A photograph of a male doctor with a grey beard and glasses, wearing a white lab coat over blue scrubs, with a red stethoscope around his neck. He is looking down at an elderly male patient lying in a hospital bed. The patient is wearing a white hospital gown. The background shows a bright, modern hospital room with large windows and greenery outside.

Nordea Small Cap Seminar August 12th 2020

Jakob Lindberg, CSO



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Oncopeptides at a Glance

Targeted cancer treatments

- Peptide Drug Conjugate platform (PDC)
- Lead compound targeting multiple myeloma (MM)

Melflufen geared for accelerated approval in the US

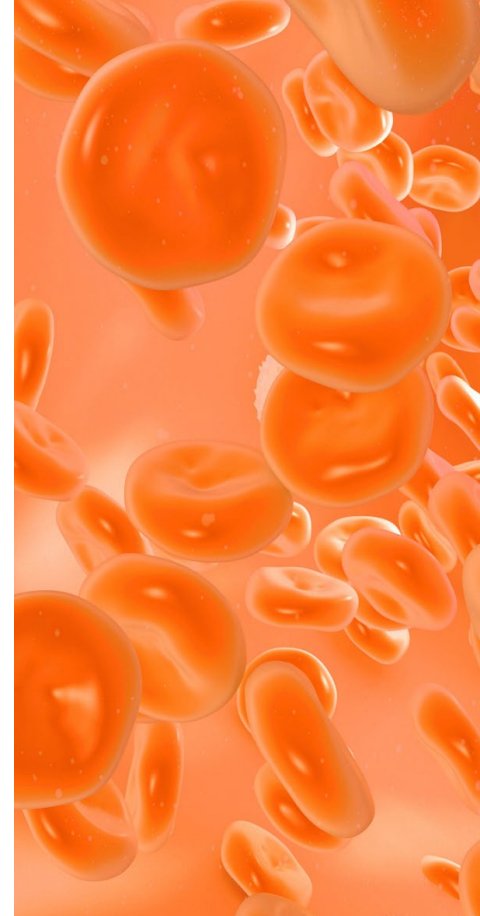
- NDA submission on June 30 based on phase 2 HORIZON data in triple-class RRMM
- sNDA submission H1 2022 based on phase 3 OCEAN data in earlier lines

PDC platform supports new indications

- Phase 1/2 study in AL amyloidosis – first study outside myeloma
- New NCE:s from PDC platform enter clinical studies 2021/22

Strong financial position

- Market cap: SEK ~8.8 B, listed on NASDAQ Stockholm
- Cash position: SEK 618 M as of March 31 plus approx. SEK 1,400 M raised in Q2



Recent Progress

FDA submission for accelerated approval

- A New Drug Application was submitted to the FDA on June 30 for accelerated approval of melflufen + dexamethasone in triple-class refractory multiple myeloma

Reinforcement of Executive Team

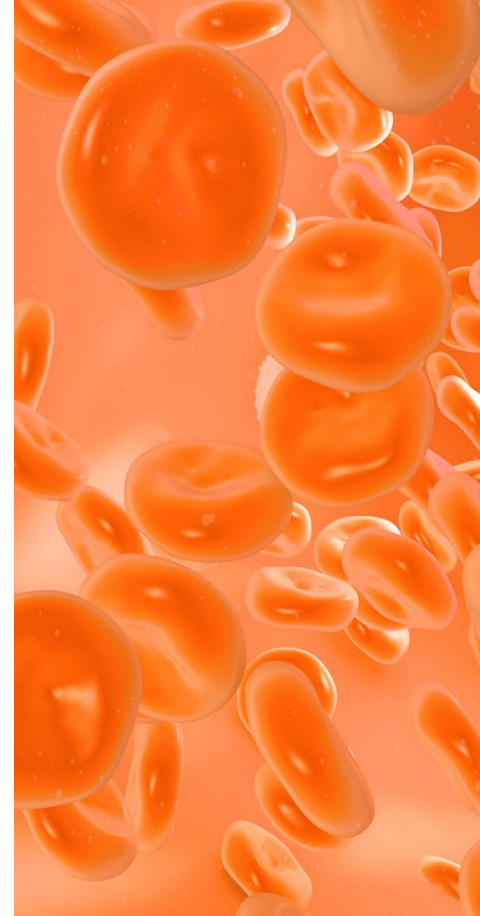
- Marty J Duvall was appointed Chief Executive Officer, CEO, from July 1, and Jakob Lindberg assumed the role as Chief Scientific Officer, CSO.

Landmark directed share issue

- Oncopeptides completed a directed share issue raising SEK 1,414 million (144 MUSD) before issue costs to reputed life science investors on May 6.

Major milestones

- Final data from the pivotal phase 2 HORIZON study was presented at the European Hematology Conference, EHA, in June
- Oncopeptides took over Kancera's laboratory for drug development in Solna, to strengthen preclinical organization and further develop PDC-platform



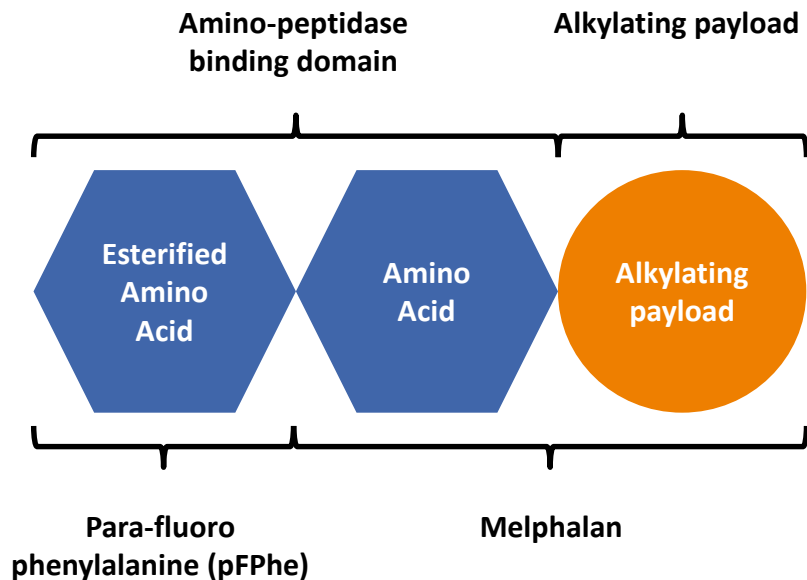
Marty Duvall - Professional background/experience

