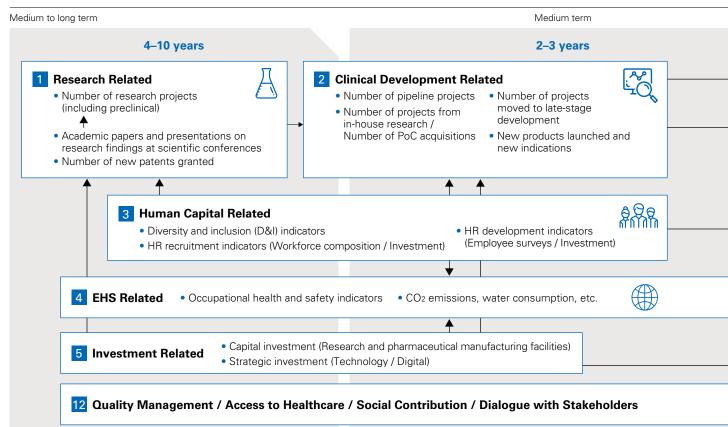
### **Relationships of Indicators**

#### Business Activities (Timeframe for results)



#### Types of pre-financial indicator (1–6)

#### • New products launched and new indications • CO2 emissions, water consumption, etc. • HR recruitment indicators (Workforce composition / Investment) Capital investment (Research and Number of projects moved to late-stage Companydevelopment pharmaceutical manufacturing facilities) Process reform/workstyle reform wide and • Strategic investment (Technology / Digital) indicators Number of projects from in-house research / division-Number of PoĆ acquisitions Company-wide employee productivity specific Contribution to cancer genomic profiling management D&I indicators • Share of sales in main disease areas / indicators • HR development indicators Customer satisfaction<sup>1</sup> (Employee surveys / Investment)<sup>1</sup> MR productivity Number of research projects Academic papers and presentations on Number of pipeline projects Monitorina research findings at scientific conferences (including preclinical)<sup>2</sup> Occupational health and safety indicators<sup>1</sup> indicators Number of new patents granted

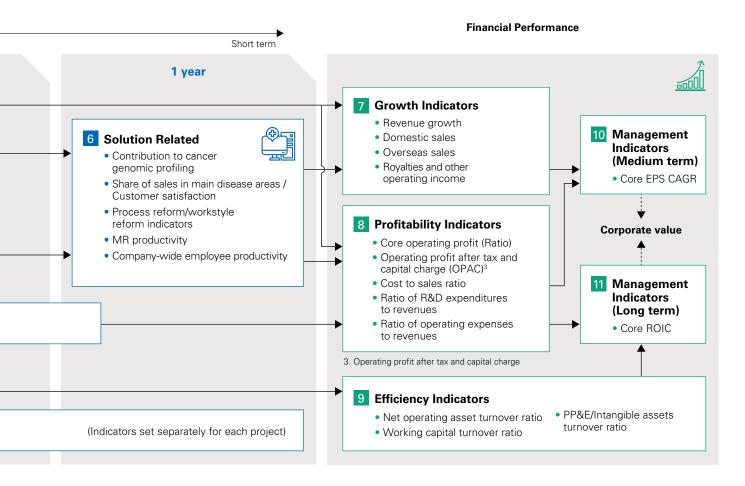
1. Partly non-disclosed 2. Disclosure only of number of research projects applying antibody engineering technology

The above diagram sets out Chugai's view of the relationship between financial results that lead to an increase in corporate value and key indicators of the business activities that impact on these financial results, taking into account the timeframes for achievement of results in each case. These indicators are divided into management indicators based on set target values and supported by PDCA cycle activities, and monitoring indicators for monitoring progress based on established plans and qualitative targets.

#### 1 Research Related 2 Clinical Development Related

Non-disclosed indicators

The time taken for research projects to yield results in business performance is normally a medium- to long-term timeframe of 4–10 years, while for technological infrastructure and pathological research, the management timeframe is still longer. These research results are reflected in the development pipeline, which is decisive in generating revenue, profit, and corporate value. Accordingly, indicators focus on the number and quality of projects and the state of progress.



#### 3 Human Capital Related

At Chugai, it is human resources who generate innovation, and we therefore recognize them as our most important asset and believe strongly that corporate results are influenced by factors such as HR recruitment, allocation and development, and the organizational culture. We therefore set detailed targets for items such as employee awareness surveys and HR management indicators.

#### 4 EHS Related 5 Investment Related

Environment, health, and safety (EHS), which is the foundation of business activities, is also associated with high levels of risk, and must be managed from a medium- to long-term perspective. Also essential for generating results is investment in research platforms for innovative drug discovery as well as in pharmaceutical technology functions, new technology, and digital applications.

#### 6 Solution Related

We use these indicators to monitor the successful execution of our strategies from a short-term (1 year) perspective. We see indicators relating to sales share in main disease areas and productivity as being among the most important indicators that affect financial results.

# 7 Growth Indicators8 Profitability Indicators9 Efficiency Indicators

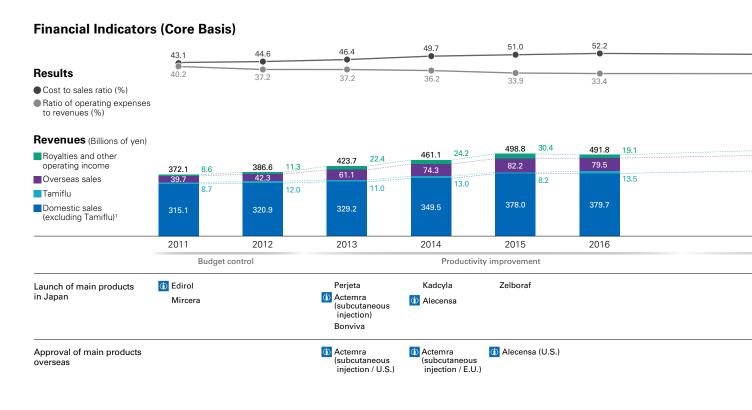
Growth indicators measure the value provided by products and services. A particularly important aspect is the global contribution to patient wellbeing as reflected in overseas revenues. As profitability indicators, we give the greatest weight to operating profit and the ratio of Core operating profit to revenue, and also see indicators relating to cost structure as important. As efficiency indicators, the turnover ratios of working capital and intangible assets are the key focus.

#### 10 Management Indicators (Medium term) 11 Management Indicators (Long term)

For an increase in corporate value, the most important indicators are growth in the profit margin of our core business and in the absolute profit figure. We therefore set Core EPS CAGR as a medium-term KPI for internal management. Additionally, for the pharmaceutical business, where business projects are rolled out with a perspective of 10 years or longer, we believe that measurement of investment efficiency over the long term is essential and focus on Core return on invested capital (ROIC) accordingly.

### Financial and Pre-Financial Highlights (IFRS)

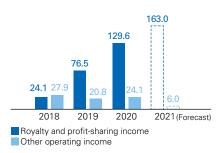
Chugai Pharmaceutical Co., Ltd. and Consolidated Subsidiaries / Years ended December 31



Chugai product 1. From 2017, domestic sales include Tamiflu.

