Takeda Oncology

Christophe Bianchi, M.D.
President, Global Oncology Business Unit, Takeda

Takeda Pharmaceutical Company Limited

Important Notice

Forward-Looking Statements

This presentation contains forward-looking statements regarding Takeda's future business, financial position and results of operations, including estimates, forecasts, targets and plans. These forward-looking statements may be identified by the use of forward-looking words such as "aim," "anticipate," "assume," "believe," "continue," "endeavor," "estimate," "expect," "forecast," "initiative," "intend," "may," "outlook," "plan," "potential," "probability," "pro-forma," "project," "risk," "seek," "should," "strive," "target," "will" or similar words, or expressions of the negative thereof, or by discussions of strategy, plans or intentions.

Any forward-looking statements in this document are based on the current assumptions and beliefs of Takeda in light of the information currently available to it. Such forward-looking statements do not represent any guarantee by Takeda or its management of future performance and involve known and unknown risks, uncertainties and other factors, including but not limited to: the economic circumstances surrounding Takeda's business, including general economic conditions in Japan, the United States and worldwide; competitive pressures and developments; applicable laws and regulations; the success or failure of product development programs; decisions of regulatory authorities and the timing thereof; changes in exchange rates; claims or concerns regarding the safety or efficacy of marketed products or product candidates; and post-merger integration with acquired companies, any of which may cause Takeda's actual results, performance, achievements or financial position to be materially different from any future results, performance, achievements or financial position expressed or implied by such forward-looking statements. Neither Takeda nor its management gives any assurances that the expectations expressed in these forward-looking statements will turn out to be correct, and actual results, performance or achievements could materially differ from expectations.

Any forward looking statements herein speak only as of the date of this document, and Takeda and its management undertake no obligation to update or revise any forward-looking statements or other information contained in this presentation, whether as a result of new information, future events or otherwise.

Medical Information

This presentation contains information about products that may not be available in all countries, or may be available under different trademarks, for different indications, in different dosages, or in different strengths. Nothing contained herein should be considered a solicitation, promotion or advertisement for any prescription drug including the ones under development.

Agenda

Overview of Takeda Oncology

ADCETRIS (brentuximab vedotin)

NINLARO (ixazomib)

- NINLARO development
- Multiple myeloma treatment paradigm
- NINLARO action plan

Summary

Takeda ONCOLOGY

The Takeda Oncology team here today

Christophe Bianchi, M.D.
President, Global Oncology Business Unit

Brian DeSchuytner
Global Head, NINLARO

Helgi Van De Velde, M.D., Ph.D
VP, Oncology Clinical Research

Kelly Page
Global Head, ADCETRIS

Tsudoi Miyoshi
Head of Japan Oncology Business Unit

Liviu Niculescu, M.D., Ph.D
VP, Global and U.S Oncology Medical Affairs

Our Vision

WE ASPIRE TO CURE CANCER

Our Mission

To deliver extraordinary medicines for people with cancer worldwide through our science, innovation and passion.

>2,000
Employees dedicated against cancer

>70
Countries operating in oncology

>$1B
Overall annual investment in oncology R&D

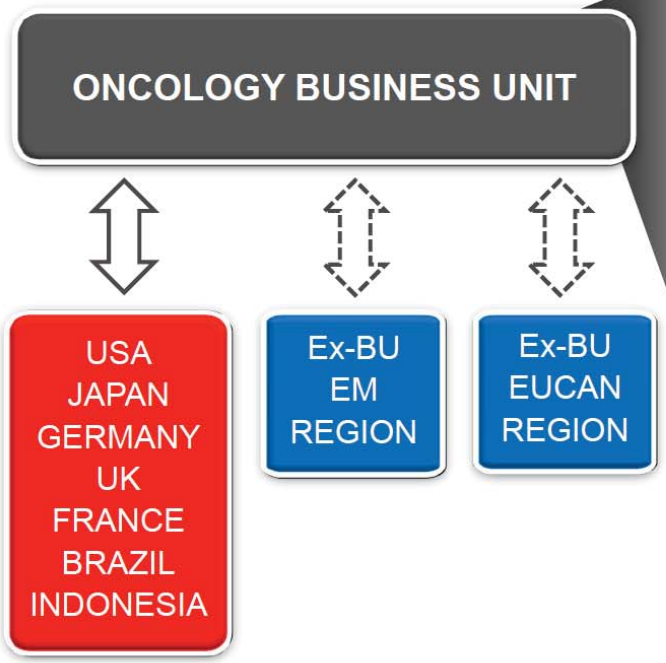
6
Marketed oncology products

Underlying revenue growth	FY14 (billion JPY)	FY15 (billion JPY)	
Oncology	**333.0**	**336.4**	**+1.0%**

Underlying growth of Oncology excl. VELCADE royalties

+4.4%

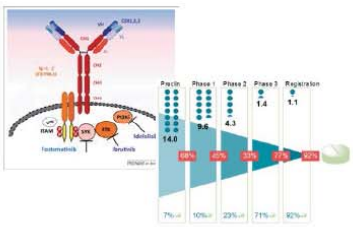
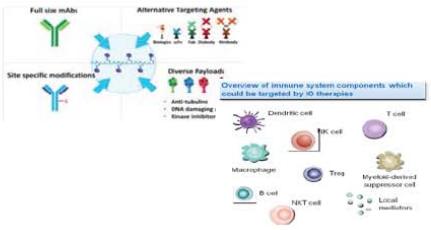
Takeda Oncology Business Unit model



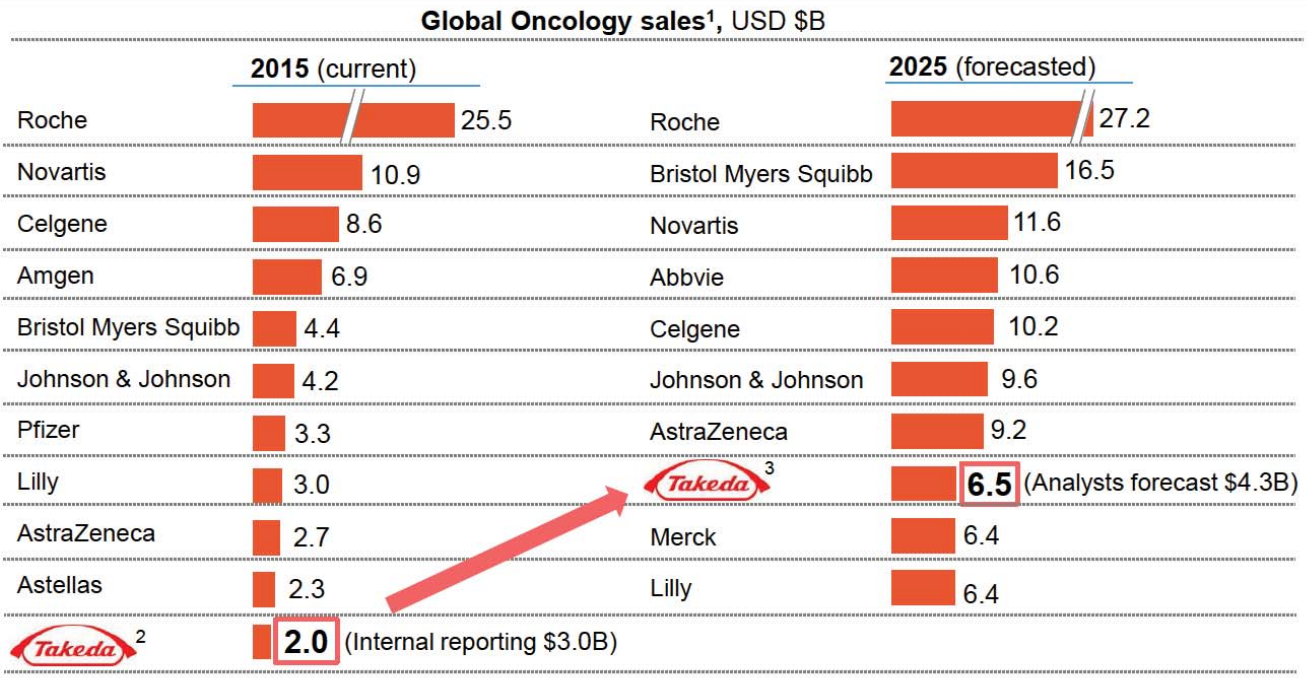
KEY RESPONSIBILITIES

1. More Direct input from Key Countries for Commercial and Development Strategies = Customer Focus and Agility
2. Development of Global Commercial – Medical Plans and Global Execution Support = Strategic Alignment
3. Seven Oncology BU Countries Accounting for 70-75% of the Oncology Market = Increased Accountability and Commitment
4. Drive Focused M&A and BD Effort = New Value Drivers

Our oncology strategy builds on current pipeline success and strengthens new capabilities through partnerships

MAXIMIZE	PRIORITIZE	COLLABORATE
NINLARO & ADCETRIS	FOCUS ON KEY PIPELINE ASSETS WITH TRANSFORMATIVE POTENTIAL	ANTIBODY DRUG CONJUGATES & PARTNERING IN IMMUNO-ONCOLOGY
NINLARO® (ixazomib) capsules ADCETRIS® brentuximab vedotin		
Deliver to broader patient populations	Set high barriers to differentiate, sourcing from internal and external expertise	Bringing internal expertise in discovering and developing targeted therapies together with external cutting-edge platforms and capabilities

Our aspiration is to be a top 10 oncology company in 2025 and rank top 5 in hematological malignancies



1. Includes immunosuppressants, immunostimulants, and Interferons; with indications in oncology, EvaluatePharma® 2016.
2. 2015 sales reported in EvaluatePharma® 2016. 3.From Takeda's internal base case projection.

The 6 brands of our oncology portfolio are transforming the market and the lives of patients

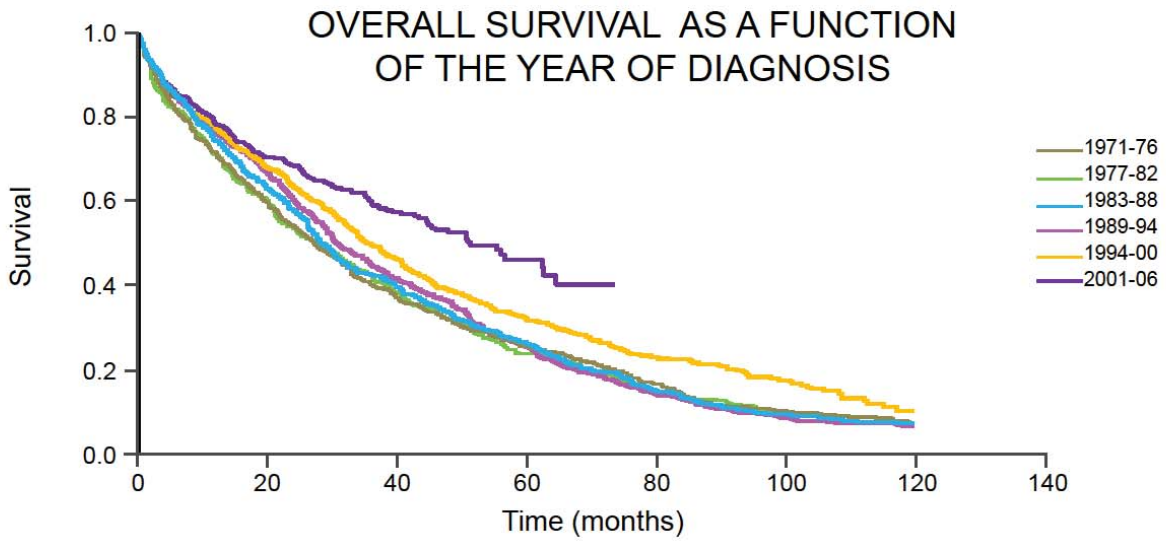
	Solid Tumors			Hematologic Malignancies		
	leuprorelin ENANTONE 3.75 mg & 11.25 mg	Vectibix (panitumumab)	Mepact mifamurtide	VELCADE (bortezomib) FOR INJECTION	ADCETRIS brentuximab vedotin	NINLARO (ixazomib) capsules
	▪ A foundational hormonal treatment in prostate cancer	▪ First fully human anti-EGFR mAb in colorectal cancer	▪ First-in-class immuno-modulator for non-metastatic osteosarcoma	▪ First ever proteasome inhibitor, for multiple myeloma and mantle cell lymphoma	▪ First-in-class CD30-directed antibody-drug conjugate in Hodgkin lymphoma and systemic ALCL	▪ First and only oral proteasome inhibitor; Transformative in multiple myeloma
Takeda Territories	▪ Japan and select countries in Asia and EU	▪ Japan	▪ EU EM expansions	▪ U.S.	▪ Global Outside U.S. and Canada	▪ Global
First Launch	▪ 1985 (U.S)	▪ 2010 (Japan)	▪ 2010 (EU)	▪ 2003 (U.S.)	▪ 2012 (EU)	▪ 2015 (U.S.)
Takeda revenues (FY2015)	***124.4B ¥***	***18.4B ¥***	***2.7B ¥***	***162.0B ¥*** *(US Sales >$1B for past 2 years)*	***27.6B ¥***	***4.0B ¥***

NINLARO key markets summary

- U.S. Launch proceeding ahead of expectations with excellent demand ramp up and positive feedback from the community
- Japan submission timelines under discussion
- European CHMP issued a negative opinion on May 27
  - Exact scientific grounds for that opinion are being analyzed but we believe it is only a temporary setback and stand by the clinical profile of NINLARO as do other stakeholders:
    - U.S. FDA record time approval and the initial experience from doctors and patients after launch
    - New England Journal of Medicine publication of pivotal study
    - Many European myeloma experts expressing strong support
  - We have filed a request for re-examination which should take about 6 months

Takeda has a legacy in the fight against myeloma with VELCADE, an important clinical and commercial benchmark

- VELCADE positively impacted survival of myeloma patients across lines of treatment and established proteasome inhibition as the standard of care
- VELCADE has achieved great commercial success treating about 70,000 patients per year resulting in global sales of $2.7B*



Kumar et al. *Blood* 2008;111:2516-2520

*Global sales in FY2013 (Apr 2013 to Mar 2014) including J&J territories: USD 2,668 MM
Source: Takeda and J&J disclosed earnings

