Daiichi-Sankyo
cancerenterprise

Care. Compassion. Science.
It's Our Obligation.

Daiichi Sankyo Cancer Enterprise

R&D Day

Joji Nakayama, President and CEO, Daiichi Sankyo Co., LTD
Antoine Yver, Chair, Daiichi Sankyo Cancer Enterprise

December 13, 2016

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

Contents

Opening Remarks

- **2025 Vision**
  Global Pharma Innovator with competitive advantage in oncology
- **Strategic Target of 5-Year Business Plan**
  Establish oncology business
- **Beginning of Transformation from April, 2016**
  New organization and leadership
  - **Establishment of Oncology R&D Unit**
  - **Global Head, Oncology R&D, Antoine Yver, MD MSc**

Daiichi Sankyo Cancer Enterprise

Daiichi-Sankyo
cancerenterprise

Care. Compassion. Science.
It's Our Obligation.

Contents

We are on a journey to build a world-class oncology engine

Past

- Daiichi Sankyo has a **history of strong science and innovation**
- In April 2016, we shared our **2025 vision** – to become a **Global Pharma Innovator with a Competitive Advantage in Oncology**

Present

- In process of launching **Cancer Enterprise** and **accelerating our most promising assets**
- Today, we are excited to **share our vision and progress to date**

Future

- Cancer Enterprise is on track to support Daiichi Sankyo **5-Year Business Plan**
  - FY2020: 40+ Bn JPY
  - FY2025: ~300 Bn JPY
- We will **deliver our portfolio for patients** and our **2025 vision**

Cancer Enterprise key messages (1/2)

- **DS-8201: Flagship asset,** HER2 ADC, key to Daiichi Sankyo strength in oncology
  - Broad opportunity
  - Partnership implications

- **Emerging franchises**
  - Acute Myeloid Leukemia **(AML)**
  - Antibody Drug Conjugate **(ADC)** technology

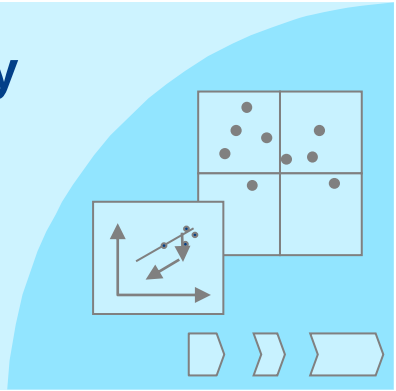
Cancer Enterprise key messages (2/2)

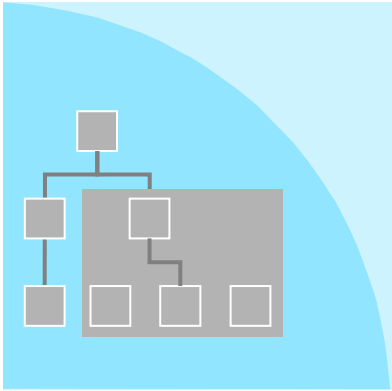
- Powerful **research engines**
  - Japan research labs, combining chemistry and biology expertise
  - Plexxikon discovery platform, enabling efficient candidate identification

- **Strategic investments** in enhanced capabilities
  - Align capabilities to aspirations
  - Strategic BD&L

Daiichi Sankyo is committed to a major transformation in oncology

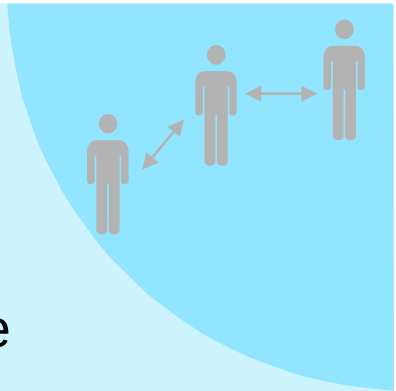
Focus our oncology portfolio and align resources toward highest value assets





Build a **dynamic** and **sustainable R&D engine** with a nimble operating model

Broaden our external engagement to enhance the quality of our science



Enrich our talent pool and **transform our culture**

Contents

Mission

To be perfect in selecting, designing, and delivering our prioritized portfolio

Vision

To deliver value to cancer patients by leading in science and changing the standard of care

Daiichi-Sankyo

cancerenterprise

Care. Compassion. Science.
It's Our Obligation.

Existing strengths support our ambition

Strategic collaborations

国立研究開発法人
国立がん研究センター
National Cancer Center Japan

UCSF Helen Diller Family Comprehensive Cancer Center

DANA-FARBER CANCER INSTITUTE

zymeworks

AgonOx

DARWIN HEALTH™
PRECISION THERAPEUTICS for CANCER MEDICINE

In-house science

- Medicinal chemistry
- Antibody research and protein engineering
- Scaffold-based drug discovery

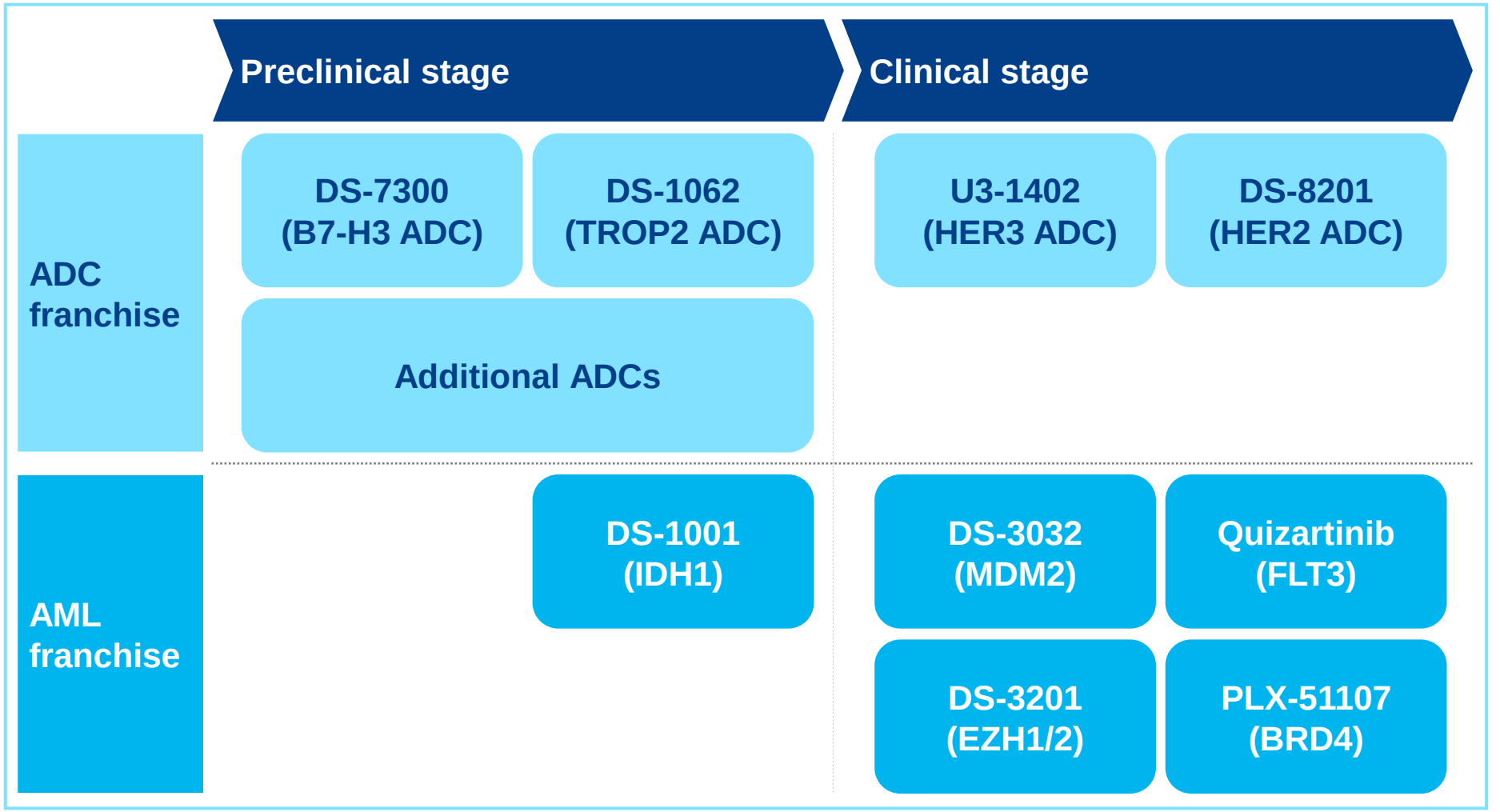
Corporate and external support

- Corporate vision and commitment
- Strategic and proactive BD&L
- World-class external scientific board

Accelerated development

- Ruthless prioritization
- Lean operating model
- Aim for perfect delivery

We are focusing today on two emerging franchises

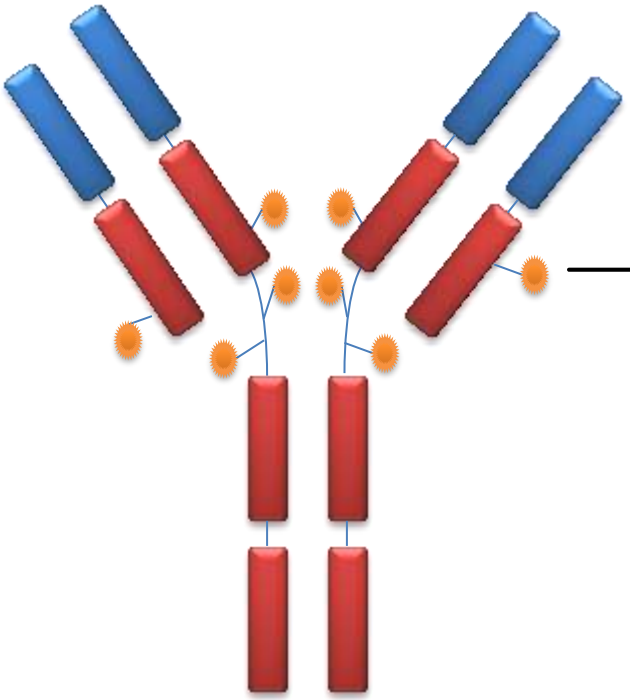


As of December 2016

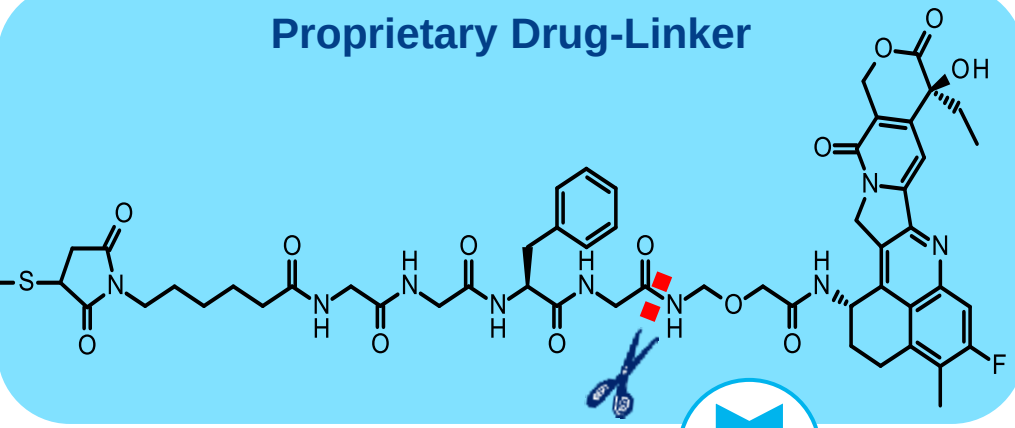
Note: Compounds under discussion are investigational agents and are not approved by the FDA or any other regulatory agency worldwide as a treatment for indications under investigation. Efficacy and safety have not been established in areas under investigation. There are no guarantee that these compounds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