#### Royalty and Profit-Sharing Income / Other Operating Income

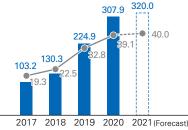
(Billions of yen)



Royalty and profit-sharing income, which is linked to sales of Chugai (in-house) products by Roche outside Japan, increased significantly in 2020 due to the overseas market penetration of Hemlibra. Other operating income, which consists of non-recurring income, is dependent on development milestones and other events, and is therefore subject to a relatively high degree of fluctuation.

### Core Operating Profit / Ratio of Core Operating Profit to Revenues

(Billions of yen / %)



Core operating profit Ratio of Core operating profit to revenues

We have one of the highest levels of performance in the industry for the ratio of Core operating profit to revenues. This is due to the low ratio of operating expenses to revenues and the trend of recent years to increasing ROOI<sup>2</sup> and declining cost to sales ratio. In 2021, we expect our fifth consecutive year of record Core operating profit due to factors including increases in exports to Roche and royalty income from Roche relating to Chugai product Hemlibra.

### Core Net Income / Core EPS<sup>3</sup>

(Billions of yen / Yen)

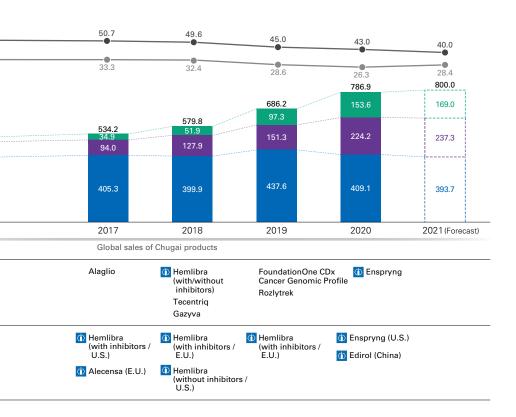


The mid-term business plan IBI 21, which we completed one year ahead of schedule, set a target for Core EPS CAGR over three years of approximately 30 percent<sup>4</sup> (assuming no stock split). With the growth of Chugai products in Japan and overseas making a major contribution to business performance, we were able to post a strong average annual growth rate of 49.5 percent, considerably exceeding the initial target within the two years to 2020.

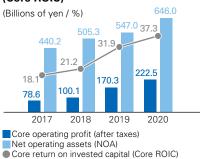
2. Royalties and other operating income

- 3. Effective July 1, 2020, Chugai has implemented a three-for-one stock split of its common stock. Calculated based on the assumption that the stock split was implemented at the beginning of 2017
- 4. Three years, based on constant exchange rate

5. Return on invested capital: Indicates how efficiently a company uses capital invested for business activities (invested capital) to generate profit.



#### Core Operating Profit after Taxes / Net Operating Assets (NOA) / Core Return on Invested Capital (Core ROIC)



Chugai has been using Core ROIC<sup>5</sup> as a financial KPI since 2019 to give greater consideration to long-term investment efficiency. NOA (2) increased significantly due to aggressive strategic investments such as Chugai Life Science Park Yokohama, while growth in Core operating profit after taxes (1) resulted in an increase in Core ROIC (1+2) to 37.3 percent in 2020.

#### Overseas Revenues / Overseas Revenues Ratio

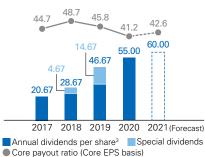
(Billions of yen / %)



Overseas revenues increased steadily with the growth in global sales of Chugai products. In 2020, the COVID-19 pandemic resulted in a major increase in Actemra exports. Hemlibra, meanwhile, continued to penetrate the market, with global sales passing the CHF 2.0 billion mark. With these and other developments, we expect the ratio of overseas revenues to increase further in 2021. Chugai has substantially improved its cost structure in view of the increase in the cost to sales ratio due to the increase in products in-licensed from Roche following the signing of the strategic alliance between the two companies. We have now secured high profitability by continuously achieving a ratio of operating expenses to revenues at a level that compares favorably with the world's leading pharmaceutical companies. Our cost to sales ratio has been improving steadily in recent years due to the solid performance of Chugai global products, which have a lower cost to sales ratio than those in-licensed from Roche. Despite a reduction in domestic sales due to the impact of the National Health Insurance (NHI) drug price revision and market penetration by generics, sales revenues reached a record level for the fourth consecutive year due to increases in items including exports to Roche of Chugai products Actemra and Hemlibra, royalties from Hemlibra, and profit-sharing income. In 2021, we expect further increase in revenues and profits on growth in Hemlibra exports to Roche and in royalty income and profit-sharing, which is projected to outweigh the year-on-year decrease in domestic sales arising from the impact of market penetration by generics and the NHI drug price revision.

#### Dividends per Share / Core Payout Ratio

(Yen / %)



In light of the rapid evolution of life sciences and digital technology, we adjusted our shareholder returns target to take into account future investment opportunities and funding plans. We, therefore, changed the target for Core payout ratio from the previous 50 percent on average to 45 percent on average based on Core EPS from 2020 to maintain our policy of stable return of profit.

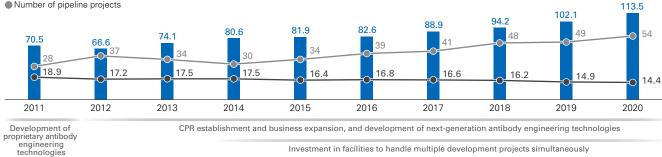
#### About Core Basis Results

Chugai reports its results on a Core basis from 2013 in conjunction with its decision to adopt IFRS. Core basis results are the IFRS basis results adjusted by excluding non-Core items, and are consistent with the concept of Core basis results disclosed by Roche. Core basis results are used by Chugai as internal performance indicators for representing recurring profit trends both internally and externally, and as indices for establishing profit distributions such as returns to shareholders. No items have been excluded from the IFRS balance sheet and cash flows, as the Core basis results concept only applies to the income statement.

#### Research, Clinical Development, Pharmaceutical Technology, and Production

#### **R&D Expenditures / R&D Expenditures to Revenues / Pipeline Projects**

R&D expenditures (Billions of yen)
 R&D expenditures to revenues (%)
 Number of pipeline projects



Comprehensive collaboration in immunology research activities with IFReC

With growing sales revenues, Chugai has increased R&D investment, generating research findings that have created innovative drugs and contributed to the development of healthcare and the pharmaceutical industry worldwide. Moreover, we have been promoting efficient development of new drugs with high success rates under our strategic alliance with Roche, which enables us, for instance, to consider and decide on in-licensing Roche products on the basis of early-stage clinical trial results. In recent years, we have maintained a robust

pipeline in terms of both quantity and quality, with progression to the clinical phase of a number of Chugai in-house projects based on the application of innovative antibody engineering technology. Going forward, in addition to concentrating Company-wide management resources in Research & Early Development (RED) as a source of value creation, we will also seek to rapidly expand our drug discovery output by applying Al-based drug discovery and other digital technologies and actively driving open innovation.

