

# Lymphom Kompetenz KOMPAKT



**ASH 2020 VIRTUAL**  
**5. – 8. Dezember 2020**



# Multiplles Myelom



**Prof. Dr. med. Katja Weisel**

II. Medizinische Klinik und Poliklinik | Universitätsklinik Hamburg-Eppendorf

## Offenlegung potentieller Interessenskonflikte

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Art	Verbundenheit
Anstellungsverhältnis, Führungsposition	
Beratungs-/Gutachtertätigkeit	Amgen, Adaptive, BMS, Celgene, GSK Janssen, Karyopharm, Oncoceptides, Sanofi, Takeda
Besitz von Geschäftsanteilen, Aktien, Fonds	
Patent, Urheberrecht, Verkaufslizenz	
Honorare	Amgen, Adaptive, Abbvie, BMS, Celgene, GSK Janssen, Karyopharm, Roche, Sanofi, Takeda
Finanzierung wissenschaftlicher Untersuchungen	Amgen, Celgene, Sanofi, Janssen (Institution)
Andere (auch immaterielle)	

## Erstbehandlung des MM

- Quadruplet bei transplantierbaren Patienten jetzt angekommen- und - der Fels in der Brandung: HD-MEL und autologe PBSCT
- Nicht-transplantierbare Patienten – Unverrückbar MAIA

## Rezidivtherapie

### *Neue Standards:*

- APOLLO und CANDOR Studie: Effektive Regime insbesondere nach Lenalidomid

### *Am Horizont:*

- CARs – mit Verve und viel Hoffnung in die Zulassung!

# Multiples Myelom

## Erstbehandlung transplantierbarer Patienten

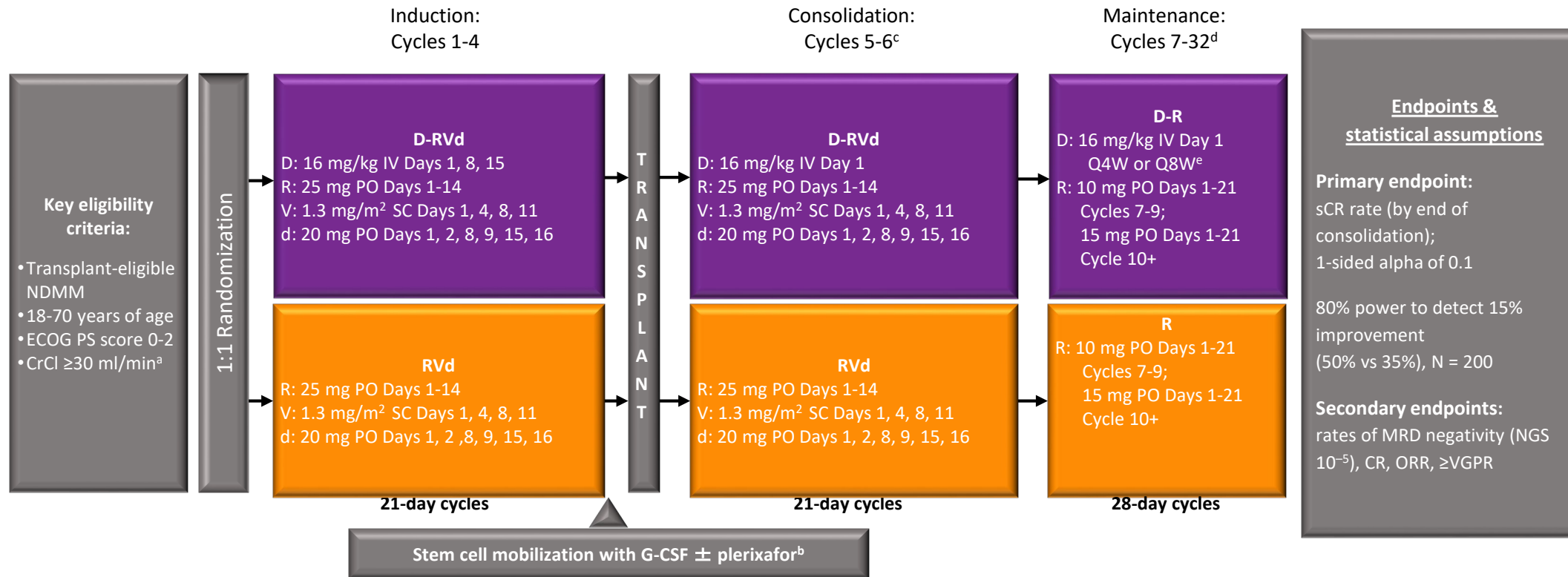
*Was bringt die Quadruplettherapie?*

## **Daratumumab (DARA) Plus Lenalidomide, Bortezomib, and Dexamethasone (RVd) in Patients with Transplant-Eligible NDMM: Updated Analysis of Griffin after 12 Months of Maintenance Therapy**

J. L. Kaufman *et al.*, Atlanta, USA

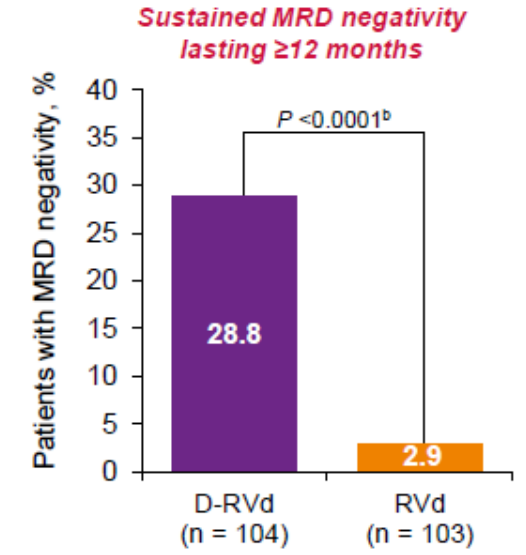
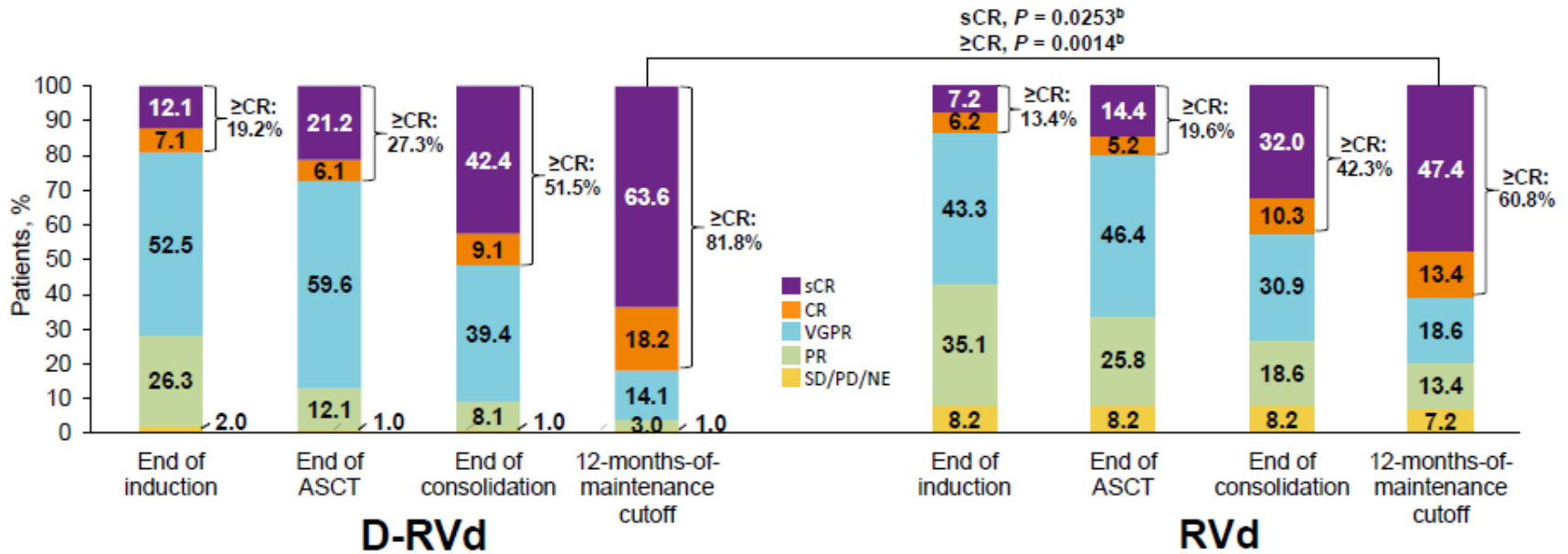
*Abstract 549*

- Phase 2 study of D-RVd vs RVd in transplant-eligible NDMM, 35 sites in US with enrollment from 12/2016 and 4/2018



Wirksamkeit und Sicherheit nach 12 Mon. Erhaltungstherapie mit Lenalidomid (R) vs. DARA-R (D-R)

# Multiples Myelom



- Nach 26,7 Mon. medianem FU: tiefe, sich verbessernde Ansprechraten mit Dara-RVd vs. RVd
- Erhaltungstherapie erhöht sCR- und MRD-Neg.-Raten mit Dara-Len vs. Len
- Keine neuen Sicherheitsbedenken
- **Aktuell zugelassene Standardtherapie außerhalb von Studien: Dara-VTd**



