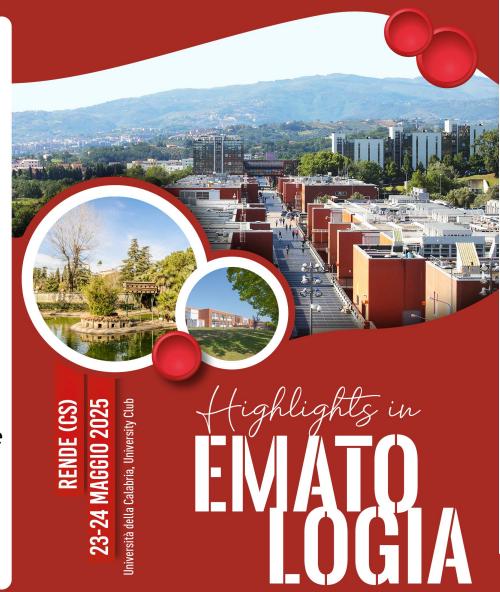
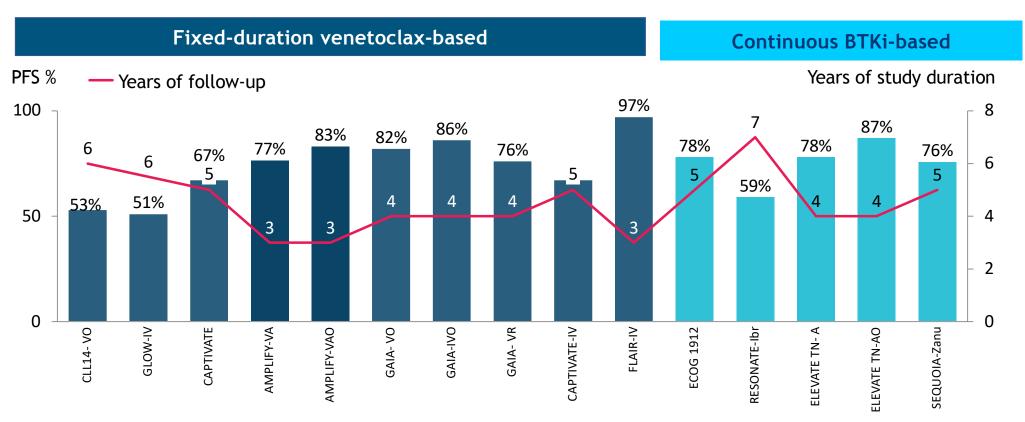
Highlights nella leucemia linfatica cronica

Francesca R Mauro

Dipartimento di Medicina Traslazionale e di Precisione Università Sapienza di Roma



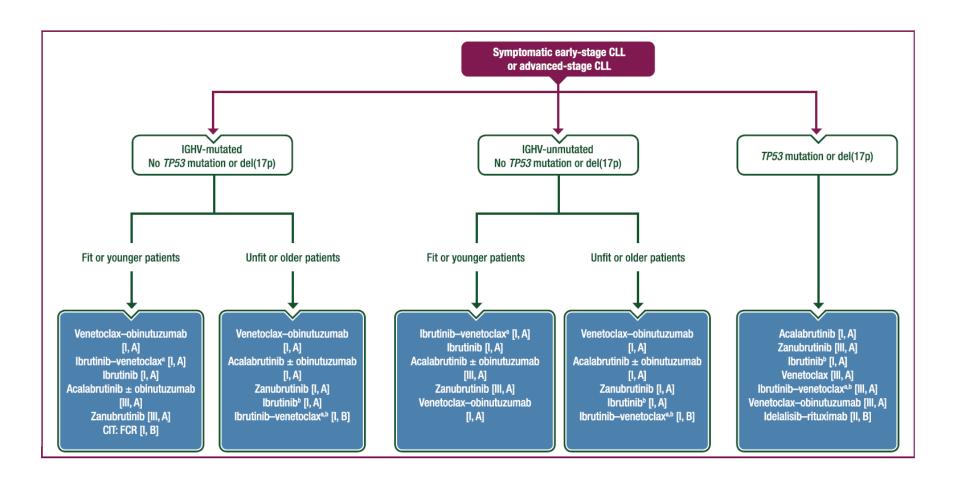
Key 1L treatments for CLL: PFS



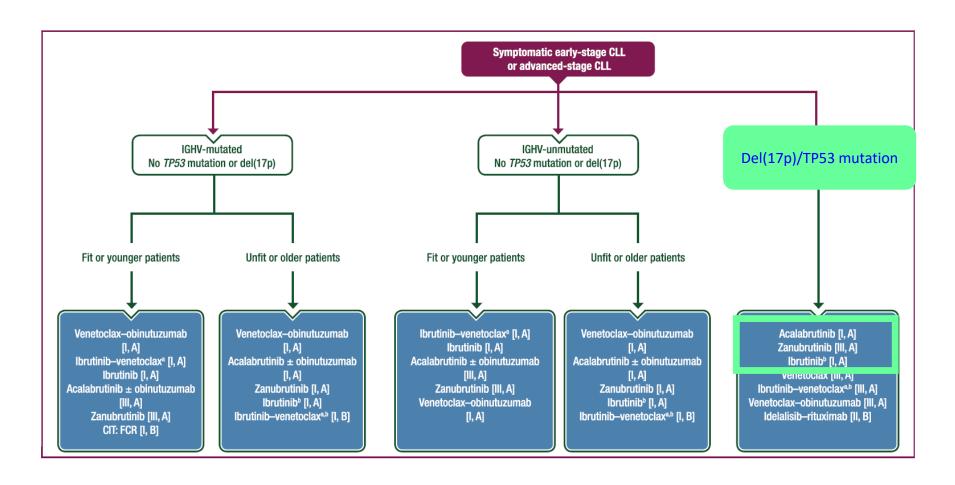
Al-Sawaf O, et al. Nat Commun 2023; Niemann CU, et al. ASH 2024, #1871; Wierda WG, et al. J Clin Oncol 2024; Brown JR, et al. N Engl J Med 2025; Fürstenau M, et al. Lancet Oncol 2024; Hillmen P, et al. ASH 2024, #631; Shanafelt T, et al. Blood 2022; Barr PM, et al. Blood Adv 2022; Sharman JP, et al. Leukemia 2022; Shadman M, et al. ASH 2024 #3249