#### Publications in Academic Papers and Presentations at Scientific Conferences regarding Chugai Research Findings<sup>1</sup>



Chugai develops innovative medicines that allow it to differentiate itself from competitors by continuously establishing proprietary drug discovery technologies and applying them to development candidates while developing production technology for mid-size molecules and other drug types where there are strong challenges to overcome. We will continue to successively generate research findings that may contribute to the overall advancement of healthcare, presenting those findings at scientific conferences and publishing them in academic papers.

1. Total of drug discovery and pharmaceutical technology

#### Number of New Products Launched and New Indications / Percentage of Product Sales Qualifying for Premium Pricing



new indications

 Percentage of product sales qualifying for premium pricing

In 2020, the number of new products launched and new indications remained at a high level, with the launch of Chugai product Enspryng, additional indications for mainstay products Tecentriq and Kadcyla, and the expanded use of F1CDx as a companion diagnostic. On the other hand, there was a large decrease in the sales share of products qualifying for premium pricing as Avastin lost this status.

Note: Products subject to special market-expansion repricing (2017: Avastin) are counted as products qualifying for premium pricing because they were assumed to meet the conditions for such pricing in the relevant fiscal years.

#### Energy Consumption / Energy Consumption per Employee (Thousands of GJ / GJ per employee)

2,421<sup>3</sup> 2.384 2,367 2 2 2 2 2,185 295 326 320 355 296 2010<sup>2</sup> 2017 2018 2019 2020 Energy consumption

Energy consumption per employee

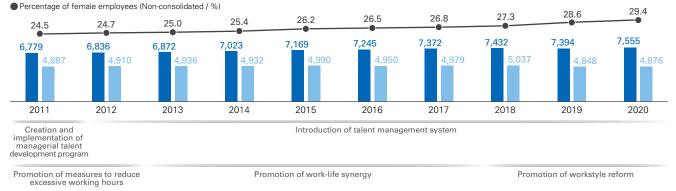
Total and per-employee energy consumption in 2020 decreased by 6 percent and 17 percent, respectively, compared with the base year of 2010. The goal of a 20 percent reduction in per-employee energy consumption was not met, but we plan to use renewable energy certificates to reach a 20 percent reduction in non-renewable energy consumption.

2. Benchmark year for mid-term environmental goals 3. Includes 40,000 GJ of overseas consumption

#### **HR Management**

#### **Employees / Ratio of Female Employees**

Number of employees (Consolidated)



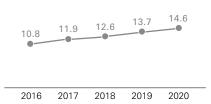
Promotion of gender diversity

Diversity Office established

The basic philosophy of Chugai's HR strategies is that people are an invaluable asset that drives the Company's growth and progress. Therefore, our policy is to promote the hiring, development, and use of diverse human resources regardless of gender or nationality. We place value on the pursuit of innovation and creativity for delivering innovative drugs to patients around the world, and are therefore committed to diversity and inclusion (D&I) as one of our HR strategies because we

recognize that innovation arises from diverse values and expertise. In January 2021, we introduced the Telework System to realize more flexible workstyles through "smart working," which we envisage will increase productivity and promote balanced work-life synergy. We will maintain an environment that enables diverse employees to fully exercise their capabilities and foster an organizational culture that generates innovation.

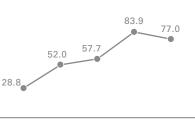
#### Ratio of Female Managers<sup>4</sup> (Non-consolidated employee basis) (%)



To promote the success of women in the workplace, we set a target ratio of female managers of 17 percent by the end of 2023 (non-consolidated employee basis<sup>4</sup>). The ratio of female managers is increasing, but we are aiming for further success by implementing measures to support career development among women, and we plan to further accelerate our initiatives to develop female leaders.

 Number of female managers as a percentage of the total number of managers. Calculated based on Chugai (non-consolidated) employees.

#### Percentage of Male Employees Taking Childcare Leave<sup>5</sup> (Non-consolidated) (%)





Chugai is working to improve work-life synergy. Although the adoption of more flexible work styles, such as work-from-home (WFH) and a paid leave system in units of hours, led to a slight fall in 2020 in the percentage of eligible male employees taking childcare leave, the trend of recent years is upward. We are promoting the use of the childcare leave system through awareness-raising activities for male employees with newborn children and their supervisors to improve their understanding of the system. We also provide supervisors with a handbook containing guidance on key management points.

 Number of male employees taking childcare leave as a percentage of all male employees with newborn children

#### Education and Training Expenditures per Employee<sup>6</sup> (Non-consolidated employee basis) (Yen)

147,511 135,019 125,426 109,580 2017 2018 2019 2020 2021(Forecast)

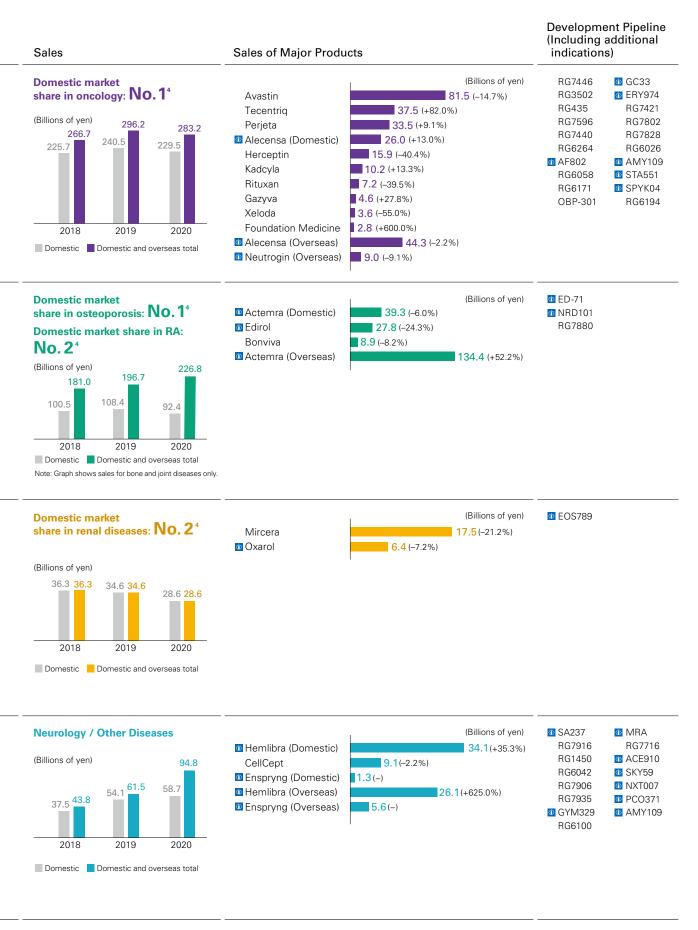
To realize advanced and sustainable healthcare from a patient-centric approach, we aim to cultivate innovation-oriented human resources that can deliver new value to patients by creating innovative drugs and proposing other creative solutions. Our education and training system is structured into Company-wide education and training<sup>7</sup> and specialized education and training provided on a departmental basis.8 In addition to cultivating the right mindset for the required roles and strengthening business skills, the system also supports career development and other objectives. By also focusing on the acquisition of advanced specialist knowledge and skills relevant to the specific department, we encourage the development of self-motivated human resources dedicated to the pursuit of innovation.

