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SESSION 2: LYMPHOMA IMAGING

017 | DEFINING ULTRA-HIGH-RISK DLBCL PATIENTS PRIOR TO INITIAL TREATMENT BASED ON AN INTEGRATIVE HOST AND DISEASE PROGNOSTIC SCORE (FROM REMARC STUDY)

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Background: The risk stratification of patients (pts) with diffuse large B-cell lymphoma (DLBCL) is based on the widely used IPI. Three of the IPI variables (LDH, stage and number of EN sites) may be refined in two metabolic measures obtained by 18FDG-PET, the total metabolic tumor volume (TMTV) and the
**TABLE 1** Hazard ratio (HR) and p-value considering ECOG PS and TMTV, SDmax, LSAD for PFS and OS

<table>
<thead>
<tr>
<th>Parameter estimate for score</th>
<th>PFS</th>
<th>OS</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>HR</td>
<td>95%CI</td>
</tr>
<tr>
<td>ECOG&gt;=2,</td>
<td>0.57</td>
<td>1.77 1.0-3.0</td>
</tr>
<tr>
<td>DMAX&gt;32m$^{-1}$</td>
<td>0.76</td>
<td>2.13 1.3-3.4</td>
</tr>
<tr>
<td>LSAD&gt;−90HU</td>
<td>0.70</td>
<td>2.01 1.3-3.2</td>
</tr>
<tr>
<td>TMTV&gt;220cm$^3$</td>
<td>0.59</td>
<td>1.81 1.1-3.0</td>
</tr>
</tbody>
</table>

**FIGURE 1** Progresion-free survival and overall survival according to the IPI, the NCCN IPI and the MVED$^2$ score
Accordingly, a score Metabolic Volume ECOG Distance Density (MVED) was calculated as 0.57 (if ECOG PS ≥2) + 0.76 (if SDmax > 32) + 0.70 (if LSAD > -90) + 0.59 (if TMTV > 220).

According to the MVED² score, pts were classified into low risk (65% of pts, median PFS and OS of 68 months and not reached, respectively), intermediate risk (25% of pts, median PFS and OS of 60 months and not reached, respectively) and high risk (10% of pts, median PFS and OS of 16 and 44 months, respectively) (Fig 1). The MVED² score has a significant impact on PFS (p < 0.001) and OS (p < 0.001) (Figure 1). More extra-nodal sites (89.3% >1 vs 47.3%, p < 0.001), more high-IPI 3-5 (96.4% vs 68.6%, p = 0.001), more high-NCCN IPI (35.7% vs 10.6%, p < 0.001), more ABC profile (46.4% vs 20.8%, p = 0.033), more involved bone marrow biopsy (42.9% vs 14.7%, p < 0.001) and male sex (78.6% vs 58%, p = 0.041) were observed in high risk patients than in the low- and intermediate-risk patients.

Conclusions: The MVED² is the first prognostic index based on new metrics measured on 18FDG-PET and ECOG PS that may help to discriminate ultra high-risk DLBCL pts, even responder to R-CHOP.

Keywords: Diagnostic and Prognostic Biomarkers

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