CAR T-Cell Therapy in ALL: Optimizing Selection, Sequencing, and Delivery in a Rapidly Evolving Landscape

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LL&M great debates

Disclosures

- **Elias Jabbour, MD:** Consultant—AbbVie Inc., Adaptive Biotechnologies, Amgen, Ascentage Pharma, Astex Pharmaceuticals, Bristol Myers Squibb, Genentech, Hikma, Jazz, Johnson & Johnson, Kite, Novartis, Pfizer, Takeda, TERN, TGRX (Ongoing); Wuge (Terminated); grant/research support—AbbVie Inc., Adaptive Biotechnologies, Amgen, Ascentage Pharma, Astex Pharmaceuticals, Bristol Myers Squibb, Genentech, Hikma, Jazz, Johnson & Johnson, Kite, Novartis, Pfizer, Takeda, TERN, TGRX (Ongoing); Wuge (Terminated)

Learning Objectives

- Analyze key clinical and biologic considerations that influence CAR T-cell therapy selection and timing in ALL, including disease burden, prior therapy exposure, and overall treatment goals
- Evaluate the latest efficacy and safety profiles of newer and emerging CAR T-cell therapies for ALL
- Apply evidence-informed strategies to address key clinical and delivery challenges associated with CAR T-cell therapy for ALL, including AE management and supportive care coordination

R/R = relapsed/refractory; ALL = acute lymphocytic/lymphoblastic leukemia; AE = adverse event.

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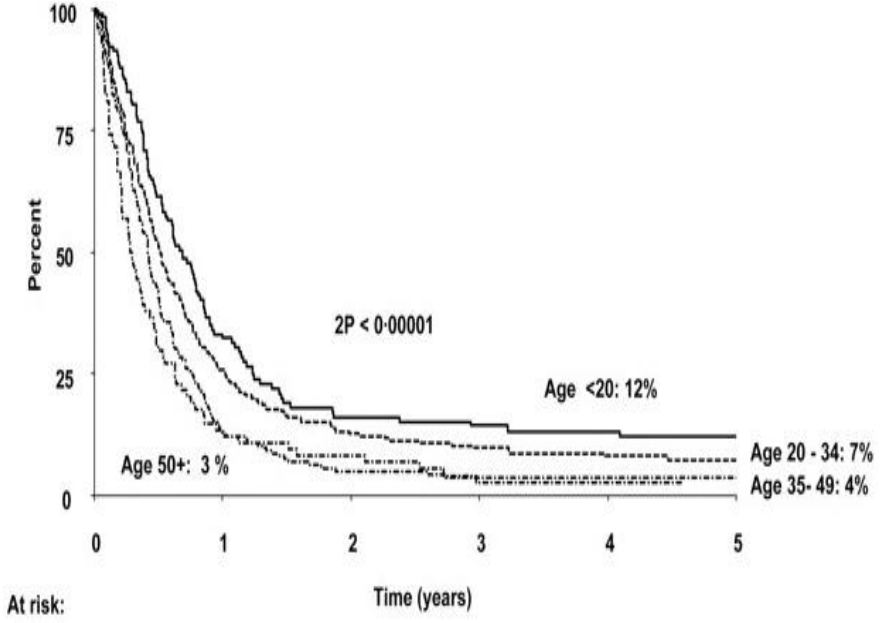
ALL—Historical Survival Rates after 1st Relapse

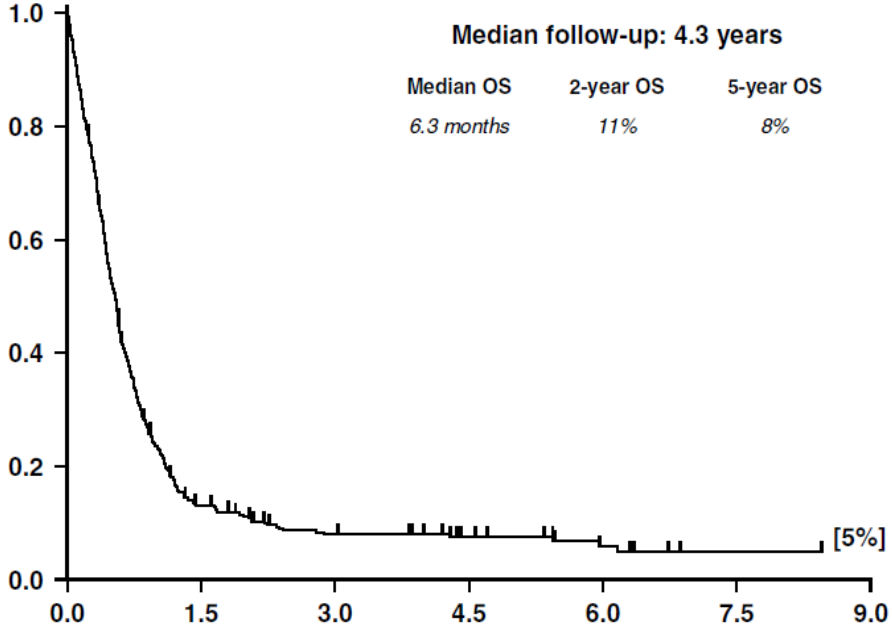
MRC UKALL2/ECOG2993 Study (n=609)[1]

Outcome of patients after 1st relapse
5-yr OS: 7%



LALA-94 Study (n=421)[2]

Outcome of patients after 1st relapse
2-yr OS: 11% and 5-yr OS: 8%



1. Fielding AK, et al. *Blood*. 2007;109(3):944-950. 2. Tavernier E, et al. *Leukemia*. 2007;21(9):1907-1914.

Historical Results in R/R ALL

Poor prognosis in R/R ALL Tx with standard of care (SOC) chemotherapy

Rate (95% CI)	No prior salvage (S1)	One prior salvage (S2)	≥2 prior salvages (S3)
Rate of CR, %	40	21	11
Median OS, months	5.7	3.4	2.9

Tx = treatment.
Gökbuget N, et al. *Haematologica*. 2016;101(12):1524-1533.

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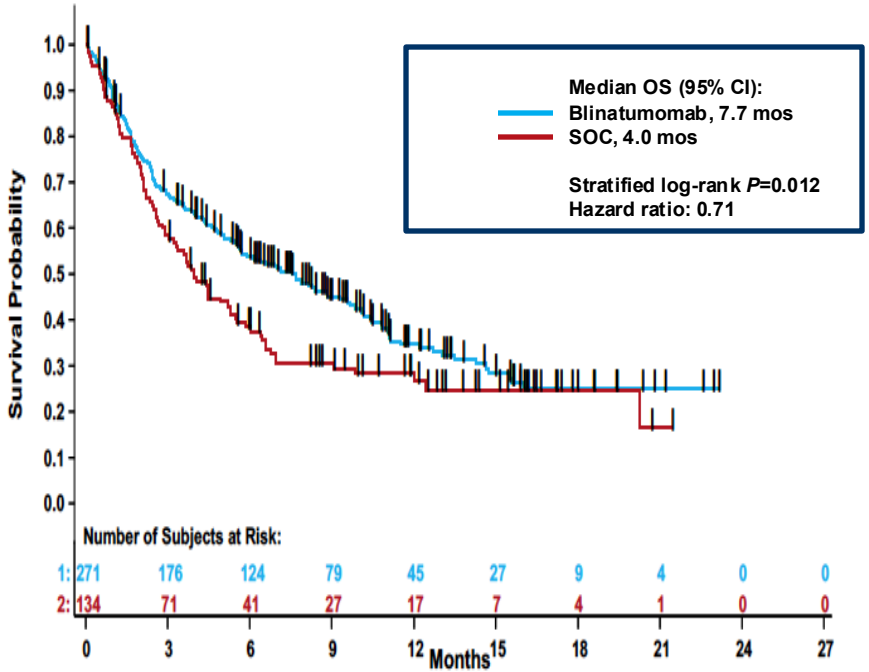
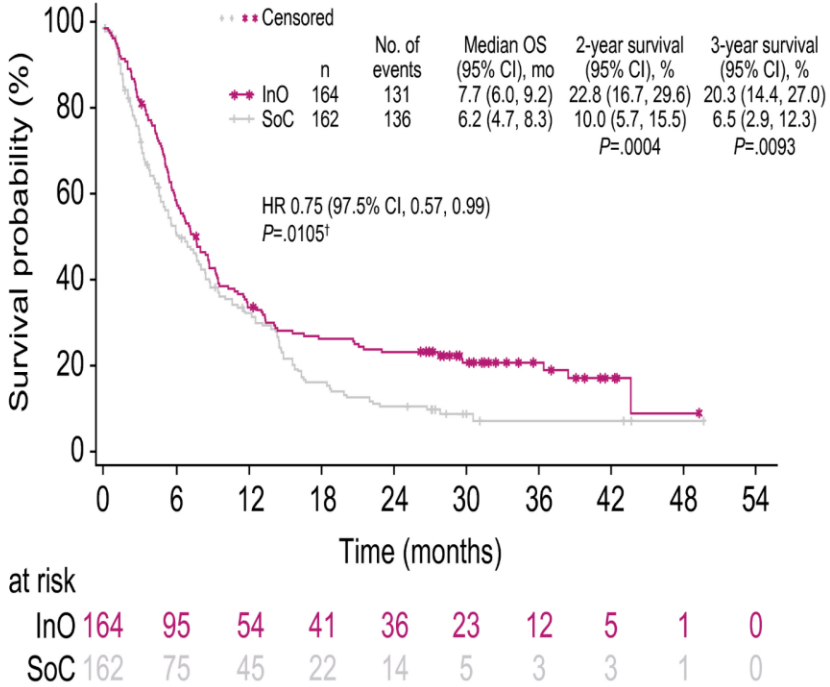
Blinatumomab/Inotuzumab vs ChemoRx in R/R ALL

Marrow CR:

Blina vs SOC: 44% vs 25%[1]



Ino vs SOC: 74% vs 31%[2, 3]



OS = overall survival; SoC = standard of care.

1. Kantarjian H, et al. *N Engl J Med*. 2017;376(9):836-847. 2. Kantarjian HM, et al. *N Engl J Med*. 2016;375(8):740-753. 3. Kantarjian HM, et al. *Cancer*. 2019;125(14):2474-2487.