- 6. Calculated based on Chugai (non-consolidated) employees (As of Jan. 1 of each year).
- Grade-specific training, career independence training, Leadership Competency Program, English-language training, next-generation managerial HR training, self-directed learning support, etc.
- Department-specific specialist knowledge and skill improvement training, specialized English-language training, etc.

## Review by Disease Area

	Opportunities and Risks	Review of 2020 Performance
Oncology Sales and Percentage of Total Sales ¥283.2 billion (-4.4% YoY) 44.7%	<ul> <li>Opportunities</li> <li>Cancer is the largest area of unmet medical needs<sup>1</sup> (the leading cause of death in Japan).</li> <li>Personalized healthcare (PHC) is expected to advance further due to factors including insurance coverage for cancer genomic profiling.</li> <li>Phase Three of the Basic Plan to Promote Cancer Control Programs, which will promote delivery systems for cancer genomic profiling.</li> <li>Risks</li> <li>Intensifying global competition for cancer immunotherapies including anti-PD-1/PD-L1 immune checkpoint inhibitors</li> <li>Return of premium for new drug creation for mainstay products</li> <li>Entry of large pharmaceutical companies into biosimilar<sup>2</sup> markets</li> </ul>	Sales in Japan decreased 4.6 percent year on year to ¥229.5 billion. The decrease occurred despite steady market penetration by new product Tecentriq and mainstay products Alecensa and Perjeta and was caused by decreased sales of Avastin, Herceptin, and other products under the impact of the National Health Insurance (NHI) drug price revision and competition from generics. Overall sales, including overseas sales, decreased 4.4 percent year on year to ¥283.2 billion. Although exports to Roche of Chugai in-house product Alecensa decreased 3.6 percent year on year to ¥43.0 billion due to the impact of a lower unit price for exports, its penetration of first-line markets progressed, primarily in the United States, Europe, and China.
Bone and Joint Diseases / Autoimmune Diseases Sales and Percentage of Total Sale <sup>3</sup> ¥226.8 billion (+15.3% YoY) 35.8%	<ul> <li>Opportunities</li> <li>The emergence of biologics has dramatically improved the effectiveness of rheumatoid arthritis (RA) treatment, and the treatment goal is shifting to remission (a symptom-free state).</li> <li>The number of osteoporosis patients is increasing yearly as populations age.</li> <li>There are many potential osteoporosis patients because the treatment rate and adherence to treatment remain low.</li> <li>Risks</li> <li>Intensifying global competition in the RA market</li> <li>Slower growth due to the maturing of Actemra in the medium to long term</li> <li>Emergence of generics in competition with the osteoporosis drug Edirol</li> </ul>	Sales in Japan decreased 14.8 percent year on year to ¥92.4 billion. The main factors in the decrease were the impact of the NHI drug price revision, which reduced sales of Actemra, a Chugai in-house product indicated for RA and related conditions, and the impact of generics on Edirol, another Chugai in-house product, which experienced a large reduction in sales from the previous year. Overall sales, including overseas sales, increased 15.3 percent year on year to ¥226.8 billion. Exports of Actemra, which is approved in more than 110 countries and distributed through Roche, experienced significant growth due notably to increased demand from clinical studies for COVID-19-associated pneumonia, and increased 52.6 percent year on year to ¥132.0 billion.
Renal Diseases Sales and Percentage of Total Sales 4.5% ¥28.6 billion (-17.3% YoY)	<ul> <li>Opportunities</li> <li>Due to the enhanced measures to address chronic kidney disease (CKD) by the Ministry of Health, Labour and Welfare (MHLW), screening rates are increasing among potential patients and people who have not been screened.</li> <li>Early intervention in potential patients is improving the treatment rate of renal anemia.</li> <li>Renal anemia is divided into the dialysis stage and the pre-dialysis stage, and the number of patients treated in the pre-dialysis stage is trending upward every year.</li> <li>Risks</li> <li>Intensifying competition in the renal anemia market due to a reduction in fee points for dialysis as part of medical fee revisions</li> <li>Intensifying competitive environment due a competing biosame and other generics</li> </ul>	Sales in Japan decreased 17.3 percent year on year to ¥28.6 billion. Sales of Oxarol, an agent for secondary hyperparathyroidism, and Mircera, a long-acting erythropoiesis stimulating agent, decreased in part because of the NHI drug price revision and the impact of generics.
Neurology / Other Diseases Sales and Percentage of Total Sales 15.0% *94.8 billion (+54.1% YoY)	<ul> <li>Opportunities</li> <li>The burden on people with hemophilia A and caregivers due to the development of inhibitors and frequent need for administration is an issue.</li> <li>Neurology is an area of very high unmet medical needs, with many pathologies and syndromes.</li> <li>Medical fee points have been increased to promote more kidney transplants, and treatment needs for kidney transplants in Japan are rising.</li> <li>Need to improve patients' quality of life because in addition to skin deterioration, itching associated with atopic dermatitis disrupts sleep.</li> <li>Risks</li> <li>Possibility of few target patients despite high unmet medical needs in the neurology area</li> </ul>	In Japan, sales of Hemlibra, a Chugai product for treating hemophilia A, increased 35.3 percent to ¥34.1 billion despite the delay in market penetration due to the COVID-19 pandemic. Ordinary sales of anti-influenza agent Tamiflu decreased 89.2 percent year on year to ¥0.8 billion, and sales for government stockpiles increased 15.6 percent to ¥3.7 billion. Exports to Roche of Hemlibra, which switched to the regular shipment price in 2019, increased 645.5 percent to ¥24.6 billion, and overall sales, including overseas sales, grew 54.1 percent to ¥94.8 billion.

Medical needs that are not adequately met due to a lack of effective treatments
 Successor products to biopharmaceuticals whose patent term has expired. They have the same quality, effectiveness, and safety as the original product, but are made by manufacturers other than the manufacturer that developed the antecedent biopharmaceutical.



Bone and joint diseases only
 Copyright © 2021 IQVIA. Source: JPM 2020 (calendar year). Reprinted with permission. The scope of the market is defined by Chugai. The analysis is conducted by Chugai.

