# SESSIONE 1 Il concetto della "durata fissa" dal farmacologo all'ematologo

### Nel paziente pretrattato

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# REVOLUTIONARY ROAD IN CLL

Innovazione rivoluzionaria nella terapia della leucemia linfatica cronica

Roma, 11 aprile 2024 UNAHOTELS Decò

## Il sottoscritto **SPORTOLETTI PAOLO** in qualità di moderatore e relatore

ai sensi dell'art. 76 sul Conflitto di Interessi, pag. 34 dell'Accordo Stato-Regione del 2 Febbraio 2017

#### dichiara

che negli ultimi due anni ha avuto i seguenti rapporti anche di finanziamento con soggetti portatori di interessi commerciali in campo sanitario:

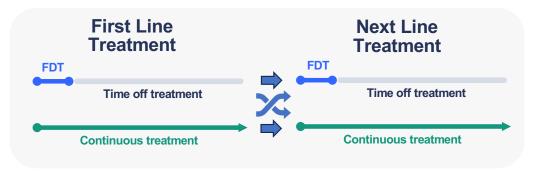
Abbvie, J&J, Astrazeneca, Beigene, Gilead



## Fixed vs continuous treatment: general considerations in the sequencing of therapies for R/R CLL

Both cBTKi and BCL2i-anti-CD20 mAb are highly effective therapies for R/R CLL

These therapies may be used sequentially in either order (independent mechanisms of action and resistance)



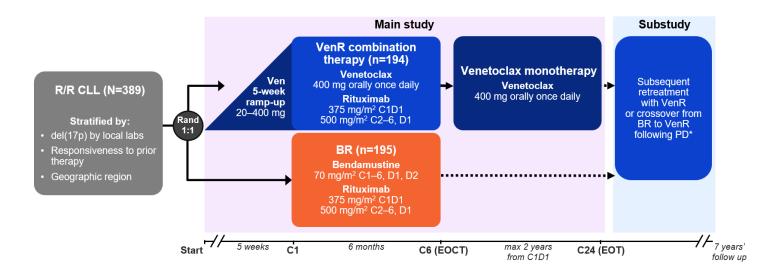
There are limitations to this understanding:

- a lack of randomized data informing the efficacy of both possible sequences
- a lack of comprehensive distinction between novel therapy-exposed and -refractory patients
- most patients with RR CLL in pivotal studies have previously received CIT.

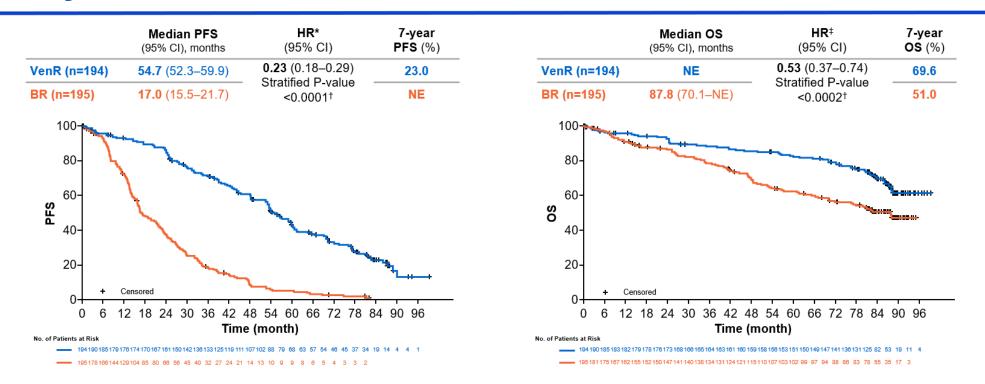


### MURANO 7 years follow up: final analyses aims

- Update PFS and OS
- Information on time to next anti-leukemic treatment (TTNT)
- Impact of MRD status on long term outcomes



# PFS and OS benefits with VenR over BR were sustained at 7 years

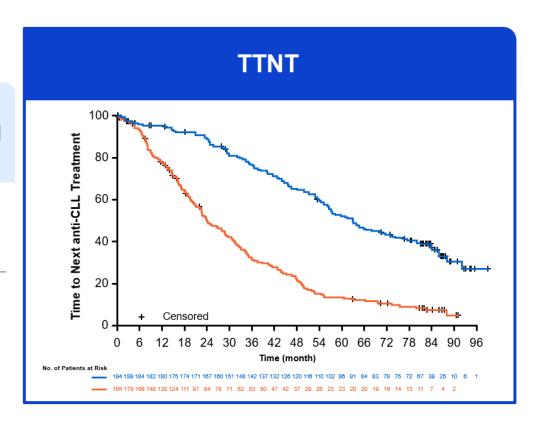


- Median follow up for efficacy (range) was 86.8 months (0.3–99.2) for VenR and 84.4 months (0.0–95.0) for BR
- No new safety signals were identified since the 5-year data cut,<sup>1</sup> with all patients outside of the AE reporting window<sup>§</sup>

