

  
Kompetenznetz  
Maligne Lymphome

# Lymphom Kompetenz KOMPAKT



**KML KONGRESSE**

Expert:innen berichten zu  
Lymphomen & Leukämien



## EHA2023 HYBRID



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Universitätsmedizin Mainz

# Mantelzell-Lymphom (MCL)

# Offenlegung potentieller Interessenskonflikte

LymphomKompetenz KOMPAKT – EHA2023 HYBRID wird in Kooperation mit sieben unterstützenden Firmen durchgeführt.  
Meine persönlichen Disclosures betreffen:

- Consultancy: Abbvie, ADC-Therapeutics, AstraZeneca, Genmab, Gilead/Kite, Incyte, Janssen, Morphosys, Novartis, Roche, Takeda
- Honoraria: Abbvie, AstraZeneca, Beigene, BMS, Genmab, Gilead/Kite, Incyte, Janssen, Roche
- Research Funding: Celgene, Gilead/Kite, Incyte, Janssen, Morphosys, Pfizer, Roche
- Patents and Royalties: not applicable
- Membership on an entity's Board of Directors or advisory committees: not applicable
- Discussion of off-label drug use: not applicable
- Travel grants: Gilead/Kite, Janssen

# Kapitel 1

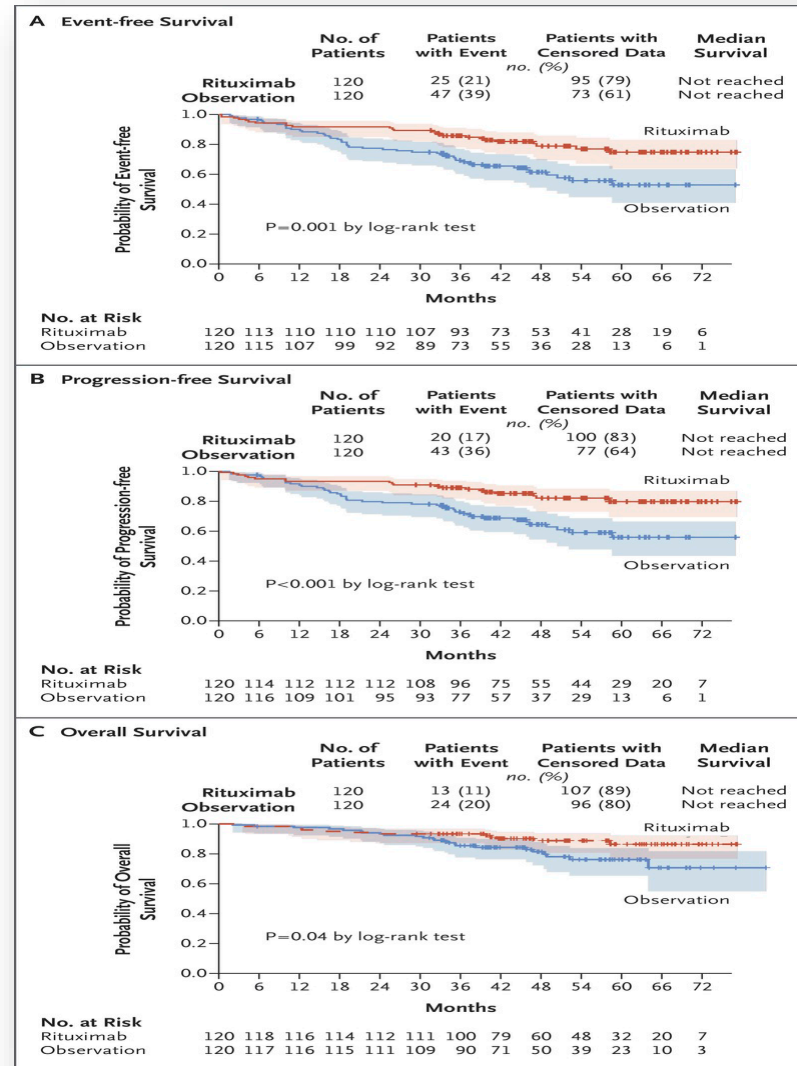
## Langzeitergebnisse einer Erhaltungstherapie beim MCL

# VERY LONG-TERM FOLLOW-UP OF RITUXIMAB MAINTENANCE IN YOUNG PATIENTS WITH MANTLE CELL LYMPHOMA INCLUDED IN THE LYMA TRIAL, A LYSA STUDY

1079

C. Sarkozy

# Hintergrund



LeGouill, NEJM, 2017

# Sind die Resultate in der Langzeitbeobachtung stabil?

Medianes follow up: 7 Jahre

- The median EFS and PFS were still statistically superior in favor of RM (not reached (NR), versus 5.8 years,  $p < .0001$  for EFS and NR versus 6.1 years for PFS in RM and observation arm respectively).
- In the RM arm, 22 patients had died (18.3%) versus 33 (27.5%) in the observation arm with a 7-year OS estimate of 83.2% (95% CI: 74.7.7%-89.0%) and 72.2% (95% CI 62.9%- 79.5%) in RM and observation arm, respectively ( $p=0.087$ )
- Causes of death were not significantly distinct between the 2 groups, lymphoma being the leading cause in both (50% in both arm), with less than 10% of infectious related death.

# Sind die Resultate in der Langzeitbeobachtung stabil?

Medianes follow up: 7 Jahre

- Post relapse OS was significantly impacted by previous RM, with a median OS-2 of 1.1 years (95%CI 0.7-2.1) for the 21 relapsing patients in the RM arm versus 4.6 years (95%CI 2-NA) for the 53 relapsing patients in the observation arm. Given the timing of relapses in RM arm, this reflects the aggressiveness of early disease progression during RM.