# Multiples Myelom

## Erstbehandlung transplantierbarer Patienten

*Warum bleibt die Hochdosistherapie  
Goldstandard?*

# Survival Analysis of Newly Diagnosed Transplant-Eligible Multiple Myeloma Patients in the Randomized FORTE Trial

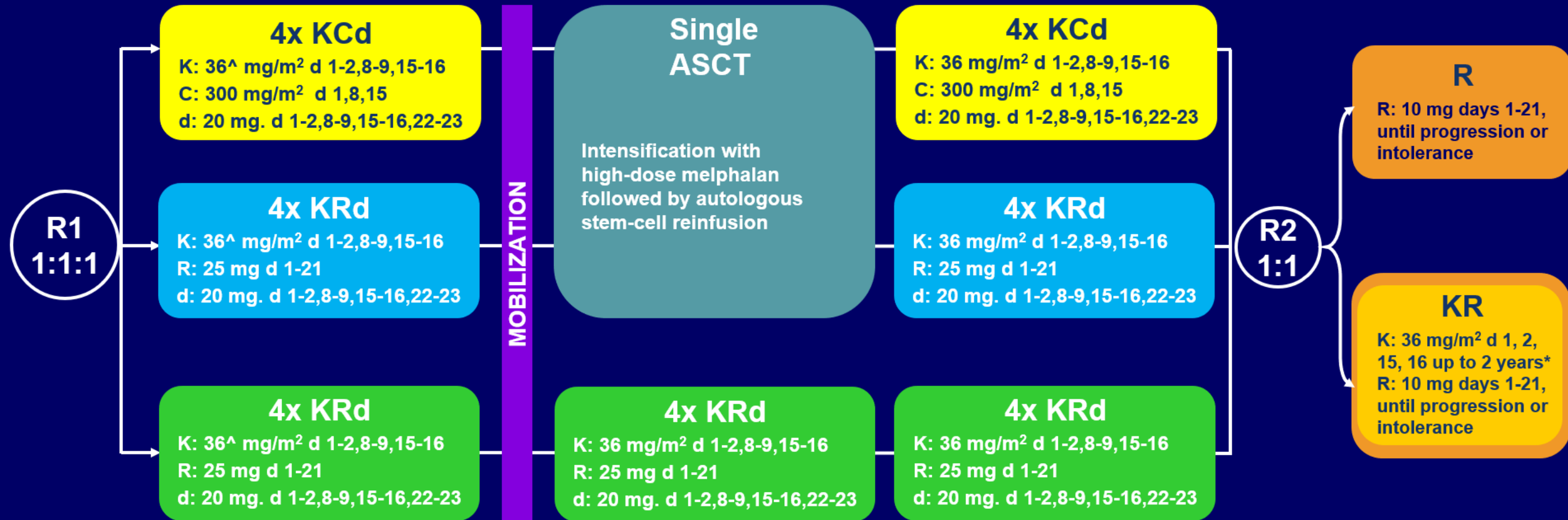
Francesca Gay<sup>1\*</sup>, Pellegrino Musto<sup>1</sup>, Delia Rota-Scalabrini<sup>1</sup>, Monica Galli<sup>1</sup>, Angelo Belotti<sup>1</sup>, Elena Zamagni<sup>1</sup>, Luca Bertamini<sup>1</sup>, Renato Zambello<sup>1</sup>, Micol Quaresima<sup>1</sup>, Giovanni De Sabbata<sup>1</sup>, Giuseppe Pietrantuono<sup>1</sup>, Mattia D'Agostino<sup>1</sup>, Daniela Oddolo<sup>1</sup>, Andrea Capra<sup>1</sup>, Anna Marina Liberati<sup>1</sup>, Salvatore Palmieri<sup>1</sup>, Franco Narni<sup>1</sup>, Massimo Offidani<sup>1</sup>, Michele Cavo<sup>1</sup>, Mario Boccadoro.<sup>1</sup>

\*Correspondence: [fgay@cittadellasalute.to.it](mailto:fgay@cittadellasalute.to.it)

1. GIMEMA / European Myeloma Network, Italy

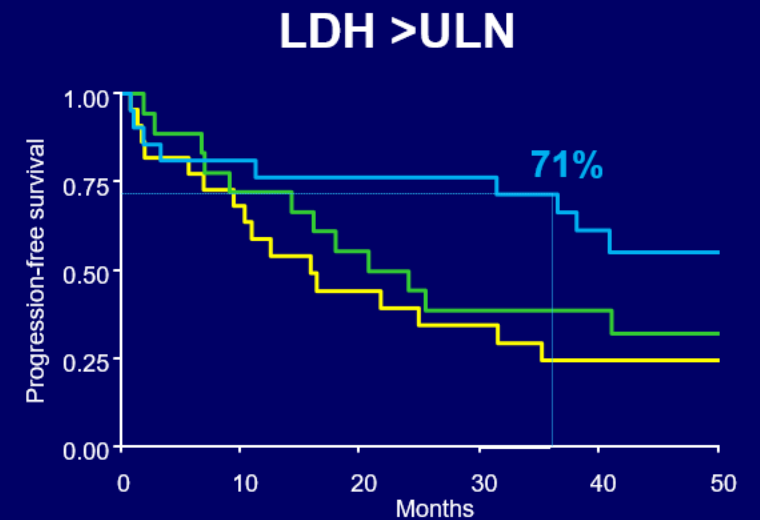
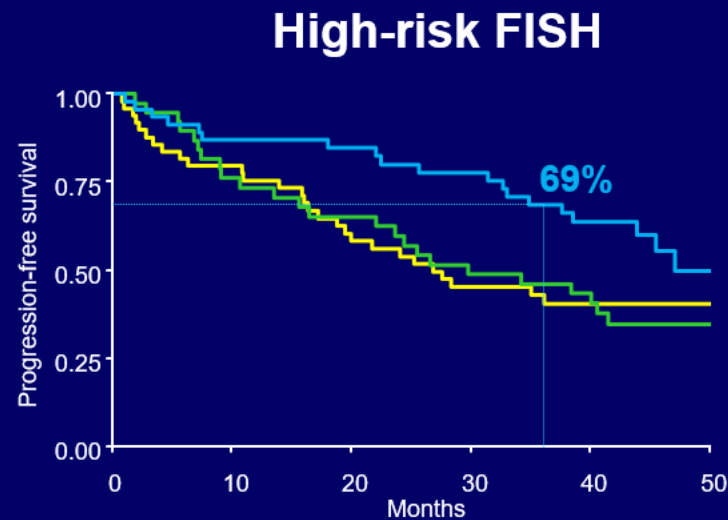
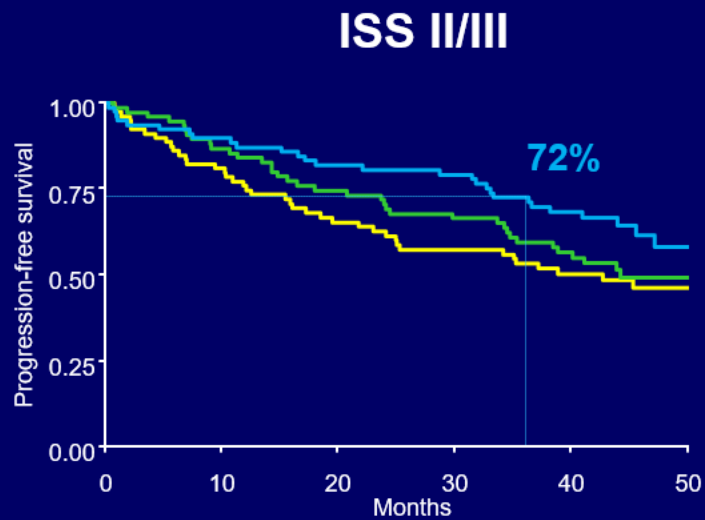
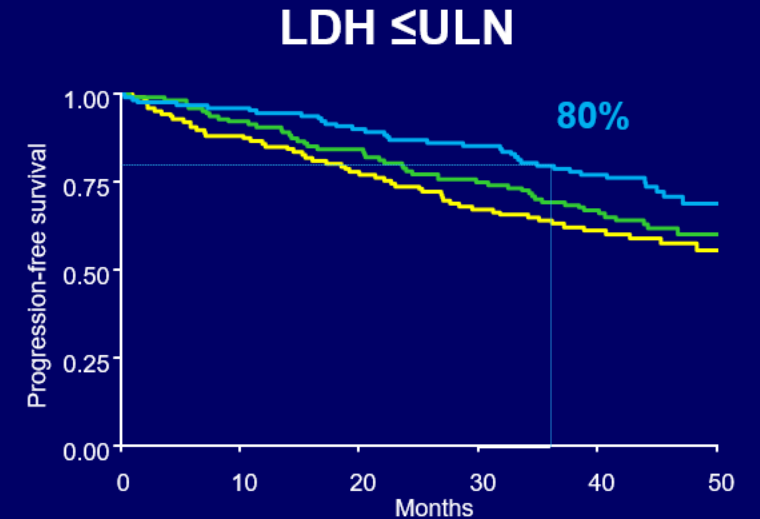
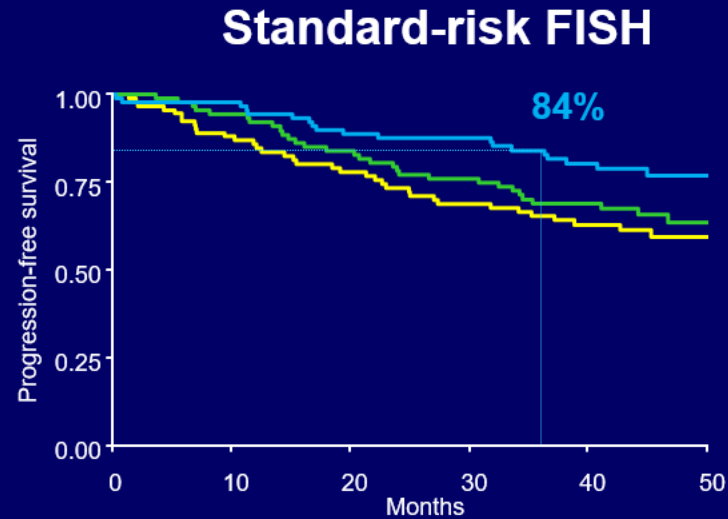
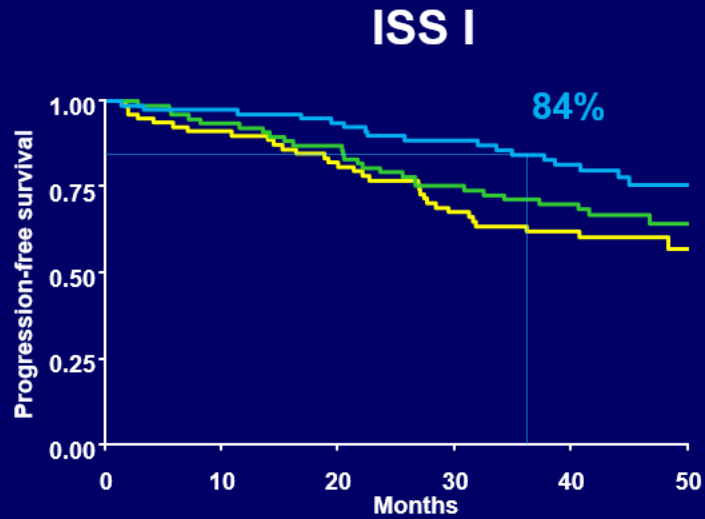
# Trial design