Injectable proteasome inhibitors have limitations preventing them from achieving higher impact

- **Twice weekly injections requiring frequent clinic/hospital visits**
- **A side effect profile including either:**
  - A clinically meaningful rate of peripheral neuropathy
  - Unpredictable and potentially life threatening cardiovascular events
- **Real-life duration of treatment of only 6 months**
  - Much shorter than clinical trial experience
  - Often shorter than required to optimize patient outcomes

Oral NINLARO builds on the legacy of injectable proteasome inhibitors

- ☑ **Efficacy of proteasome inhibition**
- ☑ **Oral**
- ☑ **Low overall peripheral neuropathy**
- ☑ **No cardiovascular safety signals**

Takeda Oncology

ONCOLOGY

- Cambridge, MA USA headquarters
  - Well situated for Business Development activities, innovation network, academic collaborations and attracting talent
- Dedicated to delivering best-in-class medicines with the goal of significantly improving the treatment of cancer worldwide
- Oncology Business Unit: an agile model balancing the local needs of the cancer community and global alignment
  - Strong cohesion among Commercial, Medical Affairs and R&D
  - Ability to respond quickly to emerging data and patient needs
  - Strong commercial infrastructure in hematological malignancies in key markets
- Two potential future blockbusters, ADCETRIS and NINLARO, will position Takeda Oncology in a strong leadership position

Patient Video

Agenda

Overview of Takeda Oncology

ADCETRIS (brentuximab vedotin) *Presented by Kelly Page*

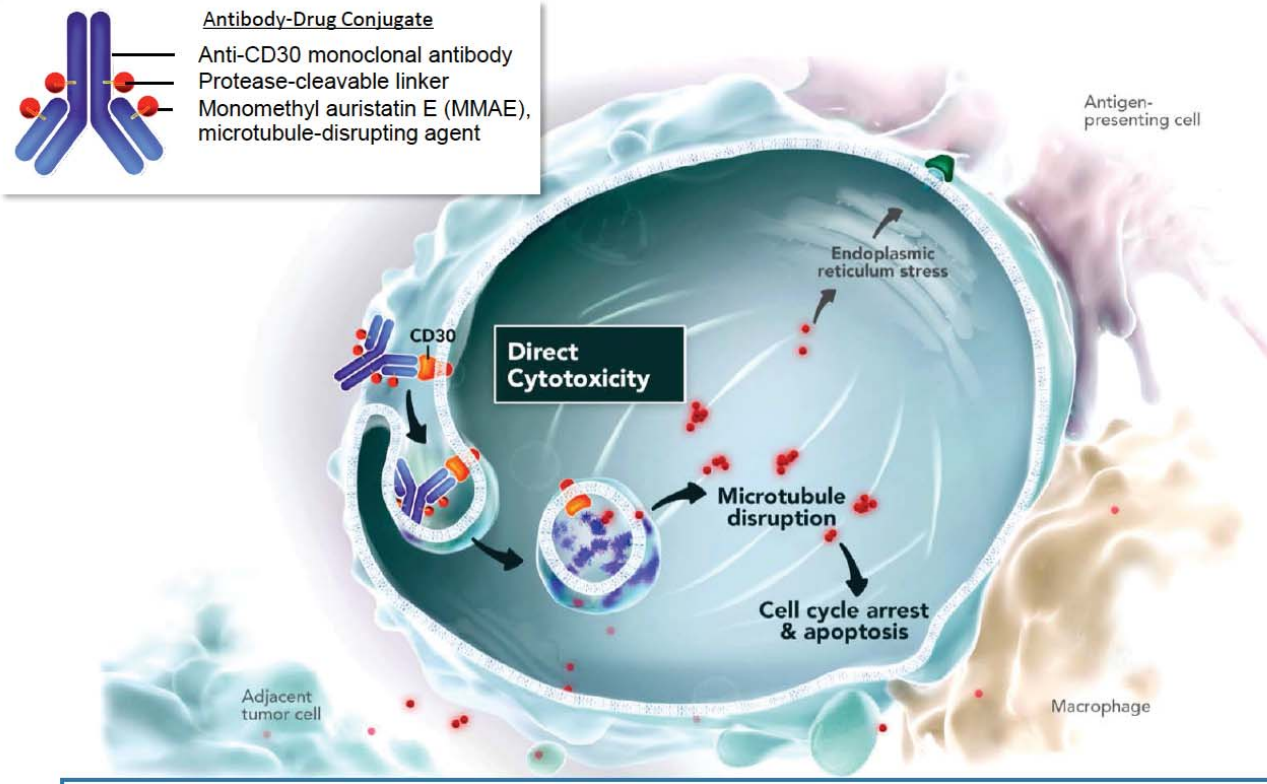
NINLARO (ixazomib)

- NINLARO development
- Multiple myeloma treatment paradigm
- NINLARO action plan

Summary

ADCETRIS®
brentuximab vedotin

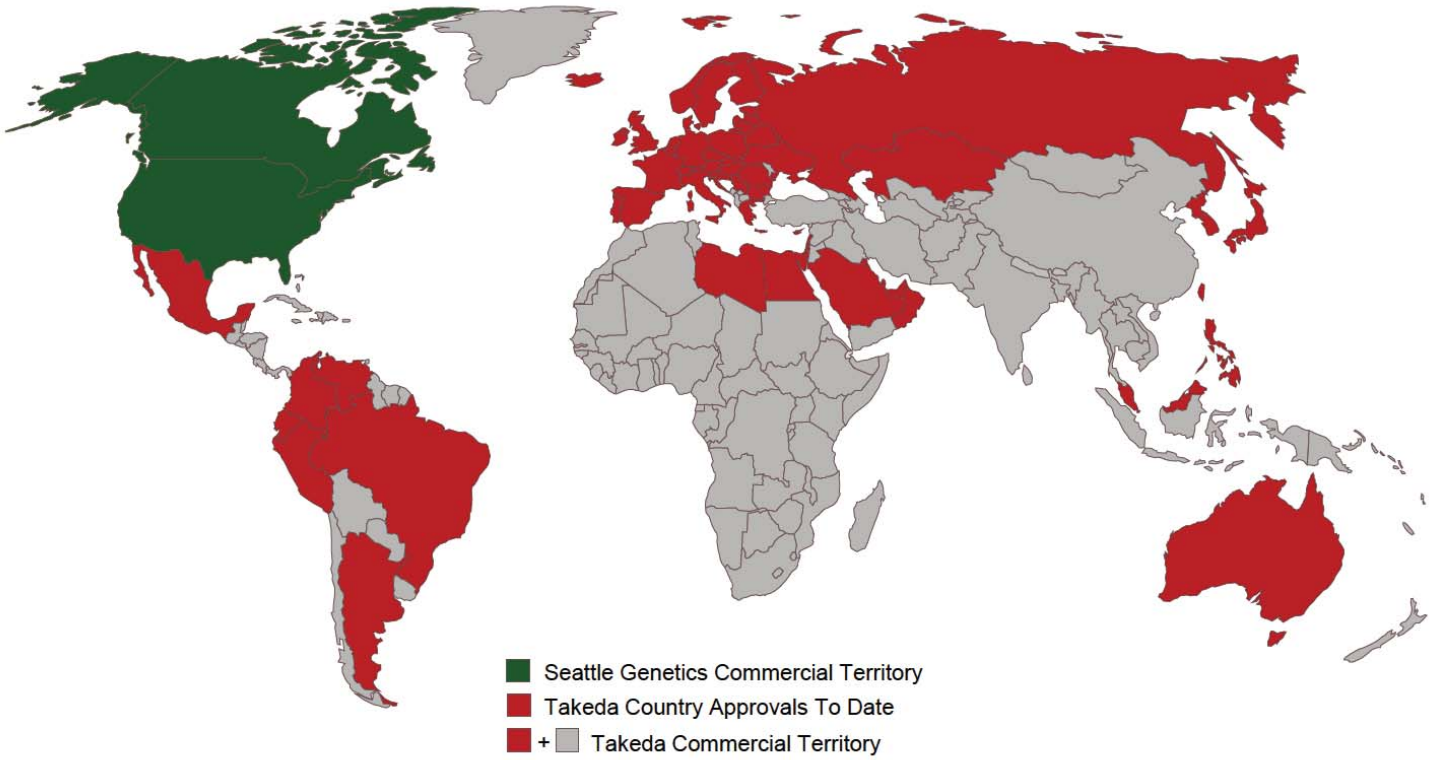
ADCETRIS: Designed with the patient in mind



Moving beyond chemotherapy to a highly targeted approach to deliver a cytotoxin directly to tumor cells

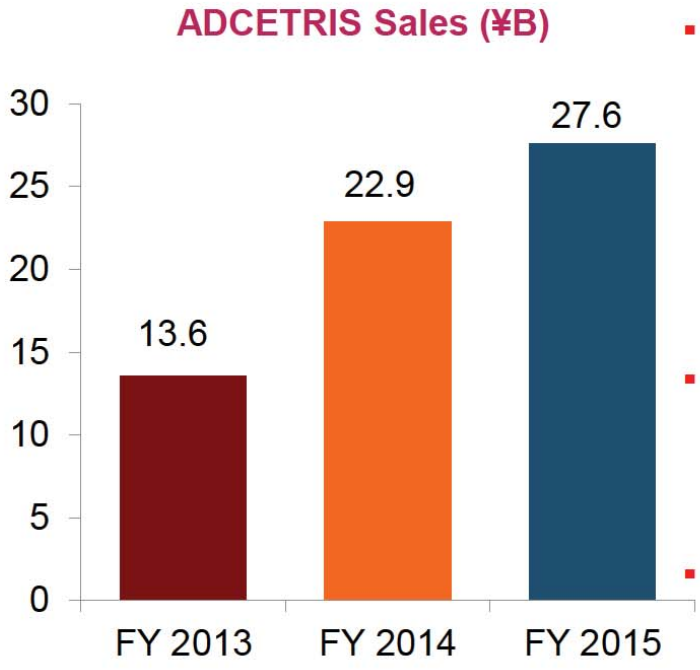
ADCETRIS: Transforming patient care

Approved in 64 countries with over 27,000 patients treated



ADCETRIS is becoming a global standard of care

FY15 revenues up 21% from FY14

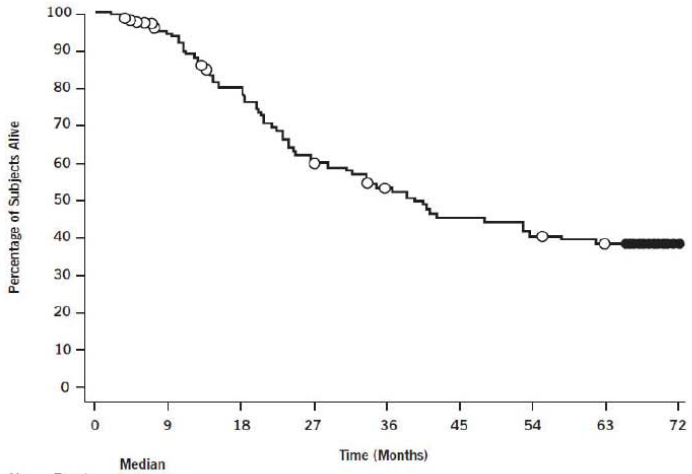


- ADCETRIS is approved for use in:
  - Relapsed or refractory (R/R) Hodgkin lymphoma (HL)
    - Following autologous stem cell transplant
    - Patients ineligible for transplant that have failed two prior chemotherapy regimens
  - R/R systemic anaplastic large cell lymphoma (sALCL)
- In early launch countries (DE, FR, UK, JP), greater than 60% of R/R HL patients have received ADCETRIS and continues to grow in other parts of the world
- Similarly, share in R/R sALCL is reaching 60% in these countries

Source: KPI Tracking Research, H2 FY15

Unprecedented outcomes with ADCETRIS in R/R HL

41% Overall Survival at 5 years in Relapsed or Refractory Hodgkin Lymphoma



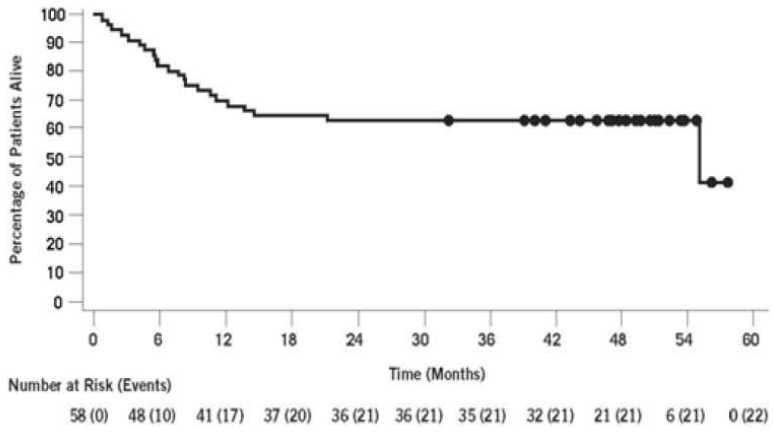
N	Events	Median (Months)
34	13	NR
102	57	40.5

- First new agent approved in R/R HL in over 30 years
- Estimated 5 yr OS = 41% (95% CI: 31%, 51%; range: 1.8-72.9+)
- Median PFS = 9.3 months (95% CI: 7.1, 12.2)
- Median overall survival (OS) and progression free survival (PFS) not reached in patients with a complete response
- The most frequent adverse events were peripheral sensory neuropathy, fatigue, nausea, diarrhea, neutropenia, vomiting, cough, pyrexia, and upper respiratory tract infection

Chen R, et al.
ASH 2015, Poster presentation (Abstract #2736)
EU SmPC

Unprecedented outcomes with ADCETRIS in R/R sALCL

64% Overall Survival at 4 years in Relapsed or Refractory Systemic Anaplastic Large Cell Lymphoma (sALCL)