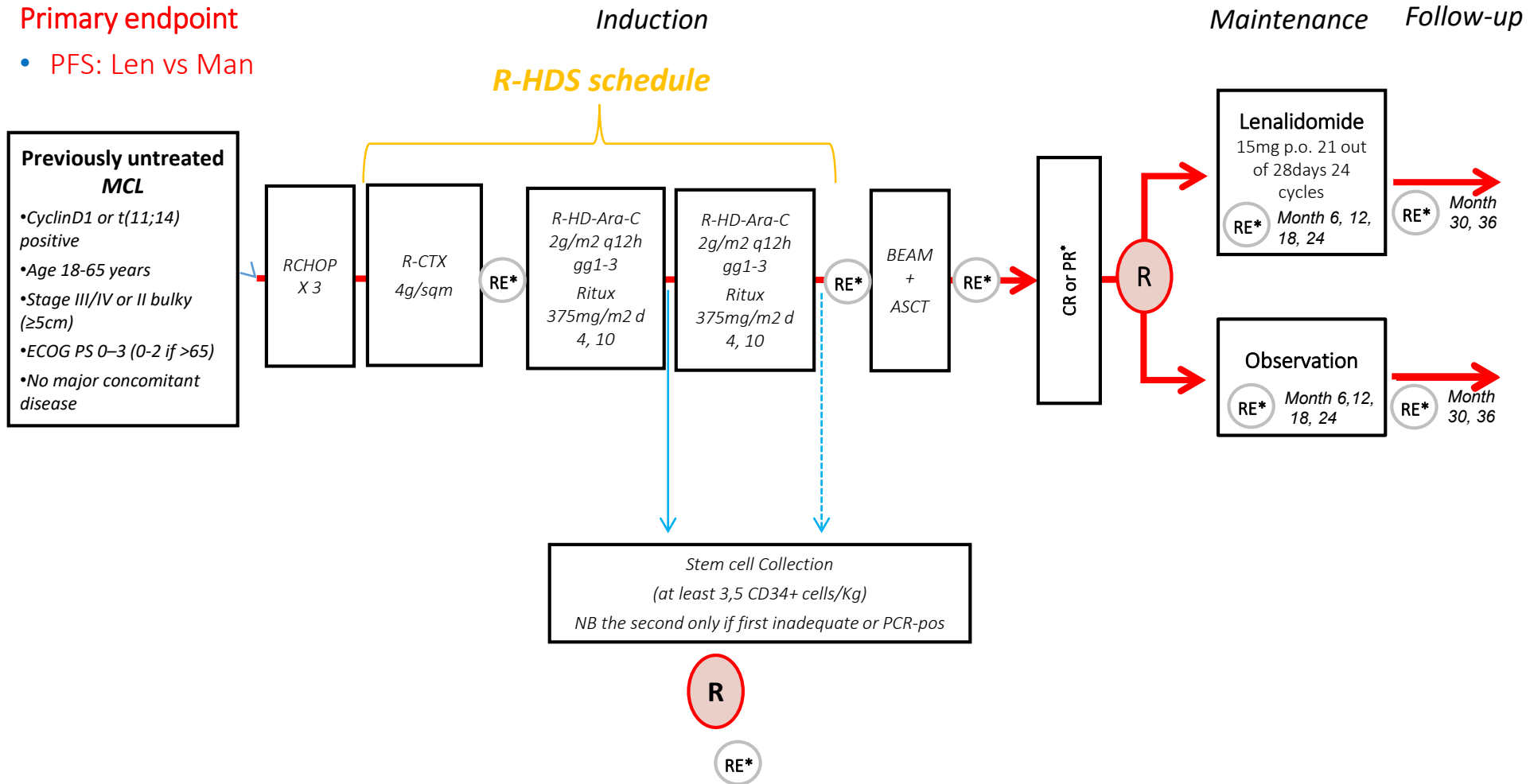
# LONG-TERM RESULTS OF THE FIL MCL0208 TRIAL COMPARING LENALIDOMIDE MAINTENANCE (LEN) VS OBSERVATION (OBS) AFTER AUTOLOGOUS STEM CELL TRANSPLANTATION (ASCT) IN MANTLE CELL LYMPHOMA (MCL)

