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Azienda Ospedalera Nazionale SS. Antonio e Biagio e Cesare Arrigo Alessandria







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# Novita da EHA 2016 – Copenhagen

# Linfomi

# **THREE QUESTIONS TO ADDRESS:**

1. Is ASCT still the golden standard for MCL? And how to challenge it in

the future?

2. What is new in relapsed follicular lymphoma? Is benda-obinotuzumab

a major step forward? Which are the alternatives?

**3.** Ultra high-risk lymphoma patients: Can we identify them? And where

shall we go for treatment?

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a major step forward? Which are the alternatives?

**3.** Ultra high-risk lymphoma patients: Can we identify them? And where

shall we go for treatment?

## Newly diagnosed and relapsed mantle cell lymphoma: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up<sup>†</sup>

M. Dreyling<sup>1</sup>, C. Geisler<sup>2</sup>, O. Hermine<sup>3</sup>, H. C. Kluin-Nelemans<sup>4</sup>, S. Le Gouill<sup>5</sup>, S. Rule<sup>6</sup>, O. Shpilberg<sup>7</sup>, J. Walewski<sup>8</sup> & M. Ladetto<sup>9</sup>, on behalf of the ESMO Guidelines Working Group<sup>\*</sup>

Young patient (≤65)	Elderly patient (>65) First line treatment	Compromised patient		
Dose-intensified Immuno-chemotherapy (R-CHOP + R-high dose Ara-0 (alternating or sequential) =>ASCT)	Conventional Immuno-chemotherapy (e.g. R-CHOP, BR) ∳ Rituximab maintenance radioimmunotherapy	Watch and wait ? R-Chlorambucil BR		
	1. Relapse			
High tumour load: Immuno-chemotherapy (e.g. BR, R-DHAP) ↓ Allo-transplant Radioimmunotherapy Rituximab maintenance	Immuno-chemotherapy (e.g. BR, R-FC) Targeted approaches ASCT Radioimmunotherapy Rituximab maintenance	Immuno-chemotherapy (e.g. BR) Targeted approaches		
	Higher relapse			
Targeted approaches: Temsirolimus, Bortezomib*, Ibrutinib, Lenalidomide* (preferable in combination) Repeat previous therapy (long remissions)				
R, rituximab; CHOP, rituximab, cyclophosphamide, doxorubicin, vincristine, prednisolone; B, bendamustin FC, fludarabine/cyclophosphamide; ASCT, autologous stem-cell transplantation; *currently not registered this indication in the European Union (EU).				

# **MCL Educational session**



# **MCL Educational session**



# The role of targeted treatment in mantle cell lymphoma: is transplant dead or alive?

Martin Dreyling<sup>1</sup> and Simone Ferrero,<sup>2</sup> on behalf of European Mantle Cell Lymphoma Network

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Haematologica, 2016



# YOUNG PATIENTS PROBABLY NOT DESERVING ASCT

roups....

