Passion for Innovation. Compassion for Patients.™



# **Top Management Presentation**Financial Results of FY2018 Q2 (April 1 – September 30, 2018)

### DAIICHI SANKYO CO., LTD

Sunao Manabe President and COO

**October 31, 2018** 

### **Forward-Looking Statements**



Management strategies and plans, financial forecasts, future projections and policies, and R&D information that Daiichi Sankyo discloses in this material are all classified as Daiichi Sankyo's future prospects. These forward looking statements were determined by Daiichi Sankyo based on information obtained as of today with certain assumptions, premises and future forecasts, and thus, there are various inherent risks as well as uncertainties involved. As such, please note that actual results of Daiichi Sankyo may diverge materially from Daiichi Sankyo's outlook or the content of this material. Furthermore, there is no assurance that any forward-looking statements in this material will be realized. Regardless of the actual results or facts, Daiichi Sankyo is not obliged and does not have in its policy the duty to update the content of this material from the date of this material onward.

Compounds under discussion are investigational agents and are not approved by the FDA or any other regulatory agency worldwide as a treatment for indications under investigation. Efficacy and safety have not been established in areas under investigation. There are no guarantee that these compounds will become commercially available in indications under investigation.

Daiichi Sankyo takes reasonable care to ensure the accuracy of the content of this material, but shall not be obliged to guarantee the absolute accuracy, appropriateness, completeness and feasibility, etc. of the information described in this material. Furthermore, any information regarding companies, organizations or any other matters outside the Daiichi Sankyo Group that is described within this material has been compiled or cited using publicly available information or other information, and Daiichi Sankyo has not performed in-house inspection of the accuracy, appropriateness, completeness and feasibility, etc. of such information, and does not guarantee the accuracy thereof.

The information described in this material may be changed hereafter without notice. Accordingly, this material or the information described herein should be used at your own judgment, together with any other information you may otherwise obtain.

This material does not constitute a solicitation of application to acquire or an offer to sell any security in the United States, Japan or elsewhere.

This material disclosed here is for reference purposes only. Final investment decisions should be made at your own discretion.

Daiichi Sankyo assumes no responsibility for any damages resulting from the use of this material or its content, including without limitation damages related to the use of erroneous information

### **Agenda**



FY2018 Q2 Financial Results

FY2018 Consolidated Forecast

- Business Update
- Revised Target for 5-Year Business Plan

R&D Update



### **FY2018 Q2 Financial Results**

## **Overview of FY2018 Q2 Results**



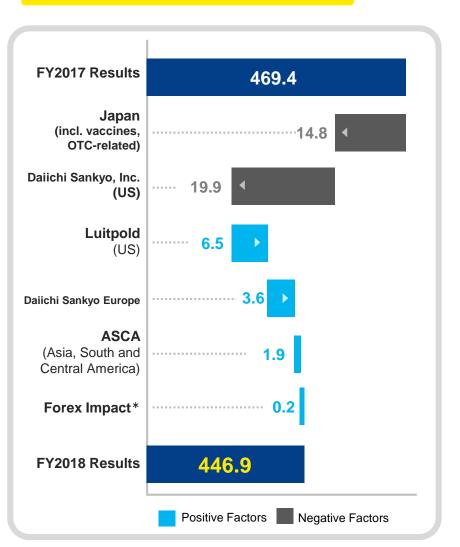
(Bn JPY)

	FY2017 Q2 YTD Results	FY2018 Q2 YTD Results	YoY
Revenue	evenue 469.4 4		-4.8%
Cost of Sales	157.1	166.6	+9.6
SG&A Expenses	140.0	128.6	-11.4
R&D Expenses	123.6	93.7	-29.9
Operating Profit	48.8	58.0	+9.2
Profit before Tax	51.2	58.6	+7.4
Profit attributable to owners of the Company	34.3	44.0	+9.7
LIED/IDV	444.07	440.27	0.90
Currency USD/JPY  Rate EUR/JPY	111.07 126.29	110.27 129.84	-0.80 +3.55

### Revenue



### Decreased by 22.5 Bn JPY (Decreased by 22.7 Bn JPY excl. forex impact) (Bn JPY)



Positive Factors	Negative Factors
Japan Lixiana +10.5	Olmetec
Pralia +2.1	Nexium -6.1 Loxonin -3.2 *Incl. impact of price revision in Japan
Daiichi Sankyo Espha (GE) Olmesartan AG, Rosuvastatin AG etc.	Daiichi Sankyo Healthcare *Incl. impact of change in accounting treatment
Daiichi Sankyo, Inc.	Welchol -11.0 Effient -5.2 Olmesartan -4.4
Luitpold Injectafer +6.1 Venofer +1.9	GE injectables2.6
Daiichi Sankyo Europe	
Lixiana +9.2	Olmesartan

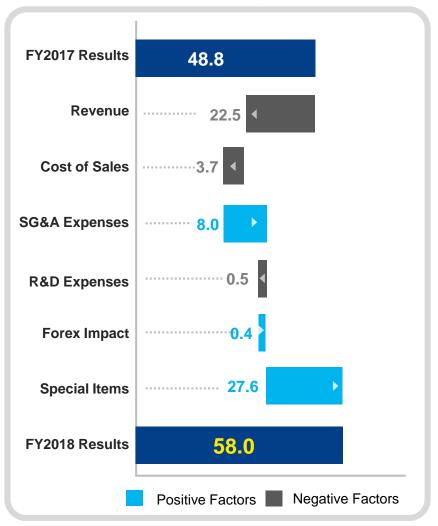
<sup>\*</sup> Forex impact USD: -0.6, EUR: +1.2, ASCA: -0.4

### **Operating Profit**



### Increased by 9.2 Bn JPY

(Decreased by 18.9 Bn JPY excl. forex impact and special items)



(Bn JPY) Revenue -22.5 incl. forex impact of +0.2 Cost of Sales -----+ +3.7 (Cost increased) Product mix due to impact of olmesartan LOE SG&A Expenses --- -8.0 (Cost decreased) Effect of cost reductions in US, impact of change in accounting treatment etc. Forex Impact -0.4 (Cost decreased) SG&A Expenses +0.0 \*See next slide for details

### **Special Items**



(Bn JPY)

	FY2017 Q2 YTD Results		FY2018 Q2 YTD Results	YoY
Cost of Sales	Gain on sales of fixed assets	-6.1		+6.1
SG&A Expenses			Gain on sales of fixed assets -3.5	-3.5
R&D Expenses	Impairment loss (Intangible)	30.2		-30.2
Total		24.1	-3.5	-27.6

-: Cost decreased items

Booked in Q2

Specifically, gains and losses related to: sale of fixed assets, restructuring, impairment, litigation, etc. amounting to 1 billion JPY or more are defined as "Special items".

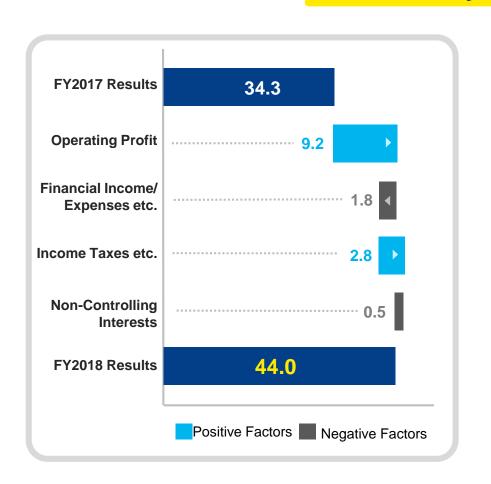
<sup>\*</sup>Special items:

Items having a transitory and material impact on operating profit are defined as "Special items".

### **Profit Attributable to Owners of the Company**



### Increased by 9.7 Bn JPY



(Bn JPY)

Financial Income/ +1.8 (Cost increased) Expenses etc.

**Deterioration of forex gains/ losses** 

Impact of the tax rate reduction in US etc.

	FY2017	FY2018	YoY
Profit before Tax	51.2	58.6	+7.4
Income Taxes etc.	17.4	14.6	-2.8
Tax rate	34.1%	24.9%	-9.2%

Non-Controlling ----+0.5 (Cost increased)
Interests

### Revenue: Major Business Units (incl. Forex Impact)



(Bn JPY)

				(511011)
	FY2017 Q2 YTD Results	FY2018 Q2 YTD Results	YoY	vs. Forecast* (%)
Japan	257.6	243.7	-13.9	47.5%
Daiichi Sankyo Healthcare	35.8	34.8	-1.0	50.4%
Daiichi Sankyo Inc.	42.0	22.0	-20.1	70.8%
Olmesartan	10.3	5.8	-4.5	64.8%
Welchol	19.7	8.7	-11.0	86.8%
Effient	8.0	2.7	-5.3	-
Savaysa	1.0	1.1	+0.1	54.3%
Movantik	2.5	2.2	-0.4	-
Luitpold	52.4	58.4	+6.1	51.7%
Venofer	14.7	16.6	+1.8	57.1%
Injectafer	16.1	22.0	+5.9	53.8%
GE injectables	19.7	17.0	-2.7	-
Daiichi Sankyo Europe	38.2	43.0	+4.8	50.6%
Olmesartan	18.0	14.4	-3.5	62.7%
Efient	3.9	3.3	-0.6	46.6%
Lixiana	11.0	20.8	+9.8	46.2%
ASCA (Asia, South and Central America)	38.6	40.1	+1.5	44.6%
				* Calculated based

111.07

126.29

USD/JPY

**EUR/JPY** 

Currency

Rate

110.27

129.84

-0.80

+3.55

\* Calculated based on new forecast updated in Oct.

