

# Mitsubishi Tanabe Pharma Corporation Business Briefing



## *Open Up the Future*

**December 7, 2016**

**Masayuki Mitsuka**  
**President and Representative Director**

# Agenda

---

## ■ Overview of Medium-Term Management Plan 16–20

## ■ Medium-Term Management Plan 16–20 Achievements and Progress in FY2016

### 1. Maximizing Pipeline Value

- Main pipelines with approval targets
- Status of key pipelines
- Efforts toward generating 10 late-stage development compounds

### 2. Strengthening IKUYAKU and Marketing

- Toward ¥300.0 bilion domestic sales with new drugs and priority products sales ratio of 75%
- Efforts toward strengthening sales functions to achieve ¥300.0 billion domestic sales
- Radicut ALS

### 3. Accelerating U.S. Business Development

- Toward achieving the goal for US business (Steps 1, 2, 3)

### 4. Reforming Operational Productivity

## ■ Toward achieving objectives of Medium-Term Management Plan 16–20

# Overview of Medium-Term Management Plan 16–20

# Overview of Medium-Term Management Plan 16–20

## Challenges That Will Be Faced During the Medium-Term Management Plan 16–20

### Domestic Business

- ▶ Reevaluation of NHI drug price system
- ▶ Progress of measures to promote use of generics (target: 80%)

### Overseas Business

- ▶ Advance into the U.S., the largest growth market (growth rate: 5% - 8%\*)
- ▶ Gilenya cliff

\* \*Source: IMS Global Outlook for Medicines Through 2018 (Nov 2014)



**With the domestic business environment becoming increasingly severe and competition to acquire new drug candidates intensifying around the world, we must overcome the Gilenya cliff and record growth centered on the U.S.**

		(IFRS)	
	FY2015 actual	FY2016 forecast* <sup>2</sup>	FY2020 objective
Revenues	¥425.7 b	¥414.0 b	¥500.0 b
Core operating profit* <sup>1</sup>	¥106.9 b	¥85.0 b	¥100.0 b
Net profit attributable to owners of the Company	¥59.3 b	¥64.0 b	¥70.0 b
R&D expenses	¥64.6 b	¥66.0 b	¥80.0 b
Overseas sales ratio	26%	23%	40%

The Company has voluntarily applied IFRS from FY 2016.

\*1. Profit in which non-recurring items (including structural reform expenses) were deducted from operating profit in IFRS

\*2. Revised forecast announced on October 25, 2016.

1

### Maximizing Pipeline Value

- Late-stage drug candidate objective  
**10 candidates** (including in-licensed)
- R&D investment  
More than ¥400.0 billion

Investment

3

### Accelerating U.S. Business Development

- US sales objective  
**¥80.0 billion** (FY 2020)
- US strategic investment  
More than ¥200.0 billion

2

### Strengthening IKUYAKU and Marketing

- Domestic sales objective  
**¥300.0 billion** (FY2020)  
**New drugs and priority products sales ratio: 75%**
- Priority diseases areas: Autoimmune, diabetes & kidney diseases, CNS, vaccines

Profit

4

### Reforming Operational Productivity

- Cost of sales / SG&A expenses reduction objective: **¥20.0 billion** (FY2020 compared to FY2015)
  - Number of employees  
Consolidated domestic workforce: 5,000 employees\*
- \*As of the end of Sep 2015: 6,176 employees

# **Medium-Term Management Plan 16–20 Achievements and Progress in FY 2016**

# Achievements and Progress in 4 Strategic Priorities (as of Dec 2016)

1

## Maximizing Pipeline Value

- 10 late-stage drug candidate objective
  - MT-2355: Phase 3 initiated
  - MT-6548: Phase 2 initiated
  - MT-5199, MT-7117: Phase 1 initiated
  - Invossa: in-licensed

Investment

3

## Accelerating U.S. Business Development

- Further expansion of US business
  - MCI-186: acceptance of NDA
  - MTPA establishment to prepare for sales

2

## Strengthening IKUYAKU and Marketing

- Domestic sales (FY2016 Plan)
  - ¥313.0 billion
  - New/priority products sales ratio: 63%
- Priority disease area
  - Simponi, Tenelia, vaccines: growth increased
  - MT-2412: NDA filled

Profit

4

## Reforming Operational Productivity

- Cost of sales / SG&A expenses redeuction  
¥3.0 billion (1H FY2016 actual), and ¥7.0 billion (FY2016 plan) compared with FY2015
- Consolidated domestic workforce: 5457 employees (as of the end of Sep 2016)
- Career opportunities for women / Enhancing diversity

# 1. Maximizing Pipeline Value

A decorative graphic at the bottom of the slide consisting of several overlapping, curved, organic shapes in various shades of blue and pink, creating a sense of movement and depth.

## 1. Maximizing Pipeline Value

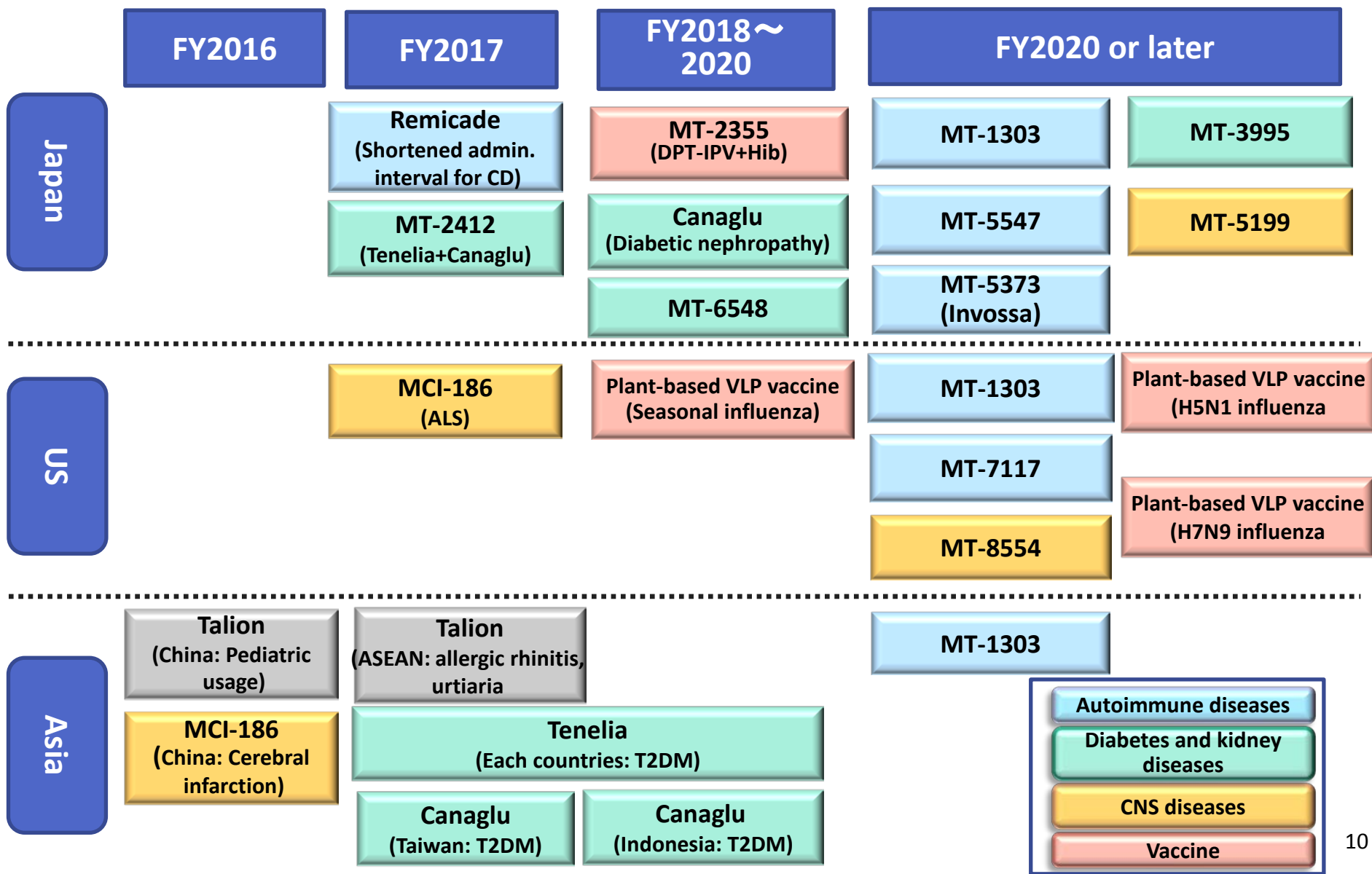
# Major Pipeline

Area	P1	P2	P3	Filed
Auto immune diseases	<div>MT-1303 (Japan: SLE)</div> <div>MT-7117 (Europe)</div> <div>MT-5547*</div>	<div>MT-1303 (Europe: MS, PS, CD Japan: CD)</div>	<div>Imusera (Japan: CIDP)</div>	<div>Remicade (Japan: Shortened admin. interval for CD)</div>
Diabetes and kidney diseases		<div>MT-3995 (Japan, Europe: Diabetic nephropathy)</div> <div>MT-6548 (Japan: Renal anemia)</div>	<div>Canaglu (Japan: Diabetic nephropathy)</div> <div>Tenelia (China: T2DM)</div>	<div>MT-2412 (Japan: Tenelia+Canaglu)</div>
CNS diseases	<div>MT-8554 (Europe)</div> <div>MT-5199 (Japan)</div>		<div>MP-214 (Japan, Korea, Taiwan: Schizophrenia)</div>	<div>MCI-186 (US: ALS)</div>
Vaccine	<div>Plant-based VLP vaccine (Canada: H7N9 influenza)</div>	<div>Plant-based VLP vaccine (Canada, US: Seasonal influenza)</div> <div>Plant-based VLP vaccine (Canada: H5N1 influenza)</div>	<div>MT-2355 (Japan: DPT-IPV+Hib)</div>	<div>*: Regeneron conducts the trial including Japanese.</div>

