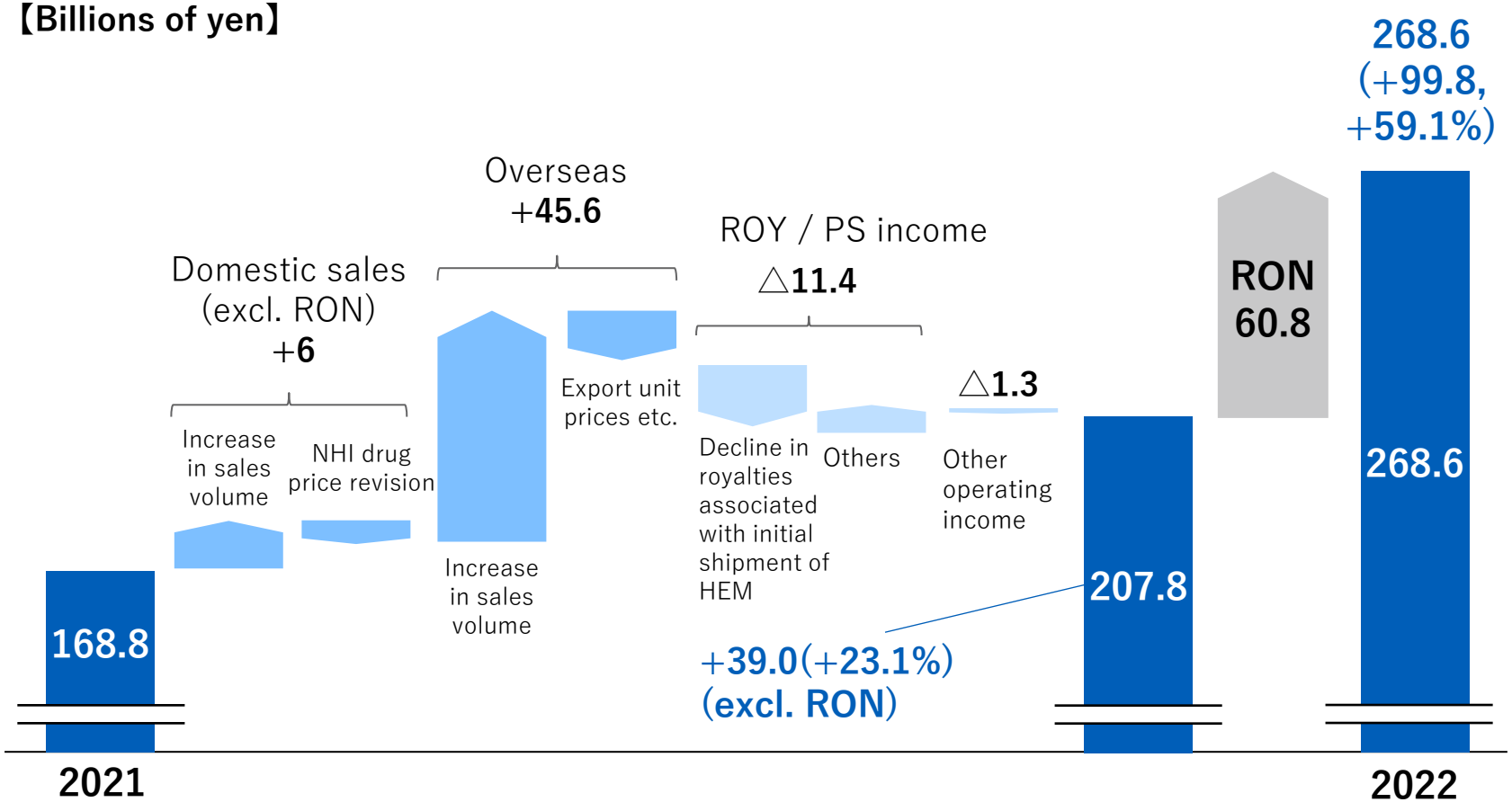
- The effect of changing situations in Russia/Ukraine had no major negative impact on performance and limited impact on development activities
- The RON supply to the government based on the 2021 contract contributed significantly. Its 2022 contract has been signed in line with the initial forecast
- Overseas sales increased significantly mainly due to HEM exports to Roche as expected
- Significant decline in ROOI associated with the initial shipment of HEM as expected
- Litigation settlement with Alexion recognized 91.9 billion yen as non-core revenue

ROOI：Royalties and other operating income
RON: Ronapreve
HEM: Hemlibra

# Topline Overview

- Domestic sales (excl. RON) increased due to an increase in new products and sales volume*
- Overseas sales increased significantly as volume growth exceeded the decline in export unit prices
- A decrease in royalty income was offset by an increase in overseas sales as expected

【Billions of yen】




- Domestic sales (excl. RON) increased as sales growth in new products Polivy, Evrysdi, and Enspryng exceeded the impact of generics and NHI drug price revision as expected
- Overseas sales increased significantly due to the full-scale HEM exports to Roche at regular shipment unit price as well as ACT exports as expected
- Regular royalties of HEM and ACT increased due to growth in overseas local sales despite a decrease in royalty income from initial shipments of HEM as expected

* Among them, the domestic patient share of HEM is as below.
'22Q1 27.9%, '21Q4 26.2%, '20Q4 20.7%, '19Q4 14.8%, '18Q4 2.1%

ACT: Actemra ROY: royalty PS: profit share

# R&D Overview

## A full-scale entry into the ophthalmology field is expected to contribute revenue growth for Chugai

- **Vabysmo:** Obtained approval for nAMD and DME. Achieved 16 week-interval administration for the first time as an intravitreal injection. Information provision activities conducted by in-house medical reps. GP3 studies for the additional indication of RVO are ongoing
- **RG6321 (PDS):** Started domestic P1 / 2 study as a new development product in the ophthalmology field
- **Roche's ophthalmology pipeline :** 9 NME*1

## Delivering new value with specialized partners in the skin diseases area

- **Mitchga®'s domestic approval:** Maruho obtained approval for pruritus associated with atopic dermatitis. Business scheme: Manufactured by Chugai and sold by Maruho
- **Expected to improve QoL:** The first drug targeting IL-31, which is the cause of pruritus. Promptly reduced pruritus in domestic P3 study
- **Overseas:** Galderma*2 is conducting GP3 studies for atopic dermatitis and prurigo nodularis, and a GP2/3 study for chronic kidney disease associated pruritus

## Protecting the rights of unique drug discovery technologies that lead to competitive advantage

- **Recycling antibody technology:** Settlement agreement signed with Alexion for a patent infringement lawsuit

PDS: Port Delivery System with ranibizumab, nAMD: neovascular age-related macular degeneration, DME: diabetic macular edema, RVO: retinal vein occlusion
NME: new molecular entity
*1 As of February 3, 2022 *2 Galderma retains exclusive global license for the development and marketing excluding Japan and Taiwan
Mitchga® is a registered trademark of Maruho Co., Ltd. in Japan.

# Progress Toward Relocation of the Research Laboratories

■ **Chugai Life Science Park Yokohama**

- **Features:** Aiming to dramatically improve research productivity by consolidating all drug discovery research functions and utilizing robotics / AI etc.
- **Construction work:** Progress as planned (scheduled to complete in October 2022 and start operation in April 2023)

■ **Kamakura research lab. / Fuji Gotemba research lab.: Progress toward closure is as follows.**

| Overview of Chugai Life Science Park Yokohama |
|---|
| Core research lab. under construction in Totsuka-ku, Yokohama city, Kanagawa<br>・Building area: 35,210m$^2$<br>・Total floor area: 119,960m$^2$ |
| Focusing on global warming countermeasures, regional disaster prevention, and biodiversity conservation, aiming for environmental performance certification |
| In addition to making environmental agreements with Yokohama city, we emphasize coexistence with the local community |

| | Contractor | Contract name | Site area | Contract period | Planned disposition date |
|---|---|---|---|---|---|
| **Kamakura research lab. North side site** | TAKASAGO INTERNATIONAL CORPORATION | Real estate sales contract | 35,359m$^2$ | March 2022 | Late 2025 (vacant site) |
| **Kamakura research lab. South side site** | Haseko Corporation | Real estate sales contract | 53,945m$^2$ | March 2022 | September 2023 (as-is) |
| **Fuji Gotemba research lab.** | TBD | TBD | 142,285m$^2$ | TBD | TBD |

# Response to the Transition to the New Market Category "Prime Market"

## ■ Establishment of Special Committee

- At the request of the revised Corporate Governance Code for companies listed on the Prime Market, we selected to establish a Special Committee (established on March 29, 2022)
  - ✓ Deliberate and consider important transactions and acts etc. that may conflict with the interests of the parent company Roche and minority shareholders
  - ✓ The Special Committee consists of three or more members consisting of only independent outside directors and independent outside corporate auditors, including one independent outside director who also serves as a outside member of the Compensation Committee

| Name | Role | Position in our company |
|---|---|---|
| Yoichiro Ichimaru | Chairman*1 | independent outside director*2 |
| Masayuki Oku | member | independent outside director*2 |
| Kenichi Masuda | member | independent outside corporate auditor*2 |

*1 Selected by mutual election of committee member
*2 Designated as an independent officer pursuant to the regulations of the Tokyo Stock Exchange, Inc., to which notification has been made.

# Introduction of New Management Members (Supervisory Responsibility)

As of April 1, 2022

## Dr. Osamu Okuda
**Representative Director, President & CEO**

Supervisory responsibility for Corporate Planning, Partnering, External Affairs, and Audit

## Dr. Hisafumi Yamada
**Director, Executive Vice President**

Supervisory responsibility for Project & Lifecycle Management (R&D), Research, Translational Research, Clinical Development, and Pharmaceutical Technology

## Toshiaki Itagaki
**Director, Executive Vice President & CFO**

Supervisory responsibility for Finance & Accounting, Corporate Communication and Purchasing

Head of Finance Supervisory Div.

## Tetsuya Yamaguchi
**Executive Vice President**

Supervisory responsibility for Project & Lifecycle Management (Marketing), Drug Safety, Medical Affairs, and Foundation Medicine

Head of Project & Lifecycle Management Unit

## Junichi Ebihara
**Executive Vice President**

Supervisory responsibility for Legal Affairs, Intellectual Property, General Affairs, Risk Management, Compliance, and Quality and Regulatory Compliance

## Shinji Hidaka
**Executive Vice President**

Supervisory responsibility for Marketing & Sales

Head of Marketing & Sales Div.

## Yoshiyuki Yano
**Executive Vice President**

Supervisory responsibility for Human Resources and Environment, Health, and Safety

Head of Human Resources Management Dept.