### Revenue: Major Products in Japan



(Bn JPY)

					(======
		FY2017 Q2 YTD Results	FY2018 Q2 YTD Results	YoY	vs. Forecast* (%)
Nexium	ulcer treatment	44.7	38.6	-6.1	50.8%
Lixiana	anticoagulant	19.7	30.1	+10.5	50.2%
Memary	Alzheimer's disease treatment	24.5	25.2	+0.7	49.4%
Loxonin	anti-inflammatory analgesic	18.9	15.6	-3.2	50.4%
Pralia	treatment for osteoporosis/ inhibitor of the progression of bone erosion associated with rheumatoid arthritis	10.9	13.0	+2.1	48.1%
Tenelia	type 2 diabetes mellitus treatment	13.2	12.6	-0.6	46.8%
Inavir	anti-influenza treatment	1.1	0.1	-1.0	0.3%
Olmetec	antihypertensive agent	31.9	7.9	-24.0	56.1%
Ranmark	treatment for bone complications caused by bone metastases from tumors	7.6	8.1	+0.5	50.6%
Efient	antiplatelet agent	6.4	7.0	+0.6	46.5%
Rezaltas	antihypertensive agent	8.5	7.8	-0.8	55.6%
Urief	treatment for dysuria	5.6	5.2	-0.4	52.4%
Omnipaque	contrast medium	7.1	6.2	-0.9	51.8%

<sup>\*</sup> Calculated based on new forecast updated in Oct.



### **FY2018 Consolidated Forecast**

### **FY2018 Consolidated Forecast**



(Bn JPY)

	FY2018 Forecast (as of Apr.)	FY2018 Forecast (as of Oct.)	vs. Forecast (as of Apr.)
Revenue	910.0	910.0	-
Cost of Sales	330.0	330.0	-
SG&A Expenses	292.0	287.0	-5.0
R&D Expenses	210.0	215.0	+5.0
Operating Profit	78.0	78.0	-
Profit before Tax	78.0	78.0	-
Profit attributable to owners of the Company	55.0	55.0	-

#### Major factors

- Japan +15.0 (incl. Lixiana +6.0, gain on transfer of long-listed products)
- Daiichi Sankyo Healthcare -5.0 (incl. impact of change in
- accounting treatment)Daiichi Sankyo Inc. -13.0 (incl. Welchol -15.0)
- Luitpold +3.0

### Major factors

 Decreased by impact of change in accounting treatment

#### Major factors

 Increased by accelerated R&D

Currency	USD/JPY	110.00	110.13
Rate	EUR/JPY	130.00	129.92

Assumption of currency rate for Q3 and Q4 USD/JPY: 110, EUR/JPY: 130



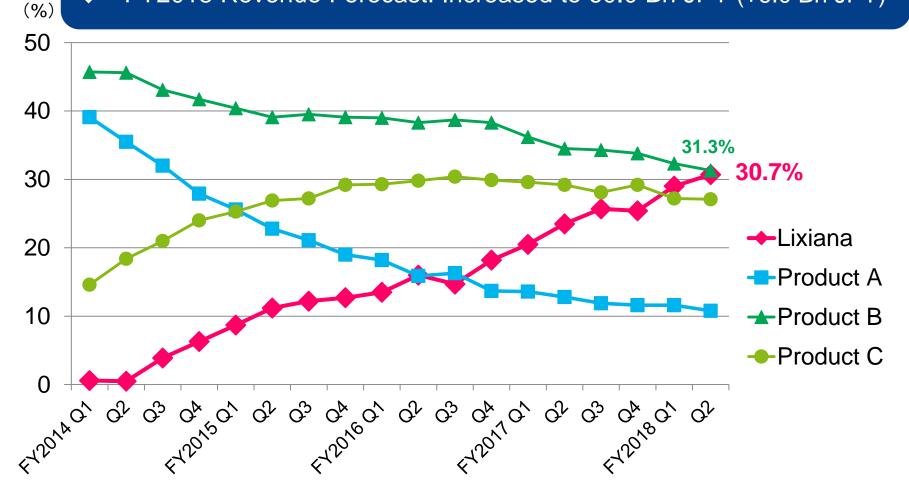
# **Business Update**

### **Lixiana: Growth in Japan**





- ◆ As of FY2018 Q2, Lixiana closed in on No.1 sales share
- ◆ FY2018 Revenue Forecast: Increased to 60.0 Bn JPY (+6.0 Bn JPY)

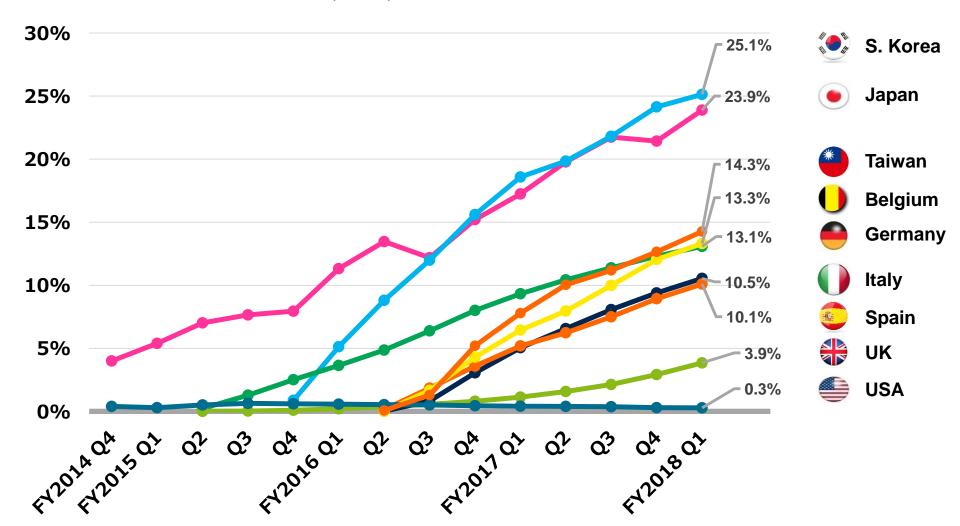


### **Edoxaban: Growth in Each Country**





Edoxaban volume (DoT) % share of DOAC markets over time





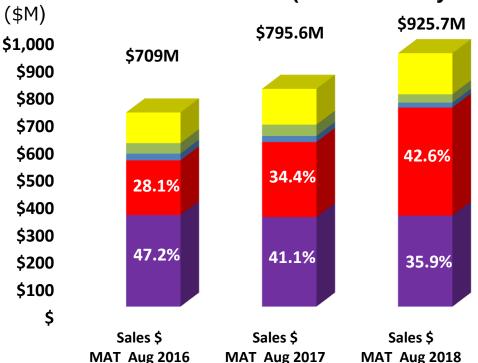
Brazil: Launched in Aug. 2018

### **LPI: Growth of Injectafer**



- As of Aug. 2018, Injectafer increased its sales share to 42.6% (Increased by 2.5% from May 2018)
- ◆ FY2018 Revenue Forecast: Increased to \$372 Mn (+\$18 Mn)

### **US IV Iron Market (includes dialysis)**



<sup>\*</sup>Injectafer is not indicated for first line use in patients who are dialysis dependent

Copyright © 2018 IQVIA. Reprinted with permission Source: IQVIA National Sales Perspectives Aug 2018 (includes all US IV Iron sales in all channels including dialysis chains)







## **Revised Target for 5-Year Business Plan**

### **Current Progress of 5-Year Business Plan**



- Edoxaban: Growing in momentum beyond the initial target
- Luitpold (US): Maintaining a high level growth
- Oncology: Enriching our pipeline value including DS-8201
   NDA submission & launch preparation of
   Quizartinib and Pexidartinib are underway
- Pain Business (US): Difficult to achieve the initial target
- Japan Business: Future business environment getting severe



Difficult to achieve the FY2020 Target: OP 165.0 Bn JPY

# **Current Progress of 5-Year Business Plan: Oncology Business**



 Built 3 pillars of oncology business, ADC Franchise, AML Franchise and Breakthrough Science, and focus investments on the pillars



0

AML Franchise



Breakthrough Science

Refer to next page

 Rich pipeline Quizartinib etc.  Rich pipeline Pexidartinib etc.