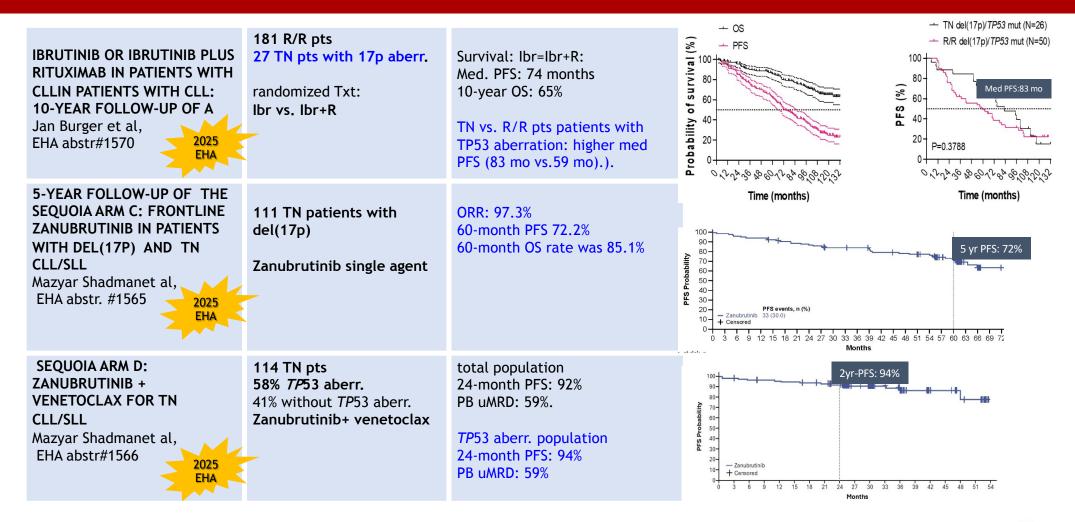
2024 ESMO Treatment guidelines: 1L treatment for CLL



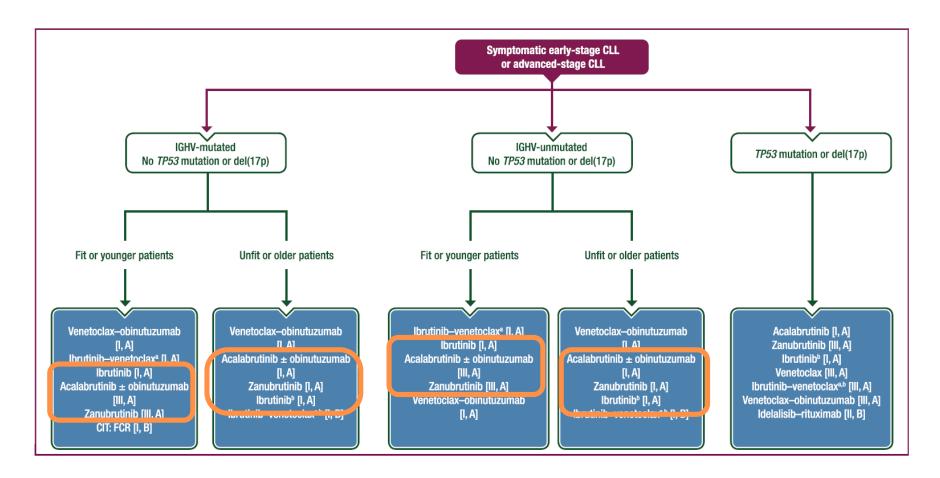
2024 ESMO Treatment guidelines: 1L treatment for CLL