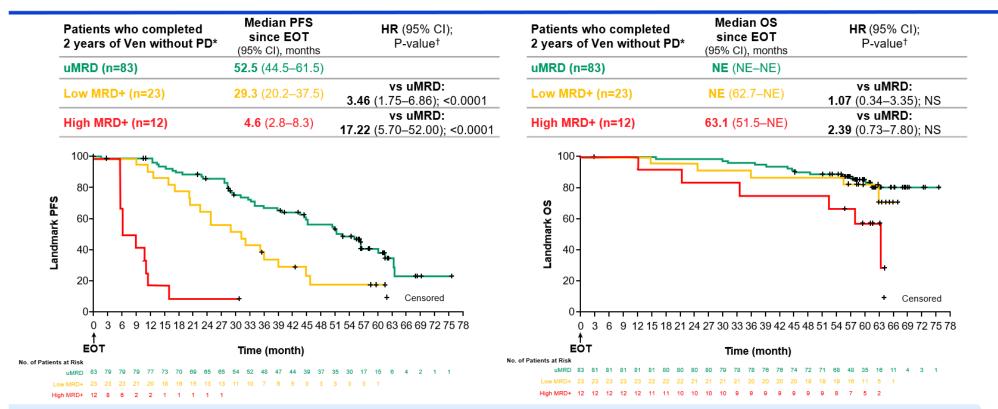
## A longer TTNT with VenR was observed vs BR

Overall, 95 (49.0%) VenR-treated patients and 131 (67.2%) BR-treated patients received subsequent anti-leukemic treatment

	<b>Median TTNT</b> (95% CI), months	<b>HR*</b> (95% CI)
VenR	<b>63.0</b> (56.1–73.6)	<b>0.30</b> (0.23–0.39) Stratified P-value
BR	<b>24.0</b> (20.7–29.5)	<0.0001†



## uMRD at EOT is associated with improved outcomes in the VenR arm

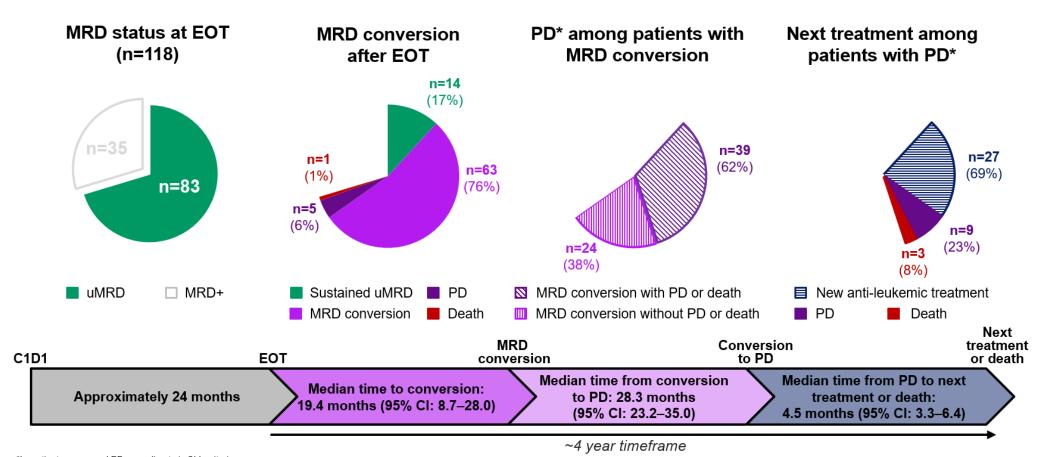


### Achievement of uMRD was associated with prolonged PFS in VenR-treated patients

Low MRD+ is defined as  $\geq$ 1 CLL cell/10,000 leukocytes to <1 CLL cell/100 leukocytes, high MRD+ is defined as  $\geq$ 1 CLL cell/100 leukocytes. Stratified HR (95% CI) for Low MRD+ vs High MRD+ = PFS, 3.22 (1.04–9.97), P=0.0350; OS, 2.27 (0.44–11.69), P=NS.

<sup>\*</sup>Investigator-assessed PD according to iwCLL criteria. †Stratified HRs and P-values are presented, P-values are descriptive only. NS, not significant.

## Most patients who received the full 2 years of VenR treatment had uMRD at EOT; generally MRD conversion with subsequent PD did not occur until ~4 years post EOT



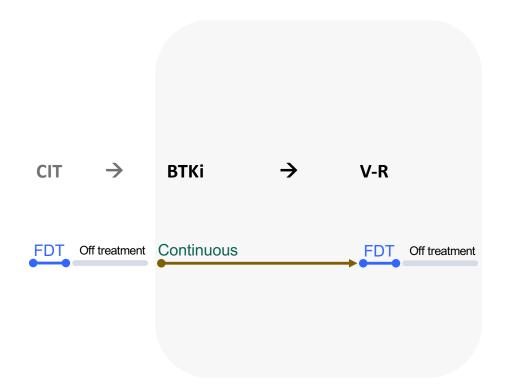
<sup>\*</sup>Investigator-assessed PD according to iwCLL criteria.

<sup>1.</sup> Kater A, et al. EHA 2023. Abstract S201 (Oral); 2. Seymour JF, et al. Blood 2022; **140**:839–850.