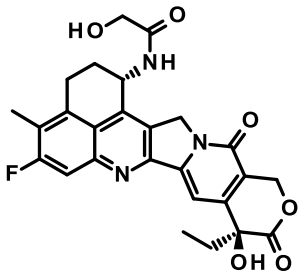
Contents

Unique antibody-drug conjugate (ADC) technology
From our Japan research labs



Proprietary Drug-Linker





Proprietary payload (DXd)
Exatecan derivative

Broad platform potential

ADC technology: Engineered to improve on prior generation ADCs

Prior generation ADCs

- Limited drug-to-antibody ratio *(3.5-4)*
- Linker instability and lack of tumoral specificity result in toxicity
- Payload related to typical chemotherapy previously received

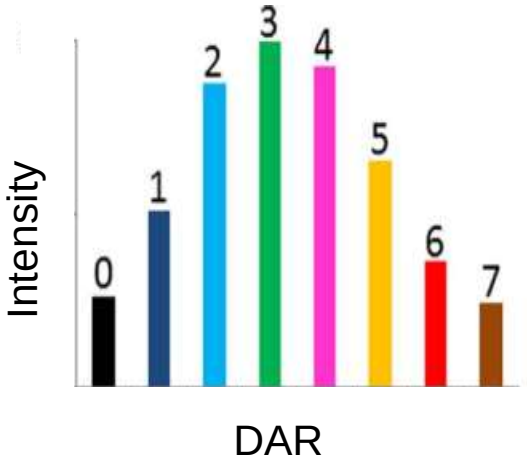
Our ADC technology

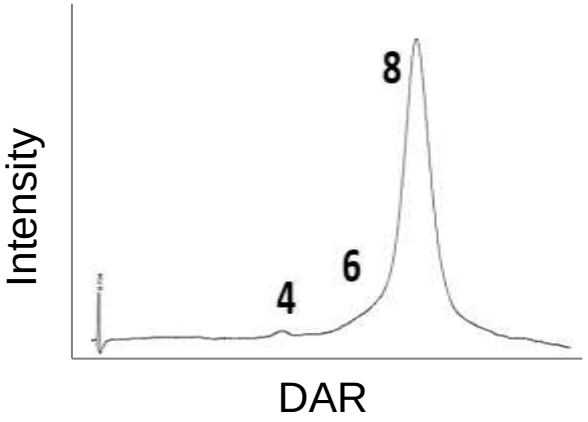
- Doubled drug-to-antibody ratio *(7-8)*
- High linker stability and more cancer-cell selective linker release
- Novel differentiated payload
  - Potent DNA topoisomerase I inhibitor
  - Effective in heterogeneous tumor microenvironment (bystander effect)
  - Very short systemic half-life

ADC technology: Drug load distribution

High drug-to-antibody ratio (DAR)

	T-DM1	DS-8201
Antibody	Trastuzumab	Anti-HER2 Ab
Payload	Tubulin inhibitor (DM1)	Topoisomerase I inhibitor (DXd)
DAR	3.5	7-8



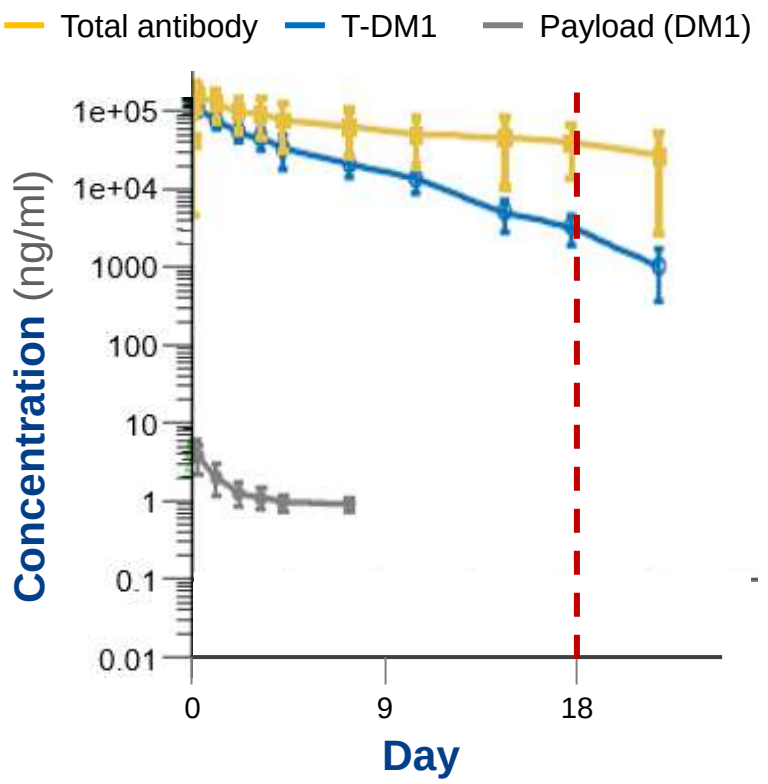


Source: Ogitani-Y *et al.*, Clin. Cancer Res. 2016; 22:5097-5108, Marcoux-J *et al.*, Protein Science 2015; 24:1210-1223

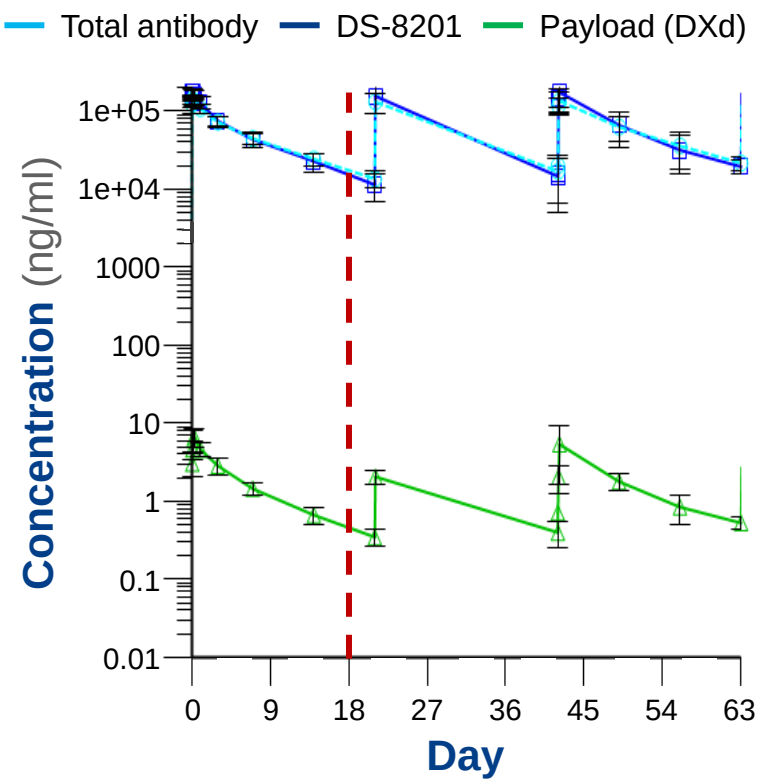
ADC technology: Linker stability

Pharmacokinetics profile

T-DM1, 3.6 mg/kg (Phase 1)



DS-8201, 6.4 mg/kg (Phase 1)



DS-8201: High linker stability and low free payload

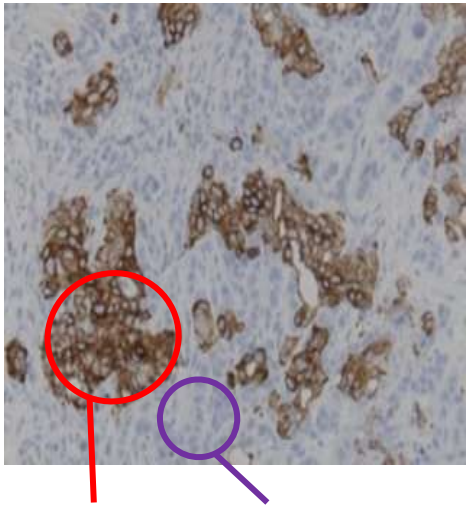
Source: Krop-I et al., J. Clin. Oncol. 2010; 28:2698-2704, Tamura-K *et al*., abstract 4585 (LBA17), ESMO 2016

ADC technology: Bystander effect

Bystander effect (Preclinical, after 14 day treatment)

