TAKEDA ONCOLOGY

WE ASPIRE TO CURE CANCER

PHILIP ROWLANDS, PHD
Head, Oncology Therapeutic Area

ORIENTATION TO OUR ONCOLOGY R&D OVERVIEW

Focused Oncology R&D Strategy

- Building on foundational expertise in hematologic malignancies and a growing portfolio in lung cancer

Novel Discovery Strategy in Immuno-Oncology (I/O) and Advance in Cell Therapies

- Pursuing novel I/O targets and next-generation platforms with world class external partners
- Next-generation cell therapies will bring transformative potential to patients with cancer

Near Term Inflections

- FY2018-FY2020 will be highlighted by several submissions, approvals, pivotal trial starts, and novel assets entering clinical trials

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WE ASPIRE TO CURE CANCER

OUR MISSION

We endeavor to deliver novel medicines to patients with cancer worldwide through our commitment to science, breakthrough innovation, and passion for improving the lives of patients.

HEMATOLOGIC MALIGNANCIES

LUNG CANCER

IMMUNO-ONCOLOGY (I/O)

BUILDING ON THE TAKEDA ONCOLOGY FOUNDATION IN HEMATOLOGIC MALIGNANCIES

GROWING LEADERSHIP POSITION IN HEMATOLOGIC MALIGNANCIES

Next Generation I/O
TAK-573
TAK-981

MDS	AML
Phase 3	Phase 3
pevonedistat	alisertib

Lymphoma
ADCETRIS® brentuximab vedotin | for injection

Chronic Myeloid Leukemia
ICLUSIG® (ponatinib) tablets

Improving Patient Outcomes in Multiple Myeloma
VELCADE® (bortezomib)
NINLARO® (ixazomib) capsules

NINLARO® (ixazomib) capsules

RECENT PROGRESS AND NEXT STEPS

Current Status

Approved in 59 countries for Relapsed/Refractory Multiple Myeloma

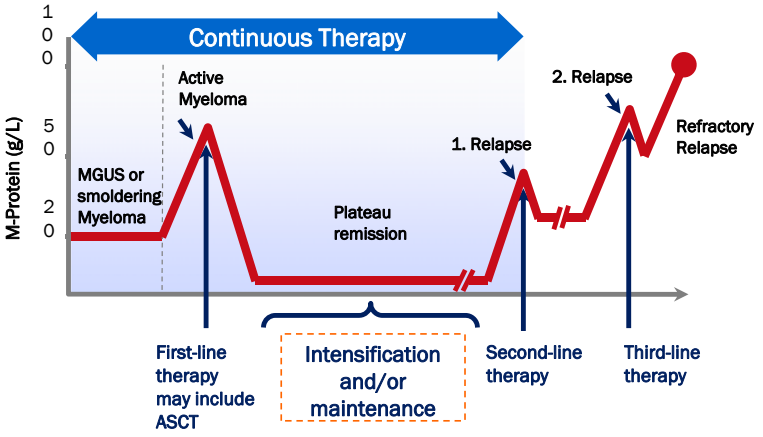
First Phase 3 maintenance readout (post-transplant)

Looking Forward

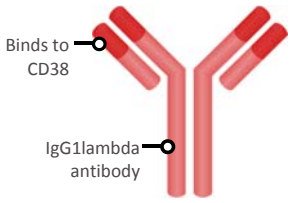
2019 Data Inflections:
MM2 (newly diagnosed)
MM4 (non-transplant maintenance)
AL1 (amyloidosis)
Evolution of real world evidence

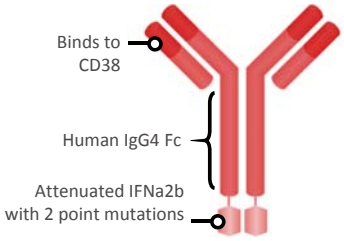
Ideal Maintenance Therapies in Multiple Myeloma:

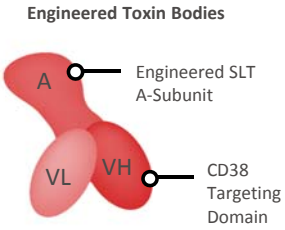
✓Easy to administer ✓Minimal toxicity ✓Maintain response



