



POST-NEW ORLEANS 2022

Novità dal Meeting della Società Americana di Ematologia

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Milano

Teatro Dal Verme

2-3-4 Febbraio 2023

COORDINATORI

Angelo Michele Carella
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BOARD SCIENTIFICO

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LEUCEMIA LINFATICA CRONICA

Trattamento di prima linea

Paolo Ghia

Università Vita-Salute San Raffaele





DICHIARAZIONE

Paolo Ghia

Come da nuova regolamentazione della Commissione Nazionale per la Formazione Continua del Ministero della Salute, è richiesta la trasparenza delle fonti di finanziamento e dei rapporti con soggetti portatori di interessi commerciali in campo sanitario.

- Posizione di dipendente in aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Consulenza ad aziende con interessi commerciali in campo sanitario **(AbbVie, Astrazeneca, BeiGene, BMS, Janssen, Lilly/LoxoOncology, MSD, Roche)**
- Fondi per la ricerca da aziende con interessi commerciali in campo sanitario **(AbbVie, AstraZeneca, BMS, Janssen)**
- Partecipazione ad Advisory Board **(AbbVie, Astrazeneca, BeiGene, BMS, Janssen, Lilly/LoxoOncology, MSD, Roche)**
- Titolarità di brevetti in compartecipazione ad aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Partecipazioni azionarie in aziende con interessi commerciali in campo sanitario **(NIENTE DA DICHIARARE)**
- Altro



CLL treatments

Continuous BTKi

Pros of Fixed duration:

- Limits Adverse events
- Reduces clonal evolution/resistance
- Decreases financial costs

Ven+O

Ven+O?

Cons of Fixed duration:

- Shorter PFS in *TP53*-aberrant cases
- Limited data on retreatment
- Logistical burden – Infusion



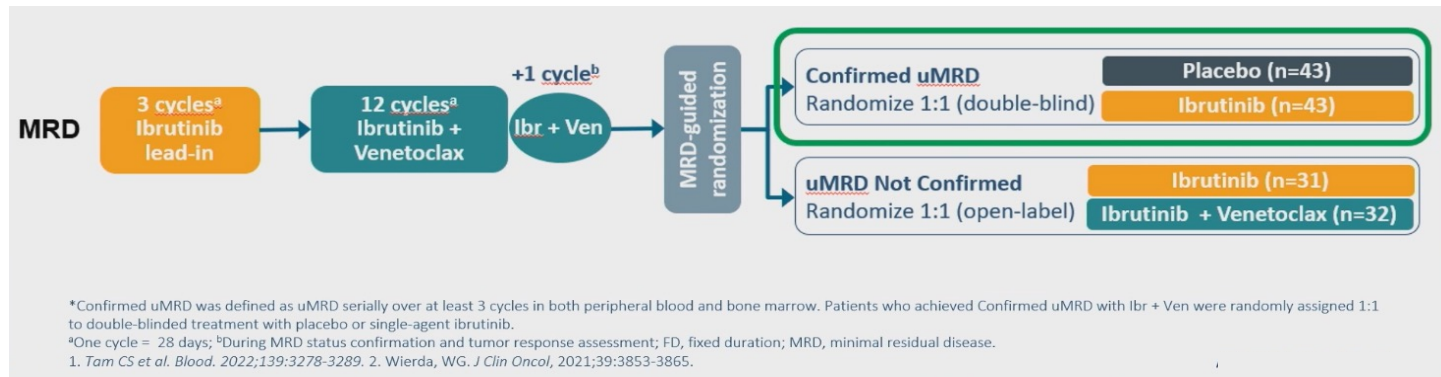
ASH Highlights: combined treatment with Ibrutinib + Venetoclax

- Treatment outcomes after undetectable MRD with first-line ibrutinib plus venetoclax: fixed duration treatment (placebo) versus continued ibrutinib with up to 5 years median follow-up in the **CAPTIVATE** study
Allan et al., Abstract 92; Saturday, December 10, 2022
- Residual disease kinetics among patients with high-risk factors treated with first-line fixed-duration ibrutinib plus venetoclax versus chlorambucil plus obinutuzumab (Clb+O): The **GLOW** Study
Niemann et al., Abstract 93; Saturday, December 10, 2022
- Combination of ibrutinib plus venetoclax with MRD-driven duration of treatment results in a higher rate of MRD negativity in IGHV unmutated than mutated CLL: updated interim analysis of **FLAIR** study
Munir et al., Abstract 94; Saturday, December 10, 2022
- Combined **ibrutinib and venetoclax** for first-line treatment of patients with CLL: 4-year follow-up data
Nitin Jain, et al., Abstract 95; Saturday, December 10, 2022