3

3

1

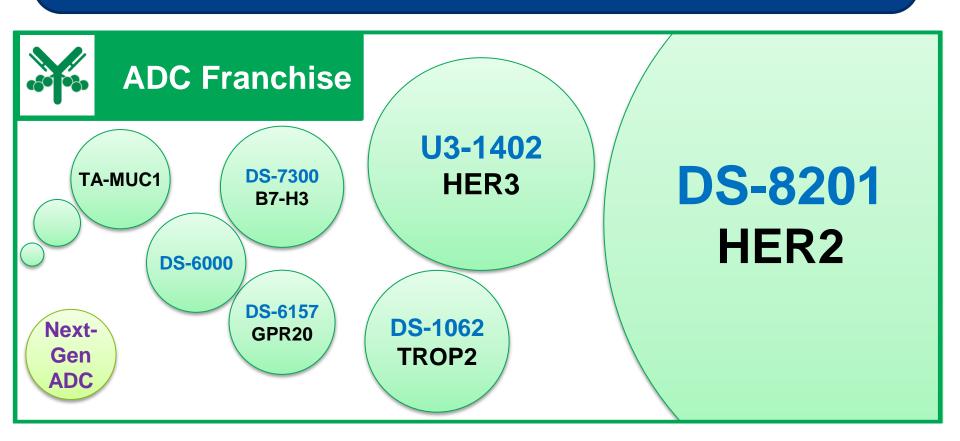
Cancer Enterprise 2025 Vision

# 7 new molecular entitles in 8 years

# **Current Progress of 5-Year Business Plan: ADC Franchise**



- Established ADC technology as a platform technology
  - DS-8201: Accumulated promising clinical data
  - U3-1402: Disclosed good clinical data
  - Increasing expectation on other ADCs



### Policy to Revise the 5-Year Business Plan



- Identify a highly promising investment opportunity for a huge future return, as the value of ADC franchise (DS-8201, U3-1402, etc.) is increasing
- Prioritize investments to maximize the ADC franchise's potential



Rather than stick to the original profit target, increase investments in oncology, and accelerate the future growth

### **5-Year Business Plan (Original)**



- Grow beyond FY2017 LOE of olmesartan
- Establish a foundation of sustainable growth

### 2025 Vision

Global Pharma Innovator with Competitive Advantage in Oncology

Revenue
910.0
Bn JPY

OP 78.0 Bn JPY FY2018

**Forecast** 

OP 165.0 Bn JPY FY2020 Target

Revenue

1,100.0 Bn JPY

- Increase value of late-stage pipeline
  - 3-5 products with peak-sales of more than 100.0 Bn JPY each
- ROE: 8% or more
- Shareholder Returns (FY2016 - FY2020)
  - Annual ordinary dividends70 JPY or more
  - > Flexible acquisition of own shares
  - Total return ratio: 100% or more

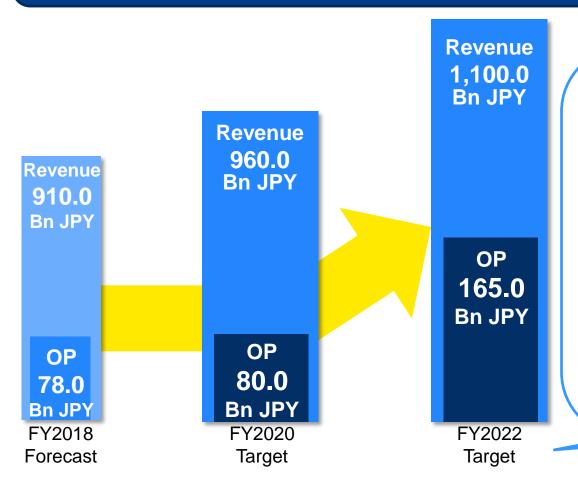
### **Revised Target for 5-Year Business Plan**



- Revised FY2020 Target
- Achieve original OP target two years behind

### 2025 Vision

Global Pharma Innovator with Competitive Advantage in Oncology

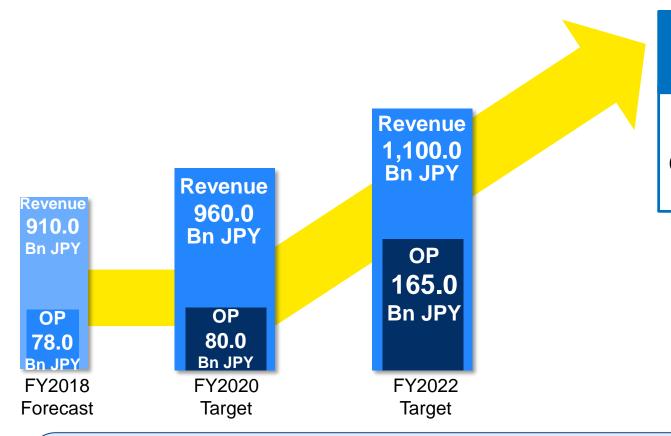


- Increase value of late-stage pipeline
  - Total expected revenue at peak : 500.0 Bn JPY or more
- ROE: 8% or more
- Shareholder Returns (FY2016 FY2022)
  - Annual ordinary dividends: 70 JPY or more
  - Flexible acquisition of own shares
  - Total return ratio: 100% or more

<sup>\*</sup> The targets excludes the impact of gain on sales of fixed assets, transformation business portfolio and partnering

### **Toward 2025 Vision**





### 2025 Vision

Global Pharma
Innovator with
Competitive Advantage
in Oncology

### Establish a Foundation of Sustainable Growth: Six Strategic Targets

Grow Edoxaban Grow as No.1 Company in Japan

Expand US Businesses

Establish Oncology Business

Continuously
Generate
Innovative
Medicine
Changing SOC

Enhance Profit Generation Capabilities



Mid-term measures to accomplish our strategic targets

Focus resources on oncology business

- Increase R&D and capital expenditures
- Promote partnering (to maximize pipeline value)
- Make the best use of BD investments
- Transform to oncology centered business portfolio

Revise regional strategy

US

Grow LPI

Accelerate oncology business establishment

Japan EU ASCA

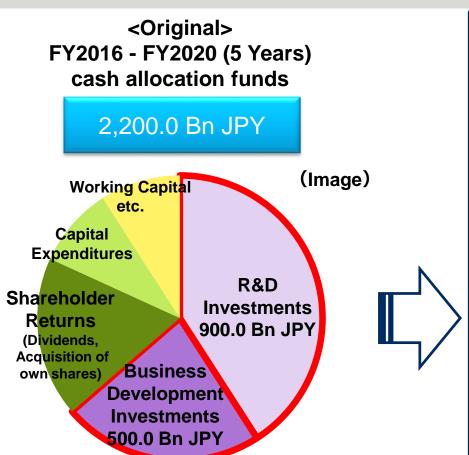
- Maximize edoxaban
- Grow base business (incl. acquisition of new products)
- Accelerate oncology business establishment

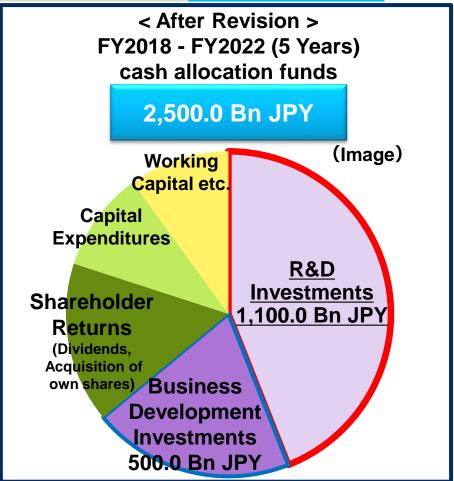
Enhance profit generation capabilities

- Reduce investments in non oncology
- Promote further cost reduction initiatives
- Sell non-core assets and cross-shareholdings

### **Cash Allocation Image**







- Increase R&D Investments and allocate more to oncology
- Make the best use of Business Development Investments to enhance oncology business

### **Shareholder Returns**



### **Shareholder Returns Policy: FY2016 - FY2022**



- ◆ Annual ordinary dividends: 70 JPY dividend in FY2016 and FY2017
- ◆ Acquisition of own shares: 50.0 Bn JPY in both FY2016 and FY2017
- ◆ Total return ratio : 100% or more (extended to FY2022)

<sup>\*</sup>Total return ratio = ( Dividends + Total acquisition costs of own shares) / Profit attributable to owners of the company

### **Oncology Business: Increase Investments**



FY2018 - FY2022 (5 Years)