474 NDMM patients, transplant-eligible and younger than 65 years



<sup>^</sup>20 mg/m<sup>2</sup> on days 1-2, cycle 1 only. \*Carfilzomib 70 mg/m<sup>2</sup> days 1, 15 every 28 days up to 2 years for patients that have started the maintenance treatment from 6 months before the approval of Amendment 5.0 onwards. NDMM, newly diagnosed multiple myeloma, R1, first randomization (induction/consolidation treatment); R2, second randomization (maintenance treatment); IQR, interquartile range K, carfilzomib; C, cyclophosphamide; R, lenalidomide; d, dexamethasone; d, days; ASCT, autologous stem-cell transplantation.

# Progression-Free Survival: Random 1 subgroup analyses



— KCd\_ASCT — KRd\_ASCT — KRd12

# Conclusions

- **KRd\_ASCT significantly prolonged PFS vs. Krd12 and vs. KCd\_ASCT**
  - **3-year PFS → 78%**
- **The benefit of KRd\_ASCT was observed in all subgroups of patients:**
  - **KRd\_ASCT in ISS I, FISH standard risk, LDH ≤ULN: 3-year PFS 80-84%**
  - **KRd\_ASCT in ISS II/III, FISH high-risk, LDH >ULN: 3-year PFS 69-72%**
- **KR significantly prolonged PFS vs. R**
  - **30 months PFS → 81%**
- **The benefit of KR was observed in all subgroups of patients:**
  - **KR in ISS I, FISH standard risk, LDH ≤ULN: 30-months PFS 83-85%**
  - **KR in ISS II/III, FISH high-risk, LDH >ULN: 30-months PFS 60-78%**
- **Maintenance with KR was manageable with no increase in treatment discontinuation due to toxicity**

# Multiples Myelom

## Erstbehandlung nicht-transplantierbarer Patienten

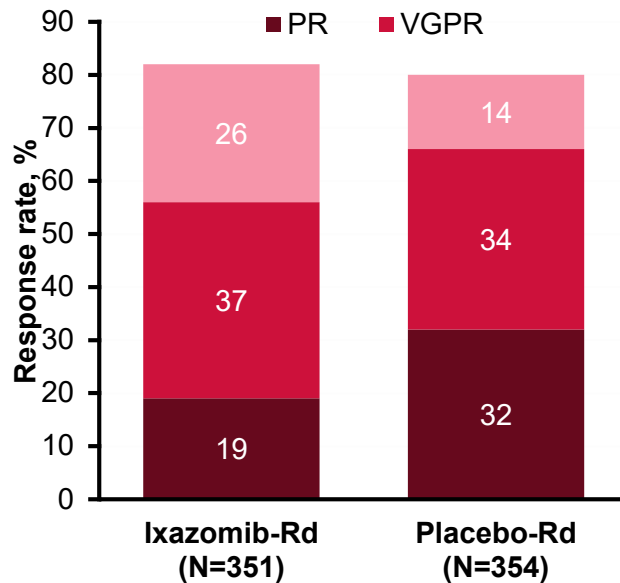
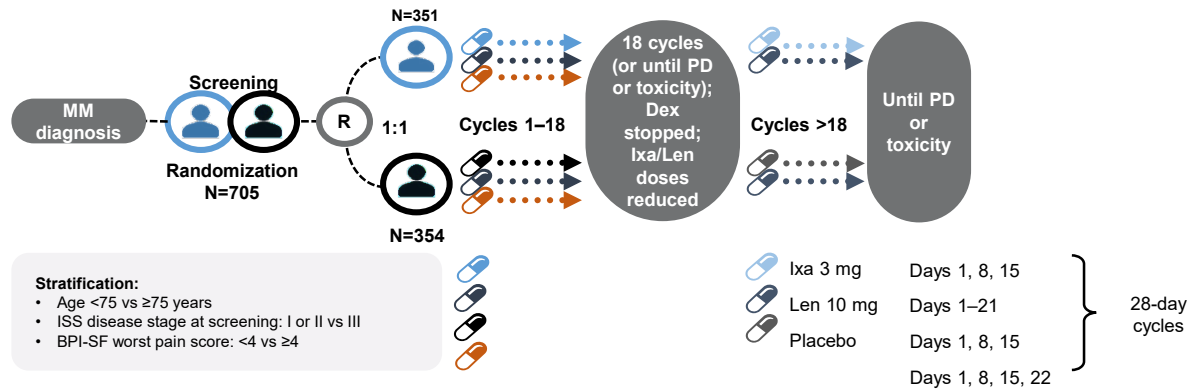
*Unverrückbar MAIA?*

## **The Phase 3 TOURMALINE-MM2 Trial: Oral Ixazomib, Lenalidomide, and Dexamethasone vs Placebo-Rd for Transplant-Ineligible Patients with Newly Diagnosed Multiple Myeloma**