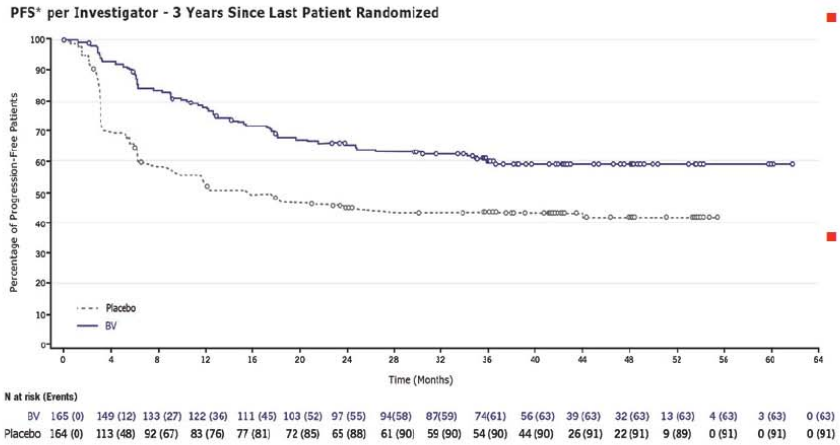
N	Events	Median (Months)	95% CI (Months)
58	22	55.1	(21.3, --)

- First agent ever approved specifically for sALCL
- Estimated 4 yr OS = 64% (95% CI: 51%, 76%)
- Median PFS per investigator = 20.0 months (95% CI: 9.4, -)
- 19 of 38 patients with a complete response remained progression free at the time of this analysis
- The safety profile was similar to that reported for R/R HL

Pro et al, ASH014 (Abstract # 3095)

Success of the Phase 3 AETHERA study may lead to a new treatment paradigm in Hodgkin lymphoma

Consolidation treatment following ASCT in HL patients showed an 18.8 month benefit over the comparator



- At 2 years, early consolidation with ADCETRIS demonstrated improved PFS in HL patients at increased risk of relapse or progression (HR=0.57, P=0.001)
- 2-year PFS rates per investigator of 65% and 45% on the ADCETRIS and placebo arms, respectively
  - Difference was sustained at the 3 year follow-up (shown)
- Safety was similar to that of previous single agent studies, however a higher rate of peripheral neuropathy was seen

Moskowitz CH, et al. Lancet 2015;385:1853-62,
Sweetenham J, et al. ASH 2015, Poster presentation (Abstract #3172)

Redefining treatment of frontline HL

Frontline Advanced Hodgkin Lymphoma

Phase 1 ADCETRIS+AVD (N=26)	
Complete remission (CR)	**96%**
Pulmonary toxicity (any event)	**0%**
3-year failure-free survival	**92%**
3-year overall survival	**100%**

Historical Results with ABVD	
CR rate in advanced HL	**70-80%**
Rate of pulmonary toxicity	**up to 25%**
3-year failure-free survival	**~75%**
5-year overall survival	**80-90%**

ECHELON-1: Phase 3 Study of ADCETRIS+AVD in Treatment Naïve, Advanced HL

Treatment naïve, Advanced HL N=1334

- A + AVD X 6 cycles
- *ADCETRIS 1.2mg/Kg QD 2 weeks per 28 day cycle
- ABVD X 6 cycles

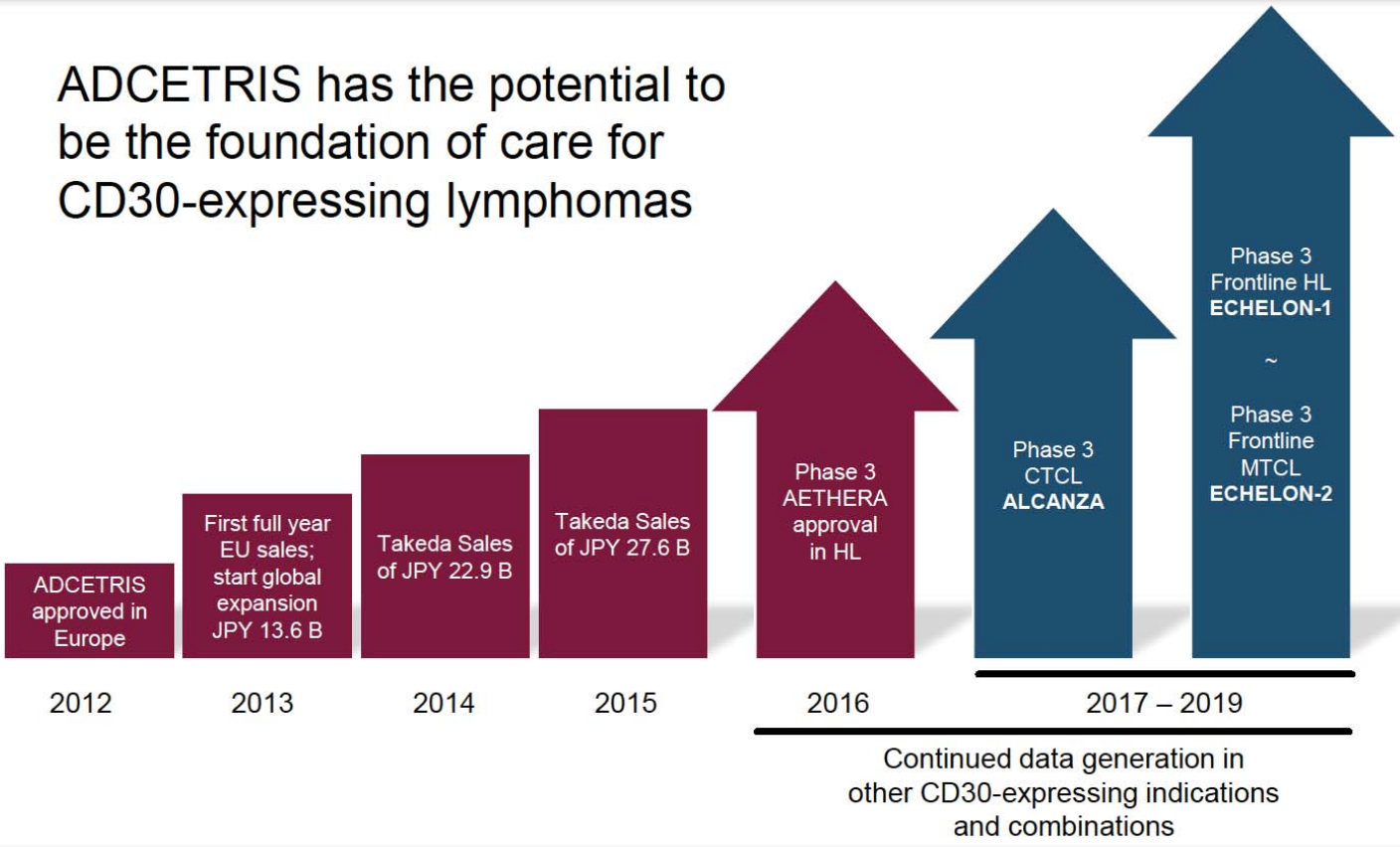
Primary Endpoint: modified PFS

Study is fully enrolled and expected to readout between 2017 to mid-2018

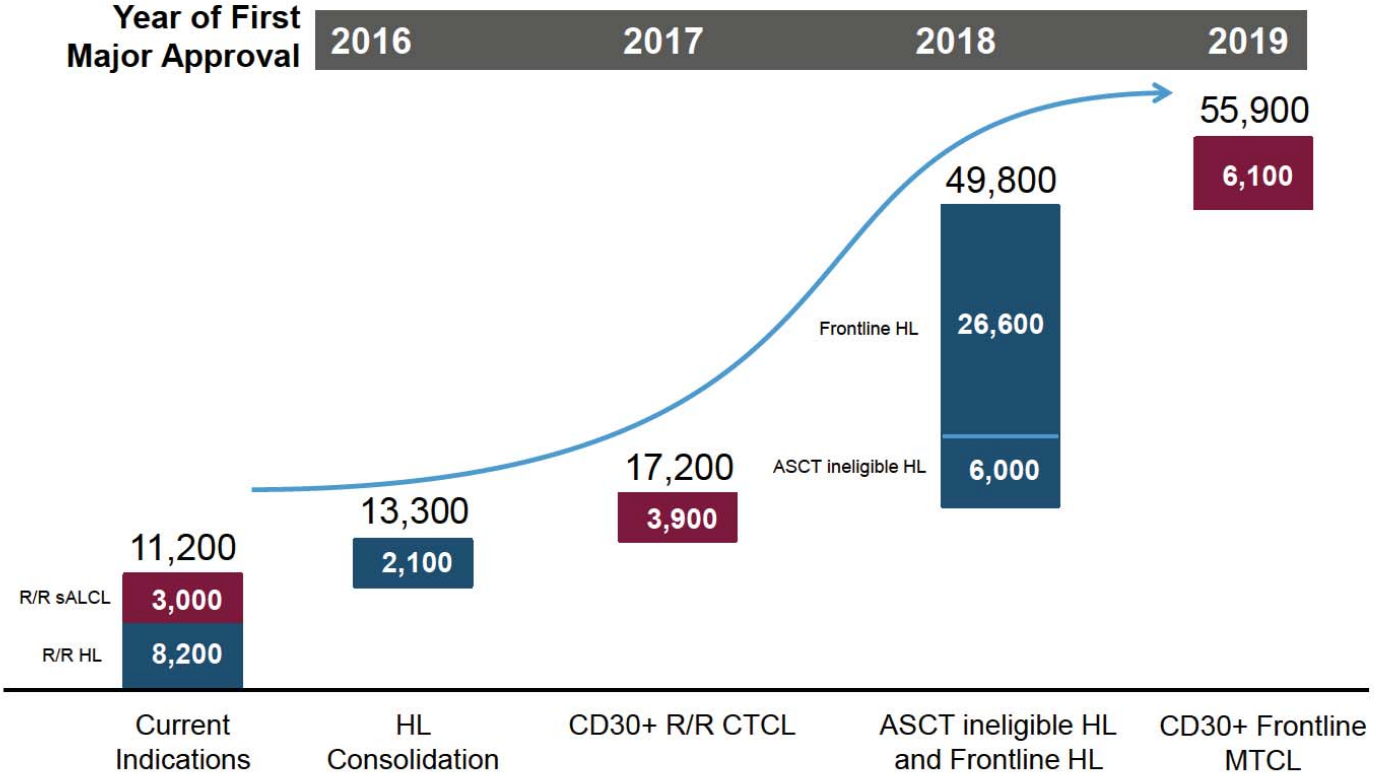
1. SGN35009 data: Younes A et. al . Lancet Oncol. 2013 Dec;14(13):1348-56, *Connors et al, ASH2014 (Abstract# 292)*
2. ABVD historical data: Younes et al, Lancet Vol 14 December 2013; Duggan DB et al, JCO 2003;21(4):607-14; Johnson et al, JCO 2005; 23 (38)
3. Skoetz et al *Lancet Oncol* 2013; 14: 943–52

The ADCETRIS opportunity

ADCETRIS has the potential to be the foundation of care for CD30-expressing lymphomas



Assuming success in ongoing studies ~4-fold expansion of addressable patient population possible



Tesselon epidemiology flow models (2014-2015)
Numbers of patients not adjusted for lack of access; represents ex-North America treatable patients

ADCETRIS is well positioned for global success

- Demonstrated long-term overall survival in both R/R sALCL and R/R Hodgkin lymphoma
- Approval of retreatment in both R/R sALCL and R/R Hodgkin lymphoma
- Combination studies with PD-1 agents
- Potential approval of earlier line indications, particularly frontline Hodgkin lymphoma
- Proven global commercial infrastructure and resources
- Commitment to our vision and to the patient community
  - Access to Medicine Initiative providing opportunities to bring ADCETRIS to additional EM countries, such as Kenya, and increasing access in other places, such as Brazil

Agenda

Overview of Takeda Oncology

ADCETRIS (brentuximab vedotin)

NINLARO (ixazomib)

NINLARO development — *Presented by Helgi Van De Velde*

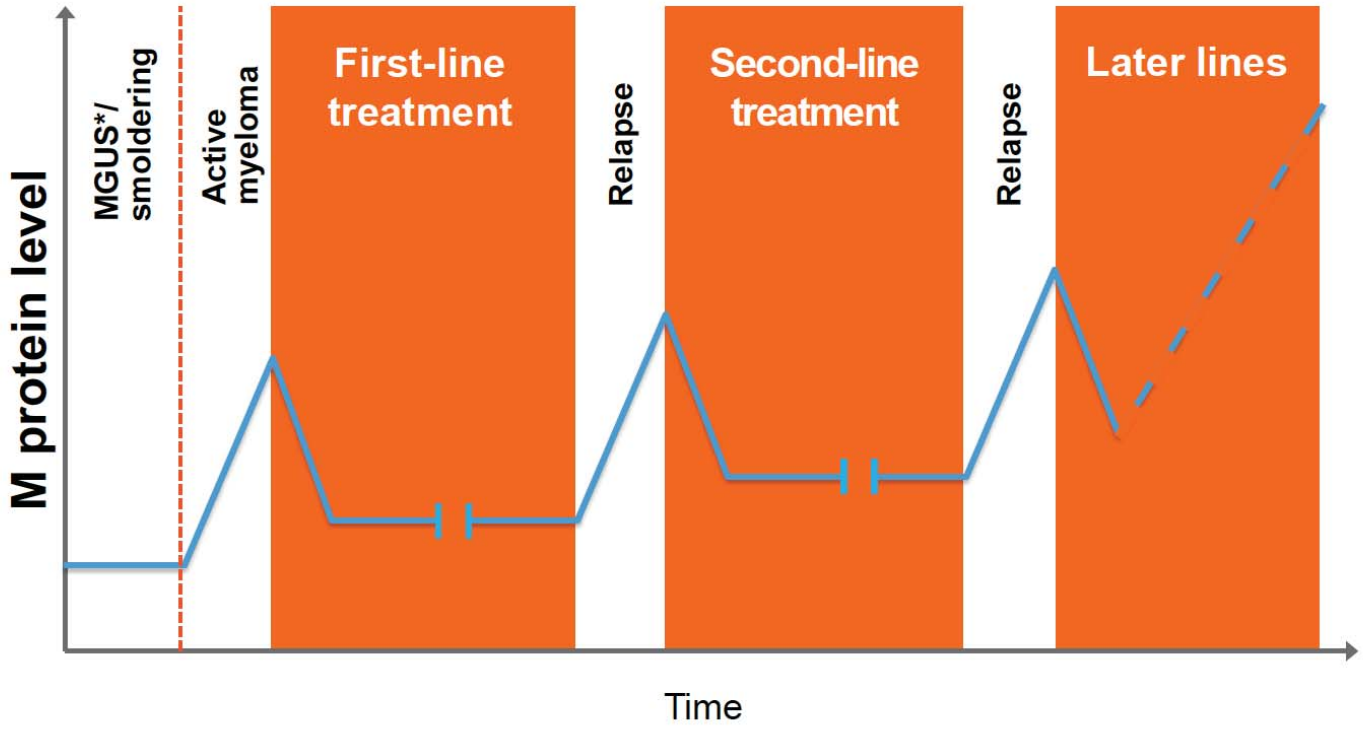
Multiple myeloma treatment paradigm

NINLARO action plan

Summary

NINLARO® (ixazomib) capsules

Multiple myeloma patients may undergo several lines of treatment



*Monoclonal gammopathy of undetermined significance

Patients face many treatment and disease burdens

TYPICAL R/R MM PATIENT

PATIENT DEMOGRAPHICS

- >70 years, failed 1-3 therapies
- Most likely polypharmacy for other conditions, prophylaxis, and treatment-related adverse reactions