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M. Ladetto

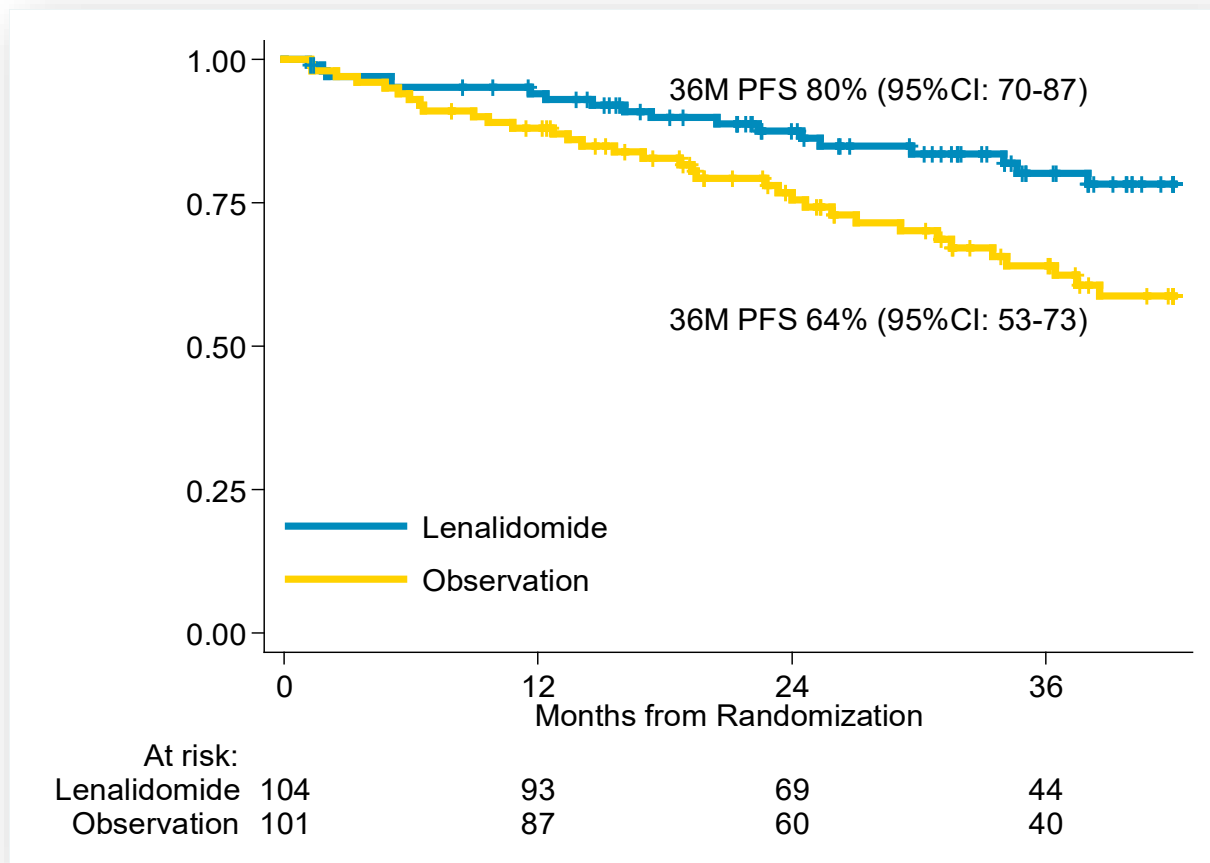
**Primary endpoint**

- PFS: Len vs Man



- RANDOM 1:1 (stratified by Clinical and molecular response and.....)
- Response evaluation

Ladetto ASH 2018



# Kernaussagen

- The two-year LEN program provided an early PFS benefit
- not maintained once LEN was interrupted with no OS advantage
  - 72 mo PFS 55 vs 50 mo (+Len vs –Len/p=0.175)
  - 72 mo OS 77 vs 75 mo (+Len vs –Len/p=0.189)
  
- Long-term MRD results stress the predictive value of this tool (BM > PB) for PFS and OS
  - particularly in the context of kinetic modeling

# Kapitel 2 – CAR-T-cells in MCL

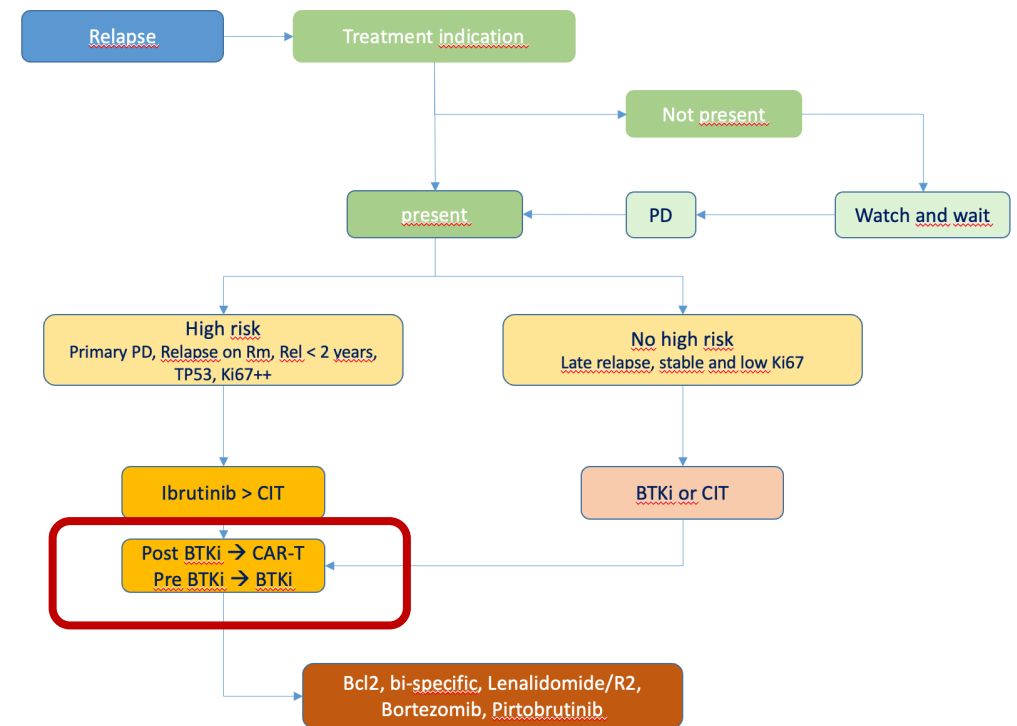
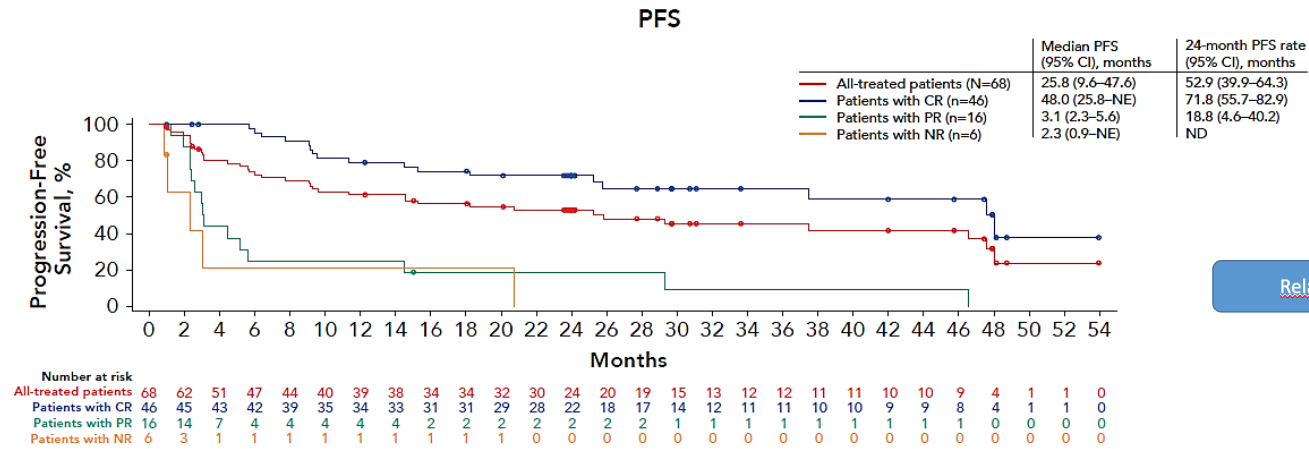
Ergebnisse im Behandlungsalltag