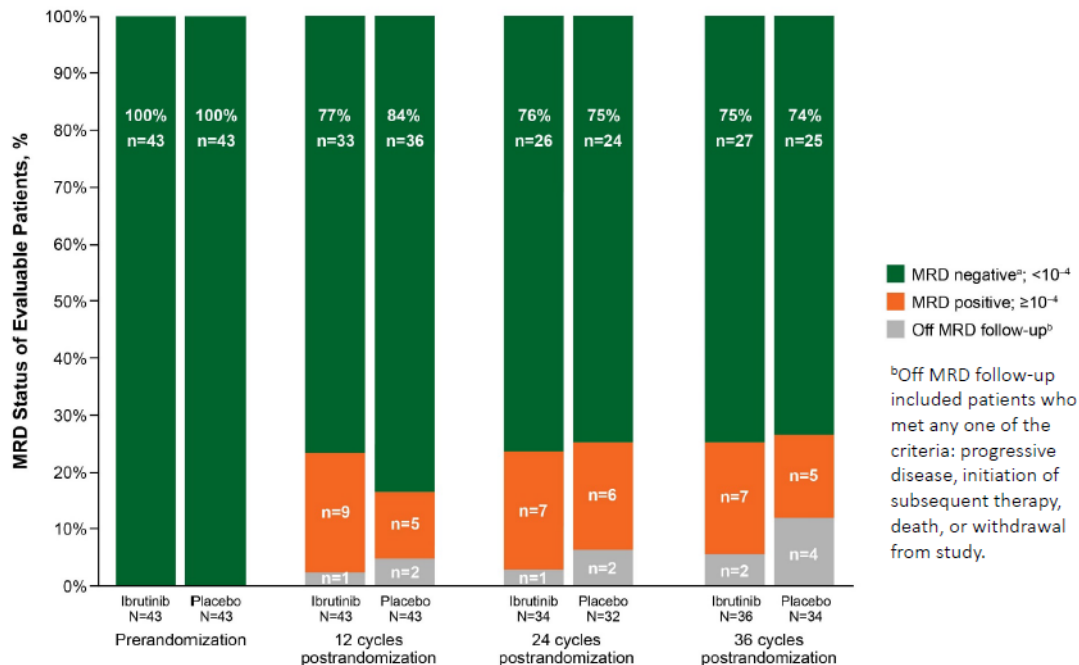
CAPTIVATE phase 2 study: first-line ibrutinib plus venetoclax

Up to 5 years median follow-up



- Median time on study was **56 months** (ibrutinib arm range, 25–68 months; placebo arm range, 40–65 months), with a median of 41 months post-randomization

MRD Status of Evaluable Patients



^bOff MRD follow-up included patients who met any one of the criteria: progressive disease, initiation of subsequent therapy, death, or withdrawal from study.

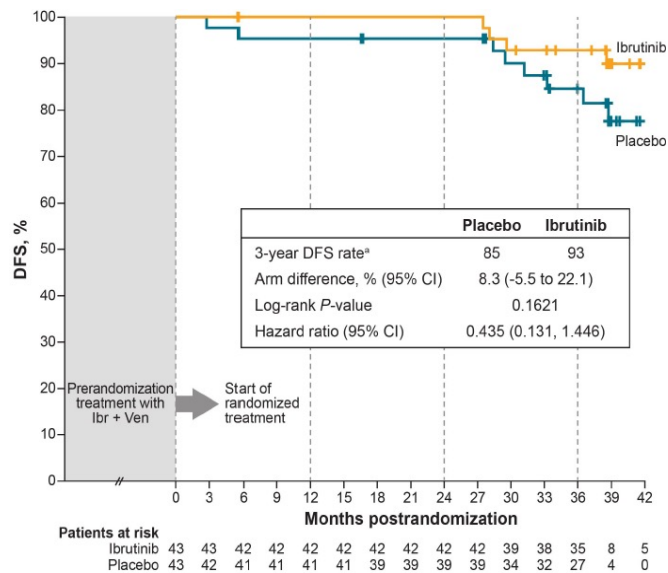
The sustainability of MRD negativity in the ITT population was comparable to that observed in the evaluable population

- Ibrutinib arm (ITT): 77% (33/43), 60% (26/43) and 63% (27/43) at 12, 24, and 36 cycles postrandomization, respectively
- Placebo arm (ITT): 84% (36/43), 56% (24/43), and 58% (25/43) at 12, 24, and 36 cycles postrandomization, respectively

³ MRD negative status $<10^{-4}$ by 8-color flow cytometry.

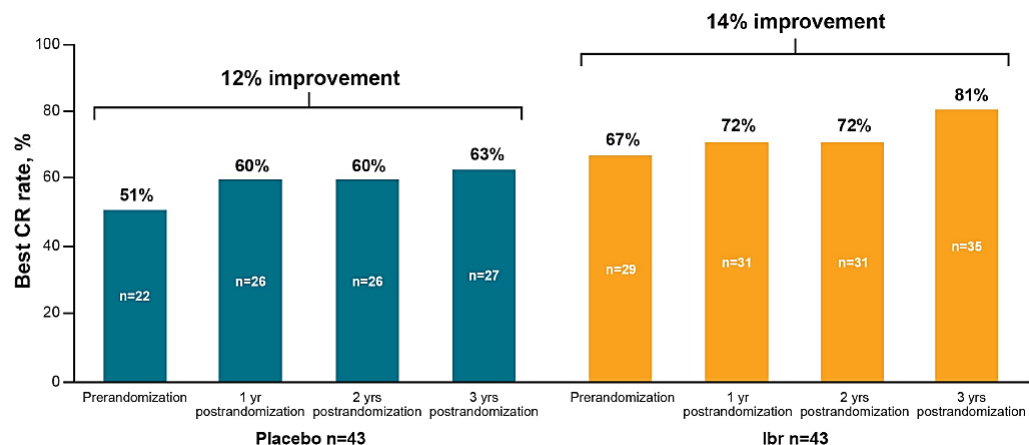


3-year disease-free survival (DFS)^a rates remain not significantly different between confirmed uMRD treatment arms



A median 41 months after stopping treatment, the 3-year DFS rate in the placebo arm remains similar to that in the ibrutinib arm (85% vs 93%)