- ◆ R&D Investments: 1,100.0 Bn JPY
  - > Prioritize the investments to maximize the potential of ADC franchise
- ◆ Capital Exp. to enhance oncology: 25.0 Bn JPY or more

### **R&D Investments**

1,100.0 Bn JPY

900.0 Bn JPY
Allocate more to oncology



200.0 Bn JPY
Additional investment to oncology

900.0 Bn JPY
Allocate <u>furthermore</u> to oncology

<Original>
FY2016 - FY2020 (5 Years)

<After Revision>
FY2018 - FY2022 (5 Years)

### **Oncology Business: Revenue Target**



 Expand the future oncology revenue by accelerating and enhancing the investments

### <Original>

**Oncology Business:** 

Revenue

FY2020: 40.0 Bn JPY

FY2025: 300.0 Bn JPY

Value of late-stage pipeline

FY2020:

3-5 products

with peak-sales of more

than 100.0 Bn JPY each

Oncology Revenue 150.0 Bn JPY

FY2022

Value of late-stage pipeline

FY2022:

Total expected revenue at peak : 500.0 Bn JPY or more

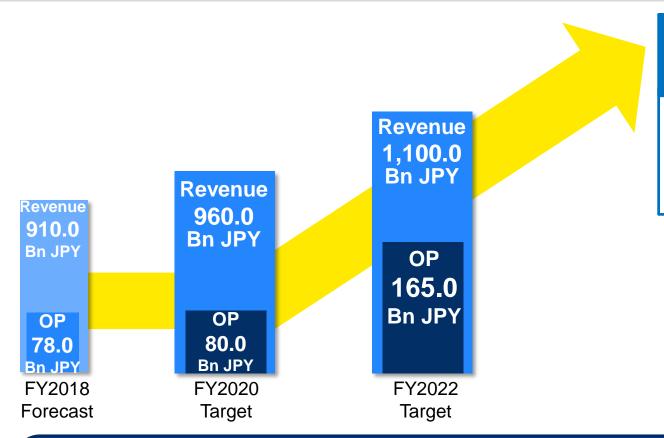
Oncology Revenue **500.0** Bn JPY

FY2025

**40.0**Bn JPY
FY2020

### **Toward 2025 Vision**





### 2025 Vision

Global Pharma
Innovator with
Competitive Advantage
in Oncology

- ◆ Enhance investments and maximize oncology business R&D investments: 1,100 Bn JPY, Oncology revenue: 500 Bn JPY in FY2025
- ◆ Commitment of FY2022 OP 165 Bn JPY, ROE 8% or more, Value of late-stage pipeline\* 500 Bn JPY or more, Total return ratio 100% or more

<sup>\*</sup> Total expected revenue at peak



# **R&D Update**

Glenn Gormley, MD, PhD

Senior Executive Officer
Global Head of R&D

### **Agenda**

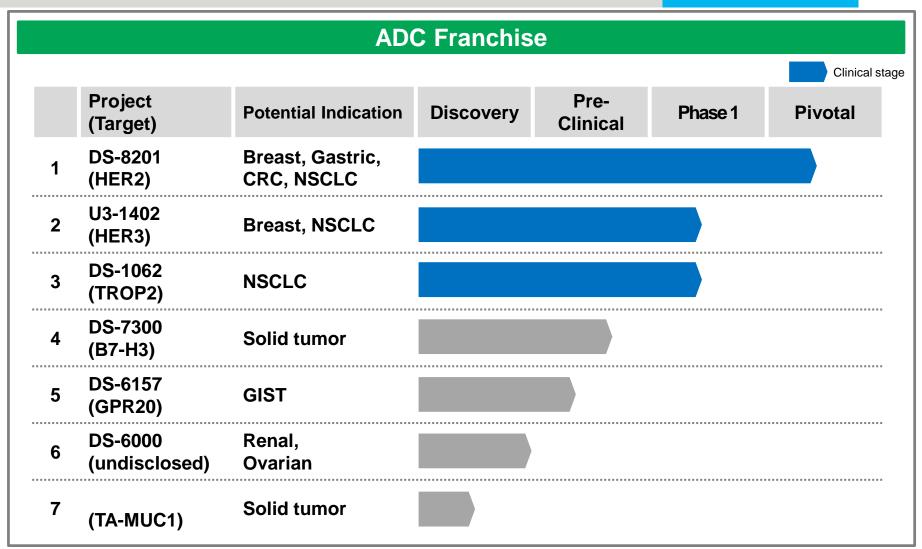


- Summary of our ADC franchise
- DS-8201 update
  - P1 study: NSCLC data
  - > P1 study: CRC data
  - P3 study: HER2 low BC P3 study target population
  - IO combination studies
- Update on other late stage oncology assets
- Timing for release of new Data prior to R&D Day
- R&D Day 2018



### List of ADC Franchise





CRC: colorectal cancer, GIST: gastrointestinal stromal tumor, NSCLC: non-small cell lung cancer



### **Summary of ADC Franchise**





Details in later pages

- Phase 1 Breast and NSCLC studies are on track
  - Update of BC data planned for SABCS 2018
  - Aiming to present initial NSCLC data at ASCO 2019
- Portability of ADC technology to other antibodies was validated based on BC data presented at **ASCO 2018**





- DS-1062: Phase 1 NSCLC study is on track
  - Aiming to present initial data at ASCO 2019
- DS-7300: preparing for Phase1 study to start in FY2019
- DS-6157: disclosed target antigen=> GPR20

35

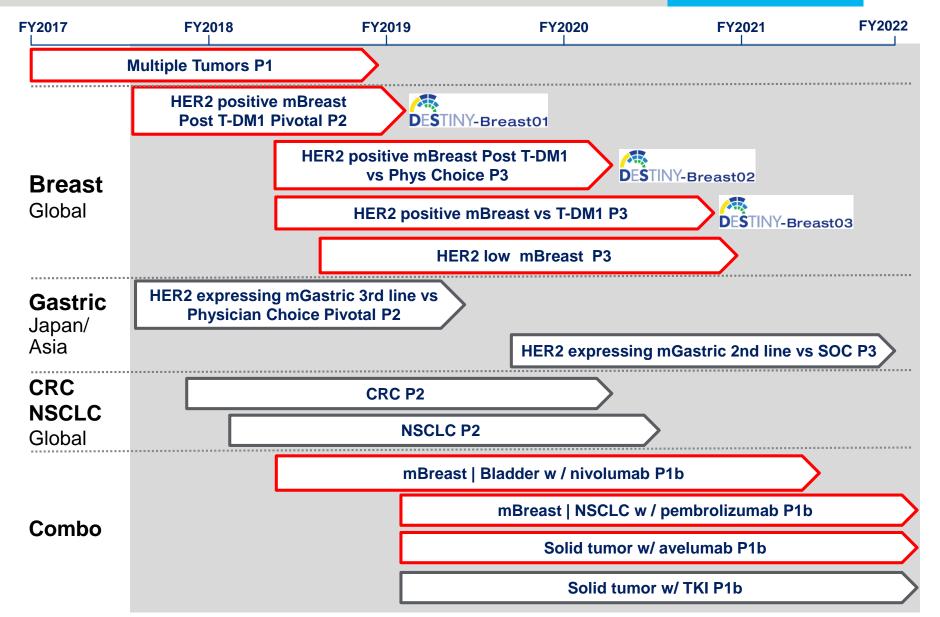
Red: New from FY2018 Q1





# M DS-8201: Clinical Program

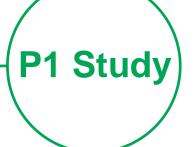






# **DS-8201: Update**





- NSCLC: Oral presentation at WCLC 2018 (World Conference on Lung Cancer)
- CRC: Poster presentation at ESMO 2018

- Completed enrollment of Phase 2 Pivotal study (DESTINY-Breast01 Study)
- Started two Phase 3 studies
  - HER2 positive post T-DM1 (DESTINY-Breast02 Study)
  - HER2 positive vs. T-DM1 (DESTINY-Breast03 Study)
- Determined target population for HER2 low P3 study





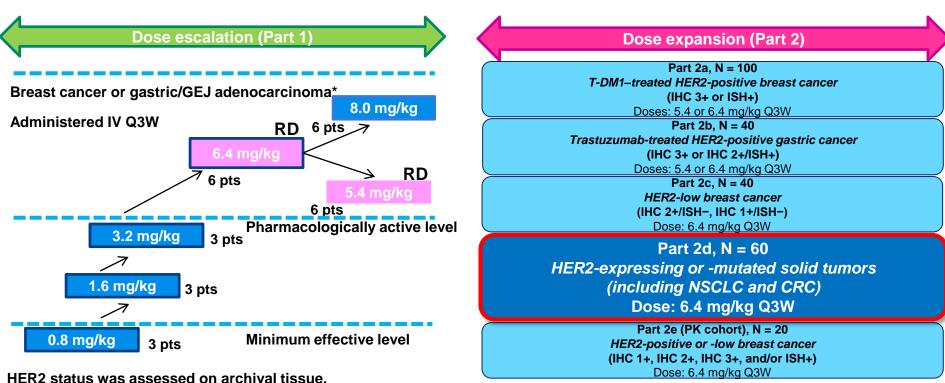
- First subject dosed for nivolumab combination P1b study
- Pembrolizumab combination clinical research collaboration
  - Avelumab combination clinical research collaboration

Red: details in later page



#### X DS-8201: Study Design of Phase 1 Study





\*Subjects in part 1 were not required to have HER2-positive (IHC 3+ or IHC2+/ISH+) tumors. GEJ, gastro-esophageal; HER2, human epidermal growth factor receptor 2; IHC, immunohistochemistry; ISH, in situ hybridization; IV, intravenous; NSCLC, non-small cell lung cancer; PK, pharmacokinetic; pts, patients; Q3W, once every 3 weeks; RD, recommended dose for dose expansion; T-DM1, trastuzumab emtansine.