Patients with major comorbidities

- Patients with limited stage MCL
- Indolent MCL
- Primary refractory patients

For specific prognet

	Author	Study Features	Evaluable patients	Therapeutic regimen	ORR% (CR%)	Median PFS (years)	Median OS (years)	Dropout rate	TRM	Secondary tumors rate
	Dreyling <i>et al.</i> , 2005 [18]	Phase III, randomized	122	R-CHOP + TBI + ASCT $\nu s.$ R-CHOP + TBI + interferon- $\alpha$	98 (81) <i>US.</i> 99 (37)	3,3 <i>vs.</i> 1,4	NR (83% 3-y OS <i>Us.</i> NR (77% 3-y OS	13% <i>vs.</i> na	5% <i>vs.</i> 0%	5%
	Hermine <i>et al.</i> , 2012 [34]	Phase III, randomized	455 R	R-CHOP + TBI + ASCT <i>vs.</i> -CHOP/R-DHAP + HD-araC + ASC	98 (63) <i>US.</i> ' 99 (61)	3,8 <i>us.</i> 7,3	6,8 <i>vs.</i> NR	na	4%	na
	Damon <i>et al.</i> , 2009 [26]	Phase II	77	R-CHOP + methotrexate + HD-araC/etoposide + ASCT	88 (69)	NR (56% 5-y PFS)	NR (64% 5-y OS)	13%	3%	na
	Van't Veer <i>et al.</i> , 2009 [27]	Phase II	87	R-CHOP + HD-araC + ASCT	70 (64)	NR (36% 4-y PFS)	NR (66% 4-y OS)	30%	5%	na
	Geisler <i>et al.</i> , 2012 [39]	Phase II	160	R-Maxi-CHOP + HD-araC+ ASCT	96 (54)	7,4	NR (64% 10-y OS)	9%	5%	4%
	Delarue <i>et al.</i> , 2013 [28]	Phase II	60	R-CHOP/R-DHAP + HD-araC + ASCT	100 (96)	6,9	NR (75% 5-y OS)	18%	1,5%	18%
	Touzeau <i>et al.</i> , 2013 [29]	Retrospective	396	Different ASCT-based schedules	83 (77)	NR (67% 3-y PFS)	NR (83% 3-y OS)	na	2,5%	6%
	Kolstad <i>et al.</i> , 2014 [40]	Phase II	160	R-Maxi-CHOP + HD-araC+/- Zevalin + ASCT	94 (82)	R (71% 4-y PFS)	NR (78% 4-y OS	9%	6%	3%
	Le Gouill <i>et al.</i> , 2014 [42]	Phase III, randomized	299	R-DHAP + ASCT +/- rituximab maintenance	na (92)	R (74% 3-y PFS)	NR (83% 3-y OS	14%	na	па
	Cortelazzo <i>et al.</i> , 2015 [99]	<ul> <li>Phase III, randomized</li> </ul>	260*	R-CHOP+R-CTX+HD-araC+ASCT +/- lenalidomide maintenance	86 (78)	R (78% 2-y PFS)	NR (89% 2-y OS	22%*	2%	na
9										
eu leg	Romaguera <i>et al.</i> , 2010 [6]	Phase II, monocentric	97	R-Hyper-CVAD	97 (87)	4,6	NR (64% 10-y OS)	29%	8%	5%
	Merli <i>et al.</i> , 2012 [31]	Phase II, multicentric	60	R-Hyper-CVAD	83 (72)	R (73% 5-y PFS)	NR (61% 5-y OS)	63%	6,5%	1,5%
	Bernstein <i>et al.</i> , 2013 [32]	Phase II, multicentric	49	R-Hyper-CVAD	86 (55)	4,8	6,8	39%	2%	4%

#### Table 1 Published clinical studies investigating first-line dose intensified therapy in MCL

#### Adapted from Dreyling M and Ferrero S, 2016

# MRD response after induction



Courtesy of Christiane Pott

#### Eskeund CW S437 15-YEAR FOLLOW-UP OF THE NORDIC MCL2-TRIAL: DESPITE LONG-TERM RESPONSES LATE RELAPSES STILL OCCUR

## BACKGROUND

- Outcome of MCL has has improved thanks to Ara-C and R
- the Nordic trial showed a projected 10-year OS and PFS of 58% and 43%
- Updated results at a median follow-up of 11.4 years

#### **METHODS**

- 160 untreated stage II-IV MCL pts.
- maxi-CHOP alternated to high-dose Ara-C, BEAM/BEAC and ASCT in responders (n=145).
- Use of pre-emptive rituximab (Andersen, JCO, 2009)

## RESULTS

- the median OS and PFS were 12.7 and 8.5 years.
- RD of the 145 patients who underwent ASCT was 12.4 years
- micro-RNA-18b (MIPI-B-miR) remains highly significant and identifies a high-risk group of an exceedingly poor prognosis with OS and PFS of only 1.6 and 1.0 years



#### CONCLUSIONS

•a pattern of continuing relapse is observed, seemingly precluding cure.