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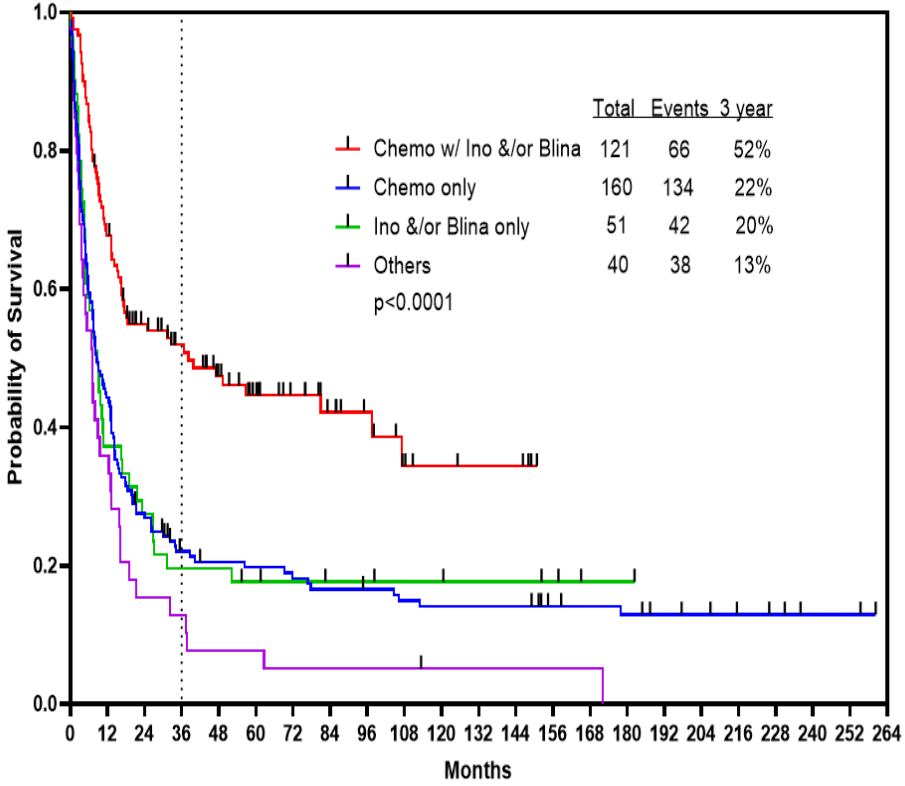
Second-Line Therapy in B-Cell ALL

372 pts with B-cell ALL treated with second-line therapies

Parameter	N	% CR	% 3-yr OS
ChemoRx +/- ino +/- blina	121	96	52
Chemo only	160	66	22
Ino or blina	51	55	20
Other	40	23	13



Jen WY, et al. Presented at: European Hematology Association (EHA) Congress; 2026. Abstract EHA-5633.

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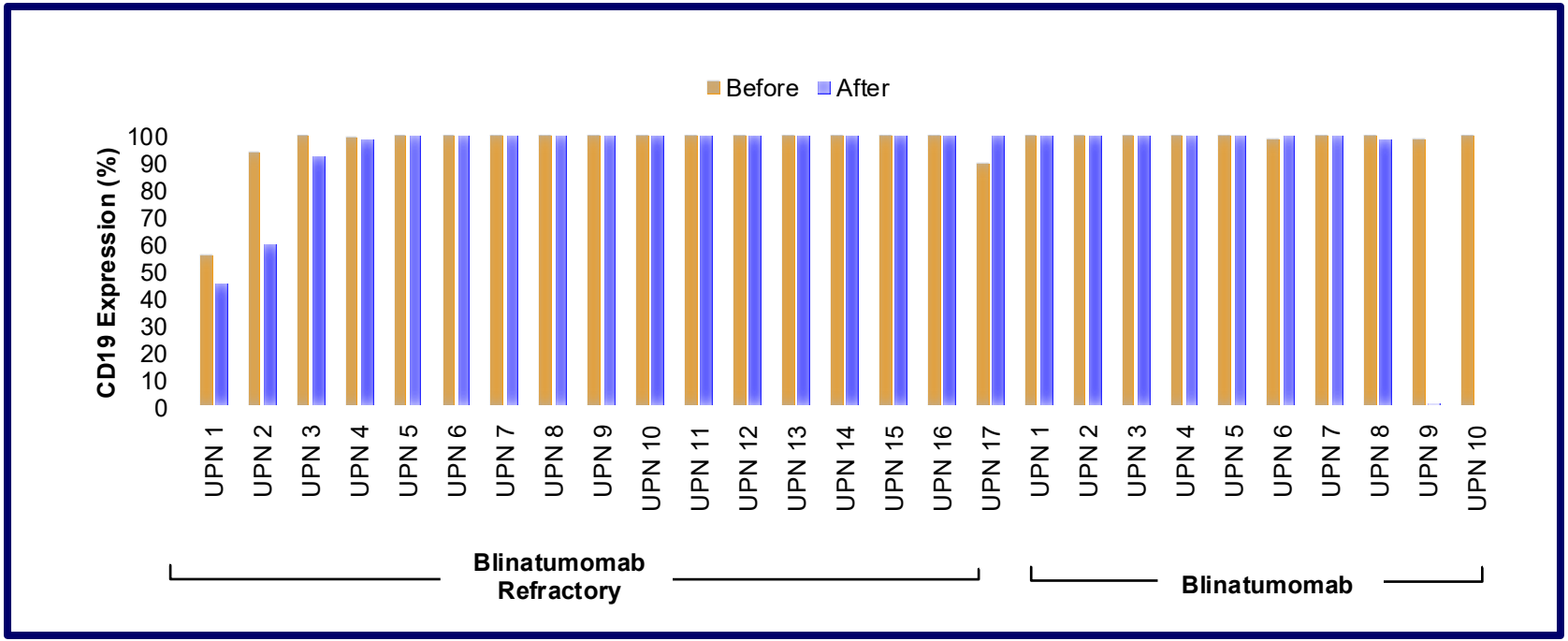
CD19 (%) Expression before and after Blinatumomab Therapy



- **61 patients evaluated for immunophenotype; 56 (92%) had CD19-positive disease**
  - 5 (8%) had ALL recurrence with CD19-negative disease
  - 2 patients progressed with lower CD19-positive disease

UPN = unified patient number.

Jabbour E, et al. *Am J Hematol*. 2018;93(3):371-374.

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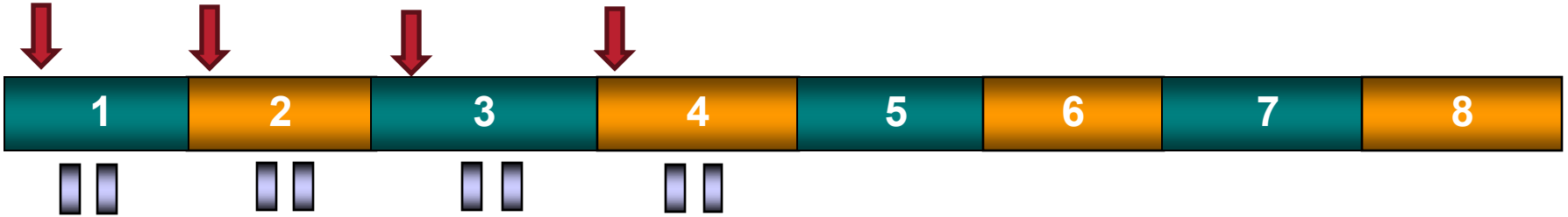
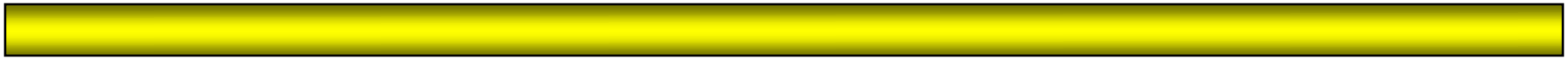
Mini-HCVD + INO ± Blina in R/R B-ALL: Original Design (Pts #1-67)

Intensive phase



Maintenance phase



36 months

Mini-HCVD

INO

Mini-MTX-cytarabine

IT MTX, Ara-C

POMP

INO	First 6 pts	7 to 34	35+
C1 (mg/m^2)	1.3	1.8	1.3
C2-4 (mg/m^2)	0.8	1.3	1.0

B-ALL = B-cell ALL; HCVD = hyperfractionated cyclophosphamide, vincristine, dexamethasone; MTX = methotrexate; POMP = 6-mercaptopurine, vincristine, methotrexate, prednisone; Ara-C = cytarabine.

Short N, et al. Presented at: EHA Congress; 2023. Abstract S119.

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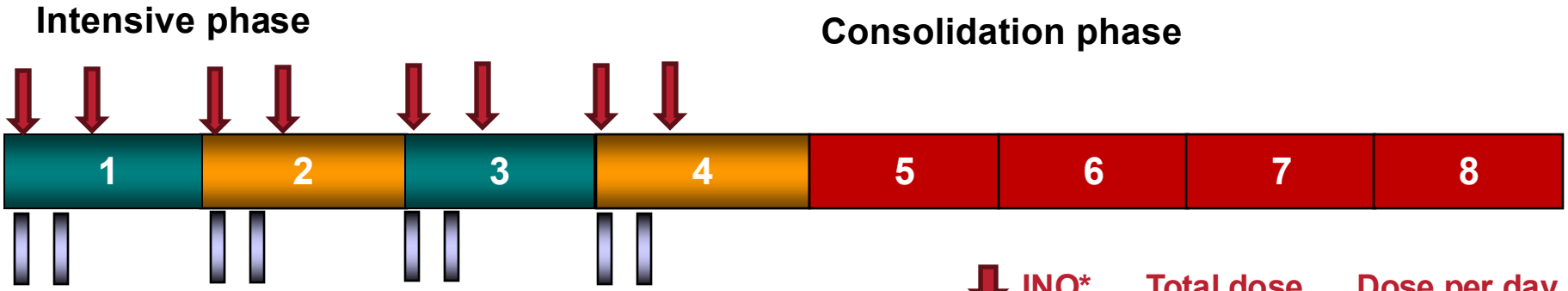
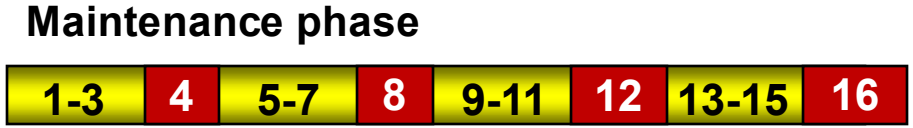
Mini-HCVD + INO ± Blina in R/R B-ALL: Modified Design (Pts #68–110)





Mini-HCVD

Mini-MTX-Ara-C

Blinatumomab

IT MTX, Ara-C

POMP

INO*	Total dose (mg/m^2)	Dose per day (mg/m^2)
C1	0.9	0.6 D2, 0.3 D8
C2-4	0.6	0.3 D2 and D8

Total INO dose = 2.7 mg/m^2

*Ursodiol 300 mg tid for VOD prophylaxis

Short N, et al. Presented at: EHA Congress; 2023. Abstract S119.