- Pharma experience at Aventis (Sanofi), MGI (Eisai), Abraxis (Celgene), Merck (MSD), ARIAD (Takeda) and Tocagen (Forte)
- Executive Leadership, Global Commercial Leadership, Marketing Leadership, Sales
- Global and domestic leadership positions
- Broad and deep oncology experience includes work in solid tumors (e.g. breast, lung, prostate, H/N, gastric, GBM, etc.), hematology (e.g. MDS, CTCL, CML, AML, MM, etc.), gene therapy and supportive care
- Launch experience includes Taxotere (US, Europe and Asia), Abraxane (China), Dacogen (US and Europe), Sylatron (Global), Iclusig (US, Europe, and Asia) and Alunbrig
- Diverse portfolio of oncology brands developed and marketed

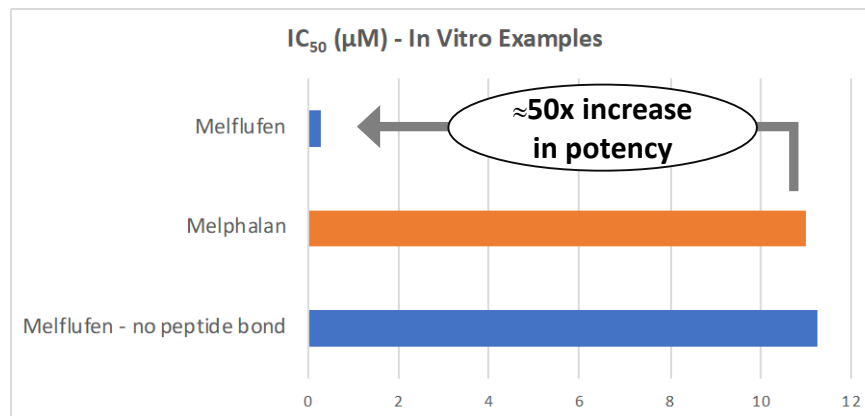


Melflufen – Mode of Action

A Peptide Drug Conjugate with an Alkylating Payload



- Highly lipophilic construct (logP of 4)
- Increase in cytotoxic activity determined by amino-peptidase activity in target cell

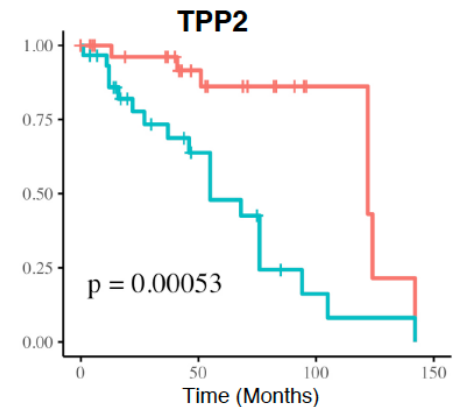
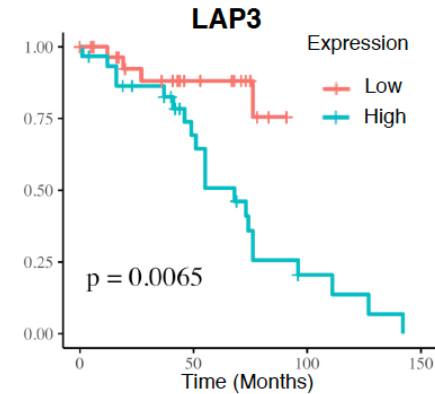


Note: Average in vitro IC_{50} data from 46 cancer cell lines.

Amino-peptidases are a good oncology target

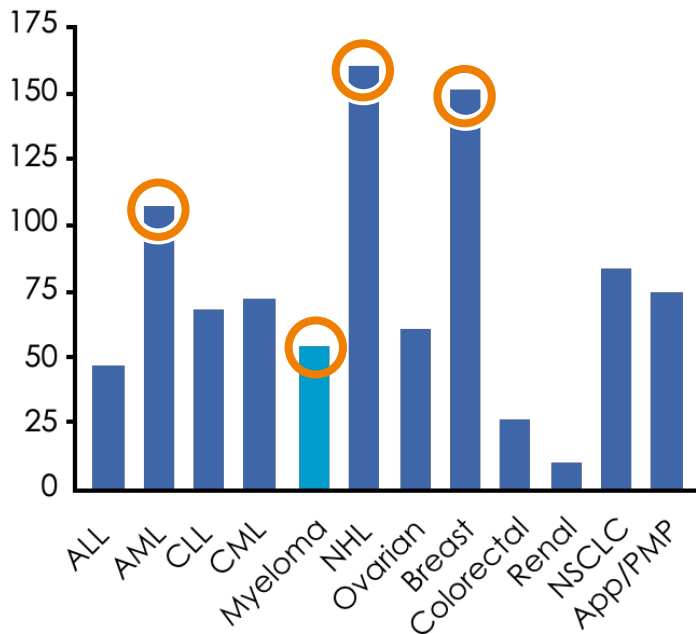
Amino-peptidases operate downstream of ubiquitin-proteasome pathway and play a key role in protein homeostasis, as well as for several other critical functions such as cell-cycle progression, programmed cell death and cell migration

- I Amino-peptidases are over-expressed in cancer cells (including multiple myeloma)
- II Amino-peptidase expression is increased between diagnosis and relapse in patient cancer samples (including multiple myeloma)
- III Amino-peptidase expression correlates with mutational burden and poor clinical outcome (including multiple myeloma)