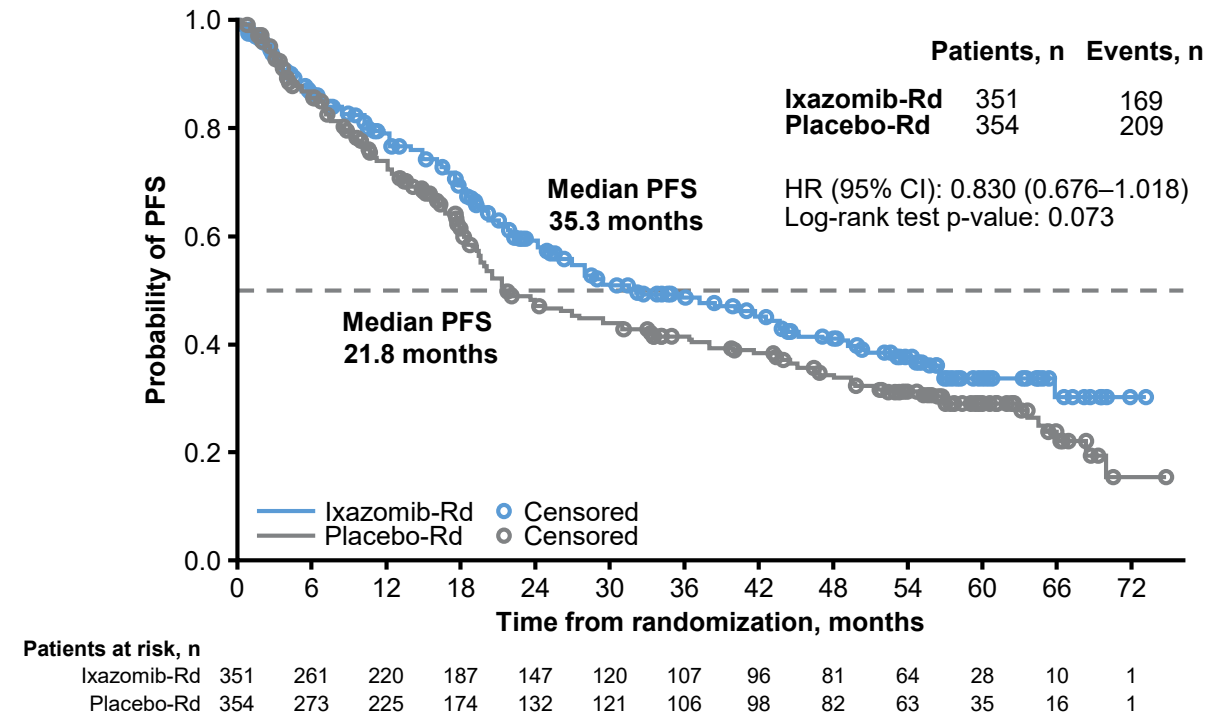
Facon et al., Lille, Frankreich

*Abstract 551*

# Multiples Myelom



- Addition of ixazomib to Rd in patients with NDMM led to a clinically meaningful PFS benefit, with a 13.5-month improvement in the median in this elderly, transplant-ineligible patient population.
- Ixazomib-Rd is a feasible treatment option for certain transplant-ineligible patients with NDMM who could benefit from an all-oral triplet combination.





## **Updated Analysis of Daratumumab Plus Lenalidomide and Dexamethasone (D-Rd) versus Lenalidomide and Dexamethasone (Rd) in Patients with Transplant-ineligible Newly Diagnosed Multiple Myeloma (NDMM): the Phase 3 MAIA Study**

Kumar et al., Rochester, USA

*Abstract 2276*

# Multiples Myelom

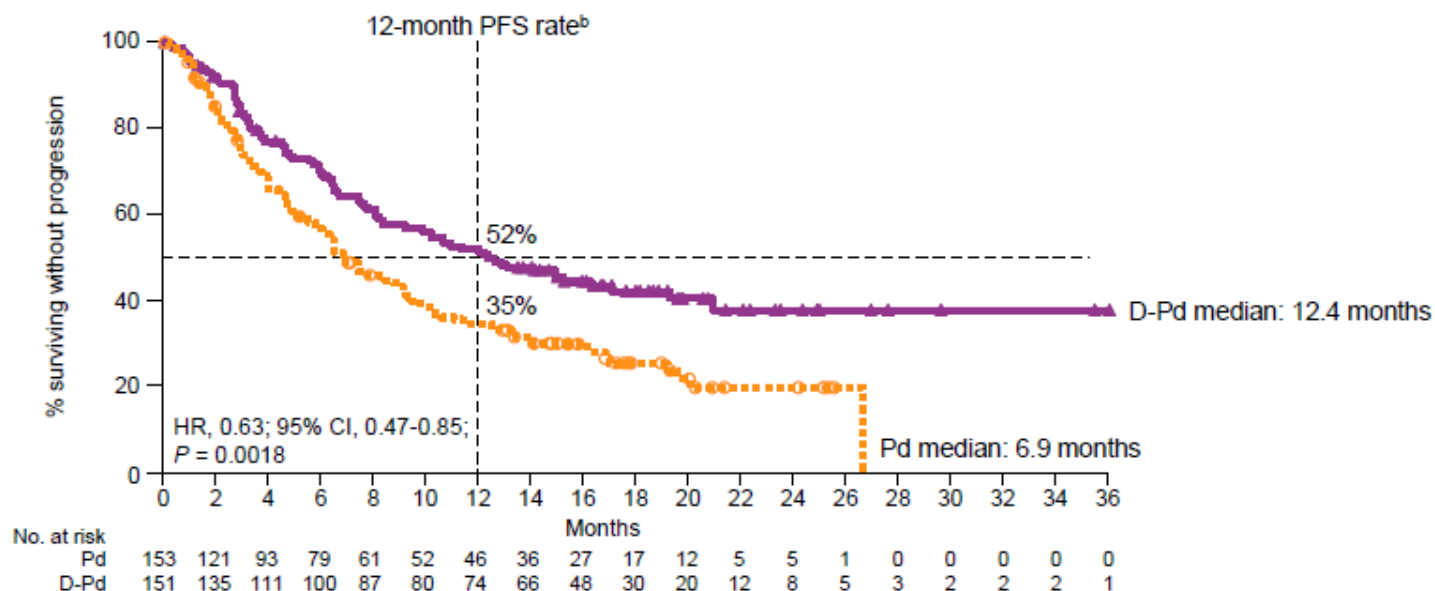
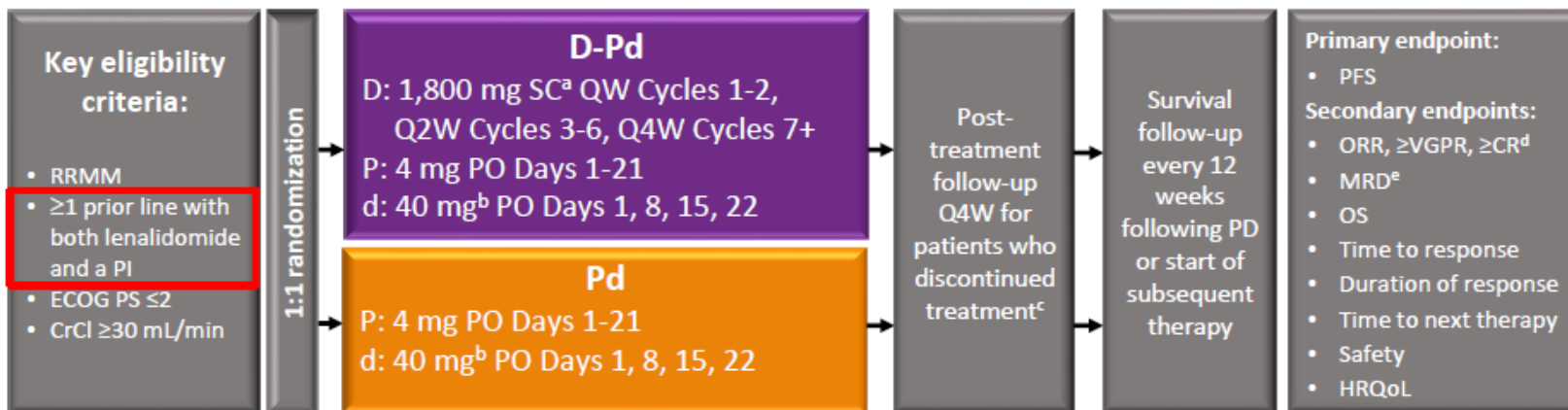
## Rezidivtherapie

*Lenalidomid-freie neue Standards: DPd und KdD*

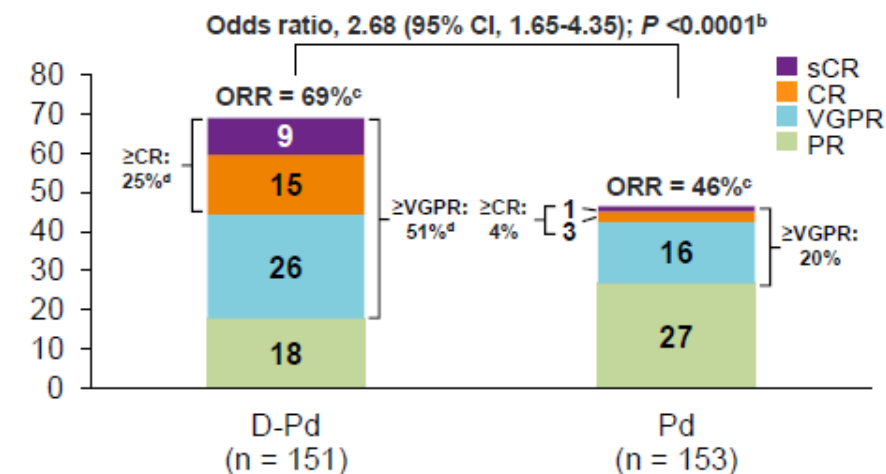
**Apollo: Phase 3 Randomized Study of Subcutaneous  
Daratumumab Plus Pomalidomide and Dexamethasone (D-Pd)  
Versus Pomalidomide and Dexamethasone (Pd) Alone in Patients  
(Pts) with Relapsed/Refractory Multiple Myeloma (RRMM)**  
Dimopoulos et al., Athens, Greece

*Abstract 412*

# Multiples Myelom



## Hematologic response



Phase 3: DARA SC und Pd bei RRMM mit  $\geq 1$  vorherigen Therapielinien

Reduziertes Risiko für Progression oder Tod vs. Pd allein (-37%)

Keine neuen Sicherheitsbedenken

Sehr wenige IRR, kurze Verabreichungsdauer ( $\uparrow$  Bequemlichkeit,  $\downarrow$  Behandlungsbelastung)