## Satoko Shisai
**Executive Vice President**

Supervisory responsibility for Digital Transformation

Head of Digital Transformation Unit

# FY2022 Q1 Consolidated Financial Overview(Core)


## Toshiaki Itagaki

Director, Executive Vice President & CFO

FY2022 Q1 Consolidated Financial Overview (Core)

# IFRS and Core Results Jan – Mar

| (Billions of JPY) | IFRS results | Non-core items | | Core results |
|---|---|---|---|---|
| | | Intangible assets | Others | |
| **Revenues** | **360.6** | | **-91.9** | **268.6** |
| Sales | 242.7 | | | 242.7 |
| Royalties and other operating income | 25.9 | | | 25.9 |
| Other revenue | 91.9 | | -91.9 | - |
| Cost of sales | -114.4 | +0.3 | | -114.1 |
| **Operating expenses** | **-59.1** | **+0.2** | **+3.4** | **-55.6** |
| M&D and G&A | -25.3 | | +2.6 | -22.7 |
| Research and development | -33.9 | +0.2 | +0.8 | -32.9 |
| **Operating profit** | **187.0** | **+0.4** | **-88.5** | **98.9** |
| Financial account balance | -0.8 | | | -0.8 |
| Income taxes | -54.4 | -0.1 | +27.0 | -27.5 |
| **Net income** | **131.8** | **+0.3** | **-61.5** | **70.6** |
| **EPS (JPY)** | 80.09 | | | 42.91 |

**Non-Core items** (Billions of JPY)

**Intangible assets**

| | |
|---|---|
| Amortization | +0.3 |
| Impairment | +0.2 |

**Others**

| | |
|---|---|
| Lump-sum income from settlement agreement with Alexion Pharmaceuticals, Inc. | -91.9 |
| Restructuring expenses, etc. | +3.4 |

FY2022 Q1 Consolidated Financial Overview (Core)

# P/L Jan - Mar (Year on Year)

| (Billions of JPY) | 2021 | 2022 | Growth | |
|---|---|---|---|---|
| **Revenues** | **168.8** | **268.6** | **+ 99.8** | **+ 59.1%** |
| Sales | 130.3 | 242.7 | + 112.4 | + 86.3% |
| Domestic | 94.9 | 161.7 | + 66.8 | + 70.4% |
| Overseas | 35.4 | 81.0 | + 45.6 | + 128.8% |
| Royalties and other operating income | 38.6 | 25.9 | - 12.7 | - 32.9% |
| Royalty and profit-sharing income | 36.6 | 25.2 | - 11.4 | - 31.1% |
| Other operating income | 2.0 | 0.7 | - 1.3 | - 65.0% |
| **Cost of sales** | **-55.0** | **-114.1** | **- 59.1** | **+ 107.5%** |
| ( cost to sales ratio) | 42.2% | 47.0% | +4.8%pts | - |
| **Operating expenses** | **-48.5** | **-55.6** | **- 7.1** | **+ 14.6%** |
| M&D and G&A * | -19.7 | -22.7 | - 3.0 | + 15.2% |
| Research and development | -28.7 | -32.9 | - 4.2 | + 14.6% |
| **Operating profit** | **65.4** | **98.9** | **+ 33.5** | **+ 51.2%** |
| (operating margin) | 38.7% | 36.8% | -1.9%pts | - |
| Financial account balance | 0.3 | -0.8 | - 1.1 | - 366.7% |
| Income taxes | -17.2 | -27.5 | - 10.3 | + 59.9% |
| **Net income** | **48.4** | **70.6** | **+ 22.2** | **+ 45.9%** |
| **EPS (JPY)** | 29.42 | 42.91 | +13.49 | + 45.9% |

**Domestic sales**
Significant increase due to sales growth of new products as well as mainstay products

**Overseas sales**
Significant increase in sales of Hemlibra and Actemra

**Royalty and profit-sharing income**
Significant decrease in royalty income for initial shipping inventory of Hemlibra

**Other operating income**
Decrease in one-time income

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

**Operating expenses**
Increase due to business taxes and increased activities of overseas subsidiaries
Increase of research and development expenses due to progress of projects, etc.

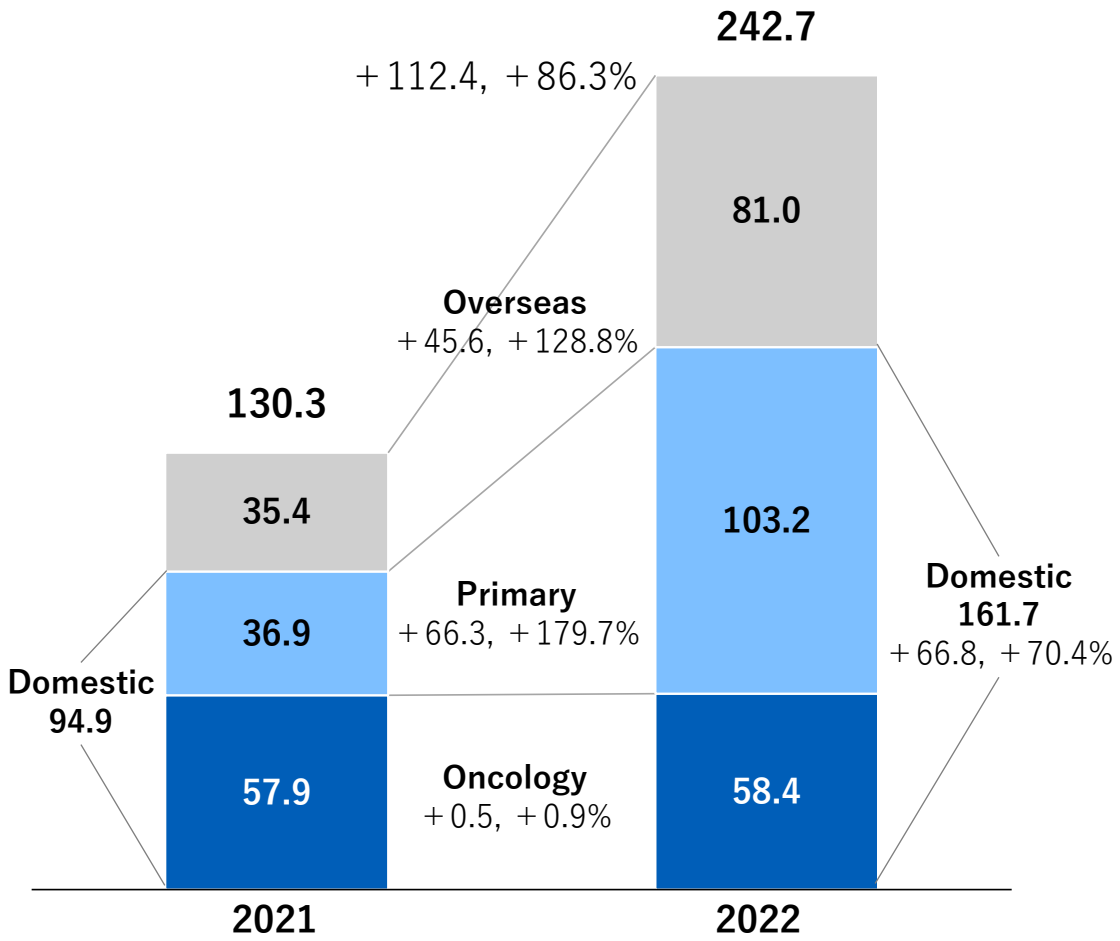
**Operating profit**
Growth mainly due to increase in sales

* M&D: Marketing and distribution, G&A: General and administration

# Sales Jan - Mar (Year on Year)

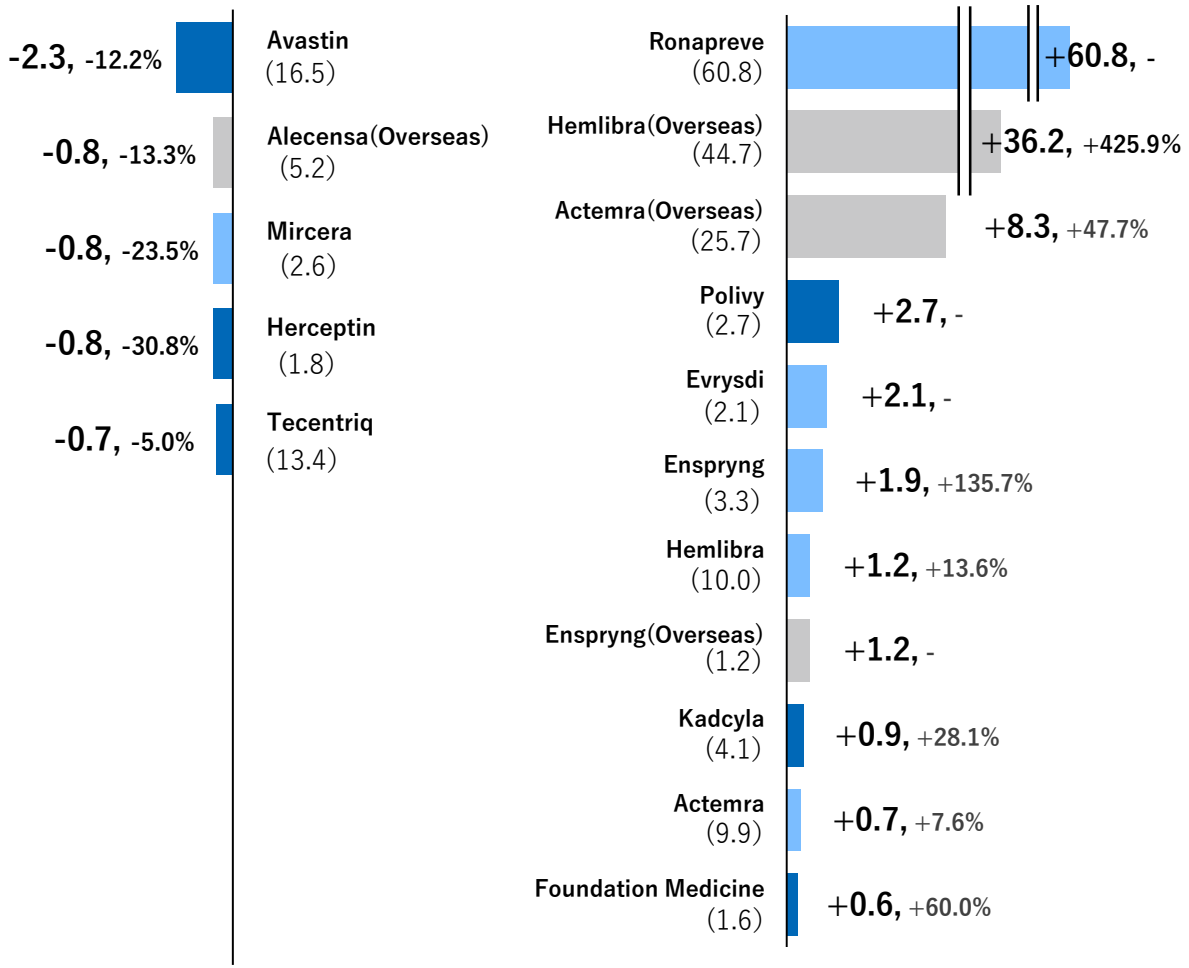
(Billions of JPY)