BTKi-based treatment in patients with CLL



2024 ESMO Treatment guidelines: 1L treatment for CLL



Priority to

Time-Limited Therapy

for CLL patients

without *TP*53 disruption

uMRDPFSTreatment-free interval

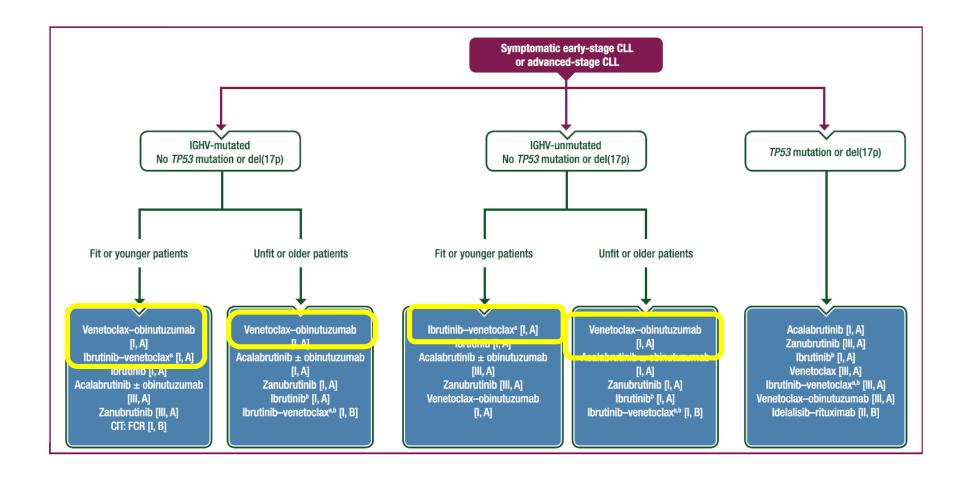
Reduced risk in BTK and BCL2 mutations
Potential retreatment

Reduced risk of long term toxicities

4 Reduced costs

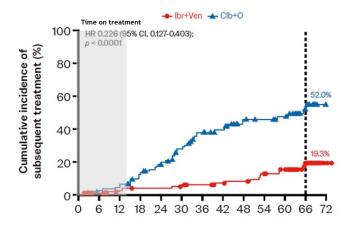
5 Patient preference

2024 ESMO Treatment guidelines: 1L treatment for CLL



1L Fixed-Duration treatment for CLL: TTNT



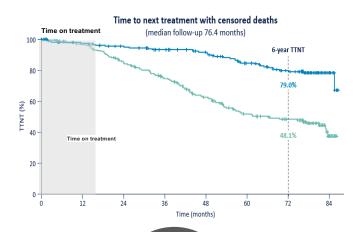


80,7%*

5.5y TTNT

*calculated as 100 - 19,3

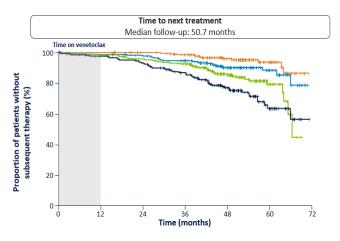
V+O - CLL14



6yTTNT 79,0%

Niemann et al. ASH 2024 Al-Sawaf O, et al. Blood 2024 Jul. Fürstenau M, et al. Lancet Oncol 2024

V+O - CLL13



4y TTNT 90,4%



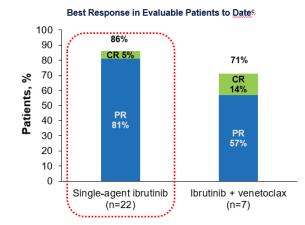
Retreatment

Eligibility Criteria

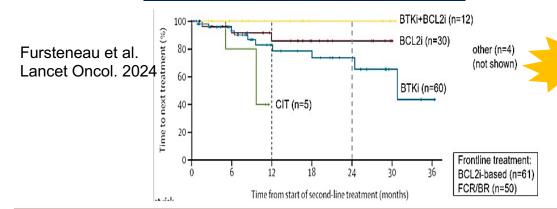
· PD by iwCLL criteria

1L CAPTIVATE trial

Wierda et al. ASCO. 2024

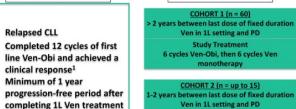


1L CLL13/GAIA trial



REVENG trial RETREATMENT WITH VenO IN PATIENTS WITH RECURRENT CLL

Treatment Cohorts



1-2 years between last dose of fixed duratio
Ven in 11. Setting and PD
Study Treatment²
6 cycles Ven-Obi, then 18 cycles Ven
monotherapy

Primary Endpoint
ORR at EoCT (C6+3 months)

Key Secondary Endpoints
CR/CRi
ORR at EoT
DOR
uMRD 10-4
PFS
OS
TTNT
Safety

.Cohort 1: at the EOCT (15 pts): ORR 100%, CR/CRi, 20%, uMRD, 85%

Davids et al. EHA 2025, abstr.#575

AV IN CLL PATIENTS RELAPSING AFTER VEN+-ANTI CD20
HOVON 159/REVEAL trial

15 patients (prior VO, 47%; VR, 53%). Median time from prior TxT: 36 months

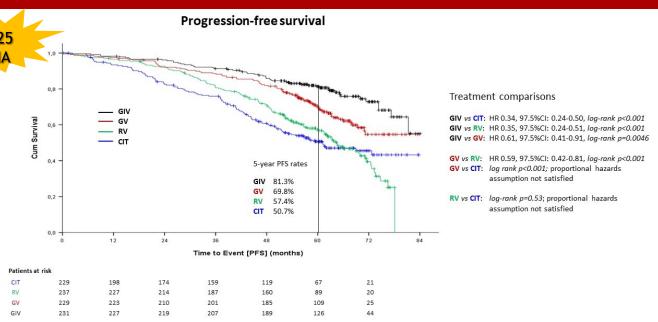
After cycle 26: ORR 100% (CR, 36%) with BM uMRD4: 21%

Median follow-up: 30 mo all pts alive, 1 pt with DP.

No events of TLS, bleeding, cardiac arrhythmia, or death.