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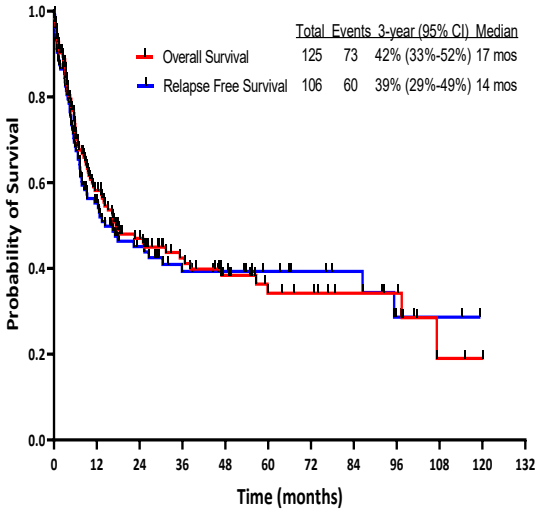
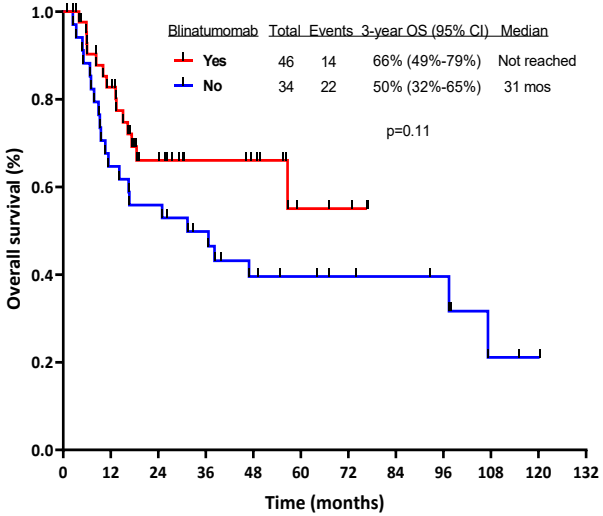
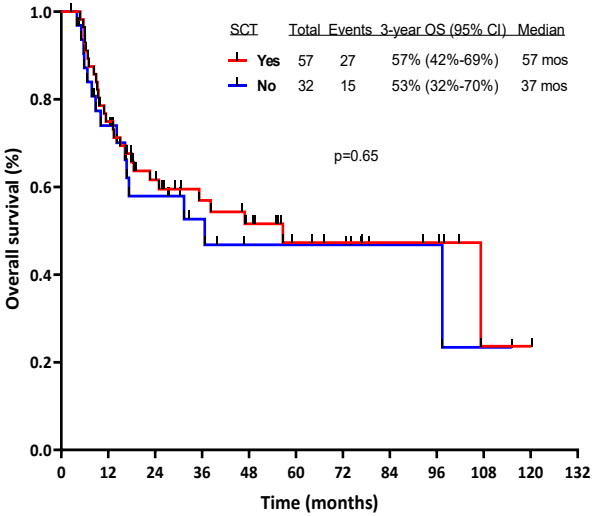
Mini-Hyper CVD-Inotuzumab-Blinatumomab in R/R ALL

- 125 pts; median age 38 yrs (18-87). 70 S1. Rx with mini-HCVD x 6-8; blina x4→POMP 1 yr with blina Q3 mos; ino 0.6 mg/m^2 D1 and 0.3 mg/m^2 D8 and 0.3 mg/m^2 D1 and D8 C2, 4, 6, 8 (2.7 mg/m^2)
- ORR rate 83% (63% CR); MRD negative 85% (53% at CR); 57 (46%) allo-SCT; F/U 36 mos
- VOD 8/125 (8%)—9/67 (13%) before blina; 1/58 (2%) with blina (*P*=0.02)







Rx = prescription; ORR = overall response rate; CR = complete response; SCT = stem cell transplantation; F/U = follow-up; VOD = veno-occlusive disease.

Kantarjian H, et al. *J Hematol Oncol*. 2023;16(1):44. Haddad F, et al. *Hemasphere*. 2023;7(S3):e89468e9.

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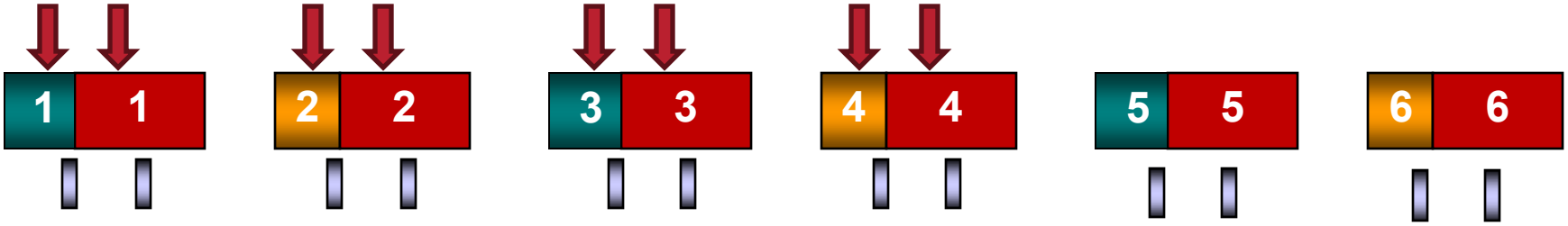
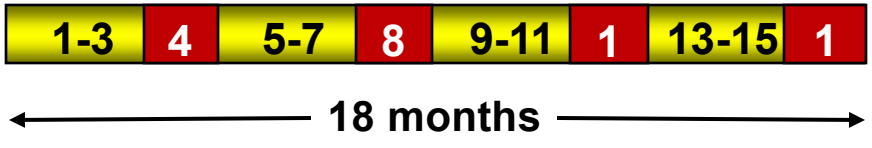
Blinatumomab-Rituximab-Inotuzumab-Condensed with KemoRx (BRICK Regimen)



INO*	Total dose (mg/m²)	Dose per day (mg/m²)
C1	0.9	0.6 D2, 0.3 D8
C2-4	0.6	0.3 D2 and D8



Total INO dose = 2.7 mg/m²

*Ursodiol 300 mg TID for VOD prophylaxis

Mini-HCVD
Blinatumomab
Mini-MTX-Ara-C
IT MTX, Ara-C
POMP

Kantarjian H, et al. *J Hematol Oncol*. 2023;16(1):44. Haddad F, et al. *Hemasphere*. 2023;7(S3):e89468e9.

Mini-HCVD-Ino-Blina in R/R ALL

- 133 pts (median age 37 yrs; 17-87) Rx with mini-HCVD-ino (n=67); same+blina (n=44); and DD-mini HCVD-ino-blina (n=22). Allo-SCT 43%

% Parameter	Total (n=133)	CT+Ino (n=67)	CT+ Ino+Blina (n=44)	DD (n=22)
ORR	86	76	93	100
CR	65	60	66	81
MRD-neg	85	82	85	95
3-yr OS	-	34	50	76
3-yr RFS	-	35	44	68
1-yr OS (S1)	-	51 (63%)	66 (66%)	90 (94%)

- 3-yr OS 54% in S1, 20% in S2
- 3-yr OS 60% with SCT vs 56% without
- SOS = 10 pts—9 (13%) initial vs (2%) later

MRD = measurable residual disease; CT = chemotherapy; DD = dose-dense; RFS = relapse-free survival; allo-SCT = allogeneic SCT; SOS = sinusoidal obstruction syndrome.

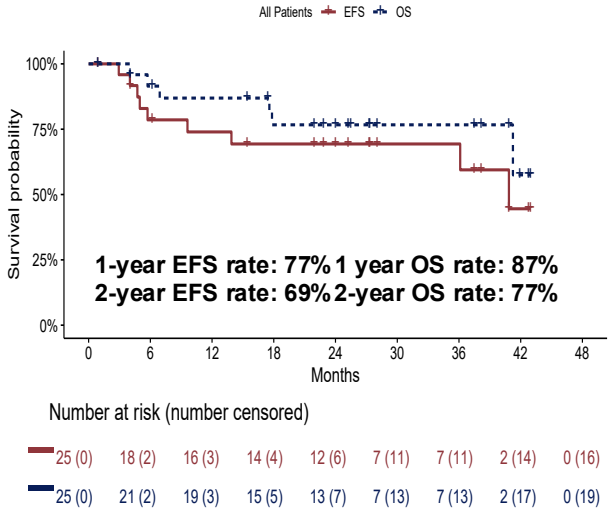
Habib D, et al. *Blood*. 2024;144(Suppl 1):2811.

LL&M great debates

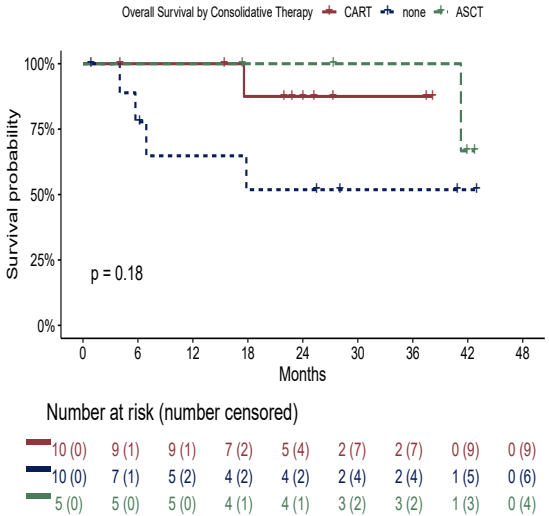
“Dose-Dense” Mini-HCVD + INO + Blina in R/R B-ALL

- 25 pts; median age 39 yrs (19-62); 12% >60yrs
- 88% S1, 12% S2+, 16% high-risk, 24% TP53, 12% prior ASCT, 32% prior blina
- ORR: 100%, CR 79%
- Best MRD-FCM 95% (73% post C1), best MRD-NGS 95% (38% post C1)
- Median F/U 25 months—2-yr EFS 69%, 2-yr OS 77%
- 2-yr OS by consolidation: CAR 89%, none 52%, ASCT 100%

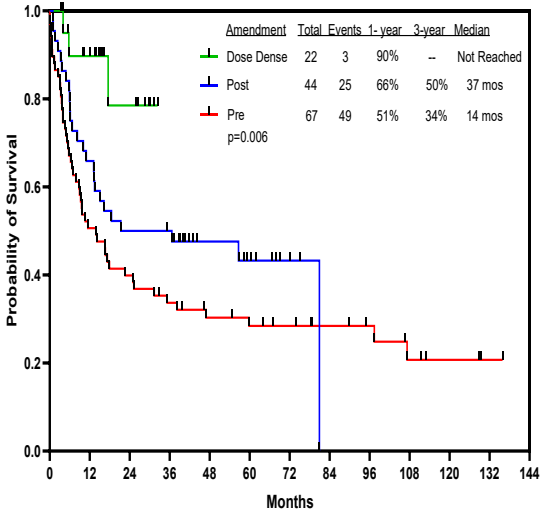
Outcomes



OS by Consolidation



OS by Regimen



ASCT = autologous SCT; EFS = event-free survival; FCM = flow cytometry; NGS = next-generation sequencing.

Goulart H, et al. *Blood*. 2025;146(Suppl 1):3350.