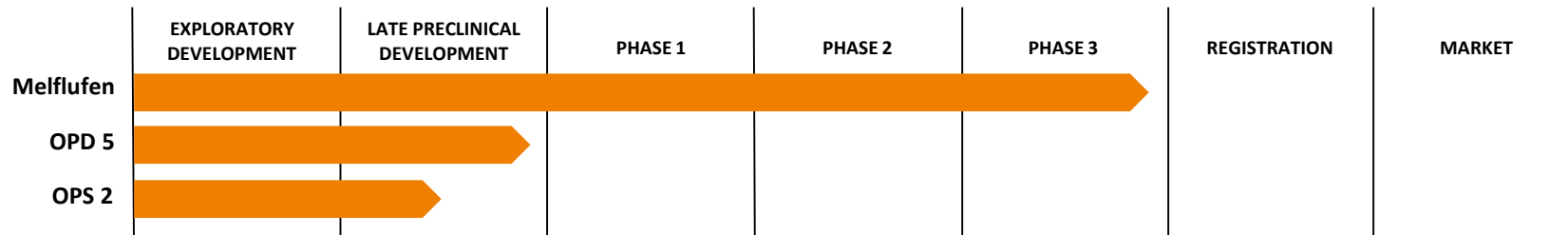
PDC Platform - Therapeutic Activity in Most Cancers

PDC Potentiation



- Lead compound melflufen is focused on MM and AL-amyloidosis
- New molecules based on PDC platform
- Indication expansion possible in AML, NHL and breast cancer

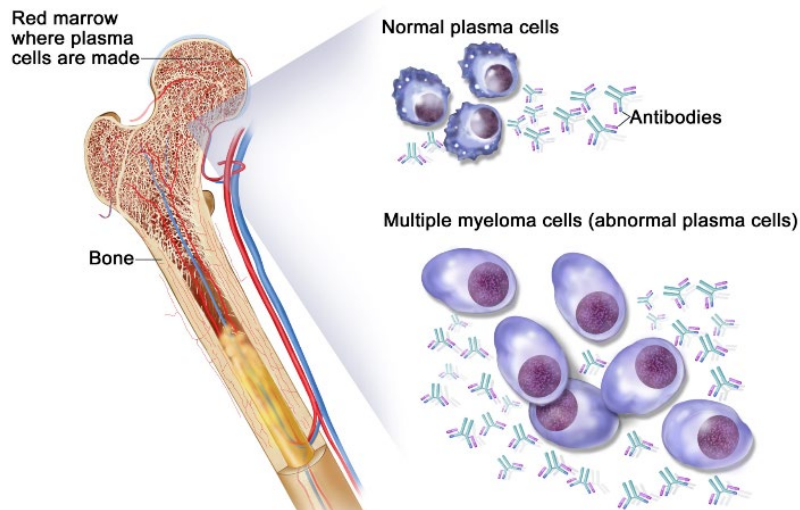
PDC Candidates in Clinical Development 2020/21



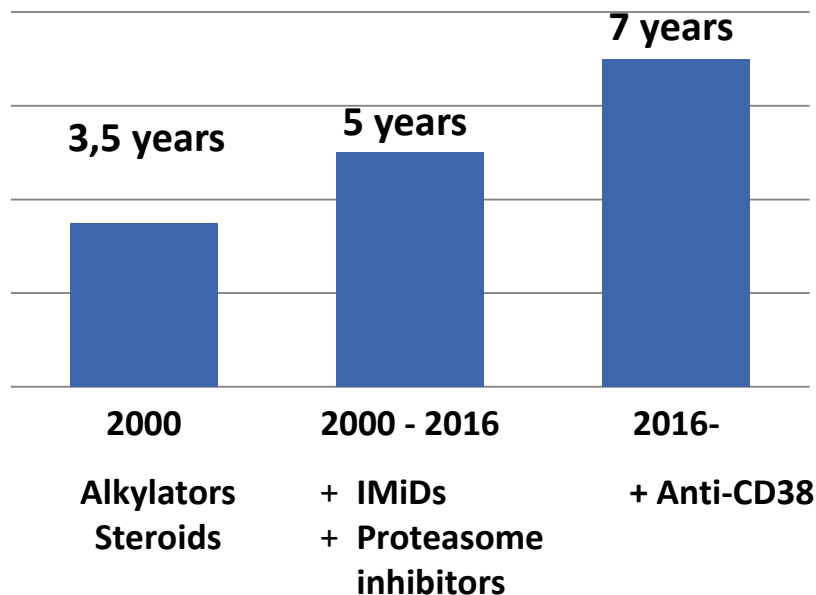
- OPD5 ready for clinical development late 2020 and OPS2, 2021
 - OPD5 – specialized PDC candidate for high-dose treatment in i.e. bone-marrow transplantation
 - OPS2 – second generation PDC candidate with alkylating payload
- Option to fully exploit PDC platform in 2021 and beyond
- Recent takeover of research facility in Solna increases pre-clinical capacity