Red box: Late-stage drug candidates

# 1. Maximizing Pipeline Value

## Approval Targets



## 1. Maximizing Pipeline Value

### Status of Key Pipeline(1) Autoimmune Disease Area

#### MT-1303 (Amiselimod/S1P receptor functional antagonist)

Indication	Area	Phase 1	Phase 2	Phase 3
Multiple sclerosis	Europe	P2b completed →		
Psoriasis	Europe	POC study completed →		
Crohn's disease	Japan / Europe	Topline data to be obtained in 4Q FY2016 →		
Systemic erythematosus	Japan	→		


- In Oct 2016, Biogen, a licensee, announced discontinuation of MT-1303 due to its strategic reason.  
**MTPC continues the development on its own or a partner. Launch in the US after FY2020 is planned.**  
**→ Contribution to the expansion of US business development**

#### MT-5547(Fasimumab/anti-NGF antibody)

- In-licensed from Regeneron Pharmaceuticals, Inc. in Sep 2015.
- P1 in Japanese subjects completed.
  - Osteoarthritis: Scheduled to start domestic P2/3 in 1Q FY2017
  - Chronic back pain: Next steps and schedule are under consideration responding to the situation of US development.

## Status of Key Pipeline(2) Diabetes and Kidney Disease

**MT-3995 (Selective mineralocorticoid receptor antagonist)**

Indication	Area	Phase 1	Phase 2	Phase 3
Diabetic nephropathy	Japan / Europe			
Non-alcoholic steatohepatitis (NASH)	Japan	<b>POC study scheduled to start</b>		

- One of in-house developed candidates with high expectation
- POC achieved in diabetic nephropathy. Out-licensing sought. To obtain added value, POC study in NASH is planned to be initiated.
- Target launch in FY2020 or later.


**MT-6548 (Vadadustat/HIF-PH inhibitor)**

Indication	Area	Phase 1	Phase 2	Phase 3
Renal anemia	Japan			

- In-licensed from Akebia Therapeutics, Inc. in Dec 2015.
- Domestic P2 study in renal anemia initiated in FY2016.
- Target launch by FY2020.


## Status of Key Pipeline(3) CNS Disease Area, Vaccines

### MP-214 (Cariprazine/dopamine D3/D2 receptor partial agonist)

Indication	Area	Phase 1	Phase 2	Phase 3
Schizophrenia	Japan/Korea/ Taiwan	Primary endpoint not achieved 		


- Further development strategy to be decided in Q4 FY2016

### MT-5199 (Valbenazine/VMAT2 inhibitor)

Indication	Area	Phase 1	Phase 2	Phase 3
Tardive dyskinesia / Huntington's disease	Japan	P1 completed 		

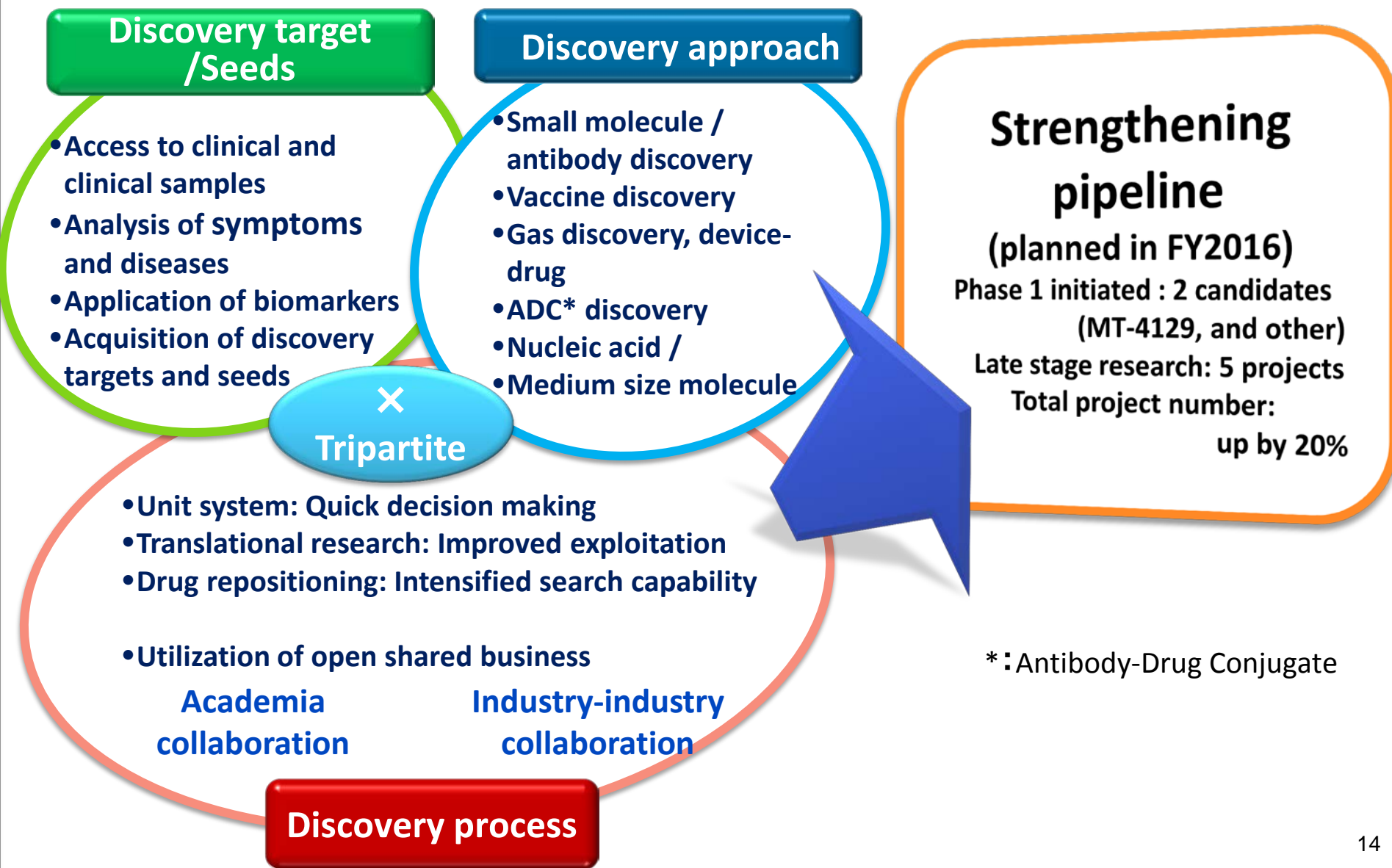
- Neurocrine Biosciences Inc., an originator, submitted NDA for tardive dyskinesia in the US in Aug 2016. PDUFA date is April 2017. (Priority review)
- Domestic P2 study in tardive dyskinesia scheduled to start in 2017.

### Plant-based VLP vaccine (for seasonal influenza)

Indication	Area	Phase 1	Phase 2	Phase 3
Seasonal influenza	US, Canada	Data to be obtained in 4Q FY 2016 		

- Launch planned in the US in FY2020.

# Efforts toward Generating 10 Late-stage Candidates





## Efforts toward Generating 10 Late-stage Candidates

Autoimmune  
disease

Keio Research Park, School of Medicine, Keio University

New horizon / molecular target exploration

Acceleration of autoimmune disease projects

Diabetes and  
kidney  
disease

AstraZeneca

School of Medicine,  
Kyoto University

Drug discovery collaboration in renal disease

Target Molecular Exploration Center for chronic  
renal disease

Assessment system for renal impairment

CNS disease

US academia, JP academia

New horizon / molecular target exploration

Establishment of assessment system for  
cognitive impairment

Vaccine

medicaGO

Rota virus infection VLP vaccine



# Project Generation through Drug Repositioning

Drug development process to identify new indications other than those expected  
through drug profiling technology

## 3 initiatives

### ◆ Strengthening of search capability of potential (LCM)

Through industry-industry collaboration and Ikuyaku research (clinical research), hidden potential of own long-listed products and Ikuyaku products is identified.



Radicut (edaravone)

1<sup>st</sup> indication  
Acute stroke



ALS indication

Domestic approval granted  
FDA filing accepted

### ◆ Strengthening of re-utilization (Repurposing)

By fully utilizing internal and external Discovery ICT and Omics technology, discontinued products are transformed into new sources of drug discovery.



Y-803 (birabresib)

IBD



Cancer indication

Successful out-license

### ◆ Challenges for expansion of medical technology (Designed pharmaceuticals)

Challenges for drug recycling by technology expansion through cooperation with academia, industry-industry partnership and MCHC group cooperation drug discovery approach.



