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ORAL ABSTRACTS

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

PD-1 Blockade before Autologous Stem Cell Transplantation Improves Outcomes in Relapsed/Refractory Classic Hodgkin Lymphoma: Results from a Multicenter Cohort

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Introduction: Single arm studies incorporating PD-1 blockade and/or brentuximab vedotin (BV) to salvage regimen have produced encouraging results in transplant-eligible relapsed/refractory classic Hodgkin lymphoma (R/R cHL) and are increasingly used in practice. As prospective randomized studies comparing PD1 based salvage to other salvage regimens are lacking, we conducted a retrospective study comparing post-transplant outcomes of R/R cHL patients who received PD1-based regimen and other novel and conventional regimen.

Methods: Consecutive adult patients with R/R cHL who received salvage therapy and underwent autologous stem cell transplant (ASCT) between 2010 and 2021 at 5 United States academic institutions were included. Demographics and clinical variables were recorded at relapse by electronic health records review. Study Objectives were post-ASCT progression free survival (PFS) and overall survival (OS).

Results: 981 pts of R/R cHL were identified. At relapse, median age was 31 (IQR: 21-43) years, 504 (52%) were male, 323 (49%) had advanced stage, 353 (41%) had extranodal disease (END), 185 (22%) had B symptoms, 345 (45%) were refractory to frontline therapy and 317 (32%) relapsed within a year of frontline therapy.308 (31%) received >1 line of salvage before ASCT. Patients were divided into 3 groups based on salvage therapy received: 1) 195 (20%) patients received a PD-1 agent with or without BV at any point before ASCT (PD-1 group), 2) 312 (32%) patients received BV at any point before ASCT without PD-1 (BV group), and 3) 474 (48%) patients received no novel agent before ASCT (chemo group). PFS was significantly higher in PD1 group (2-yr PFS 93.1 (CI $_{95}$: 89.4-96.9)%); compared to BV (2 yr PFS 73.9 (CI $_{95}$: 69.1-79.1)% , p <0.0001) or chemo groups (2 yr PFS 71.6 (CI $_{95}$: 67.6-75.9)% , p<0.0001). PFS was not different between the BV and chemo groups (p=0.88) (Figure 1). OS was not significantly different between PD-1 group (2 yr OS 96.2 % (CI $_{95}$: 93.2-99.2), p=0.06), BV group (2 yr OS 94.3% (CI $_{95}$: 91.7-97.0), p=0.2) and chemo group (2 yr OS 91.8% (CI $_{95}$: 89.3-94.4)).

Amongst pts who were transplanted in complete metabolic response (CMR), we assessed post-ASCT PFS and OS based on salvage therapy received immediately before ASCT. Pts who received PD-1 as last salvage therapy had improved PFS compared to chemo (HR: 0.15 (CI $_{95}$: 0.07-0.3), p= <0.0001) and BV (HR: 0.2 (CI $_{95}$: 0.08-0.5), p= <0.001). Pts receiving PD-1 immediately before ASCT also had higher OS compared to those receiving chemo (HR: 0.2 (CI $_{95}$: 0.05-0.8), p= 0.02) but not BV (HR: 0.8 (CI $_{95}$: 0.4-1.3), p=0.1). There was no difference between BV and chemo group in regards to PFS and OS.

In multivariable analysis that included time to relapse, B symptoms, END, pre-ASCT response, number of salvage therapy lines before ASCT, year of transplant and BV consolidation, PD-1 salvage therapy had significantly higher PFS compared to chemotherapy (HR: 0.3 (CI $_{95}$: 0.2-0.5), p= <0.001). BV group had significantly lower PFS (HR: 3.34 (CI $_{95}$: 1.8-6.0), group=0.002) compared to PD1 group. PFS was not different between BV and chemo group (p= 0.7). OS was similar between all 3 groups. Similar PFS and OS were seen among patients receiving PD-1 + BV (n=83) and PD-1 with or without chemo (n =112) (p=0.96 for PFS; p= 0.72 for OS); as well as for patients receiving PD-1 as part of their first salvage therapy (n=151) or later salvage treatments (n=44) (p=0.45 for PFS, p= 0.3 for OS). Patients who received PD1 based regimen as last salvage therapy pre-ASCT had significantly better PFS (HR: 6.8 (CI $_{95}$: 2.4-19.2), p= <0.0001) and OS (HR: 10.6 (CI $_{95}$: 2.5-44.8), p= 0.0001) compared to patients who received PD1 prior to their last line of salvage therapy per-ASCT.
Conclusion: Receipt of PD-1 based salvage therapy at any point before ASCT is associated with significantly improved PFS compared to either BV or chemotherapy-based salvage treatments. In the subgroup of patients transplanted in CMR, PD1 based last salvage regimen were associated with higher PFS compared to chemotherapy and BV and higher OS compared to chemotherapy. PD1 based last salvage therapy pre-ASCT was associated with better survival compared to PD1 prior to last salvage therapy. Results of this study strongly support the use of PD-1 based salvage therapy for patients with R/R cHL.
S.D., R.M., H.S contributed equally. R.S., M.M. contributed equally.