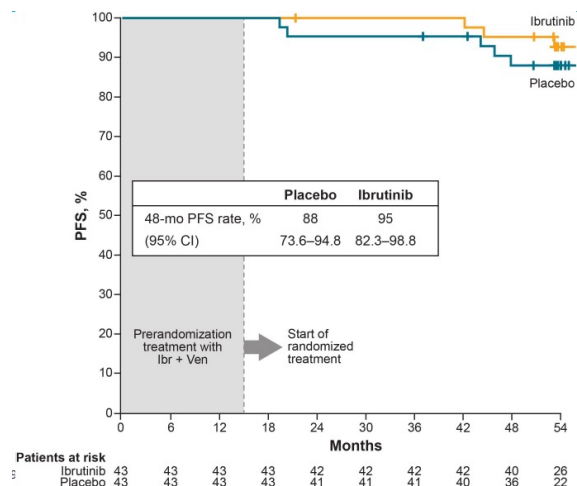
Complete response rates were steady or increased with an additional year of follow-up



CRs were durable, with no significant difference in duration of CR between treatment arms at 42 months of follow-up



Progression-free survival (PFS)

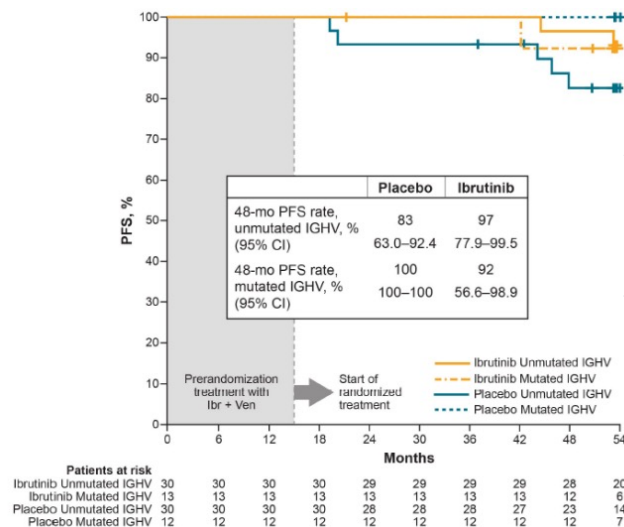


- At 48 months, PFS was 88% (95% CI, 74–95) with placebo and 95% (95% CI, 82–99) with continued ibrutinib

PD and Retreatment Outcomes

- 3 of 7 patients with PD in the placebo arm have initiated retreatment with ibrutinib; all 3 patients had PR
- 2 patients in the ibrutinib arm had PD; none have initiated retreatment

PFS by IGHV mutational status



At 48 months, PFS rates among patients with unmutated IGHV were similar to those of the total population

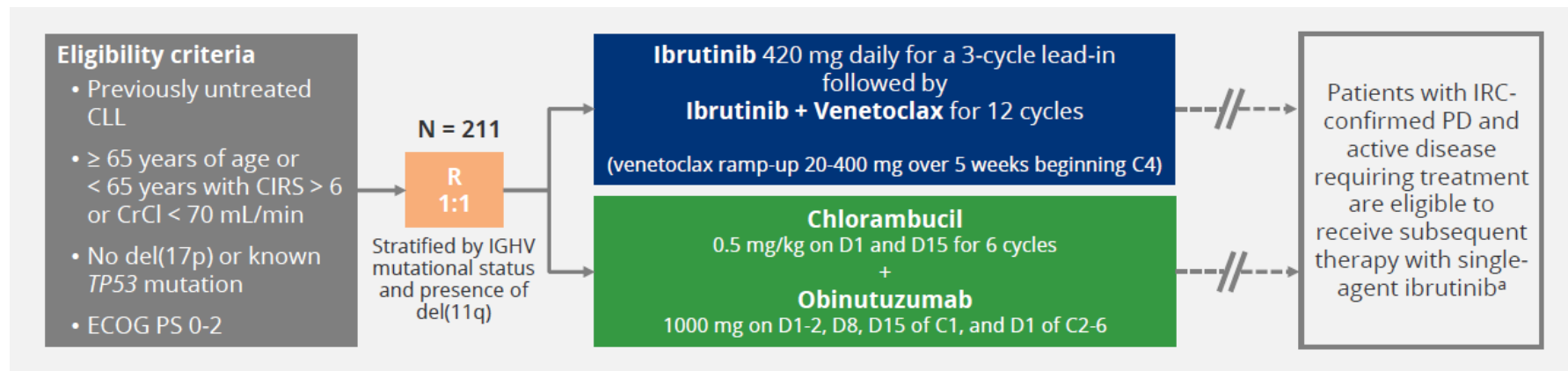
Overall survival:

100% in placebo arm; 98% in ibrutinib arm.

No deaths occurred in either arm during the last 12 months of follow-up



GLOW phase 3 study: first-line ibrutinib plus venetoclax vs chlorambucil plus obinutuzumab (Clb+O)



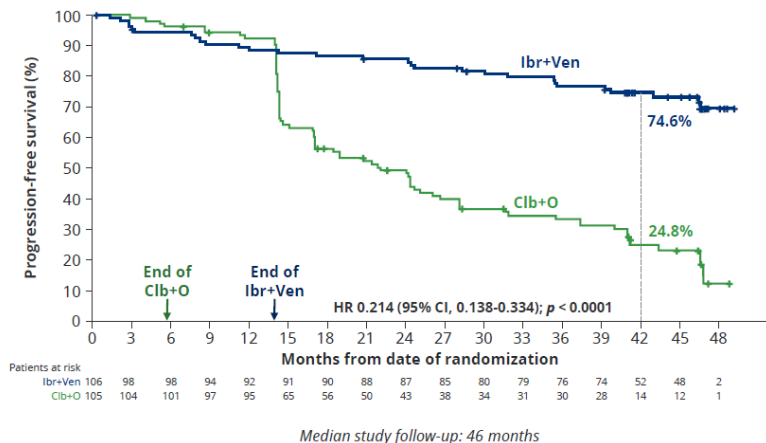
Primary end point: IRC-assessed PFS

Key secondary end points: uMRD rates, response rates, overall survival, time to next treatment, and safety