# REAL-WORLD OUTCOMES OF BREXUCABTAGENE AUTOLEUCEL (BREXU-CEL) FOR RELAPSED OR REFRACTORY MANTLE CELL LYMPHOMA: A CIBMTR SUBGROUP ANALYSIS BY PRIOR TREATMENT

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Nausheen Ahmed

# Hintergrund



1. Relapse
2. Relapse

Wang et al., EHA 2022; P1117 (poster presentation)

# Baseline Patient Characteristics

Characteristics <sup>a</sup>	Overall N=380	BTKi		Bendamustine		ASCT		Prior Therapies	
		Prior n=329	No prior n=51	Prior n=211	No prior n=169	Prior n=114	No prior n=266	1-2 Lines n=87	≥3 Lines n=293
Median age (range), years	66.8 (34.1-84.9)	66.9 (34.1-84.9)	65.5 (44.2-83.7)	<b>69.2</b> <b>(44.2-84.9)</b>	<b>64.3</b> <b>(34.1-83.7)</b>	<b>65.4</b> <b>(34.1-82.3)</b>	<b>67.7</b> <b>(34.3-84.9)</b>	66.9 (34.3-83.0)	66.5 (34.1-84.9)
ECOG PS ≥2, n (%) <sup>b,c</sup>	21 (6)	20 (7)	1 (2)	12 (6)	9 (6)	7 (6)	14 (6)	1 (1)	20 (7)
Ki-67 proliferation index ≥50%, n (%) <sup>c,d</sup>	97 (44)	<b>88 (47)</b>	<b>9 (28)</b>	<b>44 (37)</b>	<b>53 (52)</b>	23 (37)	74 (47)	27 (47)	70 (43)
TP53/17p deletion, n (%) <sup>c,d</sup>	40 (20)	32 (19)	8 (25)	16 (16)	24 (25)	6 (12)	34 (23)	13 (30)	27 (18)
Extranodal CNS involvement, n (%) <sup>b,c</sup>	17 (5)	17 (6)	0	11 (6)	6 (4)	7 (7)	10 (4)	1 (1)	16 (6)
Median no. of prior lines of therapy before leukapheresis (min-max)	4 (1-12)	<b>4 (1-12)</b>	<b>2 (1-7)</b>	<b>4 (1-12)</b>	<b>3 (1-10)</b>	<b>4 (1-12)</b>	<b>3 (1-11)</b>	<b>2 (1-2)</b>	<b>4 (3-12)</b>
Bridging therapy (any type), n (%) <sup>e</sup>	170 (46)	<b>159 (50)</b>	<b>11 (23)</b>	99 (48)	71 (44)	52 (47)	118 (46)	<b>29 (35)</b>	<b>141 (50)</b>

- Older patients were more likely to have had prior bendamustine and less likely to have received prior ASCT
- Patients with no prior BTKi therapy tended to receive brexu-cel in earlier lines and were less likely to receive bridging therapy



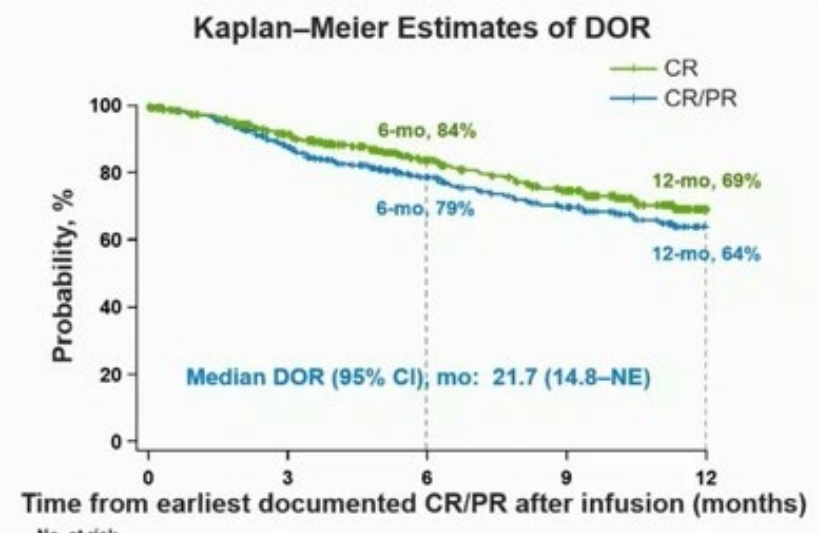
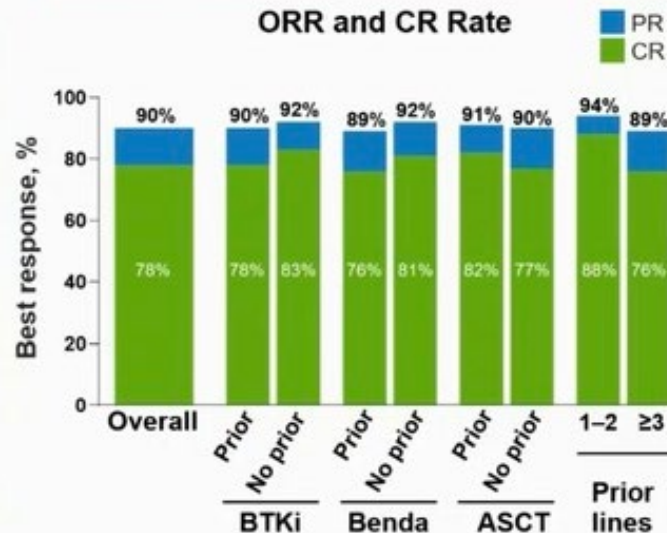
<sup>a</sup>In the overall population, 76% of patients were male, 79% were Non-Hispanic white, 4% Non-Hispanic black, 11% Hispanic, and 6% were other races, 30% of patients were chemosensitive prior to infusion, 76% had clinically significant comorbidities, 8% were planned outpatient infusions, and median time from leukapheresis to infusion was 28 days; these baseline characteristics were consistent across all subgroups. <sup>b</sup>Prior to infusion. <sup>c</sup>Percentages are based on the number of patients with available data. <sup>d</sup>At diagnosis. <sup>e</sup>Values in bold text denote statistically significant difference within a subgroup.



