


Supplementary Materials for
Consolidated Financial Results for
the 2nd Quarter of Fiscal Year 2017. 12 (IFRS)

Innovation all for the patients



CHUGAI PHARMACEUTICAL CO., LTD.

 A member of the Roche group

- Notes: 1. Portions of this report that refer to performance forecasts or any other future events are believed to be reasonable under information available at the time of the forecasts. Actual results may materially differ from these forecasts due to potential risks and uncertainties.
2. Amounts shown in this report are rounded to the nearest 0.1 billion yen. Variance and % are calculated based on the amounts
3. Exchange rates used for each period are as follows.

QTR

(Yen)

		Actual*				Actual*			
		FY2016				FY2017			
		1-3	4-6	7-9	10-12	1-3	4-6	7-9	10-12
		QTR	QTR	QTR	QTR	QTR	QTR	QTR	QTR
CHF		116.14	111.43	104.97	109.22	113.21	112.69		
EUR		127.29	122.18	114.31	117.91	121.09	122.03		
USD		115.43	108.16	102.44	109.30	113.69	111.07		
SGD		82.22	79.66	75.75	77.55	80.25	79.76		

*Market average exchange rate

YTD

	Actual*	Actual*				Actual*				Assumption
	FY2015	FY2016				FY2017				FY2017
	1-12	1-3	1-6	1-9	1-12	1-3	1-6	1-9	1-12	1-12
	Full-year	YTD	YTD	YTD	Full-year	YTD	YTD	YTD	Full-year	Full-year
CHF	125.74	116.14	113.81	110.88	110.46	113.21	112.95			106.00
EUR	134.36	127.29	124.77	121.28	120.42	121.09	121.55			122.00
USD	121.03	115.43	111.79	108.68	108.83	113.69	112.38			115.00
SGD	88.07	82.22	80.96	79.25	78.82	80.25	80.01			80.00

*Market average exchange rate

Period-end

	Actual	Actual				Actual			
	FY2015	FY2016				FY2017			
	31 Dec.	31 Mar.	30 Jun.	30 Sep.	31 Dec.	31 Mar.	30 Jun.	30 Sep.	31 Dec.
CHF	121.89	116.50	104.96	104.56	113.94	111.76	117.37		
EUR	131.75	127.47	114.39	113.38	122.27	119.47	128.35		
USD	120.52	112.43	102.83	101.03	116.55	111.92	112.18		
SGD	85.20	83.26	76.27	74.05	80.47	80.04	81.33		

Financial highlights (YTD)

(Billions of yen)

	Actual	Actual				Actual							
	FY2015	FY2016				FY2017							
	1-12	1-3	1-6	1-9	1-12	1-3	Change (%)	1-6	Change (%)	1-9	Change (%)	1-12	Change (%)
	YTD	YTD	YTD	YTD	YTD	YTD		YTD		YTD		YTD	
Revenues	498.8	119.9	247.5	361.5	491.8	125.5	+4.7	252.8	+2.1				
Sales	468.4	115.6	237.2	347.5	472.7	118.1	+2.2	236.8	(0.2)				
excl. Tamiflu	460.2	108.6	230.0	339.1	459.2	110.8	+2.0	228.7	(0.6)				
Domestic	378.0	87.8	184.2	277.2	379.7	85.1	(3.1)	183.0	(0.7)				
Sales to Roche	63.1	16.5	37.4	49.2	62.8	21.3	+29.1	36.9	(1.3)				
Overseas	19.1	4.3	8.4	12.6	16.8	4.3	0.0	8.8	+4.8				
Tamiflu sales	8.2	7.0	7.3	8.4	13.5	7.4	+5.7	8.2	+12.3				
Ordinary use	8.2	7.0	7.3	7.3	12.0	6.1	(12.9)	6.3	(13.7)				
Govt. stockpiles etc.	0.0	0.0	0.0	1.2	1.5	1.3	-	1.9	-				
Royalties and other operating income	30.4	4.3	10.3	14.0	19.1	7.3	+69.8	15.9	+54.4				
Cost of sales	(240.2)	(61.2)	(125.0)	(183.9)	(247.9)	(61.2)	0.0	(121.4)	(2.9)				
(% of Sales)	51.3	52.9	52.7	52.9	52.4	51.8	-	51.3	-				
Gross profit	258.6	58.7	122.5	177.7	243.8	64.3	+9.5	131.3	+7.2				
(% of Revenues)	51.8	49.0	49.5	49.2	49.6	51.2	-	51.9	-				
Operating expenses	(171.8)	(38.7)	(79.0)	(119.0)	(167.0)	(38.0)	(1.8)	(84.2)	+6.6				
(% of Revenues)	34.4	32.3	31.9	32.9	34.0	30.3	-	33.3	-				
Marketing and distribution	(74.8)	(16.6)	(33.1)	(49.9)	(69.8)	(15.4)	(7.2)	(32.2)	(2.7)				
(% of Revenues)	15.0	13.8	13.4	13.8	14.2	12.3	-	12.7	-				
Research and development	(83.8)	(19.3)	(40.1)	(60.3)	(85.0)	(19.3)	0.0	(44.8)	+11.7				
(% of Revenues)	16.8	16.1	16.2	16.7	17.3	15.4	-	17.7	-				
General and administration	(13.2)	(2.8)	(5.8)	(8.9)	(12.2)	(3.3)	+17.9	(7.2)	+24.1				
(% of Revenues)	2.6	2.3	2.3	2.5	2.5	2.6	-	2.8	-				
Operating profit	86.8	20.1	43.5	58.6	76.9	26.3	+30.8	47.1	+8.3				
(% of Revenues)	17.4	16.8	17.6	16.2	15.6	21.0	-	18.6	-				
Financing costs	(0.1)	(0.0)	(0.1)	(0.1)	(0.1)	(0.0)	0.0	(0.1)	0.0				
Other financial income (expense)	0.6	0.1	0.3	0.5	1.1	(0.3)	-	(0.2)	-				
Other expense	-	-	-	-	(3.5)	(1.1)	-	(0.4)	-				
Profit before taxes	87.3	20.1	43.8	59.1	74.4	25.0	+24.4	46.4	+5.9				
(% of Revenues)	17.5	16.8	17.7	16.3	15.1	19.9	-	18.4	-				
Income taxes	(24.9)	(5.4)	(11.8)	(15.4)	(20.1)	(6.2)	+14.8	(9.9)	(16.1)				
Net income	62.4	14.7	32.0	43.7	54.4	18.7	+27.2	36.5	+14.1				
(% of Revenues)	12.5	12.3	12.9	12.1	11.1	14.9	-	14.4	-				
Attributable to													
Chugai shareholders	61.1	14.5	31.5	43.1	53.6	18.5	+27.6	36.1	+14.6				
Non-controlling interests	1.2	0.2	0.5	0.6	0.8	0.2	0.0	0.4	(20.0)				
Earnings per share													
Basic (yen)	112.00	26.55	57.77	78.89	98.12	33.86	+27.5	66.07	+14.4				
Diluted (yen)	111.79	26.51	57.68	78.77	97.97	33.81	+27.5	65.97	+14.4				

Other financial income (expense) includes net amount of FX related gains/losses.