A Hematological Cancer with no Cure

Myeloma – uncontrolled plasma cell proliferation

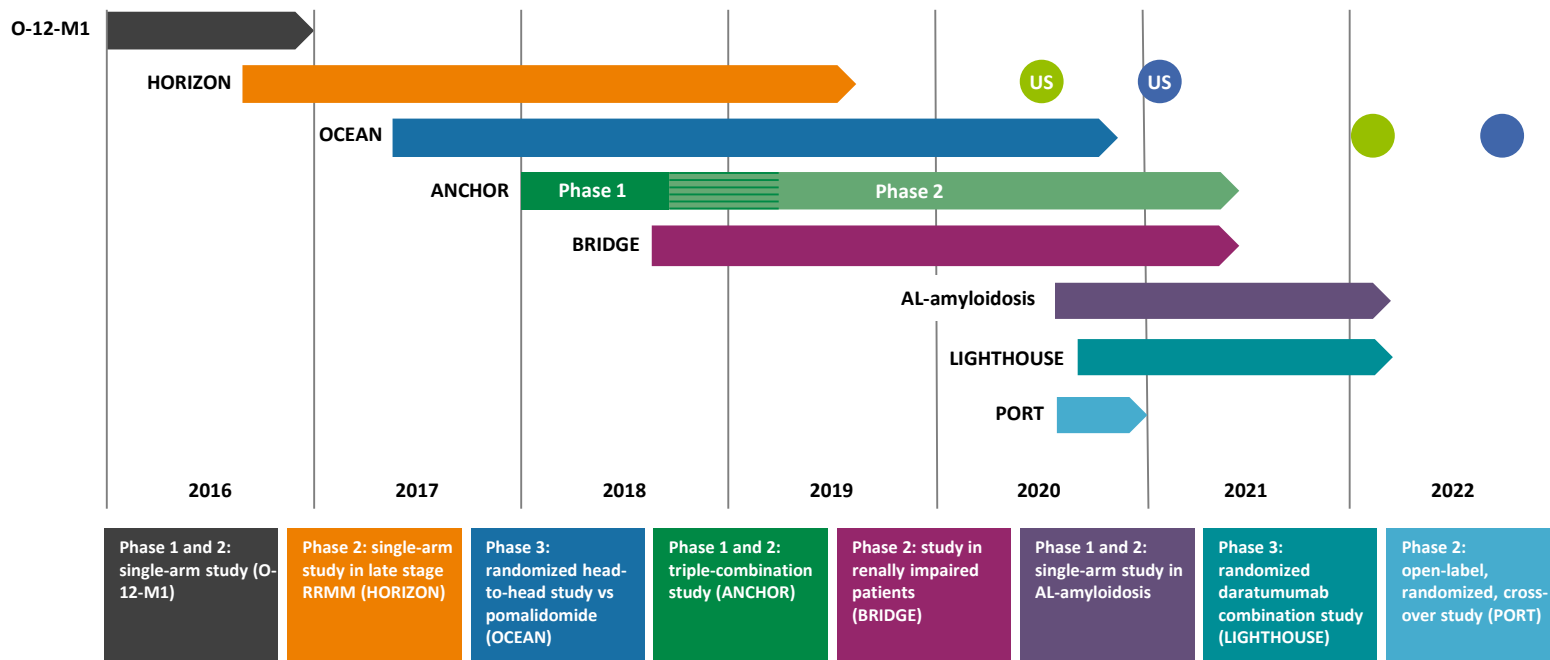


Median survival increasing with more available treatment options



Melflufen Clinical Development Program

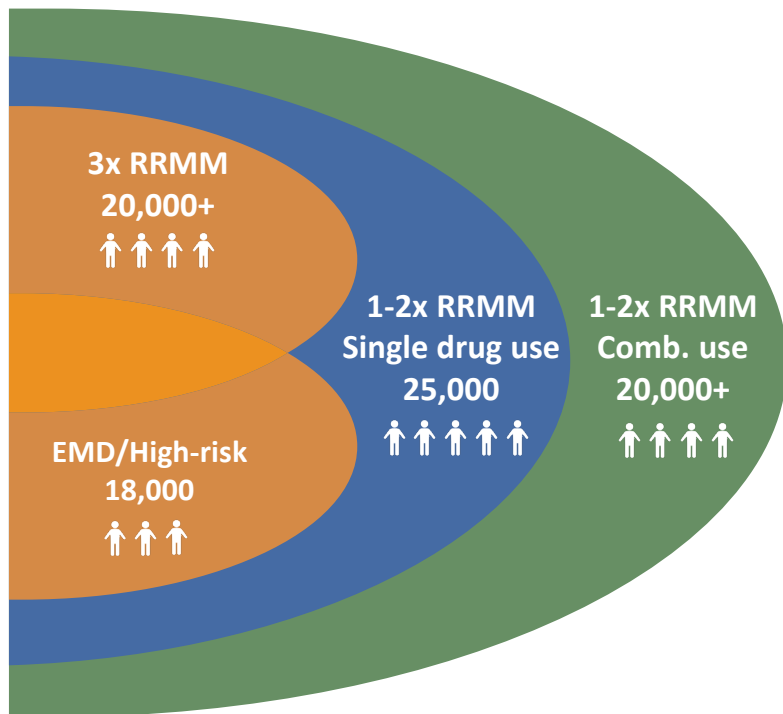
Potential to provide a broad set of data in different patient populations



The arrows show estimated Last Patient In to the studies

● Regulatory submission ● Potential market authorization

Significant Market Opportunities for Melflufen



Clinical Program supports expanding label



Anticipated label in triple-class refractory patients.