PREVIOUS TREATMENTS

- **Bortezomib (VELCADE), lenalidomide, and oral steroids**
- **Alkylating agents for transplant patients (eg, melphalan)**

STANDARDS OF CARE

- Current: **bortezomib** or **lenalidomide** plus dexamethasone
- Potential future: treating to progression with triplet therapy and/or combinations of monoclonal antibodies, proteasome inhibitors, and immunomodulators

POTENTIAL ADVERSE REACTIONS/COMORBIDITIES

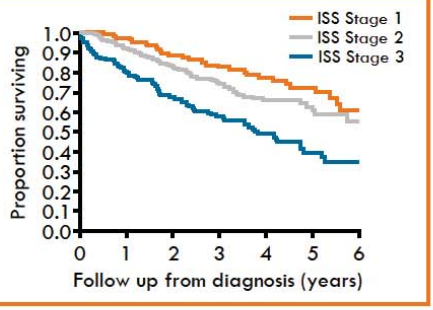
- Disease-related: renal impairment, bone pain, fractures, and fatigue
- Treatment-related: peripheral neuropathy, deep vein thrombosis, or secondary malignancies
- Other: Cardiovascular complications, bone disease, metabolic, and other conditions that must be treated

UNMET MEDICAL AND PERSONAL NEEDS:

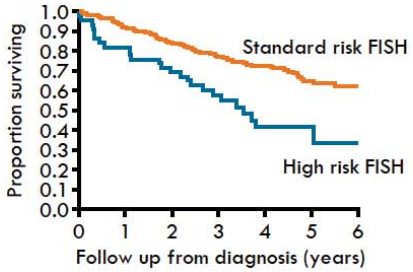
- Avoiding relapse and extending life
- Safer treatment (fewer toxicities)
- Simpler treatment (minimizing the impact of treatment/clinical concerns on daily life)

Patients with adverse prognostic characteristics have a particularly high unmet need

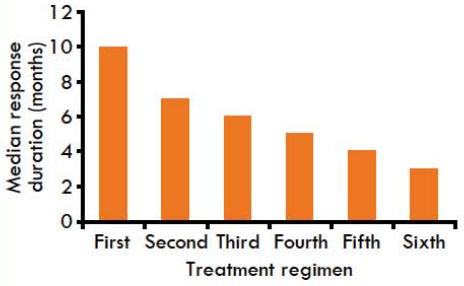
High ISS stage



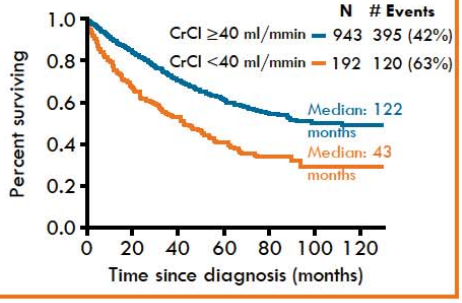
High-risk cytogenetics



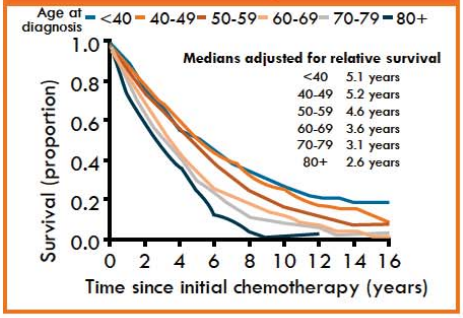
Multiple prior relapses



Poor renal function



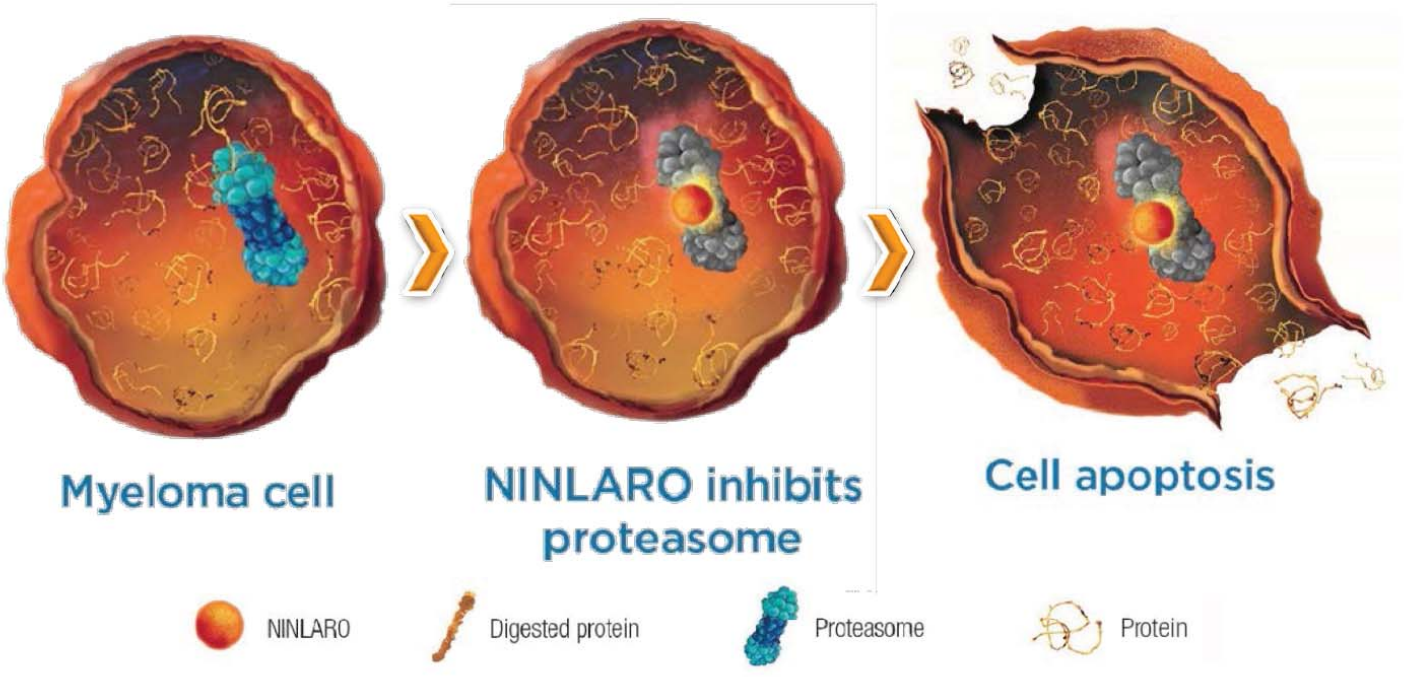
Elderly



CrCl, creatinine clearance; FISH, fluorescence in situ hybridisation

1. Kumar SK, et al. Leukemia 2014;28:1122-1128; 2. Ludwig H, et al. J Clin Oncol 2010;28:1599 - 1605; 3. Gonsalves WI, et al. Blood Cancer J 2015;5:e296; 4. Kumar SK, et al. Mayo Clin Proc 2004;79:867-874.

NINLARO mechanism of action

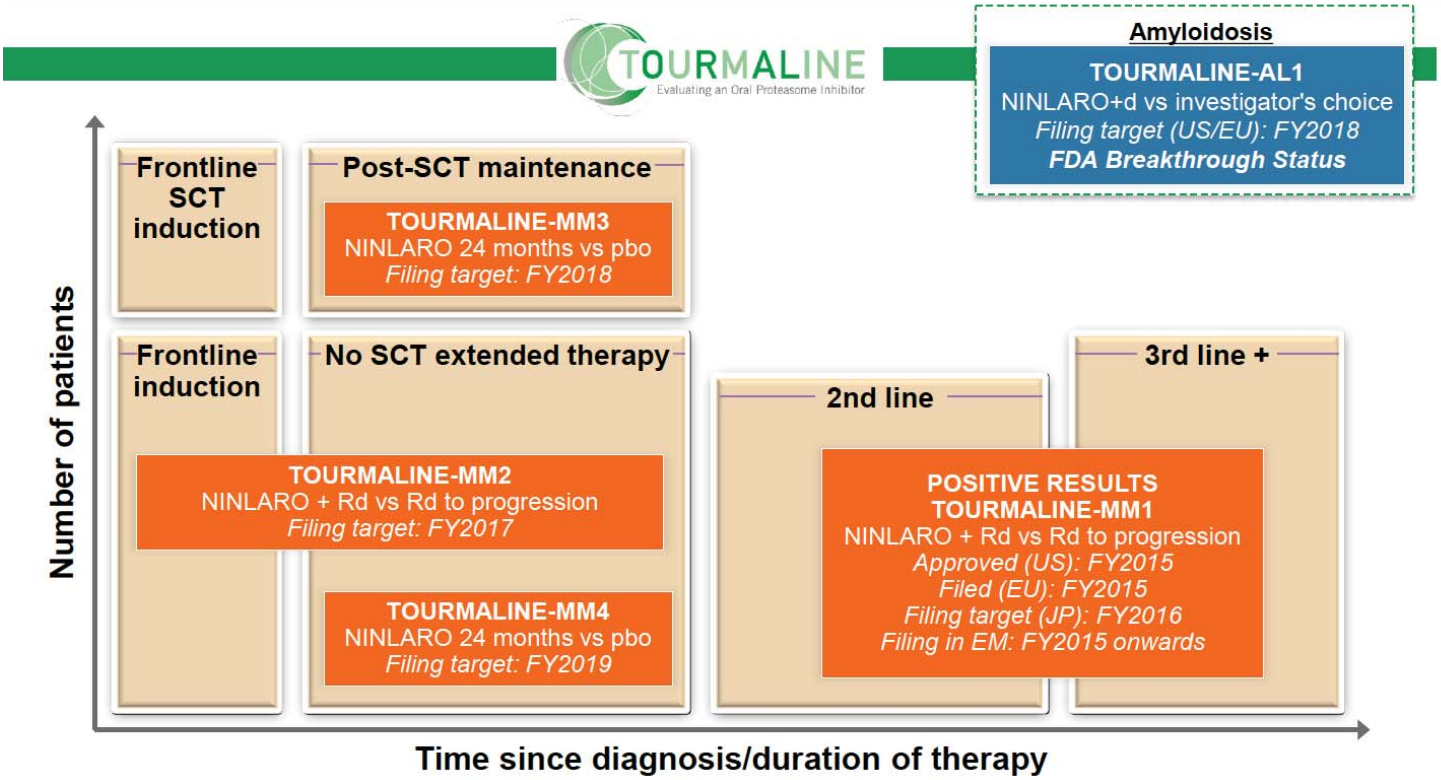


1. NINLARO temporarily blocks proteasomes from breaking down proteins.

2. This causes a buildup of proteins in the cell.

3. The buildup of proteins can result in cell death.

The TOURMALINE-MM1 Study is the first of a most comprehensive myeloma development program



Rd = Revlimid (lenalidomide) + dexamethasone
pbo = placebo

Our myeloma expertise drove excellent R&D execution and allowed rapid progress

First Myeloma Trial	Oct. 2009
Initiation of Phase 3 Rd Combo in R/R MM	Aug 2012
FDA Submission	July 2015
FDA Approval	Nov 2015

6 years from 1st patient enrolled to approval

133 days from submission to approval

NINLARO® (ixazomib) capsules

Rd = Revlimid (lenalidomide) + dexamethasone

TOURMALINE-MM1: Phase 3 study of weekly oral ixazomib + lenalidomide + dexamethasone

Global, double-blind, randomized, placebo-controlled study design

N = 722

Randomization 1:1

Ixazomib + Lenalidomide + Dexamethasone
Ixazomib: 4 mg on days 1, 8, and 15
Lenalidomide: 25 mg* on days 1-21
Dexamethasone: 40 mg on days 1, 8, 15, 22

Repeat every 28 days until progression, or unacceptable toxicity

Placebo + Lenalidomide + Dexamethasone
Placebo: on days 1, 8, and 15
Lenalidomide: 25 mg* on days 1-21
Dexamethasone: 40 mg on days 1, 8, 15, 22

Stratification:
- Prior therapy: 1 vs 2 or 3
- ISS: I or II vs III
- PI exposure: yes vs no

Primary endpoint:
- PFS

Key secondary endpoints:
- OS
- OS in patients with del(17p)

Response and progression (IMWG 2011 criteria[1]) assessed by an independent review committee (IRC) blinded to both treatment and investigator assessment

*10 mg for patients with creatinine clearance ≤60 or ≤50 mL/min, depending on local label/practice

1. Rajkumar S, et al. Blood 2011;117:4691–5.

TOURMALINE-MM1 is a rigorous Phase 3 trial with populations representative of real-world patients

TRIAL	TOURMALINE–MM1 ixazomib	ELOQUENT–1 elotuzumab	ASPIRE carfilzomib
Blinded, Placebo Control	●		
Primary Refractory Patients Allowed	●		
Free Light Chain Only Disease Allowed	●		
Creatinine Clearance < 50 mL/min	●	●	
Serum M-Protein cut-off ≥ 1 g/dL	●		
Global Enrollment Including Asia	●	●	
del(17) cut-off >60%			●
Response rates co-primary endpoint		●	