Financial highlights (QTR)

(Billions of yen)

	Actual				Actual							
	FY2016				FY2017							
	1-3	4-6	7-9	10-12	1-3	Change (%)	4-6	Change (%)	7-9	Change (%)	10-12	Change (%)
	QTR	QTR	QTR	QTR	QTR		QTR		QTR		QTR	
Revenues	119.9	127.6	114.0	130.3	125.5	+4.7	127.3	(0.2)				
Sales	115.6	121.6	110.2	125.2	118.1	+2.2	118.7	(2.4)				
excl. Tamiflu	108.6	121.4	109.1	120.2	110.8	+2.0	117.9	(2.9)				
Domestic	87.8	96.4	93.0	102.4	85.1	(3.1)	97.9	+1.6				
Sales to Roche	16.5	20.9	11.8	13.6	21.3	+29.1	15.6	(25.4)				
Overseas	4.3	4.1	4.3	4.1	4.3	0.0	4.5	+9.8				
Tamiflu sales	7.0	0.3	1.1	5.0	7.4	+5.7	0.8	+166.7				
Ordinary use	7.0	0.3	(0.0)	4.7	6.1	(12.9)	0.2	(33.3)				
Govt. stockpiles etc.	0.0	-	1.2	0.3	1.3	-	0.6	-				
Royalties and other operating income	4.3	6.0	3.8	5.1	7.3	+69.8	8.6	+43.3				
Cost of sales	(61.2)	(63.8)	(58.8)	(64.1)	(61.2)	0.0	(60.3)	(5.5)				
(% of Sales)	52.9	52.5	53.4	51.2	51.8	-	50.8	-				
Gross profit	58.7	63.8	55.2	66.2	64.3	+9.5	67.0	+5.0				
(% of Revenues)	49.0	50.0	48.4	50.8	51.2	-	52.6	-				
Operating expenses	(38.7)	(40.3)	(40.0)	(47.9)	(38.0)	(1.8)	(46.3)	+14.9				
(% of Revenues)	32.3	31.6	35.1	36.8	30.3	-	36.4	-				
Marketing and distribution	(16.6)	(16.5)	(16.8)	(19.9)	(15.4)	(7.2)	(16.8)	+1.8				
(% of Revenues)	13.8	12.9	14.7	15.3	12.3	-	13.2	-				
Research and development	(19.3)	(20.9)	(20.1)	(24.7)	(19.3)	0.0	(25.6)	+22.5				
(% of Revenues)	16.1	16.4	17.6	19.0	15.4	-	20.1	-				
General and administration	(2.8)	(2.9)	(3.1)	(3.3)	(3.3)	+17.9	(3.9)	+34.5				
(% of Revenues)	2.3	2.3	2.7	2.5	2.6	-	3.1	-				
Operating profit	20.1	23.5	15.1	18.2	26.3	+30.8	20.8	(11.5)				
(% of Revenues)	16.8	18.4	13.2	14.0	21.0	-	16.3	-				
Financing costs	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	0.0	(0.0)	0.0				
Other financial income (expense)	0.1	0.2	0.2	0.6	(0.3)	-	0.1	(50.0)				
Other expense	-	-	-	(3.5)	(1.1)	-	0.7	-				
Profit before taxes	20.1	23.7	15.3	15.4	25.0	+24.4	21.5	(9.3)				
(% of Revenues)	16.8	18.6	13.4	11.8	19.9	-	16.9	-				
Income taxes	(5.4)	(6.3)	(3.6)	(4.7)	(6.2)	+14.8	(3.6)	(42.9)				
Net income	14.7	17.3	11.7	10.7	18.7	+27.2	17.8	+2.9				
(% of Revenues)	12.3	13.6	10.3	8.2	14.9	-	14.0	-				
Attributable to												
Chugai shareholders	14.5	17.0	11.5	10.5	18.5	+27.6	17.6	+3.5				
Non-controlling interests	0.2	0.3	0.1	0.2	0.2	0.0	0.2	(33.3)				
Earnings per share												
Basic (yen)	26.55	31.22	21.12	19.24	33.86	+27.5	32.20	+3.1				
Diluted (yen)	26.51	31.17	21.09	19.21	33.81	+27.5	32.15	+3.1				

Other financial income (expense) includes net amount of FX related gains/losses.

Financial highlights (Core results YTD)

(Billions of yen)

	Actual	Actual				Actual								Forecast	
	FY2015	FY2016				FY2017								(Feb 1st Announced)	
	1-12	1-3	1-6	1-9	1-12	1-3	Change (%)	1-6	Change (%)	1-9	Change (%)	1-12	Change (%)	1-12	Change (%)
	YTD	YTD	YTD	YTD	YTD	YTD		YTD		YTD		YTD		YTD	
Revenues	498.8	119.9	247.5	361.5	491.8	125.5	+4.7	252.8	+2.1					520.5	+5.8
Sales	468.4	115.6	237.2	347.5	472.7	118.1	+2.2	236.8	(0.2)					490.4	+3.7
excl. Tamiflu	460.2	108.6	230.0	339.1	459.2	110.8	+2.0	228.7	(0.6)					482.2	+5.0
Domestic	378.0	87.8	184.2	277.2	379.7	85.1	(3.1)	183.0	(0.7)					393.9	+3.7
Sales to Roche	63.1	16.5	37.4	49.2	62.8	21.3	+29.1	36.9	(1.3)					67.4	+7.3
Overseas	19.1	4.3	8.4	12.6	16.8	4.3	0.0	8.8	+4.8					20.9	+24.4
Tamiflu sales	8.2	7.0	7.3	8.4	13.5	7.4	+5.7	8.2	+12.3					8.2	(39.3)
Ordinary use	8.2	7.0	7.3	7.3	12.0	6.1	(12.9)	6.3	(13.7)					6.5	(45.8)
Govt. stockpiles etc.	0.0	0.0	0.0	1.2	1.5	1.3	-	1.9	-					1.6	+6.7
Royalties and other operating income	30.4	4.3	10.3	14.0	19.1	7.3	+69.8	15.9	+54.4					30.0	+57.1
Cost of sales	(238.9)	(60.9)	(124.4)	(183.0)	(246.7)	(60.9)	0.0	(120.8)	(2.9)					(252.0)	+2.1
(% of Sales)	51.0	52.7	52.4	52.7	52.2	51.6	-	51.0	-					51.4	-
Gross profit	260.0	59.0	123.1	178.6	245.0	64.6	+9.5	131.9	+7.1					268.5	+9.6
(% of Revenues)	52.1	49.2	49.7	49.4	49.8	51.5	-	52.2	-					51.6	-
Operating expenses	(169.3)	(38.6)	(79.0)	(119.0)	(164.5)	(37.9)	(1.8)	(81.8)	+3.5					(176.5)	+7.3
(% of Revenues)	33.9	32.2	31.9	32.9	33.4	30.2	-	32.4	-					33.9	-
Marketing and distribution	(74.7)	(16.5)	(33.1)	(49.9)	(69.8)	(15.4)	(6.7)	(32.2)	(2.7)						
(% of Revenues)	15.0	13.8	13.4	13.8	14.2	12.3	-	12.7	-						
Research and development	(81.9)	(19.2)	(40.1)	(60.2)	(82.6)	(19.2)	0.0	(42.4)	+5.7						
(% of Revenues)	16.4	16.0	16.2	16.7	16.8	15.3	-	16.8	-						
General and administration	(12.8)	(2.8)	(5.8)	(8.9)	(12.1)	(3.3)	+17.9	(7.2)	+24.1						
(% of Revenues)	2.6	2.3	2.3	2.5	2.5	2.6	-	2.8	-						
Operating profit	90.7	20.4	44.1	59.6	80.6	26.7	+30.9	50.2	+13.8					92.0	+14.1
(% of Revenues)	18.2	17.0	17.8	16.5	16.4	21.3	-	19.9	-					17.7	-
Financing costs	(0.1)	(0.0)	(0.1)	(0.1)	(0.1)	(0.0)	0.0	(0.1)	0.0						
Other financial income (expense)	0.6	0.1	0.3	0.5	1.1	(0.3)	-	(0.2)	-						
Other expense	-	-	-	-	(3.5)	(1.1)	-	(0.4)	-						
Profit before taxes	91.2	20.5	44.4	60.0	78.1	25.3	+23.4	49.5	+11.5						
(% of Revenues)	18.3	17.1	17.9	16.6	15.9	20.2	-	19.6	-						
Income taxes	(26.3)	(5.6)	(12.0)	(15.7)	(21.3)	(6.3)	+12.5	(10.7)	(10.8)						
Net income	64.9	14.9	32.4	44.3	56.8	18.9	+26.8	38.8	+19.8						
(% of Revenues)	13.0	12.4	13.1	12.3	11.5	15.1	-	15.3	-						
Attributable to															
Chugai shareholders	63.7	14.7	32.0	43.7	56.1	18.7	+27.2	38.4	+20.0						
Non-controlling interests	1.2	0.2	0.5	0.6	0.8	0.2	0.0	0.4	(20.0)						
Weighted average number of shares in issue used to calculate diluted earnings per share (Millions of shares)	547	547	547	547	547	547	0.0	547	0.0						
Core earnings per share (diluted) (yen)	116.42	26.94	58.45	79.93	102.50	34.22	+27.0	70.10	+19.9					124.11	+21.1
Core payout ratio (%)	49.8				50.7									46.7	-
Dividend per share (Full year) (yen)	58				52									58	-
Dividend per share (Half year) (yen)	26				26							29		29	-