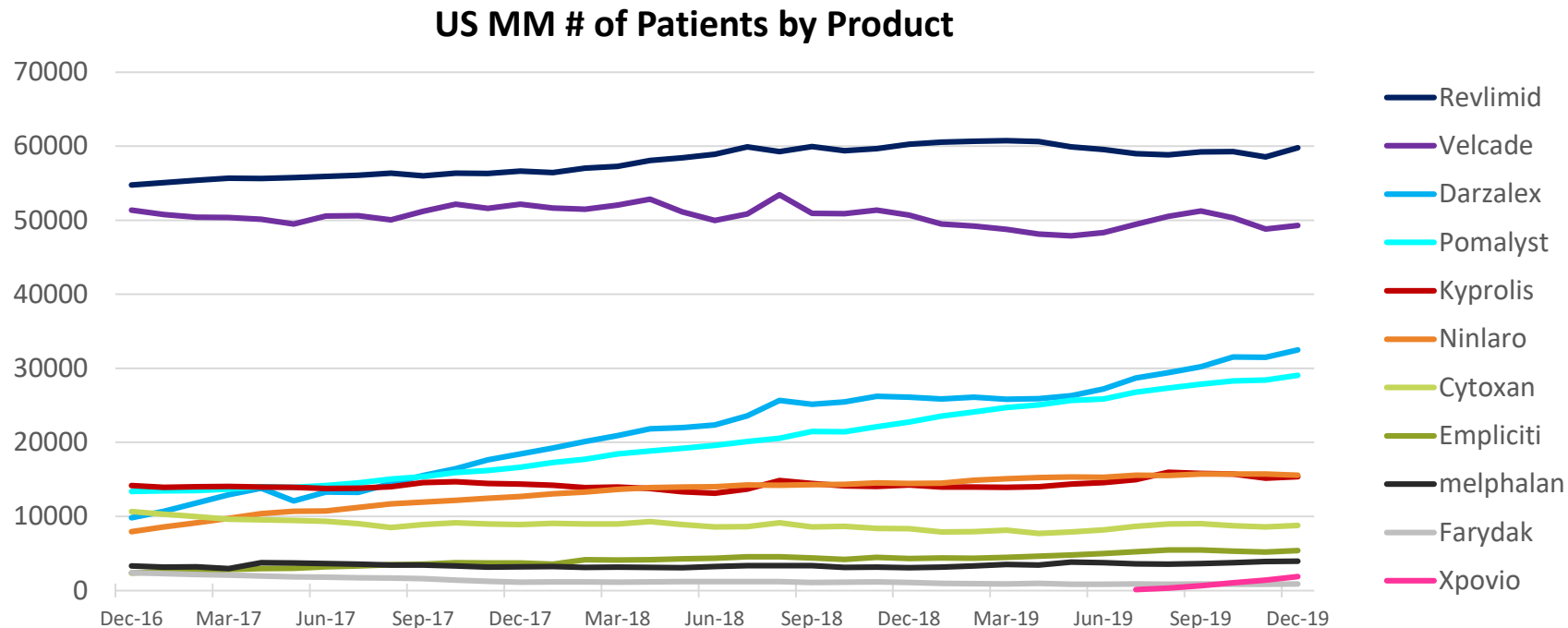
Head-to-head superiority study with the most used regimen in RRMM. Majority of RRMM patients use single agent +/- steroid.



Combination with PI or anti-CD38 opens up 2L+ combination treatment.

Source: US Patient numbers based on IntrinsiQ analysis.

Newer Products Used in Addition to Older Products as Survival Improves



Impact of COVID-19 on Our Clinical Program

- On March 20 Oncopeptides announced that:
 - Preparations for FDA-submission based on phase 2 HORIZON data on track
 - Phase 3 study OCEAN remain open for patient enrollment, top line data delayed
 - Patient recruitment in other ongoing clinical trials are temporarily paused for patient safety reasons
 - No new studies should be initiated
- Treatment continued for all patients enrolled in our clinical studies
- On May 28 we restarted our clinical program for melflufen
- The safety and well-being of our patients continues to be our top priority
- COVID-19 will influence on our way to build scientific engagement

Competitive Melflufen Data in Triple-Class RRMM

	Melflufen Final Data EHA 2020	Xpovio Karyopharm US approval July 2019	Blenrep GSK In filing
Number of patients studied	119	122	95
Overall Response/Clinical Benefit Rate	26%/39%	25%/39%	32%/36%
mDOR / mPFS responders	5.5m / 8.5m	3.8m / 4.0m	11.0m (95% CI 4.2-NR)/NR
Progression-free survival	3.9 months	3.7 months	2.8 months
Overall survival	11.2 months	8.0 months	14.9m
Share of patients with EMD	42%	22%	20%
Serious Adverse Event Rate	51%	58%	42%
Non-hematologic toxicity (grade 3/4) reported in >5% of patients	Pneumonia 9.2%	Fatigue 25.2% Hyponatremia 20.3% Nausea 9.8% Pneumonia 8.9% Diarrhea 7.3% Sepsis 5.7% Hypokalemia 5.7% Mental status 5.7% General det. 5.7%	Keratopathy/ 46% Blurred vision Hypercalcemia 7.4% Pneumonia 7.4%

Building a US Commercial and Med Affairs infrastructure with proven success in bringing new products to patients



Joe Horvat
President, NA

- 24 Years Pharmaceutical/ Biotech Experience
- Merck KGaA, BMS
- US and Global Commercial Leadership (EMD Serono)
- 12 years of oncology experience



Paul O'Connor, MD
Head of Med Affairs US

- Medical Oncologist
- 17 Years Pharmaceutical/ Biotech Experience
- Genentech, Medivation, Onyx, Clovis
- 30 years of oncology experience



Mohamed Ladha
Head of Commercial US

- 17 Years Pharmaceutical/ Biotech Experience
- Schering Plough, Merck, Pfizer, ARIAD/Takeda
- US and Global Commercial Leadership
- 17 years of oncology experience

An accomplished US Medical Affairs and Commercial Team with nearly 100 oncology product launches



Disease State Awareness/Education Campaign

Paves the way for a new class of drugs that targets aminopeptidases

This site is intended only for US healthcare professionals.