•MIPI, MIPI-B and, in particular, MIPI-B-miR remain valid prognosticators that clearly separate patients into risk groups with different outcomes.

•All risk groups might benefit from addition of novel agents.

#### Rule S et al S438 OS OUTCOMES IN PTS WITH MCL TREATED WITH IBRUTINIB IN A POOLED ANALYSIS OF 370 PATIENTS FROM 3 INTERNATIONAL OPEN-LABEL STUDIES

#### BACKGROUND

 pooled analysis from 3 ibrutinib studies (PCYC-1104, MCL2001 [SPARK] and MCL3001 [RAY])

#### METHODS

- ibrutinib 560 mg orally
- Inclusion and exclusion criteria were similar
- Simple descriptive statistics and exploratory analyses were done for PFS and OS with univariate and multivariate analyses

#### RESULTS

- 370 patients were included in this analysis; median age was 67.5 years, 94%.
- 27%, 29%, 22% had 1, 2, 3 prior lines of therapy.
- Overall response rate (ORR) was 66% (20% CR; 46% PR),
- ORR for patients with 1, 2 and ≥3 prior lines of therapy was 77%, 71% and 64%
- DOR, PFS and OS of 18.6, 12.8 and 25.0 months,
- CR pts, had a PFS of 70% and OS of 90% at 2 years.
- ECOG, sMIPI, bulky disease and blastoid histology impacts OS



#### CONCLUSIONS

OS is better patients who are younger and who have fewer prior lines of therapy

**Ibrutinib is an effective agent in blastoid MCL** to achieve a response and potentially provide a bridge transplant.

#### Data support the preferential use of ibrutinib after initial vs later relapse

#### Rule S et al P699

#### REAL-WORLD EXPERIENCE OF IBRUTINIB IN >700 PATIENTS WITH MANTLE-CELL LYMPHOMA: DATA FROM A GLOBAL NAMED PATIENT PROGRAM

•NPP program to allow access to ibrutinib for eligible patients R/E MCL This program provides real-world data on estimated outcomes with ibrutinib across a large, global MCL population.



Age (years)		1		HR (95% CI)	p Value
< 50		1		1.00 (1.00-1.00)	
50-54			1	1.41 (0.49-4.04)	0.519
55-59		<b>H</b>		1.33 (0.53-3.34)	0.549
60-64		H +		0.93 (0.39-2.23)	0.867
65-69		<b>H</b>		1.27 (0.55-2.92)	0.581
70-74		H		0.92 (0.40-2.11)	0.842
75-79		<b>H</b>		0.74 (0.32-1.76)	0.501
80-84				0.91 (0.35-2.38)	0.848
85+		-	4	1.59 (0.59-4.29)	0.364
Sex				inter derma areab	0.004
MALE		1		1.00 (1.00-1.00)	
Female		HH		1.06 (0.73-1.55)	0.764
> 3 lines of therapy					
YES		1		1.00 (1.00-1.05)	
No		1 minut		1,16 (0.81-1.66)	0.429
MCL diagnosis > 2 years					
YES				1.00 (1.00-1.00)	
No		L++		0.65 (0.46-0.92)	0.015
PD within 3 months prior	r to ibrutinit			area far to arrest	
YES				1.00(1.00-1.00)	
No		1-4-1		0.81 (0.55-1.19)	0.277
Last response CR/PR				and i farma cristi	and the
VES				1.00/1.00-1.00	
No		hand a		1.14 (0.71-1.81)	0.592
Relacse				tradition to come of	0.004
YES				1.00(1.00-1.00)	
No				1.11(0.70-1.75)	0.661
Advanced disease				the factor count	6.44.
YES				1.00(1.00-1.00)	
No				0.95/0.63-1.421	0.794
Behactory disease				was bross costs	4.194
VES				1.00/1.00-1.05	
No				0.88 (0.54-1.45)	0.627
140				0.00 (0.04-1740)	0.027
	0.1	1	10		
				Cationated LID by C	inhom we
				comated HH by C	ox model
			-	Reference category	F