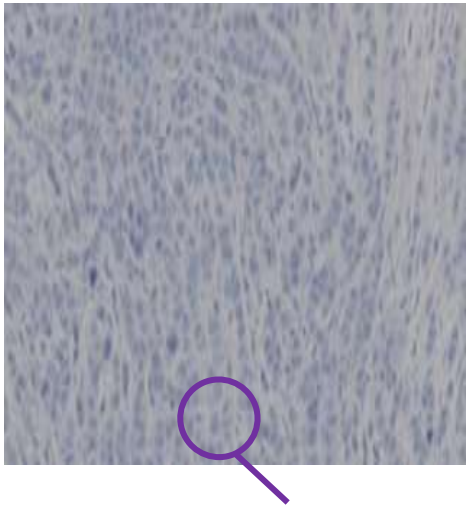
Control

Co-culture of HER2+ and HER2- tumors in vivo



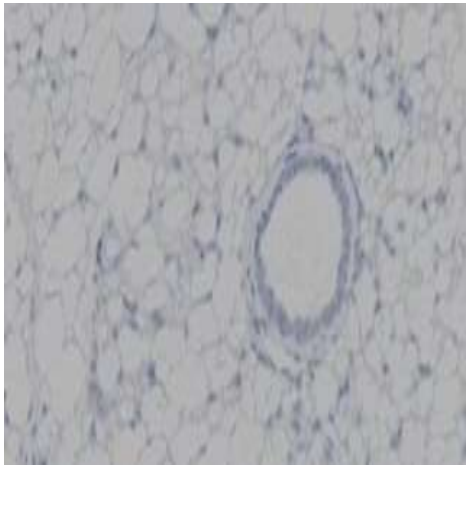
T-DM1, 10 mg/kg

Activity against HER2+ tumors only



DS-8201, 3.0 mg/kg

Activity against HER2+ and HER2- tumors

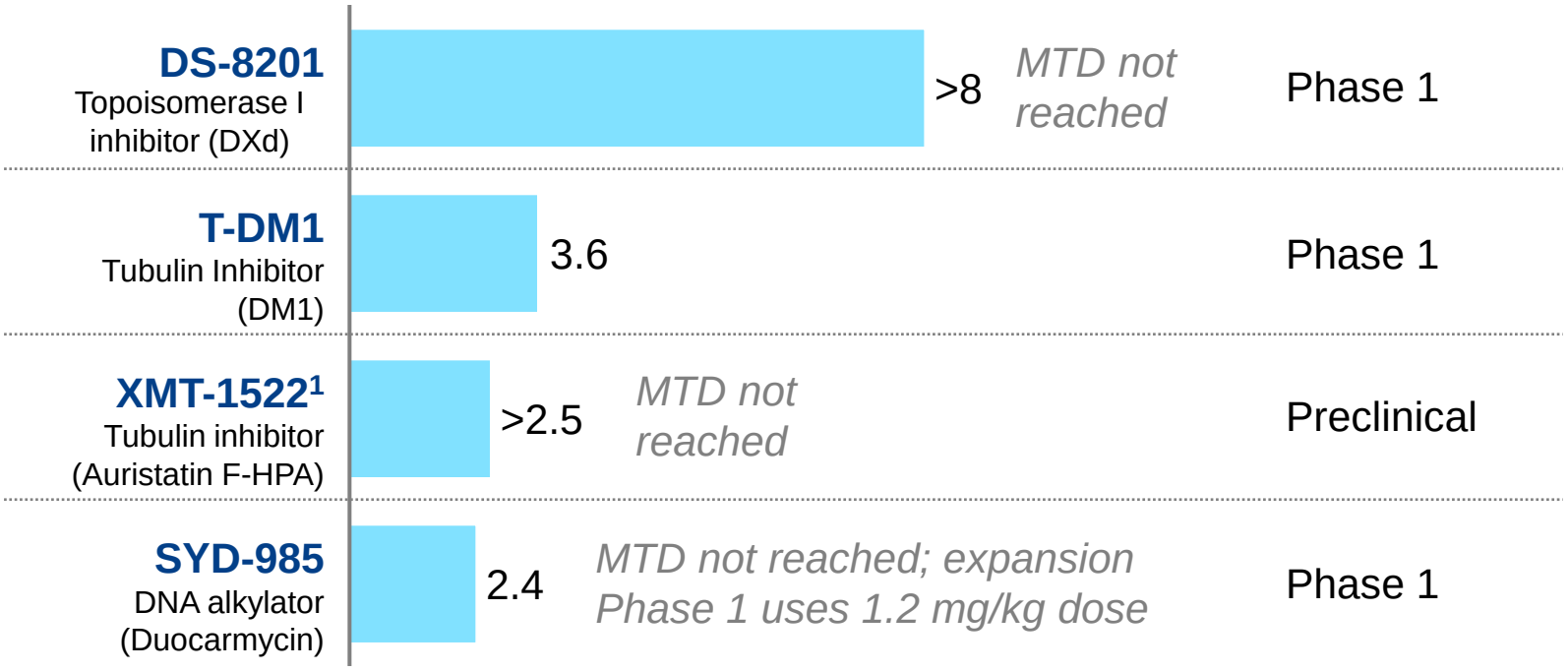


DS-8201: Ability to kill neighboring tumor cells

Source: Ogitani-Y *et al.*, Cancer Science 2016; 107:1039–1046,

ADC technology: Safety

Safety profile of various HER2 ADCs



DS-8201: MTD not reached

1 Other HER2 ADCs with Tubulin inhibitor payload have not yet disclosed maximum tolerated dose

Source: Krop-I *et. al.*, J. Clin. Oncol. 2010; 28:2698-2704, Bergstrom-DA *et al.*, AACR LBA-231 2015, Herpen-CML *et al.*, ESMO Poster 333 2015, Tamura-K *et al*. abstract 4585 (LBA17), ESMO 2016

DS-8201: HER2-ADC with potential to address significant patient unmet needs

Unmet need in HER2+ cancers

T-DM1 resistant HER2+ breast cancer	**No** approved HER2+ directed therapy
Herceptin resistant HER2+ gastric cancer	**No** approved HER2+ directed therapy
HER2 low[1] expressing tumors	**No** approved therapy indicated for HER2 low
Insensitivity to **checkpoint inhibitors** as monotherapy	**~20%** response rate

1 IHC1+ or IHC2+/FISH-

DS-8201: Promising first-in-human trial data

Highlights
Presented at ESMO, October 2016

Well tolerated;
Maximum Tolerated Dose (MTD) not reached
No grade 4 AE

Robust anti-tumor activity in T-DM1 pre-treated breast cancer patients, gastric cancer, and HER2 low expression tumors

Anti-tumor activity at all doses tested

Current trial status

Late-stage HER2+ breast, gastric and other cancer, and low HER2 breast

77 Patients treated

10 Active sites in US & Japan

54 More subjects relative to ESMO data

U.S. FDA Fast Track designation for HER2+ metastatic breast cancer

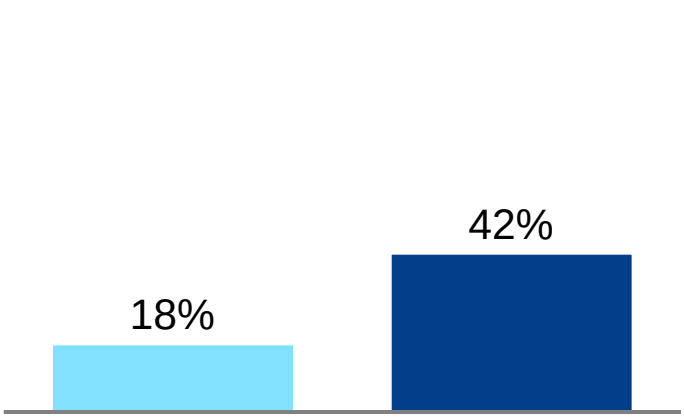
DS-8201: ESMO 2016 data (1/2)

Response rate in T-DM1 resistant breast cancer patients (Phase 1)

ORR[1]

Prior T-DM1 treatment (n=11*)

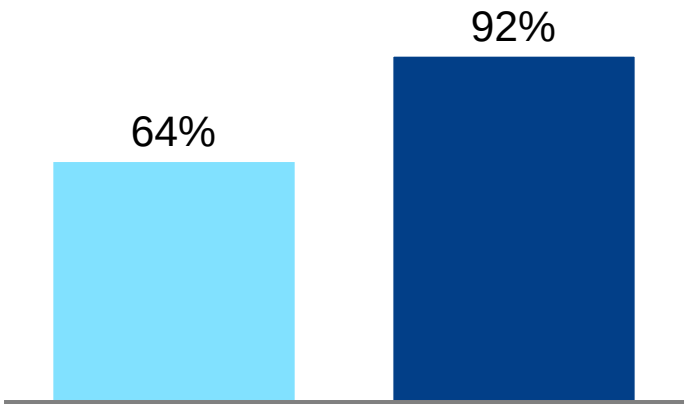
Subsequent DS-8201 treatment (n=12*)



DCR[2]

Prior T-DM1 treatment (n=11*)

Subsequent DS-8201 treatment (n=12*)



*1/12 subjects with no information of the best response on prior T-DM1 treatment

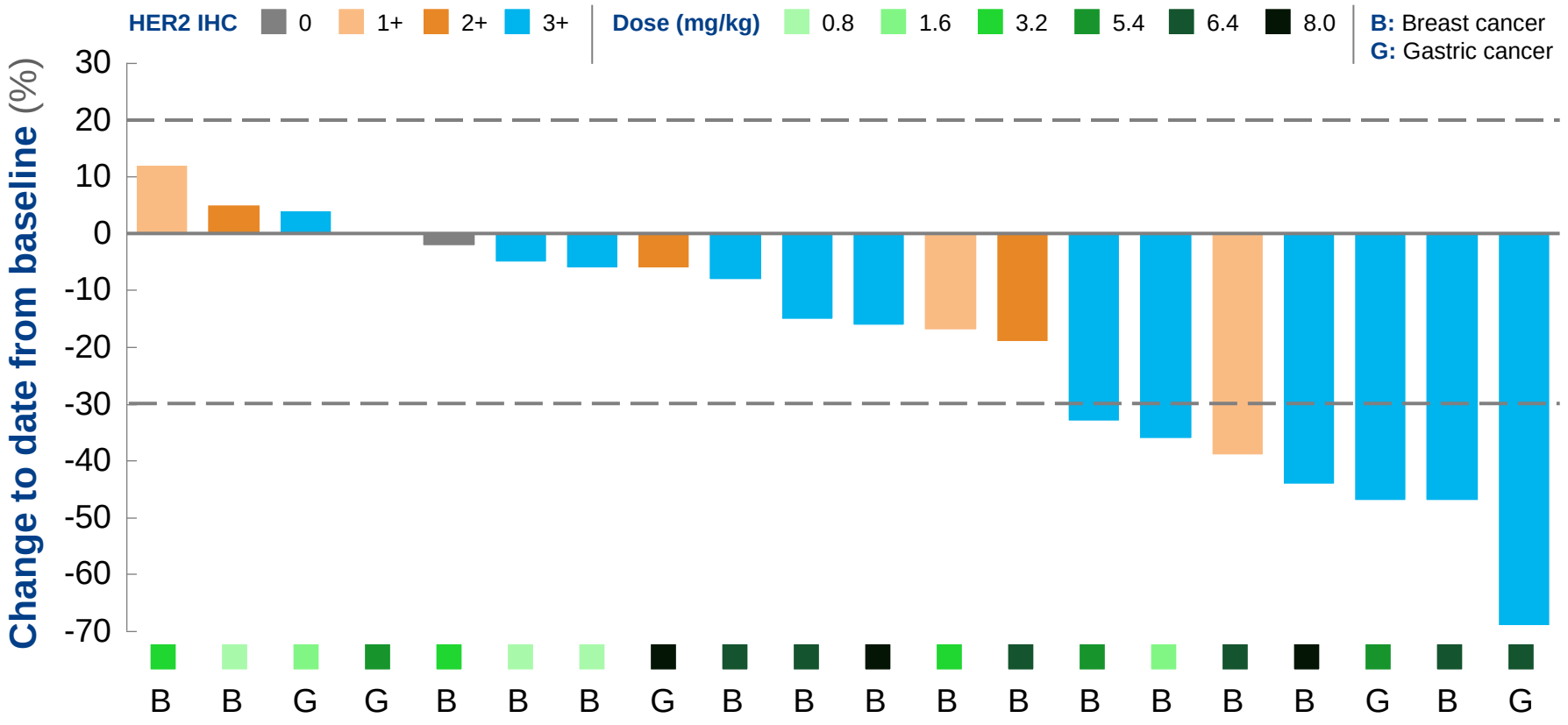
Strong response in ≥ 3rd line HER2+ breast cancer

1 Overall Response Rate = [Complete Response (CR) + Partial response (PR)]
2 Disease Control Rate = [Complete Response (CR) + Partial response (PR) + Stable Disease (SD)]

Source: Tamura-K *et al*., abstract 4585 (LBA17), ESMO 2016

DS-8201: ESMO 2016 data (2/2)

Best response to DS-8201 therapy, (Phase 1)



Potential across doses, HER2 status, and both breast and gastric cancers

Source: Tamura-K *et al*., abstract 4585 (LBA17), ESMO 2016

DS-8201: Focused pursuit of HER2+ breast and gastric cancer indications

Laser-focus on development of pivotal package

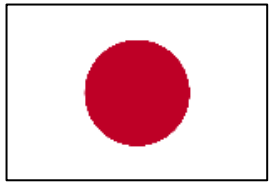
- Rate of response
- Duration of response
- Reproducibility
- Human safety database
- Dose justification

Breast cancer (T-DM1 failure)