In multiple myeloma,
**GET TO THE
ROOT OF
RESISTANCE**



Clonal evolution is a driver of resistance^{1,2}

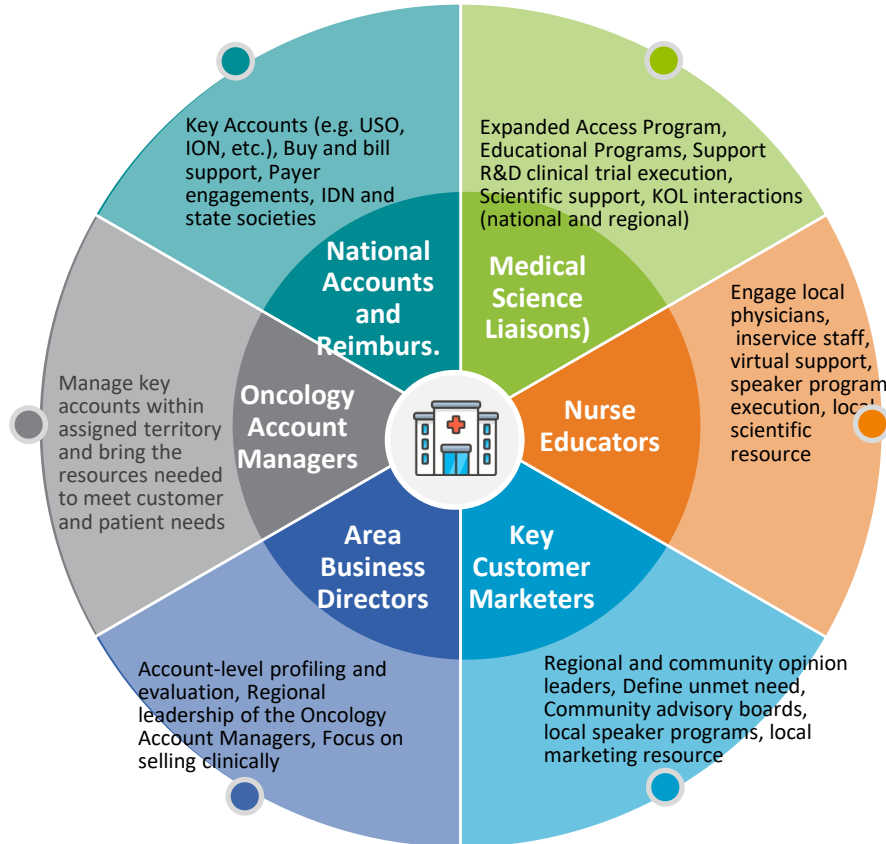
Triple-class refractory MM is an outcome of clonal evolution³

Aminopeptidases can be targeted due to high expression in MM cells

Explore the potential of PDCs and ADCs⁴

 oncopeptides

Leveraging our product profile, experience and innovation to meet the needs of our customers in today's world



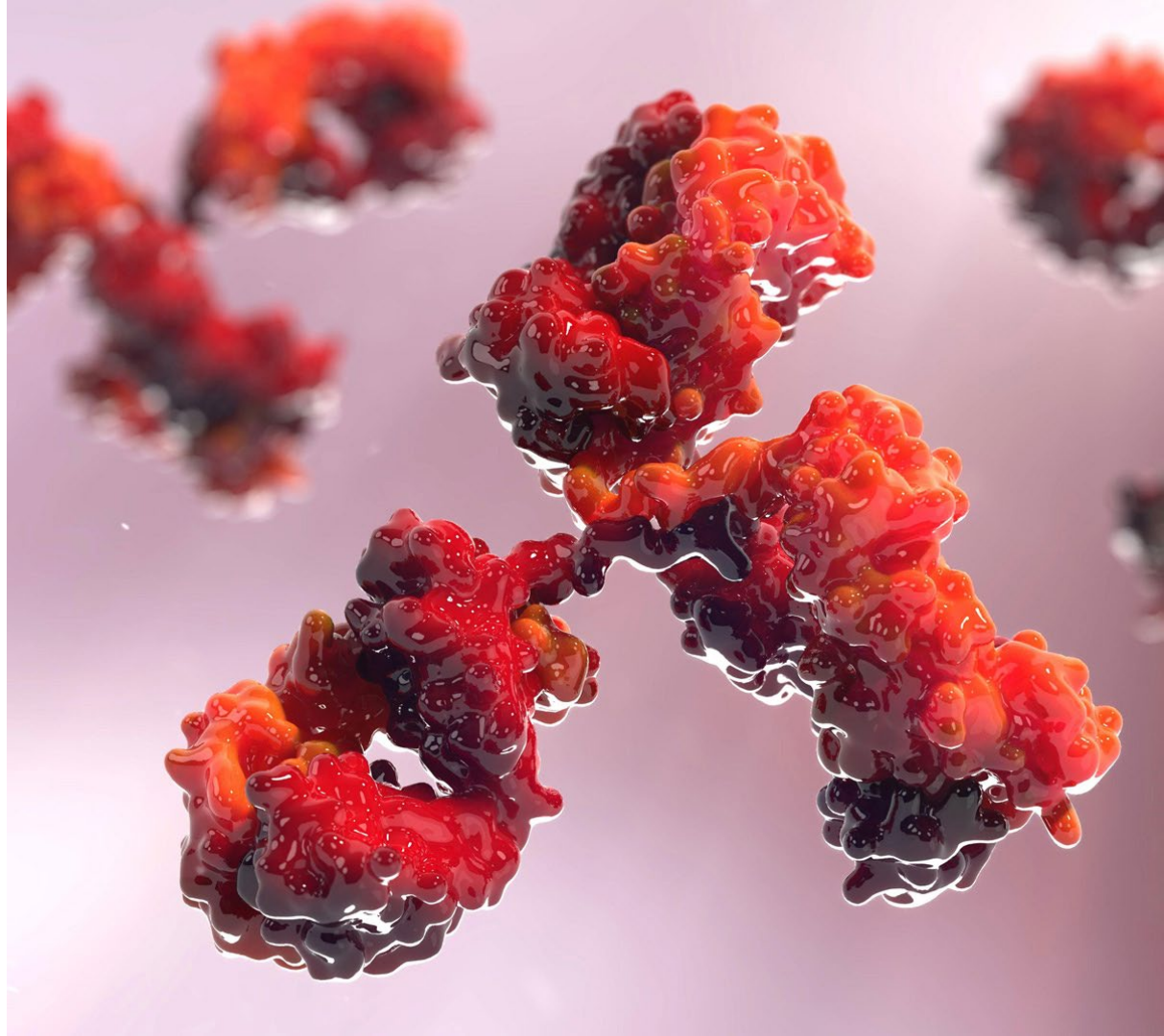
“Access” will drive our success

- New product
- Novel class and profile
- Differentiated data set
- Existing customer relationships
- Diverse team to meet diverse needs
- “Virtual” capabilities
- Ongoing and new clinical research