ADVANCE CD38 BIOLOGY FOR REFRACTORY MULTIPLE MYELOMA







TAK-079

- A fully human, anti-CD38 cytolytic IgG1lambda antibody
- Potent and selective reduction of plasmablasts and NK cells
- Potential for convenient subcutaneous delivery
- Currently in Phase 1 for refractory multiple myeloma

TAK-573

- Novel immuno-cytokine approach
- Potential to overcome toxicity of unmodified interferon α and realize the true benefit in oncology
- Compelling pre-clinical data; Phase 1 enrolling for patients with refractory multiple myeloma

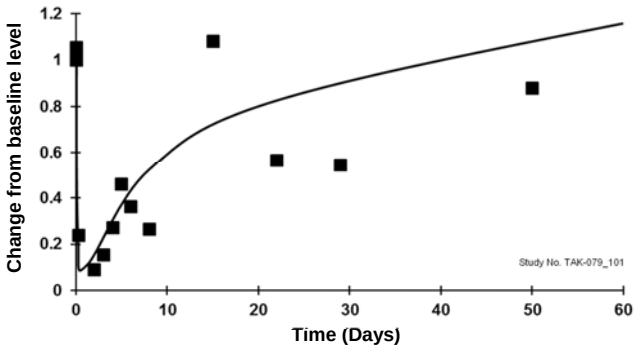
TAK-169

- 2nd generation Molecular Templates platform
- pM activity against CD38+ cells plus activity in daratumumab-resistant cells
- IND planned in 2019

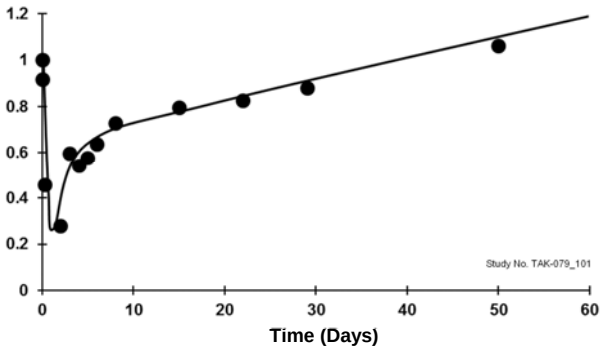
TAK-079: IMPROVING UPON FIRST GENERATION ANTI-CD38 mAb FOR REFRACTORY MULTIPLE MYELOMA PATIENTS

A potent anti-CD38 mAb administered as a low volume subcutaneous (SC) injection

Plasmablast depletion*



NK cell depletion*



* After a single SC injection of 0.6 mg/kg into healthy volunteers (n=6)

Novel pharmacokinetic properties enhance potency and enable convenient administration

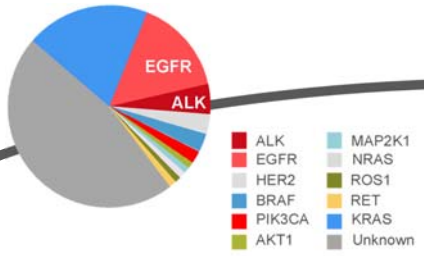
BRINGING NOVEL THERAPIES TO MDS AND AML

	PEVONEDISTAT IN HR-MDS	ALISERTIB IN AML
Unmet Need	**1 in 3 MDS** patients will progress to AML Overall **survival 1-1.5 years** in the relapse setting **No new therapies** in the last decade	AML: Current **5 year survival ~30%** Transplant remains only curative option
Clinical Status	PANTHER **Phase 3 trial initiated in 2018**	American Society of Hematology **ASH 2018: Phase 2 Data Submitted** • Alisertib is a novel, first in class mechanism for front-line AML in combination with chemotherapy
Next Steps	FDA • Potential accelerated filing based upon Phase II data in 2019	• Exploring initiation of Phase 3 registration enabling study in frontline AML in 2019

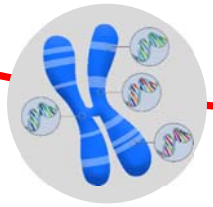
American Cancer Society – Survival Statistics for Myelodysplastic Syndromes, Tamamyan et al. *Critical Reviews in Oncology/Hematology* 2017, Yeung et al. *Biology of Blood and Marrow Transplantation* 2015, Courville et al. *BMC* Clinical *Pathology* 2017.