Kersting et al.. EHA 2025, abstr.#1563

VENETOCLAX-IBRUTINIB-OBINUTUZUMAB PROLONGS PROGRESSION-FREE SURVIVAL COMPARED TO VENETOCLAX-CD20-ANTIBODY COMBINATIONS AND CIT IN TN CLL: FINAL ANALYSIS FROM THE PHASE 3 GAIA/CLL13 TRIAL



GIV prolongs PFS compared to the widely used standard of GV (benefit likely driven by the difference in pts with unmutated IGHV)

buttolerability, quality of life and OS have to be considered when comparing GIV and GV.

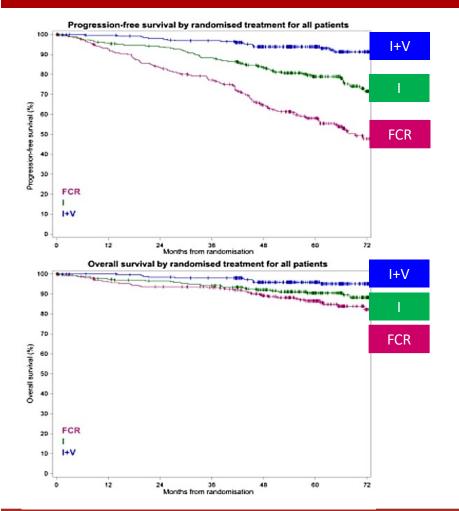
	% 5 _{VIC} -PFS				
	All pts.	U-IGHV	M-IGHV	2L <u>Txt</u>	
CIT	50.7	33.6	75.3	7.4	
RV	57.4	48.3	71	12.5	
GV	69.8	59	82.3	22.9	
GIV	81	75.9	89.1	32.9	

No difference in OS

IGHV independent prognostic factor for shorter PFS

Fürstenau et al., EHA 2025; S191

BRUTINIB PLUS VENETOCLAX WITH MRD-GUIDED DURATION OF TREATMENT IS SUPERIOR TO BOTH CONTINUOUS IBRUTINIB AND FCR FOR TN CLL: REPORT OF THE PHASE III UK FLAIR STUDY



	% pts with BM-uMRD at 9 mo	% 5yr PFS	% 5yr OS
I+V*	33.1	94.4	96
1	0	80.6	91.3
FCR	40.7	62.4	88.2

Rate of pts with uMRD increased over time
 15 pts had sudden or cardiac deaths: 4 FCR, I, 8; I+V,3)

MRD stopping rules resulted in 44% patients stopping at 2 years, 10% at 3 years and 5% at 4 years

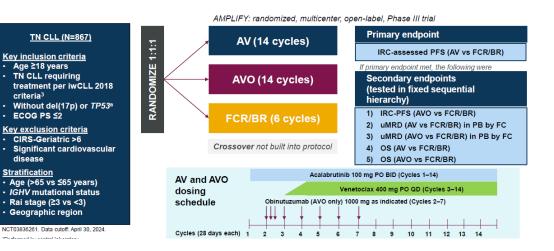
786 pts randomised to FCR, I, and I+V from 96 UK Centres

I+V significantly improved uMRD, PFS and OS rates compared to I monotherapy and FCR in untreated CLL.

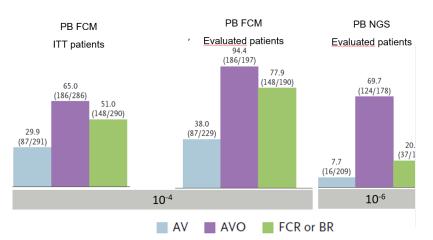
These results further substantiates the use of risk adapted approach in untreated CLL patients to optimise outcomes

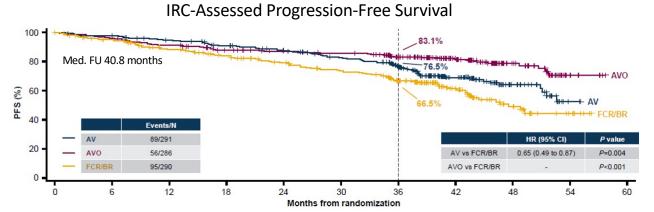
Munir et al EHA 2025, abstr.155

AMPLIFY: 1L Fixed-Duration Acalabrutinib + Venetoclax ± Obinutuzumab vs CIT in CLL



Characteristic	AV (n = 291)	AVO (n = 286)	FCR/BR (n = 290)
Median age, yr (range)	61 (31-84)	61 (29-81)	61 (26-86)
ECOG PS 2, n (%)	28 (9.6)	14 (4.9)	26 (9.0)
Rai stage O-II III-IV	154 (52.9) 137 (47.1)	170 (59.4) 116 (40.6)	163 (56.2) 127 (43.8)
del(11q) present	51 (17.5)	56 (19.6)	46 (15.9)
Unmutated IGHV	167 (57.4)	169 (59.1)	172 (59.3)



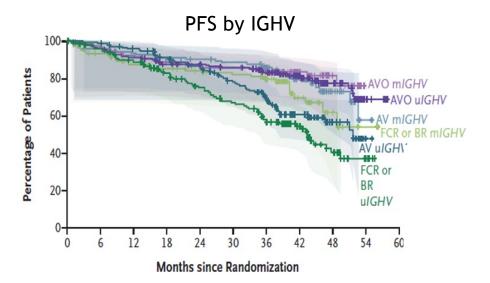


Brown et al., NEJM 2025

Highlights in EMATOLOGIA

RENDE (CS) 23-24 MAGGIO 2025

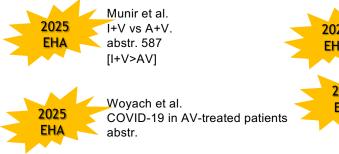
AMPLIFY: 1L Fixed-Duration Acalabrutinib + Venetoclax ± Obinutuzumab vs CIT in CLL