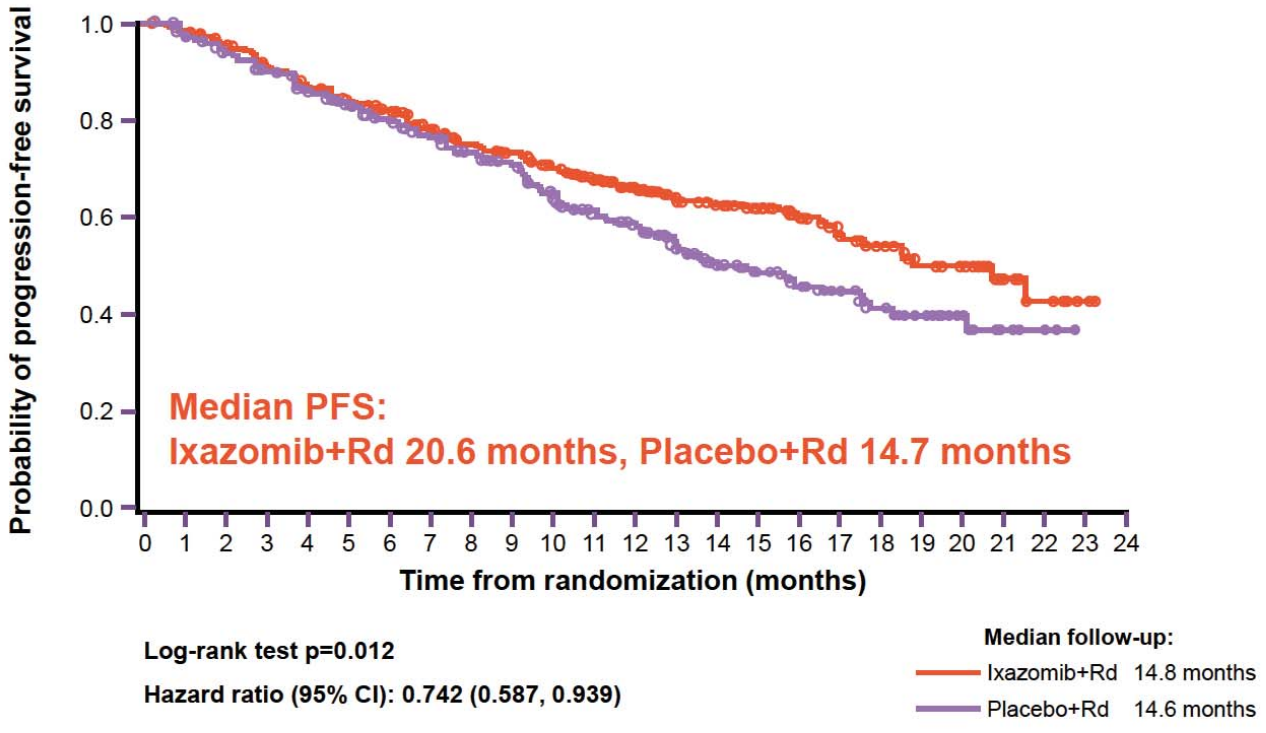
Moreau P et al. N Engl J Med 2016;374(17).
ELOQUENT trial design, ASPIRE trial design.

Ixazomib, the first oral proteasome inhibitor, significantly extends PFS in TOURMALINE-MM1

- TOURMALINE-MM1 is a uniquely robust placebo-controlled study of IRd compared to Rd
  - This data was recently published in the *New England Journal of Medicine* and demonstrated a significant extension in progression-free survival and a favorable benefit-risk profile for patients with relapsed and/or refractory multiple myeloma (R/R MM)
- IRd provided patients with relapsed and/or refractory MM with:
  - A significant and clinically meaningful improvement in PFS
  - Significantly improved time to progression (TTP) and response rates
  - Improved PFS in high-risk patients
- Ixazomib added limited additional toxicity to the placebo regimen
  - Low rates of peripheral neuropathy and no cardiovascular, pulmonary, or renal signals
  - Patient-reported quality of life was maintained
- The all-oral regimen of IRd provides an additional therapeutic option for patients with R/R MM

IRd = NINLARO (ixazomib) + Revlimid (lenalidomide) + dexamethasone
Rd = Revlimid (lenalidomide) + dexamethasone

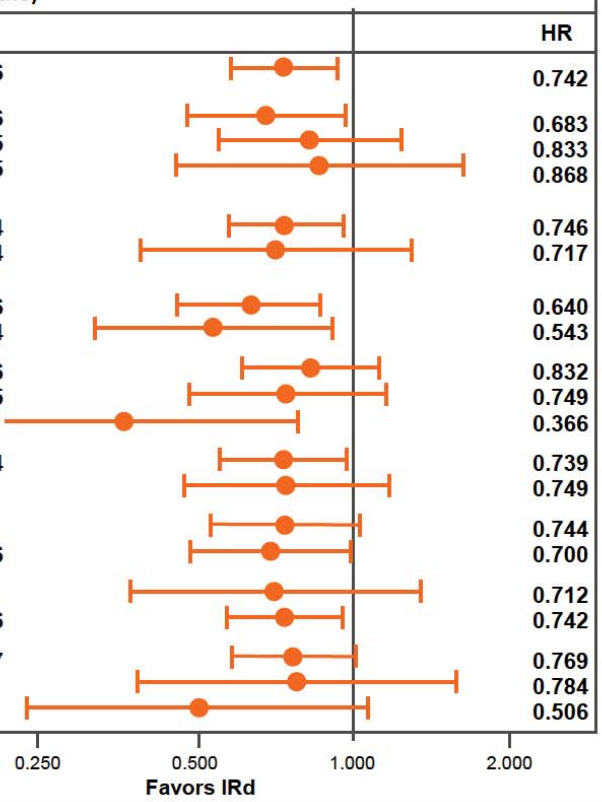
TOURMALINE-MM1 : Significant 35% improvement in progression-free survival (PFS) with IRd



Moreau P et al. N Engl J Med 2016;374(17).

TOURMALINE-MM1: Consistent PFS benefit across pre-specified patient subgroups

Variable	Subgroup	N Placebo-Rd	N IRd	Median PFS (months) Placebo-Rd	Median PFS (months) IRd	HR
All patients	ALL	362	360	14.7	20.6	0.742
Age (yrs)	≤65	176	168	14.1	20.6	0.683
	>65-75	125	145	17.6	17.5	0.833
	>75	61	47	13.1	18.5	0.868
ISS stage (stratification factor)	I or II	318	314	15.7	21.4	0.746
	III	44	46	10.1	18.4	0.717
Cytogenetic risk	Standard-risk	216	199	15.6	20.6	0.640
	High-risk	62	75	9.7	21.4	0.543
Number of prior therapies	1	217	224	15.9	20.6	0.832
	2	111	97	14.1	17.5	0.749
	3	34	39	10.2	NE	0.366
Proteasome inhibitor	Exposed	253	250	13.6	18.4	0.739
	Naive	109	110	15.7	NE	0.749
Prior IMiD therapy	Exposed	204	193	17.5	NE	0.744
	Naïve	158	167	13.6	20.6	0.700
Refractory to last prior therapy	Yes	55	59	NE	NE	0.712
	No	307	301	14.1	20.6	0.742
Relapsed or refractory	Relapsed	280	276	15.6	18.7	0.769
	Refractory	40	42	13.0	NE	0.784
	Ref & rel	42	41	13.1	NE	0.506



Moreau P et al. N Engl J Med 2016;374(17).

IRd = NINLARO (ixazomib) + Revlimid (lenalidomide) + dexamethasone
Rd = Revlimid (lenalidomide) + dexamethasone

TOURMALINE-MM1: Improved response rates, durable responses, and improved time to progression (TTP) with IRd

Response rates	IRd (N=360)	Placebo-Rd (N=362)	p-value
Confirmed ORR (≥PR), %	78.3	71.5	p=0.035
CR+VGPR, %	48.1	39.0	p=0.014
Response categories			
CR, %	11.7	6.6	p=0.019
PR, %	66.7	64.9	–
VGPR, %	36.4	32.3	–
Median time to response, mos	1.1	1.9	–
Median duration of response, mos	20.5	15.0	–
Median TTP, mos	21.4	15.7	HR 0.712 p=0.007

Moreau P et al. N Engl J Med 2016;374(17).

IRd = NINLARO (ixazomib) + Revlimid (lenalidomide) + dexamethasone
Rd = Revlimid (lenalidomide) + dexamethasone

TOURMALINE-MM1: Ixazomib adds limited additional toxicity to Rd upon prolonged exposure

- At 23 months, median number of treatment cycles: 17 (range 1–34) for IRd, and 15 (1–34) for placebo-Rd
  - 48% and 43% of patients had received ≥18 cycles, respectively

Adverse event (AE)	IRd (N=361), %	Placebo-Rd (N=359), %
Any AE	98	99
Any grade ≥3 AE	74	69
Any serious AE	47	49
AE resulting in discontinuation of study regimen	17	14
On-study death (death within 30 days of last dose)	4	6

- Higher frequency of grade ≥3 AE, primarily due to thrombocytopenia
- Rates of serious AEs, AEs resulting in discontinuation or on-study death were similar between the two arms
- Peripheral neuropathy: no difference in high grade events
- No cardiac, thrombovascular, renal or pulmonary signals

Moreau P et al. N Engl J Med 2016;374(17).
IRd = NINLARO (ixazomib) + Revlimid (lenalidomide) + dexamethasone
Rd = Revlimid (lenalidomide) + dexamethasone

AEs after median follow-up of 23 months: Increased rates with IRd driven by low-grade events

	IRd (N=361), %			Placebo-Rd (N=359), %		
Preferred terms	**All-grade**	**Grade 3**	**Grade 4**	**All-grade**	**Grade 3**	**Grade 4**
AEs overlapping with lenalidomide						
Diarrhea	45	6	0	39	3	0
Constipation	35	<1	0	26	<1	0
Nausea	29	2	0	22	0	0
Vomiting	23	1	0	12	<1	0
Rash*	36	5	0	23	2	0
Back pain	24	<1	0	17	3	0
Upper respiratory tract infection	23	<1	0	19	0	0
Thrombocytopenia	31	12	7	16	5	4
AEs with proteasome inhibitors						
Peripheral neuropathy*	27	2	0	22	2	0
Peripheral edema	28	2	0	20	1	0
AEs with lenalidomide						
Thromboembolism*	8	2	<1	11	3	<1
Neutropenia*	33	18	5	31	18	6

*Represents multiple MedDRA preferred terms.

Moreau P et al. N Engl J Med 2016;374(17).
IRd = NINLARO (ixazomib) + Revlimid (lenalidomide) + dexamethasone
Rd = Revlimid (lenalidomide) + dexamethasone

Other infrequent AEs of any grade (median follow-up of 23 months)

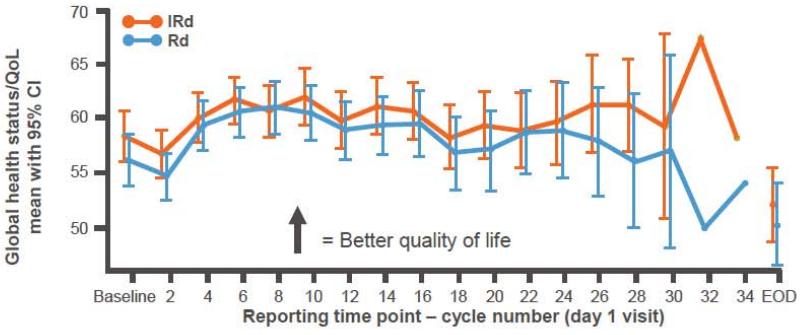
AE	IRd (N=361), %	Placebo-Rd (N=359), %
Arrhythmias*	16	15
Hypertension	6	5
Hypertension crisis	<1	0
Hypotension*	6	6
Heart failure*	4	4
Myocardial infarction*	1	2
Acute renal failure*	9	11
Liver impairment*	7	6
Interstitial lung disease*	1	2
Encephalopathy*	<1	1
Events of special interest		
New primary malignancy*,†	5	4

*Represents multiple MedDRA preferred terms.
†Includes treatment-emergent AEs and new primary malignancies reported during follow-up period.