Sales by Disease Area,
Year on Year Comparisons




Sales by Products,
Year on Year Changes

( ): Actual sales in FY2022
%: Year-on-year percentage change

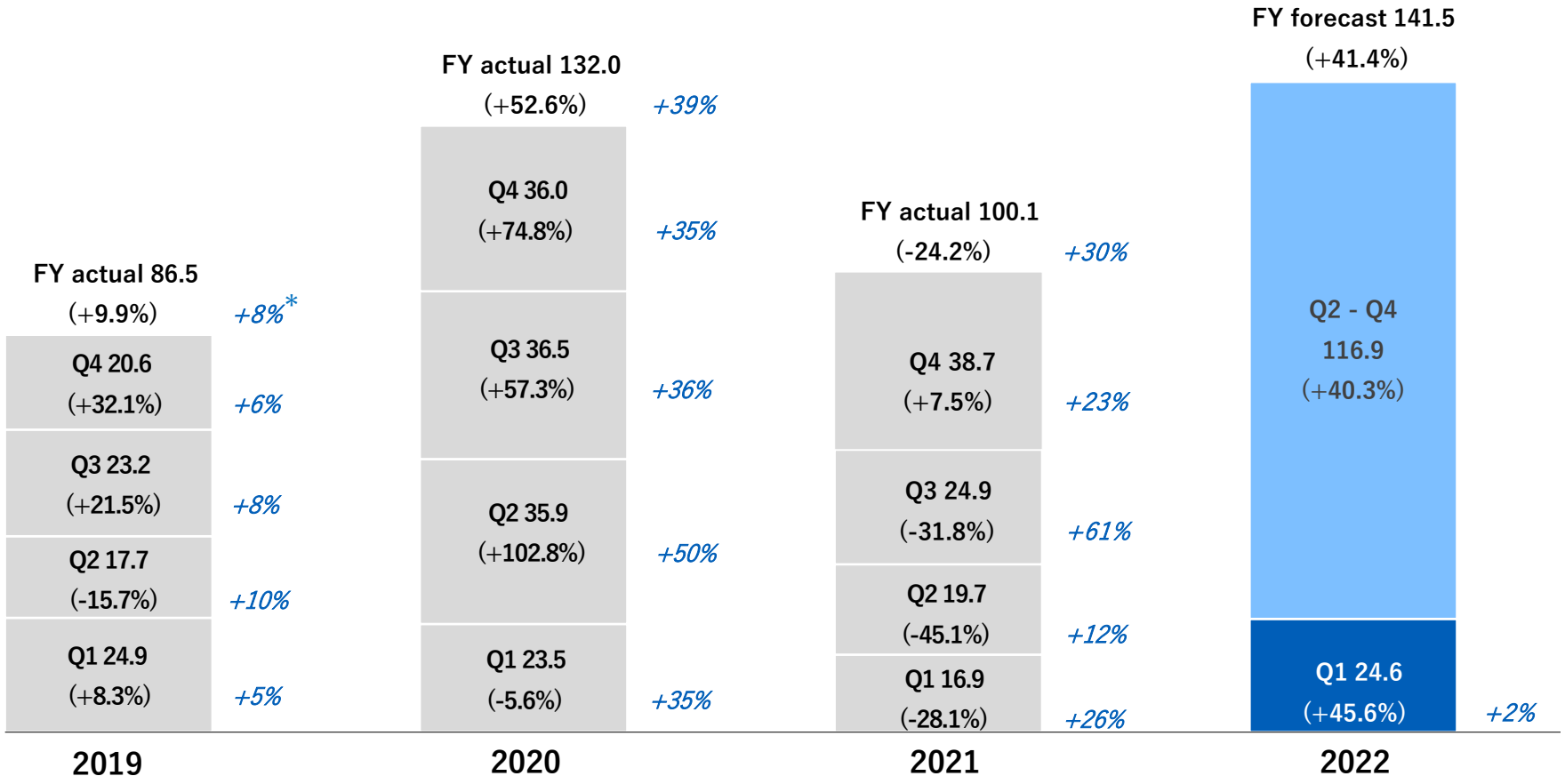


FY2022 Q1 Consolidated Financial Overview (Core)

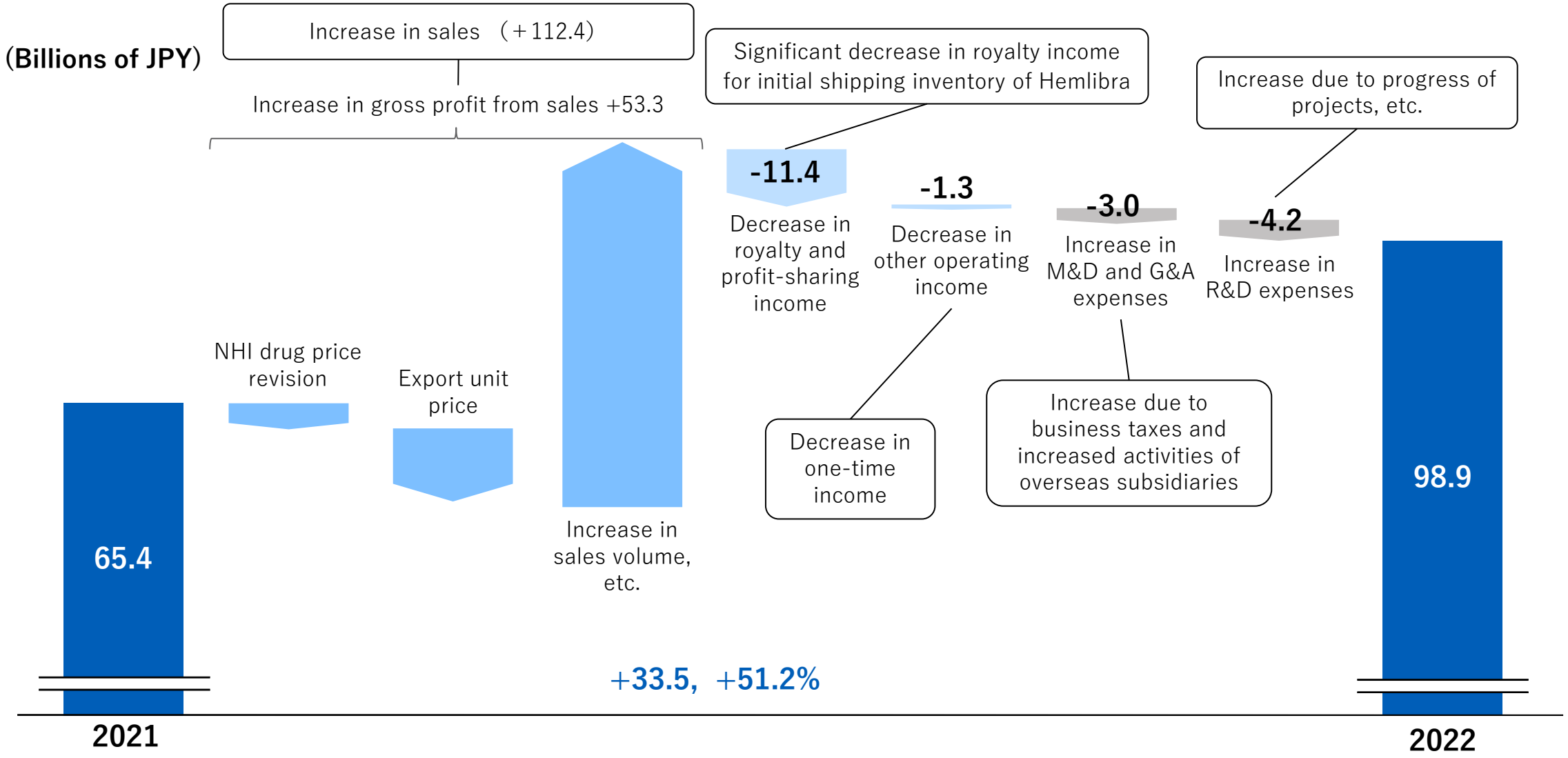
# Export of Actemra to Roche

%: year on year growth
black: Chugai sales to Roche
blue*: Roche sales excluding Japan (for reference)
*Growth rates in blue are calculated with the effects of exchange rate fluctuations eliminated.

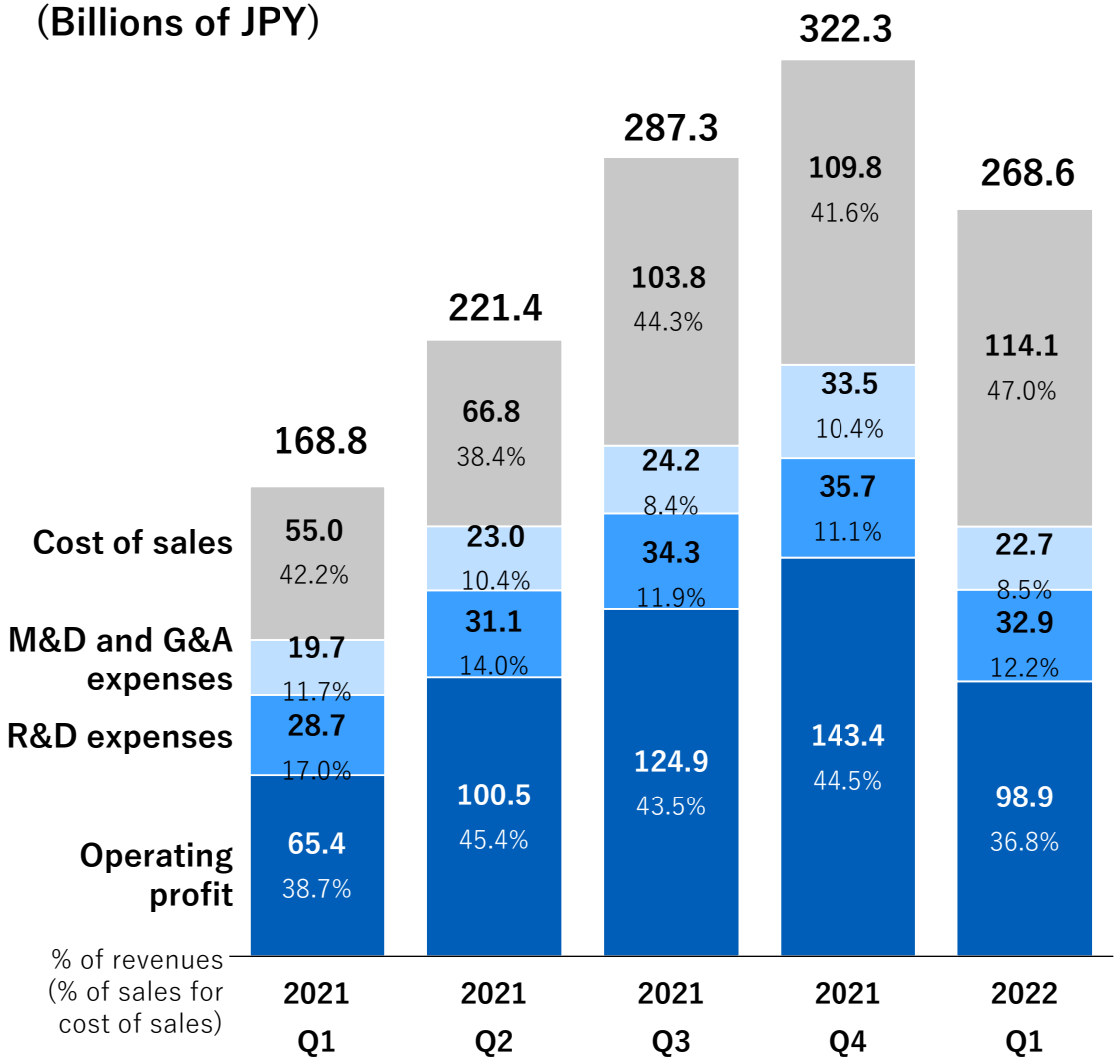
(Billions of JPY)



# Operating Profit Jan - Mar (Year on Year)



# Structure of Costs and Profit by Quarter




### vs. Year on Year (2021 Q1)

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

R&D expenses: increase due to progress of projects, etc.