			Progression- free Survival at 36 Months	
/		mo	%	
AV mIGHV	28/124	NC	86.0	
AV uIGHV	61/167	51.5	68.9	
AVO mIGHV	20/117	NC	83.6	
AVO uIGHV	36/169	NC	82.8	
FCR or BR	28/118	NC	79.9	
mIGHV	200			
FCR or BR	67/172	43.3	56.8	
uIGHV				

AEs of Clinical Interest

AEs of Clinical Interest, n (%)	AV (n	AV (n = 291)		AVO (n = 284)		FCR/BR (n = 259)	
AES OF CHINICAL INTEREST, IT (70)	Any Grade	Grade ≥3	Any Grade	Grade ≥3	Any Grade	Grade ≥3	
Any	222 (76.3)	136 (46.7)	242 (85.2)	188 (66.2)	185 (71.4)	141 (54.4)	
Cardiac events Atrial fibrillation Ventricular tachyarrhythmias	27 (9.3) 2 (0.7) 2 (0.7)	5 (1.7) 1 (0.3) 0	34 (12.0) 6 (2.1) 3 (1.1)	7 (2.5) 2 (0.7) 0	9 (3.5) 2 (0.8) 0	3 (1.2) 2 (0.8) 0	
Hypertension	12 (4.1)	8 (2.7)	11 (3.9)	6 (2.1)	7 (2.7)	2 (0.8)	
Hemorrhage	94 (32.3)	3 (1.0)	86 (30.3)	6 (2.1)	11 (4.2)	1 (0.4)	
Major hemorrhage	3 (1.0)	3 (1.0)	8 (2.8)	6 (2.1)	2 (0.8)	1 (0.4)	
Neutropenia	108 (37.1)	94 (32.3)	143 (50.4)	131 (46.1)	132 (51.0)	112 (43.2)	
Infections	148 (50.9)	36 (12.4)	153 (53.9)	67 (23.6)	82 (31.7)	26 (10.0)	
Secondary primary malignancy Excluding nonmelanoma skin cancer	15 (5.2) 8 (2.7)	5 (1.7) 5 (1.7)	12 (4.2) 7 (2.5)	5 (1.8) 4 (1.4)	2 (0.8) 1 (0.4)	0 0	
TLS	1 (0.3)	1 (0.3)	1 (0.4)	1 (0.4)	8 (3.1)	8 (3.1)	

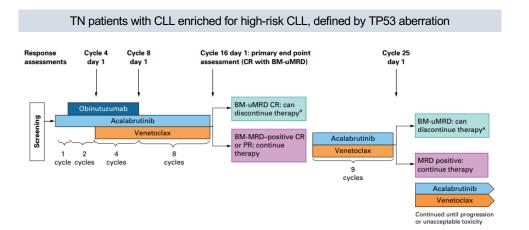


Munir et al.
A+V vs. zanubrutinib.
abstr. 1581
[Zanu>AV]

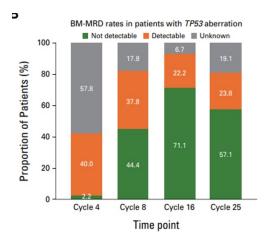
Wersting et al.
A+V in RR CLL
abstr. 1563

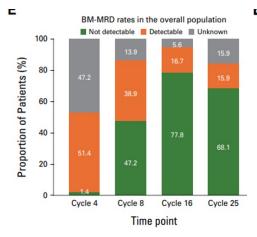
Brown et al., NEJM 2025

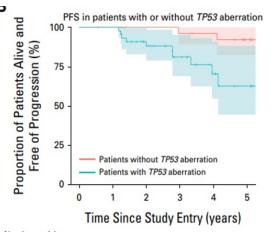
Acalabrutinib, Venetoclax, and Obinutuzumab in TN CLL patients with High-Risk Disease

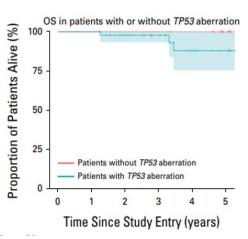


Characteristic	All Participants (N = 72)	TP53 Aberration ($n = 45$)	
Age, years, median (range)	63 (36-80)	65 (36-80)	
Cytogenetics			
TP53 aberration	45 (62.5)	45 (100.0)	
Del(17p) with TP53 mutation	31 (43.1)	31 (68.9)	
Del(17p) without TP53 mutation or TP53 unknown	3 (4.2)	3 (6.7)	
TP53 mutation without del(17p) or del(17p) unknown	11 (15.3)	11 (24.4)	
Del(13q)	33 (45.8)	19 (42.2)	
Del(11q)	17 (23.6)	7 (15.6)	
Trisomy 12	14 (19.4)	11 (24.4)	
Del(6q)	4 (5.6)	2 (4.4)	
IGHV status, unmutated	54 (75.0)	37 (82.2)	
NOTCH1 mutation	12 (16.7)	8 (17.8)	
SF3B1 mutation	13 (18.0)	11 (24.4)	