Please see page 5 "Reconciliation of IFRS results to Core results" for the detail of the adjustments.

Core earnings per share (diluted) (yen) : Net income attributable to Chugai shareholders / Weighted average number of shares in issue used to calculate diluted earnings per share.

Other financial income (expense) includes net amount of FX related gains/losses.

Financial highlights (Core results QTR)

(Billions of yen)

	Actual				Actual							
	FY2016				FY2017							
	1-3 QTR	4-6 QTR	7-9 QTR	10-12 QTR	1-3 QTR	Change (%)	4-6 QTR	Change (%)	7-9 QTR	Change (%)	10-12 QTR	Change (%)
Revenues	119.9	127.6	114.0	130.3	125.5	+4.7	127.3	(0.2)				
Sales	115.6	121.6	110.2	125.2	118.1	+2.2	118.7	(2.4)				
excl. Tamiflu	108.6	121.4	109.1	120.2	110.8	+2.0	117.9	(2.9)				
Domestic	87.8	96.4	93.0	102.4	85.1	(3.1)	97.9	+1.6				
Sales to Roche	16.5	20.9	11.8	13.6	21.3	+29.1	15.6	(25.4)				
Overseas	4.3	4.1	4.3	4.1	4.3	0.0	4.5	+9.8				
Tamiflu sales	7.0	0.3	1.1	5.0	7.4	+5.7	0.8	+166.7				
Ordinary use	7.0	0.3	(0.0)	4.7	6.1	(12.9)	0.2	(33.3)				
Govt. stockpiles etc.	0.0	-	1.2	0.3	1.3	-	0.6	-				
Royalties and other operating income	4.3	6.0	3.8	5.1	7.3	+69.8	8.6	+43.3				
Cost of sales	(60.9)	(63.5)	(58.5)	(63.8)	(60.9)	0.0	(60.0)	(5.5)				
(% of Sales)	52.7	52.2	53.1	51.0	51.6	-	50.5	-				
Gross profit	59.0	64.1	55.5	66.5	64.6	+9.5	67.3	+5.0				
(% of Revenues)	49.2	50.2	48.7	51.0	51.5	-	52.9	-				
Operating expenses	(38.6)	(40.4)	(40.0)	(45.5)	(37.9)	(1.8)	(43.8)	+8.4				
(% of Revenues)	32.2	31.7	35.1	34.9	30.2	-	34.4	-				
Marketing and distribution	(16.5)	(16.6)	(16.8)	(19.9)	(15.4)	(6.7)	(16.8)	+1.2				
(% of Revenues)	13.8	13.0	14.7	15.3	12.3	-	13.2	-				
Research and development	(19.2)	(20.8)	(20.1)	(22.4)	(19.2)	0.0	(23.1)	+11.1				
(% of Revenues)	16.0	16.3	17.6	17.2	15.3	-	18.1	-				
General and administration	(2.8)	(2.9)	(3.1)	(3.3)	(3.3)	+17.9	(3.9)	+34.5				
(% of Revenues)	2.3	2.3	2.7	2.5	2.6	-	3.1	-				
Operating profit	20.4	23.7	15.4	21.0	26.7	+30.9	23.5	(0.8)				
(% of Revenues)	17.0	18.6	13.5	16.1	21.3	-	18.5	-				
Financing costs	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	0.0	(0.0)	0.0				
Other financial income (expense)	0.1	0.2	0.2	0.6	(0.3)	-	0.1	(50.0)				
Other expense	-	-	-	(3.5)	(1.1)	-	0.7	-				
Profit before taxes	20.5	23.9	15.6	18.1	25.3	+23.4	24.2	+1.3				
(% of Revenues)	17.1	18.7	13.7	13.9	20.2	-	19.0	-				
Income taxes	(5.6)	(6.4)	(3.7)	(5.6)	(6.3)	+12.5	(4.4)	(31.3)				
Net income	14.9	17.5	11.9	12.5	18.9	+26.8	19.9	+13.7				
(% of Revenues)	12.4	13.7	10.4	9.6	15.1	-	15.6	-				
Attributable to												
Chugai shareholders	14.7	17.2	11.8	12.3	18.7	+27.2	19.6	+14.0				
Non-controlling interests	0.2	0.3	0.1	0.2	0.2	0.0	0.2	(33.3)				
Core earnings per share (diluted) (yen)	26.94	31.51	21.49	22.57	34.22	+27.0	35.89	+13.9				

Other financial income (expense) includes net amount of FX related gains/losses.

Reconciliation of IFRS results to Core results

(Billions of yen)

	FY2016				FY2017			
	1-6				1-6			
	IFRS results	Intangible assets	Others	Core results	IFRS results	Intangible assets	Others	Core results
Revenues	247.5	-	-	247.5	252.8	-	-	252.8
Sales	237.2	-	-	237.2	236.8	-	-	236.8
Royalties and other operating income	10.3	-	-	10.3	15.9	-	-	15.9
Cost of sales	(125.0)	0.6	-	(124.4)	(121.4)	0.6	-	(120.8)
Gross profit	122.5	0.6	-	123.1	131.3	0.6	-	131.9
Operating expenses	(79.0)	0.0	-	(79.0)	(84.2)	2.5	-	(81.8)
Marketing and distribution	(33.1)	-	-	(33.1)	(32.2)	-	-	(32.2)
Research and development	(40.1)	0.0	-	(40.1)	(44.8)	2.5	-	(42.4)
General and administration	(5.8)	-	-	(5.8)	(7.2)	-	-	(7.2)
Operating profit	43.5	0.6	-	44.1	47.1	3.1	-	50.2
Financing costs	(0.1)	-	-	(0.1)	(0.1)	-	-	(0.1)
Other financial income (expense)	0.3	-	-	0.3	(0.2)	-	-	(0.2)
Other expense	-	-	-	-	(0.4)	-	-	(0.4)
Profit before taxes	43.8	0.6	-	44.4	46.4	3.1	-	49.5
Income taxes	(11.8)	(0.2)	-	(12.0)	(9.9)	(0.8)	-	(10.7)
Net income	32.0	0.4	-	32.4	36.5	2.3	-	38.8
Attributable to								
Chugai shareholders	31.5	0.4	-	32.0	36.1	2.3	-	38.4
Non-controlling interests	0.5	-	-	0.5	0.4	-	-	0.4

Core results

Chugai discloses its results on a Core basis from 2013 in conjunction with its decision to apply IFRS. Core results are the results after adjusting non-Core items to IFRS results, and are consistent with the Core concept disclosed by Roche. Core results are used by Chugai as an internal performance indicator, for explaining the underlying business performance both internally and externally, and as the basis for payment-by-results such as a return to shareholders.