Operating profit: increase of +33.5 (+51.2%)

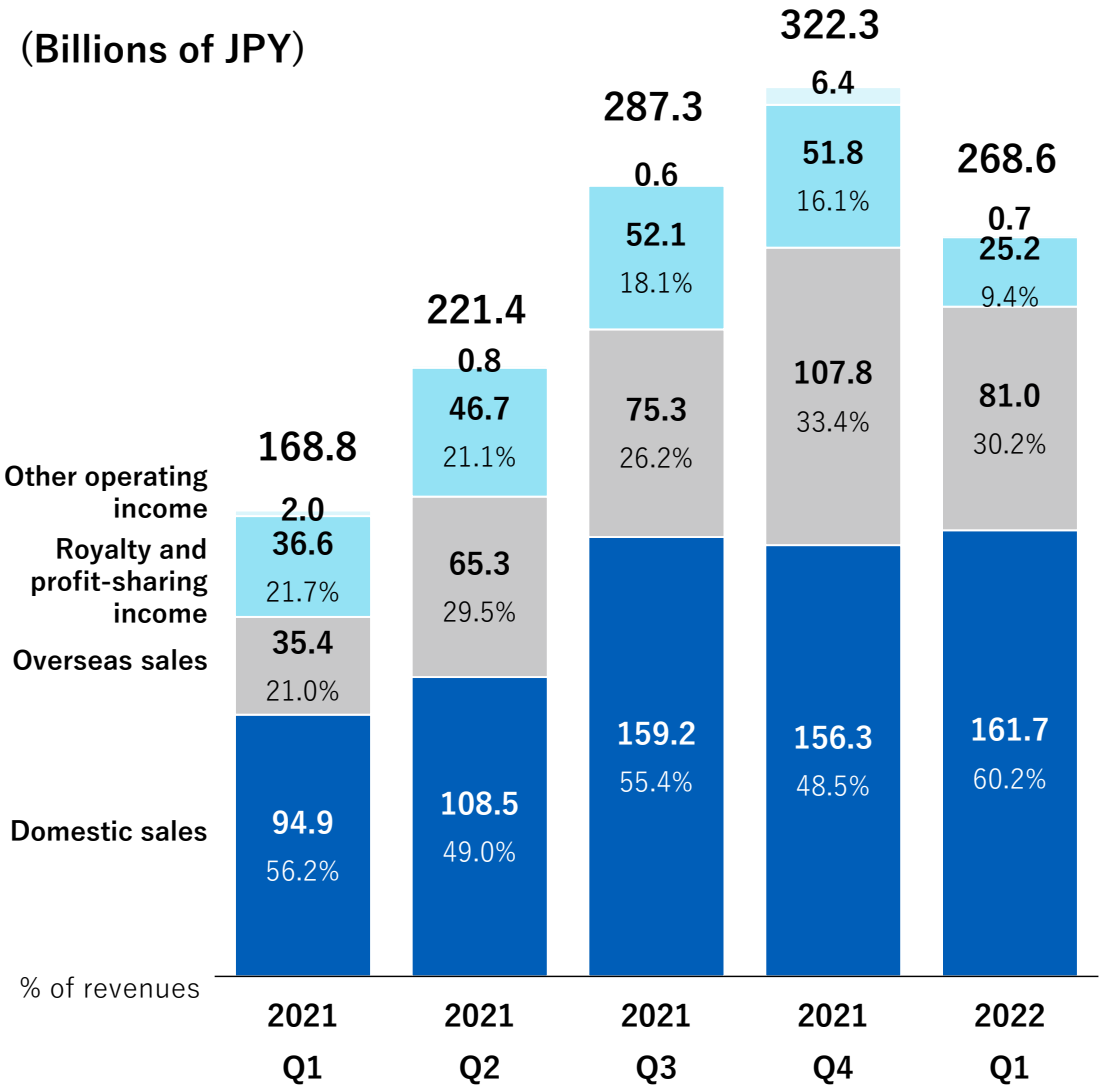
### vs. Previous Quarter (2021 Q4)

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

M&D and G&A expenses: decrease in line with the trend of previous years

Operating profit: decrease of -44.5 (-31.0%)

# Structure of Revenues by Quarter




## vs. Year on Year (2021 Q1)

Domestic sales: significant increase due to sales growth of new products as well as mainstay products

Overseas sales: significant increase in sales of Hemlibra and Actemra

Royalty and profit-sharing income: significant decrease in royalty income for initial shipping inventory of Hemlibra

## vs. Previous Quarter (2021 Q4)

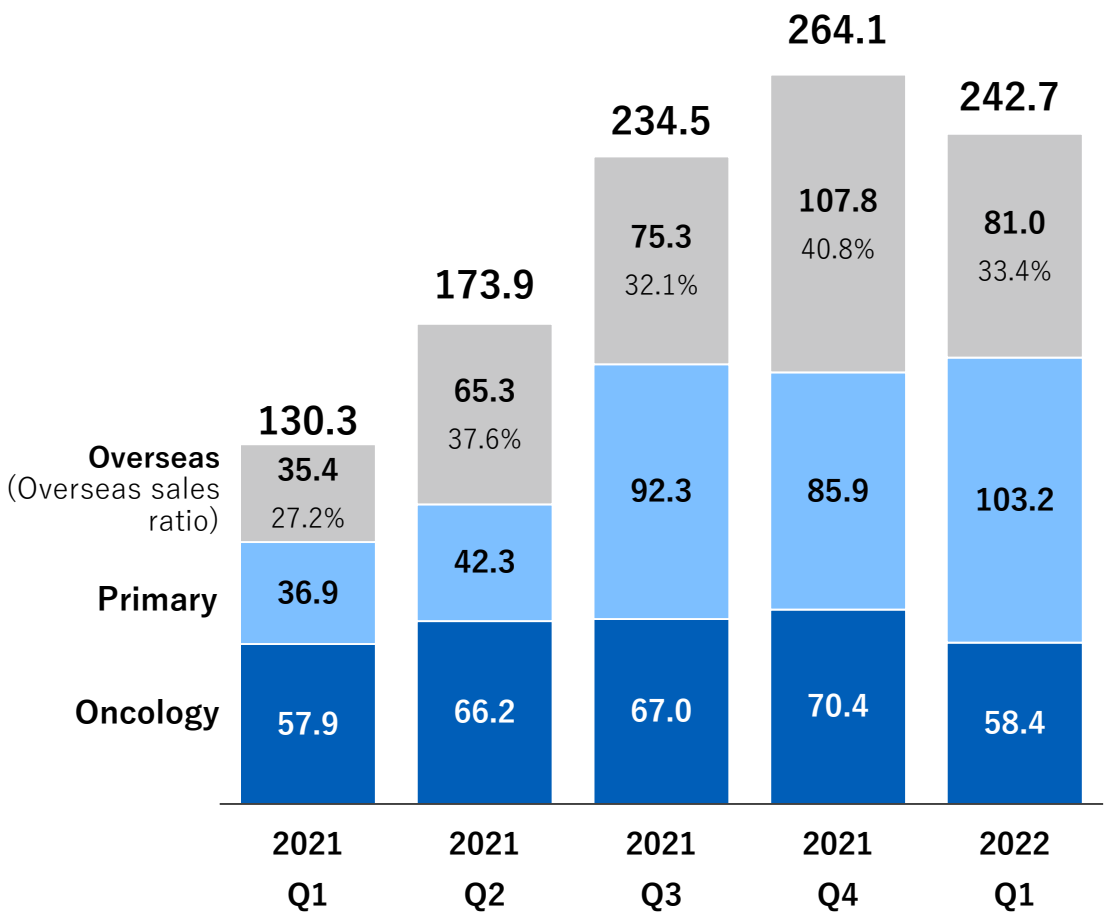
Domestic sales: decrease in line with the trend of previous years, increase in sales of Ronapreve

Overseas sales: decrease mainly due to variance in timing of exports from quarter to quarter, etc.

Royalty and profit-sharing income: decrease in income for Hemlibra

# Structure of Sales by Quarter

(Billions of JPY)




## vs. Year on Year (2021 Q1)

| | | | | |
|---|---|---|---|---|
| **Oncology** | Polivy: | +2.7 | Avastin: | -2.3 |
| **Primary** | Ronapreve: | +60.8 | Evrysdi: | +2.1 |
| | Enspryng: | +1.9 | | |
| **Overseas** | Hemlibra: | +36.2 | Actemra: | +8.3 |

## vs. Previous Quarter (2021 Q4)

| | | | | |
|---|---|---|---|---|
| **Oncology** | Avastin: | -4.6 | Tecentriq: | -2.7 |
| **Primary** | Ronapreve: | +26.2 | Hemlibra: | -2.3 |
| | Edirol: | -1.6 | Actemra: | -1.5 |
| **Overseas** | Actemra: | -13.6 | Hemlibra: | -7.8 |
| | Alecensa: | -6.6 | | |

FY2022 Q1 Consolidated Financial Overview (Core)

# P/L Jan - Mar (vs. Forecast)

| (Billions of JPY) | Actual 2022 Jan - Mar | Forecast 2022 Jan - Dec | Progress | 2021 Progress* |
|---|---|---|---|---|
| **Revenues** | **268.6** | **1,150.0** | **23.4%** | **16.9%** |
| Sales | 242.7 | 1,031.5 | 23.5% | 16.2% |
| Domestic | 161.7 | 646.3 | 25.0% | 18.3% |
| Overseas | 81.0 | 385.2 | 21.0% | 12.5% |
| Royalties and other operating income | 25.9 | 118.5 | 21.9% | 19.6% |
| Royalty and profit-sharing income | 25.2 | 114.0 | 22.1% | 19.6% |
| Other operating income | 0.7 | 4.5 | 15.6% | 20.4% |
| **Cost of sales** | **- 114.1** | **- 460.0** | **24.8%** | **16.4%** |
| ( cost to sales ratio) | 47.0% | 44.6% | - | - |
| **Operating expenses** | **- 55.6** | **- 250.0** | **22.2%** | **21.1%** |
| M&D and G&A | - 22.7 | - 100.5 | 22.6% | 19.6% |
| Research and development | - 32.9 | - 149.5 | 22.0% | 22.1% |
| **Operating profit** | **98.9** | **440.0** | **22.5%** | **15.1%** |
| (operating margin) | 36.8% | 38.3% | - | - |
| **Net income** | **70.6** | **312.5** | **22.6%** | **15.5%** |
| **EPS (JPY)** | 42.91 | 190.00 | 22.6% | 15.5% |