Basic research ongoing

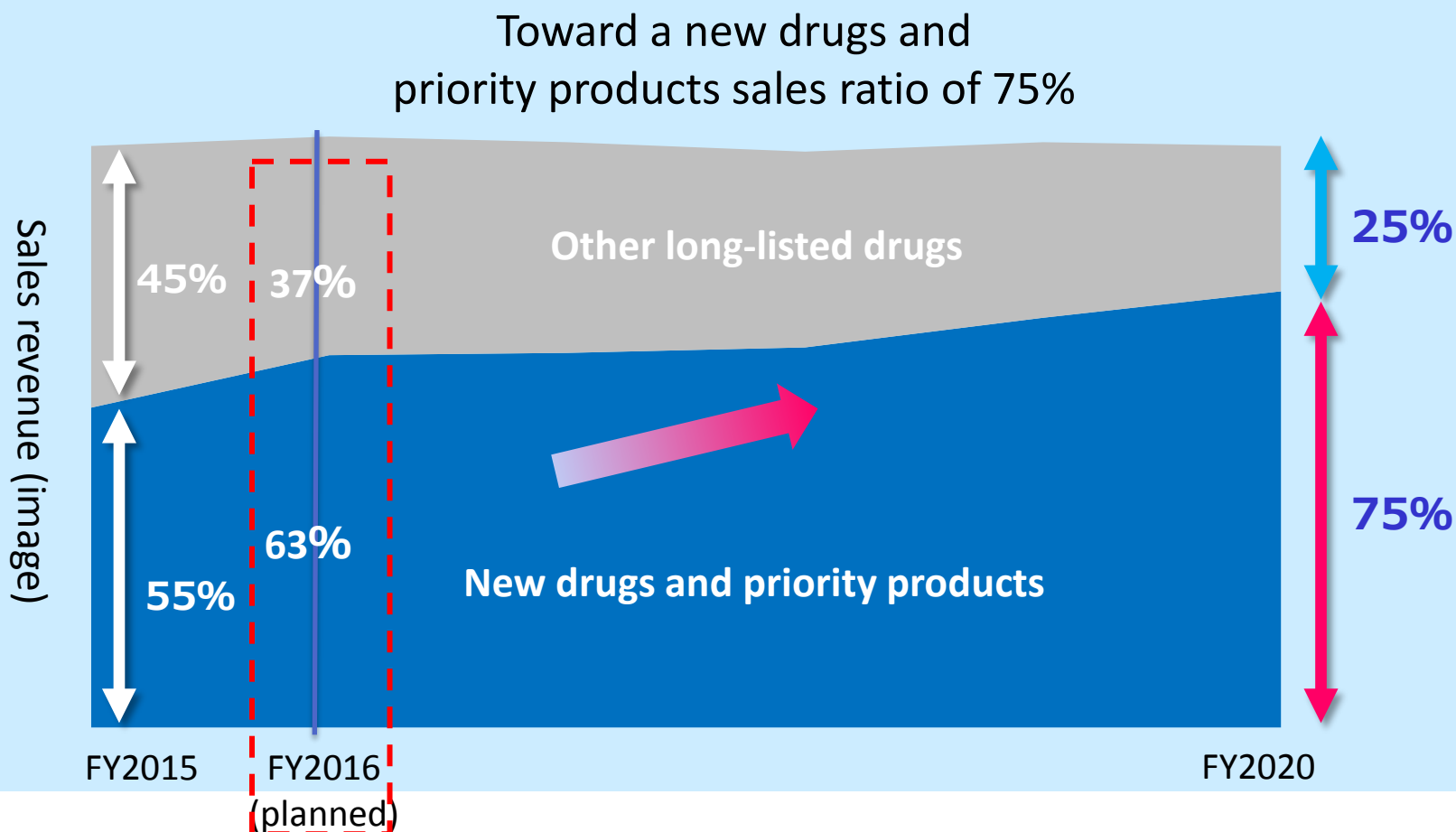
Local device, combination drug, **use of gas, expansion of modality** etc.

## 2. Strengthening IKUYAKU and Marketing

## 2. Strengthening IKUYAKU and Marketing

### **Toward ¥300.0billion Domestic Sales with New Drugs and Priority Products Sales Ratio of 75%**

With the domestic market environment becoming increasingly challenging, we will work to achieve sales targets for new drugs and priority products by strengthening IKUYAKU and marketing, leading to strong growth in 2020 and thereafter.



## Autoimmune Disease Area

**Maximizing value of IV / SC injection products. New products will further strengthen our strength. Achieve the sales objective of ¥150.0 billion.**

### Remicade

- sNDA for shortened administration period for Chron's disease.
- Remichek Q® Infliximab assay kit supports optimization of efficacy and maintenance of remission in RA patients.

**Additional growth in IBD**

### Simponi

- Changes of sales scheme with Janssen Pharma.
- Additional indication (ulcerative colitis) and new formulation (100mg syringe) are planned.

**No. 1 share in SC products**

### MT-5547

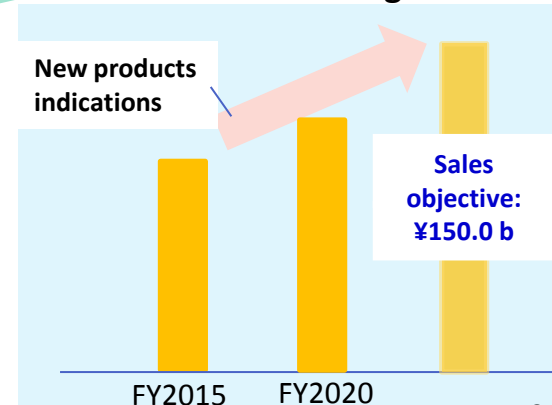
**(Osteoarthritis / chronic back pain)**

### Invossa

**(Osteoarthritis)**

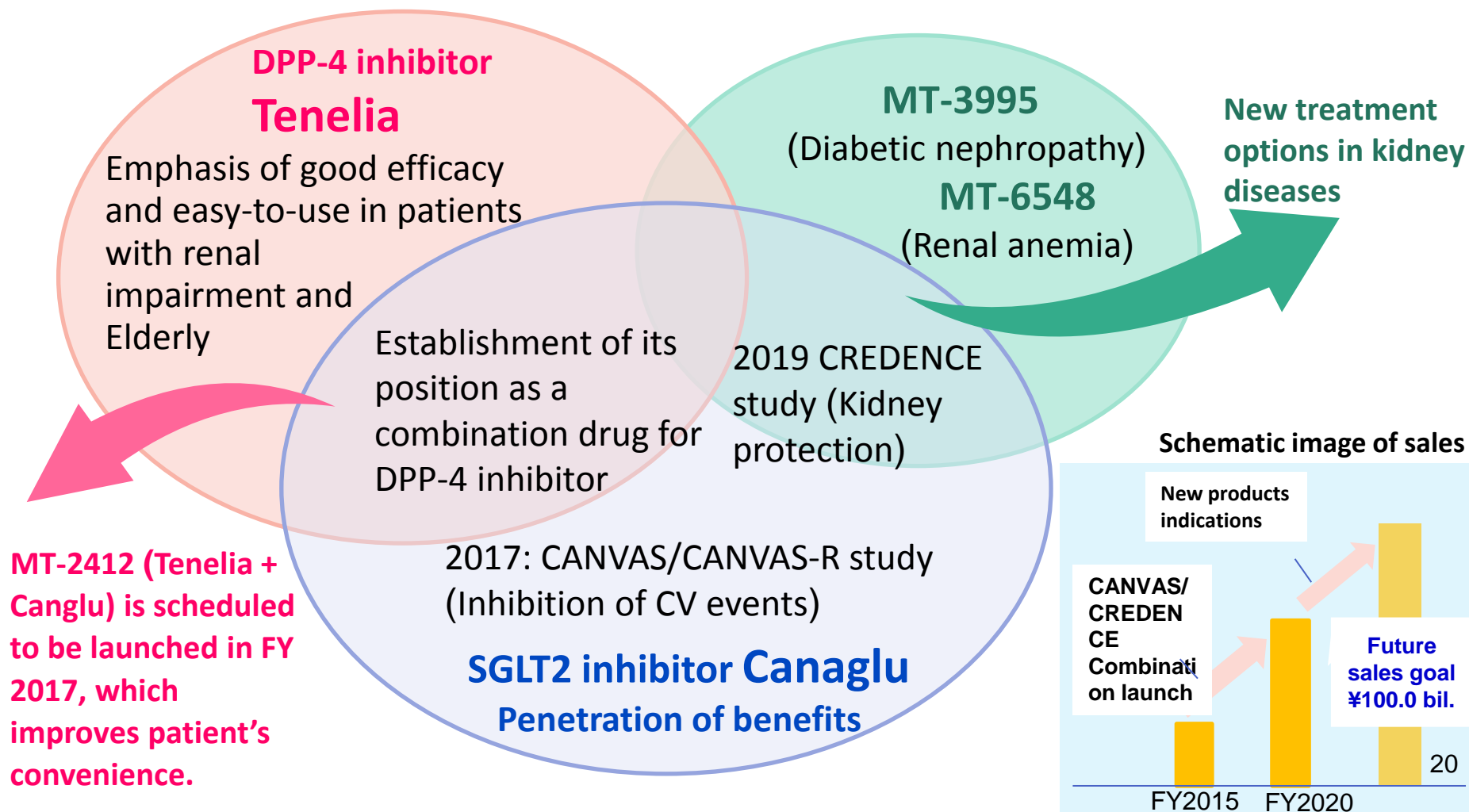
**Expansion to areas periphery**

Schematic image of sales



## Diabetes and Kidney Diseases Area

**Strengthening of product line-up in the diabetes and kidney disease area.  
Targeting to become the presence No. 1 in the disease area and achieving a sales objective of ¥100.0 billion.**





## Vaccines: Establishment of BIKEN Corporation



BIKEN: Kan-nonji Research Center (Yawata)

1961  
Start sales of  
BIKEN\* products

1990 and later  
Collaboration of  
export of BIKEN  
products

November 2016  
Basic agreement to  
establish a joint venture  
(BIKEN Corporation) with  
BIKEN to manufacture  
vaccines

Manufacturing infrastructure  
is strengthened. Competitive  
vaccines in Japan and  
overseas are supplied.