The table above shows the reconciliation of IFRS results into Core results. The detail is as below.

Intangible assets

Amortization (0.6 billion yen in 2016 and 0.6 billion yen in 2017)

Impairment (none in 2016 and 2.5 billion yen in 2017)

Others

Environmental costs (none in 2016 and in 2017)

Statements of revenues (YTD)

(Billions of yen)

	Actual	Actual				Actual								Forecast(Feb 1st announced)	
	FY2015	FY2016				FY2017								FY2017	
	1-12	1-3	1-6	1-9	1-12	1-3	Change (%)	1-6	Change (%)	1-9	Change (%)	1-12	Change (%)	1-12	Change (%)
	YTD	YTD	YTD	YTD	YTD	YTD		YTD		YTD		YTD		YTD	
Sales	468.4	115.6	237.2	347.5	472.7	118.1	+2.2	236.8	(0.2)					490.4	+3.7
Excl.Tamiflu	460.2	108.6	230.0	339.1	459.2	110.8	+2.0	228.7	(0.6)					482.2	+5.0
Domestic	378.0	87.8	184.2	277.2	379.7	85.1	(3.1)	183.0	(0.7)					393.9	+3.7
Oncology	215.7	51.1	107.0	161.2	220.3	49.3	(3.5)	106.3	(0.7)					230.0	+4.4
Avastin	93.8	22.3	45.3	67.8	92.1	20.5	(8.1)	44.0	(2.9)					92.7	+0.7
Herceptin	32.7	7.8	16.6	25.0	34.1	7.5	(3.8)	16.2	(2.4)					35.1	+2.9
Rituxan	29.0	7.2	15.3	23.3	32.1	7.0	(2.8)	15.4	+0.7					34.0	+5.9
Alecensa	8.0	2.2	5.2	8.2	11.9	3.3	+50.0	7.4	+42.3					15.9	+33.6
Xeloda	11.1	2.9	6.1	9.1	12.3	2.8	(3.4)	5.9	(3.3)					13.7	+11.4
Perjeta	10.6	2.7	5.7	8.6	11.9	2.9	+7.4	6.3	+10.5					12.9	+8.4
Tarceva	11.6	2.5	5.6	8.4	11.5	2.4	(4.0)	5.2	(7.1)					11.3	(1.7)
Kadcyla	7.3	1.9	4.2	6.1	8.3	1.8	(5.3)	3.7	(11.9)					9.4	+13.3
Zelboraf	0.5	0.1	0.3	0.3	0.4	0.0	(100.0)	0.1	(66.7)					0.4	0.0
Other products	11.0	1.4	2.9	4.3	5.8	1.0	(28.6)	2.2	(24.1)					4.6	(20.7)
Bone and joint diseases	79.4	19.8	41.5	62.4	86.1	20.4	+3.0	43.7	+5.3					94.5	+9.8
Actemra	26.8	6.6	14.3	21.8	30.2	7.0	+6.1	15.2	+6.3					32.3	+7.0
Edirol	23.1	5.8	12.4	19.1	26.7	6.3	+8.6	13.7	+10.5					29.5	+10.5
Bonviva	5.4	1.5	3.6	5.3	7.3	1.8	+20.0	4.0	+11.1					9.2	+26.0
Suvenyl	10.5	2.2	4.7	6.9	9.3	1.9	(13.6)	4.2	(10.6)					9.2	(1.1)
Other products	13.6	3.6	6.5	9.2	12.6	3.4	(5.6)	6.6	+1.5					14.3	+13.5
Renal diseases	45.4	9.6	19.9	29.9	41.1	8.3	(13.5)	18.4	(7.5)					39.0	(5.1)
Mircera	23.8	5.3	11.4	17.3	24.2	4.9	(7.5)	11.0	(3.5)					25.0	+3.3
Oxarol	12.9	2.4	4.7	6.8	9.1	1.7	(29.2)	3.8	(19.1)					6.8	(25.3)
Other products	8.8	1.8	3.8	5.8	7.8	1.7	(5.6)	3.5	(7.9)					7.2	(7.7)
Others	37.6	7.3	15.8	23.8	32.2	7.1	(2.7)	14.6	(7.6)					30.3	(5.9)
CellCept	7.0	1.7	3.7	5.7	7.9	1.9	+11.8	4.1	+10.8					9.0	+13.9
Other products	30.6	5.6	12.1	18.1	24.3	5.2	(7.1)	10.5	(13.2)					21.3	(12.3)
Overseas	82.2	20.8	45.8	61.8	79.5	25.6	+23.1	45.7	(0.2)					88.4	+11.2
Actemra	63.6	16.1	36.5	47.9	60.3	18.0	+11.8	31.1	(14.8)					59.4	(1.5)
To Roche	62.6	15.8	36.0	47.0	59.1	17.7	+12.0	30.4	(15.6)					58.0	(1.9)
Neutrogen	14.8	3.1	6.2	9.5	12.2	2.9	(6.5)	5.9	(4.8)					11.6	(4.9)
Alecensa	0.5	0.7	1.4	2.2	3.7	3.6	+414.3	5.5	+292.9					9.5	+156.8
Akynzeo	0.0	0.0	0.0	0.1	0.1	0.1	-	0.1	-					0.3	+200.0
Aloxi	0.3	0.1	0.1	0.2	0.2	0.0	(100.0)	0.0	(100.0)					0.0	(100.0)
Other products	3.0	0.8	1.4	2.0	3.0	1.1	+37.5	3.0	+114.3					7.6	+153.3
Tamiflu	8.2	7.0	7.3	8.4	13.5	7.4	+5.7	8.2	+12.3					8.2	(39.3)
Ordinary use	8.2	7.0	7.3	7.3	12.0	6.1	(12.9)	6.3	(13.7)					6.5	(45.8)
Govt. stockpiles etc.	0.0	0.0	0.0	1.2	1.5	1.3	-	1.9	-					1.6	+6.7
Royalties and other operating income	30.4	4.3	10.3	14.0	19.1	7.3	+69.8	15.9	+54.4					30.0	+57.1
Revenues	498.8	119.9	247.5	361.5	491.8	125.5	+4.7	252.8	+2.1					520.5	+5.8
Domestic	390.0	95.2	193.2	287.5	395.1	95.7	+0.5	196.2	+1.6					405.2	+2.6
Overseas	108.8	24.7	54.4	74.0	96.6	29.7	+20.2	56.6	+4.0					115.2	+19.3

Independently disclosed sales of Transplant, immunology and infectious diseases area up until FY 2016 were included and disclosed in sales of Others area from the first quarter in FY 2017.