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# ORR, CR Rate, and DOR — Overall Population



- ORR and CR rates in ZUMA-2 were 91% and 68%, respectively<sup>1</sup>

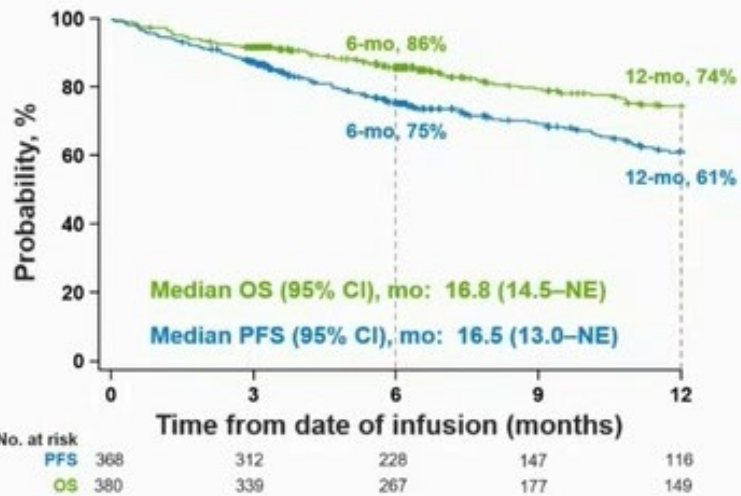
No. at risk	0	3	6	9	12
CR <sup>a,b</sup>	285	223	150	113	24
CR/PR <sup>c</sup>	324	242	156	117	25

**CIBMTR** CENTER FOR INTERNATIONAL BLOOD & MARROW TRANSPLANT RESEARCH  
<sup>a</sup>Among patients who achieved CR as a best response. <sup>b</sup>Subsequent cellular therapy and HCT without previously documented relapse or disease progression were censored; median follow-up was 12.0 months (range, 0.0–25.3). <sup>c</sup>Among patients who achieved CR/PR as a best response. NE, not estimable.  
 1. Wang M, et al. *J Clin Oncol.* 2023;41(3):555–567.

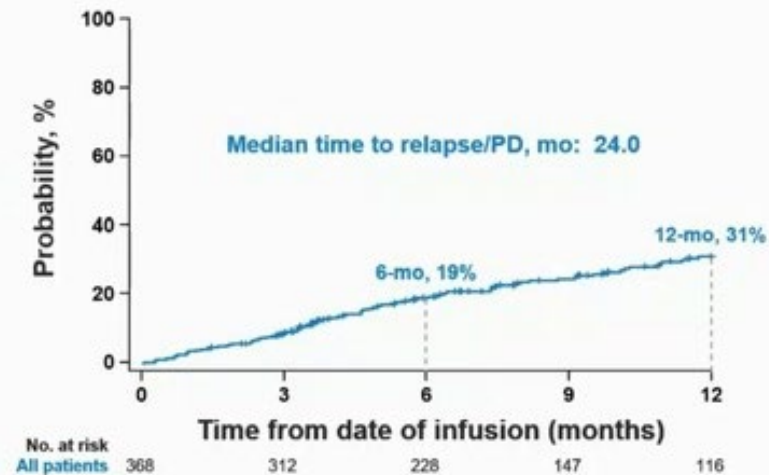


# PFS, OS, and Relapse/PD — Overall Population

Kaplan–Meier Estimates of PFS<sup>a,b</sup> and OS<sup>b</sup>



Cumulative Incidence of Relapse/PD<sup>a,b</sup>



- In the ZUMA-2 primary analysis, the 12-month PFS and OS rates were 61% and 83%, respectively<sup>1</sup>



<sup>a</sup>Subsequent cellular therapy and HCT without previously documented relapse or PD were censored. <sup>b</sup>Median follow-up was 12.0 months (range, 0.0–25.3). NE, not estimable.