## Prior therapies at baseline were mainly CIT in the Murano trial

Characteristics		VenR (n=194)	BR (n=195)
Age <sup>1</sup>	Median, years (range)	64.5 (28–83)	66 (22–85)
Lymphocyte count, n (%) <sup>1</sup>	≥25×10 <sup>9</sup> /L	129 (66.5)	134 (68.7)
del(17p)–(FISH),* n/N (%)¹	Deleted	46/173 (26.6)	46/169 (27.2)
TP53 mutational status, n/N (%)1	Mutated TP53	48/192 (25.0)	51/184 (27.7)
IGHV mutational status, n/N (%) <sup>1</sup>	Unmutated IGHV Mutated IGHV Unknown	123/180 (68.3) 53/180 (29.4) 4/180 (2.2)	123/180 (68.3) 51/180 (28.3) 6/180 (3.3)
Number of prior therapies, n (%) <sup>2</sup>	1 2 ≥3	111 (57.2) 58 (29.9) 25 (12.9)	117 (60) 43 (22.1) 35 (17 9)
Prior therapies, n (%) <sup>2</sup>	Alkylating agent Purine analog† Anti-CD20 antibody BCRi Bendamustine	185 (95.4) 158 (81.4) 148 (76.3) 3 (1.5) 4 (2.1)	182 (93.3) 157 (80.5) 153 (78.5) 5 (2.6) 5 (2.6)
Fludarabine refractory, n/N (%) <sup>1</sup>	Yes	27/191 (14.1)	30/194 (15.5)

Note: 'Number of prior therapies' in above table are correct;<sup>3</sup> values in the N Engl J Med manuscript<sup>1</sup> were incorrect.
\* 7% cutoff for 17p; assessed at central lab;<sup>1†</sup> Across both treatment groups, 55% of patients who had a prior purine analog received FCR<sup>4</sup>; BCRi, B-cell receptor pathway inhibitors; FCR, fludarabine, cyclophosphamide and rituximab; IGHV, immunoglobulin heavy chain variable region.



### VEN-R for cBTKi- and chemoimmunotherapy-exposed R/R CLL

The largest series of patients receiving VEN-R intended as time-limited therapy for cBTKi-exposed CLL

Retrospectively reviewed records of 47 consecutive patients

Treated at the Royal Melbourne Hospital and Peter MacCallum Cancer Centre (Melbourne), the Princess Alexandra Hospital (Brisbane), and Royal North Shore Hospital (Sydney)