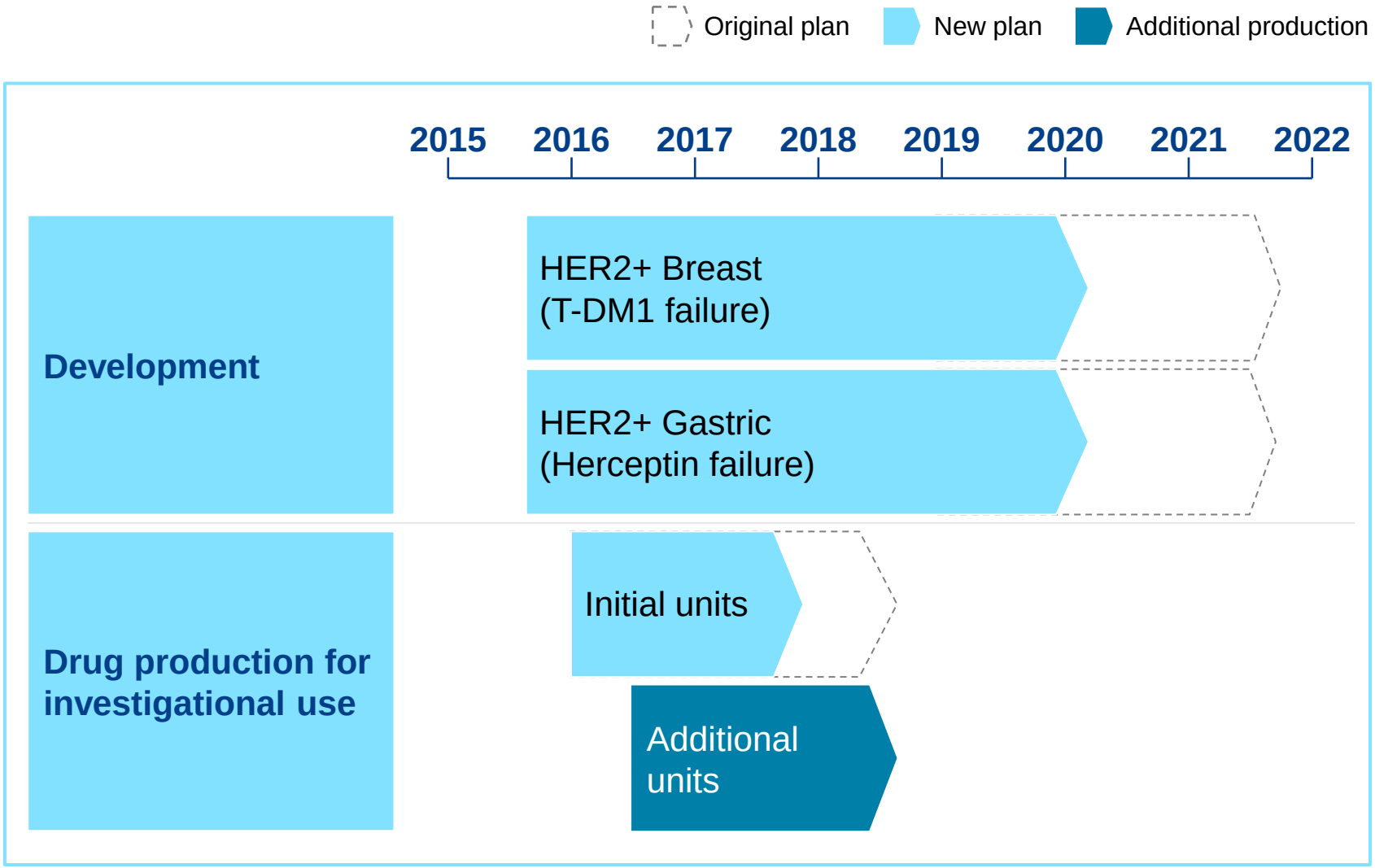
Global pursuit

Gastric cancer (Herceptin failure)

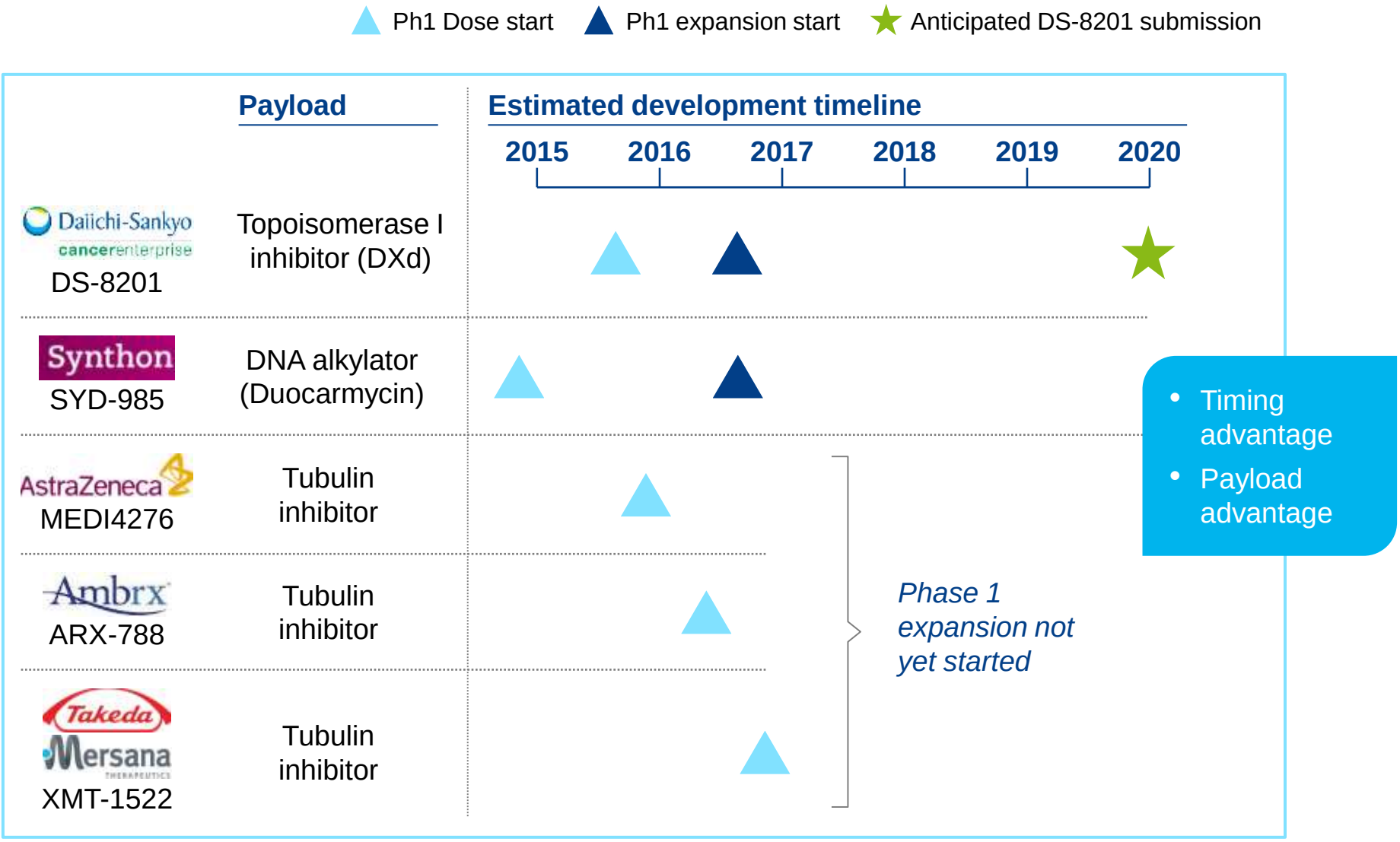
Pursuit in Japan *where patient unmet need is greatest*



DS-8201: Acceleration and tracking for first submissions in 2020



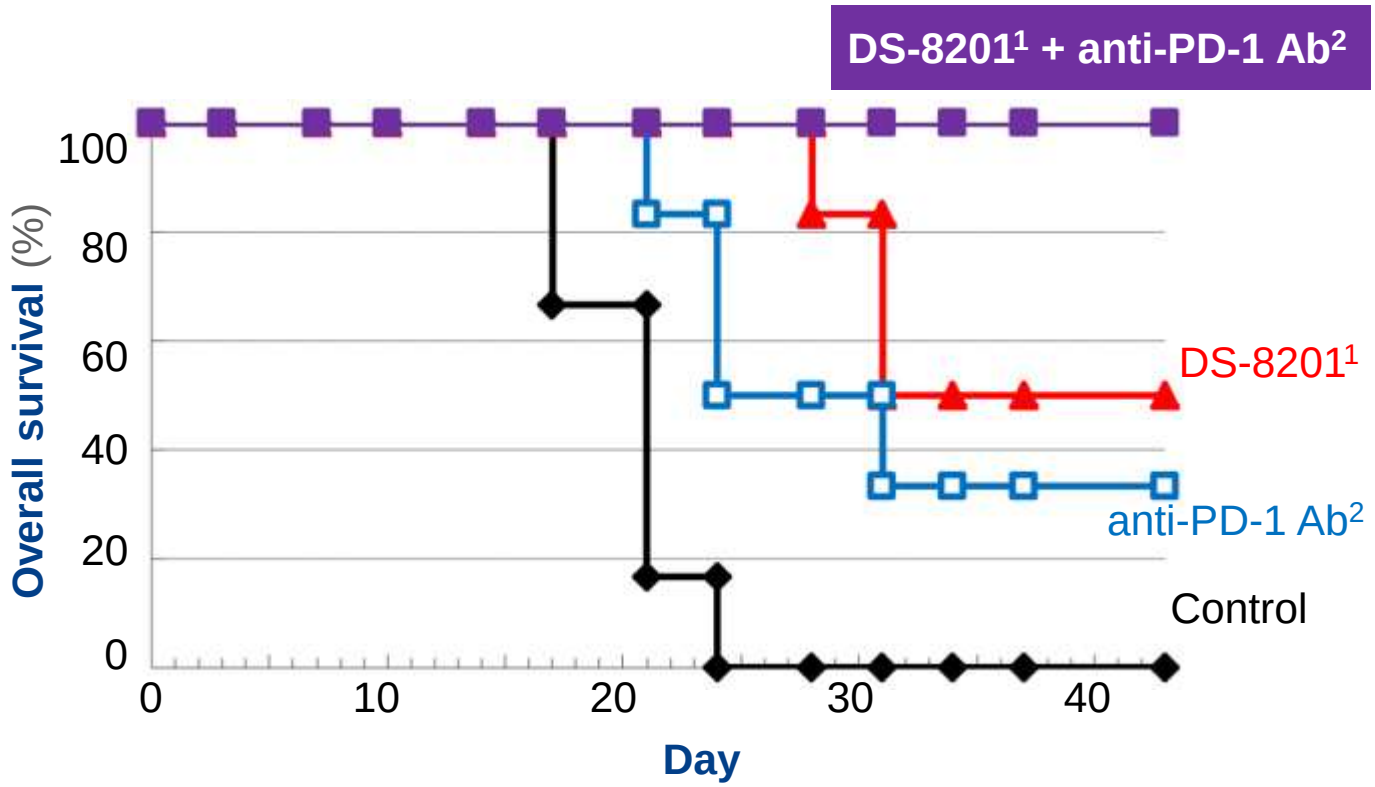
DS-8201: Leading position in next generation HER2-ADCs



Source: Synthon, AstraZeneca, Ambrx, Mersana external materials 2016

DS-8201–I/O: Potential I/O benefit in HER2+ breast and other tumors

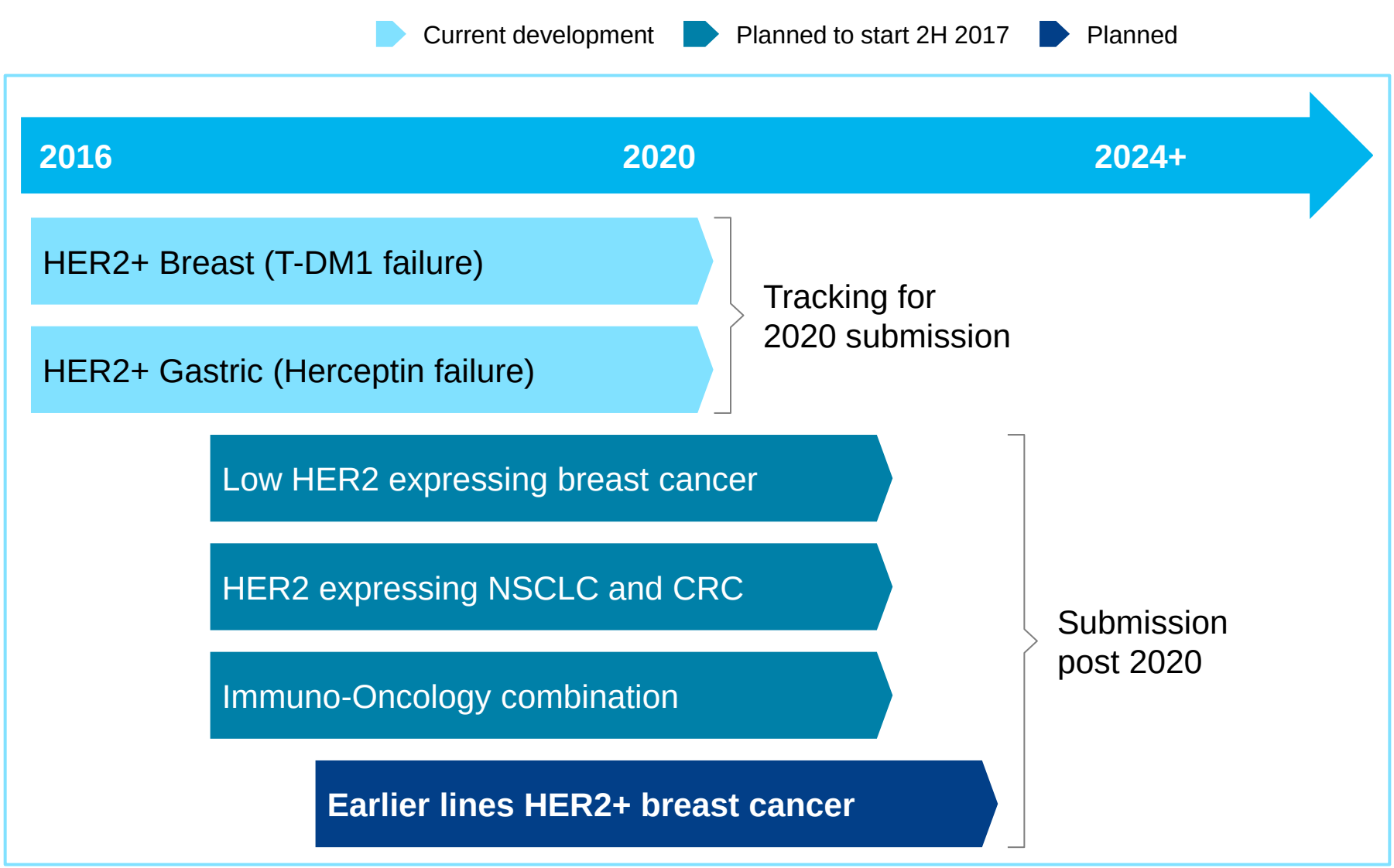
Survival of mouse with human HER2-expressing tumor cells (Preclinical)