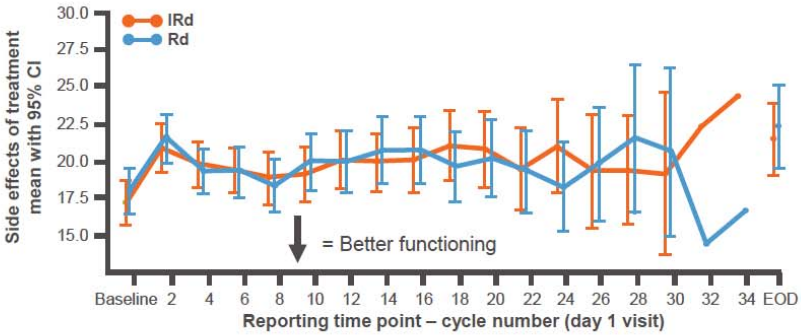
Moreau P et al. N Engl J Med 2016;374(17).
IRd = NINLARO (ixazomib) + Revlimid (lenalidomide) + dexamethasone
Rd = Revlimid (lenalidomide) + dexamethasone

TOURMALINE-MM1: Quality of life maintained with IRd vs placebo-Rd

EORTC-QLQ-C30 Mean global health status score



MY-20 Mean side effects of treatment score



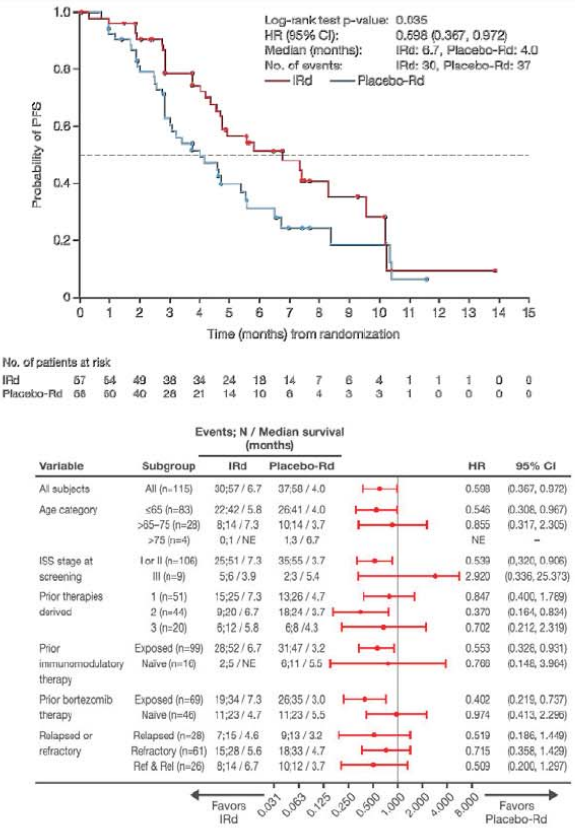
Moreau P et al. N Engl J Med 2016;374(17).
IRd = NINLARO (ixazomib) + Revlimid (lenalidomide) + dexamethasone
Rd = Revlimid (lenalidomide) + dexamethasone

Ixazomib, the first oral proteasome inhibitor, significantly extends PFS in TOURMALINE-MM1

- TOURMALINE-MM1 is a uniquely robust placebo-controlled study of IRd compared to Rd
  - This data was recently published in the *New England Journal of Medicine* and demonstrated a significant extension in progression-free survival and a favorable benefit-risk profile for patients with relapsed and/or refractory multiple myeloma (R/R MM)
- IRd provided patients with relapsed and/or refractory MM with:
  - A significant and clinically meaningful improvement in PFS
  - Significantly improved time to progression (TTP) and response rates
  - Improved PFS in high-risk patients
- Ixazomib added limited additional toxicity to the placebo regimen
  - Low rates of peripheral neuropathy and no cardiovascular, pulmonary, or renal signals
  - Patient-reported quality of life was maintained
- The all-oral regimen of IRd provides an additional therapeutic option for patients with R/R MM

IRd = NINLARO (ixazomib) + Revlimid (lenalidomide) + dexamethasone
Rd = Revlimid (lenalidomide) + dexamethasone

TOURMALINE-MM1 China continuation



- Same randomized study design of IRd versus placebo-Rd
- Same eligibility criteria and methodology
- N = 115 (China only)
- Significant improvement in PFS
  - Supported by secondary endpoint improvement in TTP and response
- Ixazomib added limited additional toxicity to placebo regimen
- Conclusion: consistent positive treatment effect in Chinese patients

Hou, et al, ASCO 2016 (Abstract #8036)
IRd = NINLARO (ixazomib) + Revlimid (lenalidomide) + dexamethasone
Rd = Revlimid (lenalidomide) + dexamethasone

Agenda

Overview of Takeda Oncology

ADCETRIS (brentuximab vedotin)

NINLARO (ixazomib)

NINLARO development

Multiple myeloma treatment paradigm ***Presented by Brian DeSchuytner***

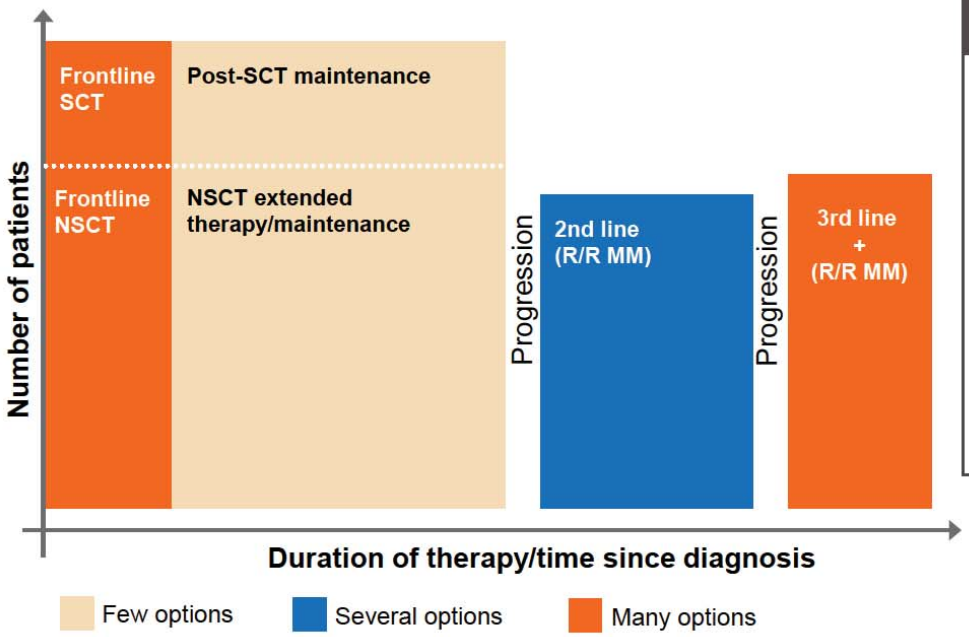
NINLARO action plan

Summary

NINLARO® (ixazomib) capsules

The relapsing nature of myeloma is reflected in distinct treatment settings representing up to 3 million patient months primarily in developed markets

The Global Myeloma Market Map



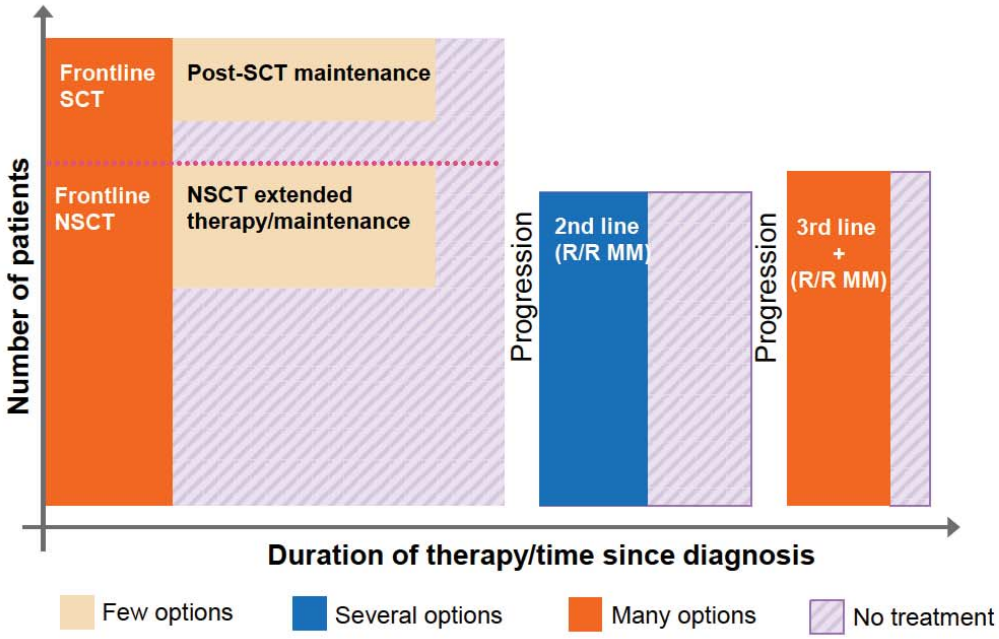
Myeloma Market

- 3M patient months primarily derived from developed markets due to under-diagnosis in emerging markets
- Pursuing aggressive NINLARO registrations in emerging markets to grow this opportunity further

NSCT=no stem cell transplant; **R/R MM**=relapsed/refractory multiple myeloma; **SCT**=stem cell transplant.

However, even in developed markets only 1.5 million patient months of treatment are delivered due to limitations of current therapy

The Global Myeloma Market Map



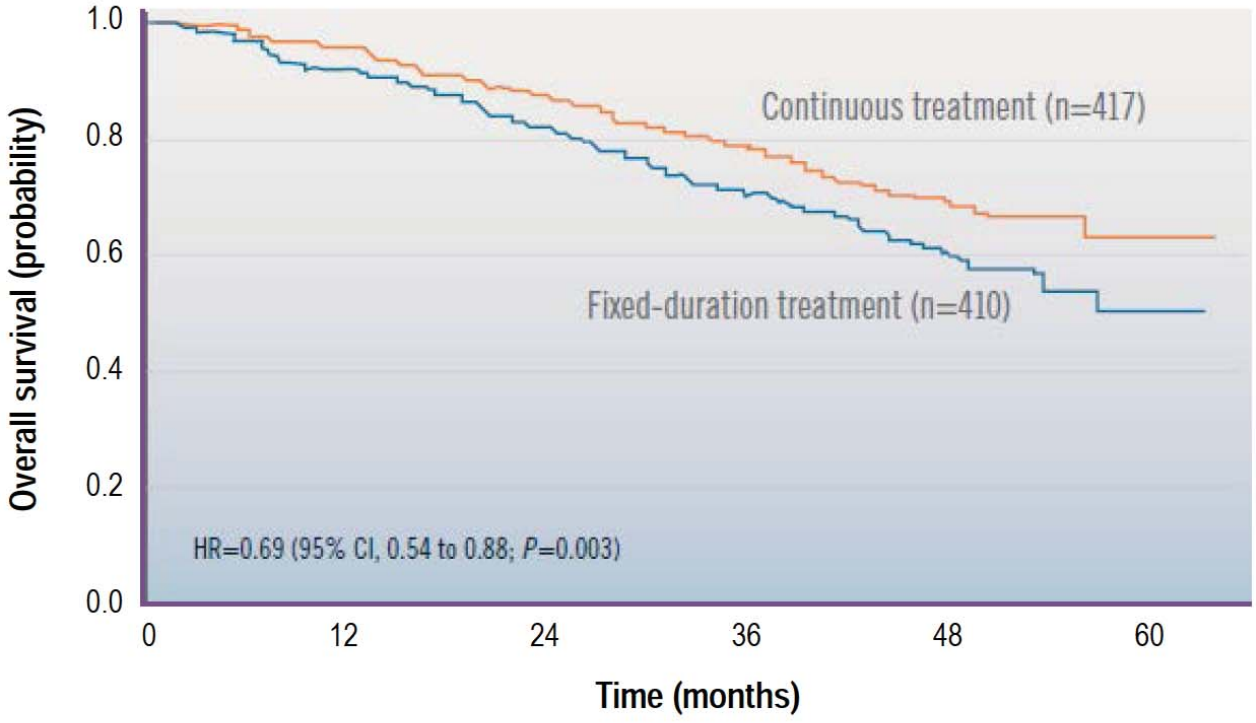
NSCT=no stem cell transplant; **R/R MM**=relapsed/refractory multiple myeloma; **SCT**=stem cell transplant.

Source: Lexidyne epidemiology and chart reviews

So what do MM patients need?

SAFER	• Minimal toxicities, especially peripheral neuropathy, cardiovascular events, secondary malignancies
SIMPLER	• Limit burden on patients and caregivers • Infrequent dosing
SUSTAINABLE	• Ability to stay on therapy • Maintain quality of life
MORE EFFECTIVE	• Improve PFS (and ultimately OS) • Especially in high-risk and difficult-to-treat patients

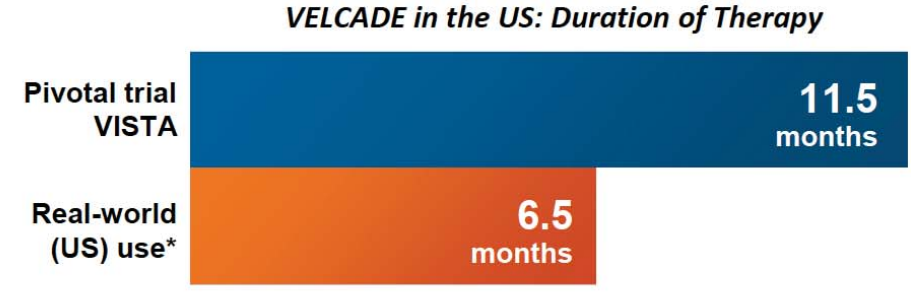
Continuous treatment has shown improved overall survival vs. fixed-duration treatment



 Adapted from Palumbo et al, *J Clin Oncol*, 2015.

But continuous treatment is difficult to achieve with current proteasome inhibitors

Patients have trouble staying on VELCADE in the real world



Reasons for discontinuation include:

- Peripheral neuropathy
- Inconvenience
- Treatment fatigue

 *VELCADE Chart Review, Kantar Health 2013. Benboubker, *NEJM* 2014

NINLARO can deliver sustainable treatment for multiple myeloma patients

UNIQUE	• The 1st and only oral proteasome inhibitor
EFFECTIVE	• ~6 month PFS improvement in a real-world representative population • Efficacy in high risk patients
MANAGEABLE SAFETY	• Low neuropathy and mostly low grade • No cardiovascular safety signal
SIMPLE	• Replace twice weekly injections at hospital with one capsule, once weekly at home
COMPETITIVELY PRICED	• Competitive vs. newly introduced agents • Access solutions

Sustainable efficacy from a proteasome inhibitor can offer new opportunities

Today

~ **6 months PI therapy**

Premature discontinuation of therapy due to fatigue from office visits or side effects

Tomorrow

Improved duration of therapy

~ **12+ months PI therapy**

\+

New settings of care

- Where earlier generation PIs are not currently used
- An alternative PI option
- After treatment with another PI
- As a combination partner for novel agents

=

More benefits for more myeloma patients

Agenda

Overview of Takeda Oncology

ADCETRIS (brentuximab vedotin)

NINLARO (ixazomib)

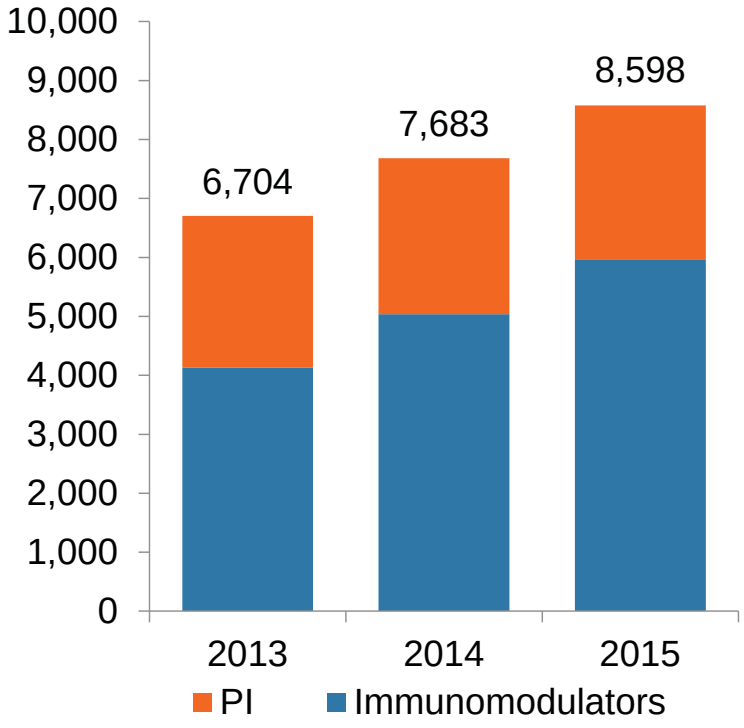
- NINLARO development
- Multiple myeloma treatment paradigm
- **NINLARO action plan**

Summary

NINLARO® (ixazomib) capsules

The current myeloma market is approaching $10B

Global Myeloma Market ($M)



Growth drivers

- **Introduction of novel therapies**
- **Longer treatment durations that can result in improved efficacy**
- **Newer treatment paradigms (e.g., maintenance therapy)**
- **Treatment combinations with novel agents (e.g., triplet therapy)**

 Company Quarterly and Annual Reports for Takeda, J&J, Amgen and Celgene.