Statements of revenues (QTR)

(Billions of yen)

	Actual				Actual							
	FY2016				FY2017							
	1-3	4-6	7-9	10-12	1-3	Change (%)	4-6	Change (%)	7-9	Change (%)	10-12	Change (%)
QTR	QTR	QTR	QTR	QTR		QTR		QTR		QTR		
Sales	115.6	121.6	110.2	125.2	118.1	+2.2	118.7	(2.4)				
Excl. Tamiflu	108.6	121.4	109.1	120.2	110.8	+2.0	117.9	(2.9)				
Domestic	87.8	96.4	93.0	102.4	85.1	(3.1)	97.9	+1.6				
Oncology	51.1	55.9	54.1	59.1	49.3	(3.5)	57.1	+2.1				
Avastin	22.3	23.0	22.4	24.3	20.5	(8.1)	23.5	+2.2				
Herceptin	7.8	8.7	8.4	9.1	7.5	(3.8)	8.6	(1.1)				
Rituxan	7.2	8.1	8.1	8.8	7.0	(2.8)	8.5	+4.9				
Alecensa	2.2	3.0	3.0	3.6	3.3	+50.0	4.1	+36.7				
Xeloda	2.9	3.2	3.0	3.1	2.8	(3.4)	3.1	(3.1)				
Perjeta	2.7	3.0	2.9	3.3	2.9	+7.4	3.4	+13.3				
Tarceva	2.5	3.0	2.8	3.1	2.4	(4.0)	2.7	(10.0)				
Kadcyla	1.9	2.2	2.0	2.1	1.8	(5.3)	2.0	(9.1)				
Zelboraf	0.1	0.1	0.1	0.0	0.0	(100.0)	0.0	(100.0)				
Other products	1.4	1.5	1.4	1.5	1.0	(28.6)	1.2	(20.0)				
Bone and joint diseases	19.8	21.7	20.9	23.7	20.4	+3.0	23.2	+6.9				
Actemra	6.6	7.6	7.6	8.3	7.0	+6.1	8.2	+7.9				
Edirol	5.8	6.7	6.6	7.6	6.3	+8.6	7.4	+10.4				
Bonviva	1.5	2.1	1.7	2.0	1.8	+20.0	2.2	+4.8				
Suvenyl	2.2	2.4	2.3	2.4	1.9	(13.6)	2.3	(4.2)				
Other products	3.6	2.9	2.7	3.4	3.4	(5.6)	3.2	+10.3				
Renal diseases	9.6	10.3	10.0	11.2	8.3	(13.5)	10.1	(1.9)				
Mircera	5.3	6.1	6.0	6.9	4.9	(7.5)	6.1	0.0				
Oxarol	2.4	2.3	2.1	2.3	1.7	(29.2)	2.1	(8.7)				
Other products	1.8	2.0	1.9	2.0	1.7	(5.6)	1.9	(5.0)				
Others	7.3	8.5	8.0	8.4	7.1	(2.7)	7.5	(11.8)				
CellCept	1.7	2.0	2.0	2.2	1.9	+11.8	2.2	+10.0				
Other products	5.6	6.5	6.0	6.2	5.2	(7.1)	5.3	(18.5)				
Overseas	20.8	25.0	16.1	17.7	25.6	+23.1	20.0	(20.0)				
Actemra	16.1	20.4	11.4	12.4	18.0	+11.8	13.1	(35.8)				
To Roche	15.8	20.2	11.1	12.1	17.7	+12.0	12.7	(37.1)				
Neutrogen	3.1	3.1	3.2	2.7	2.9	(6.5)	3.1	0.0				
Alecensa	0.7	0.7	0.7	1.5	3.6	+414.3	1.8	+157.1				
Akyzreo	0.0	0.0	0.0	0.0	0.1	-	0.1	-				
Aloxi	0.1	0.1	0.0	0.0	0.0	(100.0)	0.0	(100.0)				
Other products	0.8	0.7	0.6	1.0	1.1	+37.5	1.9	+171.4				
Tamiflu	7.0	0.3	1.1	5.0	7.4	+5.7	0.8	+166.7				
Ordinary use	7.0	0.3	(0.0)	4.7	6.1	(12.9)	0.2	(33.3)				
Govt. stockpiles etc.	0.0	-	1.2	0.3	1.3	-	0.6	-				
Royalties and other operating income	4.3	6.0	3.8	5.1	7.3	+69.8	8.6	+43.3				
Revenues	119.9	127.6	114.0	130.3	125.5	+4.7	127.3	(0.2)				
Domestic	95.2	98.0	94.3	107.6	95.7	+0.5	100.5	+2.6				
Overseas	24.7	29.6	19.7	22.6	29.7	+20.2	26.8	(9.5)				

Independently disclosed sales of Transplant, immunology and infectious diseases area up until FY 2016 were included and disclosed in sales of Others area from the first quarter in FY 2017.

Movements of assets and liabilities (Assets, Liabilities, and Net Assets)

(Billions of yen)

	Actual	Actual				Actual										
	FY2015	FY2016				FY2017										
	Dec. 31	Mar. 31	Jun. 30	Sep. 30	Dec. 31	Mar. 31	vs. Mar. 31, 2016	vs. Dec. 31, 2016	Jun. 30	vs. Jun. 30, 2016	vs. Dec. 31, 2016	Sep. 30	vs. Sep. 30, 2016	vs. Dec. 31, 2016	Dec. 31	vs. Dec. 31, 2016
Trade accounts receivable	134.5	121.5	124.5	114.1	140.7	125.2	3.7	(15.5)	128.9	4.4	(11.8)					
Inventories	161.1	167.3	173.5	187.1	185.4	189.5	22.2	4.1	188.3	14.8	2.9					
Trade accounts payable	(41.2)	(48.7)	(37.5)	(42.2)	(42.5)	(45.0)	3.7	(2.5)	(50.6)	(13.1)	(8.1)					
Other net working capital	(39.8)	(26.3)	(16.5)	(22.6)	(25.2)	(26.3)	0.0	(1.1)	(19.6)	(3.1)	5.6					
Net working capital	214.6	213.8	244.1	236.4	258.5	243.3	29.5	(15.2)	247.0	2.9	(11.5)					
Property, plant and equipment	153.5	159.4	157.6	156.4	157.1	163.3	3.9	6.2	171.3	13.7	14.2					
Intangible assets	13.5	13.8	16.6	17.3	19.3	20.3	6.5	1.0	19.6	3.0	0.3					
Other long-term assets – net	(1.3)	(0.2)	(2.4)	(3.3)	(3.7)	(3.1)	(2.9)	0.6	(2.9)	(0.5)	0.8					
Long-term net operating assets	165.8	173.0	171.8	170.3	172.7	180.5	7.5	7.8	188.1	16.3	15.4					
Net operating assets	380.4	386.8	415.9	406.7	431.1	423.7	36.9	(7.4)	435.0	19.1	3.9					
Debt	(0.7)	(0.7)	(0.7)	(0.7)	(0.6)	(0.6)	0.1	0.0	(0.4)	0.3	0.2					
Marketable securities	134.4	112.9	109.4	109.2	110.2	108.4	(4.5)	(1.8)	110.2	0.8	0.0					
Cash and cash equivalents	101.7	106.8	100.1	100.0	95.4	103.7	(3.1)	8.3	110.7	10.6	15.3					
Net cash	235.4	219.0	208.8	208.6	204.9	211.4	(7.6)	6.5	220.5	11.7	15.6					
Other non-operating assets – net	11.5	14.0	4.7	15.9	10.5	12.6	(1.4)	2.1	12.6	7.9	2.1					
Net non-operating assets	246.8	233.0	213.5	224.5	215.4	224.1	(8.9)	8.7	233.1	19.6	17.7					
Total net assets	627.3	619.8	629.4	631.2	646.5	647.8	28.0	1.3	668.2	38.8	21.7					
Total net assets																
Total assets	787.4	762.4	766.9	769.9	806.3	798.2	35.8	(8.1)	821.7	54.8	15.4					
Total liabilities	(160.1)	(142.7)	(137.5)	(138.7)	(159.8)	(150.4)	(7.7)	9.4	(153.5)	(16.0)	6.3					
Attributable to																
Chugai shareholders	625.9	618.7	628.8	630.4	645.5	647.0	28.3	1.5	667.6	38.8	22.1					
Non-controlling interests	1.4	1.1	0.6	0.8	1.0	0.8	(0.3)	(0.2)	0.5	(0.1)	(0.5)					

Trade accounts receivable: trade receivable and notes receivable

Trade accounts payable: trade payable and notes payable

Other net working capital: accrued receivable (other receivable), accrued payable (other payable), accrued expenses (other current liabilities) etc.