Davids et al. JCO 2025

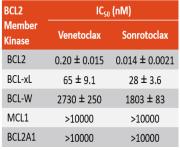
Highlights in EMATOLOGIA

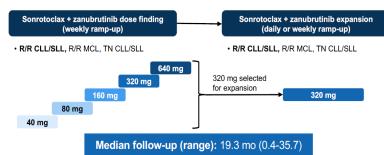
RENDE (CS) 23-24 MAGGIO 2025

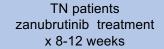
Sonrotoclax and Zanubrutinib as 1L Treatment for CLL

Ongoing Phase 1/1b Study BGB-11417-101

Sonrotoclax: potent and selective BCL2 inhibitor with short half life (4 hours)



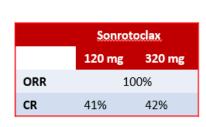


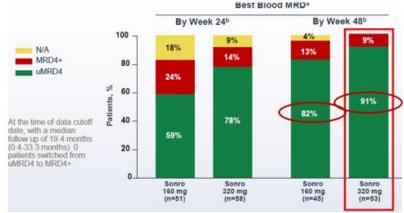


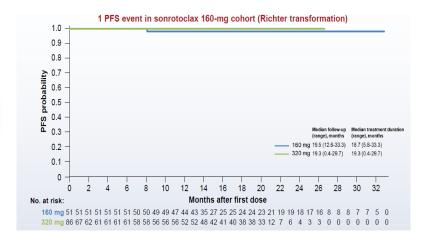


zanubrutinib combined with sonrotoclax daily ramp-up to 160 mg or 320 mg

Characteristics	Sonro 160 mg + zanu (n=51)	Sonro 320 mg + zanu (n=86)	All Patients (N=137)
Study follow-up, median (range), months	19.5 (12.6-33.3)	19.3 (0.4-29.7)	19.4 (0.4-33.3)
Age, median (range), years	63 (38-82)	61 (32-84)	62 (32-84)
Risk status, n/tested (%)			
del(17p)	5/45 (11.1)	6/77 (7.8)	11/122 (9.0)
TP53 muta	11/47 (23.4)	13/62 (21.0)	24/109 (22.0)
del(11q)	10/45 (22.2)	11/77 (14.3)	21/122 (17.2)
IGHV status, n/tested (%)			
Unmutated IGHV	32/47 (68.1)	32/60 (53.3)	64/107 (59.8)
High tumor bulk ^b at baseline, n/tested (%)	22/51 (43.1)	17/82 (20.7)	39/133 (29.3)







No TLS
The most common grade ≥3 TEAE: neutropenia



Sonrotoclax and zanubrutinib in R/R patients with CLL Cheah et al. . abst. S159

Soumerai et al. abstract #1012

RENDE (CS) 23-24 MAGGIO 2025

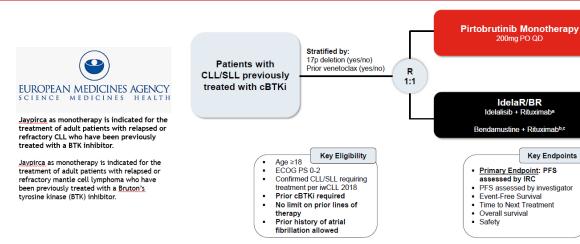


BRUIN CLL-321:

Randomized phaze 3 Trial of Pirtobrutinib vs. Idelalisib + Rituximab or BR in BTK Inhibitor Pretreated CLL/SLL

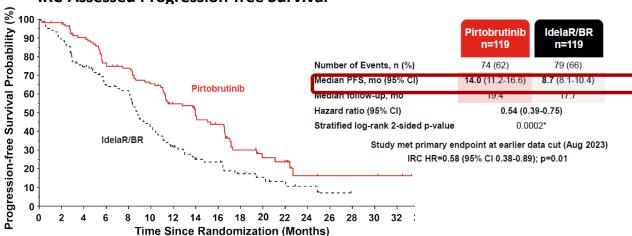
Optional Crossover

(PD confirmed by IRC)d



Baseline Characteristics IdelaR/BR **Pirtobrutinib** Characteristic (n = 119) (n = 119) Median age, yr (range) 66 (42-90) 68 (42-85) High-risk features, n/N (%) 17p del and/or TP53 mut 51/94 (54) 53/98 (54) IGHV unmut 90/97 (93) 74/93 (80) Complex karyotype 53/74 (72) 44/75 (59) BTK C481S, n/N (%) 37/99 (37) 36/94 (38) PICv2 n/N (%) 11/94 (12) 15/99 (15) Median lines prior systemic therapy. 3 (1-13) 3 (1-11) n (range) Prior therapy, n (%) cBTKi 119 (100) 119 (100) Ibrutinib 100 (84) 106 (89) Acalabrutinib 17 (14) 20 (17) Zanubrutinib 10 (8) 7 (6) Other 5 (4) 3 (3) >1 PHOLODIKE 1/ (14) 10 (13) 62 (52) BCL-2 inhibitor 60 (50) Chemotherapy 81 (68) 83 (70)

