A CURATIVE-INTENT IMMUNO-ONCOLOGY PIPELINE IS TAKING SHAPE

**WAVE 1**
NMEs that complement our global brands

- **Hematologic Malignancies**
  - TAK-924
    - FY21 target approval
  - TAK-007
    - FY23 target approval

- **Lung Cancer & Solid Tumors**
  - TAK-788
    - FY21 target approval

**WAVE 2**
Leading platforms in immuno-oncology and cell therapies
PARTNERSHIPS DRIVE OUR DIFFERENTIATED EARLY CLINICAL PIPELINE

**Unique Partnership Model**
- Innovative, disruptive platforms
- Agility in 'open lab' model

**Differentiated Portfolio**
- Harness innate immunity
- Eye towards solid tumors

THE FIRST BREAKTHROUGHS IN CANCER IMMUNOTHERAPY TARGET T CELLS

**T CELL CHECKPOINT INHIBITORS**
- PD-1
- CTLA-4

**FIRST-GEN CAR-Ts**

Adapted from Chen & Mellman, Immunity 2013
OUR FOCUS IS ON NOVEL MECHANISMS IN THE CANCER-IMMUNITY CYCLE

1. Innate immuno-modulation
   - Novel scaffold immune checkpoint platforms
   - Next-gen cell therapy & immune engager platforms

2. Adapted from Chen & Mellman, Immunity 2013

EMERGING STRENGTH IN TARGETED INNATE IMMUNE MODULATION

<table>
<thead>
<tr>
<th>PLATFORM</th>
<th>PARTNER</th>
<th>MECHANISM-OF-ACTION</th>
<th>PROGRAMS</th>
<th>PRE-CLINICAL</th>
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<td>TAK-573 (CD38-Attenukine™)</td>
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</table>

ADCC = Antibody-dependent cellular cytotoxicity

= first-in-class
ATTENUKINE™ PLATFORM ELICITS BOTH DIRECT TUMOR KILL AND IMMUNE ACTIVATION

TARGETED ATTENUATED TYPE I IFN PAYLOAD

TAK-573

Binds CD38

Human IgG4 Fc

Attenuated IFNα2b

Immunomodulation in preclinical models
Includes CD8+ T cell migration / activation

NEXT-GEN ATTENUKINE™

Binds innate immune target

Attenuated IFNα2b

TAK-573 POM IN ONGOING PHASE 1 R/R MM STUDY

Activation of CD8+ T cells in bone marrow

Baseline

CD8+ T cells

Activation Marker (CD69+)

Cycle 1 Day 16

18.4%

Cycle 2 Day 2

28.8%

EXPECTED MILESTONES (FY)

Ph1 FPI in solid tumors

Ph1b MM (incl. combinations)

ATTENUKINE™ PLATFORM MECHANISM-OF-ACTION PROGRAMS

PRE-CLINICAL PH 1

Humbody Vh

Crescendo Biologics

Concept 1

Concept 2

Agonist_redirected checkpoints

SHATTUCK

TAK-252 / SL-279352 (PD1-Fc-OX40L)

TAK-254 / SL-115154 (CSF1R-Fc-CD40L)

HIGH UNMET NEED

Current checkpoint modulators fail to improve overall survival in majority of patients

OUR DIFFERENTIATED APPROACH

New classes of checkpoint inhibitors designed to increase breadth and depth of responses

PLATFORM PARTNER MECHANISM-OF-ACTION PROGRAMS

Vh = Variable heavy domain

= first-in-class

Current checkpoint modulators fail to improve overall survival in majority of patients

New classes of checkpoint inhibitors designed to increase breadth and depth of responses

Humbody Vh

Crescendo Biologics

Concept 1

Concept 2

Agonist_redirected checkpoints

SHATTUCK

TAK-252 / SL-279352 (PD1-Fc-OX40L)

TAK-254 / SL-115154 (CSF1R-Fc-CD40L)
BRINGING 5 NOVEL CELL THERAPY PLATFORMS TO THE CLINIC BY THE END OF FY20

HIGH UNMET NEED
Current CAR-T therapies have significant challenges & fail to address solid tumors

OUR DIFFERENTIATED APPROACH
Leverage novel cell platforms & engineering to address shortcomings in liquid & solid tumors

INNATE IMMUNE PLATFORMS
- Multiple mechanisms of tumor killing
- ‘Off-the-shelf’
- Utility in solid tumors

Cancer cell death

NK & \( \gamma \delta \) T cells
Innate tumor sensors & effectors
Engineered CAR
Fc-mediated killing