2016  
Pentavalent vaccine (MT-2355)  
Collaborative development initiated



BIKEN: Kan-nonji Research Center (Seto )

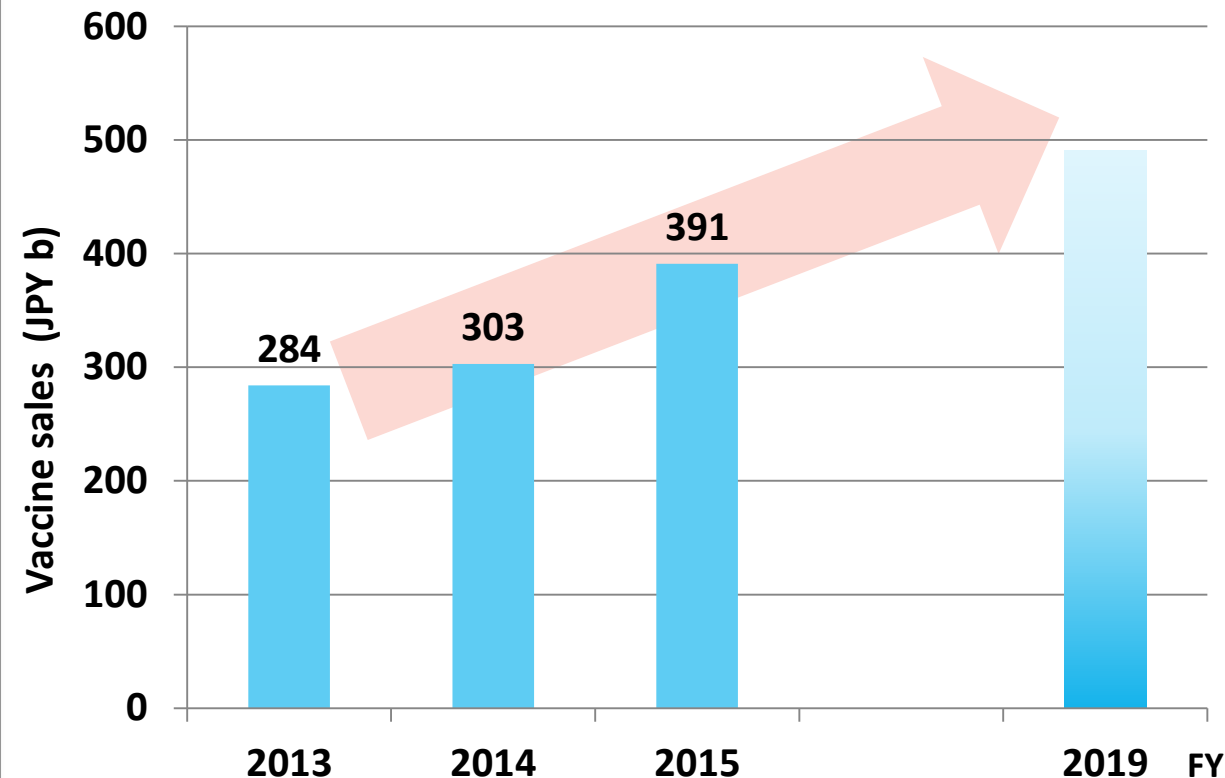


## Vaccines: Establishment of BIKEN Corporation

### 2019: Seto Center is fully operational.

**Varicella vaccine is increased by 2 to 3 times and overall vaccines are increased by 20–30%.**

**Sales will be expanded mainly with varicella vaccine and Japanese encephalitis vaccine.**



### Varicella vaccine

In March 2016, an additional indication, **prevention of herpes zoster in subjects aged 50 years or older**, received.

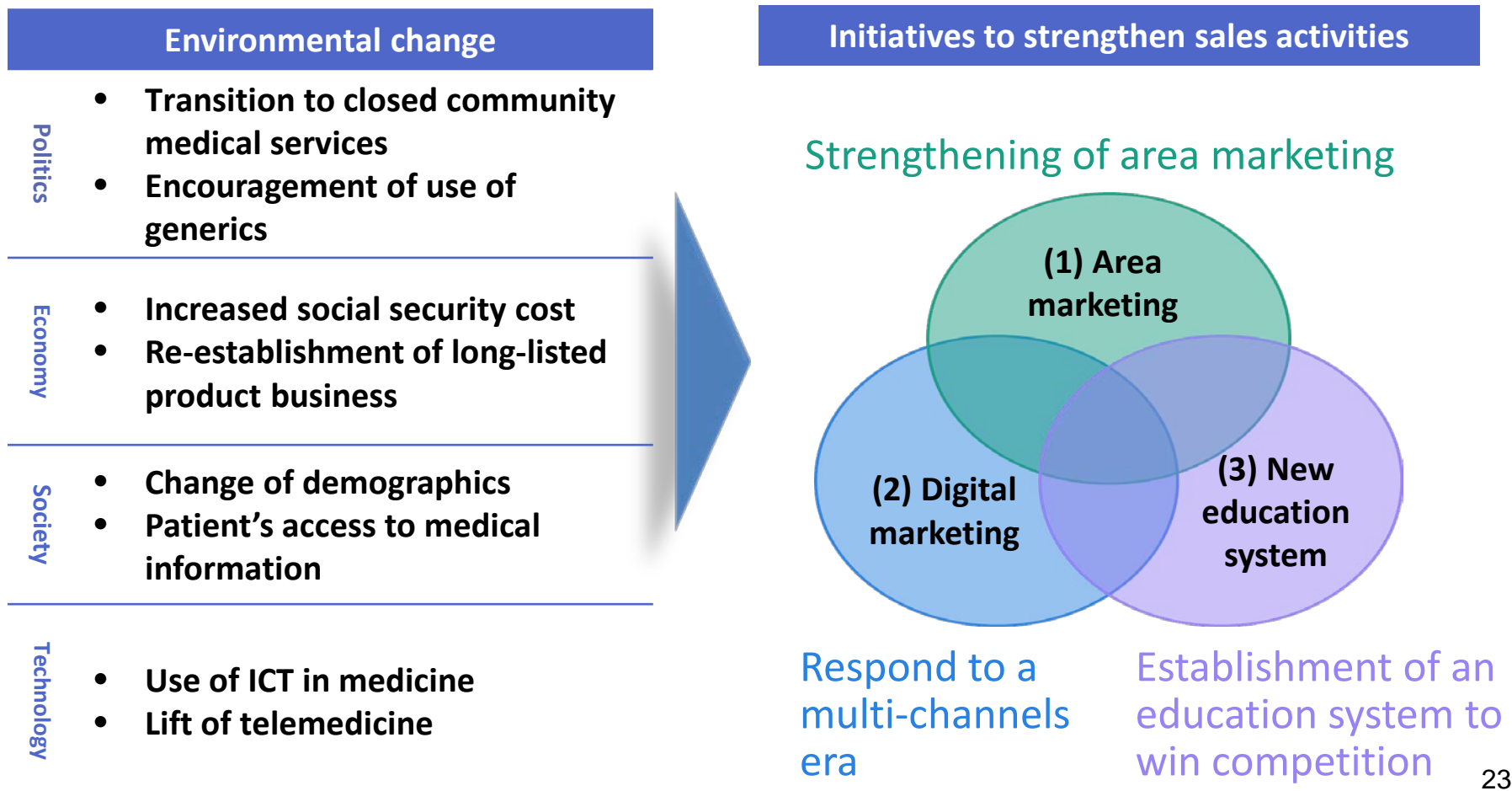
#### Herpes zoster

- Herpes zoster virus that invaded into ganglion is reactivated due to aging, fatigue or stress, etc. After pain and itching at nerve-dominated regions, water blister appear at skin. Several weeks are needed for cure.
- 600,000 subjects developed symptoms annually in Japan, with higher Incidence rate in those aged 50 years or older. About 20% of elderly patients suffered pain after herpes zoster.\*

\*: Source: IASR, vol.34

## 2. Strengthening IKUYAKU and Marketing Sales Strengthening Initiatives to Achieve Domestic Sales of ¥300.0 billion

In order to establish agile sale organization to respond to rapid changes of medical environment, the following actions are taken: (1) “Strengthening of area marketing,” (2) “Establishment of digital marketing,” and (3) “Establishment of new education system”



### Strengthening of Area Marketing

---

**To prepare for transition to community medical services, area marketing planners (AMPs) were assigned to all 117 sales offices in October 2016**

**As part of area marketing activities acceleration initiatives**

#### Role and responsibility of AMP

- Next generation managers responsible for medical institutions
- Medical Management Practice certificate will be obtained
- Play a key role in preparation, execution and verification of area marketing strategy.