**Domestic Sales**
Overall progress nearly in line with forecast

**Overseas sales**
Progress nearly in line with forecast

**Royalty and profit-sharing income**
Progress nearly in line with forecast

**Other operating income**
Progress nearly in line with forecast

**Cost of Sales**
Cost to sales ratio nearly in line with Q1 forecast

**Operating expenses**
Progress nearly in line with forecast

**Operating profit**
Progress nearly in line with forecast

* Jan – Mar progress versus Jan – Dec

# Sales Jan - Mar (vs. Forecast)

| (Billions of JPY) | Actual 2022 Jan - Mar | Forecast 2022 Jan - Dec | Forecast Progress | 2021 Progress * |
|---|---|---|---|---|
| **Sales** | **242.7** | **1,031.5** | **23.5%** | **16.2%** |
| **Domestic** | **161.7** | **646.3** | **25.0%** | **18.3%** |
| **Oncology** | **58.4** | **260.5** | **22.4%** | **22.1%** |
| Avastin | 16.5 | 69.4 | 23.8% | 23.2% |
| Tecentriq | 13.4 | 62.0 | 21.6% | 22.7% |
| Perjeta | 7.4 | 33.7 | 22.0% | 23.0% |
| Alecensa | 6.3 | 28.7 | 22.0% | 21.7% |
| Polivy | 2.7 | 16.2 | 16.7% | 0.0% |
| Kadcyla | 4.1 | 16.0 | 25.6% | 20.4% |
| Herceptin | 1.8 | 8.3 | 21.7% | 26.5% |
| Gazyva | 1.0 | 5.4 | 18.5% | 22.2% |
| Rituxan | 1.0 | 4.1 | 24.4% | 23.5% |
| Foundation Medicine | 1.6 | 9.1 | 17.6% | 19.6% |
| Other | 2.6 | 7.5 | 34.7% | 22.4% |

| (Billions of JPY) | Actual 2022 Jan - Mar | Forecast 2022 Jan - Dec | Forecast Progress | 2021 Progress * |
|---|---|---|---|---|
| **Primary** | **103.2** | **385.8** | **26.7%** | **14.3%** |
| Ronapreve | 60.8 | 199.0 | 30.6% | 0.0% |
| Hemlibra | 10.0 | 51.8 | 19.3% | 21.2% |
| Actemra | 9.9 | 41.9 | 23.6% | 21.3% |
| Enspryng | 3.3 | 16.7 | 19.8% | 14.4% |
| Edirol | 3.3 | 10.8 | 30.6% | 13.0% |
| Mircera | 2.6 | 10.2 | 25.5% | 23.6% |
| Evrysdi | 2.1 | 8.8 | 23.9% | 0.0% |
| CellCept | 1.8 | 7.4 | 24.3% | 23.8% |
| Bonviva | 1.7 | 7.0 | 24.3% | 24.4% |
| Oxarol | 1.4 | 5.1 | 27.5% | 22.6% |
| Other | 6.3 | 27.1 | 23.2% | 7.9% |
| **Overseas** | **81.0** | **385.2** | **21.0%** | **12.5%** |
| Hemlibra | 44.7 | 186.0 | 24.0% | 7.4% |
| Actemra | 25.7 | 144.4 | 17.8% | 16.9% |
| Alecensa | 5.2 | 34.1 | 15.2% | 12.0% |
| Enspryng | 1.2 | 4.6 | 26.1% | 0.0% |
| Neutrogin | 2.4 | 8.8 | 27.3% | 24.2% |
| Other | 1.9 | 7.4 | 25.7% | 19.4% |

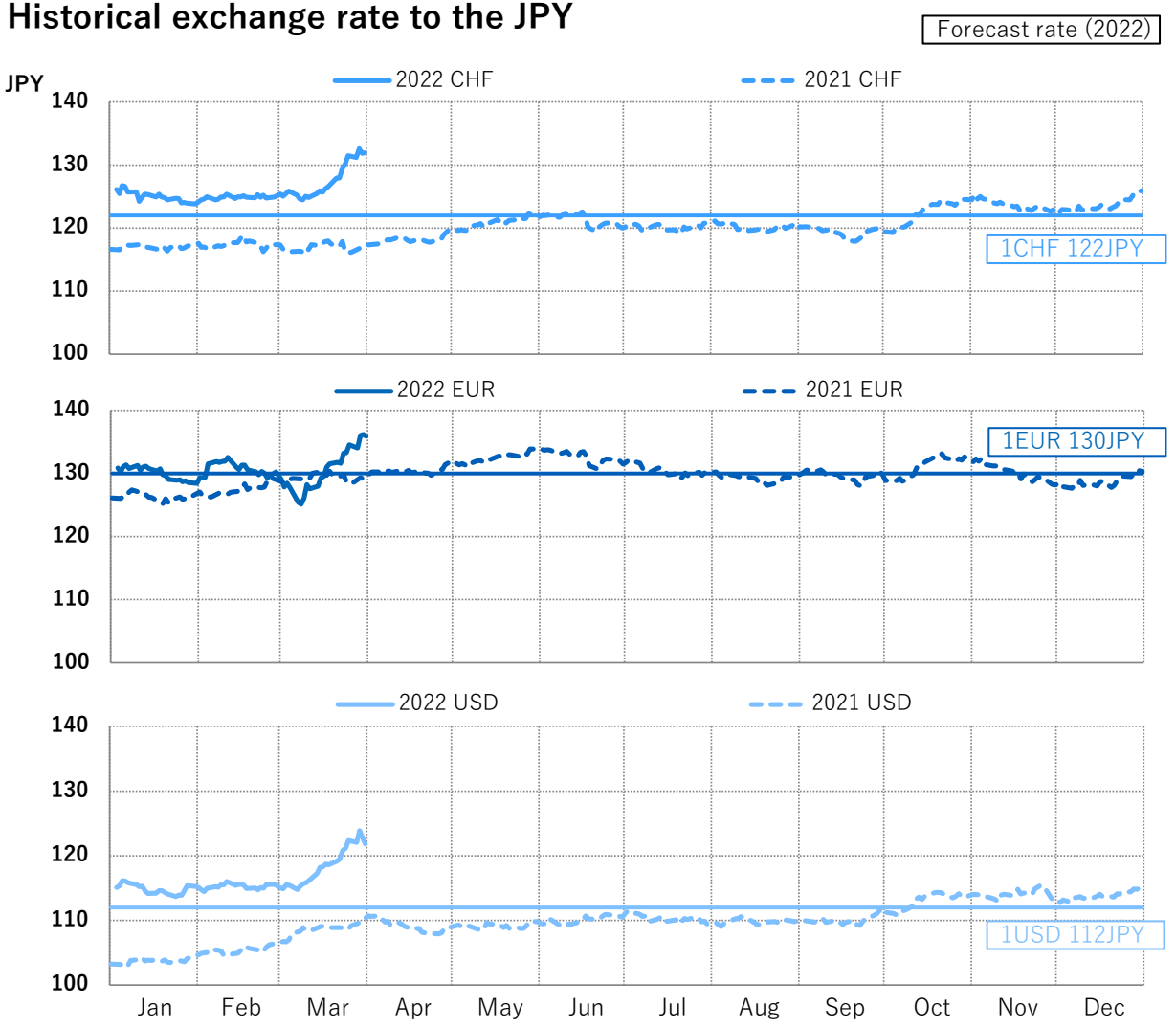
* Jan – Mar progress versus Jan – Dec

# Impact from Foreign Exchange (vs. Forecast)

| (billions of JPY) | FX impact 2022 (FX impact vs. Assumption) | |
|---|---|---|
| **Revenues** | Sales | -1.2 |
| | Royalties and other operating income | +0.4 |
| **Cost of sales & Operating expenses** | Cost of sales | -0.1 |
| | Operating expenses | -0.1 |
| **Operating profit** | **-1.0** | |

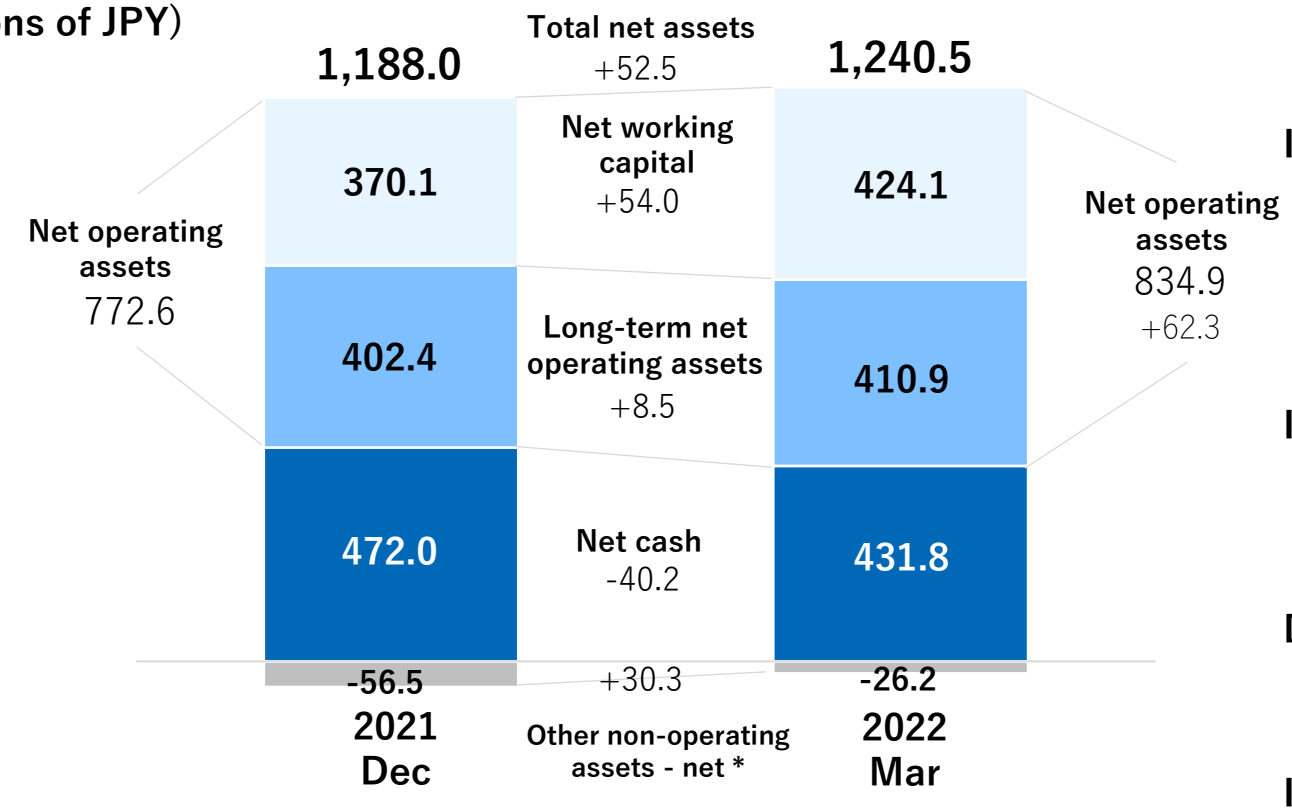
| Market average exchange rate(JPY) | 2021 Actual | 2022 Assumption | 2022 Actual |
|---|---|---|---|
| 1CHF | 117.08 | 122.00 | 125.78 |
| 1EUR | 127.65 | 130.00 | 130.43 |
| 1USD | 105.83 | 112.00 | 116.17 |

**Historical exchange rate to the JPY**



# Financial Position (vs. 2021 Year End)

(Billions of JPY)




| | | | |
|---|---|---|---|
| Total assets | 1,538.7 | +46.2 | 1,584.9 |
| Total liabilities | -350.7 | +6.3 | -344.4 |
| Total net assets | 1,188.0 | +52.5 | 1,240.5 |
| Ratio of equity attributable to Chugai shareholders | 77.2% | +1.1%pts | 78.3% |

### Increase in net working capital

Increase mainly in accounts receivable relating to settlement agreement with Alexion Pharmaceuticals, Inc. despite decrease in trade accounts receivable, etc.