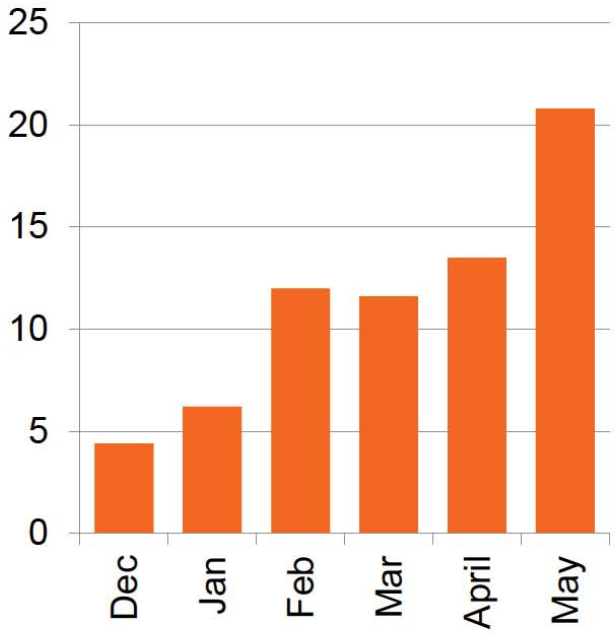
We can capture this market opportunity by focusing on three segments of the market

	Market for Proteasome Inhibitors in Myeloma	Market for Immunomodulators in Myeloma	Market for Early Discontinuation / Mid-treatment Addition
Total	**$2.7 B**	**$5.9 B**	**Missing from Market $8.5 B**
	• As an oral and sustainable alternative to earlier generation PIs	• As an triplet alternative to lenalidomide doublets	• As a way to sustain therapy despite efficacy, toxicity or convenience issues encountered with other agents

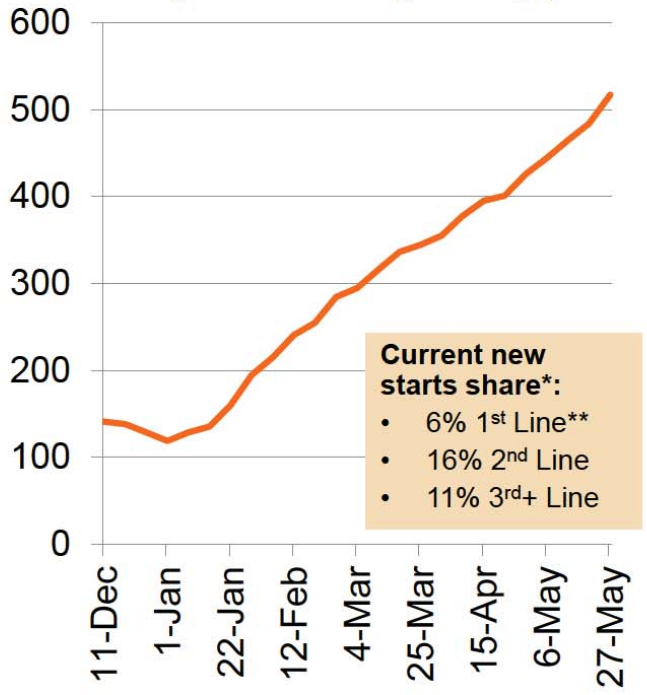
Note: Proteasome inh bitors and immunomodulators have indications outside of myeloma so global sales of products are higher than the global myeloma market

NINLARO is off to a great start in the U.S. since December launch

U.S. NINLARO Net Sales ($M)



NINLARO Weekly Demand Units (4 Week Moving Average)



* Intrinsiq IntelliView April 2016; **unpromoted

To achieve the equivalent of $1B of VELCADE revenues, NINLARO in the U.S. must only achieve half of current VELCADE share

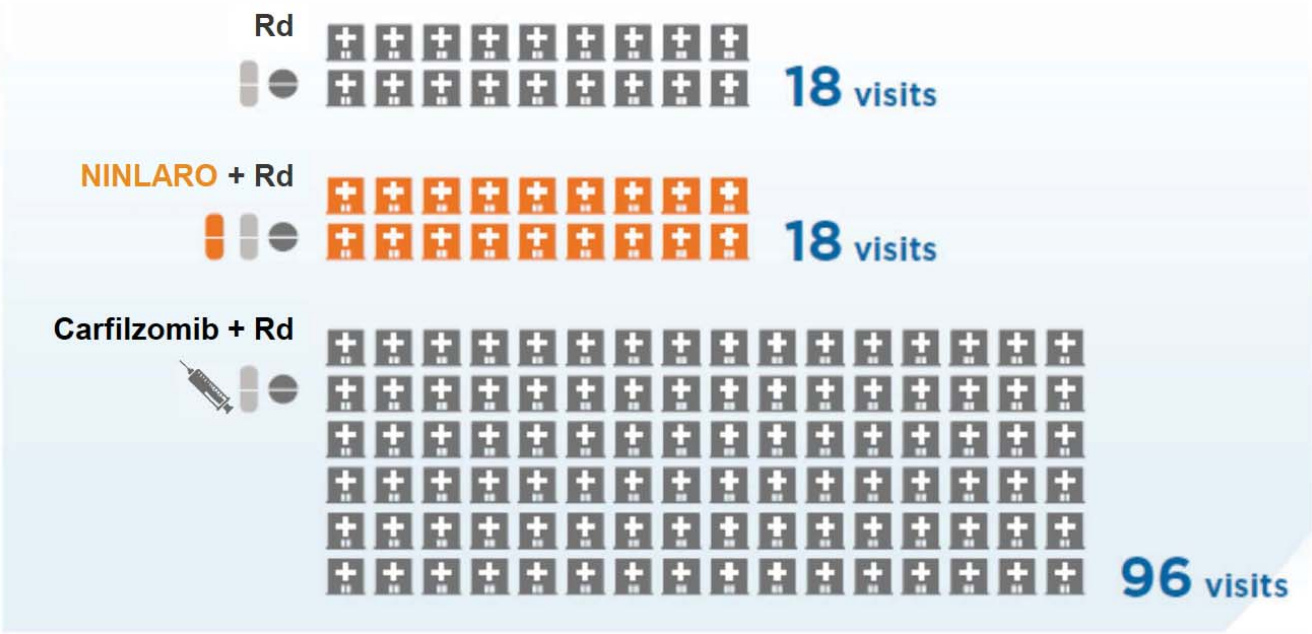
	U.S. New Patient Starts	Share of Patients	Patients Treated	Length of Therapy (Months)	Patient Months Delivered
VELCADE					
1st Line	26,000	60%	15,600	6	93,600
2nd Line	17,000	40%	6,800	6	40,800
3rd Line +	16,000	20%	3,200	6	19,200
Total	59,000	43%	25,600	6	153,600
NINLARO	**ILLUSTRATIVE FY2018 $1B U.S. SCENARIO**				
1st Line	26,000	10%	2,600	18	46,800
2nd Line	17,000	30%	5,100	12	61,200
3rd Line +	16,000	25%	4,000	12	48,000
Total	59,000	20%	11,700	13	156,000

Growth of NINLARO and the end of amortization of intangible assets related to VELCADE is expected to offset the VELCADE US API patent expiry

Additional expected events include NINLARO approval in newly diagnosed MM and NINLARO approval in maintenance settings not accessible with VELCADE

NINLARO is simple and practical and can give more time to patients and their families

Minimum number of hospital visits required for administration/collection of multiple myeloma treatments over 18 cycles



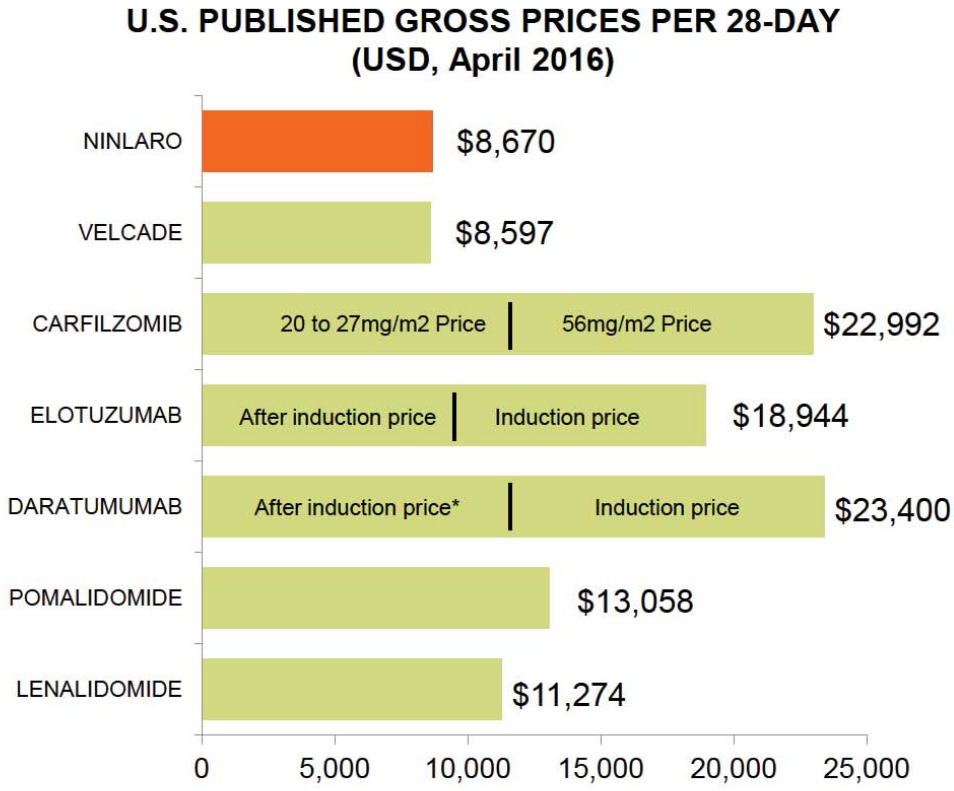
Based on the Carfilzomib U.S. Prescr bing Information.

Within our indication we know which patients NINLARO can help

Working Patients	**15%**	• NINLARO offers administration profile that allows continued work
Logistically Challenged Patients	**20%**	• NINLARO offers administration profile that avoids cumbersome additional clinic visits
Co-Morbid Patients	**20-30%**	• NINLARO offers safety profile manageable for patients with renal and cardiovascular issues
High Cytogenetic Risk Patients	**20-40%**	• NINLARO offers compelling efficacy
Multiple Relapse Patients	**50%**	• NINLARO offers compelling efficacy

Takeda Oncology Awareness Trial Usage Survey; Lexidyne

Compared to other agents, we have priced NINLARO so as not to increase the overall monthly cost

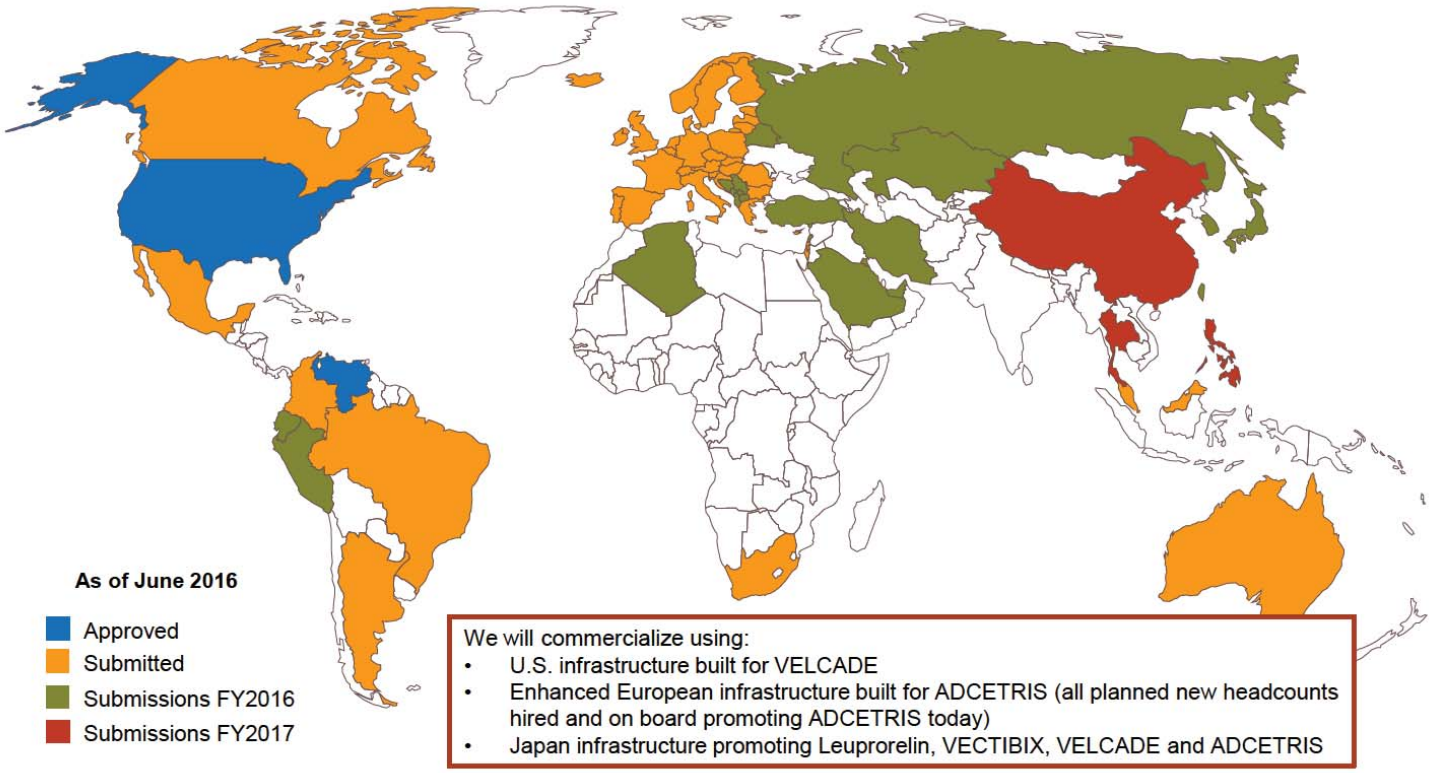


Our pricing approach is based on:

- Understanding of patient need
- Removing barriers to adoption and facilitating conversion to NINLARO
- Confidence in NINLARO's potential as continuous therapy

*based on assumption of 6 months of therapy
Source: Redbook

NINLARO global footprint: 15 submissions/approvals to date using an ASAP/ As-Wide-As-Possible strategy

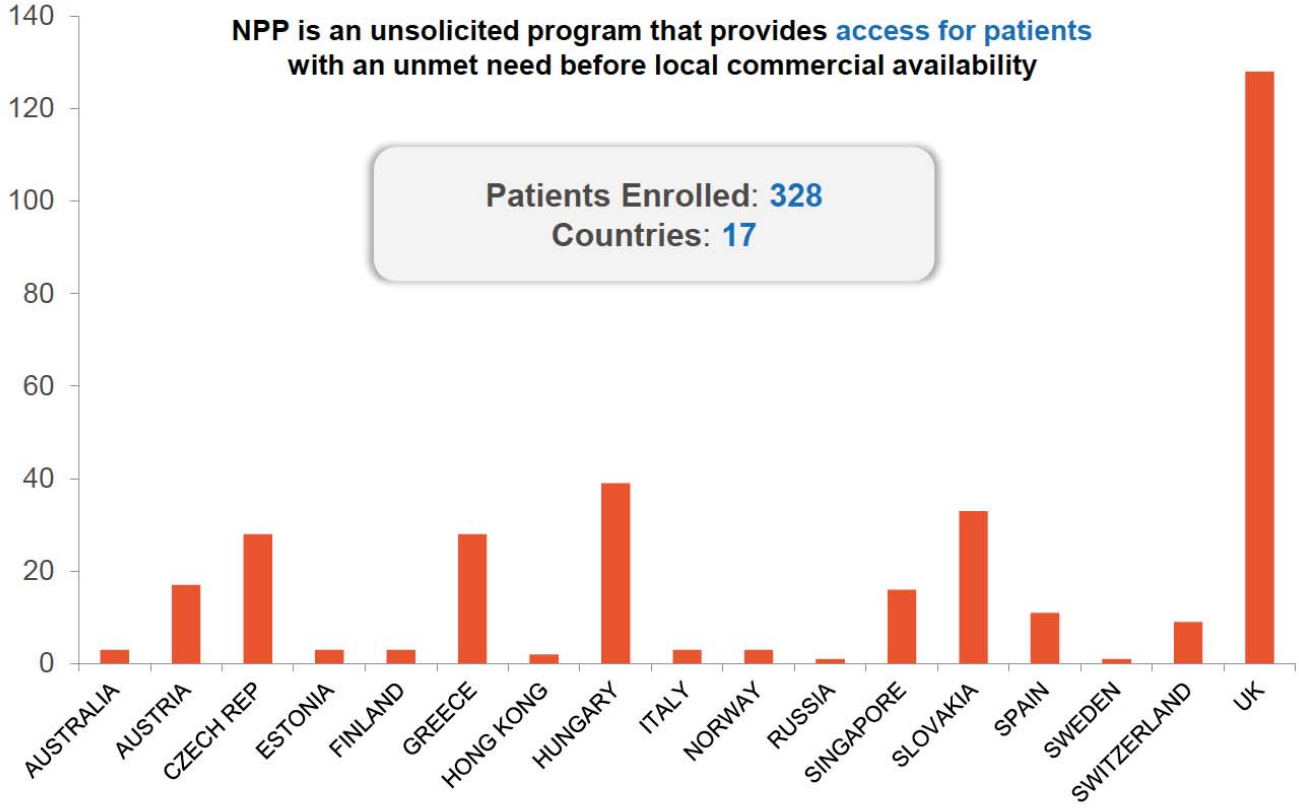


We will commercialize using:
- U.S. infrastructure built for VELCADE
- Enhanced European infrastructure built for ADCETRIS (all planned new headcounts hired and on board promoting ADCETRIS today)
- Japan infrastructure promoting Leuprorelin, VECTIBIX, VELCADE and ADCETRIS

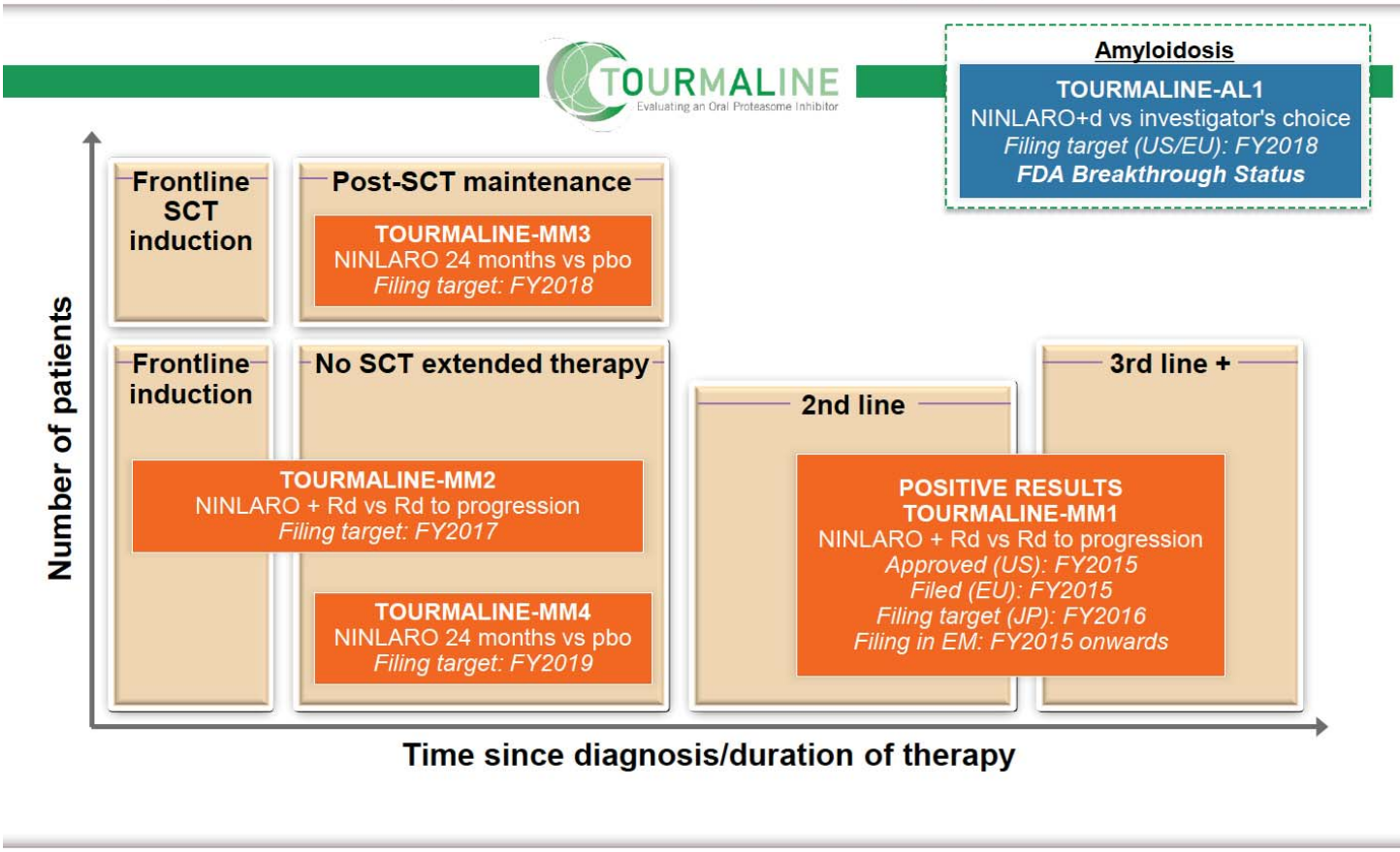
Ixazomib Named Patient Program (NPP) has provided early access to 328 patients across 17 countries to date*

NPP is an unsolicited program that provides access for patients with an unmet need before local commercial availability

Patients Enrolled: 328
Countries: 17



The TOURMALINE-MM1 Study is the first of a most comprehensive myeloma development program



Rd = Revlimid (lenalidomide) + dexamethasone
pbo = placebo

IISR program with a global footprint explores the benefit of NINLARO to patients

- >80 active and approved studies, planned to enroll over 7,000 patients over next five years
- Including 14 countries and key research groups such as ALLIANCE, IFM, EMN, HOVON, PETHEMA, MMRF, etc
- Researching NINLARO in MM in various combinations and patient populations and in additional indications besides MM
- Publications from IISRs:
  - *Kumar et, al Blood Cancer Journal*
  - *ASH 2015: 4 presentations (1 oral)*
  - *ASCO 2016: 2 oral presentations on ixazomib in non revlimid combinations*

IISR: Investigator initiated sponsored research

Impactful scientific presence

Published April 2016

- ***The New England Journal of Medicine***

Congresses

- **ASH 2015:** 15 presentations, 4 orals, 11 posters
- **ASCO 2016:** 8 abstracts accepted, 2 oral presentations
- **EHA 2016:** 14 abstracts accepted

Manuscripts already available in:

- ***Blood***
- ***The Lancet Oncology***

INSIGHT MM:
Investigation of the global outcomes of multiple myeloma

- Treatment complexity in MM is increasing with more available drugs and exponentially more combinations. In this environment, data on real life outcomes across the world, currently very limited, are needed by MM community
- Target accrual – 5000 patients worldwide, in 15 countries
  - Brazil, France, Germany, UK, U.S., Belgium, Greece, Israel, Italy, Spain, China, Colombia, Mexico, Taiwan, Turkey
- Global Steering Committee (12 U.S. & 12 global representatives)
- Collaborative approach with Steering Committee Members, Investigators and the larger MM Community
  - Steering Committee to drive data analysis and publications
  - Open access to larger MM community after embargo period
  - Potential collaborations with medical societies including Japan Hematology
- Patient Focused
  - Patient member of the Steering Committee
  - Engagement with Patient Opinion Leaders
    - Optimize study experience for patient participants through the communication and return of information they consider valuable

INSIGHT MM
INVESTIGATION OF THE GLOBAL OUTCOMES OF MULTIPLE MYELOMA

NINLARO can deliver sustainable treatment for multiple myeloma patients

UNIQUE	• The 1st and only oral proteasome inhibitor
EFFECTIVE	• ~6 month PFS improvement in a real-world representative population • Efficacy in high risk patients
MANAGEABLE SAFETY	• Low neuropathy and mostly low grade • No cardiovascular safety signal
SIMPLE	• Replace twice weekly injections at hospital with one capsule, once weekly at home
COMPETITIVELY PRICED	• Competitive vs. newly introduced agents • Access solutions

NINLARO is transformative for myeloma patients and for Takeda

VELCADE Peak Global Revenues	**$2.7B**
Price versus VELCADE (per month)	x about parity
Length of therapy from 5 - 6 months to 12+ months	x 2 to 3
Relative share to current VELCADE share	x 0.5
Maintenance	+$1B
NINLARO global potential	**>$3B**

With modest penetration across treatment settings, NINLARO has potential greater than $3B

An Illustrative >$3 B Scenario

	R/RMM 3rd+ Line	R/RMM 2nd Line	NDMM 1st Line	R/R Amyloidosis	Post-SCT Maint	Non-SCT Maint	Total
Launch Year	*FY2015*	*FY2015*	*FY2018*	*FY2018*	*FY2019*	*FY2020*	
Total eligible patients	89,000	85,000	102,000	13,000	12,400	47,000	
Patient share (%)	15%	15%	10%	15%	10%	0%	
Patients	13,350	12,750	10,200	1,950	1,240	-	
Duration (Months)	10	12	18	10	18	0	
Patient months	133,500	153,000	183,600	19,500	22,320		
Net Sales Range ($M) from	$694	$796	$955	$101	$116	$-	**$2,663**
to	$926	$1,061	$1,273	$135	$155	$-	**$3,551**

Agenda

Our patients are at the center of everything we do

Takeda Oncology is well positioned for global success

- Committed to our vision and to the patient community with a well defined MAXIMIZE-PRIORITIZE-COLLABORATE strategy
  - Proven global commercial infrastructure and resources
  - Global Oncology Business Unit balances global alignment and local needs for customer focus, increased agility and commitment.
- NINLARO and ADCETRIS are two future potential blockbusters
  - NINLARO
    - Unique profile to help transform myeloma into a chronic disease: it is actively being developed in a comprehensive global registration lifecycle plan supported by a robust set of IISRs including cooperative group studies
    - Off to a strong start in the U.S., and by 2017 will be approved or filed across most of the globe. We are confident in the data and we believe we will succeed after re-examination in Europe
  - ADCETRIS
    - Already a standard of care in its indications and has shown unprecedented survival outcomes
    - Actively developed in a comprehensive lifecycle plan which, we are hopeful, will demonstrate its curative potential and substantially increase its revenues

Thank you!

We Aspire to Cure Cancer

Takeda ONCOLOGY