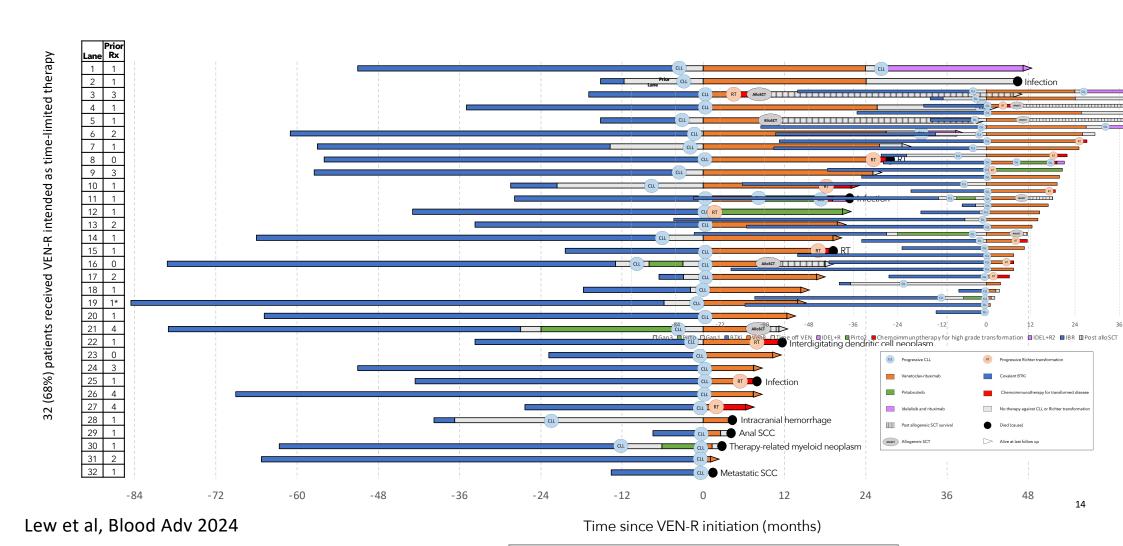
November 2016 and February 2023

Received VEN-containing therapy for cBTKi-exposed CLL

Table 1. Patient characteristic	s before VEN	N-containi	ng regimen
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	VEN-R	VEN monotherapy	Whole cohort
Clinico-pathologic characteristics before VEN			
n	32	15	47
Age, y (median, range)	70.5 (49-84)	68 (47-86)	70 (47-86)
Treatments (n) before VEN (including cBTKi)*	2 (1-5)	3 (1-7)	2 (1-7)
Chemoimmunotherapy exposed	28 (89%)	14 (93%)	42 (89%)
Fludarabine refractory ( <pr 6="" mos)<="" or="" pd="" td="" within=""><td>3 (9%)</td><td>1 (7%)</td><td>4 (9%)</td></pr>	3 (9%)	1 (7%)	4 (9%)
First cBTKi-containing therapy			
Ibrutinib	23 (72%)	14 (93%)	37 (79%)
Acalabrutinib	1 (3%)	0 (0%)	1 (2%)
Zanubrutinib	8 (25%)	1 (7%)	9 (19%)
Reason for BTKi cessation			
PD	25 (78%)	13 (87%)	38 (81%)
Toxicity	7 (22%)	2 (13%)	9 (19%)
Time to progression after cBTKi initiation, mos (median, range)	32 (6.3-83.1)	24.0 (1.1-90.7)	31.5 (1.1-90.
Intervening therapy between cBTKi-containing regimen and VEN			
None	29 (91%)	13 (87%)	42 (89%)
Bendamustine-R	0 (0%)	1 (7%)	1 (2%)
Methylprednisolone-R	O (O%)	1 (7%)	1 (2%)
Pirtobrutinib	3 (9%)	0 (0%)	3 (6%)
Genetics before VEN-containing regimen			
IGHV unmutated	13 of 15 (87%)	5 of 6 (83%)	18 of 21 (86%)
Genomic complexity (≥5 lesions)	8 of 16 (50%)	3 of 8 (38%)	11 of 24 (46%)
del17p and/or TP53 mutated	17 of 24 (71%)	9 of 14 (64%)	26 of 38 (68%)
BTKi resistance mutation(s) detected	13 of 16 (81%)	2 of 5 (40%)	15 of 21 (71%)
Outcomes after VEN-based therapy			
Best iwCLL response to VEN-based regimen			
CR¶	6 (19%)	3 (20%)	9 (19%)
PR	20 (63%)	4 (27%)	24 (51%)
SD	3 (9%)	4 (27%)	7 (15%)
PD	2 (6%)	O (O%)	2 (4%)
Not evaluated†	1 (3%)	4 (27%)	5 (11%)
uMRD attained in PB or BM‡	7 of 10 (70%)	1 of 5 (20%)	8 of 15 (53%)
Reason for VEN cessation			
PD	9 (28%)	6 (40%)	15 (32%)
Remains on VEN at last follow-up	10 (31%)	3 (20%)	13 (28%)
Completed time-limited therapy	6 (19%)	0 (0%)	6 (13%)
Proceeded to allo-SCT	3 (9%)	1 (7%)	4 (9%)
Toxicity§	1 (3%)	3 (20%)	4 (9%)
Other	3 (9%)	2 (13%)	5 (11%)

## Sequence of therapies for patients receiving VEN-R for cBTKi-exposed CLL



Progressive CLL

Pirtobrutinib

Venetoclax-rituximab

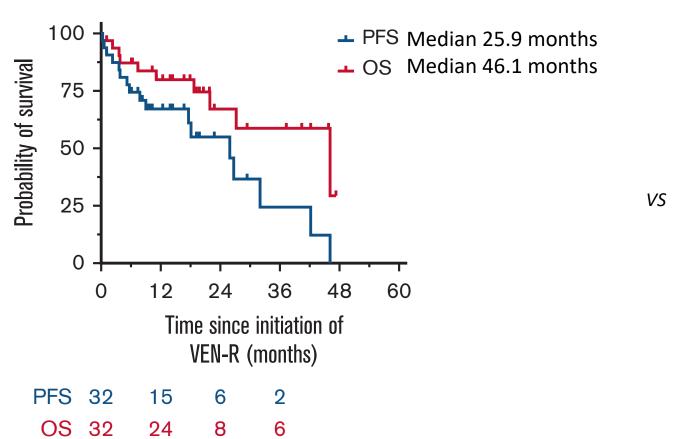
Progressive Richter transformation

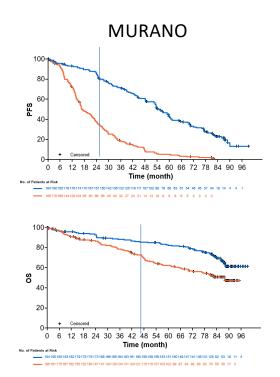
Chemoimmunotherapy for transformed disease

Covalent BTKi

## Outcomes after VEN-R for patients with cBTKi-exposed CLL







Kater AP, et al. EHA 2023. Abstract S201 (Oral).

Lew et al, Blood Adv 2024

## Venetoclax monotherapy is an effective strategy for treating BCRinaive and BCRi-pretreated patients (VENICE-1 trial)

Open-label, single-arm, phase 3b trial (VENICE-1) assessing activity and safety of venetoclax monotherapy in R/R CLL stratified by previous exposure to a BCRi

er at risk

Median duration of treatment exposure: 108 weeks

	all	BCR naive	BCR treated	
Previous lines of chronic lymphocytic leukaemia-direc	ted treatments	,	,	
1	106 (41%)	101 (53%)	5 (7%)	
2	64 (25%)	47 (25%)	17 (25%)	
≥3	88 (34%)	43 (23%)	45 (67%)	