Deroducts from Chugai research

## Development Pipeline (As of February 4, 2021)

evelopment Code Additional Indication	) Origin (Collaborator)	Indication	Status         Phase I         Phase III         Filed         Approved
ncology			
RG7446*	Roche	Hepatocellular carcinoma	
107440	Hoono	Non-small cell lung cancer (NSCLC) (adjuvant)	
		NSCLC (neoadjuvant)	
		NSCLC (Stage III / combination with RG6058)	
		Urothelial carcinoma	
		Renal cell carcinoma (adjuvant)	
	Roche (Takeda Pharmaceutical)	Renal cell carcinoma [2nd line] (combination with cabozantinib)	<b>`</b>
	Roche	Early breast cancer	
	Hoono		
		Ovarian cancer	
		Hepatocellular carcinoma (adjuvant)	
		Head and neck carcinoma (adjuvant)	
		Esophageal cancer (combination with RG6058)	<b>O</b>
		Pancreatic adenocarcinoma (combination with RG1569 or RG6058)	
G3502*	Roche	Breast cancer (adjuvant)	
	Roche		
RG435* RG7596	Noche	Hepatocellular carcinoma (combination with RG7446)	
		Hepatocellular carcinoma (adjuvant / combination with RG7446)	
		Small cell lung cancer (combination with RG7446)	<b>O</b>
	Roche	Relapsed or refractory diffuse large B-cell lymphoma (DLBCL)	O
		DLBCL	
G7440	Roche / Array BioPharma	Breast cancer	
U / ++V	HOULD / Allay DUF Hallia		
		Prostate cancer	
RG6264	Roche	Breast cancer (fixed-dose combination, subcutaneous injection)	
AF802 / RG7853*	In-house (Roche)	NSCLC (adjuvant)	
RG6058	Roche	Small cell lung cancer (combination with RG7446)	<b>O</b>
		NSCLC (combination with RG7446)	
		NSCLC (Stage III / combination with RG7446)	
		Esophageal cancer (combination with RG7446)	Q
RG6171	Roche	Breast cancer	·
OBP-301	Oncolys BioPharma	Esophageal cancer	O
		Hepatocellular carcinoma (combination with RG7446 and RG435)	0
GC33	In-house	Hepatocellular carcinoma	
RY974	In-house	Solid tumors	
RG7421	Roche / Exelixis	Solid tumors	
RG7802	Roche	Solid tumors	
RG7828	Roche	Hematologic tumors	
RG6026	Roche	Hematologic tumors	
AMY109	In-house	Solid tumors	
STA551	In-house	Solid tumors	
SPYK04	In-house	Solid tumors	
RG6194	Roche	Solid tumors	<b></b>
one and Joint Di	seases		
ED-71	In-house	Osteoporosis	
NRD101	In-house	knee osteoarthritis / shoulder periarthritis	
itoimmune Dise	:0562		
RG7880	Roche	Inflammatory bowel disease	
nal Diseases			
	In-house	Hypernhosphatemia	
	In-house	Hyperphosphatemia	
OS789	In-house	Hyperphosphatemia	
enal Diseases			
OS789 eurology	In-house In-house (Roche)	Hyperphosphatemia Neuromyelitis optica spectrum disorder (NMOSD)	
OS789 eurology			<b>~_</b>
OS789 eurology A237 / RG6168	In-house (Roche)	Neuromyelitis optica spectrum disorder (NMOSD)	
OS789 eurology GA237 / RG6168 GG7916	In-house (Roche) Roche / PTC Therapeutics	Neuromyelitis optica spectrum disorder (NMOSD) Spinal muscular atrophy (SMA)	°
OS789 urology A237 / RG6168 G7916 G1450	In-house (Roche) Roche / PTC Therapeutics Roche / MorphoSys	Neuromyelitis optica spectrum disorder (NMOSD) Spinal muscular atrophy (SMA) Alzheimer's disease	
OS789 eurology GA237 / RG6168 GG7916 GG1450 GG6042	In-house (Roche) Roche / PTC Therapeutics Roche / MorphoSys Roche / Ionis Pharmaceuticals	Neuromyelitis optica spectrum disorder (NMOSD) Spinal muscular atrophy (SMA) Alzheimer's disease Huntington's disease	
OS789 eurology 6A237 / RG6168 6G7916 6G1450 6G6042 6G7906	In-house (Roche) Roche / PTC Therapeutics Roche / MorphoSys Roche / Ionis Pharmaceuticals Roche	Neuromyelitis optica spectrum disorder (NMOSD) Spinal muscular atrophy (SMA) Alzheimer's disease	
COS789 eurology GA237 / RG6168 RG7916 RG1450 RG6042 RG7906	In-house (Roche) Roche / PTC Therapeutics Roche / MorphoSys Roche / Ionis Pharmaceuticals	Neuromyelitis optica spectrum disorder (NMOSD) Spinal muscular atrophy (SMA) Alzheimer's disease Huntington's disease	
OS789 eurology 6A237 / RG6168 6G7916 6G1450 6G6042 6G7906 6G7935	In-house (Roche) Roche / PTC Therapeutics Roche / MorphoSys Roche / Ionis Pharmaceuticals Roche	Neuromyelitis optica spectrum disorder (NMOSD) Spinal muscular atrophy (SMA) Alzheimer's disease Huntington's disease Schizophrenia	
OS789 eurology A237 / RG6168 G7916 G1450 G6042 G7906 G7906 G7935 SYM329 / RG6237	In-house (Roche) Roche / PTC Therapeutics Roche / MorphoSys Roche / Ionis Pharmaceuticals Roche Roche / Prothena In-house (Roche)	Neuromyelitis optica spectrum disorder (NMOSD) Spinal muscular atrophy (SMA) Alzheimer's disease Huntington's disease Schizophrenia Parkinson's disease Neuromuscular disease	
COS789 COS789 CA237 / RG6168 CG7916 CG6042 CG7906 CG7935 CG7935 CG79329 / RG6237	In-house (Roche) Roche / PTC Therapeutics Roche / MorphoSys Roche / Ionis Pharmaceuticals Roche Roche / Prothena	Neuromyelitis optica spectrum disorder (NMOSD) Spinal muscular atrophy (SMA) Alzheimer's disease Huntington's disease Schizophrenia Parkinson's disease	
OS789 eurology A237 / RG6168 G7916 G1450 G6042 G7906 G7935 GYM329 / RG6237 G6100	In-house (Roche) Roche / PTC Therapeutics Roche / MorphoSys Roche / Ionis Pharmaceuticals Roche Roche / Prothena In-house (Roche)	Neuromyelitis optica spectrum disorder (NMOSD) Spinal muscular atrophy (SMA) Alzheimer's disease Huntington's disease Schizophrenia Parkinson's disease Neuromuscular disease	