Disclosures Desai: *Seagen:* Honoraria. **Merryman:** *Seattle Genetics:* Membership on an entity's Board of Directors or advisory committees; *Epizyme:* Membership on an entity's Board of Directors or advisory committees; *Adaptive Biotechnology:* Membership on an entity's Board of Directors or advisory committees; *Alphasights:* Membership on an entity's Board of Directors or advisory committees; *Genmab:* Membership on an entity's Board of Directors or advisory committees, Research Funding; *Abbvie:* Membership on an entity's Board of Directors or advisory committees; *BMS:* Membership on an entity's Board of Directors or advisory committees, Research Funding; *Intellia:* Membership on an entity's Board of Directors or advisory committees; *Genentech/Roche:* Research Funding; *Merck:* Research Funding. **Shah:** *ADCT:* Research Funding; *BeiGene:* Research Funding; *AstraZeneca:* Research Funding; *Seagen Inc.:* Membership on an entity's Board of Directors or advisory committees, Research Funding; *Epizyme:* Research Funding; *AbbVie:* Membership on an entity's Board of Directors or advisory committees. **Shah:** *ArcellX:* Other: DSMB; *BMS:* Research Funding; *Beyond Spring:* Research Funding; *Amgen:* Research Funding; *Janssen:* Research Funding. **Ansell:** *ADC Therapeutics:* Research Funding; *Pfizer:* Research Funding; *AstraZeneca:* Research Funding; *Affimed:* Research Funding; *Takeda:* Research Funding; *SeaGen:* Research Funding; *BMS:* Research Funding; *Regeneron Pharmaceuticals, Inc.:* Research Funding. **Armand:** *Xencor:* Consultancy; *Affimed Therapeutics:* Research Funding; *Tessa Therapeutics:* Consultancy; *MSD:* Consultancy, Research Funding; *AstraZeneca:* Consultancy, Research Funding; *Kite - a Gilead company:* Research Funding; *Foresight Diagnostics:* Consultancy; *ATB Therapeutics:* Consultancy; *Genentech/Roche:* Consultancy, Research Funding; *Enterome:* Consultancy; *Regeneron:* Consultancy; *Adaptive Biotechnologies:* Research Funding; *IGM:* Research Funding; *GenMab:* Consultancy; *ADC Therapeutics:* Consultancy; *Bristol Myers Squibb:* Consultancy, Research Funding; *Merck:* Consultancy, Honoraria, Research Funding. **Moskowitz:** *Merck:* Honoraria, Research Funding; *Incyte:* Research Funding; *Bristol-Myers Squibb:* Research Funding; *Beigene:* Research Funding; *Seattle Genetics:* Honoraria, Research Funding; *ADC Therapeutics:* Research Funding. **Herrera:** *BMS:* Consultancy, Other: Travel/Accommodations/Expenses, Research Funding; *Adicet Bio:* Consultancy; *Allogene Therapeutics:* Consultancy; *Seattle Genetics:* Consultancy, Research Funding; *Genentech/Roche:* Consultancy, Research Funding; *Gilead Sciences:* Research Funding; *AbbVie:* Consultancy; *Merck:* Consultancy, Research Funding; *Genmab:* Consultancy; *Pfizer:* Consultancy; *AstraZeneca/MedImmune:* Consultancy; *Kite, a Gilead Company:* Research Funding; *Karyopharm Therapeutics:* Consultancy; *ADC Therapeutics:* Consultancy, Research Funding; *Caribou Biosciences:* Consultancy; *Regeneron:* Consultancy; *Takeda:* Consultancy; *Tubulis GmbH:* Consultancy; *AstraZeneca:* Research Funding. **Mei:** *NOVARTIS:* Membership on an entity's Board of Directors or advisory committees; *CTI:* Membership on an entity's Board of Directors or advisory committees; *Janssen:* Membership on an entity's Board of Directors or advisory committees; *BMS:* Research Funding; *Beigene:* Research Funding; *EUSA:* Membership on an entity's Board of Directors or advisory committees; *Incyte:* Research Funding, Speakers Bureau; *SeaGen:* Membership on an entity's Board of Directors or advisory committees, Speakers Bureau.