Other long-term assets-net: long-term prepaid expenses, long-term provisions etc.

Other non-operating assets-net: deferred income tax assets, current income tax liabilities etc.

Movements of assets and liabilities:

The consolidated balance sheet has been prepared in accordance with International Accounting Standards (IAS) No. 1, "Presentation of Financial Statements." On the other hand, "Movements of assets and liabilities" including net operating assets (NOA) are a reconfiguration of the consolidated balance sheet as internal indicators and are identical to the indicators disclosed by Roche. Furthermore, no items from the assets and liabilities of IFRS have been excluded, as the Core results concept only applies to the income statement.

Net operating assets (NOA):

Net operating assets allow for an assessment of the Group's operating performance of the business independently from financing and tax activities. Net operating assets are calculated as net working capital, long-term net operating assets that includes property, plant and equipment, intangible assets etc. minus provisions.

Movements of free cash flows

(Billions of yen)

	Actual	Actual				Actual			
	FY2015	FY2016				FY2017			
	1-12	1-3	1-6	1-9	1-12	1-3	1-6	1-9	1-12
	YTD	YTD	YTD	YTD	YTD	YTD	YTD	YTD	YTD
Operating profit – IFRS basis	86.8	20.1	43.5	58.6	76.9	26.3	47.1		
Depreciation and impairment of property, plant and equipment	14.2	3.6	7.5	11.2	14.8	3.6	7.2		
Amortization and impairment of intangible assets	3.5	0.4	0.7	1.2	4.0	0.4	3.3		
Other cash adjustment on operating profit	1.0	1.0	1.5	1.6	2.8	0.4	(0.7)		
Operating profit, net of operating cash adjustments	105.4	25.0	53.3	72.6	98.5	30.8	56.9		
(Increase) decrease in trade accounts receivable	6.7	12.9	9.7	20.1	(6.4)	15.5	11.9		
(Increase) decrease in inventories	(23.3)	(7.0)	(13.8)	(27.4)	(26.3)	(4.3)	(0.4)		
Increase (decrease) in trade accounts payable	5.9	7.5	(3.5)	1.3	1.5	2.5	8.1		
Change in other net working capital etc.	(5.2)	(7.1)	(11.0)	(3.0)	(5.0)	(1.6)	(7.9)		
Total (increase) decrease in net working capital etc.	(15.9)	6.3	(18.5)	(9.1)	(36.2)	12.2	11.6		
Investment in property, plant and equipment	(18.4)	(17.1)	(24.2)	(27.4)	(30.1)	(5.3)	(17.3)		
Investment in intangible assets	(6.5)	(0.8)	(3.5)	(4.8)	(6.2)	(4.0)	(7.4)		
Operating free cash flow	64.6	13.5	7.0	31.3	26.0	33.6	43.8		
as % of revenues	13.0%	11.3%	2.8%	8.7%	5.3%	26.8%	17.3%		
Treasury activities (interest income/expenses, foreign exchange gains/losses etc.)	1.6	1.3	1.7	4.3	3.7	(1.3)	(0.6)		
Settlement for transfer pricing taxation	–	–	–	–	–	–	(3.9)		
Tax paid	(29.1)	(12.3)	(12.8)	(25.0)	(25.3)	(10.9)	(11.0)		
Free cash flow	37.0	2.5	(4.2)	10.5	4.3	21.4	28.3		
Dividends paid	(29.4)	(17.8)	(17.9)	(32.7)	(32.8)	(14.4)	(14.6)		
Transaction in own equity instruments	1.4	0.2	0.4	0.4	0.5	0.3	0.5		
Net effect of currency translation on net cash	(3.5)	(1.3)	(4.9)	(5.1)	(2.6)	(0.7)	1.4		
Net change in net cash	5.5	(16.4)	(26.6)	(26.8)	(30.5)	6.5	15.6		

Other cash adjustment on operating profit: adjustments for all non-cash income and expense items other than amortization expenses and impairment included in operating profit (such as loss on inventory differences, reserve for doubtful accounts, stock option expenses, loss on asset retirement, and increase/decrease in reserves) as well as all non-operating income and expense cash flows relating to net operating assets (NOA) (including proceeds from the sales of assets and reserve payments)

Operating free cash flow(Operating FCF): pretax cash flow after adjusting changes in working capital and operating investments in assets (tangible and intangible) to “operating profit, net of operating cash adjustments,” which shows the company’s cash generation ability from operating activities.

Free cash flow(FCF): the ability to generate net cash from a management perspective after deducting tax, dividends, and other payments from operating FCF.

Net change in net cash: increases and decreases in marketable securities and interest-bearing debt are included.

The concepts of operating profit, operating FCF and movements of assets and liabilities including NOA presented in the previous page are mutually consistent.

Movements of free cash flows:

The consolidated statement of cash flows has been prepared in accordance with International Accounting Standard (IAS) No. 7, “Statement of Cash Flows.” FCF is a reconfiguration of the consolidated statement of cash flows as internal indicators and is identical to the indicators disclosed by Roche. Furthermore, no items from FCF have been excluded, as the Core results concept only applies to the income statement.

Performance indicators

	Units	Actual	Actual				Actual				Forecast (Feb 1st announced)
		FY2015	FY2016				FY2017				FY2017
		1-12	1-3	1-6	1-9	1-12	1-3	1-6	1-9	1-12	1-12
		As of Dec. 31	As of Mar. 31	As of Jun. 30	As of Sep. 30	As of Dec. 31	As of Mar. 31	As of Jun. 30	As of Sep. 30	As of Dec. 31	As of Dec. 31
Ratio of net income to equity attributable to Chugai shareholders (ROE)	%	10.0	2.3	5.0	6.9	8.4	2.9	5.5			
Ratio of profit before taxes to total assets (ROA)	%	11.4	2.6	5.6	7.6	9.3	3.1	5.7			
Ratio of equity attributable to Chugai shareholders	%	79.5	81.1	82.0	81.9	80.1	81.1	81.3			
Equity per share attributable to Chugai shareholders (BPS)	Yen	1,146.17	1,132.81	1,151.17	1,154.18	1,181.67	1,184.11	1,221.41			
Ratio of dividends to equity attributable to Chugai shareholders (DOE)	%	5.2	4.5								
Core return on net operating assets (Core RONOA)	%	17.1	3.9	7.8	10.9	13.2	4.5	8.9			
Cash conversion cycle (CCC)	Months	9.4	9.0	9.7	10.0	10.5	10.3	10.1			
Net cash turnover period	Months	5.7	5.5	5.1	5.2	5.0	5.1	5.2			
Number of employees		7,169	7,137	7,275	7,252	7,245	7,224	7,384			
Investment on property, plant and equipment	Billions of yen	28.7	9.7	12.4	15.1	19.4	10.0	22.9			38.0
Depreciation	Billions of yen	14.0	3.5	7.5	11.1	14.8	3.6	7.2			15.0
Investment on intangible assets	Billions of yen	5.8				9.9					
Amortization	Billions of yen	1.6				1.6					

Core RONOA: Core operating profit / Net operating assets

CCC: [Trade accounts receivable/Sales + (Inventories - Trade accounts payable)/Cost of sales]* passed months

Net cash turnover period: Net cash/Revenue* passed months

Ratio of net income to equity attributable to Chugai shareholders (ROE), Ratio of profit before taxes to total assets (ROA), and Core return on net operating assets (Core RONOA) are not annualized.