COS789 eurology CA237 / RG6168 CG7916 CG7916 CG6042 CG7906 CG7906 CG7935 CG795 CG	In-house (Roche) Roche / PTC Therapeutics Roche / MorphoSys Roche / Ionis Pharmaceuticals Roche Roche / Prothena In-house (Roche) Roche / AC Immune	Neuromyelitis optica spectrum disorder (NMOSD) Spinal muscular atrophy (SMA) Alzheimer's disease Huntington's disease Schizophrenia Parkinson's disease Neuromuscular disease Alzheimer's disease	
OS789 eurology A237 / RG6168 G7916 G1450 G6042 G7906 G7906 G7935 YM329 / RG6237 G6100 her Diseases	In-house (Roche) Roche / PTC Therapeutics Roche / MorphoSys Roche / Ionis Pharmaceuticals Roche Roche / Prothena In-house (Roche)	Neuromyelitis optica spectrum disorder (NMOSD) Spinal muscular atrophy (SMA) Alzheimer's disease Huntington's disease Schizophrenia Parkinson's disease Neuromuscular disease	
COS789 eurology GA237 / RG6168 GG7916 GG1450 GG7906 GG7906 GG7906 GG7935 GG795 G	In-house (Roche) Roche / PTC Therapeutics Roche / MorphoSys Roche / Ionis Pharmaceuticals Roche Roche / Prothena In-house (Roche) Roche / AC Immune	Neuromyelitis optica spectrum disorder (NMOSD) Spinal muscular atrophy (SMA) Alzheimer's disease Huntington's disease Schizophrenia Parkinson's disease Neuromuscular disease Alzheimer's disease	
OS789 eurology A237 / RG6168 G7916 G1450 G6042 G7906 G7906 G7935 GYM329 / RG6237 G6100 her Diseases //RA/RG1569*	In-house (Roche) Roche / PTC Therapeutics Roche / MorphoSys Roche / Ionis Pharmaceuticals Roche Roche / Prothena In-house (Roche) Roche / AC Immune In-house	Neuromyelitis optica spectrum disorder (NMOSD)         Spinal muscular atrophy (SMA)         Alzheimer's disease         Huntington's disease         Schizophrenia         Parkinson's disease         Neuromuscular disease         Alzheimer's disease         COVID-19 pneumonia         Diabetic macular edema	
COS789 eurology GA237 / RG6168 GG7916 GG1450 GG6042 GG7935 GG7935 GYM329 / RG6237 GG6100 her Diseases MRA/RG1569* GG7716	In-house (Roche)  Roche / PTC Therapeutics Roche / MorphoSys Roche / Ionis Pharmaceuticals Roche Roche / Prothena In-house (Roche) Roche / AC Immune In-house Roche Roche	Neuromyelitis optica spectrum disorder (NMOSD)         Spinal muscular atrophy (SMA)         Alzheimer's disease         Huntington's disease         Schizophrenia         Parkinson's disease         Neuromuscular disease         Alzheimer's disease         COVID-19 pneumonia         Diabetic macular edema         Neovascular age-related macular degeneration (nAMD)	
OS789 eurology 6A237 / RG6168 GG7916 GG1450 GG6042 GG7906 GG7935 GYM329 / RG6237 GG6100 her Diseases MRA/RG1569* GG7716 GG7716	In-house (Roche)  Roche / PTC Therapeutics Roche / MorphoSys Roche / Ionis Pharmaceuticals Roche Roche / Prothena In-house (Roche) Roche / AC Immune In-house Roche Roche In-house Roche In-house	Neuromyelitis optica spectrum disorder (NMOSD)         Spinal muscular atrophy (SMA)         Alzheimer's disease         Huntington's disease         Schizophrenia         Parkinson's disease         Neuromuscular disease         Alzheimer's disease         OVID-19 pneumonia         Diabetic macular edema         Neovascular age-related macular degeneration (nAMD)         Acquired hemophilia A	
COS789 eurology GA237 / RG6168 GG7916 GG1450 GG6042 GG7906 GG7906 GG7935 GYM329 / RG6237 GG6100 her Diseases MRA/RG1569* GG7716 ACE910 / RG6013	In-house (Roche)  Roche / PTC Therapeutics Roche / MorphoSys Roche / Ionis Pharmaceuticals Roche Roche / Prothena In-house (Roche) Roche / AC Immune In-house Roche Roche	Neuromyelitis optica spectrum disorder (NMOSD)         Spinal muscular atrophy (SMA)         Alzheimer's disease         Huntington's disease         Schizophrenia         Parkinson's disease         Neuromuscular disease         Alzheimer's disease         COVID-19 pneumonia         Diabetic macular edema         Neovascular age-related macular degeneration (nAMD)	
COS789 eurology GA237 / RG6168 CG7916 CG7916 CG7916 CG7906 CG7906 CG7906 CG7905 CG7905 CG7905 CG7935 CG795 CG	In-house (Roche)  Roche / PTC Therapeutics Roche / MorphoSys Roche / Ionis Pharmaceuticals Roche Roche / Prothena In-house (Roche) Roche / AC Immune In-house Roche Roche In-house Roche In-house	Neuromyelitis optica spectrum disorder (NMOSD)         Spinal muscular atrophy (SMA)         Alzheimer's disease         Huntington's disease         Schizophrenia         Parkinson's disease         Neuromuscular disease         Alzheimer's disease         OVID-19 pneumonia         Diabetic macular edema         Neovascular age-related macular degeneration (nAMD)         Acquired hemophilia A	
OS789 eurology 6A237 / RG6168 GG7916 GG1450 GG6042 GG7906 GG7906 GG7935 GYM329 / RG6237 GG6100 her Diseases MRA/RG1569* GG7716 ACE910 / RG6013 GKY59 / RG6107	In-house (Roche)  Roche / PTC Therapeutics Roche / MorphoSys Roche / Ionis Pharmaceuticals Roche Roche / Prothena In-house (Roche) Roche / AC Immune In-house Roche In-house In-house In-house In-house In-house In-house In-house	Neuromyelitis optica spectrum disorder (NMOSD)         Spinal muscular atrophy (SMA)         Alzheimer's disease         Huntington's disease         Schizophrenia         Parkinson's disease         Neuromuscular disease         Alzheimer's disease         OVID-19 pneumonia         Diabetic macular edema         Neovascular age-related macular degeneration (nAMD)         Acquired hemophilia A         Paroxysmal nocturnal hemoglobinuria (PNH)	