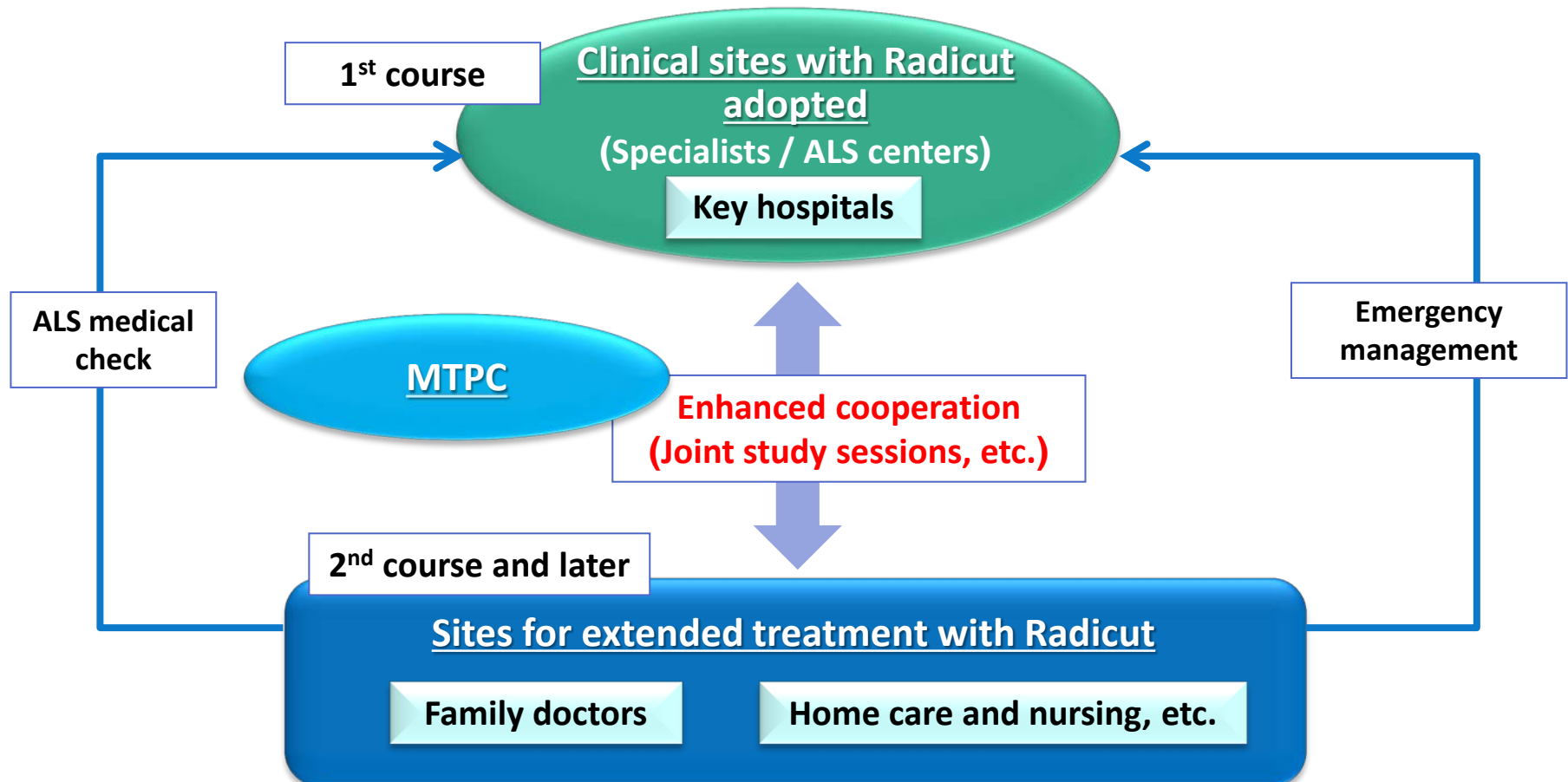
#### Expected outputs

- Community needs are understood in an accurate and expedited manner. Medical collaboration activities unique to each community are conducted
- **Contribution to local medical services from a mid-long term perspective.**

## 2. Strengthening IKUYAKU and Marketing Community Medical Collaboration through Products (Radicut ALS)

Enhance cooperation between key hospitals and family doctors based on community characteristics.