Consistent News Flow

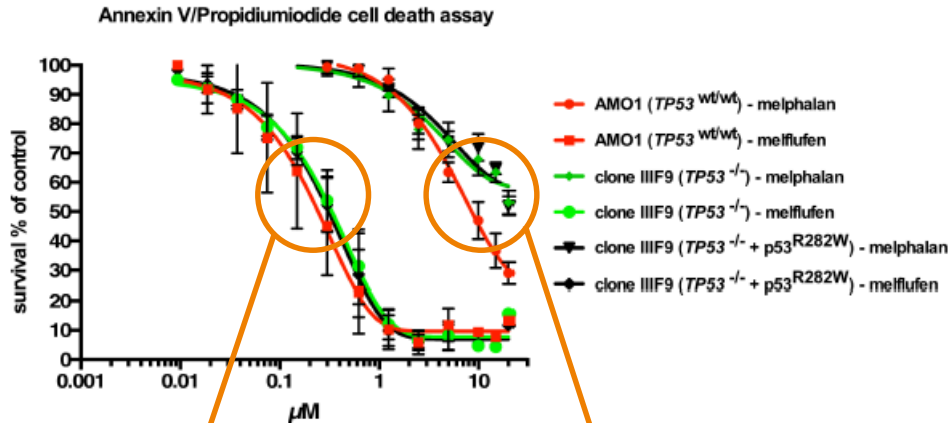
Q2 2020	Q3 2020	Q4 2020	H1 2021
✓ EHA data update	✓ First patient in Amyloidosis study	Potential accelerated approval in US	Top-line results OCEAN
✓ NDA submission	✓ First patient in PORT study	Potential launch in the US	Last patient in ANCHOR
	First patient in Expanded Access Program (US)	First patient in LIGHTHOUSE	Last patient in BRIDGE
		ASH data update	EHA data update

***Thank you for
your attention!***



Cytotoxic Activity is Clearly Differentiating

Figure 3. Melflufen vs. melphalan effects in the AMO-1 *TP53* model system assessed 72h after treatment with increasing doses of the drugs.



Melflufen:
No difference

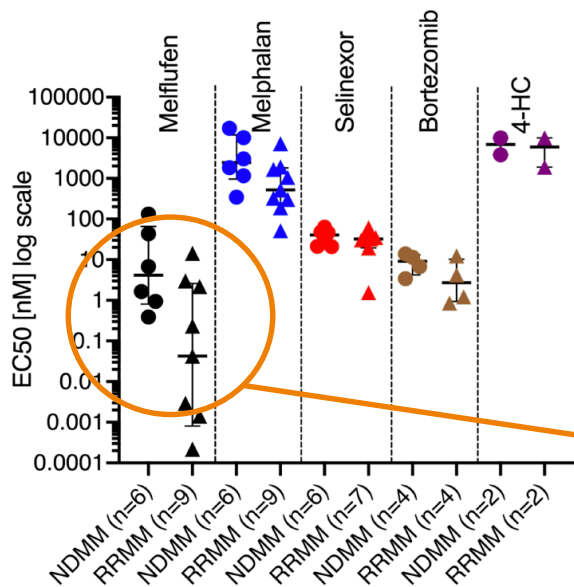
Melphalan:
Almost inactivated

Cytotoxic activity of melflufen indicates that it represents a new class

- Red = tumor cell
- Green = tumor cell with p53 deletion
- Black = tumor cell with mutated p53

Potency Increases with Malignancy

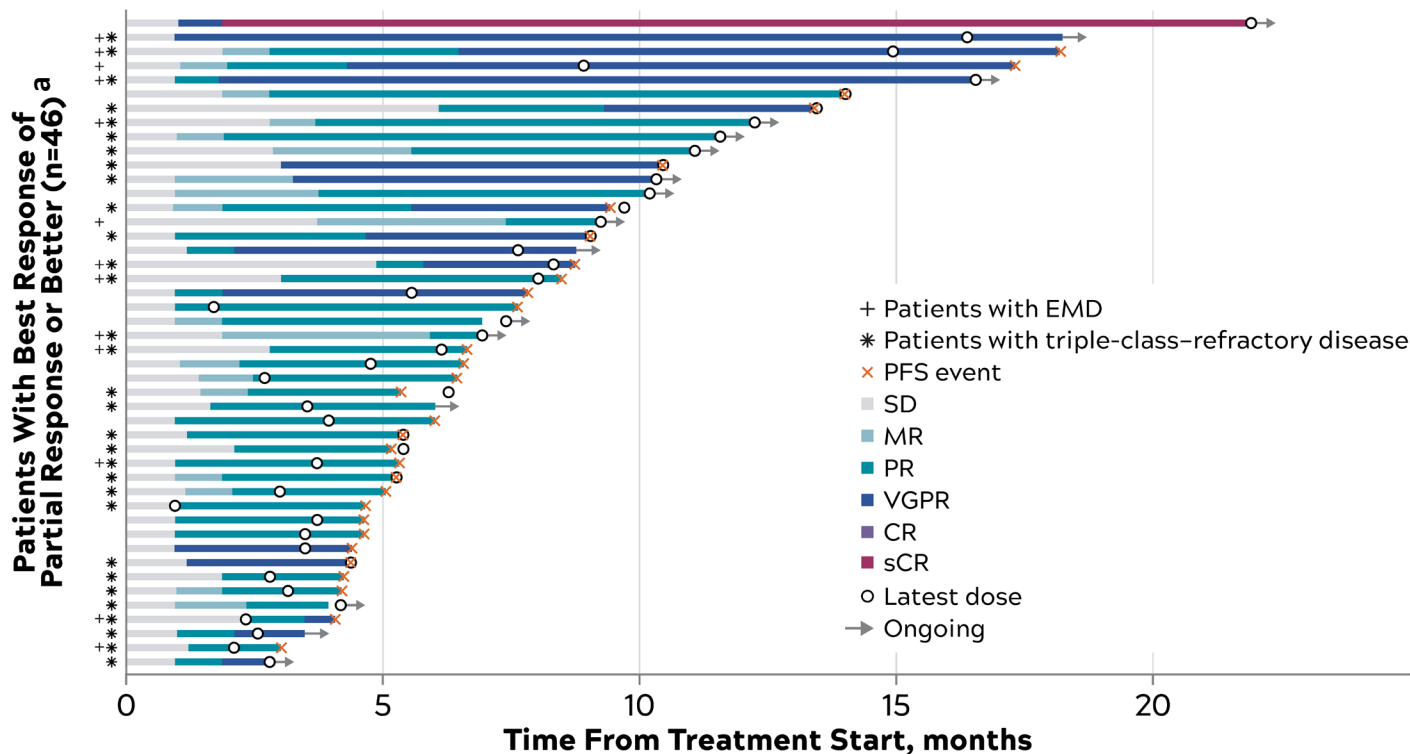
Figure 4. Comparison CD138+CD38+ cell EC50 values between NDMM and RRMM patient samples in the five tested drugs.