- Current analysis
 - Median study follow-up of **46 months** (range, 1.7-51.7)
 - MRD assessed in peripheral blood in responders by NGS



Progression-free survival (PFS) remained superior for Ibr+Ven versus Clb+O with 4 years of follow up



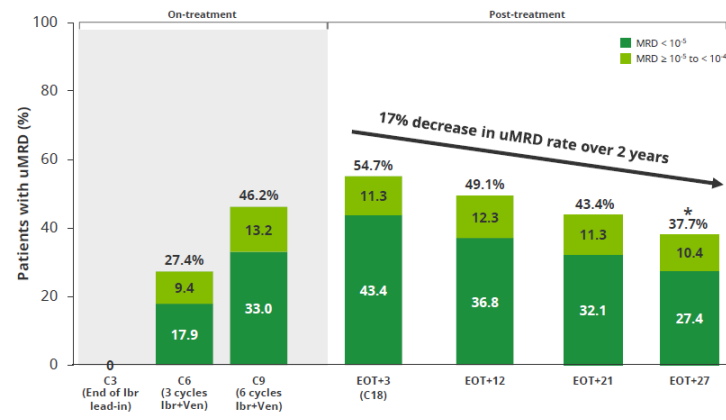
Ibr+Ven reduced the risk of progression or death by 79% versus Clb+O

- HR 0.214 (95% CI, 0.138-0.334); $p < 0.0001$

Estimated 3.5-year PFS rates:

- **74.6%** for Ibr+Ven
- **24.8%** for Clb+O

PB uMRD was attained early during treatment with Ibr+Ven and declined < 10% per year post treatment



On-treatment:

- Most patients who achieved uMRD by EOT+3 did so by C9, after 6 cycles of combined Ibr+Ven

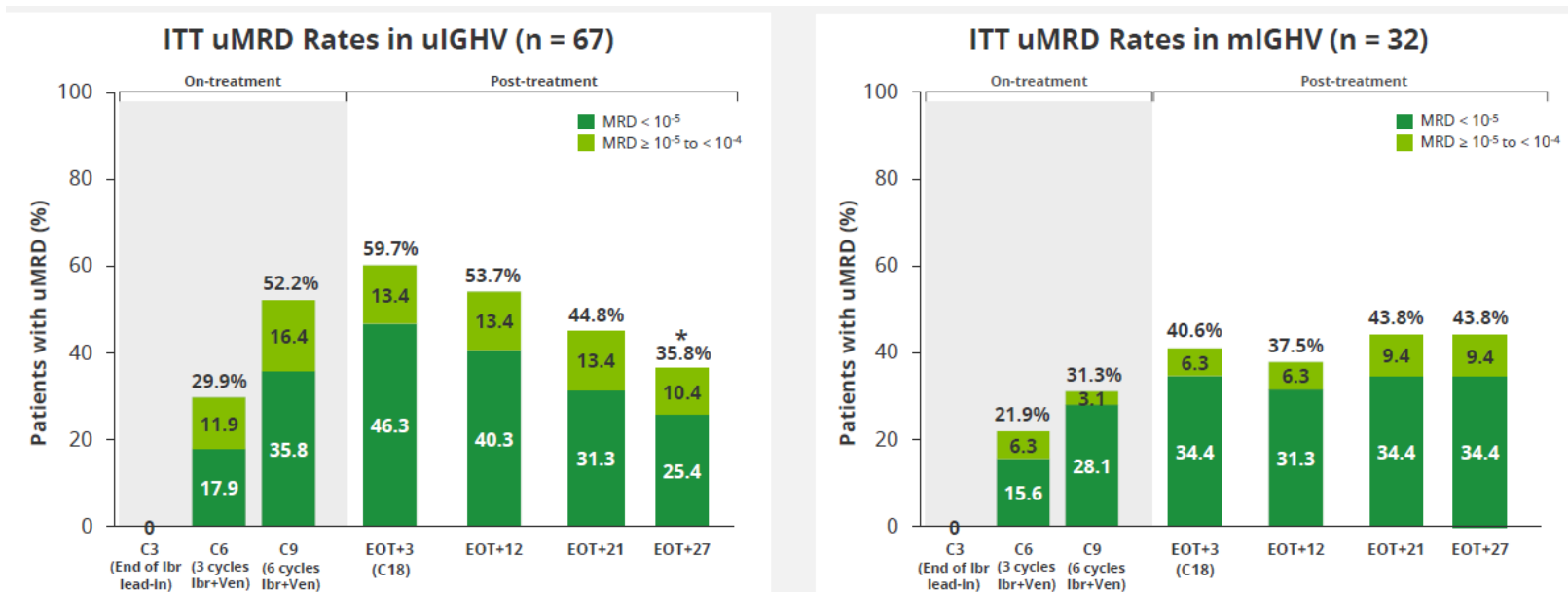
2 years post-treatment:

- Nearly 40% of patients had uMRD, including > 25% with deeper uMRD responses of < 10⁻⁵

*8 (7.5%) patients with uMRD (including 6 with uMRD < 10⁻⁵) at EOT+21 had missing samples and were considered not uMRD at EOT+27. Numbers may not add up to exact total due to rounding. EOT, end of treatment; EOT+3, end of treatment plus 3 months; ITT, intent to treat; PB, peripheral blood.