**Reduced burden of hospital visits for continued treatment / contribution to continued treatment with Radicut**

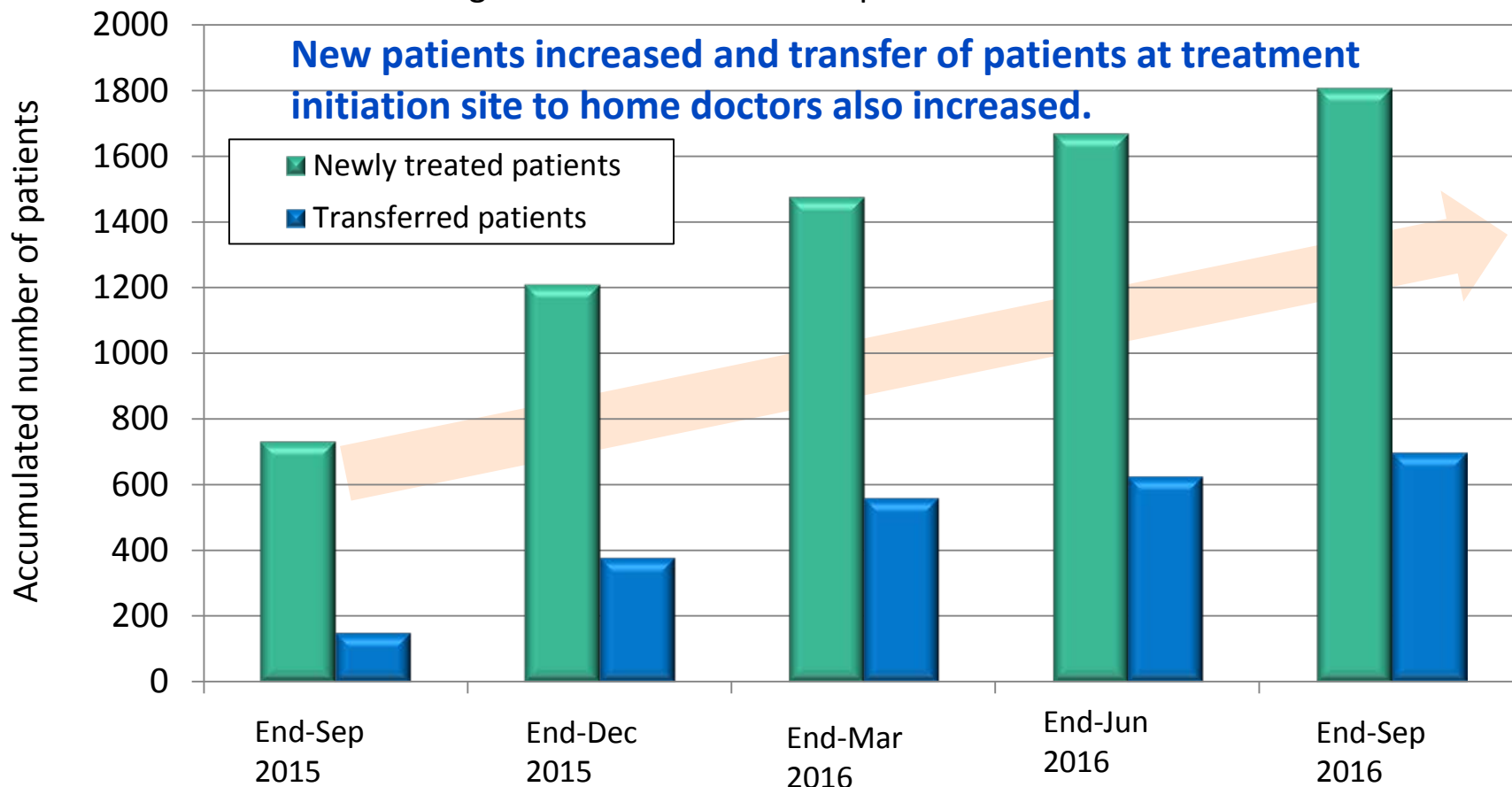


## 2. Strengthening IKUYAKU and Marketing

### Radicut ALS, Changes in the Number of Treated Patients in Japan (New/Transferred)

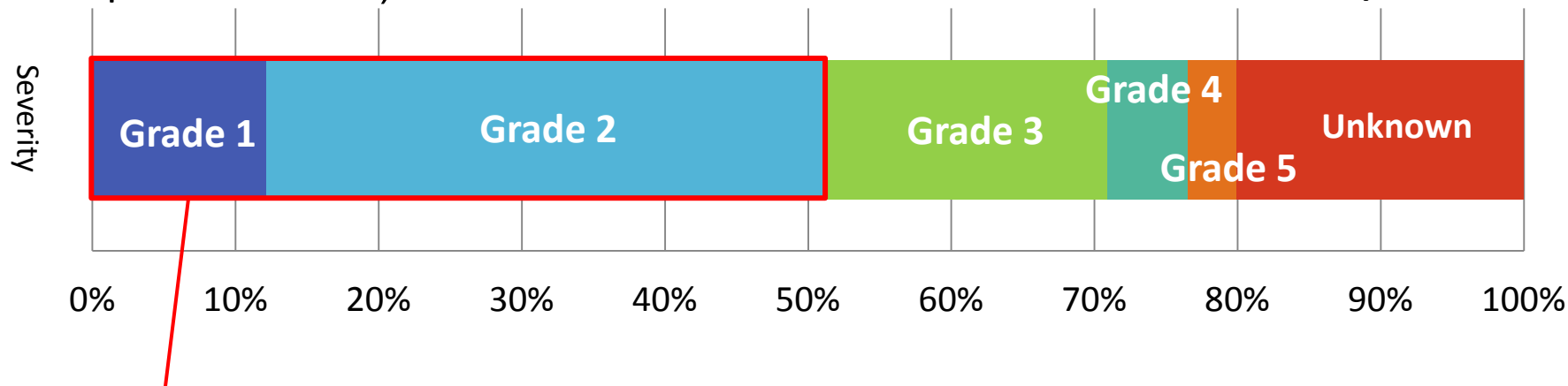
Through support for cooperation among medical institutions at community level, **“Adoption at key hospital→Continued treatment at a family doctor”** will be penetrated.

Changes in the number of ALS patients treated with Radicut



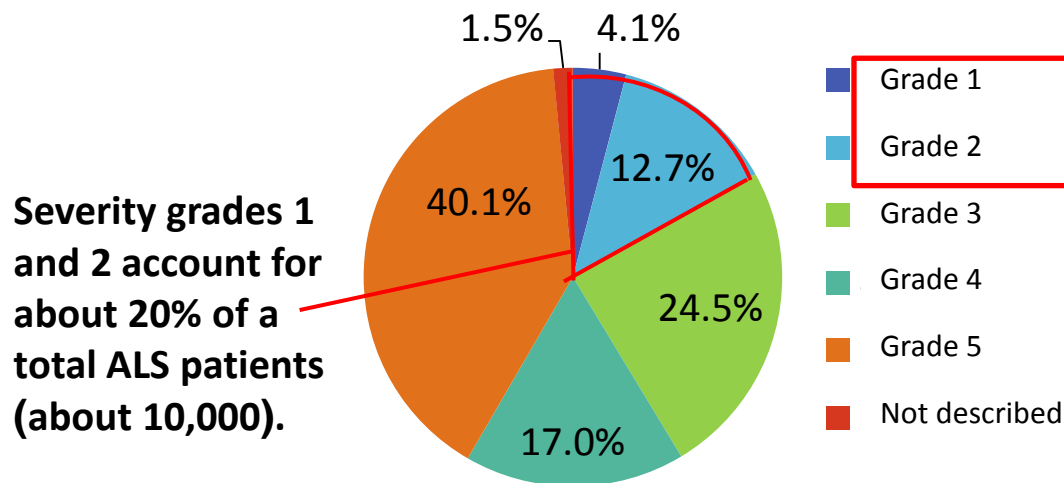
### Radicut ALS: Breakdown by ALS Severity

- Severity classification of ALS patients treated with Radicut (as of the end of September 2016)



Many patients are in grades 1 and 2, in which efficacy was demonstrated in clinical studies.

- Severity classification of total ALS patients



Severity grades 1 and 2 account for about 20% of a total ALS patients (about 10,000).

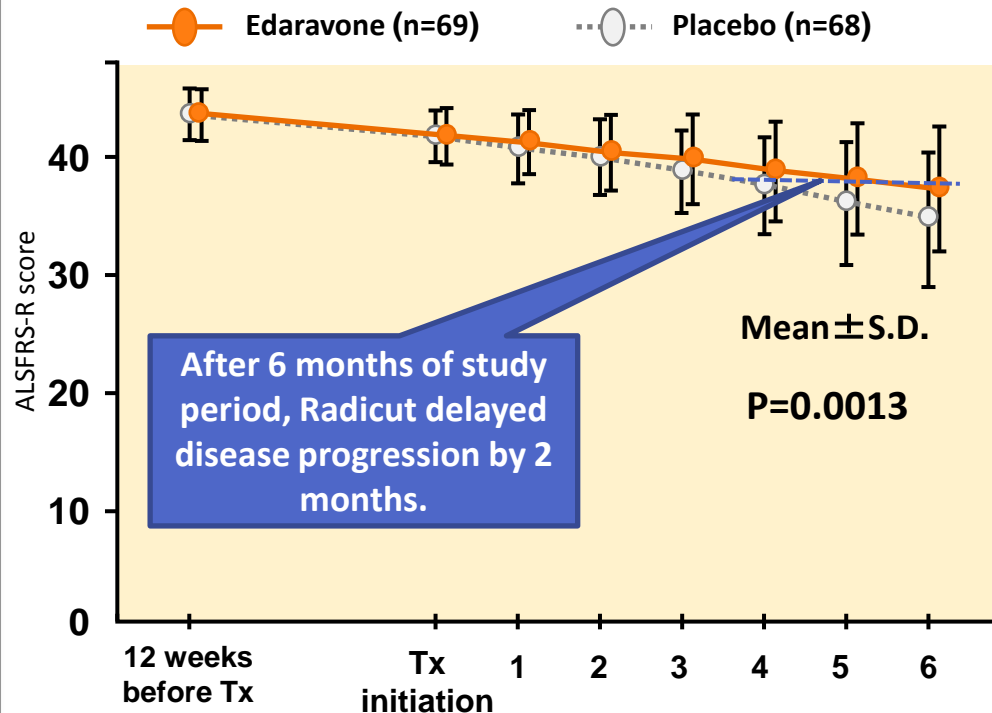


# Radicut ALS: Further demonstration of clinical significance

Clinical study data (Confirmatory study 2<sup>nd</sup>: Double-blind period)

Special drug-use investigation in progress

## Changed of ALSFRS-R score



1 course: 14 days continuous treatment followed by 14 days off treatment  
2 course and after: 10 days treatment out of 14 days followed by 14 days off-treatment

**Demonstration of safety, efficacy and long-term prognosis in clinical practice → Emphasis of clinical significance**

- Sample size planned: 700 patients (As of Oct 2016: about 220 patients registered)
- Investigation period: 7 years
- Primary endpoints: Death, permanent artificial respirator
- Secondary endpoints: Gastrostoma, tracheotomy, etc.

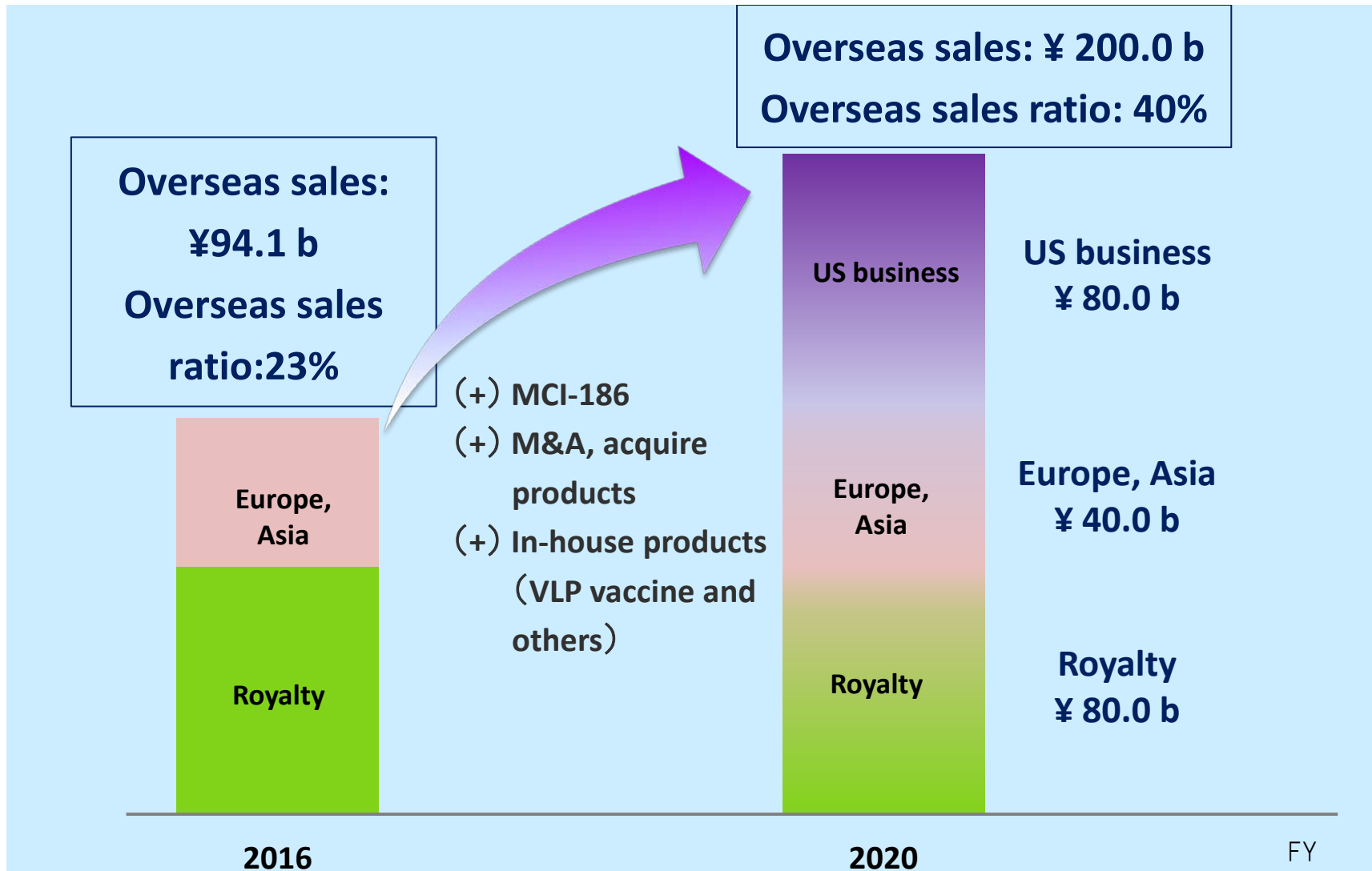
**Knowledge obtained from development and post-marketing surveillance in neurological intractable disease will be utilized for future R&D / Ikuyaku in CNS disease areas.**