DUAL STRATEGY IN LUNG CANCER: TARGETING DRIVER MUTATIONS AND NEXT-GENERATION I/O

Molecularly-Targeted Precision Therapy



Tumor Mutational Burden



CURRENT PORTFOLIO

ALUNBRIG™ BRIGATINIB 30 mg TABLETS

TAK-788

EMERGING ASSETS

Sapanisertib (TAK-228)

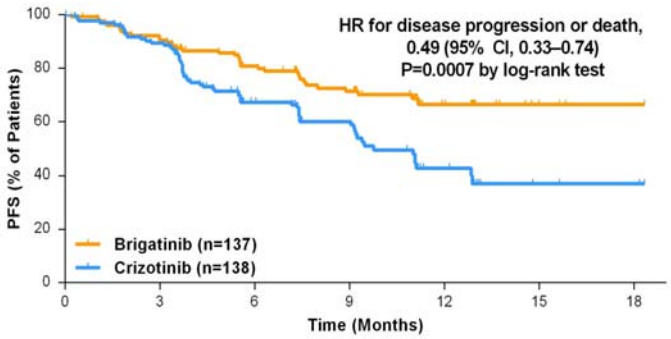
Next-generation kinase inhibitors

NEXT GENERATION TARGETS AND PLATFORM

SHATTUCK LABS

Crescendo biologics

ALUNBRIG ALTA 1L— POTENTIAL BEST-IN-CLASS PROFILE IN ALK+ NSCLC

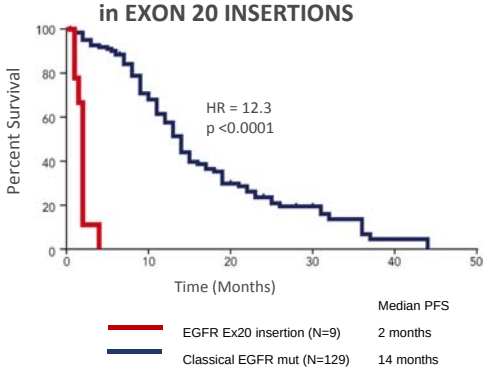


- Clear superiority to crizotinib and early separation in PFS curve
- Primary endpoint (PFS) hazard ratio is 0.49
- Risk/benefit profile consistent with the expectations of a best-in-class therapy

Camidge R., WCLC 2018

TAK-788: ADDRESSING UNMET NEED IN EGFR EXON20 MUTATIONS

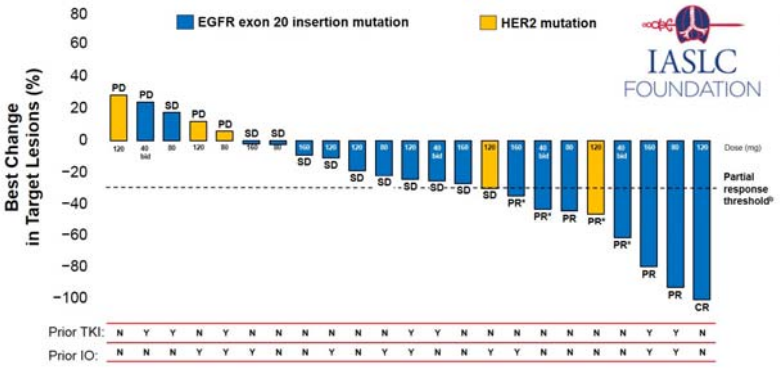
RESPONSE TO CURRENT EGFR TKIs in EXON 20 INSERTIONS



- Overall survival <6 months for exon 20 insertions
- Current therapies ineffective for these mutations

Robichaux et al. WCLC 2016

ANTITUMOR ACTIVITY IN ALL PATIENTS TREATED WITH TAK-788 AT A TOTAL DAILY DOSE OF ≥80–160 mg[a]