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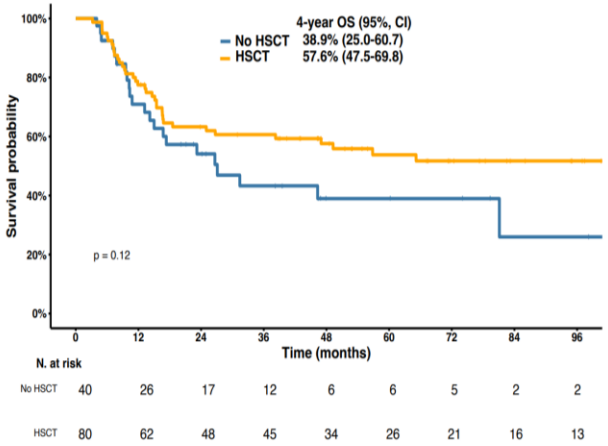
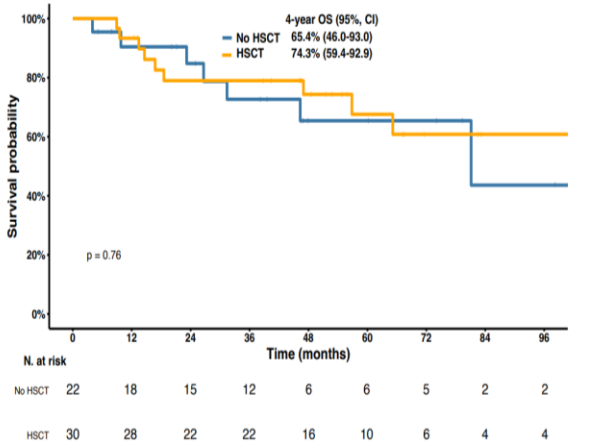
Outcomes after S1 in R/R ALL—Role of Allo-SCT Consolidation

- N=172/203 pts (85%; 137 Ph-neg, 35 Ph+) in CR2; median age 48 (18-88); 10% >70yrs
- 9% Rx prior blina and/or ino, 11% prior allo-SCT; 54% CR1D ≥12 mos
- S1: 38% both blina and ino, 41% ino, 21% blina
  - MRD-neg EOC1 60%
- Consolidation 47% allo-SCT, 9% CAR T-Rx, 44% none
- Median F/U 56 months: 4-yr OS 46%, 4-yr RFS 38%, 4-yr CIR 42%
- MVA for worse OS: older age, MRD-pos EOC1, CR1D<12 mos

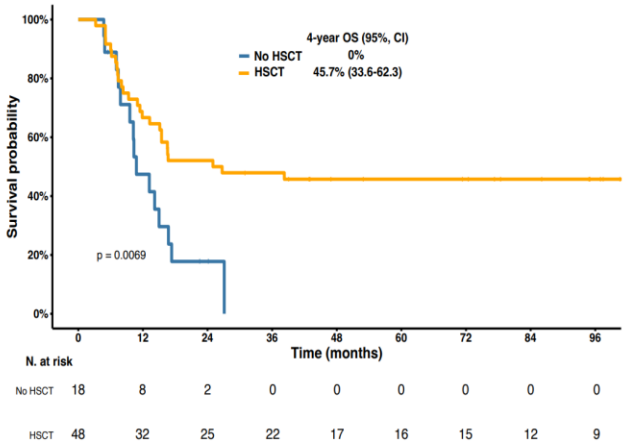
OS: Overall



OS: MRD-neg EOC1 & CR1D ≥12 mos



OS: MRD-pos EOC1 or CR1D <12 mos



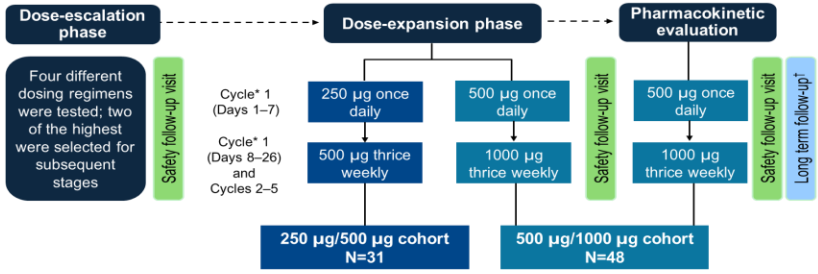
EOC = end of cycle; CR1D = duration of first complete remission; CIR = cumulative incidence of relapse; MVA = multivariate analysis; HSCT = hematopoietic SCT.

Azevedo RS, et al. *Blood*. 2025;146(Suppl 1):549.

LL&M great debates

Subcutaneous Blinatumomab in R/R ALL

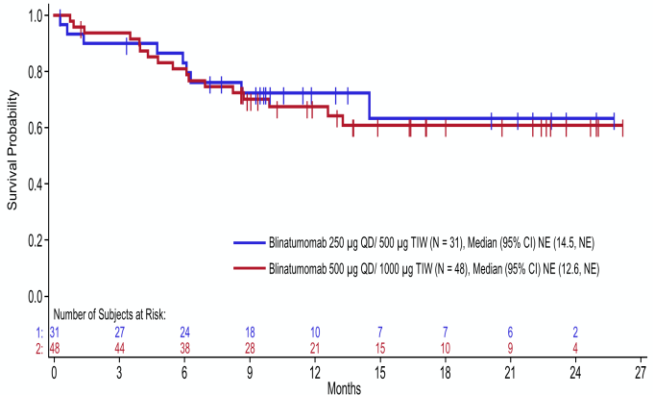
- 88 pts Rx: 36 at 250/500; 52 at 500/1000
- Rx 250 mcg daily x 7 then 500 mcg TIW; or 500/1000
- Median age 49 yrs (19-78). Median prior Rxs 2 (1-7). Baseline BM blasts 60%.
- Prior CAR T 16%, blina 19%, ino 33%, HSCT 28%
- Median F/U 14 mos



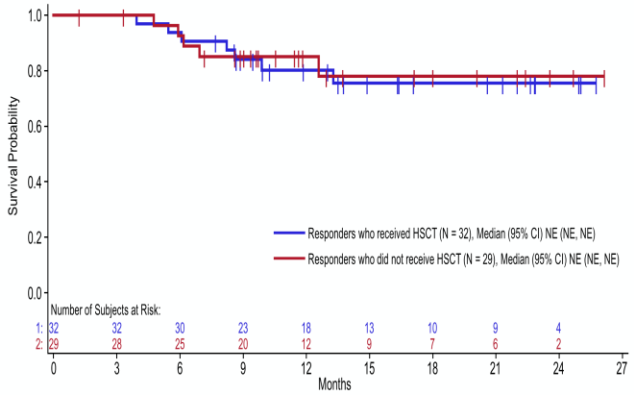
*Patients could receive 1–5 cycles of SC blinatumomab as monotherapy. Each cycle included 4 weeks of treatment followed by 1 week of treatment-free interval. Hospitalization was required for the first 12 days of cycle 1.
†Long-term follow-up lasted two years following the first dose of SC blinatumomab.
Data presented as of July 3, 2025.

Parameter	250/500	500/1000
%CR-CRh	75	79
% CR-CRh-CRi	89	92
% MRD-neg	89	93
No relapses	0	3
% 12-mos OS	72	67
% G3 CRS	17	23
% G3 ICANS	28	27

Overall Survival



OS of Responders by HSCT Status



CRh = complete remission with partial hematologic recovery; CRi = complete response with incomplete blood recovery; CRS = cytokine release syndrome; ICANS = immune effector cell-associated neurotoxicity syndrome.

Jabbour E, et al. *Lancet Haematol*. 2025;12(7):e529-e541. Jabbour E, et al. *Blood*. 2025;146(Suppl 1):5117.

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Surovatamig (AZD0486; CD3-CD19 BiTE) in R/R ALL

- 42 pts Rx in dose-escalation. Target dose 2.4, 7.2 or 15 mg.
- Median age 50 yrs (17-77); median prior Rx 3 (2-9); 60% >50% BM blasts; 62% prior CD19 Rx—43% blina and 40% and/or CAR T-Rx
- Median F/U 6.2; median DOR NR; DLTs in 2 pts (both resolved)
- G2+ CRS 9%, G3 ICANS in 1 pt

Parameter	Total	2.4 mg	7.2 mg	15 mg
No Rx	**42**	**13**	**12**	**17**
% CR-CRi-CRh	**67**	**46**	**58**	**82**
% CR	**50**	**38**	**42**	**65**
% MRD-neg		**83**	**100**	**100**

- Among pts Rx at 15 mg, ORR 88% with prior blina, 73% with prior CAR T, 86% in double-exposed, and 86% in triple-exposed pts
- Six of 7 pts with Ph-positive ALL achieved CR

BM = bone marrow; NR = not reached.

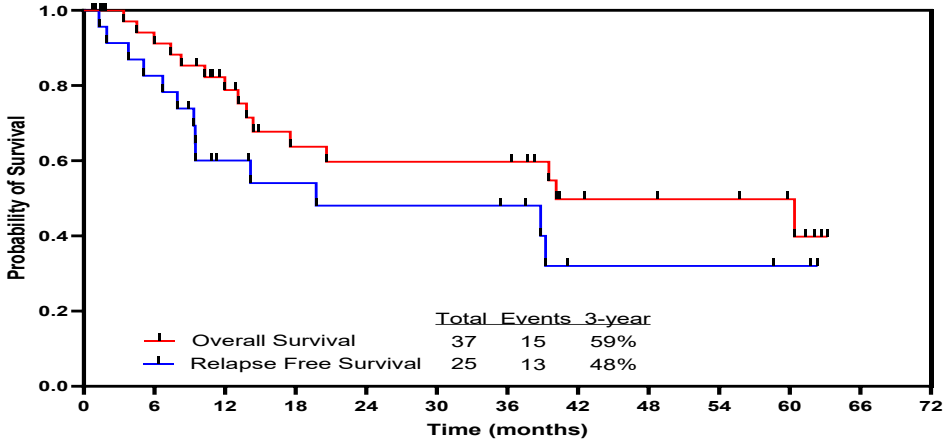
Aldoss I, et al. *Blood*. 2025;146(Suppl 1):3345.

LL&M great debates

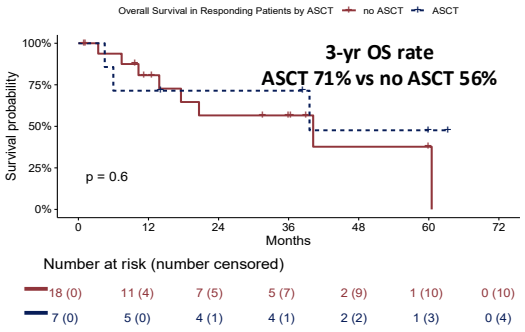
Inotuzumab for MRD-Positive B-ALL—Longterm F/U

- 37 pts; median age 49 yrs (19-71)
- 76% CR1, 24% CR2+
- Ino 0.9 mg/m2 C1 and 0.6 mg/m2 C2-6
- 54% Ph-pos, 46% Ph-neg (47% Ph-like)
- Prior Rx: 65% blina, 11% CAR, 14% ASCT
- Median 3 (1-6) cycles of ino received
- Median F/U: 39 months
- 25/37 (68%) MRD-negativity
  - Ph-neg: 10/12 (71%) MRD-neg by FCM; 9/11 (81%) MRD-neg by NGS
  - Ph-pos: 9/9 (100%) MRD-neg by FCM; 4/6 (67%) MRD-neg by NGS; 2/9 (22%) BCR::ABL1-neg
- SOS in 3 pts (1 after ASCT, 2 while on ponatinib)