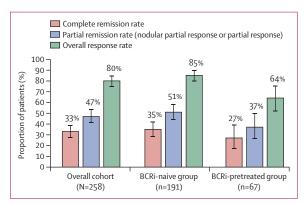
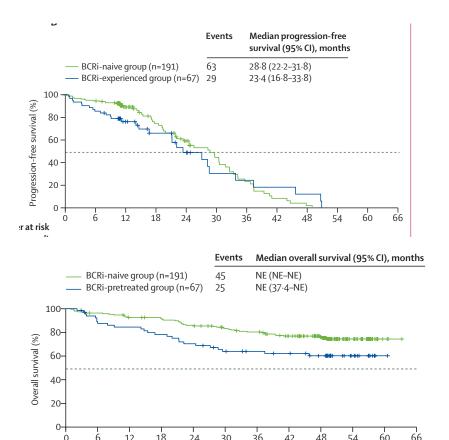
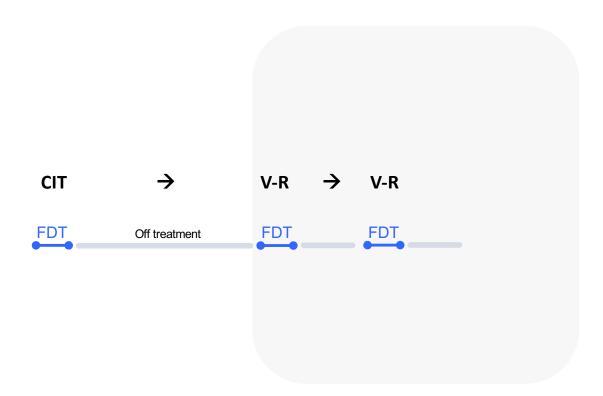


Figure 2: Response rates for patients with relapsed or refractory chronic lymphocytic leukaemia treated with venetoclax monotherapy at week 48 BCRi=B-cell receptor pathway inhibitor. Partial response needed to be confirmed later than 7 weeks or more for overall response.



Time since first response (months)



#### Retreatment in the MURANO trial

Figure 2. Subsequent anti-CLL therapies.

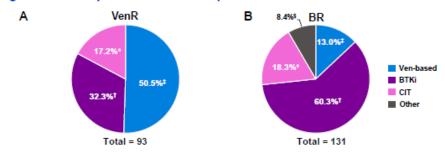
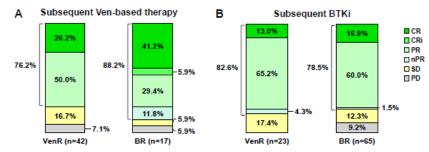
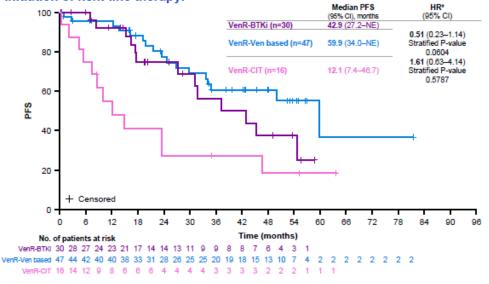


Figure 3. Response rates to subsequent VenR and BTKi therapies among evaluable patients.



SD, stable disease.

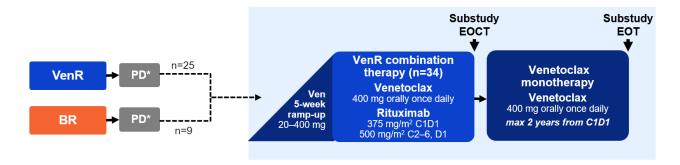
Figure 5. Kaplan Meier plot of PFS for patients in the VenR arm who received a subsequent therapy by treatment type; landmark (time zero) taken at initiation of next-line therapy.



<sup>\*</sup>Stratified HR is presented.

### MURANO retreatment/crossover substudy: additional final analyses aims

- ORR and PFS in retreatment substudy analysis
- MRD evaluation in retreatment study analysis



- Out of the 34 patients with PD who entered the substudy 25 were retreated with VenR
  - Median time (range) from the final study drug dose in the main study and Ven retreatment in the substudy was 2.3 years (1.2–3.1)

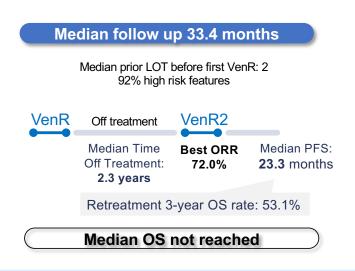
## Most patients who received VenR retreatment were classified as high risk

Patient characteristic at substudy baseline	Patients retreated with VenR (n=25)
Median age, years (range)	66 (49–82)
No. of prior therapies*, n (%)	
2	20 (80.0)
3	4 (16.0)
≥4	1 (4.0)
del(17p) <sup>†</sup> and/or <i>TP53</i> mutation <sup>‡</sup> , n (%)	
yes	8 (32.0)
no	5 (20.0)
unknown/not assessed	12 (48.0)
del(17p)†, n (%)	
deleted	7 (28.0)
not deleted	8 (32.0)
unknown/not assessed	10 (40.0)

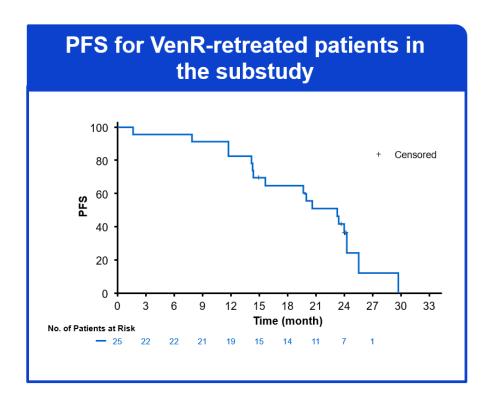
Patient characteristic at substudy baseline	Patients retreated with VenR (n=25)
<i>TP53</i> ‡, n (%)	
mutated	5 (20.0)
unmutated	17 (68.0)
unknown/not assessed	3 (12.0)
IGHV§, n (%)	
mutated	1 (4.0)
unmutated	22 (88.0)
unknown/not assessed	2 (8.0)
GC†, n (%)	
0–2	9 (36.0)
3–4	3 (12.0)
≥5	8 (32.0)
unknown/not assessed	5 (20.0)