CR, complete response; PD, progressive disease; PR, partial response; SD, stable disease
[a] Includes 40 mg bid, 80 mg qd, 60 mg bid, 120 mg qd, and 160 mg qd dose groups
[b] Per RECIST v1.1
* Response awaiting confirmation

Neal et al., WCLC 2018

Expected to begin registration-enabling Phase 2 trial in FY2018

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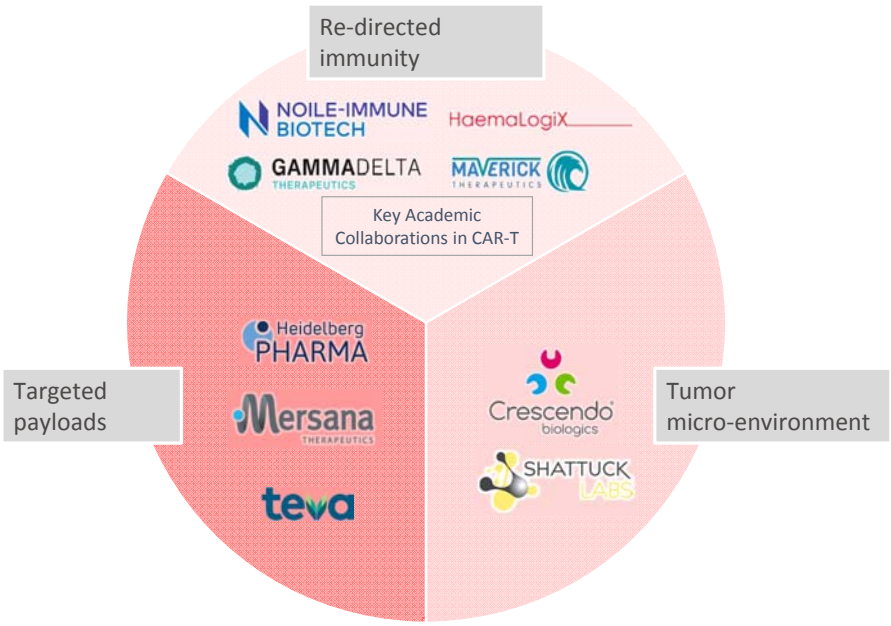
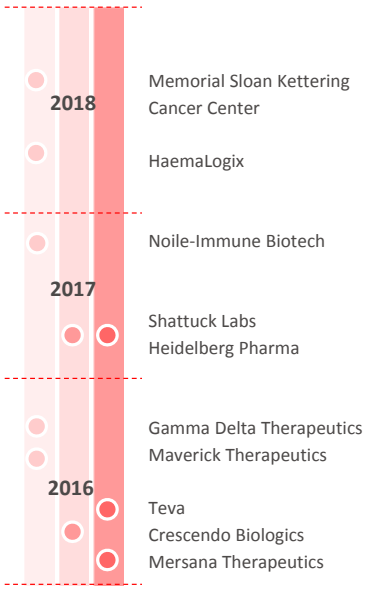
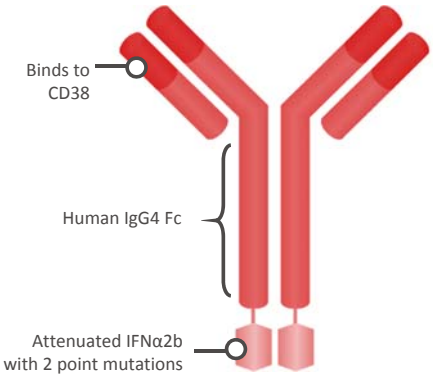
WORLD CLASS PARTNERS FUELING THE I/O PIPELINE