1. Wang M, et al. *N Engl J Med.* 2020;382(14):1331–1342.

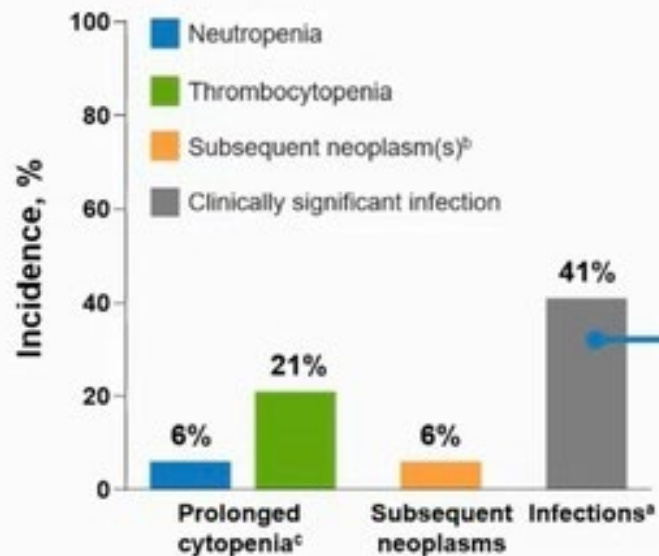


CELLULAR IMMUNOTHERAPY DATA RESOURCE

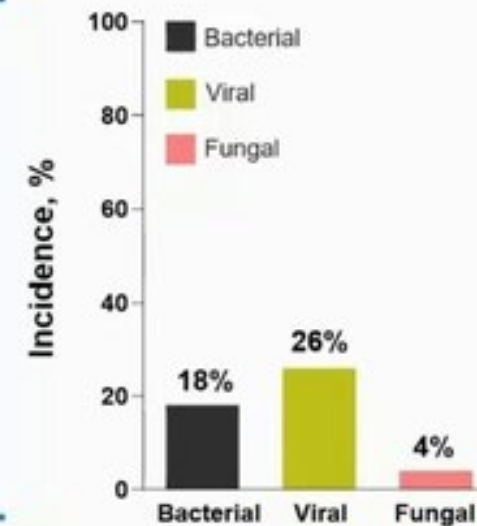
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# Other Safety Outcomes — Overall Population

Prolonged Cytopenia, Subsequent Neoplasms, and Infections<sup>a</sup>



Types of Infections<sup>d</sup>



- Prolonged neutropenia and thrombocytopenia occurred in 6% and 21% of patients, respectively
- The most common clinically significant infections were bacterial (18%) and viral (26%)

# Kapitel 3

## Neue Therapieoptionen?

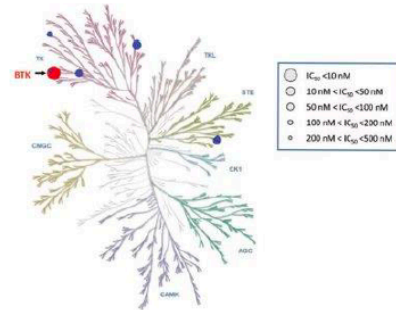
# PIRTOBRUTINIB IN COVALENT BTK-INHIBITOR PRE-TREATED MANTLE CELL LYMPHOMA: UPDATED RESULTS AND SUBGROUP ANALYSIS FROM THE PHASE 1/2 BRUIN STUDY WITH >3 YEARS FOLLOW-UP FROM START OF ENROLLMENT

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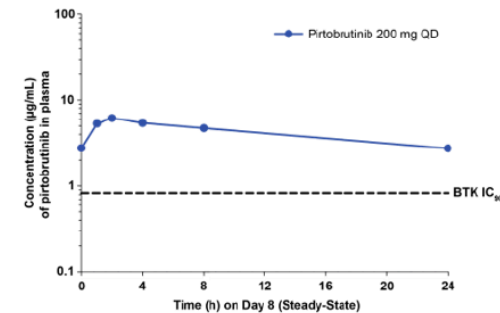
W. Jurczak

## Pirtobrutinib is a Highly Selective, Non-Covalent (Reversible) BTK Inhibitor

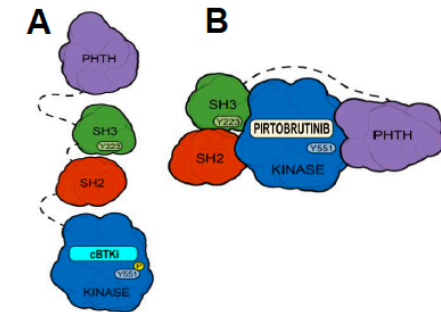
Highly Selective for BTK<sup>2,3</sup>



Plasma Exposures Exceeded BTK  $IC_{90}$  Throughout Dosing Interval



Pirtobrutinib may stabilize/maintain BTK in a closed inactive conformation

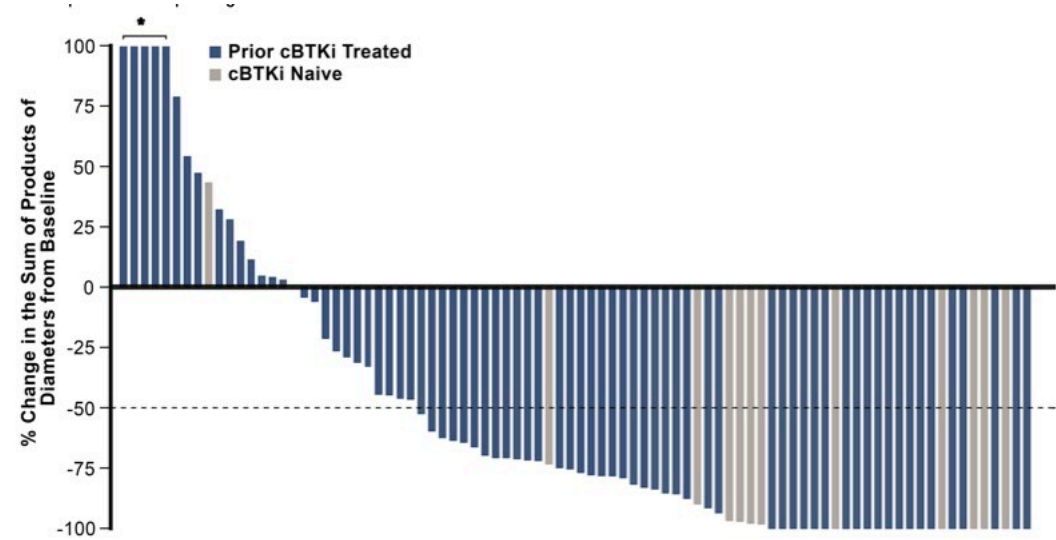


- Inhibits both WT and C481-mutant BTK with equal low nM potency<sup>4</sup>
- In contrast to cBTKi (A), pirtobrutinib (B) appears to stabilize BTK in a closed, inactive conformation, blocking access to upstream kinases and phosphorylation of Y551, thus inhibiting scaffolding interactions that support kinase-independent BTK signaling<sup>4</sup>