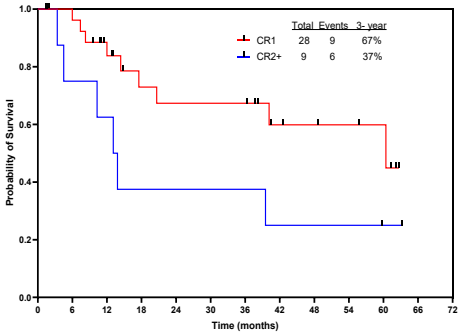
Outcomes



OS by ASCT



OS by CR1 vs CR2+

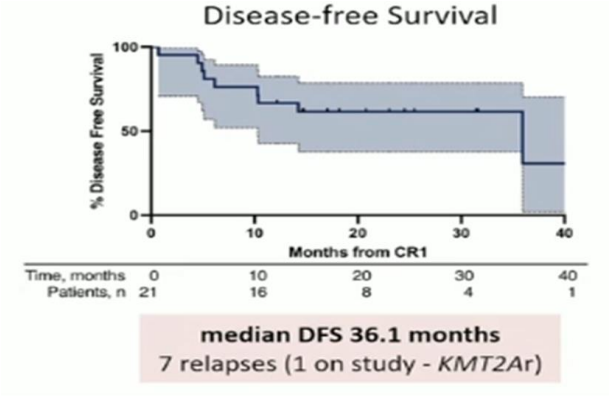


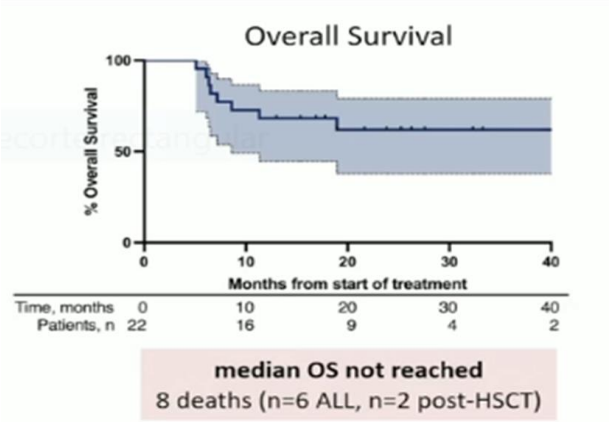
Goulart H, et al. *Blood*. 2025;146(Suppl 1):3348.

LL&M great debates

InO-VEN in R/R ALL—Phase I

- VEN (D1-21) DL1 200 mg vs DL2 400 mg (RP2D=400) + ino (D1, D8, and D15)
- Up to 2 IND followed by consolidation (up to 6 cycles total)
- Dex 10 mg/m^2 D1-4 during IND; CNS and ASCT per SOC
- 23 pts; median age 39 yrs (24-74); 35% LBL; 17% Ph+
- CR 95% (21/23—ALL 100%; LBL 86%); MRDflow 89%; MRD—NGS 74%
- Consolidation: blina (n=9); ASCT (n=14); DLI (n=1); XRT (n=1); POMP (n=1)
- Median F/U 25 mo → median DFS 36 mo; OS NR
- SOS (n=4; 17%—3 post-SCT)
- 7/21 (33%; 1 *KMT2Ar*) relapsed; 8/22 (36%; 6 ALL, 2 post-ASCT—1 SOS) died



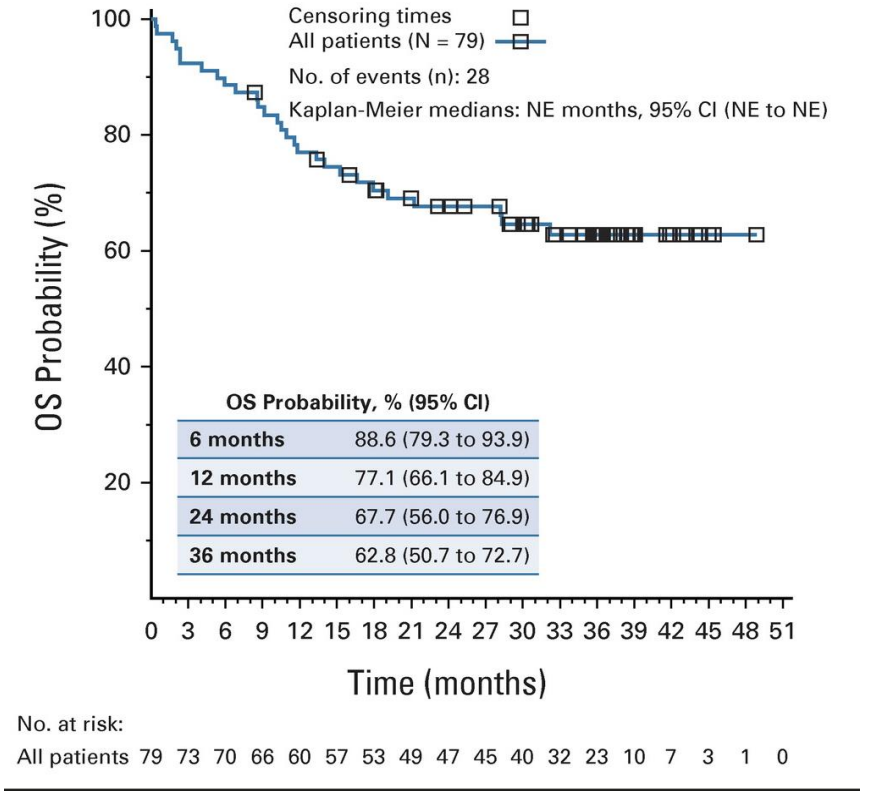


DL = dose level; IND = induction; CNS = central nervous system; LBL = lymphblastic lymphoma; DLI = donor lymphocyte infusion; XRT = radiotherapy;

Luskin M, et al. *Blood*. 2025;146(Suppl 1):645.

3-Year Update of Tisagenlecleucel in R/R ALL

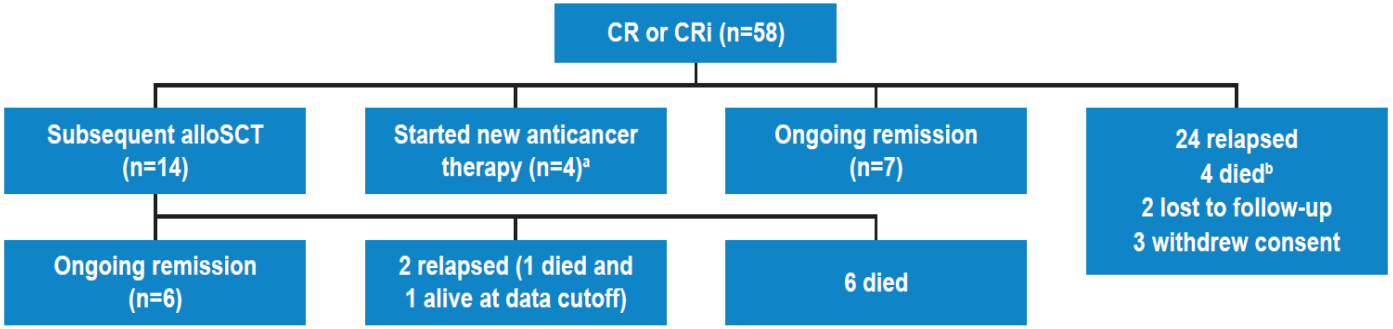
- 97 pts ≤26 yrs old enrolled
  - 79 (81%) received tisa
- Median age 11 yrs (3-24)
- Median prior Tx 3 (1-8)
- Marrow CR 66 = 82%
  - 66% of denominator
- Median F/U 38.8 mos
- 5-yr RFS 49% in pts in CR/CRi
- 3-yr EFS 44%; 3-yr OS 63%
- Grade 3/4 AE 29%

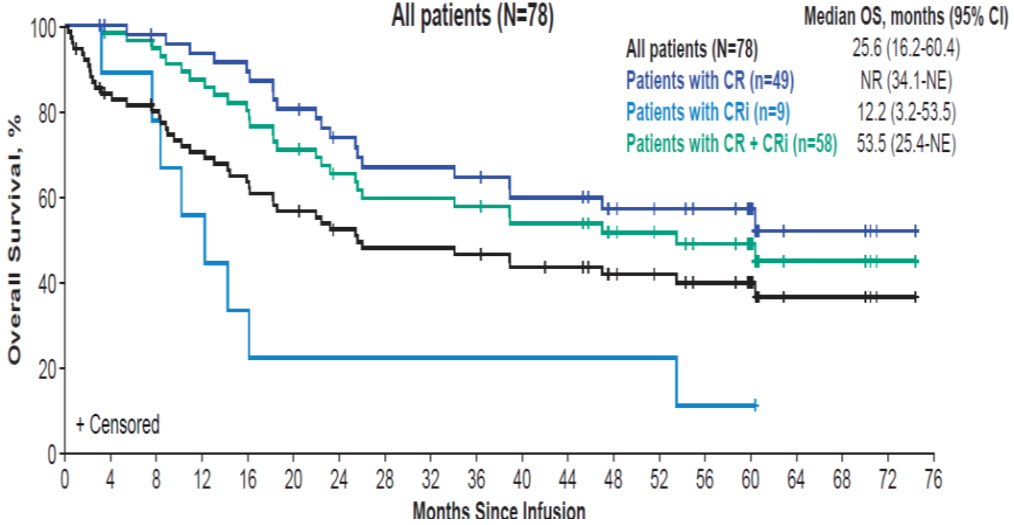


Laetsch TW, et al. *J Clin Oncol*. 2023;41(9):1664-1669.

LL&M great debates

Zuma-3: 5-Year Follow-up



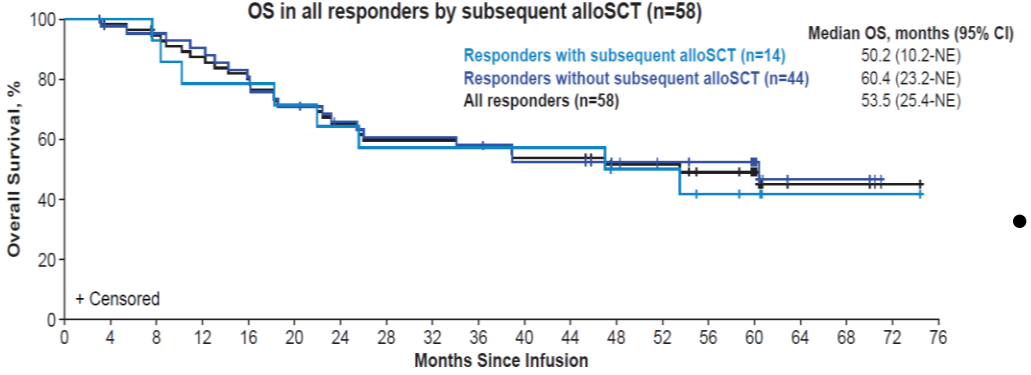


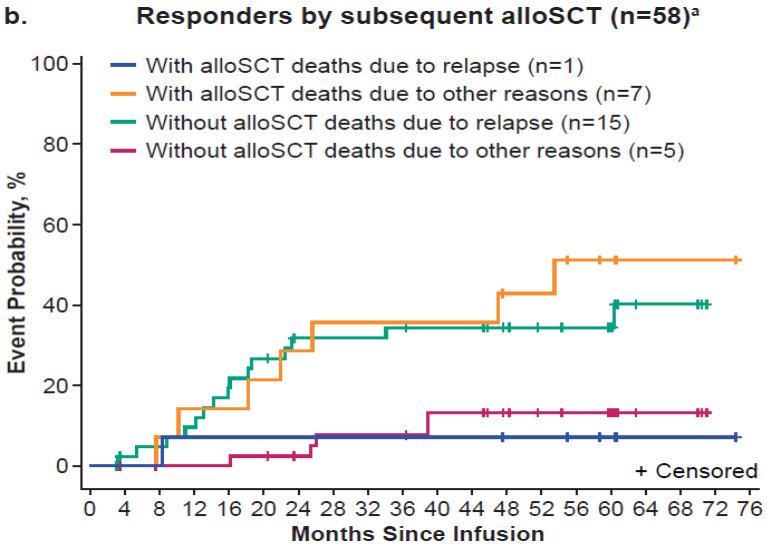
- 7 out of 58 (12%) patients are in ongoing remission at 5 years of follow-up
- No additional relapses noted between years 4 and 5 of extended follow-up
- OS remains unchanged at 40%, at 5 years

Oluwole OO, et al. Presented at: EHA Congress; 2025.