IRC-Assessed Progression-free Survival



Benefit in PFS seen in patients across all key risk-factor

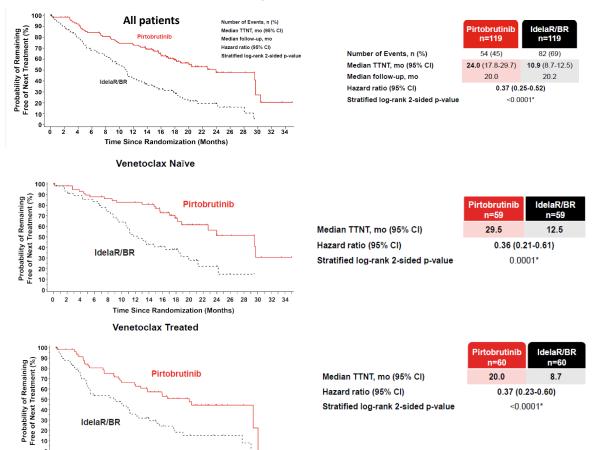
Sharman et al., 2024 ASH, abstract #886



BRUIN CLL-321:

Randomized phae 3 Trial of Pirtobrutinib vs. Idelalisib + Rituximab or BR in BTK Inhibitor Pretreated CLL/SLL

Time to Next Treatment or Death



Adverse Events of Interest ^a	Pirtobrutinib (n=116)			
(AEI)	Any grade n (%)	Grade 3+ n (%)		
Bleeding	25 (21.6)	4 (3.4)		
Bruising	9 (7.8)	1 (0.9)		
Petechiae and purpura	6 (5.2)	1 (0.9)		
Hemorrhage	18 (15.5)	3 (2.6)		
Anemia	24 (20.7)	13 (11.2)		
Neutropenia	31 (26.7)	24 (20.7)		
Thrombocytopenia	11 (9.5)	9 (7.8)		
Infection	74 (63.8)	34 (29.3)		
Infection without Covid-19	67 (57.8)	30 (25.9)		
Atrial fibrillation and atrial flutter	3 (2.6) ^a	2 (1.7)		
Hypertension	8 (6.9)	3 (2.6)		

^a2 of 3 patients with atrial fibrillation had a past medical history of atrial fibrillation

Sharman et al., 2024 ASH, abstract #886

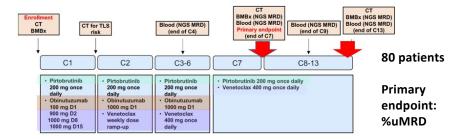


6 8 10 12 14 16 18 20 22 24 26 28 30 32 34

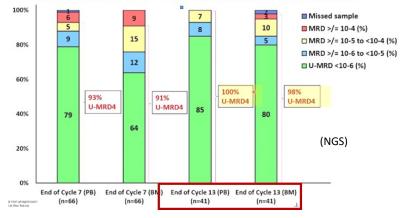
Time Since Randomization (Months)

IdelaR/BR

Pirtobrutinib, Venetoclax, and Obinutuzumab (PVO) In TN patients with CLL

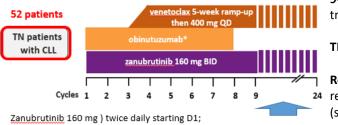


MRD at Serial Time-Points in Blood and Bone Marrow



Higher 12m uMRD rate than I+V: 98% vs 52% With a median FU of 11.9m no patient has progressed

Zanubrutinib, Obinutuzumab, and Venetoclax (BOVen) in TN patients with CLL



9-24 cycles MRD-guided treatment

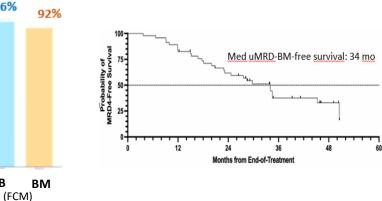
TD if uMRD4 in PB/BM

Recurrent MRD or PD: ZV 24 retreatment for 12-24 cycles (stop if uMRD4 in PB/BM.

PB

Obinutuzumab 1000 mg IV D1 (split D1-2), 8, and 15 of C1, and D1 of C2-8; Venetoclax ramp up started on C3D1).

Best uMRD4 at EOT uMRD4BM -Free Survival 96%

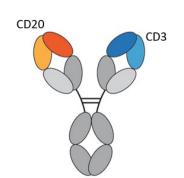


Soumerai et al., 2024 ASH, abstract #1867

Jain et al., 2024 ASH, abstract #1867

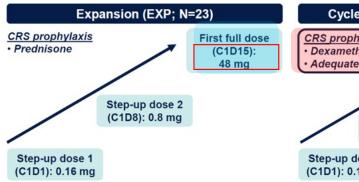


EPCORE CLL1 Expansion and Cycle 1 Optimization Cohorts

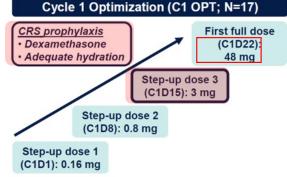


Key inclusion criteria

- CD20+ R/R CLL
- ≥2 prior lines of systemic therapy
- ECOG PS 0-2
- Measurable disease with ≥5×10⁹/L B lymphocytes (expansion only)
- · No prior allogeneic HSCT



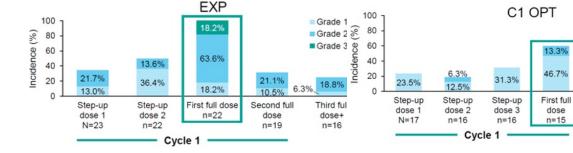
Data cutoff: May 28, 2024 Median follow-up: 22.8 months