#### DS-8201: Demographics and Baseline Characteristics of NSCLC and **CRC Patients (P1 Part 2d)**



	NSCLC (N = 18)
Age, median (range), years	58.0 (23.0–83.0)
ECOG performance status 0, n (%)	4 (22.2)
ECOG performance status 1, n (%)	14 (77.8)
HER2-mutated, n (%)	11 (61.1)
Exon 20 insertions	8 (44.4)
Transmembrane domain mutation (G660D)	2 (11.1)
Extracellular domain mutation (S310F)	1 (5.6)
Missing/not examined HER2-mutated status, n (%)	7 (38.9)
Prior cancer regimens, median (range)	3.0 (1.0–10.0)
Sum of tumor diameters, median (range), cm	7.3 (2.0–17.0)

Data cutoff, August 10, 2018. ECOG, Eastern Cooperative Oncology Group; HER2, human epidermal growth factor receptor 2; IHC, immunohistochemistry; NSCLC, non-small cell lung cancer.

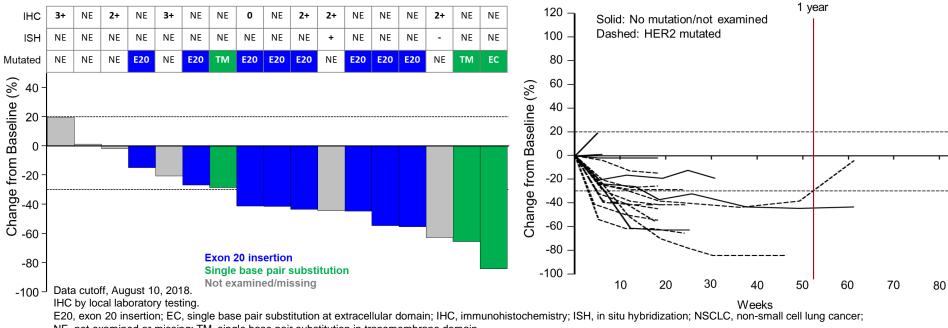
	Daiichi-Sankyo
	CRC (N = 20)
Age, median (range), years	59.5 (35.0-75.0)
ECOG performance status 0, n (%)	13 (65.0)
ECOG performance status 1, n (%)	7 (35.0)
HER2 expression (IHC), n (%)	
3+	9 (45.0)
2+	2 (10.0)
FISH positive	1 (5.0)
FISH negative	0
FISH non-evaluable	1 (5.0)
1+	2 (10.0)
0	7 (35.0)
RAS mutation, n (%)	7 (35.0)
KRAS mutation, n (%)	5 (25.0)
NRAS mutation, n (%)	2 (10.0)
Prior cancer regimens, median	4
Prior irinotecan therapy, n (%)	17 (85.0)

- Most patients received multiple prior therapies for both NSCLC and CRC
- 7 patients of IHC 0 were included in CRC



#### X DS-8201: Phase 1 Part 2d NSCLC Efficacy





NE, not examined or missing: TM, single base pair substitution in transmembrane domain.

	Confirmed <sup>a</sup> ORR, % (n/N)	Confirmed <sup>a</sup> DCR, % (n/N)		TTR, median (range), months	PFS, median (range), months
HER2-expressing or HER2-mutated NSCLC N = 18	58.8% (10/17)	88.2% (15/17)	9.9 (0.0+, 11.5)	1.4 (1.0, 4.2)	14.1 (0.9, 14.1)
HER2-mutated NSCLC n = 11	72.7% (8/11)	100% (11/11)	11.5 (0.03+, 11.5)	1.4 (1.0, 4.2)	14.1 (4.0+, 14.1)

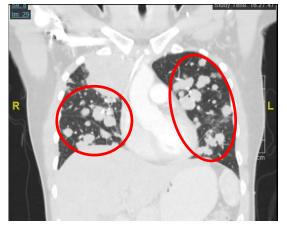
<sup>&</sup>lt;sup>a</sup>CR/PR confirmation includes subjects who had ≥2 post baseline scans, had progressive disease, or discontinued treatment for any reason prior to second post baseline scan.

◆ ORR and PFS of HER2-muated NSCLC were 72.7% and 14.1M



#### DS-8201: Phase 1 NSCLC Example CT Image from Responder













May 2018

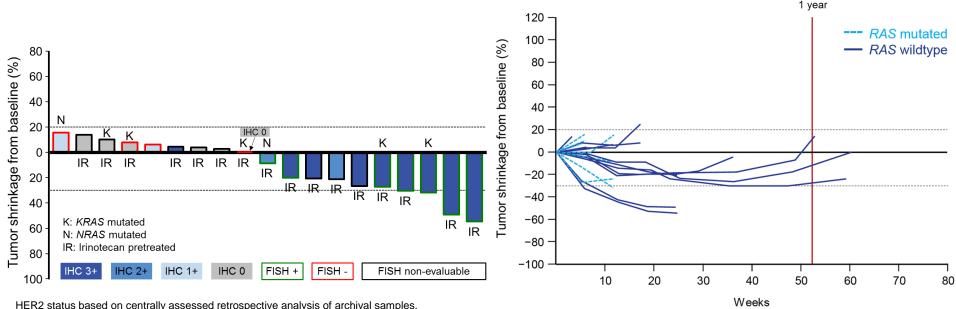
- Feb 2018: baseline
- ◆ Female 23 years of age, nonsmoker
- ◆ Stage IV, nonsquamous NSCLC, HER2 mutation (exon 20 insertion)
- ◆ 45% tumor shrinkage was observed (PR)

Images courtesy of Dr. Pasi Jänne. Special thanks to Dr. Pasi Jänne and Dr. Ian Krop of Dana-Farber Cancer Institute CT, computed tomography; HER2, human epidermal growth factor 2; NSCLC, non-small-cell lung cancer; PR, partial response;



#### M DS-8201: Phase 1 Part 2d CRC Efficacy





HER2 status based on centrally assessed retrospective analysis of archival samples. Dotted lines denote 30% decrease and 20% increase in tumor size cutoffs for partial response and progressive disease, respectively.

FISH, fluorescence in situ hybridization; HER2, human epidermal growth factor receptor 2; IHC, immunohistochemistry; IR, irinotecan pretreated; K, KRAS mutation; N, NRAS mutation.

	Confirmed <sup>a</sup> ORR, % (n/N)	Confirmed <sup>a</sup> DCR, % (n/N)	DOR, median (range), months	TTR, median (range), months	OS, median (range), months
CRC	15.8%	84.2%	NR	2.8	NR
N=19*	(3/19)	(16/19)	(0.0+, 5.5+)	(1.3, 8.1)	(1.0+, 17.9+)

<sup>&</sup>lt;sup>a</sup>CR/PR confirmation includes subjects who had ≥2 post baseline scans, had progressive disease, or discontinued treatment for any reason prior to second post baseline scan.

\* Evaluable patients (one IHC 0 patient was non evaluable out of 20 enrollment)

- ORR was 15.8% for the overall population (3/19)
- In HER2 positive (IHC2+, 3+) CRC patients, ORR was 27.3% (3/11)



# DS-8201: Frequent TEAEs (≥20%) (all tumor types from part 1 and part 2)



All tumor types from P1 study part 1 and part 2; 5.4 or 6.4 mg/kg <sup>a</sup> (N = 259)							
	Any Grade, n (%)	Grade ≥3, n (%)					
Nausea	192 (74.1)	9 (3.5)					
Decreased appetite	147 (56.8)	12 (4.6)					
Vomiting	113 (43.6)	6 (2.3)					
Anemia	98 (37.8)	50 (19.3)					
Alopecia	97 (37.5)	0					
Fatigue	88 (34.0)	6 (2.3)					
Diarrhea	87 (33.6)	6 (2.3)					
Constipation	85 (32.8)	2 (0.8)					
Platelet count decreased	73 (28.2)	27 (10.4)					
Neutrophil count decreased	66 (25.5)	40 (15.4)					
White blood cell count decreased	66 (25.5)	32 (12.4)					
Malaise	58 (22.4)	1 (0.4)					
Pyrexia	53 (20.5)	2 (0.8)					
Aspartate aminotransferase increased	53 (20.5)	4 (1.5)					

Data cutoff, August 10, 2018. A subject was counted once if the same AE was reported more than once. <sup>a</sup>All subjects from Part 1 and Part 2 receiving ≥1 dose of [fam-] trastuzumab deruxtecan 5.4 mg/kg or 6.4 mg/kg regardless of tumor type. AE, adverse event; TEAE, treatment-emergent adverse event.