1. 10 mg/kg 2. 2.5mg/kg

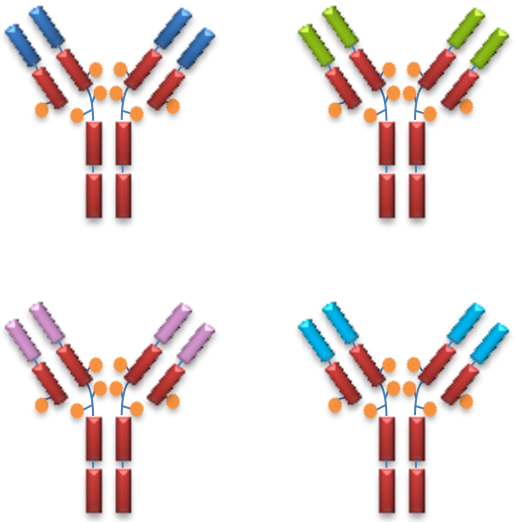
Source: Daiichi Sankyo Cancer Enterprise data on file

DS-8201: Development scope



ADC franchise: Expansion strategy

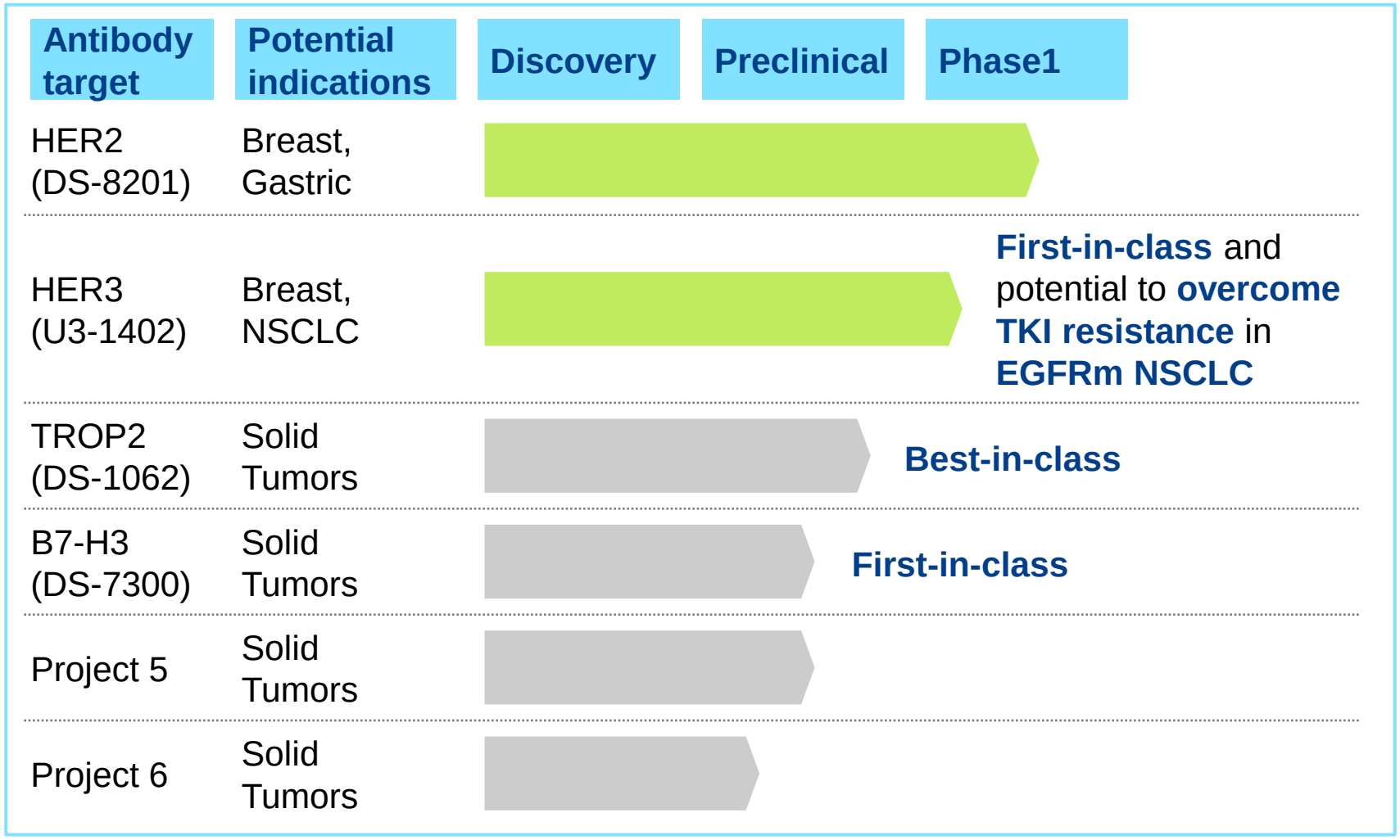
Our pipeline



Partnerships

ADC franchise: Our pipeline

Clinical stage

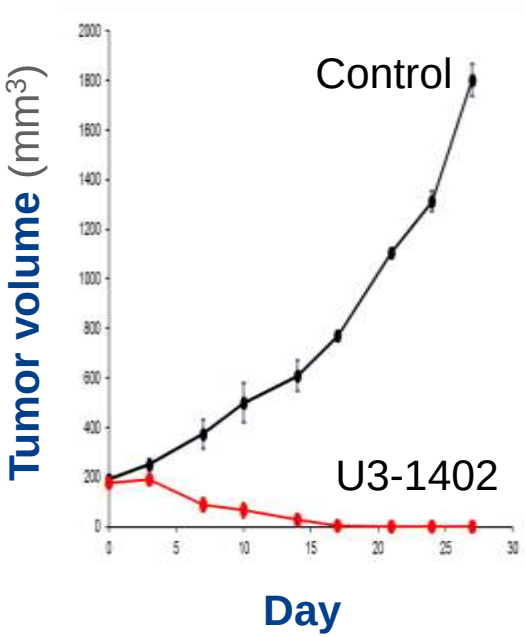


Note: Compounds under discussion are investigational agents and are not approved by the FDA or any other regulatory agency worldwide as a treatment for indications under investigation. Efficacy and safety have not been established in areas under investigation. There are no guarantee that these compounds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

