

ROLE OF BONE MARROW BIOPSY IN HODGKIN LYMPHOMA STAGING IN THE PET/CT ERA.



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INTRODUCTION AND OBJECTIVES

In recent years, several studies were conducted to investigate the role of routine BMB in newly diagnosed cHL staged with PET/CT: recently, a meta-analysis [1] reported data of 955 patients in 9 different studies, to determine whether BMB is still necessary in patients staged at diagnosis with PET/CT. Here we report data of patients (pts) with cHL assessed at diagnosis with both BMB and PET/CT, to evaluate their concordance in the detection of bone marrow lymphomatous involvement.

METHODS

We retrospectively analyzed data of consecutive pts since 2007 to 2013 referring to 16 Hematology departments of the Fondazione Italiana Linfomi (FIL). All pts underwent at baseline to both unilateral or bilateral BMB and PET/CT; stage assessment was performed with PET/CT according to the Ann Arbor classification, and it was compared to that resulting from PET/CT combined to BMB. The predictive significance of PET/CT was determined in terms of positive (PPV) and negative predictive value (NPV), sensitivity and specificity.

RESULTS

: in this survey we included 1244 pts, 159 were excluded due to the lack of baseline BMB or PET/CT. Median age 32 (range, 14-80 years), 567 male (52%). Nodular sclerosis (70,9%) and mixed cellularity (19,3%) were the most common histotypes; bulky disease and B symptoms were present in 27% and 42% of pts, respectively. 169 pts (16%) presented one or more focal skeletal lesions at PET/CT and 55 (5%) had a positive BMB; other patients' characteristics are summarized in table 1. In 34/55 pts focal skeletal lesions evidenced by PET/CT revealed a positivity of BMB, while in 948/1030 pts the absence of skeletal lesions or a diffuse skeletal FDG uptake combined with a negative BMB. Based on these data, PPV and NPV resulted to be 20% and 98%, respectively; sensitivity and specificity were 62% and 87%, respectively. In 54/55 patients with positive BMB had PET/CT in stage III or IV, while 1/1043 (0.09%) would have been treated differently if he had not performed the BMB.

Correlation between PET/CT-assessed staging and BMB results

	Patients with negative BMB (n=1030)		Patients with positive BMB (n=55)	
	n	%	n	%
PET/CT Ann Arbor stage				
I	55	5.3	0	0
II	531	51.5	1	1,8
III	250	24.3	8	14,6
IV	194	18,9	46	83,6
Focal skeletal PET/CT lesions				
Unifocal	48	4,7	8	14,5
Bifocal	30	2.9	2	3,6
Multifocal	57	5.5	24	43,6
No focal lesions	895	86,9	21	38,3
Diffuse homogeneous skeletal FDG uptake				
	53	5,1	9	16.5
Risk group according to GHSG				
Early stage	184	17,9	0	0
Intermediate	290	28,1	1	1,8
Advanced stage	530	51,5	54	98,2
Unspecified limited stage	26	2,5	0	0

CONCLUSIONS

NPV of PET/CT for bone marrow involvement was very high (98%). Moreover, the influence of BMB on the planning of treatment was minimal. BMB may be omitted in cHL patients staged with PET/CT.