### Increase in long-term net operating assets

Increase mainly in property, plant and equipment, etc.

### Decrease in net cash

(See next slide)

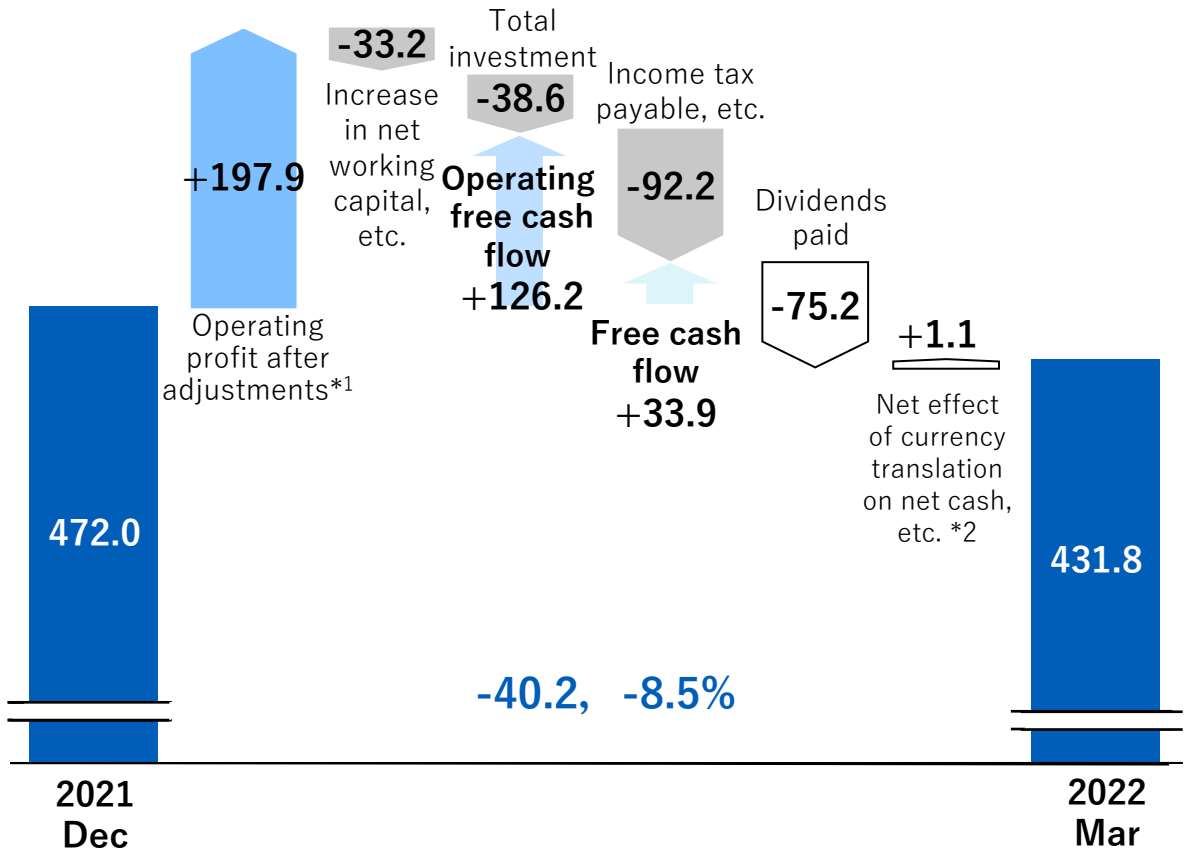
### Increase in other non-operating assets – net

Decrease mainly in accrued corporate tax

* E.g., deferred income tax assets, accrued corporate tax, etc.

# Net Cash (vs. 2021 Year End)

(Billions of JPY)




| | |
|---|---|
| **Operating profit after adjustment** *1 | **+197.9** |
| Operating profit *1 | +187.0 |
| Depreciation, amortization and impairment *1 | +7.5 |
| **Increase in net working capital, etc.** | **-33.2** |
| **Total investment** | **-38.6** |
| Property, plant and equipment | -34.1 |
| Payment for lease liabilities | -1.8 |
| Intangible assets | -2.6 |
| **Operating free cash flow** | **+126.2** |
| **Income tax payable, etc.** | **-92.2** |
| Income tax payable | -85.5 |
| **Free cash flow** | **+33.9** |
| **Dividends paid** | **-75.2** |
| **Net effect of currency transaction on net cash, etc.** *2 | **+1.1** |

*1 Including Non-Core (IFRS results)
*2 Net effect of currency translation on net cash, etc. = Transaction in own equity instruments + Purchase of non-controlling interests + Net effect of currency translation on net cash(*3)
*3 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)

# Overview of Development Pipeline


## Tetsuya Yamaguchi

Executive Vice President, Head of Project & Lifecycle Management Unit

## Overview of Development Pipeline

# Q1 Topics

Letters in orange：in-house projects (global development)　Letters in blue：in-licensed from Roche (development and distribution in Japan)

As of April 25, 2022

| | | | |
|---|---|---|---|
| **Approved** | Mitchga | pruritus associated with atopic dermatitis | March 2022 |
| | Vabysmo | age-related macular degeneration associated with subfoveal choroidal neovascularization and diabetic macular edema (DME) | March 2022 |
| | Perjeta/Herceptin | advanced or recurrent HER2-positive colon cancer or rectal cancer not amenable to curative resection that has progressed after cancer chemotherapy | March 2022 |
| **Filed** | Actemra | COVID-19 in hospitalized adults - under Priority Review by the U.S. FDA | April 2022 (acceptance of filing) |
| | Gazyva | chronic lymphocytic leukemia (CLL) - combination with acalabrutinib | March 2022 |
| **Pipeline entry** | SKY59/crovalimab | Sickle cell disease (US and EU) | P2 study (March 2022) |
| | RG6321/ranibizumab(PDS) | neovascular age-related macular degeneration (nAMD) and DME | P1/2 study (March 2022) |
| | RG7828/mosunetuzumab | follicular lymphoma (3rd Line) | P1 study (March 2022) |
| **Development discontinued** | RG7992 | non-alcoholic steatohepatitis (NASH) | |
| **Readout in pivotal study** | SKY59/crovalimab | COMMODORE 3 (China) met co-primary endpoints in PNH | P3 study (Q1 2022) |
| | RG6058/tiragolumab | SKYSCRAPER-02 did not meet its co-primary endpoint of PFS in SCLC | P3 study (March 2022) |
| **Medical conference** | Vabysmo | YOSEMITE/RHINE studies (DME) | AED (February 2022) |
| | Evrysdi | SUNFISH/RAINBOWFISH studies (Spinal muscular atrophy) | MDA (March 2022) |

Underlined are disclosed due to changes in pipeline entry rule

PDS: Port Delivery System with ranibizumab　AED: Angiogenesis, Exudation and Degeneration　MDA: Muscular Dystrophy Association

Overview of Development Pipeline

# Mitchga® (nemolizumab)

- Maruho received regulatory approval for pruritus associated with atopic dermatitis (AD)
- IL-31 is known to play a role in pruritus and skin inflammation associate with multiple skin diseases including AD, and Mitchga® is the first antibody drug targeting IL-31 receptor A
- Pruritus in AD affects QoL significantly by raising barriers in patients' lives, such as poor sleep quality and concentration
- Mitchga® is expected to improve QoL through a rapid improvement of pruritus as well as sleep disturbance

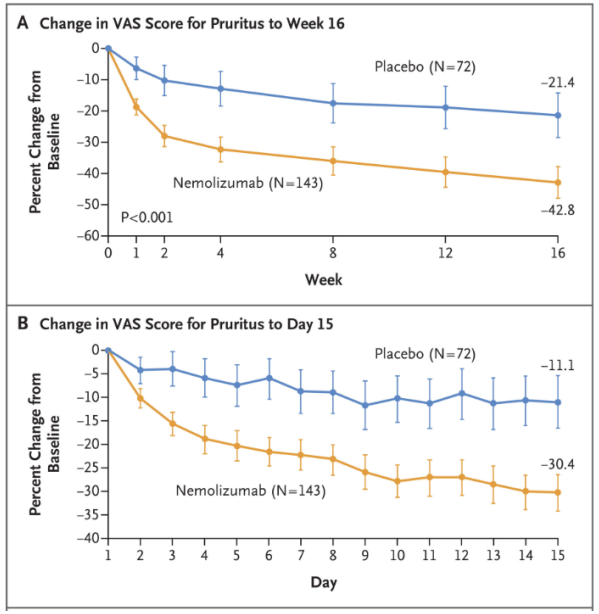
## Results from P3 study in Japan*1

| Outcome Measures (at week 16) | Primary endpoint | Secondary endpoint | | | Safety |
|---|---|---|---|---|---|
| | mean percent change in the VAS*2 score for pruritus | mean percent change in the EASI*3 score | DLQI*4 score 4 or less (proportion) | ISI*5 score 7 or less (proportion) | Adverse Event |
| nemolizumab (n=143) | -42.8% | -45.9% | 40% | 55% | 71% |
| placebo (n=72) | -21.4% | -33.2% | 22% | 21% | 71% |
| Difference between two groups (95%CI) | -21.5%pts (-30.2, -12.7), P < 0.001 | -12.6%pts (-24.0, -1.3) | 17%pts (2, 31) | 33%pts (17, 48) | - |

*1conducted by licensee Maruho *2 VAS (Visual Analogue Scale) provides a range of scores from 0–100 (0: no pruritus, 100: expected max pruritus)
*3 EASI (Eczema Area and Severity Index) is a validated scoring system that grades the physical signs of atopic dermatitis/eczema.
*4 DLQI (Dermatology Life Quality Index) is designed to measure the health-related quality of life of patients suffering from a skin disease (0-30 point).
*5 ISI (Insomnia Severity Index) is an instrument to assess sleep by patients' subjective views (0-28 point). 7 points or less corresponds to "no clinical insomnia."
Mitchga® is a registered trademark of Maruho Co., Ltd. in Japan.

Source: Kenji Kabashima et al. NEJM 2020; 383: pp141-150.

## Mean percent change in the VAS score for pruritus



# Vabysmo®

- First anti VEGF-A/anti Ang-2 bispecific antibody in ophthalmology, approved for neovascular age-related macular degeneration (nAMD) and diabetic macular edema (DME)
- Vabysmo® achieved a maximum 16-week dosing interval for the first time in P3 study and showed potential to reduce injection frequency and treatment burden
- Estimated number of patients in Japan: nAMD about 0.88 million*1, DME about 0.71 million*2
- Vabysmo® continued to be generally well-tolerated. Adverse events in the study eye that occurred at a frequency of 0.5% or greater included intraocular inflammation (e.g. uveitis), intraocular pressure increased, retinal pigment epithelial tears, and vitreous floaters.