GLOW phase 3 study: uMRD dynamics according to IGHV status

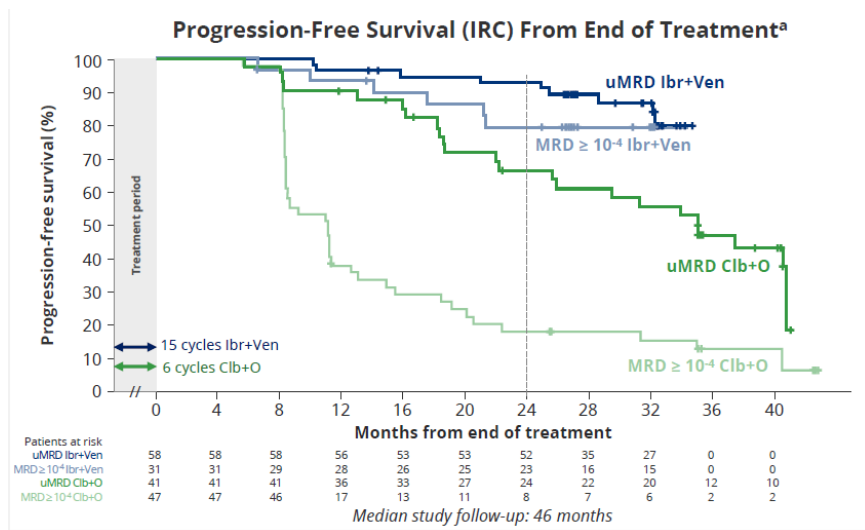


- uMRD rates (including < 10⁻⁵) were higher and uMRD was achieved faster in patients with uIGHV versus mIGHV CLL
- uMRD was better sustained post-treatment in patients with mIGHV CLL

*7 (10.4%) patients with uMRD (including 5 with uMRD < 10⁻⁵) at EOT+21 had missing samples and were considered not uMRD at EOT+27.
Numbers may not add up to exact total due to rounding.



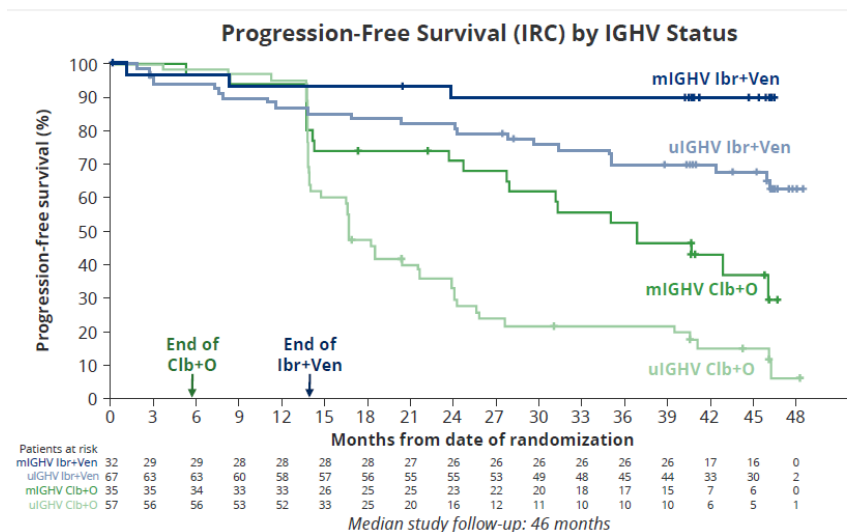
GLOW phase 3 study: PFS according to IGHV status



PFS was better sustained with Ibr+Ven versus Clb+O, regardless of MRD status at EOT+3

With Ibr+Ven

- Low impact of EOT+3 MRD status on PFS post-treatment
- PFS rate at 2 years post-treatment remained $\geq 80\%$ regardless of MRD status



PFS at 3.5 years was higher for Ibr+Ven versus Clb+O for both uIGHV and mIGHV CLL

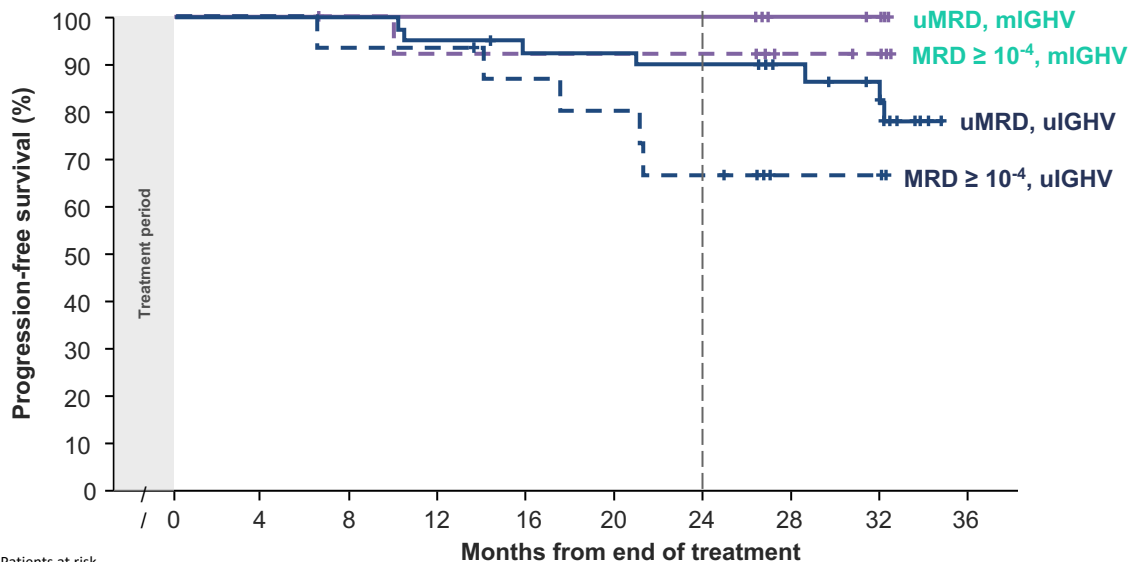
> 90% of patients in the Ibr+Ven arm did not require subsequent treatment at 3.5 years:

- 91.5% for uIGHV; 93.5% for mIGHV



GLOW phase 3 study: PFS according to uMRD and IGHV status

Ibr+Ven Progression-Free Survival (IRC) From End of Treatment



Patients at risk	0	4	8	12	16	20	24	28	32	36
uMRD, mIGHV	13	13	13	13	13	13	13	7	5	0
MRD $\geq 10^{-4}$, mIGHV	14	14	13	12	12	12	12	9	8	0
uMRD, uIGHV	40	40	40	38	36	36	35	27	22	0
MRD $\geq 10^{-4}$, uIGHV	16	16	15	15	13	12	10	6	6	0

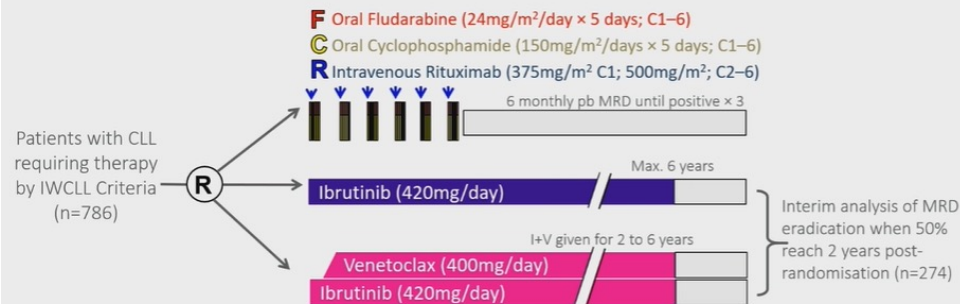
Median study follow-up: 46 months

- Estimated PFS at 2 years post-treatment for **mIGHV** CLL:
 - >90% regardless of MRD status at EOT+3
- Estimated PFS at 2 years post-treatment for **uIGHV** CLL:
 - 90% for uMRD at EOT+3 versus **67% for MRD $\geq 10^{-4}$**



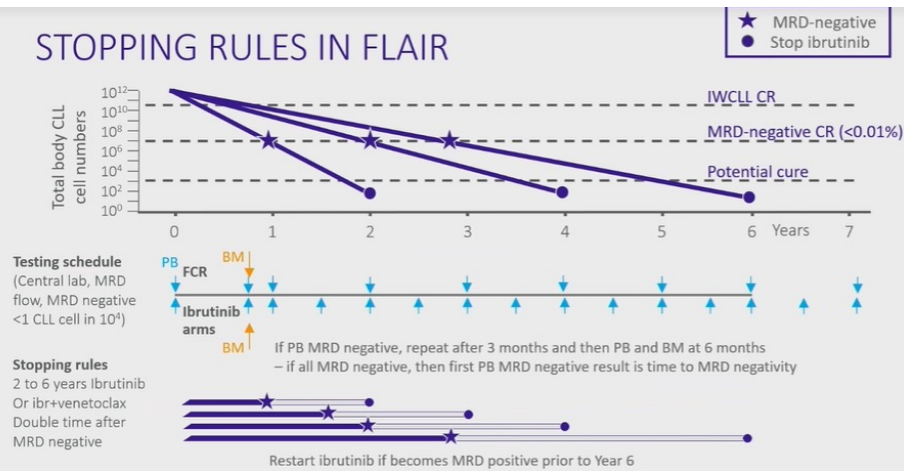
FLAIR phase 3 study: updated interim analysis of **ibrutinib plus venetoclax** with MRD-driven duration of treatment

FLAIR FCR VS I VS I+V: TRIAL DESIGN



In ibrutinib and ibrutinib+venetoclax arms: PB MRD every 6 months. If PB MRD negative repeat after 3 months and then PB and BM at 6 months – if all MRD negative, then first PB MRD negative result is time to MRD negativity.
Duration of therapy – double time to MRD negativity (minimum 2 years; maximum 6 years)

STOPPING RULES IN FLAIR





FLAIR phase 3 Study: MRD within 2 years by sub-group

VH Mutation status

Mutated	55 (31)	56.4% (42.3%, 69.7%)
Unmutated	64 (51)	79.7% (67.8%, 88.7%)
Subset 2	8 (3)	37.5% (8.5%, 75.5%)
Other	9 (4)	44.4% (13.7%, 78.8%)



MRD negative remission within 2 years: 79.7% IGHV unmutated compared to 56.4% IGHV mutated patients

Subgroup	N # (Events)	Proportion with event # (95% CI)
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MRD Negativity rate in the bone marrow within 2 years post-randomisation (I+V only)