Development pipeline (as of July 27, 2017)

Development code (Compound number)	Indication # Additional indication	Stage (Date)	Generic name Product name Dosage form	Origin Overseas name (Collaborator)	Mode of Action
<u>Oncology</u>					
AF802 / RG7853 (CH5424802/RO5424802)	Non-small cell lung cancer (NSCLC) [post-crizotinib]	Approved (17/02) Europe	alectinib Alecensa Oral	In-house Alecensa (Roche)	ALK inhibitor
	NSCLC [1st line] #	Filed (17/03) Overseas			
RG435 (RO4876646)	Renal cell carcinoma #	Phase III Multinational study	bevacizumab Avastin Injection	Roche Avastin	Anti-VEGF (Vascular Endothelial Growth Factor) humanized monoclonal antibody
RG1273 (RO4368451)	Breast cancer (adjuvant) #	Phase III Multinational study	pertuzumab Perjeta Injection	Roche Perjeta	HER2 dimerization inhibitory humanized monoclonal antibody
	Gastric cancer #	Phase III Multinational study			
RG3502 (RO5304020)	Breast cancer (adjuvant) #	Phase III Multinational study	trastuzumab emtansine Kadcyla Injection	Roche Kadcyla	Anti-HER2 antibody-tubulin polymerization inhibitor conjugate
GA101 / RG7159 (RO5072759)	Indolent non-Hodgkin's lymphoma (NHL)	Phase III Multinational study	obinutuzumab Injection	Roche Gazyva/Gazyvaro (EU) (Nippon Shinyaku)	Glycoengineered type II anti-CD20 monoclonal antibody
RG7446 (MPDL3280A)	NSCLC	Filed (17/02)	atezolizumab	Roche Tecentriq	Engineered anti-PDL1 monoclonal antibody
	NSCLC (adjuvant)	Phase III Multinational study	Injection		
	Small cell lung cancer (SCLC)	Phase III Multinational study			
	Urothelial carcinoma	Phase III Multinational study			
	Muscle invasive urothelial carcinoma (adjuvant)	Phase III Multinational study			
	Renal cell carcinoma	Phase III Multinational study			
	Renal cell carcinoma (adjuvant)	Phase III Multinational study			

Development code (Compound number)	Indication # Additional indication	Stage (Date)	Generic name Product name Dosage form	Origin Overseas name (Collaborator)	Mode of Action
	Breast cancer	Phase III Multinational study			
	Ovarian cancer	Phase III Multinational study			
	Prostate cancer	Phase III Multinational study			
RG7440 (GDC-0068)	Prostate cancer	Phase III Multinational study	ipatasertib Oral	Roche/Array BioPharma	AKT inhibitor
GC33 / RG7686 (GC33/RO5137382)	Hepatocellular carcinoma	Phase I Multinational study*	codrituzumab Injection	In-house (Roche)	Anti-Glypican-3 humanized monoclonal antibody
CKI27 (CKI27)	Solid tumors	Phase I Phase I Overseas	Oral	In-house	Raf and MEK dual inhibitor
RG7596 (RO5541077)	NHL	Phase I	polatuzumab vedotin Injection	Roche	Anti-CD79b antibody-drug conjugate
RG7604 (GDC-0032)	Solid tumors	Phase I	taselisib Oral	Roche	PI3K inhibitor
ERY974 (ERY974)	Solid tumors	Phase I Overseas	Injection	In-house	Anti-Glypican-3/CD3 bispecific antibody
RG7421 (GDC-0973)	Solid tumors	Phase I	cobimetinib Oral	Roche/Exelixis Cotellic	MEK inhibitor
RG6078 (GDC-0919)	Solid tumors	Development discontinued	Oral	Roche/NewLink Genetics	IDO inhibitor
<u>Bone and Joint Diseases</u>					
ED-71 (ED-71)	Osteoporosis	Phase III China	eldecalcitol Edirol Oral	In-house	Activated vitamin D ₃ agent

Development code (Compound number)	Indication # Additional indication	Stage (Date)	Generic name Product name Dosage form	Origin Overseas name (Collaborator)	Mode of Action
NRD101 (NRD101)	Knee osteoarthritis /Shoulder periarthritis	Phase III China	Purified sodium hyaluronate Suvenyl Injection	In-house	Sodium hyaluronate
Renal Diseases					
EOS789 (EOS789)	Hyperphosphatemia	Phase I	Oral	In-house	-
		Phase I Overseas			
Autoimmune Diseases					
MRA / RG1569 (RO4877533)	Giant cell arteritis #	Approved (17/05) US	tocilizumab Actemra Injection	In-house Actemra/RoActemra (EU) (Roche)	Humanized anti-human IL-6 receptor monoclonal antibody
		Filed (16/11) Europe			
	Large-vessel vasculitis #	Filed (16/11)			
	Systemic sclerosis #	Phase III Multinational study			
SA237/RG6168 (SA237)	Neuromyelitis optica (NMO)	Phase III Multinational study*	Injection	In-house (Roche)	Anti-IL-6 receptor recycling antibody
RG7845 (GDC-0853)	Rheumatoid arthritis	Phase I	Oral	Roche	BTK inhibitor
Neurology					
RG1450 (RO4909832)	Alzheimer's disease	Phase III Multinational study	gantenerumab Injection	Roche/MorphoSys	Anti-amyloid-beta human monoclonal antibody
RG7412 (RO5490245)	Alzheimer's disease	Phase III Multinational study	crenezumab Injection	Roche/AC Immune	Anti-amyloid-beta humanized monoclonal antibody
RG7916 (RO7034067)	Spinal muscular atrophy (SMA)	Phase I	Oral	Roche/PTC Therapeutics	SMN2 splicing modifier

Development code (Compound number)	Indication # Additional indication	Stage (Date)	Generic name Product name Dosage form	Origin Overseas name (Collaborator)	Mode of Action
Others					
ACE910 / RG6013 (RO5534262)	Hemophilia A (Inhibitor)	Filed (17/06) Overseas	emicizumab Injection	In-house (Roche)	Anti-FIXa/FX bispecific antibody
		Filed (17/07) Japan			
	Hemophilia A (Non-inhibitor)	Phase III Multinational study			
RG3637 (RO5490255)	Idiopathic pulmonary fibrosis	Phase II Multinational study	lebrikizumab Injection	Roche	Anti-IL-13 humanized monoclonal antibody
CIM331** (CIM331)	Pruritus in dialysis patients	Phase II	nemolizumab Injection	In-house	Anti-IL-31 receptor A humanized monoclonal antibody
URC102 (URC102)	Gout	Phase II Overseas	 Oral	In-house/JW Pharmaceutical (JW Pharmaceutical)	URAT1 inhibitor
PCO371 (PCO371)	Hypoparathyroidism	Phase I Overseas	 Oral	In-house	PTH1 receptor agonist
SKY59 / RG6107 (SKY59)	Paroxysmal nocturnal hemoglobinuria (PNH)	Phase I/II Multinational study	 Injection	In-house (Roche)	Anti-C5 recycling antibody

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

* Multinational studies managed by Chugai

** Development for atopic dermatitis: Out-licensed to Galderma (Overseas) and Maruho (Japan)

Changes from the last announcement on April 25, 2017

Oncology

- RG7440 Phase I → Phase III multinational study (Prostate cancer)
- RG7421 Phase I (Solid tumors: Development started)
- RG6078 Phase I → Development discontinued (Solid tumors)

Bone and Joint Diseases

- NRD101 Phase III (Knee osteoarthritis/Shoulder peri-arthritis: Development started) [China]

Autoimmune Diseases

- MRA/RG1569 Filed → Approved (Giant cell arteritis) [US]
- RG7845 Phase I (Rheumatoid arthritis: Development started)