#### Lenz G et al S439 SEQUENCE VARIANTS IN PATIENTS WITH PRIMARY AND ACQUIRED RESISTANCE TO IBRUTINIB IN THE PHASE 3 MCL3001 (RAY) TRIAL

#### BACKGROUND

•To identify specific mechanisms of ibrutinib resistance in MCL, and to correlate genetic signatures with patient response.

#### **METHODS**

- Primary resistance analysis,
- Acquired resistance analysis.

#### RESULTS

Mutations associated with primary resistance to ibrutinib were identified in NF-kB signaling pathways, both canonical (e.g., A20) and non-canonical (e.g., BIRC2). Other mutations were found in epigenetic modifiers and in the EGFR family.

Acquired resistence: Mutations in epigenetic modifiers and alternate NF-kB or PI3K/mTOR pathways were found after a short treatment duration (<4 months).

#### No primary or secondary BTK C481S mutations

## CONCLUSIONS

Understanding both primary and acquired resistance patterns is key in order to improve outcomes and define the populations that benefit from ibrutinib treatment

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# THE GADOLIN TRIAL



	Obinutuzumab plus bendamustine (n=194)	Bendamustine monotherapy (n-202)
(Continued from previous column)		
Ritucimab-refractory type		
Rituximab plus chemotherapy	156 (80%)	157 (78%)
No response or progressive disease during or within	76/156 (49%)	86/157 (55%)
6 months after last rituximab induction dose		
Progressive disease during or within 6 months after last ritucimab maintenance dose	76/156 (49%)	70/157 (45%)
Other	4/156 (3%)	1/157 (1%)
Rituximab monotherapy	38 (20%)	45 (22%)

Data are n (%) or median (IQR), unless otherwise shown. INHL-indolent non-Hodgkin lymphoma. FLIPI-Follcular Lymphoma International Prognostic Index. \*Patients not designated as grade 3 a or 3b. †Status at initial diagnosis, for patients with follicular lymphoma only. ‡One patient had a negative value because of an incorrect treatment completion date. §Patients who were refractory to ritukimab and alkylator agent in the same or separate regimens. ¶Patients who progressed more than 6 months after last ritukimab dose but within 6 months after best response, and patients whose refractory status could not be classified because of insufficient detail in case report form.

Table 1: Baseline patient demographics and disease characteristics (intention-to-treat population)

Figure 1: Trial profile



	Total (N)	n/events		Hazard ratio
		Obinutuzumab plus bendamustine (n=194)	Bendamustine monotherapy (n=202)	(95%C)
Randomisation stratification factors				
Follicular lymphoma				
Yes	321	155/54	166/90	0-49 (0-35-0-68)
No	75	39/17	36/14	0.94 (0.46-1.90)
Number of previous therapies				
«2	312	154/51	158/83	0-49 (0-34-0-69)
>2	84	40/20	44/21	0-80 (0-43-1-48)
Refractory to				
Rituximab monotherapy	83	38/14	45/22	0.55 (0.28-1.08)
Rituximab plus chemotherapy induction	162	76/29	86/42	0.59 (0.36-0.95)
Rituximab maintenance after chemotherapy induction	146	76/28	70/39	0.57 (0.35-0.93)
Demographic and baseline disease characteristics				
Sex				
Male	228	110/41	118/57	0.58 (0.39-0.87)
Female	168	84/30	84/47	0.52 (0.33-0.83)
Bulky disease at baseline				
Yes >6 cm	136	66/27	70/37	0.63 (0.38-1.04)
No.e6 cm	257	128/44	129/67	0.51 (0.35-0.75)
B symptoms at baseline (s 1)				
Yes	58	30/12	28/16	0.57 (0.27-1.22)
No	335	163/59	172/87	0.55 (0.40-0.77)
Double refractory status				
Yes	311	147/55	164/87	0.56 (0.40-0.78)
No	85	47/16	38/17	0.55 (0.28-1.10)
ECOG at baseline				
0-1	375	185/66	190/99	0.53 (0.39-0.72)
2	18	9/5	9/4	1-44 (0-39-5-41)
All patients	396	194/71	202/104	0.55 (0.40-0.74)
			0.05 0.1 0.2 0.5 1 Favours obinuturumab F plus bendamustine	2 5 10 20