ADC franchise: Our Pipeline, Preclinical data

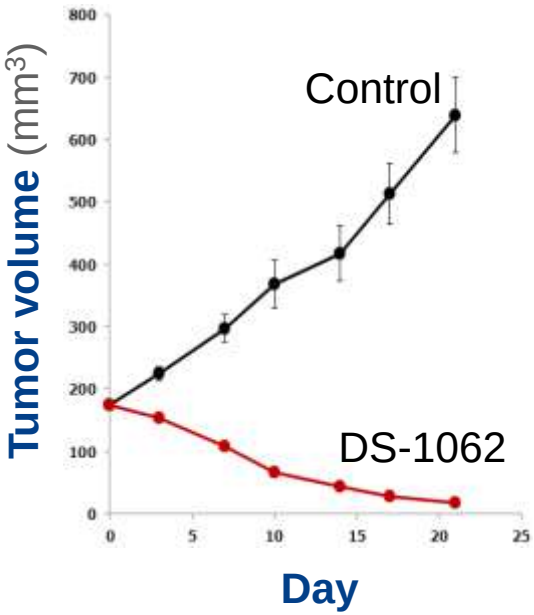
Triple negative breast cancer

HER3-ADC



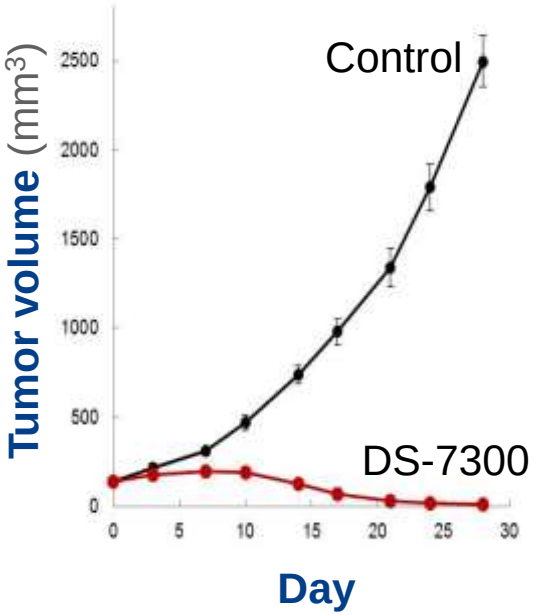
Pancreatic cancer

TROP2-ADC



NSCLC

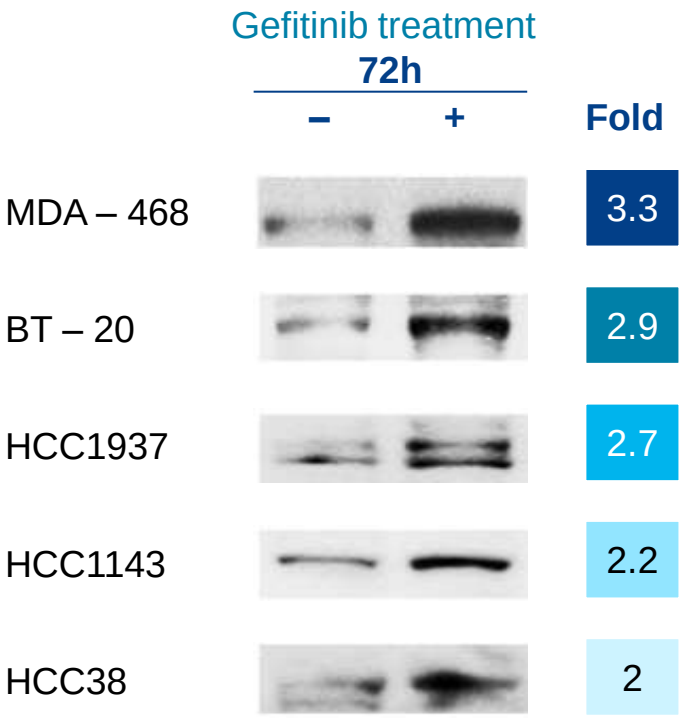
B7-H3-ADC



Source: Daiichi Sankyo Cancer Enterprise data on file

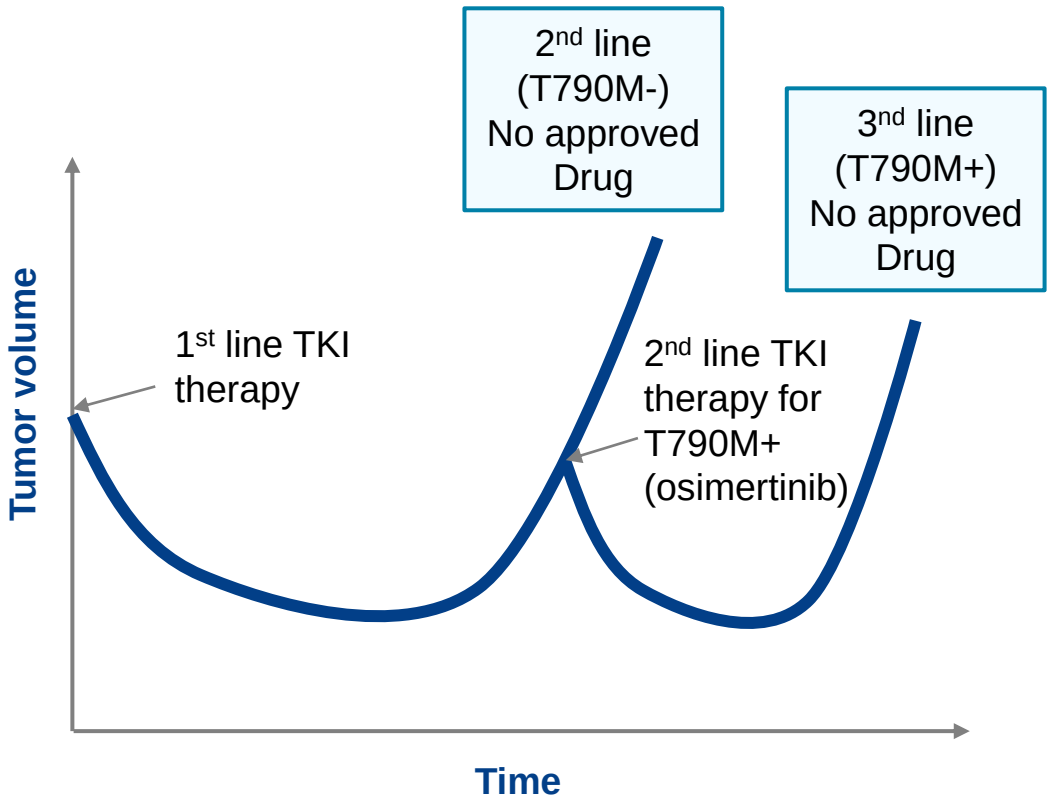
HER3-ADC (U3-1402): Potential in EGFRm NSCLC

HER3 expression after EGFR TKI treatment (in-vitro cell lines)



HER3 is upregulated by EGFR TKI therapy

EGFRm NSCLC patient journey



HER3-ADC has potential to address unmet need of patients who progress on current therapies

Source: Verma-N *et al.*, Cancer Res. 2016, Adapted from NCCN Guidelines

ADC franchise: Partnerships

Immuno-Oncology partnerships with our existing ADC assets

HER2-ADC

HER3-ADC

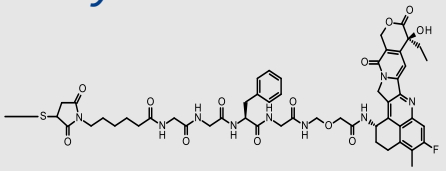
TROP2-ADC

B7-H3-ADC

I/O mechanisms (e.g., checkpoint inhibitors)

Partnerships to apply our ADC technology to **new antibodies and targets**

Our proprietary linker and novel payload

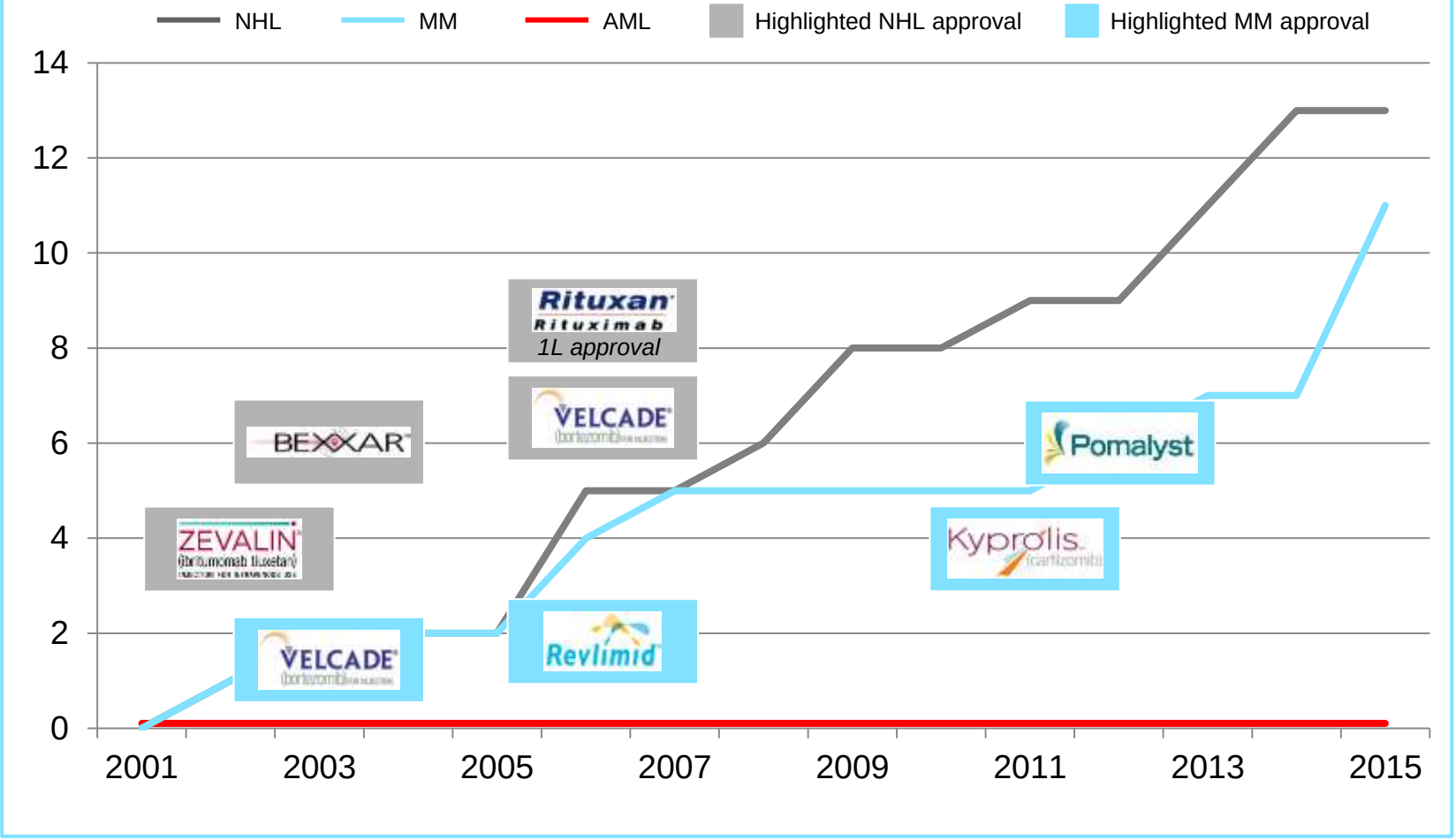


Additional targets

Contents

No US FDA approval in AML

Number of FDA approvals, since 2001



Source: National Cancer Institute, FDA, CenterWatch

Molecular subtyping creates new opportunities

AML

~40k new cases

- Each year in US, EU12, JP

Extremely poor prognosis

- 26% 5-year survival rate

Few treatment options

- Bridging to transplant an important lever to extend survival

FLT3-ITD AML

Common driver mutation

- ~25% of AML patients

Particularly aggressive

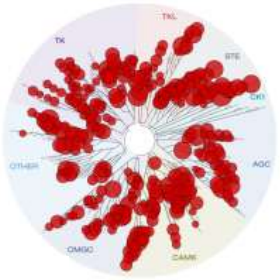
- **> 3 times more likely** to relapse at 2 years after transplant

Source: Leukemia & Lymphoma Society, NCCN Guidelines, Brunet-S *et al.*, J. Clin. Oncol. 2012; 30:735-741, Dohner-H *et al.*, NEJM 2015; 373:1136-1152

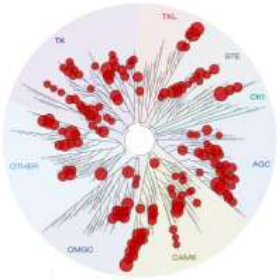
Quizartinib: Potential best-in-class FLT3 inhibitor

First-generation multi-kinase inhibitors

Lestaurtinib[1]



Midostaurin[1]

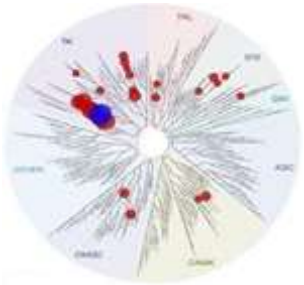


Limited responses in FLT3 AML, due to one or more of:

- Low potency
- Unfavorable PK profile
- Low selectivity
- Limited activity against blasts in bone marrow

Quizartinib

Quizartinib[1]



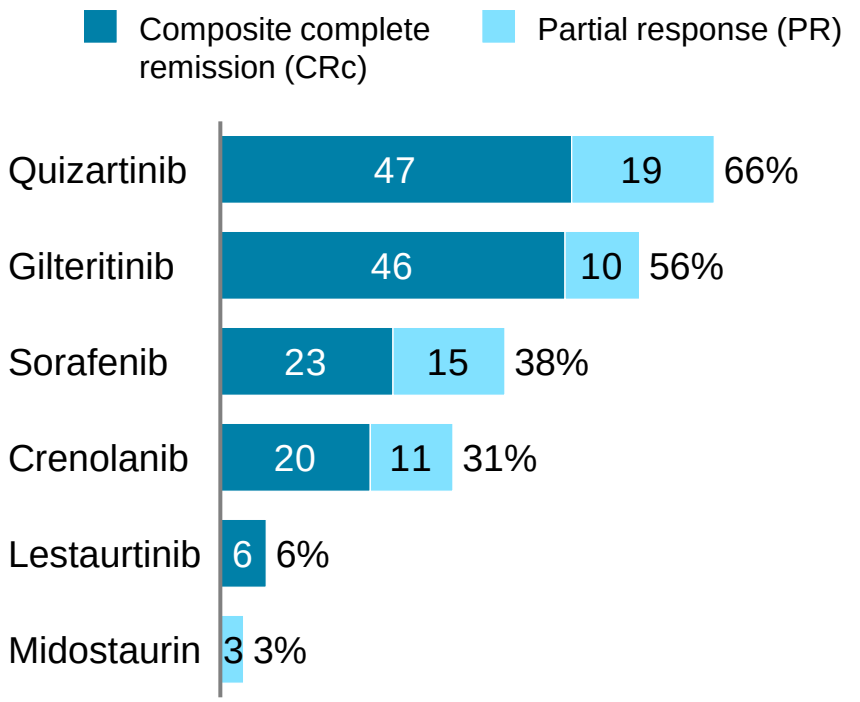
- High **potency** FLT3 inhibitor; also inhibits PDGFR, KIT
- Favorable **PK profile**
- High **selectivity** against panel of 402 kinases
- Complete and sustained inhibition of phospho-FLT3 **both in bone marrow blasts and peripheral blood**