## MCL Patient Characteristics

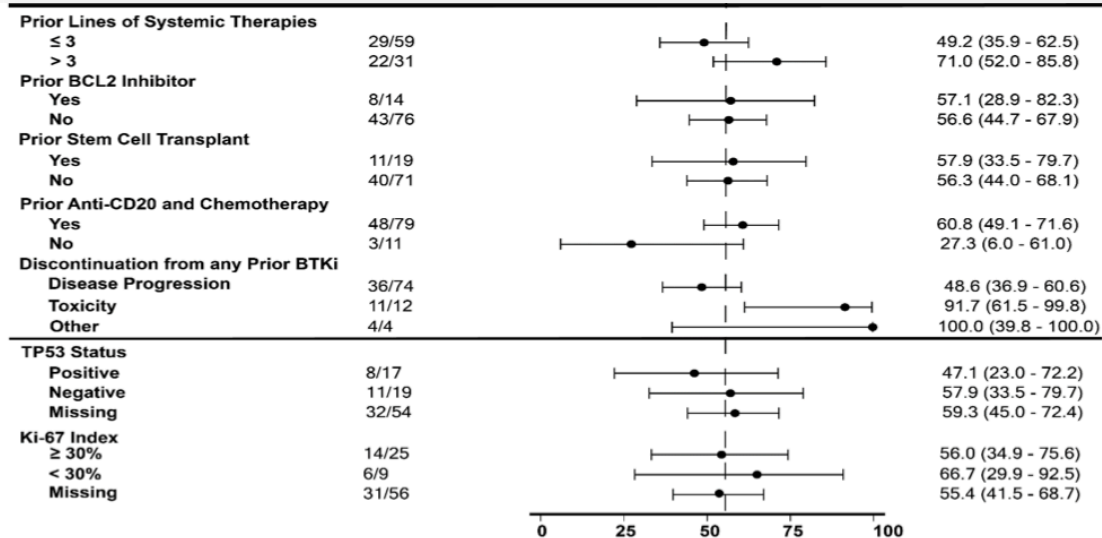
Characteristics	Prior cBTKi (n=90)	cBTKi Naïve (n=14)
<b>Median age, years (range)</b>	70.0 (46.0-87.0)	67.0 (60.0-86.0)
<b>Male, n (%)</b>	72 (80.0)	10 (71.4)
<b>Histology, n (%)</b>		
Classic	70 (77.8)	11 (78.6)
Pleomorphic/Blastoid	20 (22.2)	3 (21.4)
<b>ECOG PS, n (%)</b>		
0	61 (67.8)	5 (35.7)
1	28 (31.1)	8 (57.1)
2	1 (1.1)	1 (7.1)
<b>sMPII Score, n (%)</b>		
Low risk (0-3)	20 (22.2)	3 (21.4)
Intermediate risk (4-5)	50 (55.6)	5 (35.7)
High risk (6-11)	20 (22.2)	6 (42.9)
<b>Tumor bulk (cm), n (%)</b>		
<5 <sup>a</sup> / ≥5	66 (73.3) / 24 (26.7)	9 (64.3) / 5 (35.7)
<b>Bone marrow involvement, n (%)</b>		
Yes	46 (51.1)	4 (28.6)
No	44 (48.9)	10 (71.4)
<b>Median number of prior lines of systemic therapy, n (range)</b>	3 (1-8)	2 (1-3)
<b>Reason discontinued any prior cBTKi<sup>b</sup>, n (%)</b>		
Progressive disease	74 (82.2)	-
Toxicity / Other	16 (17.8)	-
<b>Prior therapy, n (%)</b>		
BTK inhibitor	90 (100.0)	0 (0.0)
Anti-CD20 antibody	86 (95.6)	14 (100.0)
Chemotherapy	79 (87.8)	14 (100.0)
Immunomodulator	19 (21.1)	1 (7.1)
Stem cell transplant	19 (21.1)	7 (50.0)
Autologous	17 (18.9)	7 (50.0)
Allogeneic	4 (4.4)	0 (0.0)
BCL2 inhibitor	14 (15.6)	0 (0.0)
CAR-T	4 (4.4)	0 (0.0)
PI3K inhibitor	3 (3.3)	1 (7.1)
<b>TP53 status, n (%)</b>		
Yes	17 (18.9)	3 (21.4)
No	19 (21.1)	4 (28.5)
Missing	54 (60.0)	7 (50.0)
<b>Ki-67 index, n (%)</b>		
<30%	9 (10.0)	2 (14.3)
≥30%	25 (27.8)	6 (42.9)
Missing	56 (62.2)	6 (42.9)

Data cutoff date of 29 Jul 2022. <sup>a</sup><5 cm includes 7 prior cBTKi patients and 1 cBTKi-naïve patient without a measurable lymph node. <sup>b</sup>In the event more than one reason was noted for discontinuation, disease progression took priority.



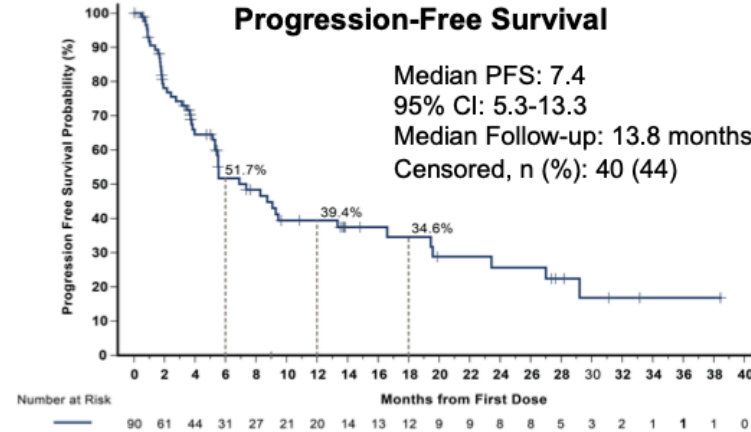
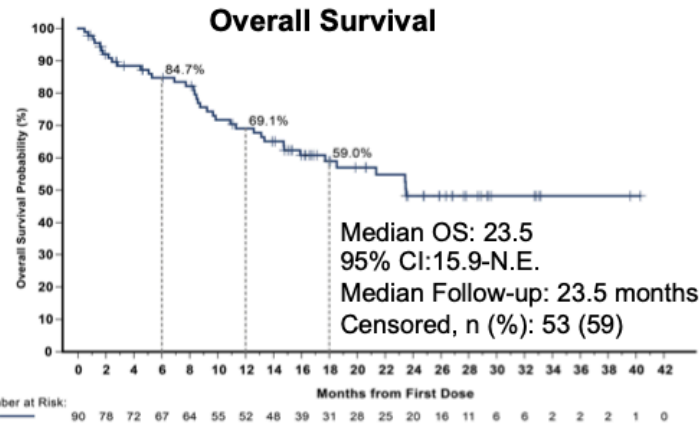
## Overall Response Rate in Prior cBTKi MCL Subgroups