- Adverse events were generally of low grade
- The most frequent AEs Grade > 3 were hematologic in nature



#### **DS-8201: Adverse Events of Special Interest** (all tumor types from part 1 and part 2)



All tumor types from P1 study part 1 and part 2; 5.4 or 6.4 mg/kg <sup>a</sup> (N = 259)						
	Any Grade, n (%)	Grade ≥3, n (%)				
AST increased	53 (20.5)	4 (1.5)				
ALT increased	40 (15.4)	2 (0.8)				
Blood bilirubin increased	6 (2.3)	1 (0.4)				
Ejection fraction decreased	2 (0.8)	0				
Electrocardiogram QT prolonged	13 (5.0)	1 (0.4)				
Interstitial lung disease (ILD)	10 (3.9)	2 (0.8)				
Pneumonitis	22 (8.5)	6 (2.3)				
Infusion-related reactions	4 (1.5)	0				

Data cutoff, August 10, 2018.

<sup>a</sup>All subjects from Part 1 and Part 2 receiving ≥1 dose of [fam-] trastuzumab deruxtecan 5.4 mg/kg or 6.4 mg/kg regardless of tumor type.

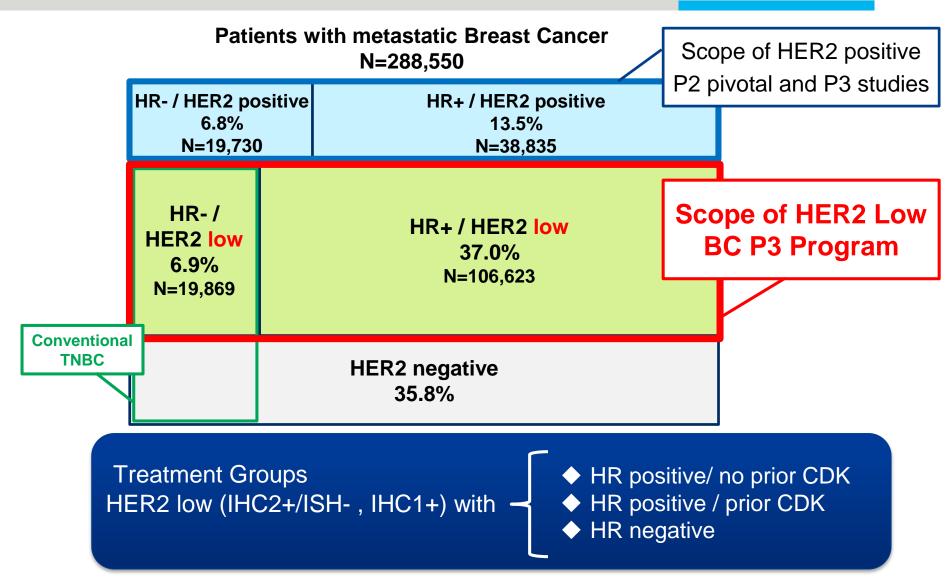
ALT, alanine aminotransferase; AST, aspartate aminotransferase; ILD, interstitial lung disease; NSCLC, non-small cell lung cancer; QTc, QT interval corrected for heart rate.

- There were 5 fatal cases of ILD/pneumonitis observed in the overall population
- ◆ There was only one grade 5 pneumonitis case in the NSCLC cohort and this case was determined to be unrelated to study drug by the independent adjudication committee



#### **DS-8201 : HER2 Low BC Phase 3 Target Population**





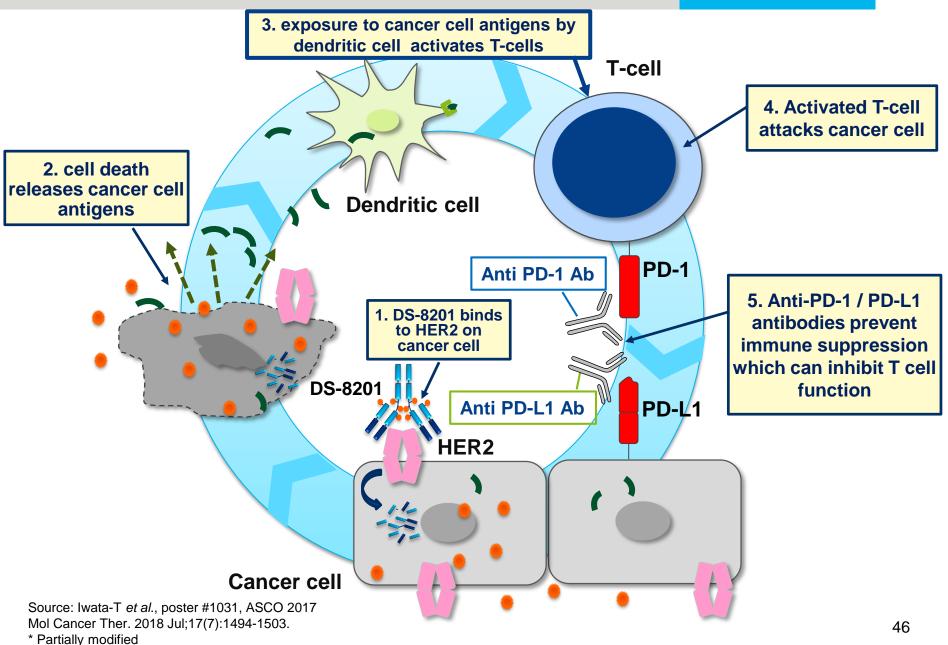
HR: hormone receptor; TNBC: triple negative breast cancer

HR-: estrogen-receptor (ER) and progesterone-receptor (PR) negative



#### X DS-8201: Hypothesis of IO Combo Effect



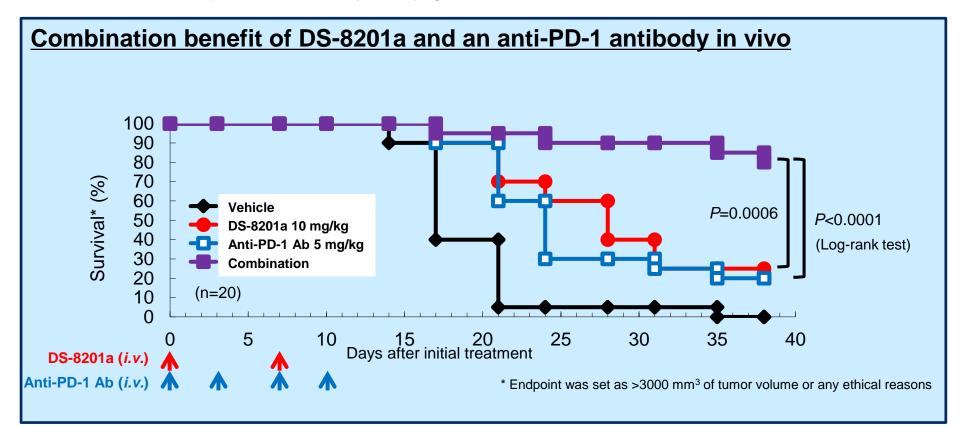




# The DS-8201: Strategy of IO Combo



- Pre-clinical study demonstrated synergetic effect of DS-8201 and anti-PD-1 antibody
- Three P1b studies will be conducted in multiple tumor types to identify the most effective combination for each indication
  - Nivolumab (anti PD-1 antibody): first subject dosed in August 2018 (see page 58)
  - Pembrolizumab (anti-PD-1 antibody): see page 48
  - Avelumab (anti PD-L1 antibody): see page 49



Source: Iwata-T et al., poster #1031, ASCO 2017 Mol Cancer Ther. 2018 Jul;17(7):1494-1503.