LL&M great debates

Zuma-3: Role of Allo-SCT post-CAR T





- Non-relapse mortality high in patients undergoing subsequent allo-SCT, with a 5-year rate of 26%
- Death due to relapse post allo-SCT low compared with patients without allo-SCT
- Without allo-SCT, the main reason for death was relapse

Oluwole OO, et al. Presented at: EHA Congress; 2025.

KMT2Ar = Adverse in R/R ALL Rx with Brexu-Cel (ROCCA Database)

- 286 pts: 169 high risk (HR), 117 standard risk (SR)
  - HR: *TP53* (14%), *KMT2Ar* (9%), *CRLF2r* (29%), other (38%)
- HR more often Hispanic (50% vs 28%), similar disease burden, hx blina/ino/allo, CNS dx, EMD at time of apheresis compared to SR pts
- CR/CRi: 91% (HR) vs 90% (SR); MRD-: 79% v 78%; median OS: 22 vs 21 mos

Parameter	*KMT2A*	*TP53*	*CRLF2*	Other
% CR-CRi	71	95	95	89
Median EFS (mos)	4	7	12	11
Median OS (mos)	7	22	NR	NR

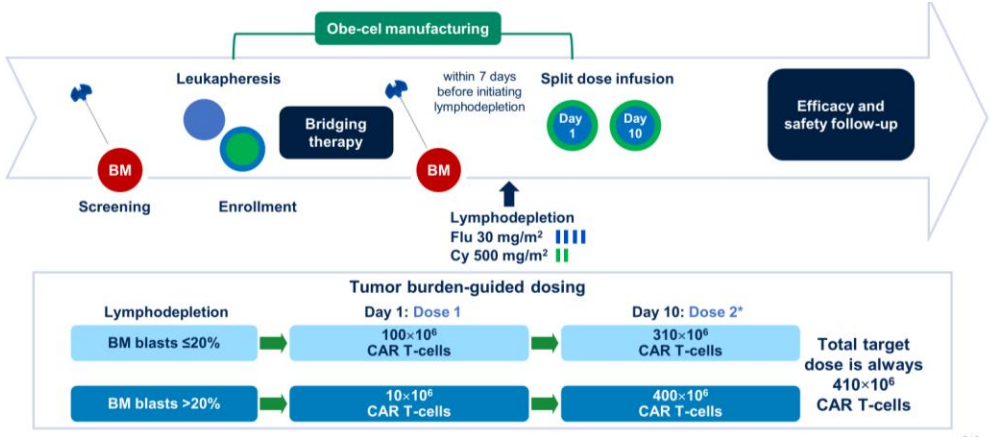
- *KMT2Ar* only subgroup with inferior OS (HR 3.17, 95% CI 1.53-6.58, *P*=0.02)

Hx = history; EMD = extramedullary disease.
Leonard J, et al. *Blood*. 2025;146(Suppl 1):3365.

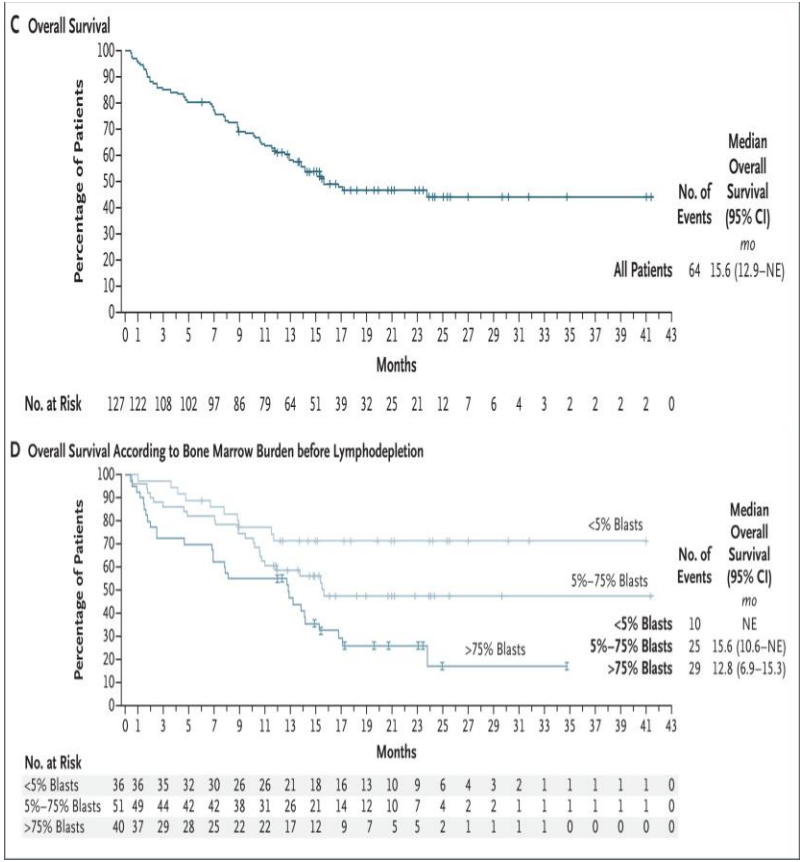
LL&M great debates

Obecaptagene Autoleucel (OBE-CEL) in Adult R/R ALL (FELIX)

- AUTO 1 fast off-rate CD19 binder CAR-T
- 153 enrolled, 127 (83%) infused. Median age 47 yrs.



- G3 CRS 2.5%; G3 ICANS 7.5%
- Prior blina 42%, ino 31%, allo-SCT 44%
- cCR-CRi 99/127 = 78% (99/153 = 65%). 19/77 allo-SCT.
- Loss of CAR T = HR 2.9
- 12-mos EFS 49%, 12-mos OS 61%



cCR = clinical CR.

Jabbour E, et al. Presented at: American Society for Clinical Oncology (ASCO) Annual Meeting; 2024. Abstract 6504.
Roddie C, et al. *N Engl J Med*. 2024;391(23):2219-2230.

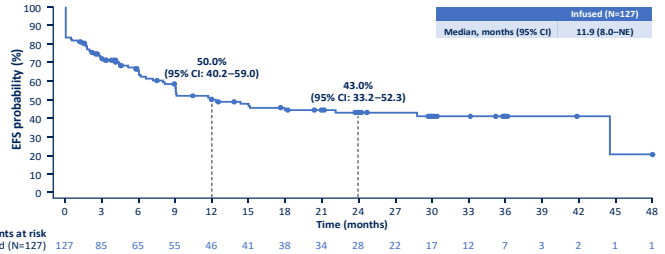
LL&M great debates

OBE-CEL in Adult R/R ALL—(FELIX): Long-Term Follow-Up

- Median F/U 32.8 months
  - 2-yr DOR 54%; 2-yr EFS 43%; 2-yr OS 46%
- No CRS, no ICANS
- MVA for better remission rates
  - Ph+ disease
  - Earlier obe-cel use
  - Less refractory disease
- MVA for better survival
  - Lower disease burden at LD
  - Ongoing CAR T-cell persistence

Event-free survival, censoring for consolidative SCT

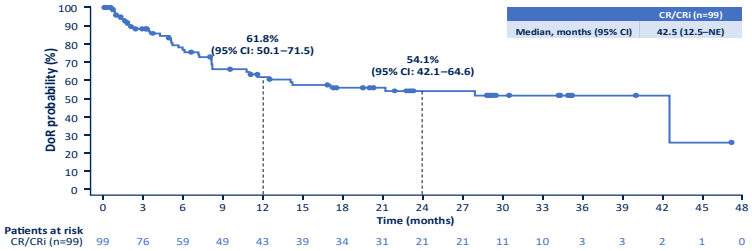
At 24 months, event-free survival probability was 43.0%



Current data cut: 18 Jan 2025; median follow up: 32.8 months (range: 19.952.8).
EFS censoring for non-protocol anti-cancer therapies including consolidative SCT with disease assessment by independent response review committee.
CI, confidence interval; EFS, event-free survival; M, months; NE, not estimable; SCT, stem cell transplant.

Duration of remission, censoring for consolidative SCT

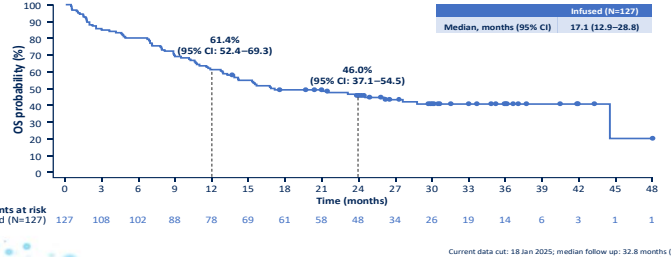
Probability of remaining in remission 24 months after onset was 54.1%



Current data cut: 18 Jan 2025; median follow up: 32.8 months (range: 19.952.8).
DoR censoring for non-protocol anti-cancer therapies including consolidative SCT with disease assessment by independent response review committee.
CI, confidence interval; CR, complete remission; CRi, complete remission with incomplete hematologic recovery; DoR, duration of remission; NE, not estimable; SCT, stem cell transplant.

Overall survival, without censoring for consolidative SCT

At 24 months, overall survival probability was 46.0%



Current data cut: 18 Jan 2025; median follow up: 32.8 months (range: 19.952.8).
OS without censoring for consolidative SCT.
CI, confidence interval; CR, complete remission; CRi, complete remission with incomplete hematologic recovery; Overall survival; SCT, stem cell transplant

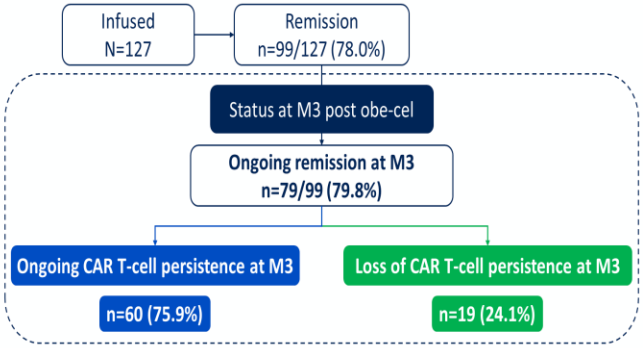
LD = lymphodepletion.

Jabbour E, et al. Presented at: Society of Hematologic Oncology (SOHO) Annual Meeting; 2025.