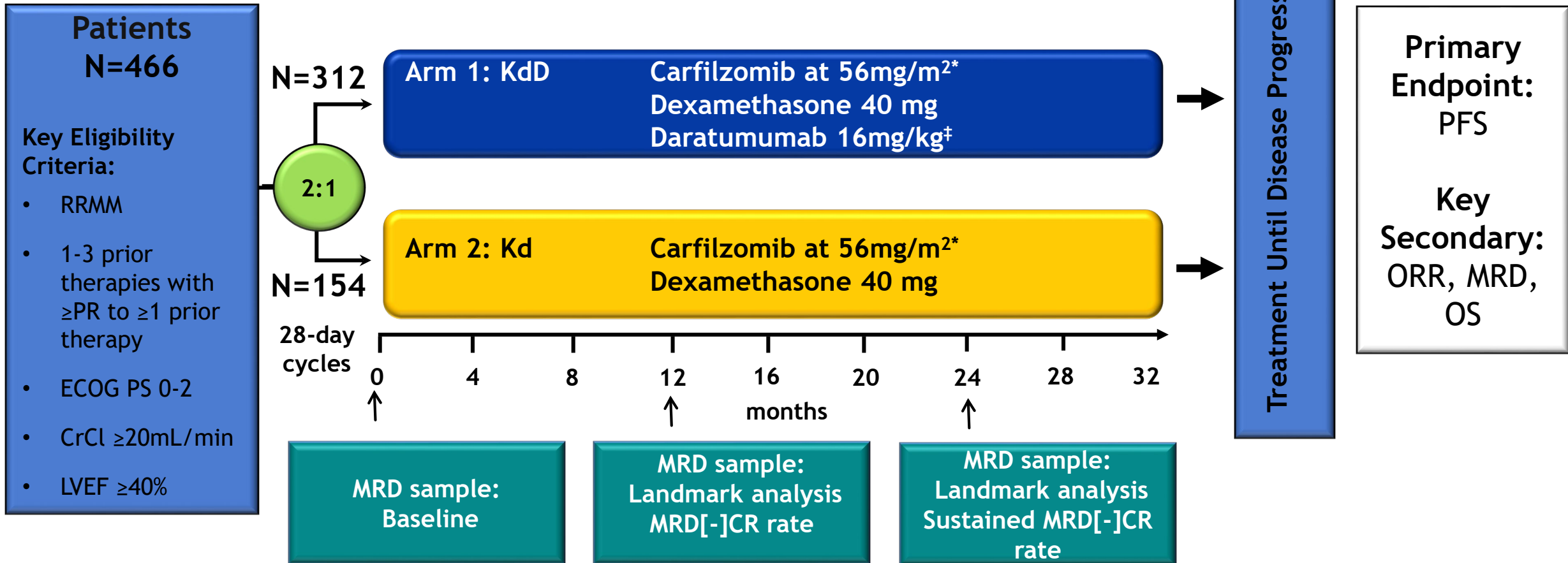
-> EU Zulassung für Dara-Pd wird angestrebt, wichtiges Regime für RRMM-Patienten

## **Carfilzomib, Dexamethasone, and Daratumumab Versus Carfilzomib and Dexamethasone in Relapsed or Refractory Multiple Myeloma: Updated Efficacy and Safety Results of the Phase 3 Candor Study**

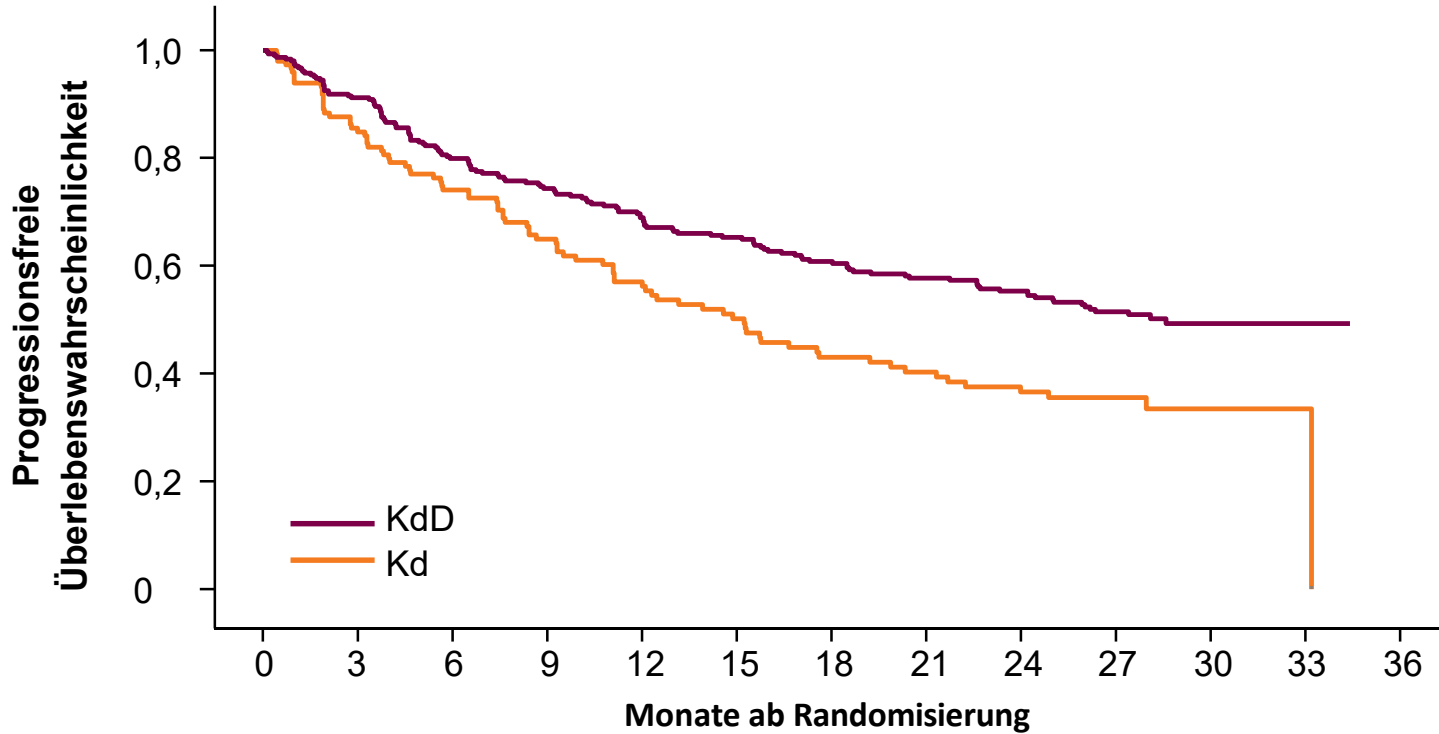
Dimopoulos et al., Athens, Greece

*Abstract 2325*

## CANDOR Study Design



# RRMM: KdD vs. Kd (CANDOR) – Update Wirksamkeit & Verträglichkeit



Anzahl risikoexponierter Patienten

	0	3	6	9	12	15	18	21	24	27	30	33	36
KdD	312	279	235	210	189	178	159	146	136	105	30	6	0
Kd	154	120	99	83	69	57	47	44	39	28	4	1	0

**Datenschnitt am 15.6.2020**  
(ca. 36 Monate nach Aufnahme des ersten Patienten)

	KdD (n=312)	Kd (n=154)
Med. Nachbeobachtungszeit, Monate	27,8	27,0
Patienten mit PFS-Ereignissen, n (%)	140 (44,9)	85 (55,2)
<b>Medianes PFS,* Monate</b>	<b>28,6</b>	15,2
<b>HR (95 % KI)</b>	<b>0,59 (0,45–0,78)</b>	

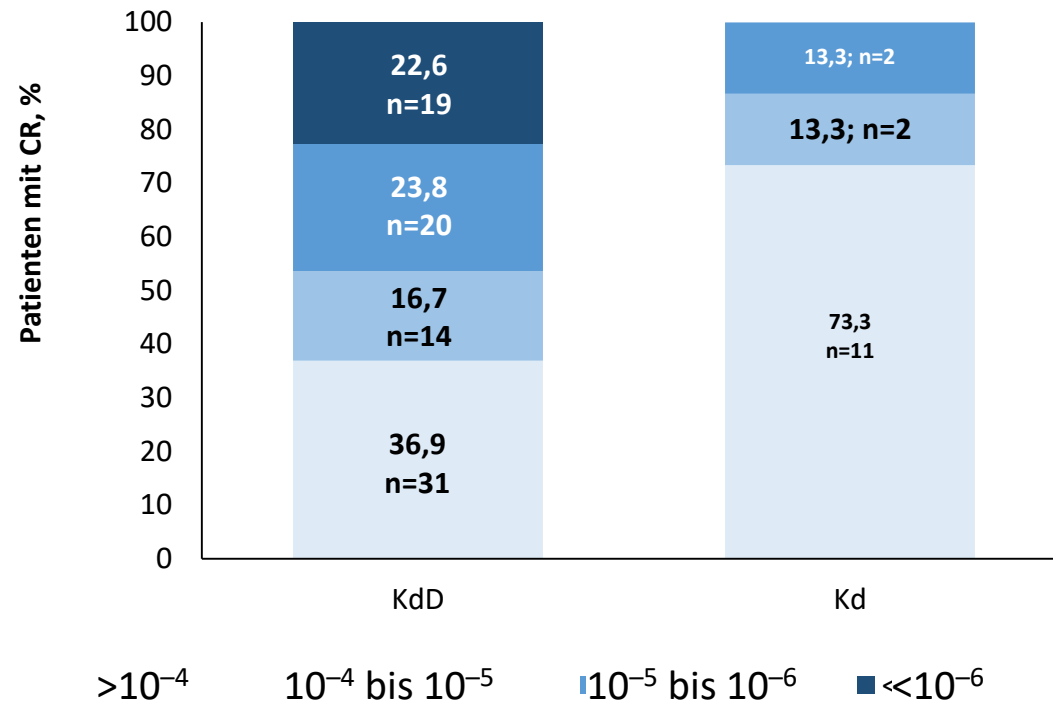
\*ORCA (Onyx Response Computer Algorithm)

K = Carfilzomib; d = Dexamethason; D = Daratumumab; RRMM = rezidiertes/refraktäres multiples Myelom; HR = Hazard Ratio; KI = Konfidenzintervall; PFS = progressionsfreies Überleben.