A NETWORK OF TOP INNOVATORS IS FUELING TAKEDA’S CELL THERAPY ENGINE

CUTTING-EDGE ENGINEERING & CELL PLATFORMS

- IPSC expertise
- \( \gamma \delta \) T cell platform
- Armored CAR-Ts
- Next-gen CARs
- IPSC CAR-Ts
- CAR-NK platform

Dr. Sadelain is a co-inventor on patents relative to next-gen CARs, intellectual property that MSK has licensed to Takeda. As a result of these licensing arrangements, Dr. Sadelain and MSK have financial interests related to these research efforts.
TAKEDA IS EMBARKING ON A TRANSFORMATIVE CAR-NK PARTNERSHIP THAT COULD ENTER PIVOTAL TRIALS IN 2021

**NK CAR Platform**
- Multiple mechanisms of tumor killing
- Potentiation of innate & adaptive immunity

**Cancer cell**
- Activating NK receptor
- IL-15

**FOUR NOVEL, OFF-THE-SHELF CAR-NK THERAPIES IN DEVELOPMENT**

**PATIENT VALUE PROPOSITION**
- Rapid and deep responses with a short-time-to-treatment, safe, off-the-shelf CAR-NK available in outpatient & community settings

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<tbody>
<tr>
<td>CAR-NK (allo cord blood)</td>
<td>MD Anderson Cancer Center Dr. Katy Rezvani</td>
<td>Non-autologous NK cell therapy</td>
<td>TAK-007 (CD19 CAR-NK) BCMA CAR-NK Platform expansion</td>
<td>= first-in-class</td>
<td></td>
</tr>
</tbody>
</table>

**PLATFORM VALUE INFLECTIONS**

<table>
<thead>
<tr>
<th>FY</th>
<th>Programs</th>
<th>Preclinical</th>
</tr>
</thead>
<tbody>
<tr>
<td>2H 2020</td>
<td>Ongoing maturation of clinical data: Efficacious dose, durability, partial vs. full allo, cryopreserved product</td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>Manufacturing process complete</td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td>Pivotal trials in r/r DLBCL / CLL / Indolent NHL BLA filing</td>
<td></td>
</tr>
</tbody>
</table>

- **CLL** = Chronic lymphocytic leukemia
- **DLBCL** = Diffuse large B-cell lymphoma
- **iNHL** = Indolent non-Hodgkin’s lymphoma

*Estimated number of patients projected to be initially eligible for treatment in G7 markets, subject to regulatory approval


DRAMATIC COMPLETE RESPONSE IN FIRST PATIENT TREATED

47-YEAR OLD MALE WITH RELAPSED TRANSFORMED DOUBLE-HIT (C-MYC / BCL-2) DLBCL

Baseline scan
Day 30 post CAR19-NK

KINETICS OF CAR-NK VERSUS ENDOGENOUS T AND B CELLS IN PERIPHERAL BLOOD

61-YEAR OLD MALE CLL/RICHTER’S TRANSFORMATION
(5 PRIOR LINES OF THERAPY)

Baseline scan
Day 30 post CAR19-NK

CR in Richter’s; SD in CLL

60-YEAR OLD FEMALE WITH CLL / ACCELERATED CLL
(5 PRIOR LINES OF THERAPY)

Baseline scan
Day 30 post CAR19-NK

Data from Dr. Katy Rezvani, MD Anderson Cancer Center

CLL = Chronic lymphocytic leukemia  CR = Complete response  SD = Stable disease

Data from Dr. Katy Rezvani, MD Anderson Cancer Center
CAR-NK CELLS PERSIST IN PATIENTS AND DO NOT TRIGGER CYTOKINE RELEASE SYNDROME (CRS)