## 3. Accelerating U.S. Business Development



### 3. Accelerating U.S. Business Development

## Toward Increasing Overseas Sales and Overseas Sales Ratio



## Toward achieving the Objectives of US Business Development

With strategic investment of more than ¥200.0 billion, US sales will be increased to ¥80.0 billion by FY 2020.

### Step 3: “Sustained growth of US business”

**MT-1303**  
(Inflammatory,  
autoimmune  
disease)

**MT-7117**  
(Inflammatory,  
autoimmune  
disease)

**MT-8554**  
(Neurological  
disease)

**Medicago  
VLP vaccine**

### Step 2: “Expansion of US business”

**M&A**

**Acquire products**

### Step 1: “First step to US business”

**MCI-186/Radicava  
(ALS)**



## Step 1: First Step to US Business Development (MCI-186)



Mitsubishi Tanabe Pharma

### MCI-186

- In June and December 2015, ALS indication granted in Japan and Korea.
- NDA submitted to FDA on Jun 16, 2016→Accepted in Aug→ PDUFA date: Jun 16, 2017
- US brand name is tentatively **RADICAVA**.

### Sales/ support organization dedicated to RADICAVA sales under establishment

#### 1. Allocation of sales reps and target sites

Sales office managers and sales reps will be allocated.

Main target:

- ALS specialized hospital where diagnosis and treatment of ALS are provided.
- Neurologists who treat ALS patients

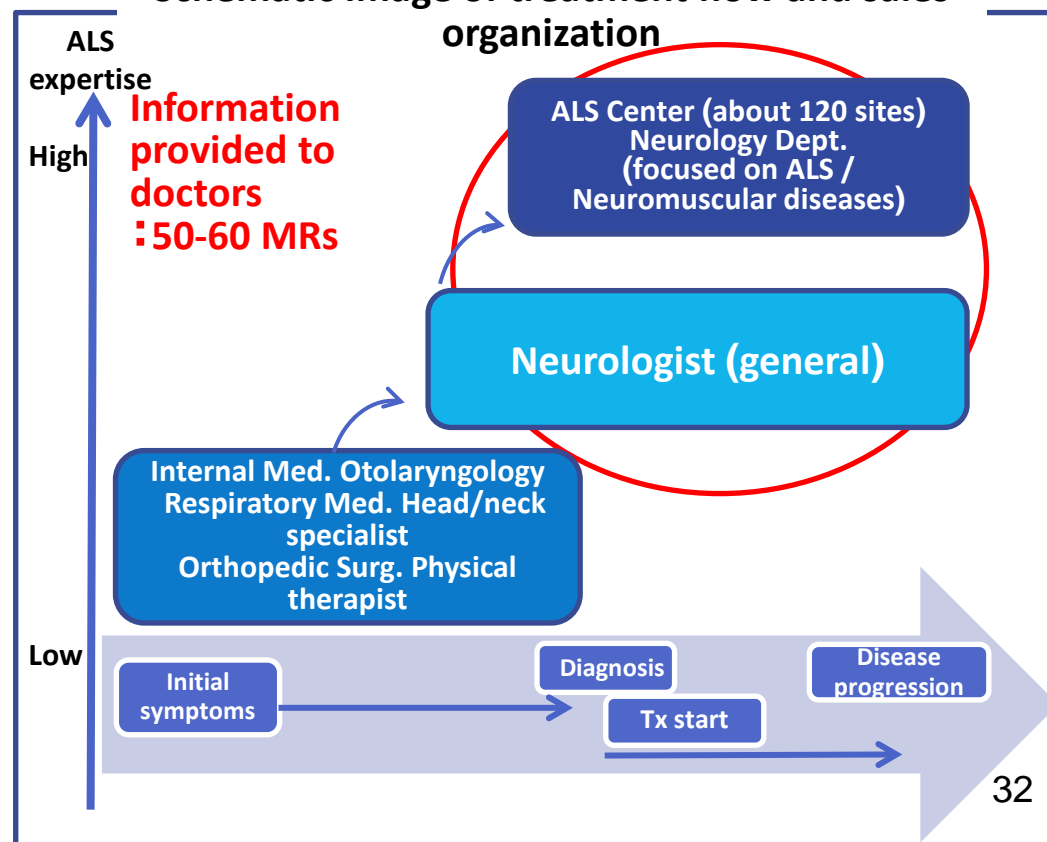
#### 2. Reimbursement support

Reimbursement support staffs will be allocated to help streamline reimbursement process

#### 3. Patient support

Consultation service will be established where information about treatment will be provided.

### Schematic Image of treatment flow and sales organization

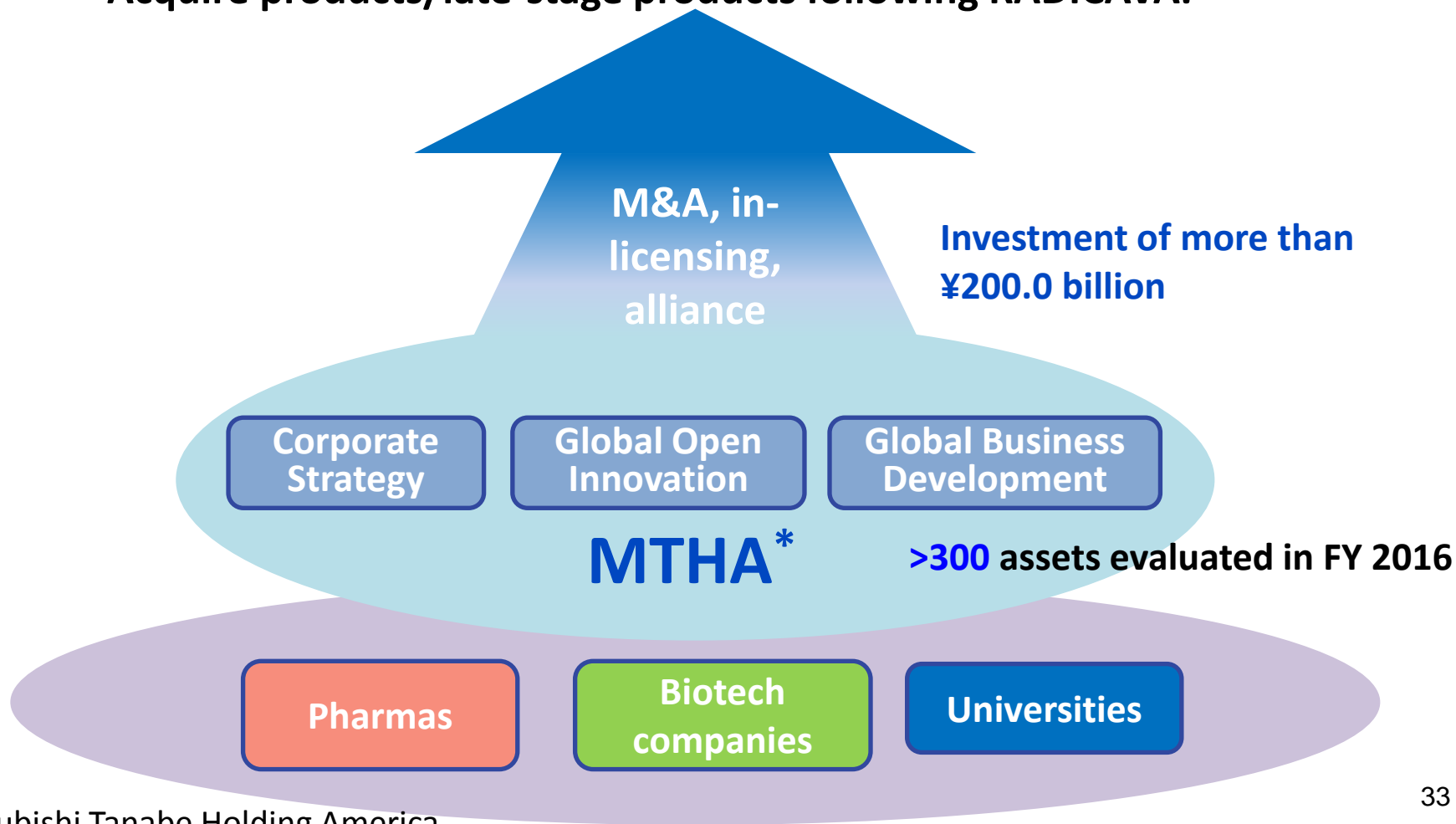




## Step 2: Expansion of US business development

Through acquisition of external assets, US pipeline in **neurological diseases** will be established.