- Potency of melflufen increases in vitro against myeloma patient samples as disease progresses
- NDMM = newly diagnosed MM
- RRMM = relapsed refractory MM

Melflufen: Increased potency as disease progresses

Swim Lane of Patients with \geq Partial Response



Data cutoff date: January 14, 2020. ^a Investigator-assessed best overall response per International Myeloma Working Group uniform criteria.¹

CR, complete response; EMD, extramedullary disease; ITT, intention-to-treat; MR, minimal response; PFS, progression-free survival; PR, partial response; sCR, stringent complete response; SD, stable disease; VGPR, very good partial response.

1. Rajkumar SV, et al. *Blood*. 2011;117:4691-4695.

Richardson PG, et al. *EHA* 2020. #EP945.

Final HORIZON Data in Triple-Class Refractory RRMM

Independent Review Committee (IRC) data

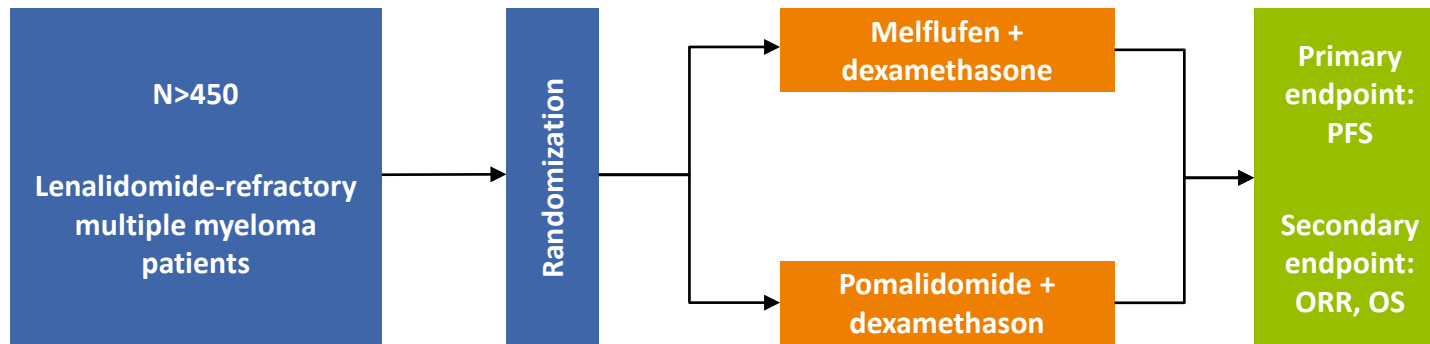
Primary End-Point	Investigator Ass. Data Jan 14 th	IRC Data Jan14 th	Incl. unconfirmed responses Jan 14 th
Overall Response Rate (ORR) – ITT n=157	29%	30%	31% (inv. and IRC)
ORR – 3x RRMM n=119	26%	26%	27% (inv. and IRC)
ORR – EMD n=55	24%	27%	NA

Note: Two unconfirmed responses on January 14th have later been confirmed.

Safety profile comparable to what was reported at ASH 2019, i.e. hematological toxicities were common but manageable – non-hematological toxicities were infrequent

OCEAN Compares Melflufen with SoC in RRMM

450+ patients ongoing enrollment – top-line results in H1 2021



RRMM data from pomalidomide FDA label and O-12-M1 study

Treatment	ORR	CBR	Median PFS	Median DOR	Median OS
Melflufen + Dexamethasone	31%	49%	5.7 months	8.8 months	20.7 months
Pomalidomide + Dexamethasone	24%	NR	3.6 months	7.0 months	12.4 months

IMiDs Share Resistance Mechanism

Average IMiD free period significant in pomalidomide registration study

- Only 29% received lenalidomide as last treatment

Lenalidomide used more aggressively today

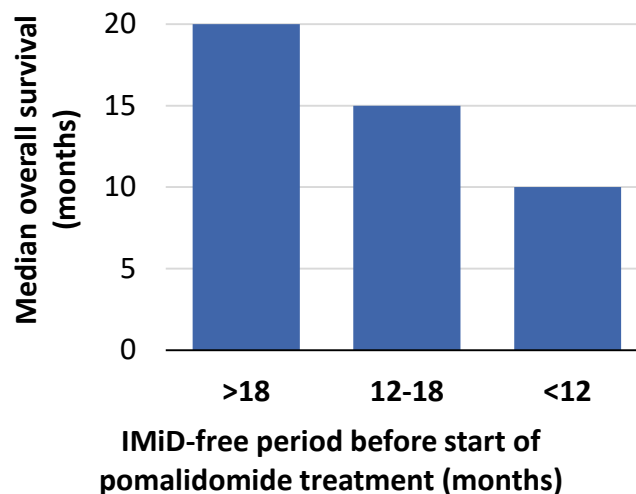
- Median maintenance duration 24 months (not 10 months)

All lenalidomide patients in OCEAN failed in 18 months

- Vast majority has lenalidomide as last treatment

No assumptions in OCEAN to account for increased cross resistance

Pomalidomide efficacy decreases for recent lenalidomide failures



Source: Pomalidomide with Low Dose Dexamethasone Is Effective Irrespective of Primary or Secondary Resistance to Lenalidomide but the IMiD-Free Interval Is Important (Dimopoulos et. al. ASH poster 2016).