Trneny M et al S440 OBINUTUZUMAB PLUS BENDAMUSTINE VERSUS BENDAMUSTINE ALONE IN PATIENTS WITH RITUXIMAB-REFRACTORY FOLLICULAR LYMPHOMA: RESULTS FROM THE GADOLIN STUDY

## BACKGROUND

FL subset analysis of GADOLIN pts. 321 (81%) of 396 iNHL pts enrolled had FL.

## **METHODS**

**Pts received either G + B90 or B120** 

#### RESULTS

Median number of prior therapies was 2. 94% pts were refractory to their last prior rituximab (R)-containing regimen and 88% double-refractory to R and an alkylating agent.

According to IRC PFS is not reached in the G-B arm and 13.8 mo in the B arm (Figure 1),

Survival data were immature at the time of analysis. Safety profiles were comparable.

Parameter	FL subpopulation			
	G-B (n=155)	B (n=166)		
Median observation time (range), mo	22.08 (0.4-48.5)	20.27 (0.0-50.0)		
PFS (IRC)				
Pts with event, n (%) Median (mo) HR [95% CI]; stratified*	54 (34.8) Not reached 0.48 [0.34-0.68]	90 (54.2) 13.8		
PFS (INV)				
Pts with event, n (%) Median (mo) HR [95% Cl]; stratified*	62 (40.0) 29.2 0.48 [0.	102 (61.4) 13.7 35-0.67]		
Response <sup>†</sup> (IRC)				
EOI response (%): overall <sup>‡</sup> /CR Best response (%): overall <sup>‡</sup> /CR	70.5/9.4 79.7/15.7	62.6/13.5 77.0/19.3		

\*Stratification factors for FL population were refractory type (R vs R-chemo) and prior therapies ( $\leq 2$  vs >2); <sup>†</sup>During treatment and within 12 mo after start of treatment; <sup>‡</sup>Complete response (CR) or partial response.



#### Table 1.

Jiménez Ubieto A et al S441 ANALYSIS OF SECONDARY NEOPLASIAS AFTER HIGH DOSE THERAPY SUPPORTED BY AUTOLOGOUS STEM CELL TRANSPLANTATION IN FOLICULAR LYMPHOMA PATIENTS. A LONG TERM FOLLOW-UP ANALYSIS FROM THE GELTAMO REGISTRY.

#### BACKGROUND

- HDT/ASCTis effective in FL
- Secondary neoplasia is one the major cncern

To evaluate the cumulative incidence and characteristics of sMDS/sAML and solid tumors after HDT/ASCT in a very long-term follow-up analysis of FL patients.

#### **METHODS**

A total of 655 FL patients (GELTAMO registry)

#### RESULTS

Median follow-up 12 years. The median OS were 21.3 years from HDT/ASCT and 22.6 years from the time of FL diagnosis. 12.5% developed a second malignancy: solid tumors (47.5%), sMDS/sAML (42.5%). The accumulated incidence at 5, 10 and 15 years was 1.8%, 3.5% and 4.9% for solid tumors and 2.6%, 4.3% and 5% for sMDS/sAML. Male sex and BM as stem cell source were associated to an increased risk.