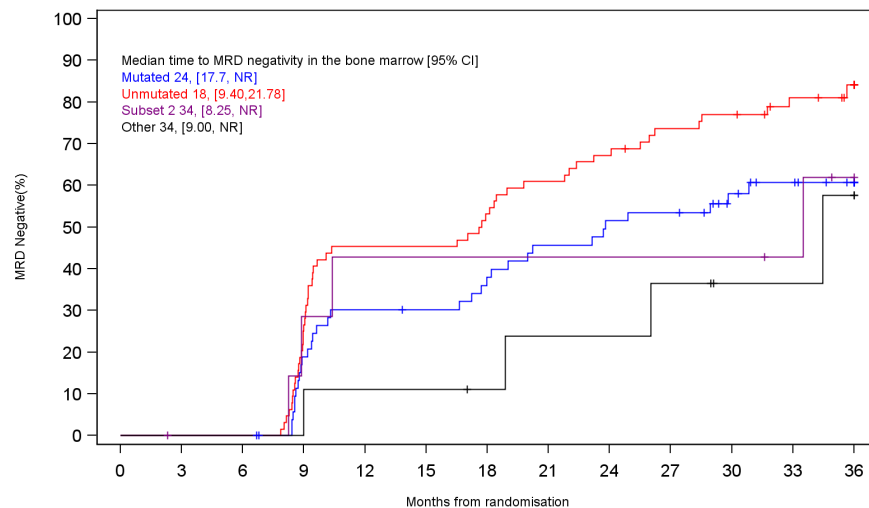
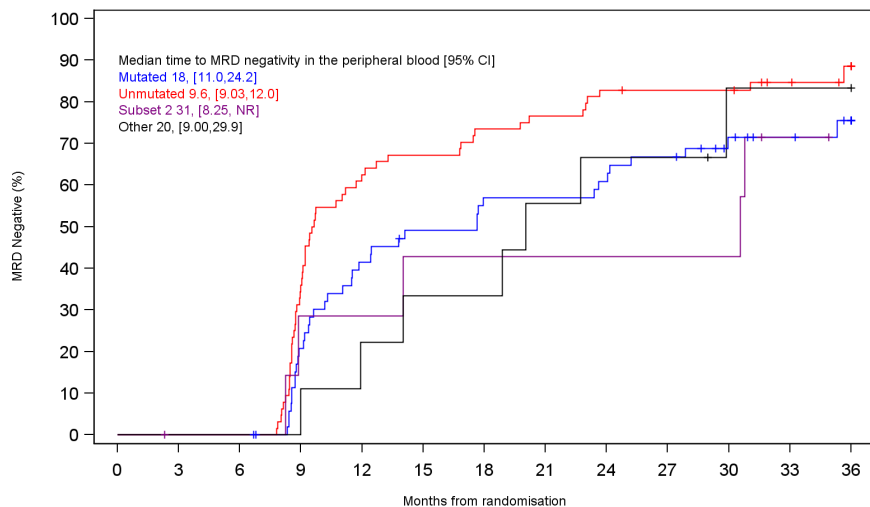
Hierarchical model of chromosomal abnormalities

ATM deletion	29 (24)	82.8% (64.2%, 94.2%)
Trisomy 12	28 (19)	67.9% (47.6%, 84.1%)
Normal karyotype	28 (19)	67.9% (47.6%, 84.1%)
13q deletion	44 (24)	54.5% (38.8%, 69.6%)
Undetermined	7 (3)	42.9% (9.9%, 81.6%)

MRD negative:
82.8% 11q del
67.9% Tri 12
67.9% Normal
54.5% 13q del



FLAIR phase 3 Study: Time to MRD negativity by IGHV mutation status (I+V TREATMENT ONLY)





Ibrutinib and venetoclax for first-line treatment of CLL patients: 4-year follow-up data

	C1	C2	C3	C4 --> 27 (24 cycles of Combined Rx)
Ibrutinib	420mg daily	420mg daily	420mg daily	420mg daily
Venetoclax	-	-	-	20mg daily 1 week; 50mg daily 1 week; 100mg daily 1 week; 200mg daily 1 week; 400mg daily continuous

Duration of therapy: 24 cycles of combined IBR and VEN

Marrow MRD (flow cytometry) at end of cycle 24 of combined Rx

- Negative (<0.01%): Stop both IBR and VEN
- Positive (≥0.01%): Continue 12 additional cycles of IBR + VEN

Patients with treatment-naïve CLL/SLL meeting 2008 iwCLL treatment criteria with at least one of the following feature:

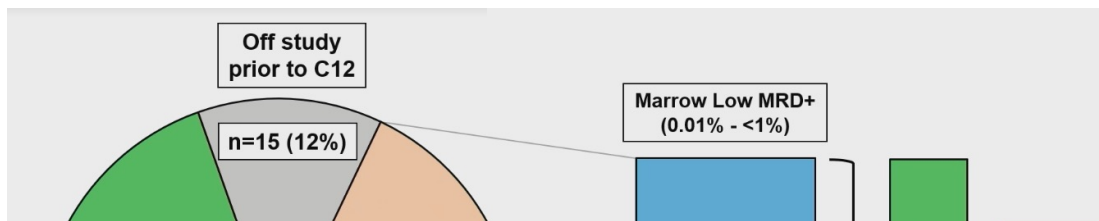
- Del(17p) or mutated *TP53*
- Del(11q)
- Unmutated *IGHV*
- Age ≥65 years