LL&M great debates

OBE-CEL in Adults with R/R ALL: T-Cell Persistence at Month 3

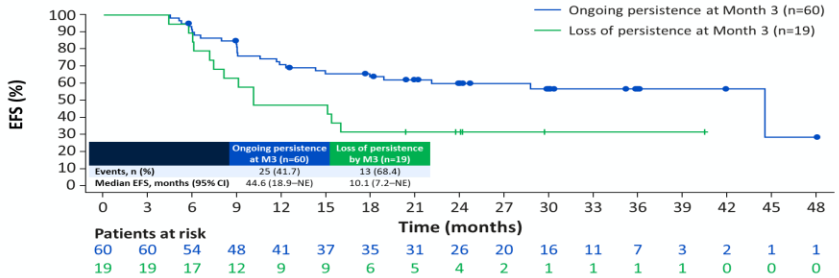
- 127 pts Rx; CR/CRi 78% (99/127)
- Median F/U 33 months; 2-yr OS 46% 2-yr EFS 43%
- M3: 80% (79/99) pts in ongoing CR/CRi; 76% (60/79) CAR-T cell persistence
- T-cell persistence: median age 54 (20-81), 40% ≥3 prior Rx; 37% prior blina; 60% prior allo; median BM blast at LD 30%
- Median OS (T-cell persistence vs loss): 44.6 mos vs NR
  - 2-yr OS 69% vs 53%; 2-yr EFS 60% vs 32%
- 70/79 in CR/CRi at M3 did not receive alloSCT
  - 49/54 (91%) pts in NGS MRD-neg CR at M3
  - 2-yr EFS 56% vs 33% (T-cell persistence vs loss)
  - 2-yr OS 68% vs 56% (T-cell persistence vs loss)



CAR, chimeric antigen receptor; M3, Month 3; obe-cel, obecabtagene autoleucel.

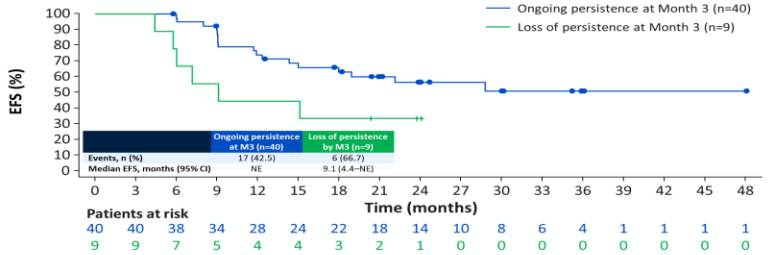
EFS by M3 persistence

Figure 2. Kaplan-Meier plot of EFS in patients with ongoing remission at M3, stratified by persistence status at M3.



EFS by M3 persistence and MRD-neg without HSCT

Figure 4. Kaplan-Meier plot of EFS in patients with ongoing remission at M3, no post-obe-cel SCT, and deep MRD-negative remission, stratified by persistence status at M3.



EFS without censoring for non-protocol anti-cancer therapies, including SCT, with disease assessment by IRRC.
CI, confidence interval; EFS, event-free survival; IRRC, independent response review committee; M3, Month 3; MRD, measurable residual disease; NE, not estimable; obe-cel, obecabtagene autoleucel; SCT, stem cell transplant.

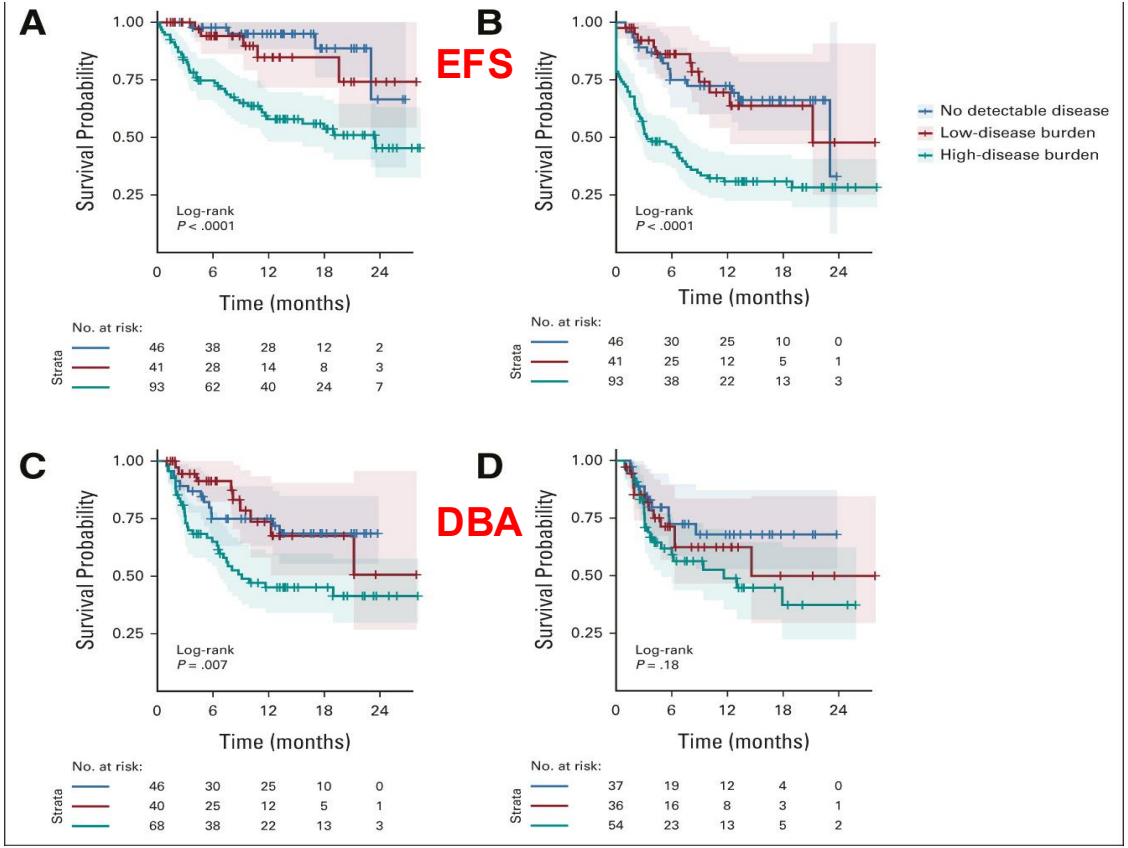
Roddie C, et al. *Blood*. 2025;146(Suppl 1):5118.

LL&M great debates

Real-World CAR Consortium and Disease Burden

OS

DOR



EFS

DBA

- 200 pts (185 pts infused); median age 12 yrs (0-26 yrs); CR = 85%
- HBD n=94 (47%); LBD n=60 (30%); ND n=46 (23%)
- 12-mos EFS = 50%, 12-mos OS = 72%
- G3 CRS = 21% (35% in HBD); G3 NE = 7% (9% in HBD)

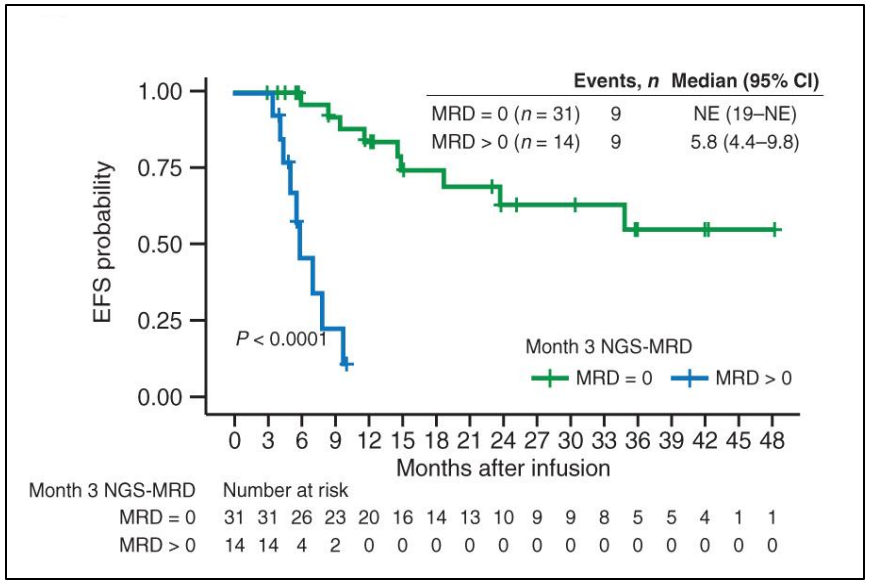
HBD = high-burden disease; LBD = low-burden disease; ND = no disease; NE = not estimable.

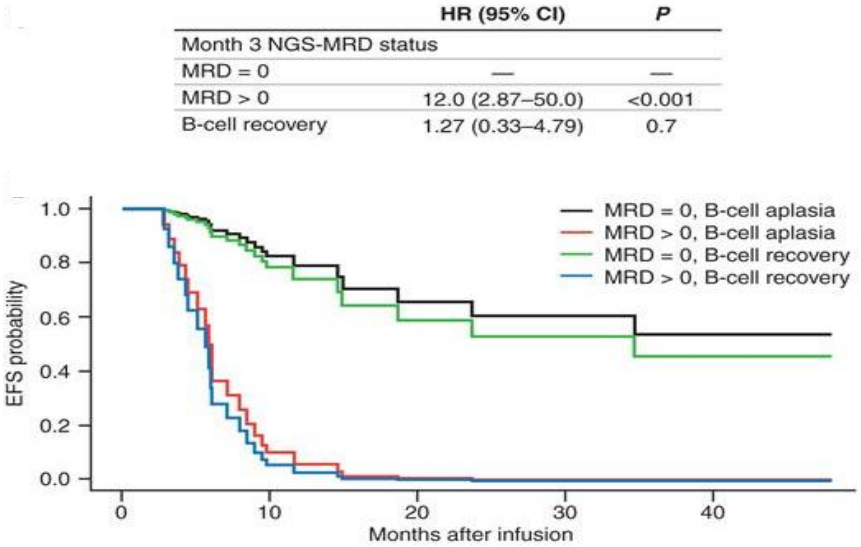
Schultz LM, et al. *J Clin Oncol*. 2022;40(9):945-955.

LL&M great debates

NGS MRD Negativity after CAR T-Cell Therapy for ALL

- Detectable MRD after tisagenlecleucel by NGS independently predicted for EFS and OS on multivariate analysis
- NGS MRD status at 3 months was superior to B-cell aplasia/recovery at predicting relapse/survival





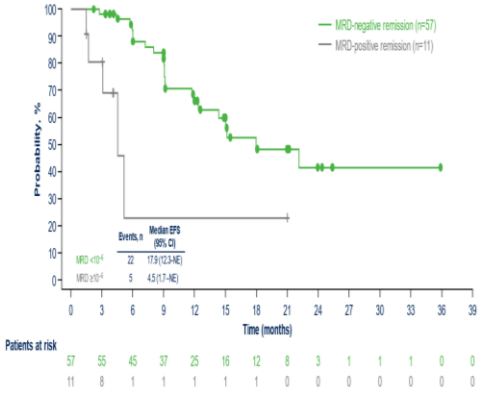
Pulsipher MA, et al. *Blood Cancer Discov*. 2022;3(1):66-81.