Characteristics		No.*	%	
All patients		655	100	
Median age, years (range)		47 (18-73)		
Sex: Male/ Female		330/325	50.4/ 49.6	
	Low	108	33	
FLIPI Score	Intermediate	120	36	
	High	102	31	
	Low	69	22	
FLIPI 2 Score	Intermediate	118	38	
	High	125	40	
	CR	405	62	
Disease Status at ASCT	PR	221	34	
	Refractory disease	29	4	
Anthracycline-containing first line therapy		460	76	
Fludarabine-containing first line therapy		36	6	
Only one therapy line be	fore HDT/ASCT	183	28	
Rituximab previous HDT, Yes/ No		184/436	30/70	
Conditioning Regimen TBI based, Yes/ No		109/504	17/83	
PBPC, Yes/ No		517/87	14.5/ 85.5	
Abbreviations: BM: Bone Marraw, Transplantation. HOT: High Dose Thesa a There are some missing data for seve	FLPI: Folicular Lymphonia prognatic index pp. 186. Total Body irradiation. PBPC: Periphera radvariables. No. of missing values can be direct	. CR: Complete Response.FR: Partial Ro I blood Progenitor Cells. Dy derived for each wariable by the equation	reponse. ASCT: Autologous Ster	

#### CONCLUSIONS

FL pts are at an increased risk of second malignancy but not as high as reported.

Low percentage of TBI and early transplant could explain these good results.

Once a secondary neoplasia is diagnosed prognosis is dismal.

the incidence of secondary neoplasia will probably not diminish the benefit of HDT/ASCT in relapsed FL.

#### Hatake et al P686

INTERIM ANALYSIS OF POST MARKETING SURVEILLANCE OF YTTRIUM-90 IBRITUMOMAB TIUXETAN IN JAPANESE PATIENTS WITH RELAPSED OR REFRACTORY INDOLENT B-CELL NON-HODGKIN LYMPHOMA OR MANTLE CELL LYMPHOMA.

#### RESULTS

413 pts enrolled. Good safety confirmed. ORR in 354 evaluable pts was 76.8%, CR rate 47.7%. ORR and CR for those receiving 2 or less prior regimens were 86.0% and 56.1% respectively, while ORR and CR for those receiving more than 2 prior regimens were 69.3% and 40.7%

CONCLUSIONS 90YITis a tolerable and efficacious treatment option for pts with R/R B-cell NHL or MCL in Japan,

It demonstrates good benefit-risk balance

#### Li JJ et al P317

IDELALISIB MONOTHERAPY IN RELAPSED/REFRACTORY FOLLICULAR LYMPHOMA (FL): EXPERIENCE THROUGH AN EARLY ACCESS PROGRAM IN EUROPE AND AUSTRALIA

Baseline Demography	Total
	(n=66)
FL Grade, n (%)	
1	9 (14.1)
2	32 (50)
3a	23 (35.9)
Documented	64
Missing data	2
Age, years	
Median, (range)*	66 (40-86)
Male*, n (%)	32 (48.5)
Ann Arbor stage at enrollment, n (%)	
1	2 (3.0)
JI	4 (6.1)
	19 (28.8)
IV	41 (62.1)
High risk FLIPI-2 score at enrollment, n (%)	39 (63.9)
Documented	61
Missing data	5
ECOG, n (%)	
0	24 (36.4)
1	32 (48.5)
2	10 (15.2)
3	0
Number of prior regimens, median (range)	4 (2-13)

**RESULTS** Results: 66 pts with refractory FL who had documented prior treatment regimens. A total of 12 pts (20%) ASCT .

With a median follow up of 109 days IDELA monotherapy was well-tolerated with 6/66 pts (9.1%) reporting an SAE.

(Febrile neutropenia, neutropenia, diarrhea, gastrointestinal inflammatory disorder, pancytopenia, progressive disease, liver enzyme elevation, hypotension and colon cancer).

**CONCLUSIONS**: The results confirm the acceptable tolerability profile of IDELA.

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a major step forward? Which are the alternatives?