# X DS-8201: Pembrolizumab combo P1b Study



**Dose Escalation** 

Dose expansion

- HER2 expressing BC
- HER2 expressing NSCLC or
- HER2 mutated advanced NSCLC

HER2 positive advanced BC post T-DM1 Cohort 1

HER2 low advanced BC post SOC Cohort 2 (IHC1+ or IHC2+, ISH-)

HER2 expressing advanced NSCLC with no prior Cohort 3 treatment with anti-PD-1 or anti-PD-L1 agents (IHC1+,IHC2+, or IHC3+)

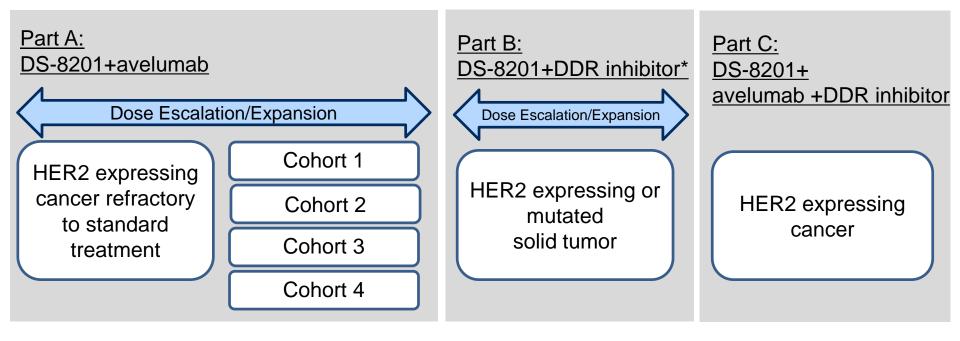
HER2 mutated advanced NSCLC with no prior Cohort 4 treatment with anti-PD-1 or anti-PD-L1 agents

Estimated enrollment	125 patients
Primary Endpoint	MTD, RDE, ORR
Secondary endpoint	DOR, DCR, PFS, OS, TTR, Safety
JAPIC/CT.gov	N/A



#### X DS-8201: Avelumab Combo P1b Study





\*investigational DNA damage response (DDR) inhibitor of Merck KGaA

Estimated enrollment	200 patients
Primary Endpoint	MTD, RDE, ORR
Secondary endpoint	DOR, DCR, PFS, OS, TTR, Safety
JAPIC/CT.gov	N/A

## **Other Update**





- Submission in JP/US/EU
  - > JP: submitted on October 17<sup>th</sup> (Orphan Drug Designation)
    - Based on safety and efficacy data confirmed in JP P2 study (bridging study to QuANTUM-R)
  - US: rolling submission (Breakthrough Therapy Designation)
  - EU: on track for 2H FY2018 (Orphan Drug Designation)
- Submit US NDA in 2H FY2018
  - US: Orphan Drug and Breakthrough Therapy Designations
  - EU: Orphan Drug Designation





- Will start clinical trial in Japan in 2H FY2018
  - Orphan Drug Designation

#### **Next Data Points until R&D Day**





December 1-3, 2018: American Society of Hematology (ASH) @ San Diego

 AML Franchise: Multiple abstracts submitted (including Quizartinib QuANTUM-R)





December 4-8, 2018: San Antonio Breast Cancer Symposium (SABCS)

- DS-8201
  - P1 study BC HER2 positive/low update
  - Dose justification for BC P2 and P3 studies
  - Result of ILD Adjudication Committee
- U3-1402
  - BC P1 study update



# **R&D Day 2018**



- Date: December 12, 2018 (wed)15:00 17:00 (plan)
- Location: Daiichi Sankyo Headquarters, Tokyo
- Contents (plan)
  - CE\* 2025: overall progress towards our long-term strategy
  - ADC Franchise: critical data and progress / forward plan
  - AML Franchise: critical data and progress / forward plan

<sup>\*</sup>Cancer Enterprise



# Appendix

- R&D Milestone Events
- Major R&D Pipeline
- Out-licensing Projects
- Study Designs
- Abbreviations

#### **FY2018 R&D Milestone Events**

As of Oct 2018



Project	Study / Indication	FY2018				FY2019
i roject	Study / Indication	Q1	Q2	Q3	Q4	Q1
	P1: multiple tumors		Enroll completed			
	P2: HER2 positive mBC Post T-DM1 pivotal study		Enroll completed			
	P3: HER2 positive mBC Post T-DM1 vs Phys Choice		Study started			
	P3: HER2 positive mBC vs T-DM1		Study started			
DS-8201	P3: HER2 low mBC			Study start planned		
	P2: NSCLC	Study started				
	P1b: mBC/Bladder with nivolumab		Study started			
	P1b: mBC/NSCLC with pembrolizumab				1	Study start planned
	P1b: solid tumor with avelumab					Study start planned
U3-1402	P1/2: mBC	P2 part study started				
Quizartinib	P3: QuANTUM-R AML Relapsed/Refractory	TLR		Submission		
DS-3032	P1: AML with Quizartinib			Study start planned		
D3-3032	P1: AML with Azacitidine			Study start planned		
Pexidartinib	P3: TGCT (US)			Submission		
Axi-Cel®	P2: BCL (JP)			Study sta	rt planned	
DS-1205	P1: EGFRm NSCLC with osimertinib			Study start planned		
D3-1205	P1: EGFRm NSCLC with gefitinib			Study started		
Mirogabalin	P3: DPNP/PHN (JP)				Approval	
Esaxerenone	P3: Essential hypertension (JP)				Approval	
Laninamivir	P3: Anti-influenza (nebulizer formulation) (JP)		Submission			
DS-5141	P1/2: DMD (JP)	TLR	Extension study started			

AML: acute myeloid leukemia, BCL: B-cell lymphoma, CRC: colorectal cancer, DMD: Duchenne muscular dystrophy, DPNP: diabetic peripheral neuropathic pain, GBM: glioblastoma multiforme, mBC: metastatic breast cancer, mGC: metastatic gastric cancer, NSCLC: non-small cell lung cancer, PHN: Postherpetic neuralgia, TGCT: tenosynovial giant cell tumor, TLR: Top Line Results

Red: New or update from FY2018 Q1 Blue: achieved

# **Major R&D Pipeline (Oncology)**

As of Oct 2018



	Generic Name/Project Code Number	Target indication	Region		Sta	ıge	
	(Class)	(Class)		Phase 1	Phase 2	Phase 3	NDA/BLA
X		mBC (HER2 positive post T-DM1)	JP/US/EU/Asia		<del></del>		
		mise (HERE positive posit i Bill)	31 / 00/ 20/ 1.5.10		:		
a:		mBC (HER2 positive vs. T-DM1)	JP/US/EU/Asia		:		
ise	DS-8201 (Anti-HER2 ADC)	mGC (HER2 positive post trastuzumab)	JP/Asia				
anck		CRC	JP/US/EU				
ADC Franchise		NSCLC	JP/US/EU				
AD		mBC and bladder cancer (w nivolumab)	US/EU				
	LIZ 1402 (Apti HED2 ADC)	mBC	JP/US				
	U3-1402 (Anti-HER3 ADC)	NSCLC	US				
	DS-1062 (Anti-TROP-2 ADC)	NSCLC	JP/US				
A	Quizartinib/AC220 (FLT3 inhibitor)	AML (Relapsed/Refractory)	JP/US/EU/Asia				
0		AML (1st line)	JP/US/EU/Asia				
a	DS-3032 (MDM2 inhibitor)	Solid tumor	JP/US				
AML Franchise		AML	US				
-ran	DC 2204 (ETHA (2 : 1 : 1 : 1 )	ATL/L, PTCL	JP				
ML	DS-3201 (EZH1/2 inhibitor)	AML, ALL	US				
٧	PLX51107 (BRD4 inhibitor)	AML, solid tumor	US				
	DS-1001 (IDH1m inhibitor)	Glioma	JP				
	PLX2853 (BRD4 inhibitor)	AML, solid tumor	US				
1	Pexidartinib (CSF-1/KIT/FLT3 inhibitor)	TGCT	US/EU				
듈	DS-1647 (G47Δ virus)	Glioblastoma	JP				
Breakthrough Science	Axi-Cel® (Anti-CD19 CAR-T cells)	BCL	JP				
Break Scien	DS-1205 (AXL inhibitor)	NSCLC (w osimertinib(US), gefitinib (JP))	US/JP				

ALL: acute lymphoblastic leukemia, AML: acute myeloid leukemia, ATL/L: adult T-cell leukemia/lymphoma, BCL: B-cell lymphoma, CRC: colorectal cancer, mBC: metastatic breast cancer, mGC: metastatic gastric cancer, NSCLC: non-small cell lung cancer, PTCL: peripheral T-cell lymphoma, TGCT: tenosynovial giant cell tumor

★: projects in the field of oncology which are planned for application based on the results of P2 studies