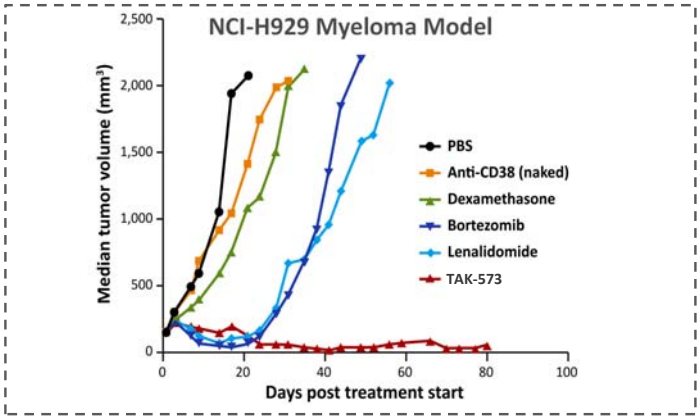




TAK-573: BRINGING A NOVEL IMMUNO-CYTOKINE APPROACH TO MULTIPLE MYELOMA

Targeted delivery of attenuated interferon α to CD38 - a known target in multiple myeloma





Highly compelling pre-clinical data with TAK-573 in a core area of our clinical development expertise in multiple myeloma
Ph 1 currently enrolling for patients with refractory multiple myeloma

Pogue et al. PLOS ONE 2016

TAKEDA ONCOLOGY AIMS TO BECOME A LEADER IN CELL THERAPIES

TRANSFORMATIVE POTENTIAL UTILIZING NEXT GENERATION CELL THERAPY PLATFORMS

GAMMADELTA THERAPEUTICS

NOILE-IMMUNE BIOTECH

γ-CiRA (Takeda-CiRA) Joint Program Framework

Key Academic Collaborations in CAR-T

Cell therapy engine for Takeda R&D

FY2019: Differentiated CAR-Ts in Phase I
FY2020+: Other Hematologic Malignancy and Solid Tumor CAR-Ts

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AN INNOVATIVE PIPELINE ENHANCED WITH EXTERNAL PARTNERSHIPS

	Discovery/preclinical*	Phase 1	Phase 2	Phase 3	Approved**
Hematologic Malignancies	Mtem: TAK-169 CD38 SLTA	TAK-079 RR MM, SLE CD38 *mAB*	TAK-659 Lymphoma SYK, FLT-3 *Small Molecule* Alisertib AML AURORA A *Small Molecule*	Pevonedistat HR-MDS/AML NEDD 8 *Small Molecule*	NINLARO Amyloidosis, ND MM, R/R MM dara combo, R/R MM Ninlaro/dex,, Maint. MM post-SCT PROTEASOME *Small Molecule* Incyte / Ariad: ICLUSIG 2nd-Line Chronic Phase CML, Ph+ ALL BCR-ABL *Small Molecule* Seattle Genetics: ADCETRIS FL HL, FL PTCL, CTCL (JP) R/R HL (CN), sALCL (CN) CD30 *mAB ADC*
Lung Cancer		TAK-788 NSCLC Exon 20 EGFR/HER2 *Small Molecule*	Sapanisertib Endometrial Cancer Lung Cancer mTORC1/2 *Small Molecule*		ALUNBRIG 2L post-crizotinib ALK+NSCLC (EU, JP, CN), FL ALK+ NSCLC ALK *Small Molecule*
Immuno-Oncology	Shattuck Labs: TAK-252 PD-1/OX40L TAK-676 STING	teva: TAK-573 RR MM CD38 Attenukine *mAB Fusion Protein* TAK-981 SUMOYLATION *Small Molecule*			
Solid Tumors		Mersana: TAK-522 Solid Tumors HER2 *mAB ADC* TAK-164 Solid Tumors GCC *mAB ADC*	TAK-931 Solid Tumors CDC7 *Small Molecule*	Myovant Sciences: relugolix Prostate Cancer (JP) GnRH antagonist *Small Molecule*	TESARO: niraparib*** Ovarian Cancer. *PARP 1/2* *Small Molecule* Exelixis: cabozantinib*** 1L/2L RCC, 2L HCC *Multi-RTK* *Small Molecule*