<sup>\*</sup>Including the VenR treatment they received in the main study. †Assessed by array comparative genomic hybridization. ‡Assessed by NGS. §Assessed by PCR. GC of ≥3 copy number alterations, or del(17p) and/or TP53 mutations. GC, genomic complexity.

## VenR retreatment resulted in high response rates, which translated to meaningful PFS amongst retreated patients



Response rates indicate that VenR retreatment is a viable option for pretreated patients

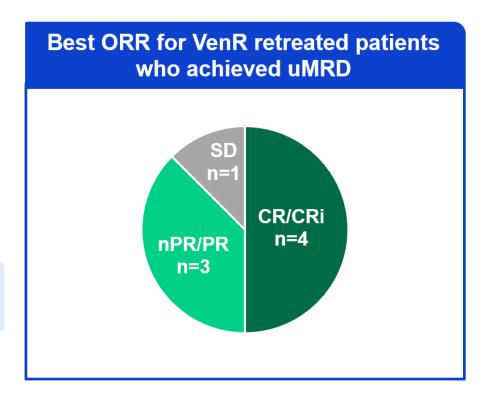


CR, complete response.

## uMRD status was attainable upon retreatment with VenR but was not sustained for the duration of treatment

- 44% of patients in the substudy never achieved uMRD in the main study
- Amongst VenR-retreated patients, 8 (32%) achieved uMRD at the retreatment EOCT; all responded, with 7/8 achieving CR/PR

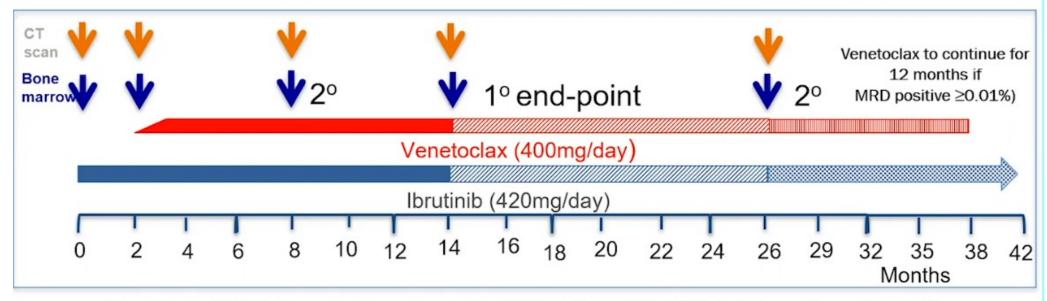
No patients retained their uMRD status at the retreatment EOT





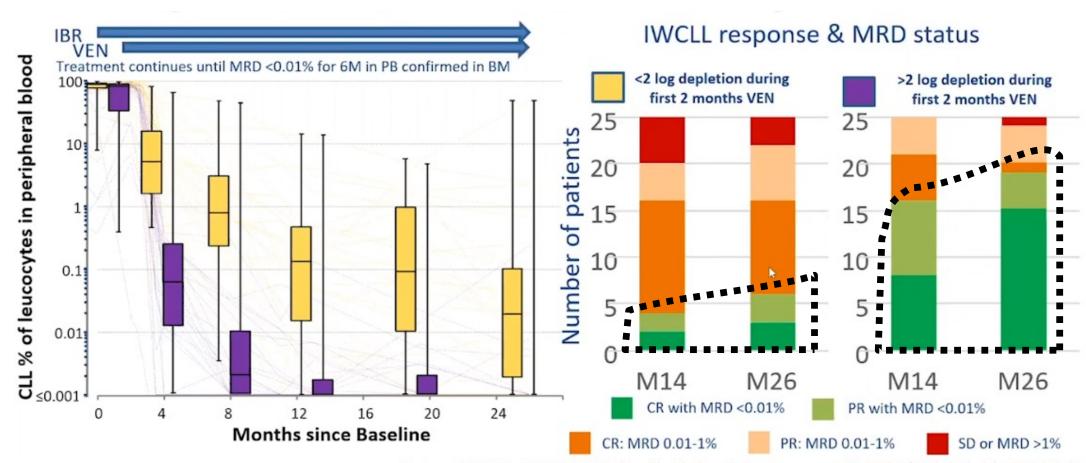
## Bloodwise TAP Clarity Study: Ibrutinib + Venetoclax in R/R CLL (no prior I or V)

## **Treatment Schedule and Stopping Rules**



Duration of VEN therapy: 3 consecutive MRD4 (<0.01% CLL) in PB confirmed in BM: MRD <0.01% at M8  $\rightarrow$  stop I+V at M14; MRD <0.01% at M14/26  $\rightarrow$  stop I+V at M26 MRD negative (<0.01%) at M38  $\rightarrow$  stop I+V at M38, if MRD positive ( $\ge$ 0.01%) continue IBR