Proportion of patients in global P3 studies who achieved a treatment duration of up to 16 weeks interval at 1 year or at 2 years *3

| Indication | study | at 1 year | at 2 years |
|---|---|---|---|
| nAMD | TENAYA | 45.7% | Not presented |
| | LUCERNE | 44.9% | Not presented |
| DME | YOSEMITE | 52.8% | 60.0% |
| | RHINE | 51.0% | 64.5% |

VEGF-A: vascular endothelial growth factor A
Ang-2: Angiopoietin-2

*1 Miho Yasuda; The Hisayama Study. New Ophthalmology 2016;33:1247-51. *2 Yau JW, et al. Diabetes Care 2012;35:556-64.
*3 Source: Heier JS, et al. The Lancet. 2022; 399:729-740 Wykoff CC, et al. The Lancet. 2022; 399:741-755 Angiogenesis, Exudation and Degeneration 2022

Overview of Development Pipeline

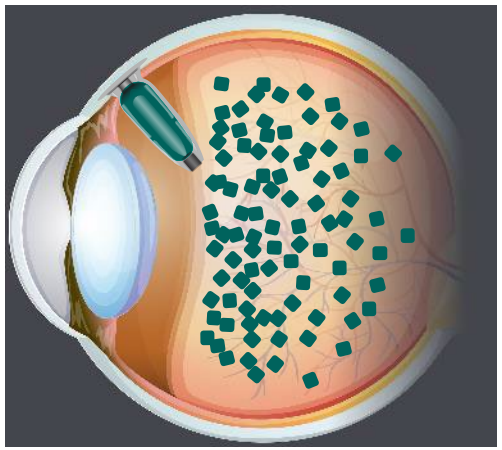
# Port Delivery System with Ranibizumab[1] (PDS)

- **PDS is an implant that enables long and continuous drug delivery**
- **PDS maintains visual acuity and controlled retinal thickness as effectively as monthly ranibizumab injections**

- In US, Genentech received the FDA approval in October 2021 for the indication of neovascular age-related macular degeneration (nAMD) and commercializes the product under SUSVIMO™ [2]. Global phase III trials are ongoing for diabetic macular edema (DME) and diabetic retinopathy.
- In Japan, local phase I/II trial is ongoing in nAMD and DME patients with every 24 -week refills.

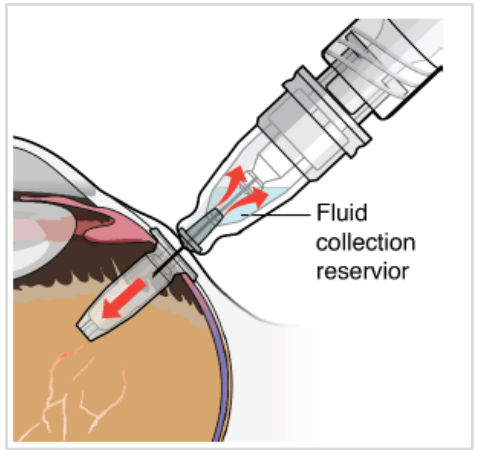
Implant

Drug diffusion



Differ from the actual size

Refill Exchange




Differ from the actual size

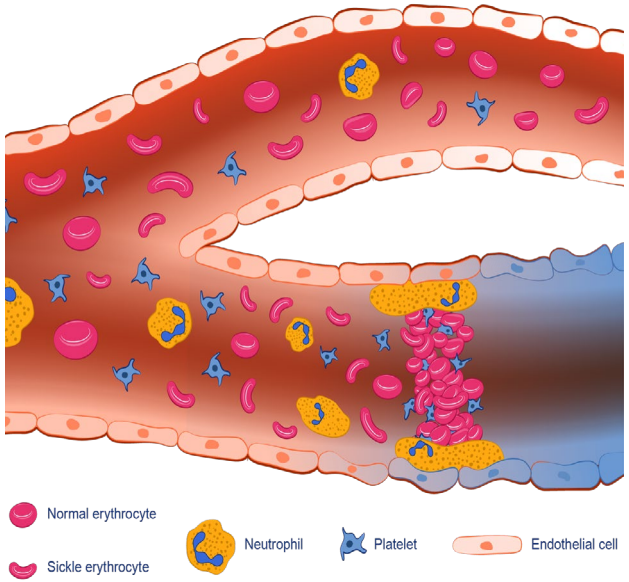
1. Ranibizumab is a Fab-fragment of a recombinant humanized monoclonal antibody against vascular endothelial growth factor-A (VEGF-A) that is already marketed and supplied worldwide as Lucentis® for intravitreal administration.
2. Dosage and administration in US: The recommended dose of SUSVIMO (ranibizumab injection) is 2 mg(0.02 mL of 100 mg/mL solution) continuously delivered via the SUSVIMO implant with refills every 24 weeks (approximately 6 months).

# Crovalimab：Sickle cell disease (SCD)

## Exploring the potential role of complement inhibition with crovalimab in the treatment of SCD

- SCD is a genetic disorders caused by mutations in *HBB*, which encodes hemoglobin subunit β
- Hemoglobin molecules that include mutant hemoglobin subunit β can polymerize, which cause sickling of red blood cells
- Sickled erythrocyte results in chronic hemolysis and anemia, painful vaso-occlusive crises, and multi-system end-organ damage that accumulates over time
- Prevalence of SCD is highest in sub-Saharan Africa, India, the Middle East, and the Mediterranean region and is increasing globally due to migration patterns. It is rare in Japan
- Elevation in markers of complement activation have been reported in SCD*

* Tampaki A et al. Blood rev 2021;100805.




Source: materials from Roche

### Crovalimab Clinical Development

| Study | Main Objective |
|---|---|
| CROSSWALK-a | evaluating the safety and the preliminary efficacy for an acute vaso-occlusive painful crisis, which is a major unmet need in SCD, with single-dose treatment<br>Primary endpoint: safety |
| CROSSWALK-c | evaluating the efficacy of sustained, longer-term complement inhibition in prevention of vaso-occlusive crises and end-organ damage<br>Primary endpoint: VOC rate, up to 48 weeks |

VOC: Vaso-occlusive crises

Overview of Development Pipeline

# 2022: Key R&D Milestones

| | Product | Indication/Study name | Progress |
|---|---|---|---|
| **Projects to be approved** | Actemra | COVID-19 pneumonia | ✓ |
| | nemolizumab | Atopic dermatitis | ✓ |
| | Hemlibra | Acquired hemophilia A | |
| | Herceptin/Perjeta | HER2 positive colorectal cancer | ✓ |
| | faricimab | Neovascular age-related macular degeneration (nAMD) | ✓ |
| | faricimab | Diabetic macular edema (DME) | ✓ |
| | Tecentriq | Non-small cell lung cancer (NSCLC) [adjuvant] | |
| | Polivy | Previously untreated diffuse large B-cell lymphoma (DLBCL) | |
| **P3/Pivotal readouts** | Alecensa | ALINA Study: NSCLC [adjuvant] | 2023 |
| | gantenerumab | GRADUATE1/2 Study: Alzheimer's disease | |
| | Tecentriq | IMpower030 Study: NSCLC [neoadjuvant] | |
| | Tecentriq | IMmotion010 Study: RCC [adjuvant] | |
| | Tecentriq | IMvoke010 Study: HNC [adjuvant] | |
| | Tecentriq + Avastin | IMbrave050 Study: HCC [adjuvant] | |
| | Tecentriq + tiragolumab | SKYSCRAPER-01 Study: NSCLC [1st line] | |
| | Tecentriq + tiragolumab | SKYSCRAPER-02 Study: SCLC | ✗ |

**Letters in orange**：in-house projects (development in global)　**Letters in blue**：in-licensed from Roche (development and distribution in Japan)

Overview of Development Pipeline

# Projected Submissions (Post PoC NMEs and Products)

CHUGAI
Roche Roche Group

**NME** **Line extension**

**in-house**

**in-licensed (Roche)**

as of April 25, 2022

DLBCL: diffuse large B-cell lymphoma
FDC: fixed-dose combination
nAMD: neovascular age-related macular degeneration
HCC: hepatocellular carcinoma
PNH: paroxysmal nocturnal hemoglobinuria
BC: Breast cancer

RCC: renal cell carcinoma
NSCLC: non-small cell lung cancer
SCLC: small cell lung cancer
HNC: head and neck carcinoma
MIBC: muscle-invasive bladder cancer
gMG: generalized myasthenia gravis
RVO: retinal vein occlusion
DMD: duchenne muscular dystrophy
aHUS: atypical hemolytic uremic syndrome
SCD: Sickle cell disease
PDS: Port Delivery System with ranibizumab

## Filed

- HEMLIBRA ★ (ACE910/RG6013) mild-moderate hemophilia A (EU)
- GAZAYVA ★ (RG7159) CLL
- HEMLIBRA (ACE910/RG6013) Acquired hemophilia A
- POLIVY (RG7596) 1L DLBCL
- ACTEMRA ★ (MRA/RG1569 ) COVID-19 pneumonia (US)
- TECENTRIQ (RG7446) NSCLC (adjuvant)

- TECENTRIQ+AVASTIN (RG7446＋RG435) 1L Ovarian Cancer
- RG6264 (FDC, sc) Breast Cancer
- TECENTRIQ (RG7446) RCC (adjuvant)
- TECENTRIQ (RG7446) HNC (adjuvant)

## 2022

- TECENTRIQ (RG7446) 2L RCC + cabozantinib
- VABYSMO (RG7716) RVO
- TECENTRIQ ★ (RG7446) Urothelial Carcinoma
- gantenerumab (RG1450) Alzheimer's Disease
- TECENTRIQ ★ (RG7446) 2L NSCLC + cabozantinib
- tiragolumab (RG6058) NSCLC + TECENTRIQ
- TECENTRIQ (RG7446) NSCLC (neoadjuvant)
- ipatasertib (RG7440) Prostate Cancer
- crovalimab (SKY59/RG6107) PNH (China: to be filed in 2022)
- AVASTIN (RG435) 1L SCLC + TECENTRIQ
- ALECENSA (AF802/RG7853) NSCLC (adjuvant)
- TECENTRIQ+AVASTIN (RG7446＋RG435) HCC (adjuvant)

## 2023

- tiragolumab + TECENTRIQ (RG6058 + RG7446) Esophageal Cancer
- tiragolumab + TECENTRIQ (RG6058 + RG7446) NSCLC (Stage III)
- ranibizumab(PDS) ★ (RG6321) nAMD/DME
- TECENTRIQ (RG7446) MIBC (adjuvant)
- SRP-9001 (RG6356) DMD
- crovalimab (SKY59/RG6107) aHUS
- mosunetuzumab (RG7828) 3L Follicular lymphoma
- ENSPRYNG (SA237/RG6168) gMG
- pralsetinib (RG6396) 1L NSCLC

