myeloablative in all cases. Overall survival, leukemia free survival (LFS) and relapse incidence (RI) at 3 years were 57±4%, 49±4% and 45±3%, respectively. Only 4 patients (1.9%) had VOD (moderate-2, severe-2) at median day 16 (range, 10-47). One of the patients died from VOD. Non relapse mortality at 3 years was low 6±1%. In multivariate analysis the only prognostic factor that was found to be significant for OS, LFS, RI and NRM was age >50 *vs* <50 years with p-value of <0.001, <0.001, <0.006 and <0.001, respectively (47±5%, 38±5%, 52±5%, 10±3% *vs* 68±5%, 76±4%, 32±5% and 0%, respectively).
In summary, these results suggest, that similar to the allogeneic setting, VOD is a very uncommon event after AutoSCT using iv Bu in the conditioning regimen translating into a low NRM incidence.

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Intravenous busulfan plus cyclophosphamide (Cyt) versus TBI plus Cy conditioning for allogeneic stem cell transplantation from matched unrelated donors. In adult patients with AML in first relapse: a survey from the ALWP of EBMT

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We compared TBI/Cy to I.V Bu/Cy conditioning prior to alloSCT from HLA matched unrelated donors in 169 adult pts with AML in Rel 1. 95 pts were given TBI/Cy and 74 Bu/Cy. Median age was 38 (18-62) and 42 (19-72) years in the TBI/Cy *vs.* Bu/Cy groups, respectively (P<0.005). FAB classification, cytogenetic risk, time from diagnosis to alloSCT, donor gender and CMV serostatus did not differ between the groups. Median year of alloSCT was 2004 *vs.* 2007, respectively (P<0.001). ATG was used in 35% *vs.* 71% in the TBI/Cy and Bu/Cy groups, respectively (P<0.0001). 80% and 78% of the TBI/Cy and Bu/Cy groups received PBSC grafts, while 22% and 20% received BM grafts, respectively (P=0.8). Median follow-up was 23 (range, 1-125) and 27 (1-120) months in the TBI/Cy and Bu/Cy groups, respectively. Engraftment was similar, 17 (10-33) and 16 (6-31) days in the TBI/Cy and Bu/Cy groups, respectively (P=0.23). Similarly, acute GVHD (≥Gr II) incidence did not differ between the 2 groups: 33% *vs.* 37% for the TBI/Cy *vs.* Bu/Cy, respectively. Death before day 100 occurred in 38% *vs.* 25% with TBI/Cy *vs.* Bu/Cy, respectively (P=0.25). 2y NRM was similar between the 2 groups, 28±5% *vs.* 19±5%, respectively (P=0.2). 2y relapse rate was 54±5% *vs.* 50±6%, respectively (P=0.56). Induction of remission post alloSCT was higher with Bu/Cy *vs* TBI/Cy, 72% *vs* 54% (P=0.02). 2y LFS was also higher with the Bu/Cy *vs* TBI/Cy, groups: 23 ± 6% *vs.* 18±4%, respectively (P=0.045). Similarly, 2y OS was significantly higher with Bu/Cy *vs.* TBI/Cy 37±6% *vs.* 21±5%, respectively (P=0.013). The main cause of death was disease relapse: 53% and 60%, with TBI/Cy *vs.* Bu/Cy, respectively (p=0.49). VOD and infection-related deaths did not differ between the groups. In multivariate analysis the interval from diagnosis to transplant (> *vs* < 16 months) was the most significant prognostic factor for Rel, LFS and OS 25±8% *vs* 59±4% (p=0.004), 48±9% *vs* 17±3% (p=0.002) and 41±7% *vs* 20±4% (p=0.003), respectively. Age, cytogenetic risk groups and use of ATG were not significant prognostic factors for survival. In all, this observational registry based study suggest that in AML pts in first Rel undergoing unrelated transplantation post transplant iv Bu/Cy *vs* TBI/Cy incuced higher remission rate which results in better LFS and OS. This advantage in favor of the iv Bu/Cy regimen is also possibly due to a lower overall toxicity and improved capacity for salvage therapy.

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Impact of chronic graft-versus-host disease after reduced-intensity conditioning allogeneic stem cell transplantation for acute myeloid leukaemia: A report from the Acute Leukaemia Working Party of the European Group for Blood and Marrow Transplantation

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We investigated the impact of occurrence of GVHD on transplantation outcomes in a large cohort of AML pts given allogeneic PBSC after RIC conditioning. Data from 1859 AML pts in first (n=1439) or second (n=420) CR transplanted between 2000 and 2009 following a RIC regimen at EBMT affiliated centres were analyzed. Pts were given PBSC from HLA-identical sibling (MRD, n=1208), or from HLA-matched unrelated donors (MUD, n=651). ATG was given in 269 (22%) MRD and in 267 (41%) MUD recipients, respectively, while 151 (13%) MRD and 165 (25%) MUD recipients received in-vivo T cell depletion with alemtuzumab. The impact of chronic GVHD (cGVHD) on outcomes was assessed using time-dependent multivariate Cox models and in a landmark analysis at 18 months after transplant. The 3-y cumulative incidence of cGVHD was 47%. Fifty-three percent of patients with cGVHD had extensive cGVHD, while the remaining 47% had limited cGVHD. In multivariate analyses, occurrence of grade II-IV aGVHD was associated with a lower risk of relapse (HR=0.8; P=0.04), a higher risk of chronic (HR=2.2; P<0.001) and extensive chronic GVHD (HR=2.8; P<0.001), a higher risk of NRM (HR=2.4 P<0.001), a worsened LFS (HR=1.3; P=0.01), and a worsened OS (HR=1.5; P<0.001). In multivariate time-dependent analyses, occurrence of limited cGVHD was associated with a lower risk of relapse (HR=0.7; P=0.05), comparable NRM (HR=1.4; P=0.16), comparable LFS (HR=0.9; P=0.29) and better OS (HR=0.5; P<0.001), while occurrence of extensive cGVHD was associated with a lower risk of relapse (HR=0.6; P=0.01), higher NRM (HR=3.2; P<0.001), a trend for worsened LFS (HR=1.3; P=0.06) and comparable OS (HR=0.9; P=0.34). In a landmark analysis in patients who were leukemia-free at 18 months after transplantation (n=776), 2-year relapse, NRM, LFS and OS were 16±2%, 2.5±1%, 82±2%, and 89±2%, respectively, in patients without cGVHD before the landmark time-point, versus 9±1% (P=0.001), 8±1% (P<0.001), 83±2% (P=0.65), and 86±2% (P=0.38), respectively, in patients with cGVHD before the landmark time-point. In conclusion, in this cohort of AML patients transplanted in remission, occurrence of cGVHD was associated with a lower risk of relapse that translated to better OS in patients with limited cGVHD but not in those with extensive cGVHD who experienced higher long term NRM. These results highlight the role of the GVT effect in RIC allo-SCT, but also the need for improving the prevention of severe cGVHD in pts receiving RIC allo-SCT.

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Impact of alemtuzumab versus anti-thymocyte globulin after unrelated allogeneic stem cell transplantation with reduced-intensity conditioning as treatment for AML in CR1: a survey from the Acute Leukaemia Working Party of the EBMT

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In vivo T cell depletion of the graft with anti-thymocyte globulin (ATG) or with alemtuzumab has been frequently used in the