Data cutoff: May 28, 2024 Median follow-up: 2.9 months

hamman la		C1 OPT mFU: 2.9 months				
Response, n (%)	Full Analysis Set N=23	Response Evaluable n=21	TP53 Aberration n=15	<i>IGHV</i> Unmutated n=16	Double Exposed ^a n=19	Response Evaluable n=10
Overall responseb	14 (61)	14 (67)	10 (67)	10 (63)	10 (53)	6 (60)
Complete response	9 (39)	9 (43)	5 (33)	7 (44)	7 (37)	1 (10)

CRS Events by Dosing Period



 EXP MRD Negativity, n/n (%)°
 uMRD4
 uMRD6d

 Overall responseb
 9/12 (75)
 8/12 (67)

 Complete response
 7/7 (100)
 6/7 (86)

 Partial response
 2/5 (40)
 2/5 (40)

 Full analysis set
 9/23 (39)
 8/23 (35)

Danilov et al., 2024 ASH, abstract #883

Grade 1

Grade 2

33.3%

Third full

dose+

7.7%

30.8%

Second full

dose

n=13

RENDE (CS) 23-24 MAGGIO 2025



Efficacy and Safety of the BTK Degraders in patients with R/R CLL

BTK Degrader NX-5948 in 60 Patients with R/R CLL

(Phase 1 NX-5948 Study)

Shah et al., 2024 ASH, abstr. #885

N= 60 patients

Med prior Txt=4 BTK/PLCG2/BCL2 mutated ~50% ORR at 16 weeks: 84.2%

CR: 0%

Response duration >6months: 26.5%

BTK Degrader BGB-16673 in Patients with R/R CLL/SLL.

(Phase 1 CaDAnCe-101 Study)

Thompson et al., 2024 ASH, abstr. #885 Scarfò et al. EHA 2025, abstr. #158



N=66 patients

Med prior Txt=4 BTK/PLCG2 mutated ~48%

TP53 aberr.: 65% Triple exposed:58%

ORR: 80.3% - CR: 2%

at 200 mg): 94%

triple exposed pts:75%

BTK mutated: 70.8%

• TP53 disrupted:76.7%

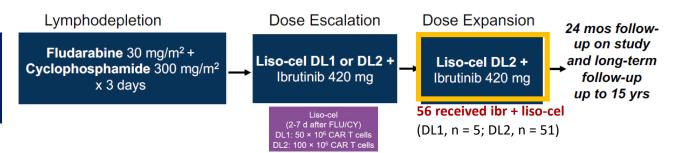
Med. FU: 13 mo. Med PFS: NR

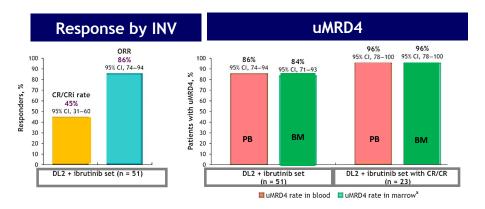
Transcend CLL 004 Study

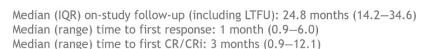
Lisocabtagene Maraleucel Combined with Ibrutinib for Patients with R/R CLL)/SLL

Elegilility criteria

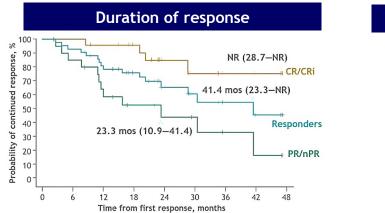
- receiving BTKi with PD at entry
- 2) HR-disease and < CR after ≥ 6 mo on BTKi
- 3) BTK/PLCy2 mutation ± ibr PD
- prior BTKi with no contraindications to ibr
- 5) PD on BTKi and received prior venetoclax.







Liso-cel showed rapid expansion (median t_{max} , 10 d) and was detected up to 42 mo after infusion.



Safety

No TAES-related mortality CRS 80% (Gr ≥3: 4%) NE: 41% (Gr ≥3: 11%).

Gr3 HTN: 7%; AF: 2%

Prolonged cytopenias:45%

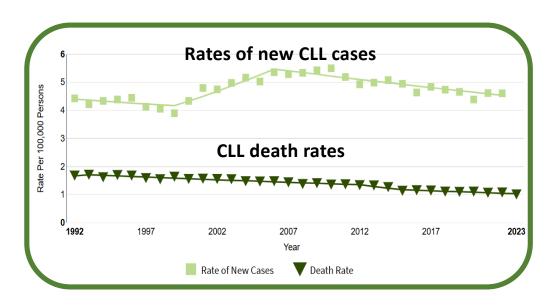
Liso-cel + IBR: higher ORR/CR rate and lower gr \geq 3 CRS/NE rates vs liso-cel monotherapy

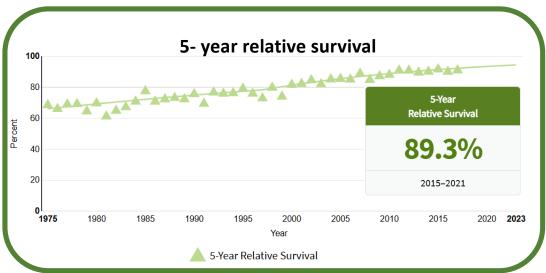
Wierda et al. ASH 2024. Abstract #887.



Cancer Stat Facts: Leukemia — Chronic Lymphocytic Leukemia (CLL)







Approximately 0.6 percent of men and women will be diagnosed with CLL at some point during their lifetime, based on 2018–2021 data, excluding 2020 due to COVID.

Age-adjusted death rates have been falling on average 1.9% each year over 2014–2023.