## 2024

- mosunetuzumab (RG7828) 2L Follicular lymphoma
- giredestrant (RG6171) 1L BC
- giredestrant (RG6171) BC (adjuvant)
- TECENTRIQ ★ (RG7446) 2L HCC
- TECENTRIQ+AVASTIN (RG7446＋RG435) HCC(intermediate stage)
- TECENTRIQ (RG7446) eBC (neoadjuvant)
- TECENTRIQ (RG7446) eBC (adjuvant)
- crovalimab ★ (SKY59/RG6107) SCD (US/EU)

## 2025 and beyond

★ : new entry ★ : changes in submission year

Underlined are new entries due to change of the rule in pipeline

Overview of Development Pipeline

# Projects under Development (1/2)

**Letters in orange** : in-house projects (development in global)　**Letters in blue** : in-licensed from Roche (development and distribution in Japan)

As of April 25, 2022

| | Phase I | Phase II | Phase III | Filed |
|---|---|---|---|---|
| **Cancer** | **LUNA18**<br>- solid tumors<br>**GC33 / codrituzumab**<br>- HCC<br>**ERY974**<br>- solid tumors<br>**STA551**<br>- solid tumors<br>**SOF10 (RG6440)**<br>- solid tumors<br>**SPYK04**<br>- solid tumors<br>**RG7828 / mosunetuzumab**<br>- follicular lymphoma (3L) ★<br>**RG7421 / cobimetinib**<br>- solid tumors<br>**RG7802 / cibisatamab**<br>- solid tumors<br>**RG6026 / glofitamab**<br>- hematologic tumors<br>**RG6194 / HER2-TDB**<br>- solid tumors | | **AF802 (RG7853) / Alecensa**<br>- NSCLC (adjuvant)<br>**RG7446 / Tecentriq**<br>- NSCLC (neoadjuvant)<br>- NSCLC (2L) ★<br>- urothelial carcinoma (1L)<br>- MIBC (adjuvant)<br>- RCC (adjuvant)<br>- RCC (2L)<br>- early BC (adjuvant)<br>- early BC (neoadjuvant)<br>- HCC (2L) ★<br>- HNC (adjuvant)<br>- prostate cancer (2L) ★<br>**RG7446 / Tecentriq + RG435 / Avastin**<br>- NSCLC (adjuvant)<br>- ovarian cancer (1L)<br>- HCC (adjuvant)<br>- HCC (intermediate stage)<br>**RG7440 / ipatasertib**<br>- prostate cancer (1L)<br>**RG6264 (Herceptin+Perjeta)**<br>- breast cancer (Fixed-dose combination, subcutaneous injection)<br>**RG6058 / tiragolumab + RG7446 / Tecentriq**<br>- SCLC (1L)<br>- NSCLC (1L)<br>- NSCLC(stage III)<br>- esophageal cancer<br>**RG6171 / giredestrant**<br>- breast cancer (1L)<br>- breast cancer (adjuvant)<br>**RG7828 / mosunetuzumab**<br>- follicular lymphoma (2L)<br>**RG6396 / pralsetinib**<br>- NSCLC | **RG7446 / Tecentriq**<br>- NSCLC (adjuvant)<br>**RG7596 / Polivy**<br>- DLBCL<br>**RG7159 / Gazyva**<br>- CLL ★ |

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

★: Projects with advances in stages since February 3, 2022
Underlined are new entries due to change of rule in pipeline

DLBCL: diffuse large B-cell lymphoma
HCC: hepatocellular carcinoma
SCLC: small cell lung cancer
RCC: renal cell carcinoma
BC: breast cancer

NSCLC: non-small cell lung cancer
HNC: head and neck carcinoma
MIBC: muscle-invasive bladder cancer
TDB: T cell-dependent bispecific
CLL: chronic lymphocytic leukemia

Overview of Development Pipeline

# Projects under Development (2/2)

Letters in orange : in-house projects (development in global)  Letters in blue : in-licensed from Roche (development and distribution in Japan)

As of April 25, 2022

| | Phase I | Phase II | Phase III | Filed |
|---|---|---|---|---|
| **Immunology** | **RG7880 (IL-22 fusion protein)**<br>- inflammatory bowel disease | | | **MRA (RG1569) / Actemra (US)**<br>- COVID-19 pneumonia★ |
| **Neurology** | **GYM329 (RG6237)**<br>- neuromuscular disease<br>**RG7935 / prasinezumab**<br>- Parkinson's disease<br>**RG6100 / semorinemab**<br>- Alzheimer's disease<br>**RG6102 (BS-Gante)**<br>- Alzheimer's disease | **RG7906 / ralmitaront**<br>- schizophrenia | **SA237 (RG6168) / Enspryng**<br>- generalized myasthenia gravis (gMG)<br>**SRP-9001(RG6356) / delandistrogene moxeparvovec**<br>-DMD *<br>**RG1450 / gantenerumab**<br>- Alzheimer's disease<br>**RG6042 / tominersen**<br>- Huntington's disease | |
| **Hematology** | **NXT007**<br>- hemophilia A (PI/II) | **SKY59 (RG6107) / crovalimab**<br>- sickle cell disease (SCD) ★ | **SKY59 (RG6107) / crovalimab**<br>- PNH<br>- Atypical hemolytic uremic syndrome (aHUS) | **ACE910 (RG6013) / Hemlibra (JPN)**<br>- Acquired hemophilia A<br>**ACE910 (RG6013) / Hemlibra (EU)**<br>- mild/moderate hemophilia A ★ |
| **Ophthalmology** | **RG6321 / PDS**<br>- DME ★<br>- nAMD ★ | | **RG7716 / Vabysmo**<br>- retinal vein occlusion | |
| **Other** | **AMY109**<br>- endometriosis | | | |

In principle, completion of first dose is regarded as the start of clinical studies in each phase.
★: Projects with advances in stages since February 3, 2022
Underlined are new entries due to change of rule in pipeline
* Sarepta manages the global study, including Japan

gMG: generalized myasthenia gravis
PNH: paroxysmal nocturnal hemoglobinuria
nAMD: neovascular age-related macular degeneration
DME: diabetic macular edema

PDS: Port Delivery System with ranibizumab
DMD: Duchenne muscular dystrophy

Overview of Development Pipeline

# Advances in Chugai Originated Projects Licensed Out to the 3rd Party

★: changes since February 3, 2022　As of April 25, 2022

| Development code Chugai/generic name (partner code) | Licensee | Indication | Stage | Mode of Action | Progress |
|---|---|---|---|---|---|
| **CKI27 (VS-6766)** | Verastem Oncology | Ovarian cancer | global: P2 | RAF/MEK inhibitor | • US FDA BTD（recurrent LGSOC in combination with defactinib） |
| | | NSCLC | global: P2 | | — |
| | | | global: P1/2 | | • RAMP 203 trial (in combination with KRAS G12C inhibitor sotorasib) initiated in Q1 2022 ★<br>• RAMP 204 trial (in combination with KRAS G12C inhibitor, adagrasib) to be initiated in Q2 2022 |
| **CIM331/ nemolizumab** | Global (Galderma) Japan (Maruho) | Atopic dermatitis | global: P3 | Anti-IL-31 receptor A humanized monoclonal antibody | — |
| | | | Japan: approved ★ | | Granted regulatory approval for itch associated with atopic dermatitis ★ |
| | | Prurigo nodularis | global: P3 | | • US FDA BTD |
| | | | Japan: P2/3 | | — |
| | | CKDaP | global: P2/3★ | | — |
| **OWL833 (LY3502970)** | Eli Lilly and Company | Type 2 diabetes | global: P2 | Oral non-peptidic GLP-1 receptor agonist | • Conduct a 12-week proof of concept study in type 2 diabetes (P1b)<br>✓ Highest dose group of OWL833 shows 4.71 kg weight loss and 1.77% lowering of HbA1c<br>• Initiated P2 study in September 2021 |
| | | Obesity | global: P2 | | • Initiated P2 study in September 2021 |

LGSOC: low-grade serous ovarian　CKDaP: CKD associated pruritus

# FoundationOne CDx Cancer Genomic Profile -Companion diagnostic indications-

As of April 25, 2022

| Alterations | Cancer type | Relevant drugs |
|---|---|---|
| Activated *EGFR* gene alterations | Non-small cell lung cancer (NSCLC) | afatinib dimaleate, erlotinib hydrochloride, gefitinib, osimertinib mesylate, dacomitinib hydrate |
| *EGFR* exon 20 T790M alterations | | osimertinib mesylate |
| *ALK* fusion genes | | alectinib hydrochloride, crizotinib, ceritinib, brigatinib |
| *ROS1* fusion genes | | entrectinib |
| *MET* exon 14 skipping alterations | | capmatinib hydrochloride hydrate |
| *BRAF* V600E alterations | | dabrafenib mesilate, trametinib dimethyl sulfoxide |
| *BRAF* V600E and V600K alterations | Malignant melanoma | dabrafenib mesylate, trametinib dimethyl sulfoxide, vemurafenib, encorafenib, binimetinib |
| *ERBB2* copy number alterations (HER2 gene amplification positive) | Breast cancer | trastuzumab (genetical recombination) |
| *KRAS/NRAS* wild-type | Colorectal cancer | cetuximab (genetical recombination), panitumumab (genetical recombination) |
| Microsatellite Instability-High | | nivolumab (genetical recombination) |
| Microsatellite Instability-High | Solid tumors | pembrolizumab (genetical recombination) |
| Tumor Mutational Burden-High | | pembrolizumab (genetical recombination) |
| *NTRK1/2/3* fusion gene | | entrectinib, larotrectinib sulfate |
| *BRCA1/2* alterations | Ovarian cancer | olaparib |
| *BRCA1/2* alterations | Prostate cancer | olaparib |
| *FGFR2* fusion genes | Biliary tract cancer | pemigatinib |

* Underlined are the companion diagnostic features and relevant drugs currently filed for regulatory approval

# FoundationOne Liquid CDx Cancer Genomic Profile

## Companion diagnostic indications

As of April 25, 2022

| Alterations | Cancer type | Relevant drugs |
|---|---|---|
| Activated *EGFR* gene alterations | Non-small cell lung cancer (NSCLC) | afatinib dimaleate, erlotinib hydrochloride, gefitinib, osimertinib mesylate |
| *EGFR* exon 20 T790M alterations | | osimertinib mesylate |
| *ALK* fusion genes | | alectinib hydrochloride, crizotinib, ceritinib |
| *ROS1* fusion genes | | entrectinib |
| *NTRK1/2/3* fusion gene | Solid tumors | entrectinib |
| *BRCA1/2* alterations | Prostate cancer | olaparib |

# Main clinical trials to be initiated

**NOTE:**
**No additional data other than public information are disclosed prior to initiation of trials**

| Development Code | Indication | Phase | CT information |
|---|---|---|---|
| GYM329/RG6237 | Spinal Muscular Atrophy in combination with Evrysdi | P 2/3 | NCT05115110 |
| RG7159/obinutuzumab | Lupus nephritis | P3 | https://jrct.niph.go.jp/detail/17455/jRCT/3 (Japanese only) |

# Contacts

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CHUGAI

Roche Group

# INNOVATION BEYOND IMAGINATION