	Responders/Patients		ORR % (95% CI)
All Patients	51/90		56.7 (45.8 - 67.1)
Age (years)			
< 65	17/24		70.8 (48.9 - 87.4)
≥ 65	34/66		51.5 (38.9 - 64.0)
Sex			
Male	39/72		54.2 (42.0 - 66.0)
Female	12/18		66.7 (41.0 - 86.7)
Race			
White	42/76		55.3 (43.4 - 66.7)
Non-White	9/14		64.3 (35.1 - 87.2)
Region			
US	38/68		55.9 (43.3 - 67.9)
Outside US	13/22		59.1 (36.4 - 79.3)
ECOG PS at Baseline			
0	36/61		59.0 (45.7 - 71.4)
1-2	15/29		51.7 (32.5 - 70.6)
Ann Arbor Staging for Lymphoma			
Stage I - III	12/20		60.0 (36.1 - 80.9)
Stage IV	39/70		55.7 (43.3 - 67.6)
Simplified MCL IPI			
Low Risk [0 to 3]	16/20		80.0 (56.3 - 94.3)
Intermediate Risk [4 to 5]	30/50		60.0 (45.2 - 73.6)
High Risk [6 to 11]	5/20		25.0 (8.7 - 49.1)
Tumor Bulk (largest diameter)			
< 5 cm	35/59		59.3 (45.7 - 71.9)
≥ 5 cm	10/24		41.7 (22.1 - 63.4)
Extranodal Disease			
Yes	24/35		68.6 (50.7-83.1)
No	27/55		49.1 (35.4 - 62.9)
Bone Marrow Involvement			
Yes	25/46		54.3 (39.0 - 69.1)
No	26/44		59.1 (43.2 - 73.7)
Gastrointestinal Involvement			
Yes	4/7		57.1 (18.4 - 90.1)
No	47/83		56.6 (45.3 - 67.5)
MCL Histology			
Classic/Leukemic	41/70		58.6 (46.2 - 70.2)
Blastoid	4/8		50.0 (15.7 - 84.3)
Pleomorphic	6/12		50.0 (21.1 - 78.9)

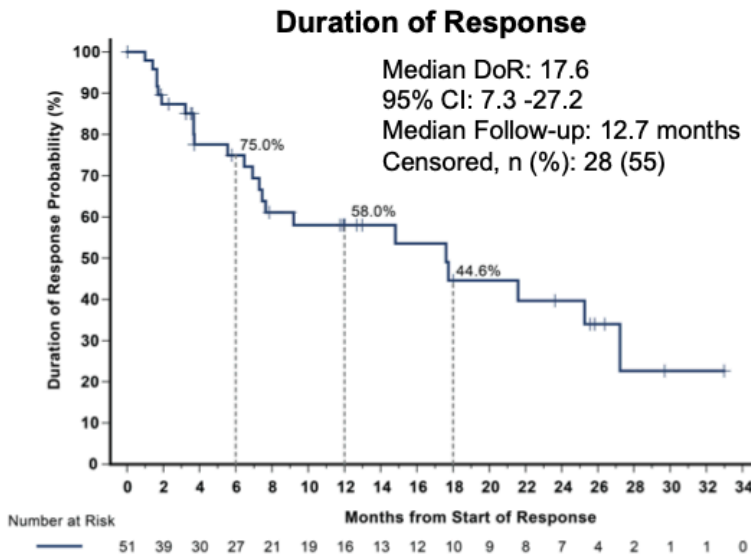




## DoR, PFS, and OS in Pre-Treated MCL Patients Based on IRC Assessment



- cBTKi-naïve cohort, median DoR, PFS, and OS (95% CI) were not reached
  - 18-month DoR rate was 100% (95% CI: 100%)
  - 18-month PFS rate was 92.3% (95% CI: 56.6-98.9%)
  - 18-month OS rate was 92.3% (95% CI: 56.6-98.9%)



Data cutoff date of 29 Jul 2022. Response status per Lugano 2014 criteria based on IRC assessment.

# Zusammenfassung | Take-Home-Messages

Eine Erhaltungstherapie ist beim Mantelzelllymphom mit einem verbesserten progressionsfreien Überleben assoziiert. Der Effekt kann jedoch nach dem Absetzen verschwinden.

Es wird wichtig sein, die Patienten zu identifizieren, die von einer verlängerten Therapie profitieren.

CAR-T-Zell-Therapie beim MCL ist auch im Routineinsatz sicher und effektiv in allen Patientengruppen.

Pirtobrutinib verspricht eine weitere Option für Patienten mit BTK—Versagen mit guter Verträglichkeit zu werden. Der Stellenwert im Vergleich zu anderen BTKi in der Inhibitor-naiven Situation muss noch evaluiert werden.

Die Kurzpräsentationen sind online unter

**[www.lymphome.de/eha2023](http://www.lymphome.de/eha2023)**

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Universitätsmedizin Mainz

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