**3.** Ultra high-risk lymphoma patients: Can we identify them? And where

shall we go for treatment?

Casasnovas O et al S105 BASELINE TOTAL METABOLIC VOLUME (TMTV) PREDICTS THE OUTCOME OF PATIENTS WITH ADVANCED HODGKIN LYMPHOMA (HL) ENROLLED IN THE AHL2011 LYSA TRIAL.

# BACKGROUND

The TMTV assessed on the baseline FDG-PET assessed prospectively in pts enrolled in a phase III randomized trial (PET-driven)

#### **RESULTS**

- follow-up of 16 months, 2y-PFS was 81% vs 93% in pts with high and low TMTV
- Using also PET-2 3 groups could be identified having a 61%, 88%, 94% 2y-PFS respectively (p<0.0001).

## CONCLUSIONS

The TMTV predicts the outcome of young advanced HL pts. The combination of TMTV and PET2 allows identifying 3 subsets of HL pts

Stewart D et al S479

A BIOCLINICAL PROGNOSTIC MODEL INCORPORATING MYC AND BCL2 PREDICTS OUTCOME TO SALVAGE THERAPY IN RELAPSED/ REFRACTORY DIFFUSE LARGE B-CELL LYMPHOMA: AN NCIC CTG LY12 CORRELATIVE SCIENCE STUDY.

#### BACKGROUND

To determine clinical and molecular predictors of EFS and OS for rrDLBCL pts treated with R-GDP or R-DHAP followed by ASCT (Canadian Ly12 study)

#### **METHODS**

**91 pts had DLBCL immunohistochemical (IHC) testing** for CD10, BCL6, MUM1, FOXP1, LMO2, BCL2, CMYC, P53, pySTAT3 expression.

**In addition, 97 formalin-fixed, had GEP with NanoString** to evaluate Cell of Origin (COO) by the Lymph2Cx assay, as well as BCL2, MYC, P53, STAT3, PDL1 and PD1 expression.

#### RESULTS

• Expression of both MYC and BCL2 was associated to poor outcome. Dual expressing (DE) lymphomas (MYC+/BCL+) had significantly worse 3y EFS (0% vs 40%, p=0.0009) and OS rates (20% vs 54%, p=0.0004)

Stewart D et al S479

A BIOCLINICAL PROGNOSTIC MODEL INCORPORATING MYC AND BCL2 PREDICTS OUTCOME TO SALVAGE THERAPY IN RELAPSED/ REFRACTORY DIFFUSE LARGE B-CELL LYMPHOMA: AN NCIC CTG LY12 CORRELATIVE SCIENCE STUDY.

MYC and BCL2 expression using NanoString GEP (>1.5xmean) were significantly associated with inferior OS and EFS, and no patient who expressed both markers achieved 2y EFS or OS.

Concordance rate of 79% was seen for MYC and 57% for BCL2. In multivariate analyses, primary refractory DLBCL, LDH at relapse, MYC expression and BCL2 expression (assessed by either IHC or GEP).



## CONCLUSIONS

MYC and BCL2 expression, determined by IHC or Nanostring GEP, are independent poor prognostic factors for rrDLBCL, and dual expression predicts dismal prognosis. Tchernonog E et al S788 CLINICAL CHARACTERISTICS AND PROGNOSTIC FACTORS OF IMMUNOCOMPROMISED AND NON IMMUNOCOMPROMISED PLASMABLASTIC LYMPHOMA PATIENTS: ANALYSIS OF 135 PATIENTS TREATED IN THE LYSA GROUP.

#### BACKGROUND

PBL remains a diagnostic and therapeutic challenge with an aggressive clinical course. Aim of this study was to specify the clinical, biological, pathological features and outcome of patients with PBL.

#### **METHODS AND RESULTS**

**135 patients with PBL diagnosed after 2000 within LYSA**. The median age was 58, male predominance. 56 HIV-positive patients, 17 post-transplant patients, and 62 "immunocompetent".