OOOO Designates change in status in 2020 and thereafter Note: In principle, completion of first dose is regarded as the start of clinical studies in each phase.

2020/9	atezolizumab / Tecentriq	Engineered anti-PD-L1 monoclonal antibody (Injection)
[2022]	·	
[2023 or later]		
[2023 or later]		
[2022]		
[2022]		
[2023 or later]		
[2021]		
[2022]		
[2022]		
[2022]		
[2023 or later]		
2020/8	trastuzumab emtansine / Kadcyla	Anti-HER2 antibody-tubulin polymerization inhibitor conjugate (Injection)
2020/9	bevacizumab / Avastin	Anti-vascular endothelial growth factor (VEGF) humanized monoclonal antibody (Injection)
		· · · · · · · · · · · · · · · · · · ·
[2022]		
[2023 or later]		
2020/6	polatuzumab vedotin / Product name undetermined	Anti-CD79b antibody-drug conjugate (Injection)
[2021]		
[2023 or later]	ipatasertib / Product name undetermined	AKT inhibitor (Oral)
[2022]		
[2021]	trastuzumab, pertuzumab / Product name undetermined	Anti-HER2 humanized monoclonal antibody / HER2 dimerization inhibitory humanized monoclonal antibody (Injection
[2023 or later]	alectinib / Alecensa	ALK inhibitor (Oral)
[2022]	tiragolumab / Product name undetermined	Anti-TIGIT human monoclonal antibody (Injection)
[2023 or later]		
[2023 or later]		
[2023 or later]		
[2023 or later]	Generic and product names undetermined	Selective estrogen receptor degrader (SERD) (Oral)
	· · · · · · · · · · · · · · · · · · ·	
[2023 or later]	Generic and product names undetermined	Oncolytic type 5 adenovirus (Injection)
	codrituzumab / Product name undetermined	Anti-Glypican-3 humanized monoclonal antibody (Injection)
	Generic and product names undetermined	Anti-Glypican-3 / CD3 bispecific antibody (Injection)
	cobimetinib / Product name undetermined	MEK inhibitor (Oral)
	cibisatamab / Product name undetermined	Anti-CEA / CD3 bispecific antibody (Injection)
	mosunetuzumab / Product name undetermined	
		Anti-CD20 / CD3 bispecific antibody (Injection)
	glofitamab / Product name undetermined	Anti-CD20 / CD3 bispecific antibody (Injection)
	Generic and product names undetermined	- (Injection)
	Generic and product names undetermined	Anti-CD137 agonistic switch antibody (Injection)
	Generic and product names undetermined	— (Oral)
	Generic and product names undetermined	Anti-HER2 / CD3 bispecific antibody (Injection)
(China) Dec. 2020	eldecalcitol / Edirol	Activated vitamin D <sub>3</sub> agent (Oral)
(China) 2021	purified sodium hyaluronate / Suvenyl	Sodium hyaluronate (Injection)
	Generic and product names undetermined	Human IL-22 fusion protein (Injection)
		/O11
	Generic and product names undetermined	- (Oral)
(Japan / U.S.) Aug. 2020	satralizumab / Enspryng	pH-dependent binding humanized anti-IL-6 receptor monoclonal antibody (Injection)
	satralizumab / Enspryng	pH-dependent binding humanized anti-IL-6 receptor monoclonal antibody (Injection)
(E.U.) Aug. 2019		
(E.U.) Aug. 2019 2020/10	risdiplam / Product name undetermined	SMN2 splicing modifier (Oral)
(E.U.) Aug. 2019 2020/10 [2023 or later]	risdiplam / Product name undetermined gantenerumab / Product name undetermined	SMN2 splicing modifier (Oral) Anti-amyloid-beta human monoclonal antibody (Injection)
(E.U.) Aug. 2019 2020/10	risdiplam / Product name undetermined gantenerumab / Product name undetermined tominersen / Product name undetermined	SMN2 splicing modifier (Oral) Anti-amyloid-beta human monoclonal antibody (Injection) Antisense oligonucleotide targeting HTT mRNA (Injection)
(E.U.) Aug. 2019 2020/10 [2023 or later]	risdiplam / Product name undetermined gantenerumab / Product name undetermined	SMN2 splicing modifier (Oral) Anti-amyloid-beta human monoclonal antibody (Injection)
(E.U.) Aug. 2019 2020/10 [2023 or later]	risdiplam / Product name undetermined gantenerumab / Product name undetermined tominersen / Product name undetermined	SMN2 splicing modifier (Oral) Anti-amyloid-beta human monoclonal antibody (Injection) Antisense oligonucleotide targeting HTT mRNA (Injection)
(E.U.) Aug. 2019 2020/10 [2023 or later]	risdiplam / Product name undetermined gantenerumab / Product name undetermined tominersen / Product name undetermined ralmitaront / Product name undetermined	SMN2 splicing modifier (Oral)         Anti-amyloid-beta human monoclonal antibody (Injection)         Antisense oligonucleotide targeting HTT mRNA (Injection)         Partial TAAR1 agonist (Oral)         Anti-a-synuclein monoclonal antibody (Injection)
(E.U.) Aug. 2019 2020/10 [2023 or later]	risdiplam / Product name undetermined gantenerumab / Product name undetermined tominersen / Product name undetermined ralmitaront / Product name undetermined prasinezumab / Product name undetermined Generic and product names undetermined	SMN2 splicing modifier (Oral)         Anti-amyloid-beta human monoclonal antibody (Injection)         Antisense oligonucleotide targeting HTT mRNA (Injection)         Partial TAAR1 agonist (Oral)         Anti-a-synuclein monoclonal antibody (Injection)         Anti-latent myostatin sweeping antibody (Injection)
(E.U.) Aug. 2019 2020/10 [2023 or later]	risdiplam / Product name undetermined gantenerumab / Product name undetermined tominersen / Product name undetermined ralmitaront / Product name undetermined prasinezumab / Product name undetermined	SMN2 splicing modifier (Oral)         Anti-amyloid-beta human monoclonal antibody (Injection)         Antisense oligonucleotide targeting HTT mRNA (Injection)         Partial TAAR1 agonist (Oral)         Anti-a-synuclein monoclonal antibody (Injection)
(E.U.) Aug. 2019 2020/10 [2023 or later]	risdiplam / Product name undetermined gantenerumab / Product name undetermined tominersen / Product name undetermined ralmitaront / Product name undetermined prasinezumab / Product name undetermined Generic and product names undetermined	SMN2 splicing modifier (Oral)         Anti-amyloid-beta human monoclonal antibody (Injection)         Antisense oligonucleotide targeting HTT mRNA (Injection)         Partial TAAR1 agonist (Oral)         Anti-a-synuclein monoclonal antibody (Injection)         Anti-latent myostatin sweeping antibody (Injection)
(E.U.) Aug. 2019 2020/10 [2023 or later] [2023 or later]	risdiplam / Product name undetermined gantenerumab / Product name undetermined tominersen / Product name undetermined ralmitaront / Product name undetermined prasinezumab / Product name undetermined Generic and product names undetermined semorinemab / Product name undetermined	SMN2 splicing modifier (Oral)         Anti-amyloid-beta human monoclonal antibody (Injection)         Antisense oligonucleotide targeting HTT mRNA (Injection)         Partial TAAR1 agonist (Oral)         Anti-a-synuclein monoclonal antibody (Injection)         Anti-latent myostatin sweeping antibody (Injection)         Anti-tau humanized monoclonal antibody (Injection)
(E.U.) Aug. 2019 2020/10 [2023 or later]	risdiplam / Product name undetermined gantenerumab / Product name undetermined tominersen / Product name undetermined ralmitaront / Product name undetermined prasinezumab / Product name undetermined Generic and product names undetermined	SMN2 splicing modifier (Oral)         Anti-amyloid-beta human monoclonal antibody (Injection)         Antisense oligonucleotide targeting HTT mRNA (Injection)         Partial TAAR1 agonist (Oral)         Anti-a-synuclein monoclonal antibody (Injection)         Anti-latent myostatin sweeping antibody (Injection)
