PMBC, may be still safely adopted. Further studies on toxicity and economic costs are needed.

Keywords: Aggressive B-cell non-Hodgkin lymphoma

No conflicts of interest pertinent to the abstract.

AGGRESSIVE NHL

HIGH ADIPOSE TISSUE DENSITY IS A NEGATIVE PROGNOSTIC FACTOR IN DLBCL PATIENTS TREATED BY R-CHOP, INDEPENDENT FROM TMTV AND PS –FROM THE REMARC STUDY


Background: Body mass composition (BMC) including body mass index (BMI), muscle and adipocyte tissue structure has been reported to be associated with survival in oncological patients (pts). The aim was to analyze the prognostic impact of the BMC in elderly pts with diffuse large B-cell lymphoma treated with R-CHOP in first line.

Patients and Methods: Pts included in the REMARC study (NCT01122472), (DLBCL >60 to 80 years old, responder to R-CHOP randomized between lenalidomide or placebo). BMC parameters were measured at the level of L3 with an Artificial Intelligence software on the CT part of the baseline PET/CT performed before treatment: lumbar skeletal muscle index (LSMI, cm²/m²) and density (LSMD, Hounsfield Unit (HU)), lumbar psoas muscle index (LPMI) and density (LPMD), lumbar subcutaneous adipose index (LSAI) and density (LSAD), and lumbar visceral adipose index (LVAI) and density.
Results: 289 pts were analyzed, including 171 males (59.2%) and 113 (39.1%) pts\(>\)70. In male, BMC showed significant higher BMI LSMI, LPMI, and LVAI. In pts \(>\)70, BMC showed significant lower LSMI and higher LVAI than in pts \(<\)70. In univariate analysis, only adipose densities (LSAD and LVAD) were prognostic of outcome.

Pts with high LSAD (\(>\)90 HU, \(n=69, 24\%\)) had a 3-year PFS of 57.1\% vs 77.8\% (HR \(=\) 2.39 (95\%CI \(=\) 1.5-3.7)) and OS of 70.0\% vs 90.4\% (HR \(=\) 2.77 (95\%CI \(=\) 1.6-4.8)) for the low LSAD pts (\(<\)90HU). They had lower weight, BMI, worse ECOG PS (<2, 75.4\% vs 45\%, \(p<0.01\)), more extranodal sites (\(\geq\), 75.4\% vs 45\%, \(p<0.03\)), higher TMTV (median of 327 cm\(^3\) vs 211 cm\(^3\), \(p=0.009\)), and higher IPI (IPI 3-5, 85.5\% vs 66.4\%, \(p=0.002\)) and NCCN-IPI (high/high intermediate, 84.1 vs 63.7\%, \(p=0.01\)), but no difference in age (\(p=0.24\)) or sex (\(p=0.26\)).

Pts with high LVAD (\(>\)86 HU, \(n=108, 37.4\%) had a 3-year PFS of 63.1\% vs 78.5\% (HR \(=\) 1.92 (95\%CI \(=\) 1.3-2.9)) and OS of 75.4\% vs 91.4\% (HR \(=\) 2.66 (95\%CI \(=\) 1.5-4.6)), lower weight, BMI, more extranodal sites (\(\geq\), 61.1\% vs 47\%, \(p=0.02\)), more bone marrow involved (25.9\% vs 13.3\%, \(p=0.02\)), higher TMTV (median of 306 cm\(^3\) vs 207 cm\(^3\), \(p=0.01\)), and higher NCCN-IPI (high/high intermediate, 79.6\% vs 61.9\%, \(p=0.01\)), and no difference in age (\(p=0.19\)) or sex (\(p=0.27\)).

Multivariable analysis including densities, TMTV and ECOG showed that LSAD(\(>\)90) and TMTV (\(>\)220cm\(^3\)) were independent predictors of PFS and OS and LVAD TMTV (\(>\)220cm\(^3\)) and ECOG (\(\geq\)) were independent predictors of PFS and OS.

Conclusions: This is the first report showing that adipose tissue alteration is a strong prognosticator of outcome in DLBCL. The key question remains if this adipose tissue alteration should be considered as an inherent pt’s frailty or would be a consequence of metabolic changes induced by the tumor. Metabolomic analysis of the baseline plasma is ongoing and might give us new insights into this question.

Keywords: Diagnostic and Prognostic Biomarkers

Conflicts of interests pertinent to the abstract
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LymForest-25 has the advantage of making individualized predictions that do not reside in pre-established clinical and molecular subgroups, overcoming the limitations of imperfect patient subgrouping scores. Such an approach could drive the development of new first-line therapeutic interventions for selected high-risk patients based on personalized predictions.