However also this subtype of patients may present some degree of immunodepression.

Immunophenotype showed CD138 positivity in 88% of cases and CD20 negativity in 90% of cases. EBER expression was observed in 62% of cases. Chemotherapy was administered to 108 of 135 patients, with a complete response rate of 55%.

**Rituximab, had a trend towards improved CR rate.** The median overall survival was 32 mos. HIV positive status showed better overall survival.

#### DISCUSSION

Specific guidelines to clarify all the treatment options are lacking

Festuccia M et al 796 ALLOGENEIC STEM CELL TRANSPLANTATION AND BRENTUXIMAB VEDOTIN IN RELAPSED/REFRACTORY HODGKIN LYMPHOMA: A MULTICENTER EXPERIENCE

# BACKGROUND

allo-HCT has been used in RR HL with controversial results. Aim of our study is to investigate the role of allo-HCT in RR HL

## **METHODS**

69 patients with RR HL, median age 34 (range, 18 - 64), **52 patients (75%)** were at least in PR. The remaining **16 patients (23%) had progressive** disease (non-responsive).

**Brentuximab Vedotin** (BV) was given as bridge to transplant in 11 patients. Moreover, 7 patients received BV after allo-HCT.

The majority of patients underwent reduced intensity allo-HCT, 64 patients (93%). MUD in 57%. The stem cells source was PB in 61 patients (88%).

#### RESULTS

Median OS of 5.1 years (range, 0 - 13.8) and RFS of , 1.3 years.

The 5-year cumulative incidence of treatment related mortality (TRM) and relapse were 17.7% and 43.4%, respectively.

The 5-year estimated of RFS was significantly higher in responsive compared to non-responsive patients, 46.9% versus 12.5%, respectively, p= 0.009.

Eleven patients received BV as bridge to allo-HCT for a median of 6 cycles.. All patients achieved at least PR. None of patients treated with BV had unexpected toxicity or GVHD worsening.

#### DISCUSSION

Allo-HCT is a feasible and effective option for RR HL.

BV showed efficacy as a bridge to allo- HCT as well as post allo-HCT rescue.



# **CHALLENGING HIGH-RISK PATIENTS**





# THANK YOU FOR YOUR ATTENTION

# HAVE AN EXCITING AND FRUITFUL DISCUSSION !!!!





Azienda Ospedalera Nazionale SS. Antonio e Biagio e Cesare Arrigo Alessandria



#### **TRIANGLE study** Flow chart 5 Figure 2: Study flow chart WCL Not ASCT / Maintenance / Observation Induction Observation for progression, death and SPM until end of the Standard Arm A: R-CHOP/R-DHAP followed by ASCT study. Observation 3w 3w up to 9,5 years 3w 3w 3w 3w 6w I Experimental Arm A+I: R-CHOP/R-DHAP+I followed by ASCT and I-maintenance Randomization **Initial Staging** 560 mg Ibrutinib daily Observation for 2yrs or until progression 3w 3w 2 years 3w 3w 3w 3w 6w up to 7,5 years 1 Experimental Arm I: R-CHOP/R-DHAP + I followed by I-maintenance 560 mg Ibrutinib daily for 2 yrs <u>or</u> until progression Observation 2 years up to 7,6 years 3w 3w 314



# **FLAZ-12: STUDY DESIGN**



# rotocols in relapsed FL: Renoir



A randomized phase III multicenter trial assessing efficacy and toxicity of a combination of Rituximab and Lenalidomide (R2) vs Rituximab alone as maintenance after chemoimmunotherapy with Rituximab-Bendamustine for relapsed/refractory FL patients not eligible for autologous transplantation (ASCT).



Rituximab 375 mg/m2 day 1 q 90 days (8 cycles) Lenalidomide (10 mg dd 1-21 q 28) (24 cycles)

Rituximab 375 mg/m2 day 1 q 90 days (8 cycles)