# RRMM: KdD vs. Kd (CANDOR) – MRD

## MRD-Ansprechen bei Patienten mit CR nach 12 Monaten



- Nach 12 Monaten hatten die Patienten unter Behandlung mit KdD eine höhere CR-Rate (26,9% vs. 9,7%) und ein tieferes Ansprechen bezüglich der MRD<sup>neg</sup> als Patienten mit Kd.
- Während einer medianen Nachbeobachtungszeit von 6 Monaten kam es bei keinem Patienten mit MRD<sup>neg</sup> CR zu einer Krankheitsprogression oder einem Todesfall.
- Im KdD-Arm beeinflusst eine Lenalidomid-Vorbehandlung oder –Refraktärität die MRD<sup>neg</sup> CR-Rate nicht.

CR = komplette Remission; Kd = Carfilzomib + Dexamethason; KdD = Carfilzomib + Dexamethason + Daratumumab; MRD = minimale Resterkrankung; MRD<sup>neg</sup> = MRD-negativ; RRMM = rezidiviertes/refraktäres multiples Myelom

# Multiples Myelom

## Rezidivtherapie

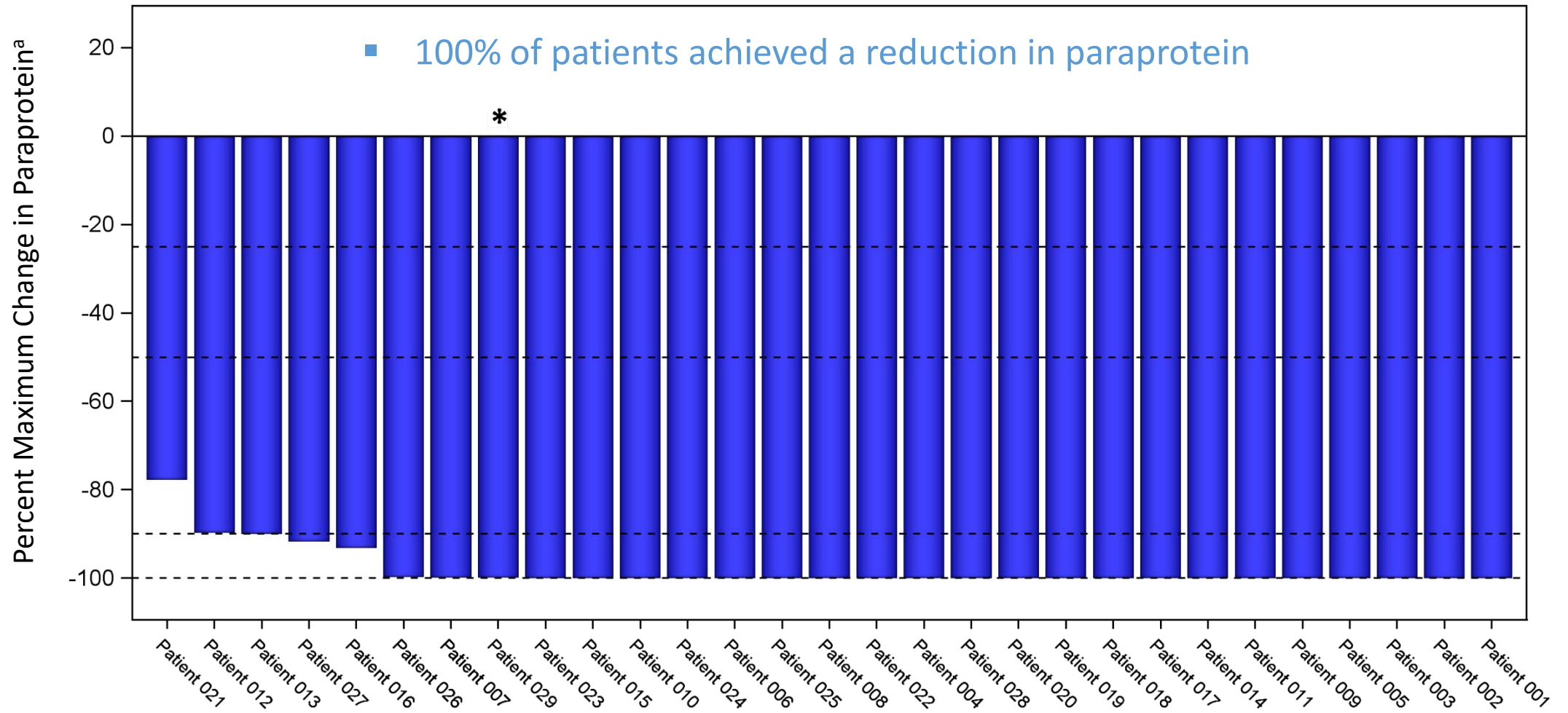
CARs – mit Verve und viel Hoffnung in die Zulassung!

## **CARTITUDE-1: Phase 1b/2 Study of Ciltacabtagene Autoleucel, a B-Cell Maturation Antigen–Directed Chimeric Antigen Receptor T-Cell Therapy, in Relapsed/Refractory Multiple Myeloma**

Madduri et al., New York, USA

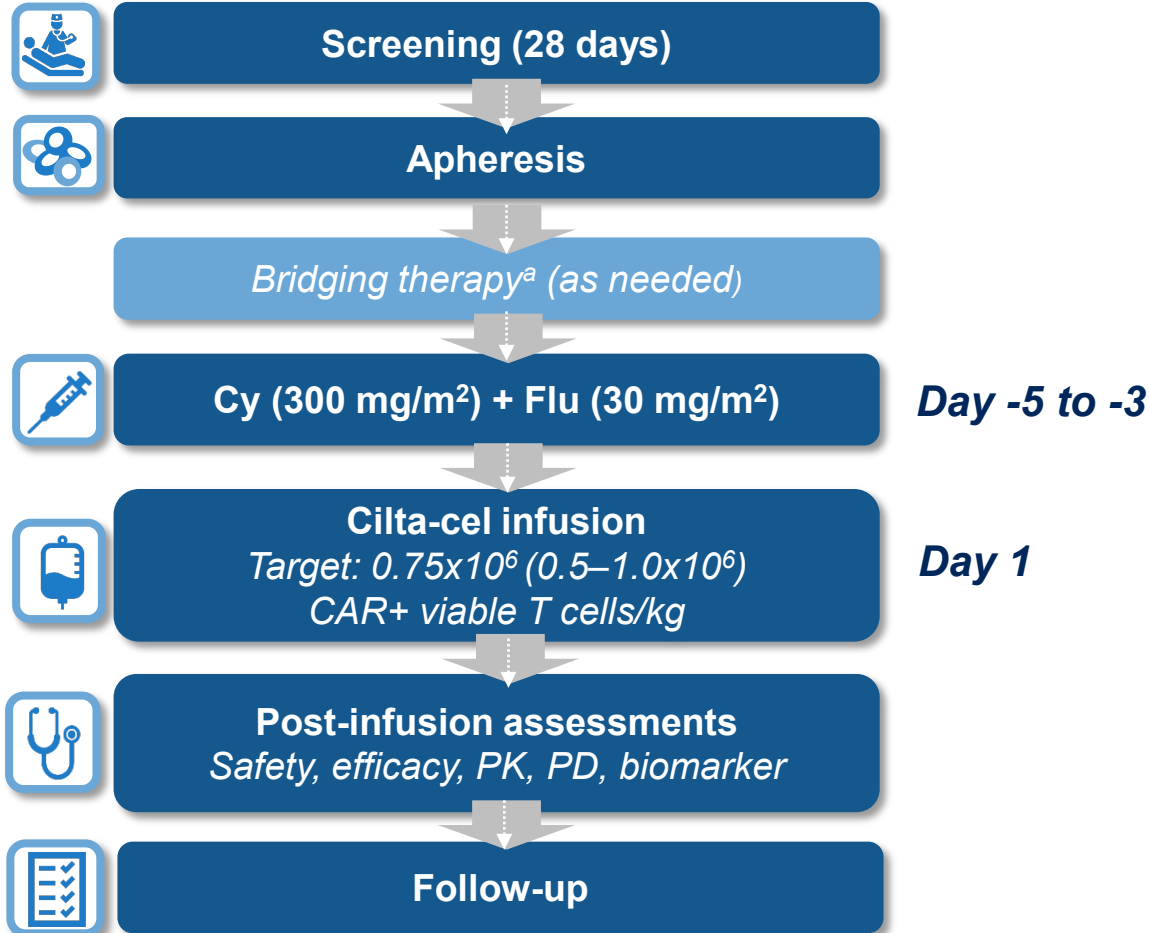
*Abstract 177*

# ASH 2019



<sup>a</sup>Serum M-protein, urine M-protein, or difference between involved and uninvolved free light chain (dFLC). \*Bence-Jones proteinuria at baseline, with a transient response during bridging therapy; output represents dFLC value