(E.U.) Aug. 2019 2020/10 [2023 or later] [2023 or later]	risdiplam / Product name undetermined gantenerumab / Product name undetermined tominersen / Product name undetermined ralmitaront / Product name undetermined prasinezumab / Product name undetermined Generic and product names undetermined semorinemab / Product name undetermined	SMN2 splicing modifier (Oral)         Anti-amyloid-beta human monoclonal antibody (Injection)         Antisense oligonucleotide targeting HTT mRNA (Injection)         Partial TAAR1 agonist (Oral)         Anti-a-synuclein monoclonal antibody (Injection)         Anti-latent myostatin sweeping antibody (Injection)         Anti-tau humanized monoclonal antibody (Injection)
(E.U.) Aug. 2019 2020/10 [2023 or later] [2023 or later] [2023 or later] [2021] (Japan)* [2021]	risdiplam / Product name undetermined gantenerumab / Product name undetermined tominersen / Product name undetermined ralmitaront / Product name undetermined prasinezumab / Product name undetermined Generic and product names undetermined semorinemab / Product name undetermined tocilizumab / Actemra	SMN2 splicing modifier (Oral)         Anti-amyloid-beta human monoclonal antibody (Injection)         Antisense oligonucleotide targeting HTT mRNA (Injection)         Partial TAAR1 agonist (Oral)         Anti-a-synuclein monoclonal antibody (Injection)         Anti-latent myostatin sweeping antibody (Injection)         Anti-tau humanized monoclonal antibody (Injection)         Humanized anti-human IL-6 receptor monoclonal antibody (Injection)
(E.U.) Aug. 2019 2020/10 [2023 or later] [2023 or later] [2023 or later] [2021] (Japan)* [2021] [2021]	risdiplam / Product name undetermined gantenerumab / Product name undetermined tominersen / Product name undetermined ralmitaront / Product name undetermined prasinezumab / Product name undetermined Generic and product names undetermined semorinemab / Product name undetermined tocilizumab / Actemra faricimab / Product name undetermined	SMN2 splicing modifier (Oral)         Anti-amyloid-beta human monoclonal antibody (Injection)         Antisense oligonucleotide targeting HTT mRNA (Injection)         Partial TAAR1 agonist (Oral)         Anti-acsynuclein monoclonal antibody (Injection)         Anti-latent myostatin sweeping antibody (Injection)         Anti-tau humanized monoclonal antibody (Injection)         Humanized anti-human IL-6 receptor monoclonal antibody (Injection)         Anti-VEGF / Ang2 bispecific antibody (Injection)
(E.U.) Aug. 2019 2020/10 [2023 or later] [2023 or later] [2023 or later] [2021] (Japan)* [2021] [2021] [2021] [2021] [2022] (Japan)	risdiplam / Product name undetermined gantenerumab / Product name undetermined tominersen / Product name undetermined ralmitaront / Product name undetermined prasinezumab / Product name undetermined Generic and product names undetermined semorinemab / Product name undetermined tocilizumab / Actemra faricimab / Product name undetermined emicizumab / Hemlibra	SMN2 splicing modifier (Oral)         Anti-amyloid-beta human monoclonal antibody (Injection)         Antisense oligonucleotide targeting HTT mRNA (Injection)         Partial TAAR1 agonist (Oral)         Anti-acsynuclein monoclonal antibody (Injection)         Anti-datent myostatin sweeping antibody (Injection)         Anti-tau humanized monoclonal antibody (Injection)         Anti-tau humanized monoclonal antibody (Injection)         Anti-tau humanized monoclonal antibody (Injection)         Anti-tau humanized nonoclonal antibody (Injection)         Anti-VEGF / Ang2 bispecific antibody (Injection)         Anti-coagulation factor IXa / X bispecific antibody (Injection)
(E.U.) Aug. 2019 2020/10 [2023 or later] [2023 or later] [2023 or later] [2021] (Japan)* [2021] [2021]	risdiplam / Product name undetermined gantenerumab / Product name undetermined tominersen / Product name undetermined ralmitaront / Product name undetermined prasinezumab / Product name undetermined Generic and product name undetermined semorinemab / Product name undetermined tocilizumab / Actemra faricimab / Product name undetermined emicizumab / Hemlibra crovalimab / Product name undetermined	SMN2 splicing modifier (Oral)         Anti-amyloid-beta human monoclonal antibody (Injection)         Antisense oligonucleotide targeting HTT mRNA (Injection)         Partial TAAR1 agonist (Oral)         Anti-ac-synuclein monoclonal antibody (Injection)         Anti-latent myostatin sweeping antibody (Injection)         Anti-tau humanized monoclonal antibody (Injection)         Anti-tau humanized anti-human IL-6 receptor monoclonal antibody (Injection)         Anti-VEGF / Ang2 bispecific antibody (Injection)         Anti-coagulation factor IXa / X bispecific antibody (Injection)         Anti-C5 recycling antibody (Injection)
(E.U.) Aug. 2019 2020/10 [2023 or later] [2023 or later] [2023 or later] [2021] (Japan)* [2021] [2021] [2021] [2021] [2022] (Japan)	risdiplam / Product name undetermined gantenerumab / Product name undetermined tominersen / Product name undetermined ralmitaront / Product name undetermined prasinezumab / Product name undetermined Generic and product names undetermined semorinemab / Product name undetermined tocilizumab / Actemra faricimab / Product name undetermined emicizumab / Hemlibra	SMN2 splicing modifier (Oral)         Anti-amyloid-beta human monoclonal antibody (Injection)         Antisense oligonucleotide targeting HTT mRNA (Injection)         Partial TAAR1 agonist (Oral)         Anti-acsynuclein monoclonal antibody (Injection)         Anti-datent myostatin sweeping antibody (Injection)         Anti-tau humanized monoclonal antibody (Injection)         Anti-tau humanized monoclonal antibody (Injection)         Anti-tau humanized monoclonal antibody (Injection)         Anti-tau humanized nonoclonal antibody (Injection)         Anti-VEGF / Ang2 bispecific antibody (Injection)         Anti-coagulation factor IXa / X bispecific antibody (Injection)
(E.U.) Aug. 2019 2020/10 [2023 or later] [2023 or later] [2023 or later] [2021] (Japan)* [2021] [2021] [2021] [2021] [2022] (Japan)	risdiplam / Product name undetermined gantenerumab / Product name undetermined tominersen / Product name undetermined ralmitaront / Product name undetermined prasinezumab / Product name undetermined Generic and product name undetermined semorinemab / Product name undetermined tocilizumab / Actemra faricimab / Product name undetermined emicizumab / Hemlibra crovalimab / Product name undetermined	SMN2 splicing modifier (Oral)         Anti-amyloid-beta human monoclonal antibody (Injection)         Antisense oligonucleotide targeting HTT mRNA (Injection)         Partial TAAR1 agonist (Oral)         Anti-ac-synuclein monoclonal antibody (Injection)         Anti-latent myostatin sweeping antibody (Injection)         Anti-tau humanized monoclonal antibody (Injection)         Anti-tau humanized anti-human IL-6 receptor monoclonal antibody (Injection)         Anti-VEGF / Ang2 bispecific antibody (Injection)         Anti-coagulation factor IXa / X bispecific antibody (Injection)         Anti-C5 recycling antibody (Injection)

\* Roche is conducting multiple global phase III studies of Actemra against COVID-19 pneumonia separately.