Obecaptagene Autoleucel (OBE-CEL) in Adult R/R ALL (FELIX): Impact of MRD

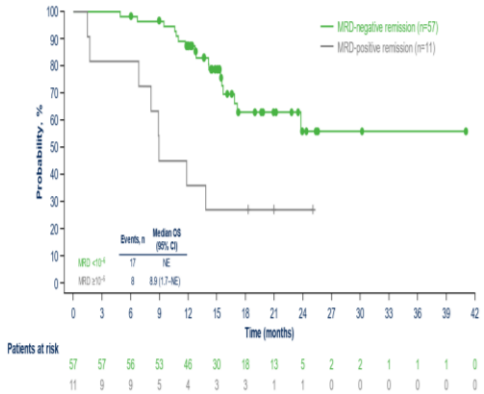
- 96/127 (76%) NGS calibration by NGS; 73/96 (76%) CR/CRi; 68/73 (93%) MRD assessment
- MRD-negative 68/73 (84%); median to MRD-negative 1 mo
- F/U 21.5 mos—70% MRD-neg CR alive

Parameter	% MRD-pos	% MRD-neg	% MRD-neg If <5% BL@ LD	% MRD-neg If ≥5%-≤75% BL@ LD	% MRD-neg If >75% BL@ LD
	16	84	90	87	72
Median EFS (mos)	4.5	18	NR	18	12
Median OS (mos)	9	NR	NR	NR	17

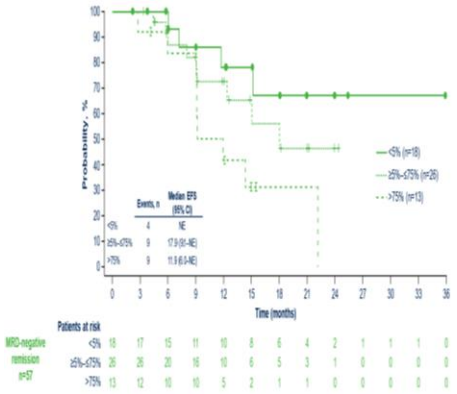
EFS by MRD status



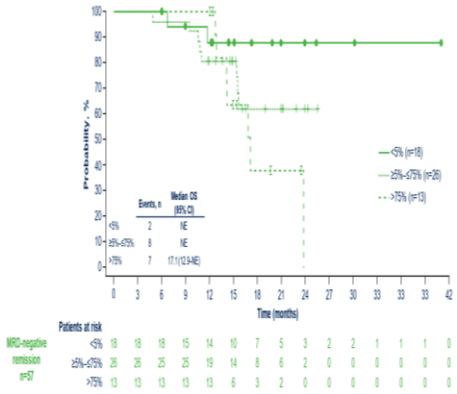
OS by MRD status



EFS in MRD by Tumor Burden



OS in MRD by Tumor Burden



Jabbour E, et al. *Blood*. 2024;144(Suppl 1):963

LL&M great debates

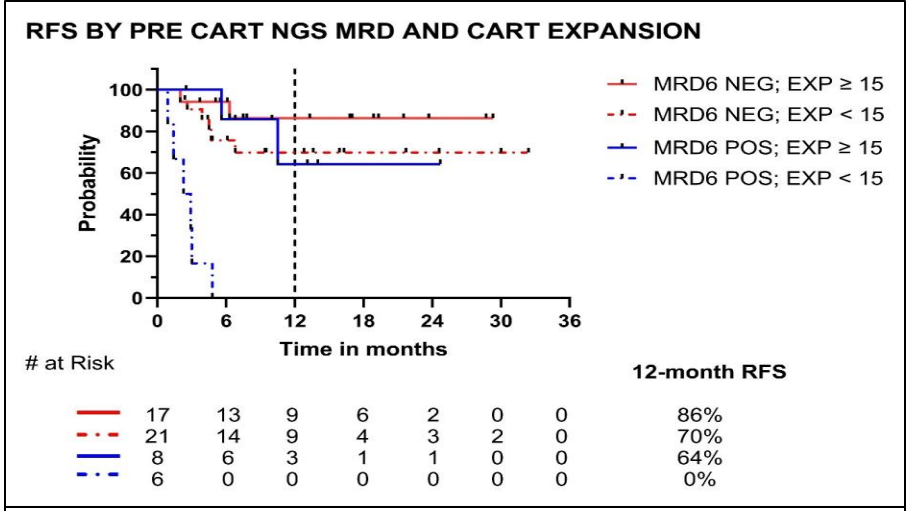
CAR T for CNS Relapse

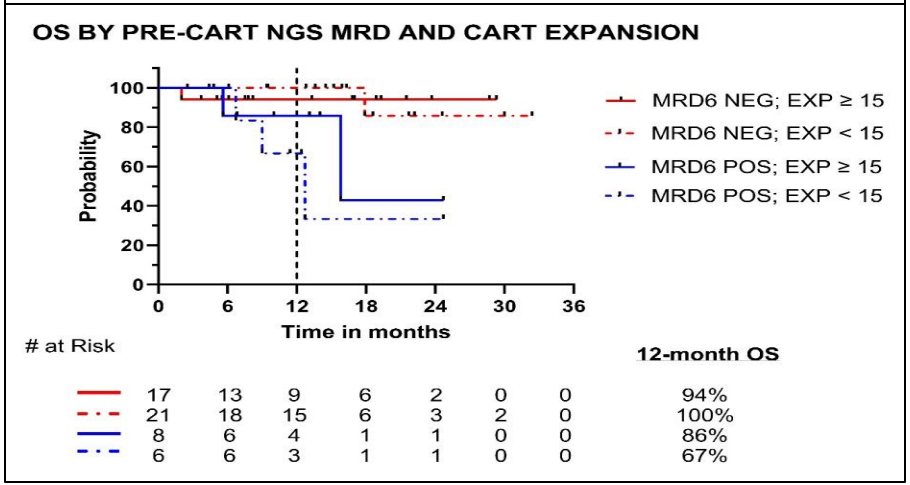
- 42 pts with CNS disease: 8 CNS 2, 2 by imaging; no CNS 3. Median age 8 yrs (1-26).
- CAR $5x10^6$/kg
- CNS CR 41/42=98%
- Median FU 12 mos; 2-yr EFS 90%
- 4-yr EFS 71%; 4-yr OS 93%

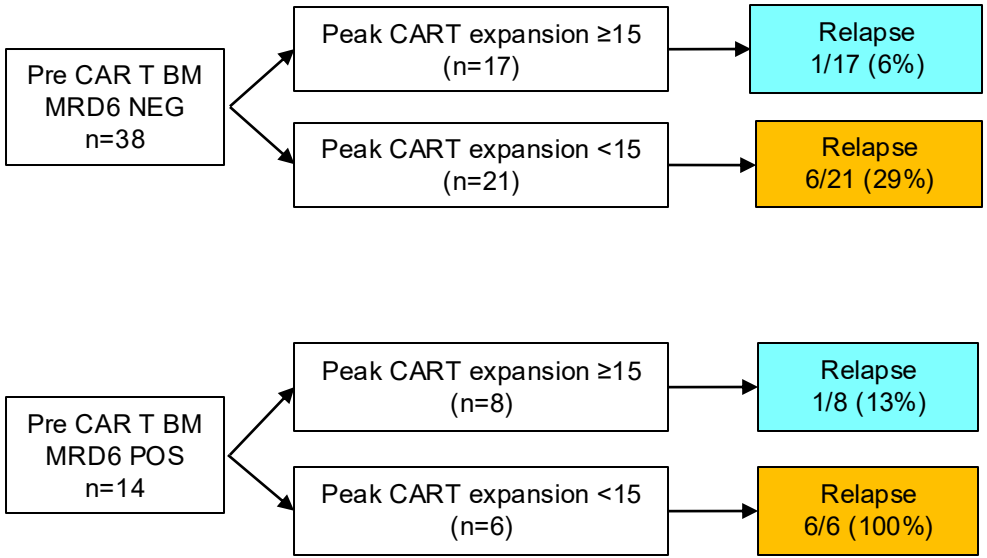
DiNofia A, et al. *Blood*. 2025;146(Suppl 1):648.

Brexu-Cel as Consolidation Rx in B-ALL: Peak CART Expansion ≥15 Cells/µL and MRD Status

52 pts; 10 FL, 25 S1, 17 S2+





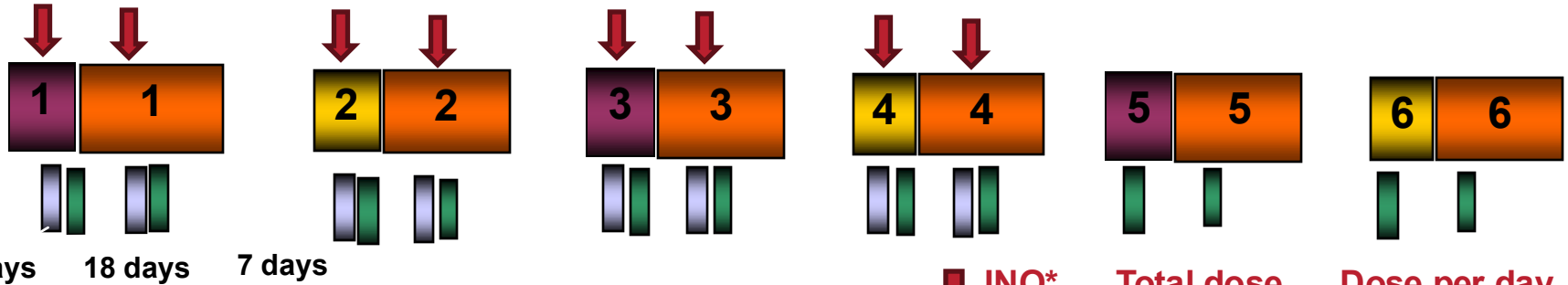


Khaire N, et al. *J Clin Oncol*. 2025;43(16 Suppl):6543.

LL&M great debates

Dose-Dense Mini-HCVD + INO + Blina + CAR T Cells in ALL: The CURE

Induction phase: C1-C6



	INO*	Total dose (mg/m²)	Dose per day (mg/m²)
C1		0.9	0.6 D2, 0.3 D8
C2-4		0.6	0.3 D2 and D8

Total INO dose = 2.7 mg/m²

*Ursodiol 300 mg tid for VOD prophylaxis

Consolidation phase

CAR T Consolidation/Allo-SCT

- Mini-Hyper-CVD
- Mini-MTX-Ara-C
- Rituximab
- IT MTX, Ara-C
- Blinatumomab

Unpublished data.

LL&M great debates

Key Learning Points

- CAR T-cell selection and timing should consider disease burden, prior CD19-directed therapy exposure, and treatment goals
- Prior exposure to blinatumomab and other CD19-directed therapies may influence CAR T-cell outcomes
- Approved and emerging CAR T-cell therapies demonstrate meaningful activity in R/R ALL, with differences in efficacy, durability, and safety
- Obecabtagene autoleucel has demonstrated durable remissions and sustained CAR T-cell persistence in adults with R/R B-ALL
- Early recognition and management of ICANS are critical to optimizing patient safety and outcomes
- Multidisciplinary coordination and supportive care are essential throughout the CAR T-cell treatment continuum

LL&M great debates

Thank You

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LL&M great debates