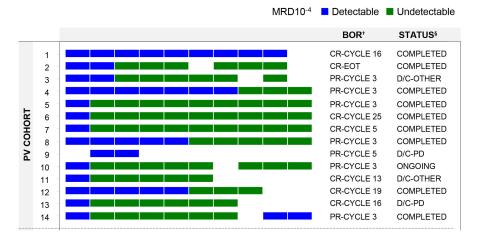
### MRD response correlates with initial leucocytes depletion rate

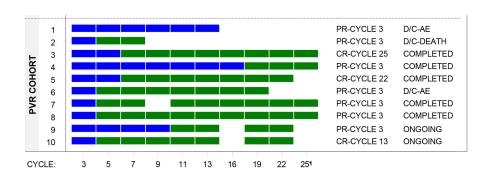


Rawstron et al, EHA 12-Jun-2020; 294984; S164: Peripheral blood kinetics predicts long term responses to IBR +VEN for R/R CLL in the Bloodwise TAP CLARITY trial.

## Fixed-Duration Pirtobrutinib Combined with Venetoclax ± Rituximab in R/R CLL: Updated Results, Including MRD Data, from the BRUIN Phase 1b Study

Figure: Swimmer's Plot of MRD and Best Overall Response to Fixed-duration Pirtobrutinib in Combination with Venetoclax ± Rituximab in R/R CLL





<sup>&</sup>lt;sup>†</sup> Best overall response was based on investigator assessment.

Abbreviations: AE, adverse event; BOR, best overall response; CR, complete response; D/C, discontinued; MRD, minimal residual disease; PD, progressive disease; PR, partial response

The majority of pts had IGHV unmutated CLL (PV=73%; PVR=89%). ORR was 93.3% (95% CI, 68.1-99.8) for the 15 pts receiving PV and 100% (95% CI, 69.2-100.0) for the 10 pts receiving PVR, with 10 complete responses (PV=7; PVR=3).



<sup>§</sup> One patient in the PV cohort discontinued treatment because of protocol noncompliance. The calibration sample (i.e., pre-treatment) for this patient failed to identify a clonal sequence and subsequent MRD tracking by clonoSEQ was not possible. MRD data are therefore missing for this patient and not presented in the figure.

¹Study protocol required a lead-in cycle of pirtobrutinib monotherapy followed by up to 24 cycles of combination therapy with venetoclax for a total of 25 cycles.



## A pooled analysis of 13 pts with two consecutive time-limited V-containing therapies

#### GCLLSG 5 multi-center Phase 2 and 3 trials (N=13)<sup>3</sup>

Retreatment with venetoclax-based regimens

Median prior LOT: 2.5 (1-4)

No progression at a median observation time of 19 months

Ven1 Off treatment Ven2

ORR 100% Median Time ORR 100% uMRD 92% Off Treatment: uMRD 69%

28 months

Ven1: VenO n=10 Ibr+VenO n=3

Ven2: VenO n=4 Acala+VenO n=9

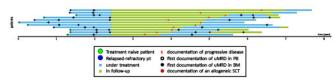


Figure 1: Swimmers plot of 11 pts with 2 Ven-containing therapies (2 pts from CLL13 trial excluded due to unavailable data regarding progression-free survival):

Plot shows duration of first and second venetoclax-containing therapy (blue parts of the bar) and of observation time in between and after V1 and V2, respectively (green part of the bar); time point of first documentation of undetectable MRD (uMRD) in peripheral blood (PB, circle) and bone marrow (BM, black dot), as well as of the disease progression (red X).

Mainly pts with adverse risk factors and a short remission duration

V-based re-treatment appeared to be safe and efficacious:

- all pts responded with at least 2/3 achieving uMRD again
- no increased rate of AEs was seen

### CLL14: Response to second-line treatment (4 years post randomization)

Phase 3, randomized, open-label, multicenter study evaluating VenO vs OClb in patients with 1L CLL (N=432)

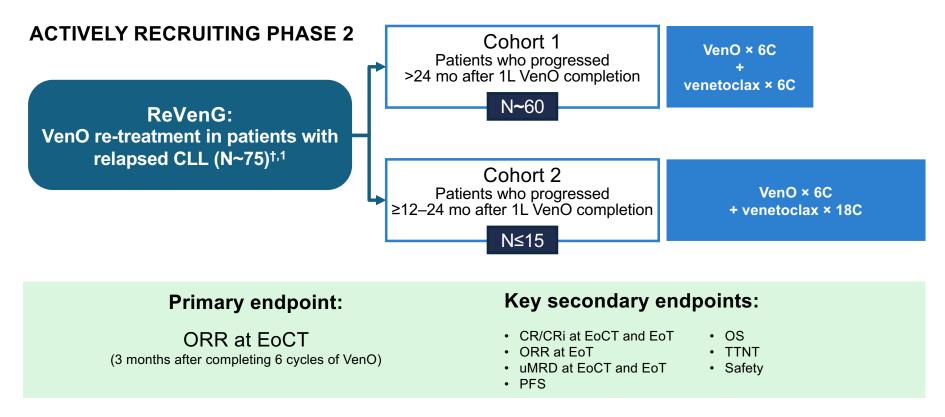
- Median observation time: 52 months
- All patients off treatment for ≥3 years