Acquire products/late-stage products following RADICAVA.





## Step 3: Sustained Growth of US Business

At the therapeutic area where we try to build up the franchise in the US, we will pursue POC and accelerate product development so as to create a product line-up in the US.

Establishment of product line-up mainly in neurological diseases and autoimmune diseases area.

US market

● Accelerated development of late-stage candidates in US

MT-1303

Seasonal influenza vaccine

● Efforts to obtain POC  
(Strengthening of medical sciences)

MT-8554

MT-7117

● Search for discovery stage seeds / discovery platform

## 4. Reforming Operational Productivity

A decorative graphic at the bottom of the slide consists of several overlapping, curved, ribbon-like shapes. The primary colors are various shades of blue, ranging from a deep navy to a light sky blue. A single, vibrant pink shape is also present, partially overlapping the blue ones on the left side. The shapes flow from the bottom left towards the right, creating a sense of movement and modern design.

## 4. Reforming Operational Productivity

Open Up the Future

### Cost Reduction and Revitalization of Human Resources



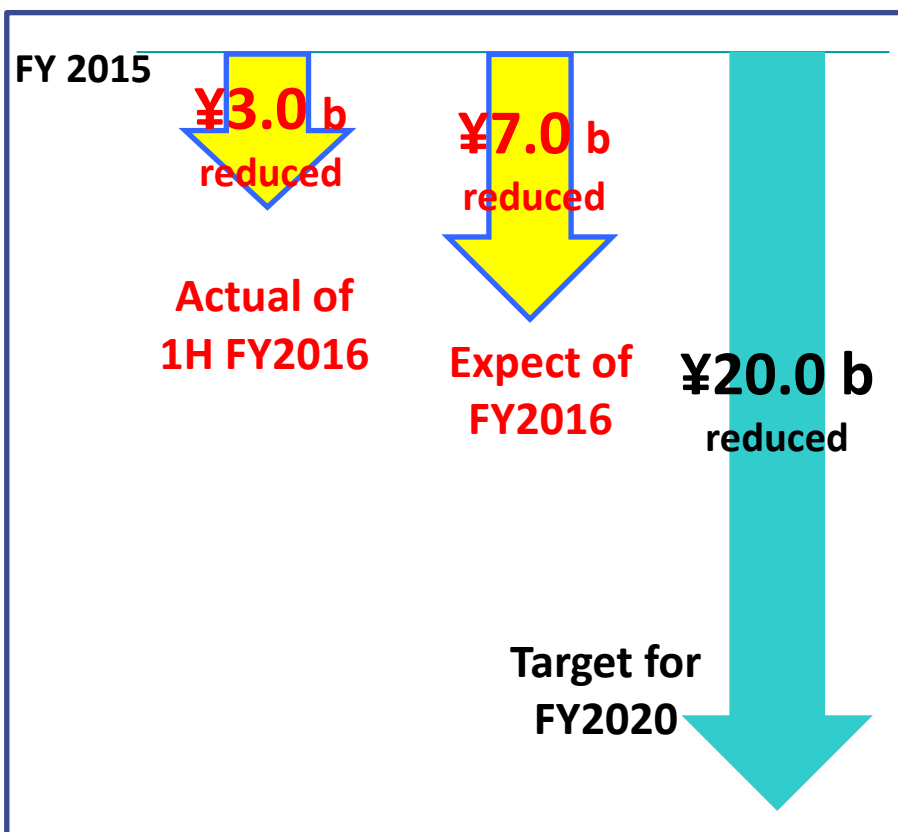
#### Cost reduction

Reducing total **¥20.0 billion** costs  
(compared with FY2015)

- Cost of sales:
  - Pursuit of low cost operation through reform of production supply chain
- SG&A:
  - Continued efforts on company-wide cost cut and efficient use of expenses

#### Use of human resources

- To reduce a workforce of **5,000 employees** for Japan organization by FY2020, duplicated functions are reviewed and organization based on functional efficiency is to be built
- Revitalization of human resources will be promoted.
- For overseas, human resources will mainly be allocated to US.



# **Toward the achievement of Medium-Term Management Plan 16–20**

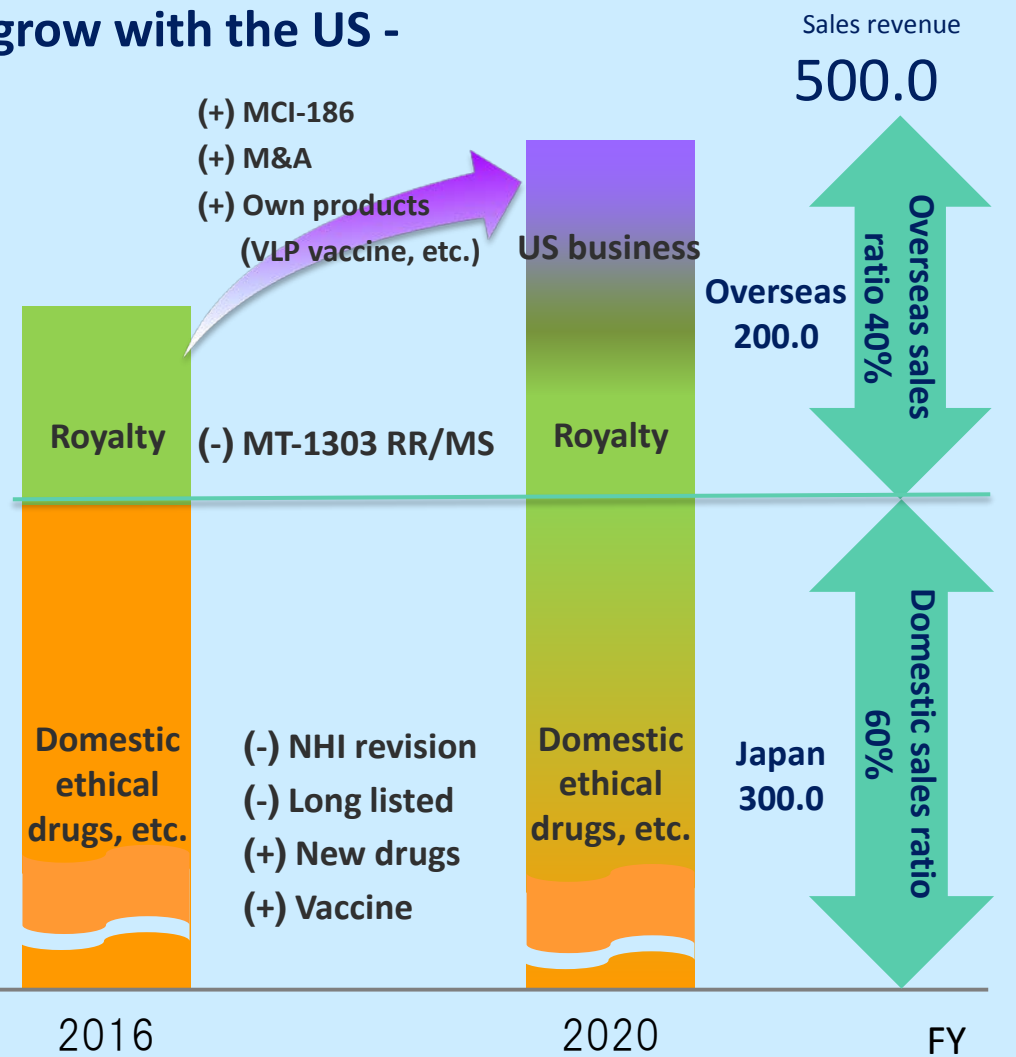
An abstract graphic consisting of several overlapping, flowing curves in shades of blue and pink, originating from the bottom left and extending towards the right side of the slide.

## Toward the Achievement of Medium-Term Management Plan 16-20

### - Overcome Gilenya-cliff and grow with the US -

- ▶ For the reduction of PR due to expiration of Gilenya US patent protection, profits will be ensured through full exploitation of own US business and RR/MS of out-licensed products.

- ▶ Invokana RR is expected to achieve robust sales growth.



# *Open Up the Future*

Becoming a company that works with a sense  
of speed and is the first to deliver differentiated value



## Cautionary Statement

The statements contained in this presentation is based on a number of assumptions and belief in light of the information currently available to management of the company and is subject to significant risks and uncertainties.