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POSTER ABSTRACTS

624.HODGKIN LYMPHOMAS AND T/NK CELL LYMPHOMAS: CLINICAL AND EPIDEMIOLOGICAL

Efficacy of Brentuximab Vedotin Maintenance Therapy Following Autologous Stem Cell Transplantation in Patients with Relapsed/Refractory Classical Hodgkin Lymphoma with and without Pre-Transplant Exposure to Novel Agents

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Background: Maintenance therapy with brentuximab vedotin (BV) after autologous stem cell transplantation (ASCT) improved progression-free survival (PFS) among high-risk patients (pts) with relapsed or refractory (R/R) classical Hodgkin lymphoma (cHL) in the phase III AETHERA trial. However, cHL treatment has changed significantly since that trial with frequent incorporation of BV and PD-1 inhibitors into earlier lines of therapy. The efficacy of BV maintenance may be different among pts who receive novel agents before ASCT.

Methods: Pts with a diagnosis of R/R cHL who underwent ASCT between 2010 and 2022 were identified at 5 US transplant centers. Pts receiving no systemic post-ASCT maintenance or BV maintenance were included, while pts receiving investigational maintenance treatments were excluded. Medical records were reviewed to identify clinical variables.

Results: 921 pts were identified. Median age was 32 yrs (IQR 24-44). 641 pts (70%) had primary refractory disease or relapsed within 12 months of frontline therapy, 326 (35%) had extranodal disease at relapse, and 173 (19%) had B symptoms at relapse. Pts received a median of 2 (1-9) lines of therapy before ASCT, including 295 (32%) who received ≥3 lines. 425 (46%) pts received BV before ASCT (including 24 pts as part of frontline treatment). 70 pts (8%) were BV-refractory (defined as failure to achieve an objective response to any BV-based treatment). 169 (18%) received a PD-1 agent with salvage treatment. 638 pts (69%) had a complete response on pre-ASCT positron emission tomography (PET). BEAM (71%) or CBV (21%) conditioning were used for most pts and 236 pts (26%) received peri-ASCT radiation.

224 pts (24%) received post-ASCT BV maintenance (including 37% of pts undergoing ASCT from 2015-2022). Compared to pts receiving no maintenance, pts receiving BV maintenance were more likely to have primary refractory/early relapsed disease (79% vs 67%, p<0.001), have received only 1 salvage regimen (79% vs 65%, p=0.001), and received BEAM conditioning (83% vs 67%, p<0.001). BV maintenance pts were less likely to receive peri-ASCT radiation (20% vs 28%, p=0.022). The median number of BV maintenance cycles was 10 (1-18) and the most common reason for discontinuation was neuropathy.

Median post-ASCT follow-up was 4.9 yrs. 5-yr PFS and OS after ASCT were 70% (95% CI 67-74%) and 85% (83-88%), respectively. Because BV-refractory pts were much less likely to receive BV maintenance (p=0.0044) and had inferior PFS (HR 2.2, p<0.001) (and therefore would serve as a confounder), we excluded BV-refractory pts from additional analyses.

Use of BV maintenance was associated with improved PFS (5-yr 81% vs 67%, HR 0.47 [0.33-0.69], p<0.001) and OS (5-yr 92% vs 83%, HR 0.38 [0.20-0.73], p=0.004). The benefit of BV maintenance depended upon pre-ASCT therapy. BV maintenance was associated with a significant improvement in PFS for pts who received no novel agents before ASCT (HR 0.41 [0.25-0.65], p<0.001), but not for BV-treated (HR 0.69 [0.38-1.25], p=0.22) or PD-1-treated pts (HR 0.63 [0.13-3.03], p=0.56) (**Figure**). Among pts with 0-1 modified AETHERA risk factors, BV maintenance was not associated with a significant PFS benefit in any treatment subgroup (no novel agents, HR 0.50, p=0.087; BV-treated, HR 1.28, p=0.67; PD-1-treated, HR 2.97, p=0.44). For

pts with 2+ modified AETHERA risk factors, BV maintenance significantly improved PFS in the no novel agent group (HR 0.35, p<0.001) but not in the BV-treated (HR 0.55, p=0.099) or PD-1 treated groups (HR 0.24, p=0.19). In multivariable analyses that included key variables (age, year of ASCT, conditioning regimen, peri-ASCT radiation, early relapse/primary refractory disease, B symptoms, extranodal sites, pre-ASCT PET, lines of therapy), BV maintenance was associated with a significant PFS benefit among pts who received no novel agents before ASCT (HR 0.27 [0.12-0.65], p<0.001), but not for pts treated with BV (HR 0.56 [0.28-1.10], p=0.091) or PD-1 blockade (HR 1.10 [0.22-5.56], p=0.91) before ASCT.

Conclusions: In this large cohort, BV maintenance was associated with the clearest benefit among pts who received only chemotherapy before ASCT. We were unable to identify a significant improvement in PFS for pts receiving novel agents before ASCT (which could be due to insufficient power to detect a small benefit in this population), suggesting that if these pts benefit from BV maintenance, its impact is likely more limited.

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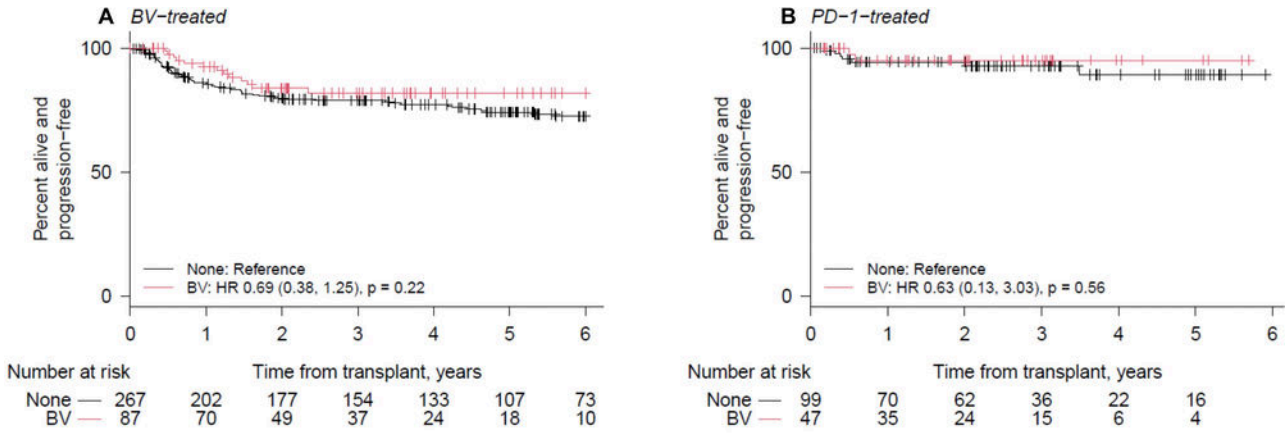

Figure: Progression-free survival with and without BV maintenance among **A**) Patients receiving BV before ASCT, and **B**) Patients receiving PD-1 before ASCT. BV-refractory patients were excluded from these analyses.

Figure 1

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