1 Kinase interaction maps. Red circles indicate kinases bound, and circle size indicates binding affinity

Source: Pratz-K *et al.*, Blood 2010; 115:1425–1432, Adapted from Zarrinkar-P *et al.*, Blood 2009; 114:2984-2992

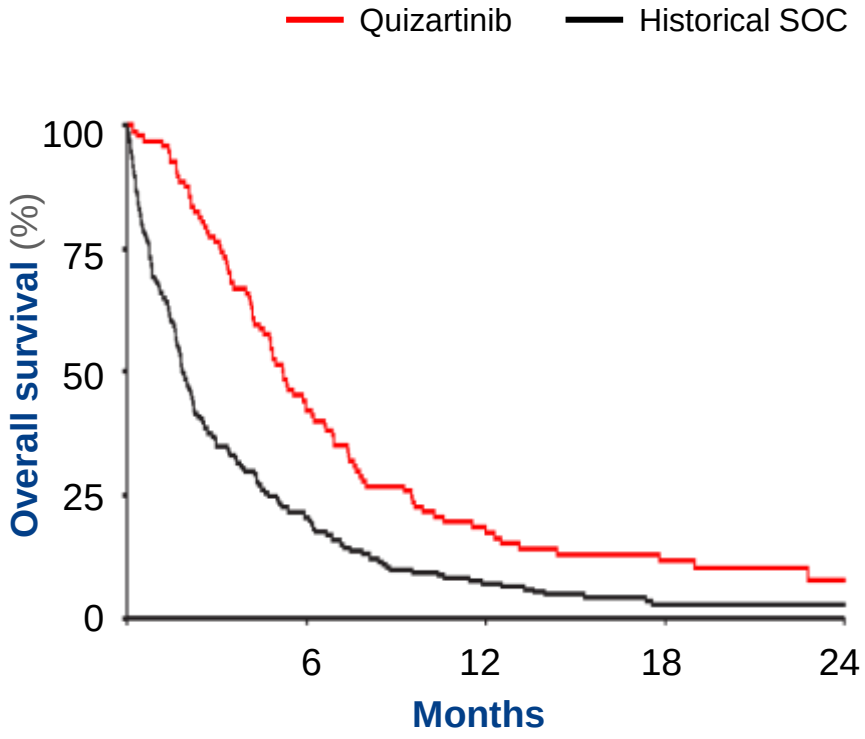
Relapsed/Refractory FLT3-ITD AML in fit patients: Promising efficacy

Overall response rate[1] to FLT3 inhibitors as single agent



Highest overall response rate among FLT3 inhibitors

Overall survival of Quizartinib (Ph. 2) vs. historical SOC[2]



More than double median OS (~5.7 months vs. ~2 months) compared with historical SOC

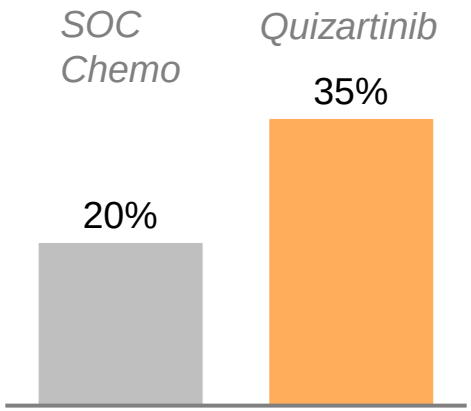
1. ORR = CRc + PR 2. Historical analysis of 183 patients with same criteria as Quizartinib trial (1990-2013)

Source: Hills-R *et al.*, ASH 2015 abstract 2557, Cortes-J *et al.*, ASH 2013 abstract 494, Smith-BD *et al.*, Blood 2004; 103(10):3669-3676, Metzelder-SK *et al.*, Leukemia 2012; 26:2353-2359, Fischer-T *et al.*, J. Clin. Oncol. 2010; 28:4339-4345, Cortes-J *et al.*, ASCO 2016 abstract 7008, Altman-J *et al.*, ASH 2015 abstract 321

Relapsed/Refractory FLT3-ITD AML in fit patients:
Potential to bridge to transplant

Bridge to transplant

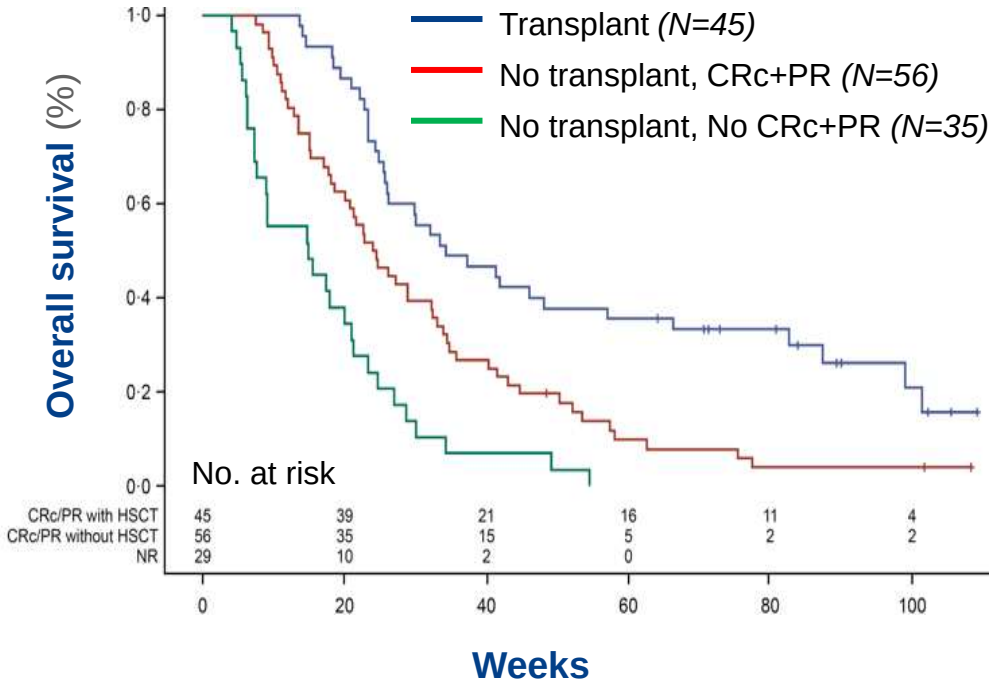
Percent bridged to transplant



FLT3 population	All FLT3 mutants	ITD(+) only
Line of care	After 1st relapse	After 2nd relapse

Nearly **doubles rate of transplant**

Overall survival by response to Quizartinib and subsequent transplant or no transplant (Phase 2, N=136)



Of the 35% of patients bridged to transplant, **~1/3 remained alive at 1 year**

Source: Levis-M *et al.*, Blood 2011; 117:3294-3301, Daiichi Sankyo Cancer Enterprise data on file

Quizartinib: Phase 3 trials in FLT3-ITD AML fit patients to change standard of care

Induction	Consolidation	Maintenance	Relapsed / Refractory

QuANTUM-FIRST STUDY

- Combination with SOC chemotherapy[1]
- First patient dosed October 2016

QuANTUM-R STUDY

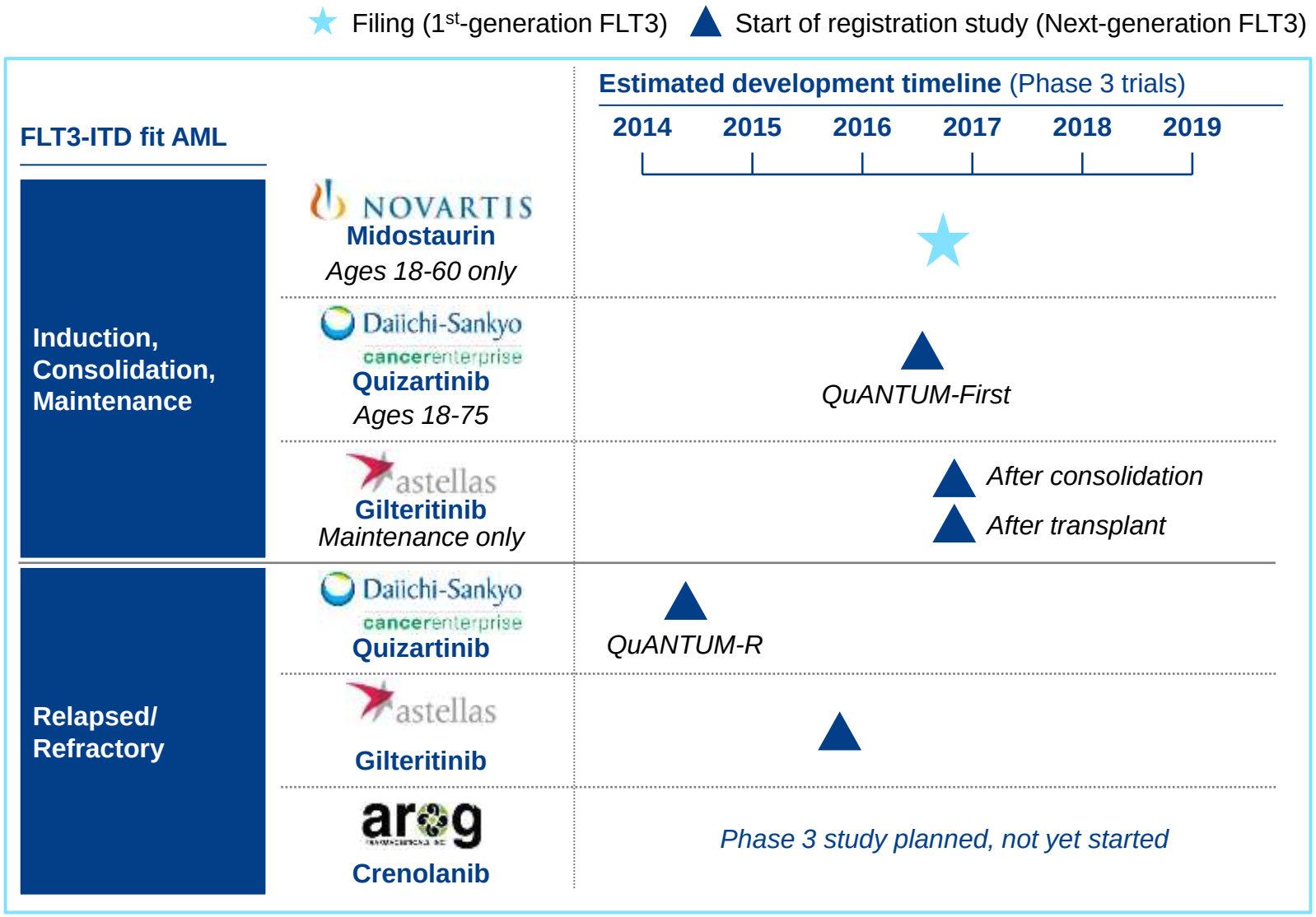
- Monotherapy
- Overall Survival
- Interim analysis planned H1 2017

Polyclonal disease → *Increase of FLT3-ITD clones* → *Addiction to FLT3-ITD*

Global pursuits

1. Induction (Cytarabine + Anthracycline + Quizartinib for 1-2 cycles); Consolidation (High dose Cytarabine + Quizartinib up to 4 cycles and/or HSCT); Maintenance (Quizartinib or Placebo up to 12 cycles)