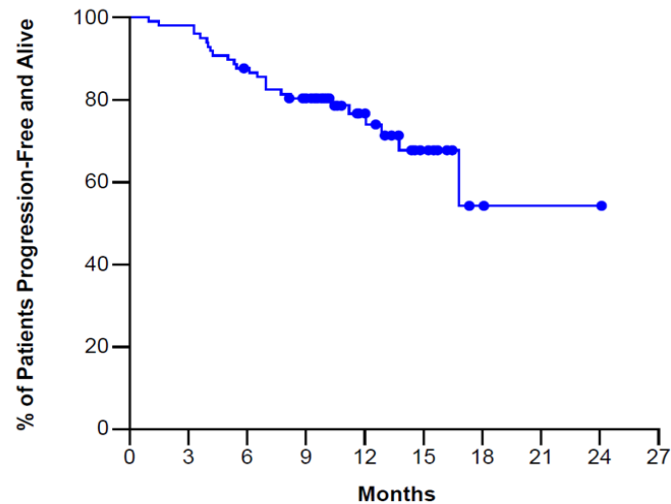
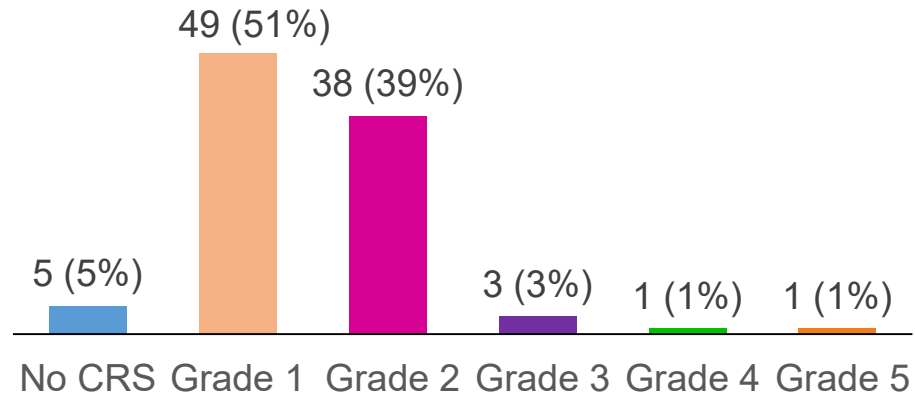
# Multiples Myelom



Characteristic	N=97
Prior lines of therapy, median (range)	6.0 (3–18)
Previous stem-cell transplantation, n (%)	
Autologous	87 (89.7)
Allogenic	8 (8.2)
Triple-class exposed, <sup>c</sup> n (%)	97 (100)
Penta-exposed, <sup>d</sup> n (%)	81 (83.5)
Triple-class refractory <sup>c</sup>	85 (87.6)
Penta-refractory <sup>d</sup>	41 (42.3)
Refractory status, n (%)	
Carfilzomib	63 (64.9)
Pomalidomide	81 (83.5)
Anti-CD38 antibody	96 (99.0)
Refractory to last line of therapy, n (%)	96 (99.0)

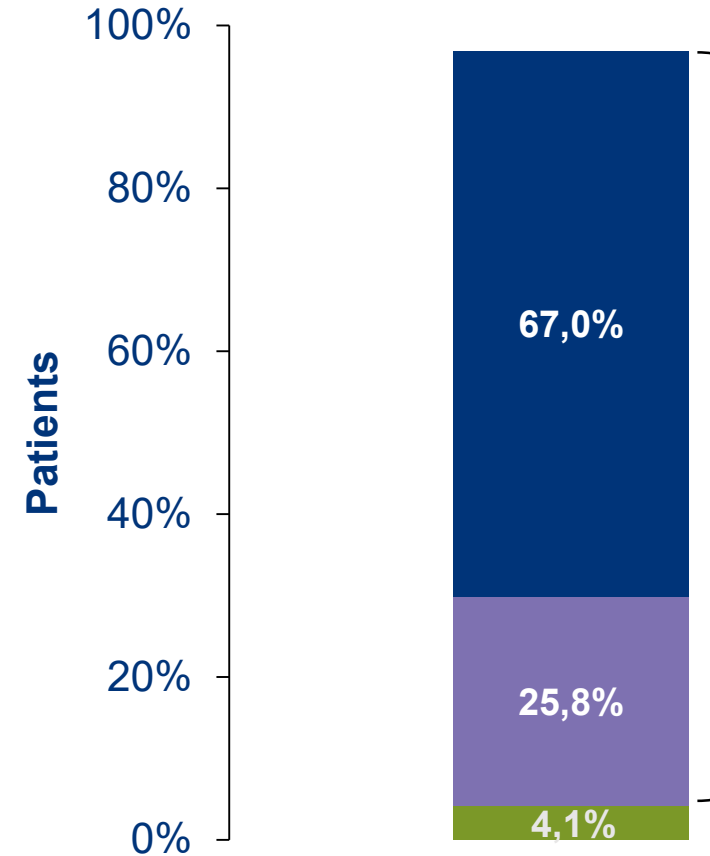
# Multiples Myelom

Maximum CRS Grade (N=97)



Months	0	3	6	9	12	15	18	21	24	27
No. at risk	97	95	84	71	30	14	2	1	1	0

ORR<sup>a</sup>: 96.9% (94/97)



Best response<sup>b</sup> = ■ sCR ■ VGPR ■ PR

## Idecabtagene vicleucel (ide-cel, bb2121), a BCMA-directed CAR T cell therapy, in patients with relapsed and refractory multiple myeloma: updated results from phase 1 CRB-401 study