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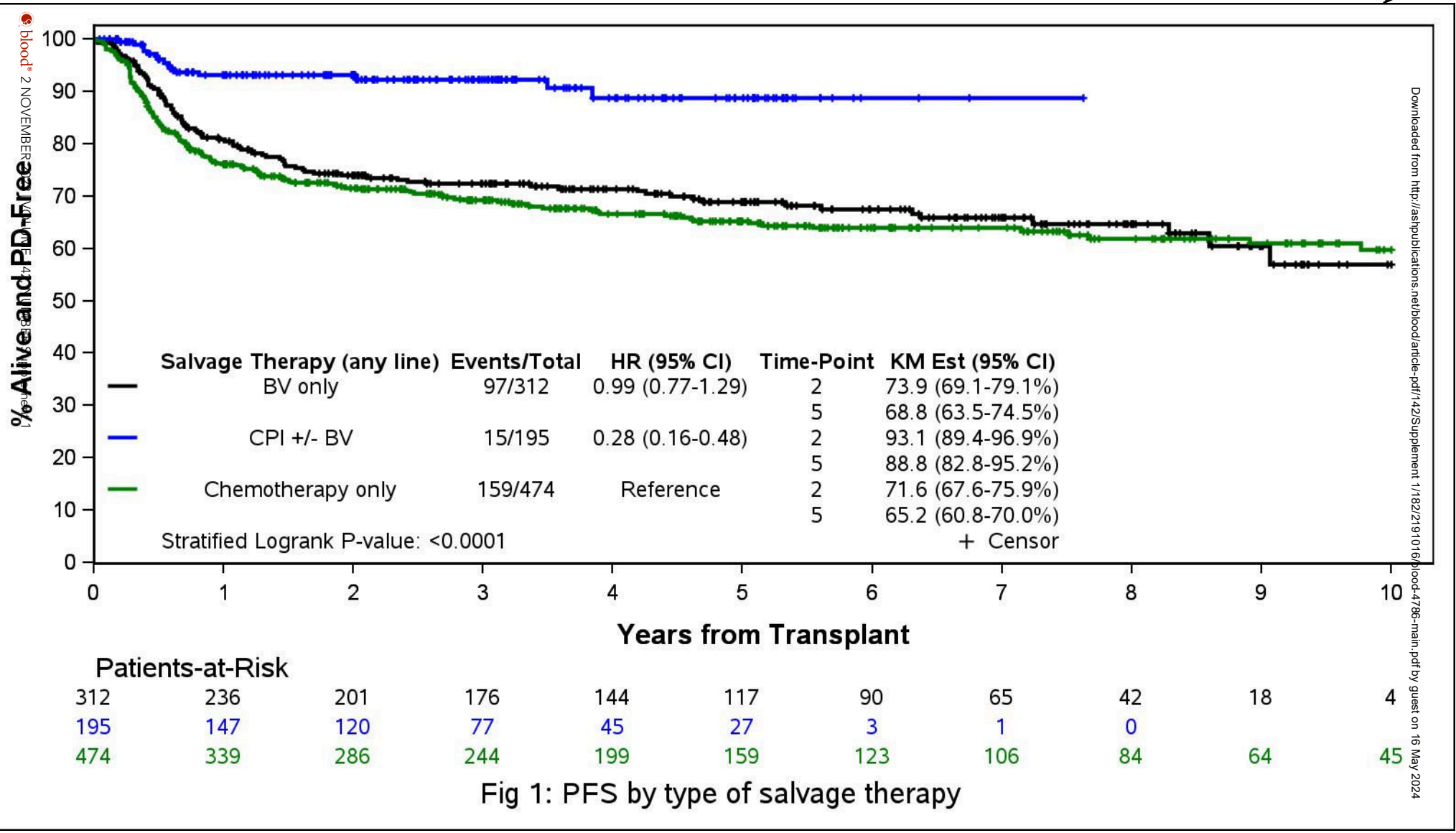

Fig 1: PFS by type of salvage therapy

Figure 1