CAR-NK CELLS PERSIST UP TO 4 MONTHS POST INFUSION

IL-6 LEVELS POST CAR-NK INFUSION DO NOT INDICATE CRS

CAR-NK EFFICACY & TOXICITY TREATING MULTIPLE DIAGNOSES

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Lines of Treatment</th>
<th>HLA Match</th>
<th>CRS / Neurotox</th>
<th>Complete Response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dose Level 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DLBCL - Relapsed transformed double-hit</td>
<td>3</td>
<td>Partial match</td>
<td>None</td>
<td>✓</td>
</tr>
<tr>
<td>DLBCL - Refractory</td>
<td>7</td>
<td>Partial match</td>
<td>None</td>
<td>PD</td>
</tr>
<tr>
<td>CLL</td>
<td>4</td>
<td>Partial match</td>
<td>None</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Dose Level 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLL</td>
<td>4</td>
<td>Partial match</td>
<td>None</td>
<td>✓</td>
</tr>
<tr>
<td>CLL/Richter’s transformation</td>
<td>5</td>
<td>Partial match</td>
<td>None</td>
<td>✓ * Richter’s</td>
</tr>
<tr>
<td>CLL/Accelerated CLL</td>
<td>5</td>
<td>Partial match</td>
<td>None</td>
<td>✓</td>
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<tr>
<td><strong>Dose Level 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DLBCL - Refractory</td>
<td>11</td>
<td>Partial match</td>
<td>None</td>
<td>✓</td>
</tr>
<tr>
<td>DLBCL - Relapsed transformed double-hit</td>
<td>4</td>
<td>Partial match</td>
<td>None</td>
<td>✓</td>
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<tr>
<td>Follicular lymphoma - Relapsed</td>
<td>4</td>
<td>Mismatch</td>
<td>None</td>
<td>PD</td>
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<td>Follicular lymphoma - Relapsed</td>
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<td>Mismatch</td>
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CRS = Cytokine Release Syndrome
*Turtle et al. 2017
Data from Dr. Katy Rezvani, MD Anderson Cancer Center

Data from Dr. Katy Rezvani, MD Anderson Cancer Center

CRS = Cytokine release syndrome
DLBCL = Diffuse large B-cell lymphoma
ASCT = Autologous stem cell transplant
HLA = Human leukocyte antigen
PD = Progressive disease
*Complete response for Richter’s
FAST-TO-CLINIC CELL THERAPY ENGINE WILL MAXIMIZE LEARNINGS ON MULTIPLE ‘DISRUPTIVE’ PLATFORMS

5 CLINICAL-STAGE PROGRAMS EXPECTED BY END OF FY20

FY19

TAK-007
Off-the-shelf CAR-NK product
MD Anderson Cancer Center

TAK-102
Cytokine + chemokine armed CAR-T
NOILE-IMMUNE BIOTECH

CD19 1XX-CAR-T
Next-gen CART signaling domain
Memorial Sloan Kettering Cancer Center

GDX012
Gamma-delta T cells
GAMMADELTA THERAPEUTICS

GCC CAR-T
Colorectal Cancer
Takeda

FY20

FY21+:
Other cell therapy candidates

A RICH AND POTENTIALLY TRANSFORMATIVE EARLY CLINICAL ONCOLOGY PIPELINE

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<td>Co-inhibition &amp; co-stimulation</td>
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<tr>
<td>Shiga-like toxin A</td>
<td>AVANIR</td>
<td>Novel cytotoxic payload</td>
<td>TAK-169 (CD38-SLTA)</td>
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<tr>
<td>IGN toxin</td>
<td>IMMUNO-GEN</td>
<td>Solid tumor-targeted ADC</td>
<td>TAK-164 (GCC-ADC)</td>
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<tr>
<td>Conditional T cell engagers</td>
<td>MAVERICK</td>
<td>Novel solid tumor platform</td>
<td>MVC-101 (EGFR COBRA™)</td>
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<tr>
<td>Cell therapy platforms</td>
<td>GAMMADELTA</td>
<td>Off-the-shelf cell therapies</td>
<td>TAK-007 (CD19 CAR-NK)</td>
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UNDISCLOSED TARGETS

= first-in-class

Hematology
Solid tumors
NME MILESTONES ACHIEVED IN FY19 AND LOOKING AHEAD TO OTHER POTENTIAL MILESTONES\(^1\) THROUGH FY20

**PIVOTAL STUDY STARTS, APPROVALS**

<table>
<thead>
<tr>
<th>1H FY 2019</th>
<th>2H FY 2019</th>
<th>1H FY 2020</th>
<th>2H FY 2020</th>
</tr>
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<tr>
<td>TAK-925 EoD POC</td>
<td>PEVONEDISTAT EoD POC</td>
<td>TAK-788 Ph 3 start</td>
<td>TAK-721 EoD Approval</td>
</tr>
<tr>
<td>TAK-721 EoD</td>
<td>TAK-924 Ph 3 data (induction)</td>
<td>TAK-573 POC</td>
<td>TAK-620 Ph 3 data</td>
</tr>
<tr>
<td>TAK-101 EoD POC</td>
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**KEY DATA READOUTS**

1. Potential key milestone dates as of November 14, 2019. The dates included herein are estimates based on current data and are subject to change.
2. Potentially registration enabling.

**SUMMARY**

1. **Total transformation of preclinical & early clinical pipeline**
2. **Differentiated opportunities in IO leveraging innate immunity & cell therapies**
3. **Multiple near-term catalysts informing momentum towards solid tumors**