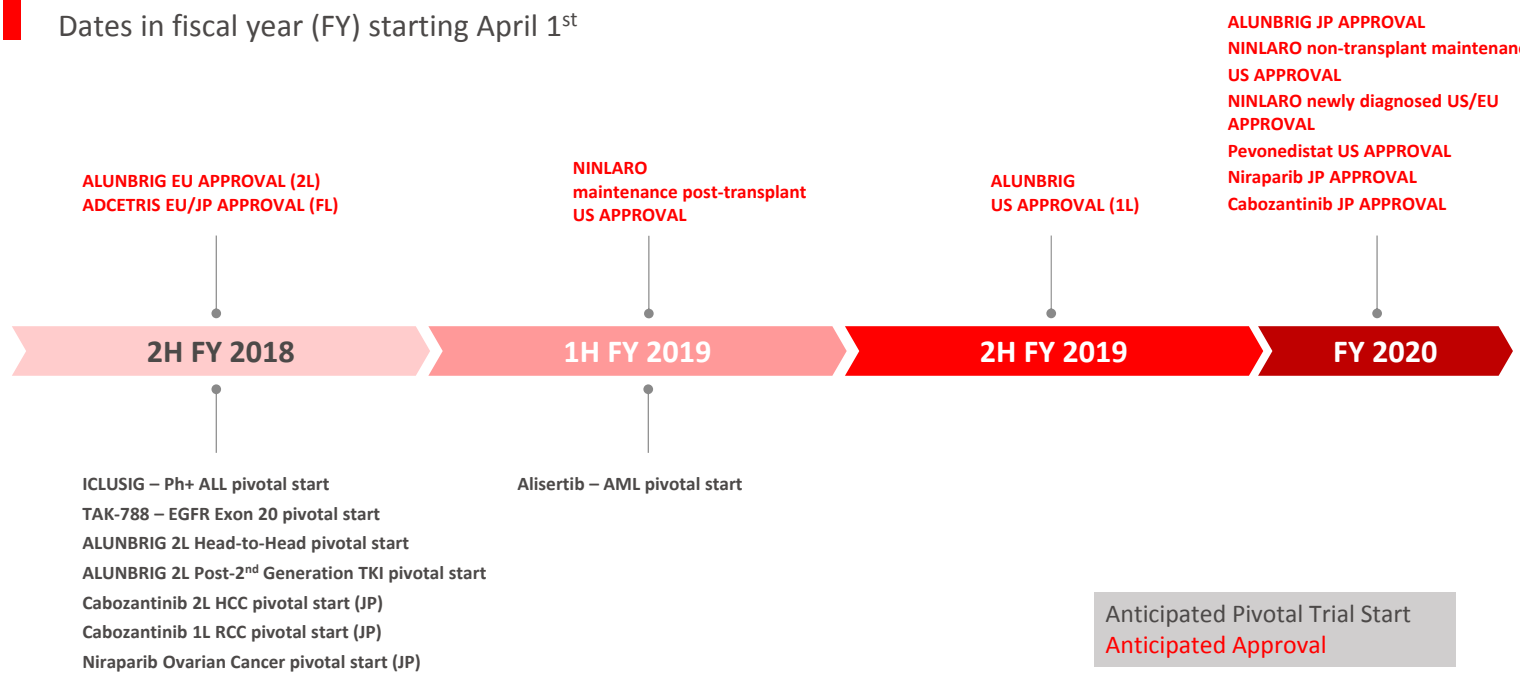
Pipeline as of September 23, 2018 * *Assets shown in discovery/preclinical and Phases 1-3 explicitly refer to new molecular entities*
** *Some with active development seeking new or supplemental indications, or approvals in new territories*
*** *In pivotal trial for Japan approval*

External collaboration

Note: Takeda holds the right to develop and commercialize Adcetris in ex-US/Canada. For Niraparib and Cabozantinib, Takeda holds the right to develop and commercialize in Japan and selected Emerging Markets

EXPECTED KEY ONCOLOGY PORTFOLIO INFLECTION AND MILESTONES

Dates in fiscal year (FY) starting April 1st



Anticipated Pivotal Trial Start
Anticipated Approval

Projected timelines as of September 23, 2018, subject to change

CONCLUSION

1 Focused on delivering the next approvals for NINLARO, ALUNBRIG, and pevonedistat

2 Expanding transformative treatment options in our focus areas of hematologic malignancies and lung cancer with alisertib, TAK-788 and novel CD38 targeted mechanisms

3 Harnessing the power of external innovation with a diverse set of world-class partnerships, accelerating novel therapies into the clinic