Others

- ACE910/RG6013 Phase III multinational study → Filed (Hemophilia A (Inhibitor)) [Japan/Overseas]

R&D Activities (Jan. 1, 2017- Jul. 27, 2017)

As for clinical development activities, Chugai saw progress as described below:

Oncology

- We obtained approval in Europe for the indication of adult patients with anaplastic lymphoma kinase (ALK) positive, metastatic NSCLC who have progressed on or those intolerant to crizotinib, for the ALK inhibitor AF802/RG7853 in February, 2017. We filed overseas applications for the expected indication of ALK positive, metastatic NSCLC (1st line) in March, 2017.
- We filed an application for the engineered anti-PDL1 monoclonal antibody RG7446 for the expected indication of NSCLC in February, 2017. We started Phase III multinational studies for the expected indication of renal cell carcinoma (adjuvant) in January, 2017, and for ovarian cancer and prostate cancer in March, 2017.
- We started Phase III multinational study for the AKT inhibitor RG7440 for the expected indication of prostate cancer in June, 2017.
- We started Phase I study for the MEK inhibitor RG7421 for the expected indication of solid tumors in July, 2017.
- We decided to discontinue development of the anti-VEGF (Vascular Endothelial Growth Factor) humanized monoclonal antibody (product name: Avastin) for malignant pleural mesothelioma, since Roche has judged that the MAPS study, an overseas investigator initiated trial, was not fully conducted according to registrational standards.
- We decided to discontinue development of the IDO inhibitor for solid tumors based on the results of overseas clinical studies conducted by Roche.

Bone and Joint Diseases

- We started Phase III study in China for the sodium hyaluronate NRD101 for the expected indication of knee osteoarthritis and shoulder peri-arthritis in July, 2017.

Renal Diseases

- We started overseas Phase I study for EOS789 for the expected indication of hyperphosphatemia in February, 2017.

Autoimmune Diseases

- We obtained approval for the indication of giant cell arteritis in the US for the humanized anti-human IL-6 receptor monoclonal antibody MRA/RG1569 (product name: Actemra) in May, 2017.
- We started Phase I study for the BTK inhibitor RG7845 for the expected indication of rheumatoid arthritis in June, 2017.

Neurology

- We started Phase I study for the SMN2 splicing modifier RG7916 for the expected indication of spinal muscular atrophy in January, 2017.
- We started Phase III multinational study for the anti-amyloid-beta humanized monoclonal antibody RG7412 for the expected indication of Alzheimer's disease in March, 2017.

Others

- We filed applications for the anti-FIXa/FX bispecific antibody ACE910/RG6013 for the expected indication of hemophilia A (inhibitor) in the US/Europe in June and in Japan in July, 2017.

Major clinical trials in oncology field

Treatment	Expected Indication	Study design	Study name	Stage	Planned filing year
RG1273 Perjeta	Breast cancer (adjuvant)	Herceptin + chemotherapy ± Perjeta	APHINITY	Phase III	2017
	Gastric cancer	Herceptin + chemotherapy ± Perjeta	JACOB	Phase III	2018
RG3502 Kadcyla	Breast cancer (adjuvant)	Kadcyla + Perjeta vs. Herceptin + Perjeta + chemotherapy	KAITLIN	Phase III	2020 and beyond
GA101/ RG7159 (obinutuzumab)	Indolent NHL	GA101 + chemotherapy vs. Rituxan + chemotherapy (G-chemo vs. R-chemo)	GALLIUM	Phase III	2017
RG7446 (atezolizumab)	Non-small cell lung cancer (NSCLC)	RG7446 vs. docetaxel	OAK	Phase III	2017
		PD-L1 positive: RG7446	BIRCH	Phase II	
		PD-L1 positive: RG7446 vs. chemotherapy	IMpower 110	Phase III	
		Non-squamous: RG7446 + chemotherapy ± Avastin vs. Chemotherapy + Avastin	IMpower 150	Phase III	
		Non-Squamous: Chemotherapy ± RG7446	IMpower 132	Phase III	
		Squamous: Chemotherapy ± RG7446	IMpower 131	Phase III	
	NSCLC (adjuvant)	RG7446 vs. best supportive care	IMpower 010	Phase III	2020 and beyond
	Small cell lung cancer	carboplatin + etoposide ± RG7446	IMpower 133	Phase III	2019
	Urothelial carcinoma	RG7446 vs. chemotherapy	IMvigor 211	Phase III	2017
		RG7446 ± chemotherapy vs. chemotherapy	IMvigor 130	Phase III	2020 and beyond
	Muscle invasive urothelial carcinoma (adjuvant)	RG7446 vs. observation	IMvigor 010	Phase III	2020 and beyond
	Breast cancer	Triple negative breast cancer: nab-paclitaxel ± RG7446	IMpassion 130	Phase III	2018
	Ovarian cancer	carboplatin + paclitaxel + Avastin ± RG7446	IMaGYN 050	Phase III	2020 and beyond
	Prostate cancer	Castration-resistant prostate cancer: enzalutamide ± RG7446	IMbassador 250	Phase III	2020 and beyond
Renal cell carcinoma (adjuvant)	RG7446	IMmotion 010	Phase III	2020 and beyond	
RG435 Avastin	Renal cell carcinoma	RG7446 + Avastin vs. sunitinib	IMmotion 151	Phase III	2018
RG7440 (ipatasertib)	Prostate cancer	abiraterone ± RG7440	IPATENTIAL-150	Phase III	2020 and beyond

Clinical trials for cancer immunotherapy

Cancer type	Target	Treatment	Study name	Stage
Non-small cell lung cancer	2nd line	RG7446 (atezolizumab)	OAK	Phase III
	PD-L1 positive	RG7446 (atezolizumab)	BIRCH	Phase II
	PD-L1 positive, 1st line	RG7446 (atezolizumab)	IMpower 110	Phase III
	Non-Squamous, 1st line	RG7446 (atezolizumab) + chemotherapy + Avastin	IMpower 150	Phase III
	Non-Squamous, 1st line	RG7446 (atezolizumab) + chemotherapy	IMpower 132	Phase III
	Squamous, 1st line	RG7446 (atezolizumab) + chemotherapy	IMpower 131	Phase III
	Adjuvant	RG7446 (atezolizumab)	IMpower 010	Phase III
Small cell lung cancer	1st line	RG7446 (atezolizumab) + chemotherapy	IMpower 133	Phase III
Urothelial carcinoma	2nd line+	RG7446 (atezolizumab)	IMvigor 211	Phase III
	1st line	RG7446 (atezolizumab) ± chemotherapy	IMvigor 130	Phase III
	Muscle invasive carcinoma, adjuvant	RG7446 (atezolizumab)	IMvigor 010	Phase III
Breast cancer	Triple negative, 1st line	RG7446 (atezolizumab) + chemotherapy	IMpassion 130	Phase III
Renal cell carcinoma	1st line	RG7446 (atezolizumab) + Avastin	IMmotion 151	Phase III
	Adjuvant	RG7446 (atezolizumab)	IMmotion 010	Phase III
Ovarian cancer	1st line	RG7446 (atezolizumab) + chemotherapy + Avastin	IMaGYN 050	Phase III
Prostate cancer	Castration-resistant, 2nd line	RG7446 (atezolizumab) + chemotherapy	IMbassador 250	Phase III
Hepatocellular carcinoma	Glypican-3 positive	GC33 (codrituzumab) + RG7446 (atezolizumab)	—	Phase I
Solid tumor	Glypican-3 positive	ERY974	—	Phase I
	—	RG7421 (cobimetinib) + RG7446 (atezolizumab)	—	Phase I