Quizartinib: Development context

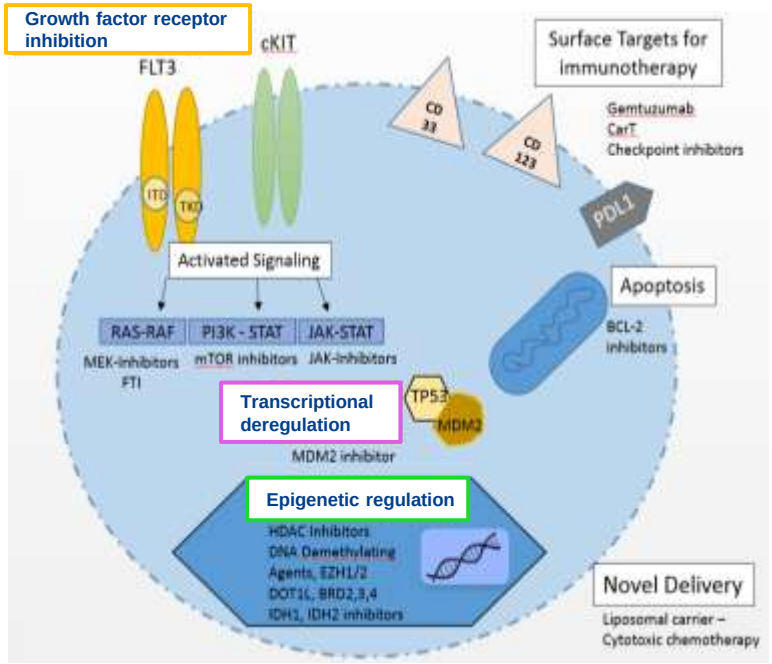


Source: Astellas R&D Day 2016, U.S. National Institutes of Health

AML franchise: Our pipeline

Clinical stage

Emerging classes of targets in AML



Developing 3 of 7 emerging classes of targets

	MoA (asset)	Pre-clinical	Phase 1	Registration trial
Growth factor receptor inhibition	FLT3 (Quizartinib)			
Transcriptional deregulation	MDM2 (DS-3032)			
Epigenetic regulation	BRD4 (PLX-51107)			
	EZH1/2 (DS-3201)			
	IDH1 (DS-1001)			

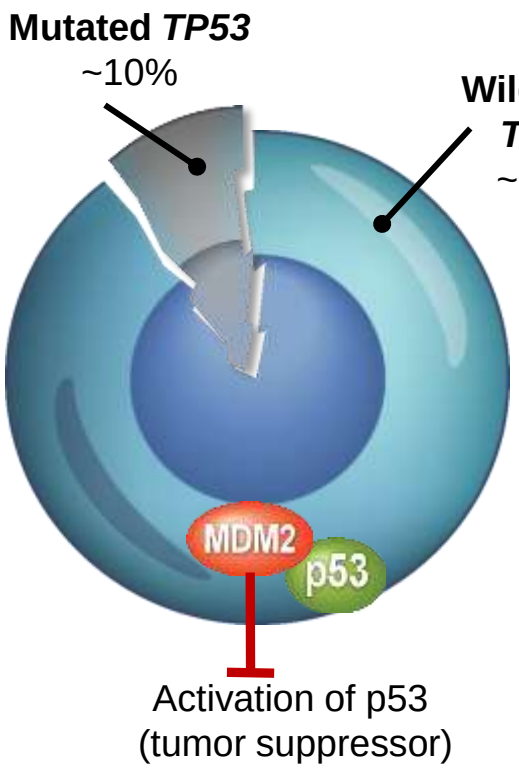
- Address emergence of **resistance**
- **Quicker development**
- **Access and pricing flexibility**

Source: Adapted from Dohner-H *et al.*, NEJM 2015; 373:1136-1152, Thol-F *et al.*, Blood 2015; 126:319-327, Khan *et al.*, Clin Can Res, 2012; Ramos-N, *et al.*, J. Clin. Med. 2015; 4:665-695, Isidori-A *et al.*, Can Res Frontiers 2016; 2:226-251

Note: 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.

AML franchise:
Re-activation of p53 by targeting MDM2 in AML and MDS

The Role of MDM2 in AML and MDS

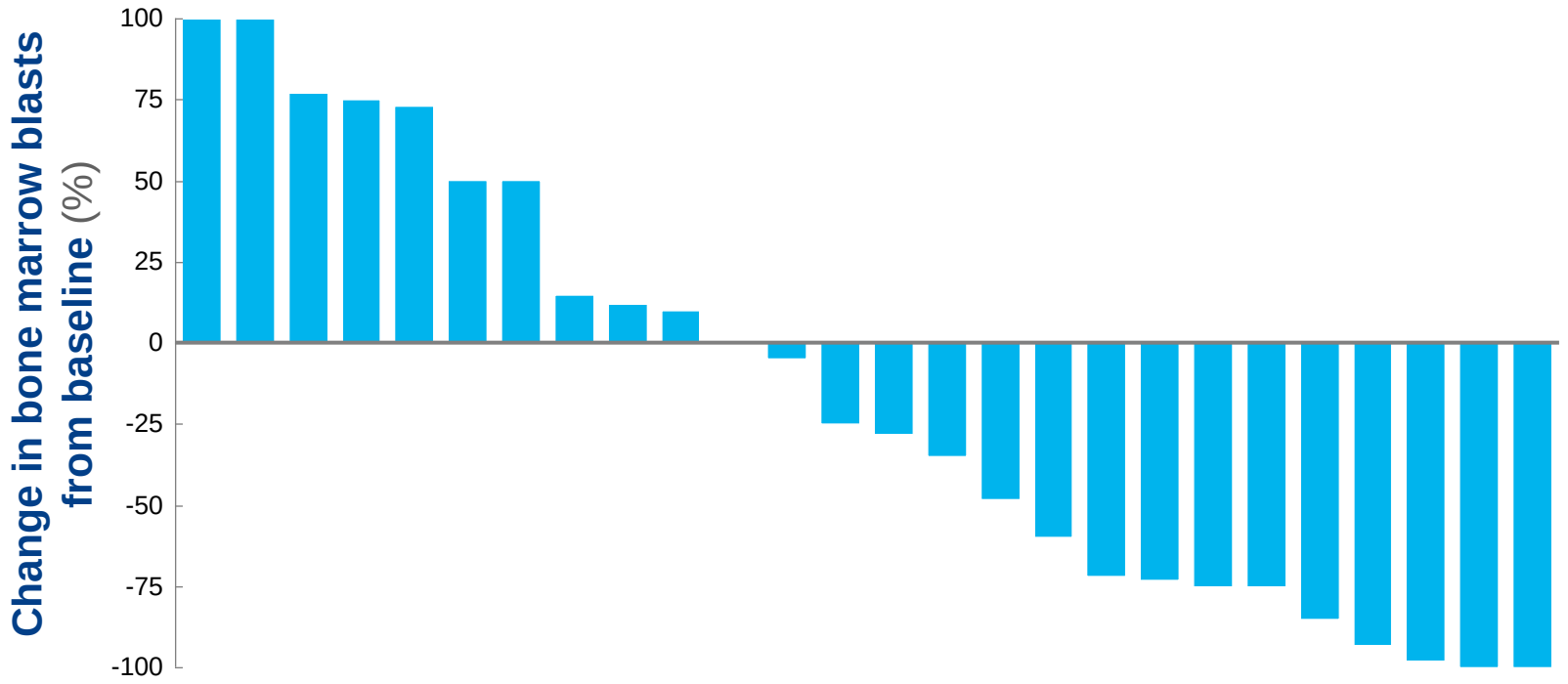


- ~90% wild-type TP53 in de novo AML/MDS
- p53 is downregulated by overexpression of MDM2
- DS-3032 is an small-molecule oral MDM2 inhibitor

Source: Wattel-E *et al.*, Blood 1994; 84:3148-3157, Nakano-Y *et al.*, Eur. J. Haematol. 2000; 65:23-31, Gamez-S *et al.*, J. Blood Disord. 2015; 2:1-8, Renneville-A *et al.*, Leukemia 2008; 22:915-931, Nakamaru-K *et al.*, Mol. Canc. Therapeut. 2015; 14(12 suppl 2):B5

MDM2 inhibitor (DS-3032): ASH 2016 data

Anti-tumor activity of monotherapy DS-3032 in R/R AML and MDS patients, N=26 (Phase 1)



Bone marrow blast reduction in ~60% of evaluable subjects

Source: DiNardo-N *et al.*, ASH 2016, abstract 593

AML franchise in summary

- AML has **high unmet need**
- Quizartinib has promising potential to **change SOC** for FLT3-ITD AML in fit patients
- AML franchise includes other **exciting early-stage assets**
- Daiichi Sankyo Cancer Enterprise is **well-positioned** in the changing AML landscape

Contents

Update on other late-stage programs

Pexidartinib (CSF-1R)

On track to market by 2019

TGCT (Phase 3)

- Additional safety measures implemented following cases of non-fatal, serious liver toxicity
- Proceeding to efficacy and safety endpoint evaluation

Combination with I/O

Multiple tumor types

- Dose escalation with pembrolizumab completed; Phase 1 dose expansion underway
- Other preclinical

Patritumab (HER3)

Awaiting data

Recurrent head and neck cancer (Phase 2)

- Combination with cetuximab and platinum
- Accrual ongoing (65/105 patients)

HER2+ breast cancer (Phase 2)

Tivantinib (c-MET)

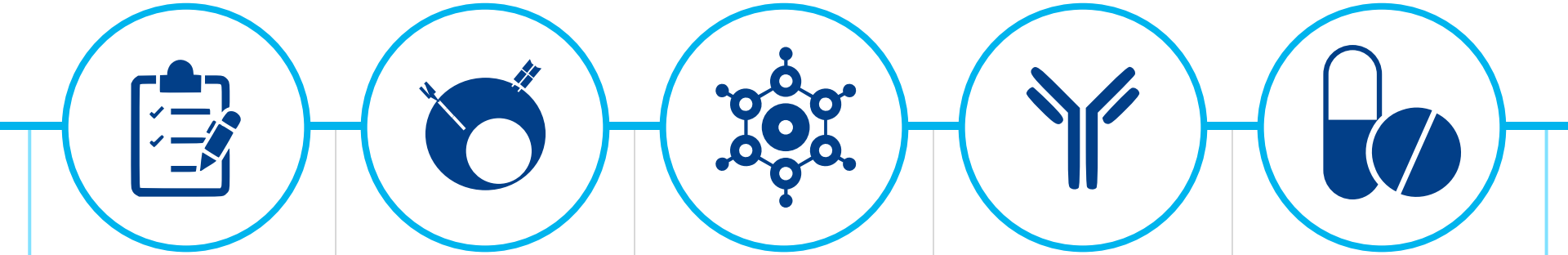
Awaiting data

Second-line HCC (Phase 3)

- Final **analysis in H1 2017**

Contents

5-Year Business Plan: DS-8201 opportunities



Fast to market	Low HER2 segments	Immuno-Oncology	ADC franchise	Market potential
Tracking for first submission in 2020 for breast cancer globally and gastric cancer in Japan	**Best-in-class** HER2 breast cancer and **first-in-class** low HER2 cancers	**'Partner of choice'** for I/O-resistant segments	Proprietary technology from our Japan labs with **broad platform potential**	Meaningfully contribute to Daiichi Sankyo **5-Year Business Plan**

Note: 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.

5-Year Business Plan: CE contribution

- **Commitment** to major transformation in **oncology**
- Innovation in **science** to deliver value for **patients**
- **Perfection** in selecting, designing, and **delivering** our portfolio
- ADC and AML **franchises** from our powerful research engines
- Strategic **investments** and **partnerships** to maximize value

Looking to the future

In approximately 6-12 months, we expect to provide

- **Progress update** toward 5-Year Business Plan
- **Longer term** view for Cancer Enterprise R&D

Contents

Colleagues available for questions

Glenn Gormley	Senior Executive Officer, Global Head of R&D
Antoine Yver	Executive Vice President, Global Head of Oncology R&D, Chair of Daiichi Sankyo Cancer Enterprise
Kouichi Akahane	Executive Officer, Head of Oncology Function, R&D Division
Gideon Bollag	CEO, Plexxikon
Arnaud Lesegretain	Vice President, Global Team Leader, Quizartinib and AML franchise
Yuki Abe	Senior Director, Biologics and Immuno-Oncology laboratories

Contact address regarding this material

Daiichi Sankyo Co., Ltd.
Corporate Communications Department
TEL: +81-3-6225-1126
Email: DaiichiSankyoIR@daiichisankyo.co.jp