2 <sup>nd</sup> -line therapy,			VenO					OClb		
n					Unknow					Unknow
	All	OR	SD	PD	n	All	OR	SD	PD	n
Total	14	7		1	6	63	27	12	2	22
ВТКі	8	3		1	4	35	15	4	2	14
Venetoclax	2	1			1	8	4			4
CIT	3	3				15	5	7		3
PI3Ki						1		1		
Rituximab monotherapy						1				1
Others	1				1	3	3			

BTKi was the most common second-line therapy used. Early data show that with VenO, a response was observed in many patients treated with a second-line BTKi, suggesting BTKi post venetoclax therapy is an effective sequence

BTKi, Bruton's tyrosine kinase inhibitor; CIT, chemoimmunotherapy; OClb, obinutuzumab and chlorambucil; OR, overall response; PI3Ki, phosphoinositide 3-kinase inhibitor; VenO, venetoclax and obinutuzumab.

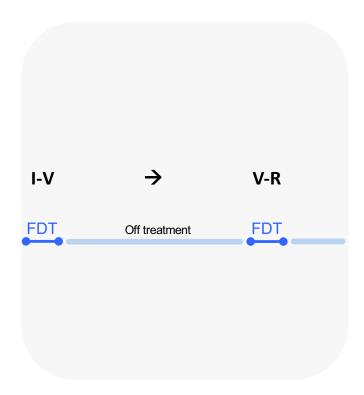
The prospective ReVenG study investigates the efficacy of fixed duration VenO retreatment in patients with CLL after prior Ven-based therapy



<sup>&</sup>lt;sup>†</sup> 28-day cycles, O: 100 mg (IV) D1, 900 mg D2, 1,000 mg D8 and D15 of C1, then 1,000 mg IV D1 C2–6; Ven: 5-week ramp-up (20–400 mg) PO QD D22 of C1, then 400 mg OD C3–12 (Cohort 1) or C3–C24 (Cohort 2).

1. Davids M, et al. ASH 2021. Abstract 2634 (Poster).

EoCT, End of Combination Treatment;



### AGENZIA ITALIANA DEL FARMACO

#### DETERMINA 26 febbraio 2024

O Data dell'ultima recidiva

Modifica delle condizioni e modalita' di monitoraggio nell'ambito dei registri AIFA del medicinale per uso umano «Venclyxto». (Determina n. 2/2024). (24A01189)

(GU n.55 del 6-3-2024)

			T
Е	Campo obbligatorio ai fini dell'eleggi	venclyxto (venetoclax)	
0	Campo obbligatorio	Leucemia Linfatica Cronica (LLC)	
. VEI		B. er il trattamento di pazienti adulti con LLC in assenza della fallito la chemioimmunoterapia e la terapia con un inibitore della	
	nclyxto in combinazione con rituximab ica cronica (LLC) che hanno ricevuto al	è indicato per il trattamento di pazienti adulti con leucemia Imeno una terapia precedente.	
infat	nclyxto in combinazione con obinutuzo ica cronica (LLC) non trattati in preced azione ammessa alla rimborsabilit		
	ica cronica (LLC) non trattati in preced	ab è indicato per il trattamento di pazienti adulti con leucemia lenza e non candidabili ad immunochemioterapia di prima linea	
		1- Scheda Registrazione paziente (RP)	
E	Età	≥18 anni 2- Scheda Eleggibilità e Dati Clinici (E_DC)	
	Ca	ratteristiche della malattia	
	Cronica (LLC)		
		state escluse altre malattie linfoproliferative	
			Indicazione
		No	
			max 12 cicli
		0	

	Chlorambucil +/- Rituximab	I
	Obinutuzumab + Chlorambucil	
	Ofatumumab + Chlorambucil (o Bendamustina)	
	Rituximab in monoterapia	
	R-CVP	
recedenti trattamenti	R-CHOP	
	Corticosteroidi in monoterapia	
	Ibrutinib o altro BTKi	
	ldelalisib +/- Rituximab	Solo per le indicazioni 1 e 2 se non selezionata una di queste opzioni, si apre una domanda
	Altro inibitore della via del recettore delle cellule B	(vd sotto)
	Ofatumumab in monoterapia	
	Regimi contenenti Alemtuzumab	
	Altro	

Se sel	ezionato "Ibrutinib o altro BTKi" tra i precedenti tratta	menti, si apre la domanda sottostante	
O Il paziente è stato sottoposto a trattamento con Ibrutinib in associazione a venetociax?		Si	
	Ibrutinib in associazione a venetoclax?	No	
Se ris	posto "Si" alla domanda precedente, si apre la domand	la sottostante	
E	Il paziente ha manifestato tossicità inaccettabile oppure è risultato refrattario al trattamento (recidiva	Si	blocca
o pr	progressione di malattia nell'arco dei 6 mesi ccessivi al termine della terapia)?	No	

## Considerations to optimize treatment sequencing

Prior drug exposure and response to prior treatment

Reason for end of prior therapy (progress or intolerance)

Patient preferences



Patient clinical status

Financial considerations

Upcoming new MOAs

Regulatory authority