# Major R&D Pipeline (SM/Vaccine) As of Oct 2018



	Canadia Nama/Dusiant Cada Number (Class)	Torret Indication	Dogion		Sta	ıge	
	Generic Name/Project Code Number (Class)	ject Code Number (Class) Target Indication Region		Phase 1	Phase 2	Phase 3	NDA
ā		AF	ASCA				
80	Edoxaban/DU-176b (Fxa inhibitor)	VTE	ASCA				
		Very elderly patients AF	JP				
SM)	Prasugrel/CS-747 (anti-platelet agent)	Ischemic stroke	JP				
ne (S	Facycronano/CS 2450 (MD enterconict)	Hypertension	JP				
edici	Esaxerenone/CS-3150 (MR antagonist)	Diabetic nephropathy	JP				
Specialty medicine (SM)	DS-1040 (TAFIa inhibitor)	Acute ischemic stroke, Acute pulmonary embolism	JP/US/EU				
cial	DS-2330 (hyperphosphatemia treatment)	Hyperphosphatemia in chronic kidney disease	-				
Spe	Mirogabalin/DS-5565 (α2δ ligand)	DPNP, PHN	JP				
	Laninamivir/CS-8958 (neuraminidase inhibitor)	Influenza	JP				
	DS-5141 (ENA oligonucleotide)	DMD	JP				
	DS-1211(TNAP inhibitor)	Prevention of ectopic calcification diseases	US				
O WILLY	VN-0107/MEDI3250 (live attenuated influenza vaccine)	Prevention of seasonal influenza	JP				
Vaccine	VN-0105 (DPT-IPV/Hib)	Prevention of pertussis, diphtheria, tetanus, poliomyelitis and Hib	JP				_
Vac	VN-0102/JVC-001 (Measles-Mumps-Rubella vaccine)	Prevention of Measles, Mumps and Rubella	JP	_			

AF: atrial fibrillation, DMD: Duchenne muscular dystrophy, DPNP: diabetic peripheral neuropathic pain, PHN: Postherpetic neuralgia, VTE: venous thromboembolism

# **Out-licensing Projects**

As of Oct 2018



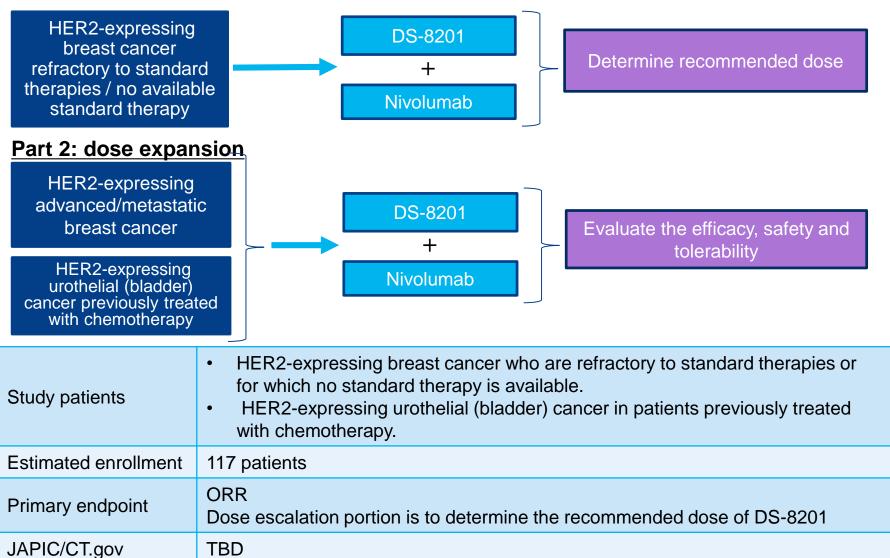
	Pre-clinical	Phase1	Phase 2
Oncology		■ DS-6051 (NTRK/ROS1 inhibitor)	
Specialty Medicine	<ul> <li>■ DS-1515         <ul> <li>(Inflammatory disease/PI3Kδ inhibitor)</li> </ul> </li> <li>■ DS-1039</li></ul>	■ DS-2969 (Clostridium difficile infection / GyrB inhibitor) ■ DS-1093 (inflammatory bowel disease (IBD)/ HIF-PH inhibitor) ■ DS-7080 (AMD / Angiogenesis inhibitor)	■ Laninamivir (CS-8958/Anti-influenza/ Out-licensing with Vaxart Inc)

Red: New or update 57

#### DS-8201: P1b Nivolumab Combination Study (US/EU)



#### Part 1: dose escalation

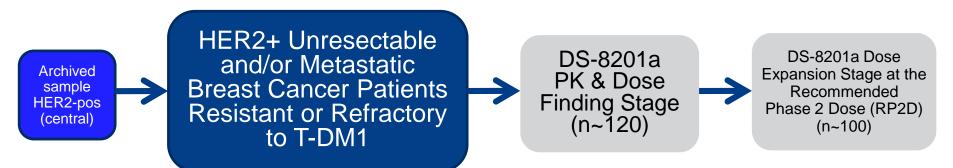


## **DS-8201 BC Pivotal P2 Study**





DS-8201a in Human Epidermal Growth Factor Receptor 2 (HER2)-Positive Breast Cancer

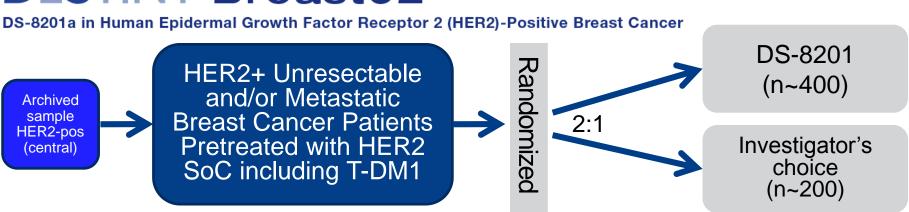


Summary	A phase 2, multicenter, open-label study of DS-8201, an anti-HER2-antibody drug conjugate (ADC) for HER2 positive, unresectable and/or metastatic breast cancer patients previously treated with ado-trastuzumab emtansine (T-DM1)
Estimated enrollment	230 patients
Primary Endpoint	ORR
Secondary endpoint	OS, PFS, CBR, DOR
JAPIC/CT.gov	JapicCTI-173693 / NCT03248492

#### DS-8201 BC P3 Study vs Physician's Choice







Investigator's choice options include:

lapatinib+capecitabine

Summary	A phase 3, multicenter, randomized, open-label, active-controlled trial of DS-8201, an anti-HER2-antibody drug conjugate (ADC), versus treatment of investigator's choice for HER2-positive, unresectable and/or metastatic breast cancer patients pretreated with prior standard of care (SOC) HER2 therapies, including ado-trastuzumab emtansine (T-DM1)
Estimated enrollment	600 patients
Primary Endpoint	PFS
Secondary endpoint	OS, PK, ORR, CBR, DOR
JAPIC/CT.gov	JapicCTI-184017 / NCT03523585

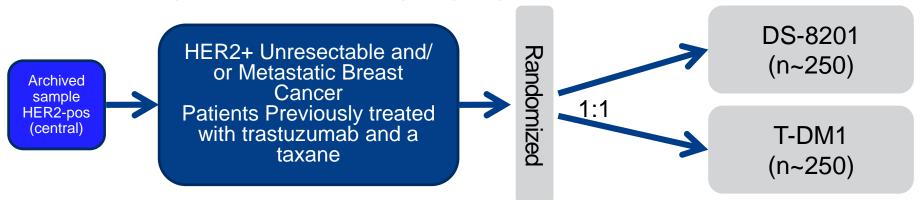
trastuzumab+capecitabine

#### DS-8201 BC P3 Study vs T-DM1





DS-8201a in Human Epidermal Growth Factor Receptor 2 (HER2)-Positive Breast Cancer



Summary	A phase 3, multicenter, randomized, open-label, active controlled study of DS-8201, an anti-HER2-antibody drug conjugate, versus ado-trastuzumab emtansine (T-DM1) for HER2-positive, unresectable and/or metastatic breast cancer patients previously treated with trastuzumab and a taxane
Estimated enrollment	500 patients
Primary Endpoint	PFS
Secondary endpoint	OS, PK, ORR, Safety, DOR, CBR
JAPIC/CT.gov	JapicCTI-183976 / NCT03529110

# **Abbreviations**



Abbreviation	
BTD	Breakthrough therapy designation
CR	Complete response
DCR	Disease control rate
DLT	Dose limiting toxicity
DOR	Duration of response
EGFR	Epidermal growth factor receptor
MTD	Maximum tolerated dose
NSCLC	Non-small-cell lung cancer
ORR	Overall response rate Objective response rate
OS	Overall survival
PD	Progress disease
PFS	Progression-free survival
PR	Partial response
RDE	Recommended dose for expansion
TTR	Time to response

#### **Contact address regarding this material**

#### Daiichi Sankyo Co., Ltd.

**Corporate Communications Department** 

TEL: +81-3-6225-1126

Email: DaiichiSankyoIR@daiichisankyo.co.jp