Lin et al., Rochester, USA

*Abstract 131*

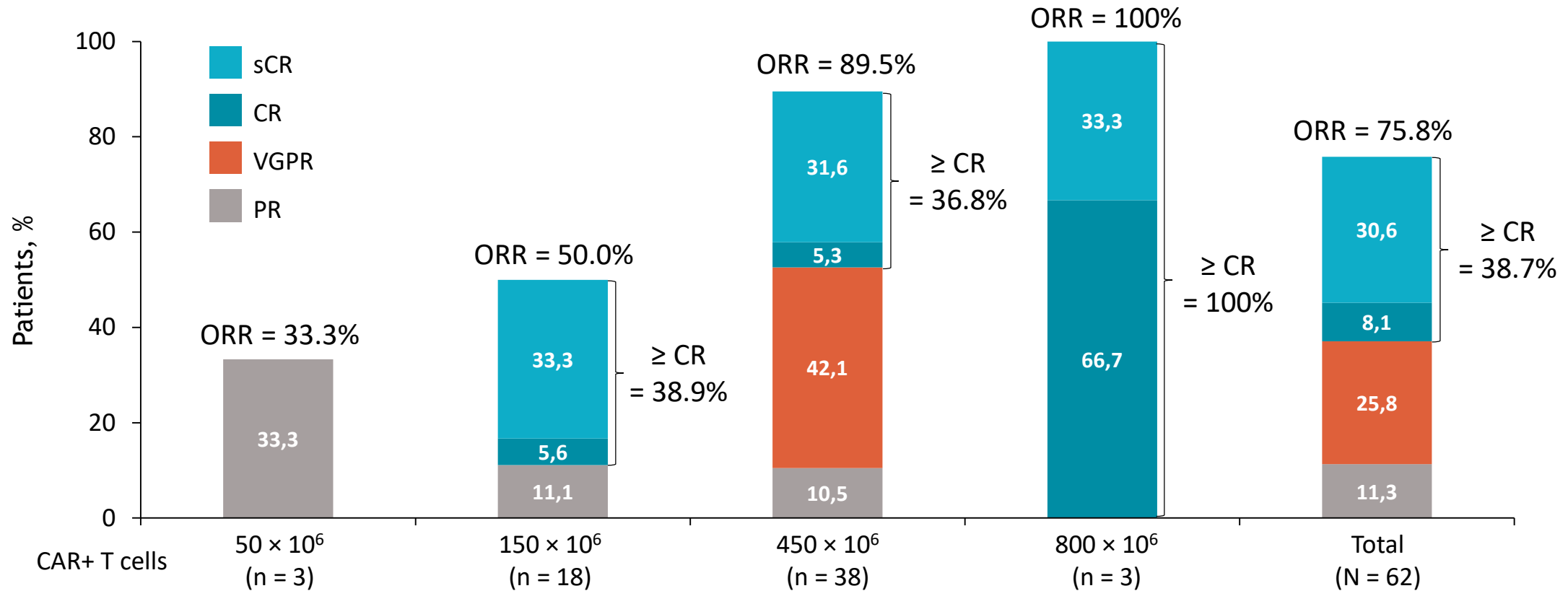
# Multiples Myelom

Target dose, × 10 <sup>6</sup> CAR+ T cells	50 (n = 3)	150 (n = 18)	450 (n = 38)	800 (n = 3)	Total (N = 62)
Age, median (range), y	60 (58-68)	63.5 (44-75)	61 (37-74)	57 (41-67)	61 (37-75)
Male, n (%)	2 (66.7)	13 (72.2)	23 (60.5)	1 (33.3)	39 (62.9)
Time since diagnosis, median (range) y	1.5 (1.4-6.2)	6.2 (1.7-15.2)	5.4 (0.8-35.7)	4.1 (3.9-15.9)	5.5 (0.8-35.7)
ECOG PS 0/1, % <sup>a</sup>	33.3/33.3	27.8/72.2	23.7/73.7	33.3/66.7	25.8/71.0
High-risk cytogenetics, n (%) <sup>b</sup>	0	6 (33.3)	10 (26.3)	1 (33.3)	17 (27.4)
R-ISS III, n (%)	1 (33.3)	2 (11.1)	7 (18.4)	1 (33.3)	11 (17.7)
High tumor burden, n (%) <sup>c</sup>	2 (66.7)	10 (55.6)	14 (36.8)	1 (33.3)	27 (43.5)
Extramedullary disease, n (%)	2 (66.7)	4 (22.2)	16 (42.1)	1 (33.3)	23 (37.1)
Prior regimens, median (range)	4 (3-11)	8 (4-15)	6 (3-18)	6 (5-7)	6 (3-18)
Prior ASCT, n (%)	3 (100)	16 (88.9)	35 (92.1)	3 (100)	57 (91.9)
Prior exposed / refractory, %					
Last prior therapy	100 / 33.3	100 / 61.1	100 / 89.5	100 / 33.3	100 / 75.8
IMiD and PI	100 / 33.3	100 / 83.3	100 / 84.2	100 / 66.7	100 / 80.6
IMiD, PI, and anti-CD38	33.3 / 0	94.4 / 72.2	97.4 / 76.3	100 / 33.3	93.5 / 69.4
Bridging therapy, n (%)	1 (33.3)	9 (50.0)	21 (55.3)	1 (33.3)	32 (51.6)

<sup>a</sup>Two patients (1 each at 50 and 450 × 10<sup>6</sup> target cells) had ECOG PS 2. <sup>b</sup>del17p, t(4;14), and/or t(14;16). <sup>c</sup>≥ 50% CD138-positive cells or percentage of plasma cells in bone marrow biopsy.

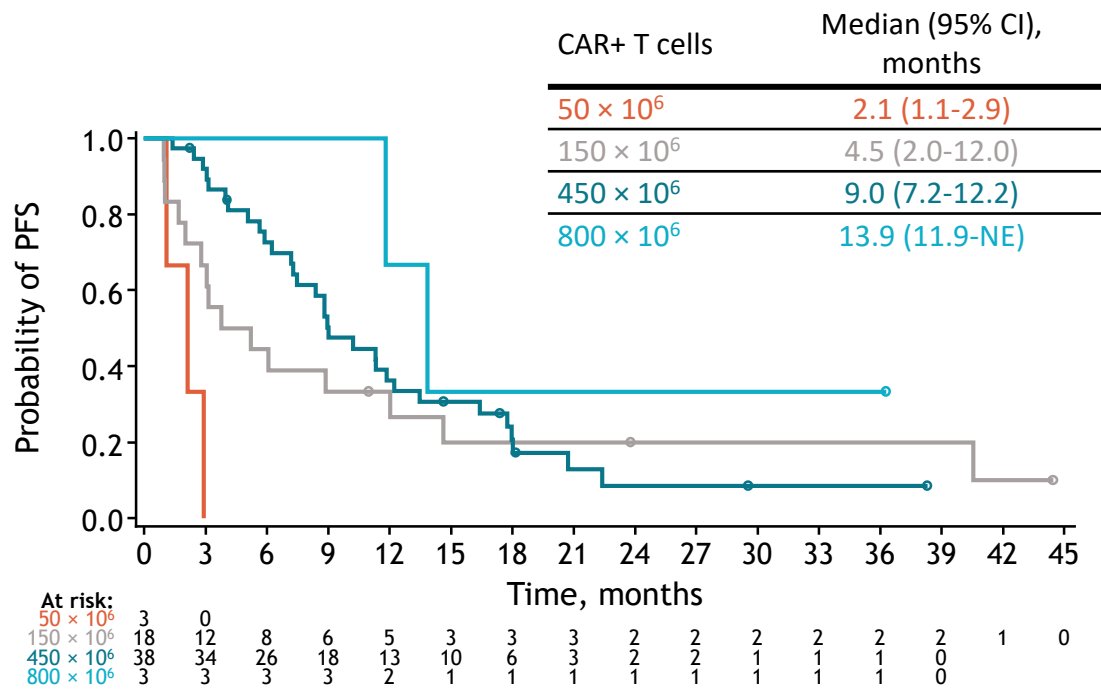


# Multiples Myelom



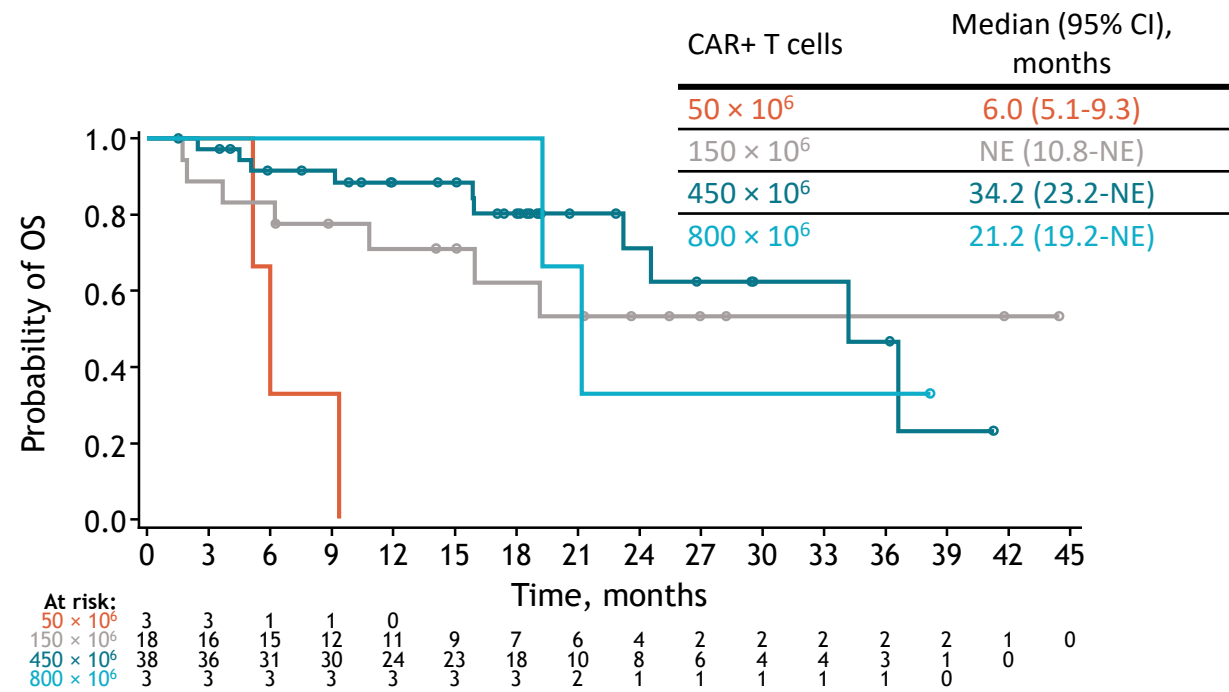
# PFS and OS

### PFS by target dose



Median PFS 8.8 months  
(95% CI, 5.9-11.9 months) across all treated patients

### OS by target dose



Median OS 34.2 months  
(95% CI, 19.2-NE months) across all treated patients

Median and 95% CI from Kaplan-Meier estimate. NE, not estimable.

# Multiples Myelom

Ide-Cel und Cilta-Cel erzielen bisher unerreichte Ansprechraten und PFS Daten in einer stark vorbehandelten Patientenpopulation

Trotz gleichem Zielantigen ist das Muster des CRS unterschiedlich

Studien in früheren Rezidiven und im randomisierten Vergleich rekrutieren bereits

Die Zulassung beider Konstrukte wird für 2021 erwartet

Die Kurzpräsentationen sind online unter

**[www.lymphome.de/ash2020](http://www.lymphome.de/ash2020)**

Für den Inhalt verantwortlich:

Prof. Dr. med. Katja Weisel

II. Medizinische Klinik und Poliklinik • Universitätsklinik Hamburg-Eppendorf



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