Baseline characteristics (n=120)

		n (%) or median [range]
Age, years		64.5 [26-88]
	≥65	60 (50)
	≥70	35 (29)
Gender, M		87 (73)
ALC, K/μL		76.3 [1.14-366]
PLT, K/μL		140 [28-334]
HGB, g/dL		12.0 [7.7-18.4]
B2M, mg/L		3.6 [1.7-13.7]
FISH	Del(17p)	20 (17)
	Del(11q)	31 (26)
	Trisomy 12	23 (19)
	Negative	19 (16)
	Del(13q)	27 (22)
<i>IGHV</i> status (n=116)	Unmutated	100 (86)
Cytogenetics (n=115)	Complex	15 (13)
Mutations (n=119)	<i>TP53</i>	19 (16)
	<i>NOTCH1</i>	35 (29)
	<i>SF3B1</i>	26 (22)
	<i>BIRC3</i>	10 (8)
Del(17p) / <i>TP53</i> -m		27 (23)



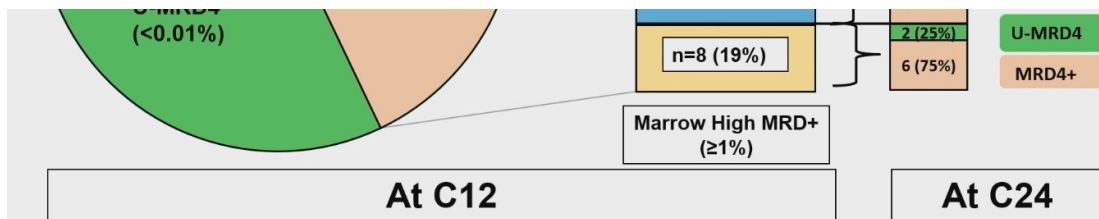
Ibrutinib and venetoclax for first-line treatment of CLL patients: Impact of 2nd year of treatment

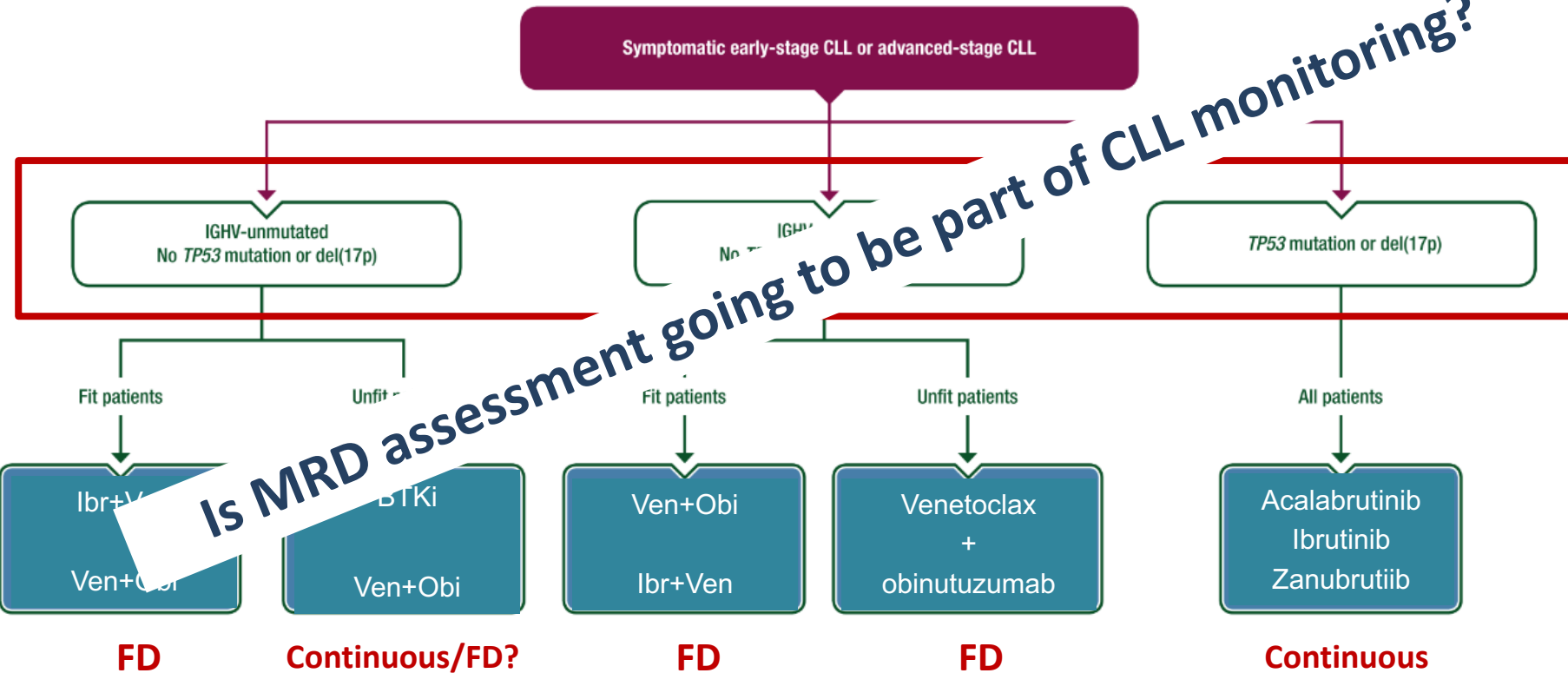


With a trial amendment, MRD+ pts after C24 could get **12 additional cycles** of IBR + VEN combination

18/23 pts resumed combination for 12 additional cycles

11/18 (61%) pts achieved U-MRD remission during the third year of combined Rx







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