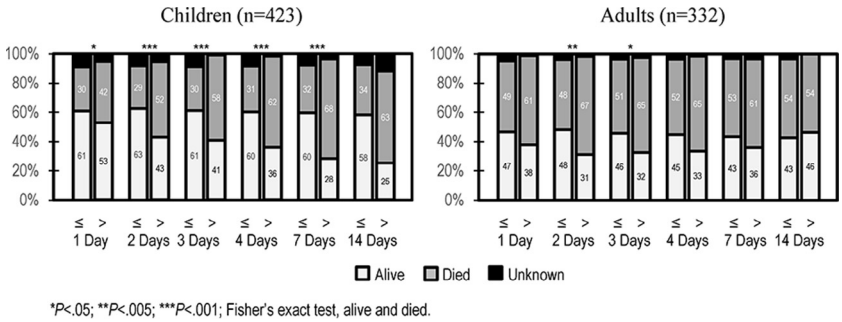


Figure 1. Day +100 survival: treatment difference for earlier vs later initiation.

rates in pediatric (age ≤16 years) and adult patients were examined *post-hoc* by time to start of defibrotide post-diagnosis for (1) all patients before/after days 1, 2, 3, 4, 7, and 14, using Fisher's exact test and (2) patients starting defibrotide on a particular day: 0, 1, 2, 3, 4, 5, 6, 7, 8-14, and ≥15 (Cochran-Armitage test for trend across days). Causes of treatment delay were not assessed.

Results: Of 755 post-HSCT patients through April 18, 2015, 423 were pediatric (232 with MOD) and 332 adults (194 with MOD). Defibrotide was started on the day of diagnosis in 33% of pediatric and 30% of adult patients; 94% and 92%, respectively, started defibrotide by day 7 post-diagnosis.

In the analysis of treatment initiation before or after days 1, 2, 3, 4, 7, and 14 across each age group, earlier defibrotide start resulted in numerically higher survival rates for all cutoffs except day 14 in adults, with only 4% of adult patients beginning treatment post-day 14 (Figure 1). The trend test was also statistically significant over time for higher Day +100 survival with earlier initiation in pediatric patients ($P < .001$) and adults ($P = .028$).

Conclusions: Decreased Day +100 survival in pediatric and adult groups was associated with longer treatment delays post-VOD/SOS diagnosis, confirmed by Cochran-Armitage testing. These results suggest that, irrespective of age, early defibrotide initiation post-VOD/SOS diagnosis may improve Day +100 survival outcomes, although no specific day post-diagnosis seemed to provide a clinically meaningful cutoff for better outcome, suggesting that later intervention still retains value if therapy is not initiated sooner.

Support: Jazz Pharmaceuticals.

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Single Institution Experience RIC Haploidentical Transplants

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We report a single institution experience with reduced intensity conditioning haplo-identical transplantation in AML/MDS from the years 2014 to 2016. We retrospectively reviewed 24 cases. All patients had 2 or 3 loci mismatched. All received Fludarabine 30 mg/m2 × 5 doses, CTX 14.5 mg/kg × 2 doses and TBI 200 centigray prior to the infusion of the HPC product and CTX 50 mg/kg × 2 doses day 3, 4 after the infusion of the HPC product. Tacrolimus and MMF are started on day 5. HLA antibodies were performed for all patients.

Mean age was 56.8 years, with range 21 to 73 years. Disease Status was CR1 in 14 patients with AML. Seven patients had a history of high risk MDS.

Cytogenetics/Molecular abnormalities included Trisomy 1, 8, 9, 11, 21. Eight patients had FL+3 ITD mutations. Three patients developed acute renal failure. Two of these patients required dialysis.

None of the patients developed severe acute GVHD (grade 3-4) or extensive chronic GVHD. All patients received unmanipulated HPC, Apheresis products with a mean CD34 cell dose of 5.48×10^6/kg, range 2.6 to 8.85. Mean neutrophil engraftment was 19 days, with a range of 14 to 36. One patient had primary graft failure. Four patients had secondary graft failure. Two of these patients received Azacitidine for graft immune modulation. Three of the four receive incremental DLI's. One patient achieved full chimerism and count recovery with Azacitidine alone. One patient remains in remission 22 months after transplant on Azacitidine without evidence of engraftment of donor cells.

Median overall survival was 256 days. Ten of these patients remain in CR with full donor chimerism at 9 months median follow up (range 9 to 30 months.) Four o f these patients had FLT 3 ITD mutations. T replete RIC haplo identical transplant using post transplant Cytoxan is a promising alternative for patients with high risk AML/MDS and may prove to be more effective than fully matched donor transplants.

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Catheter Thrombosis in Allogeneic Hematopoietic Stem Cell Transplantation (Allo-HSCT) Recipients

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Introduction: Central venous catheters are most important way of venous access in allo-HSCT. Catheter thrombosis incidence are lower in allo-HSCT compared to autologous hematopoietic stem cell transplantations as a rate of 8-20%. In this study, we present our data of catheter thrombosis in allo-HSCT recipients.

Patients and Methods: We retrospectively analysed 495 patients who underwent allo-HSCT between 2001 and 2015. Central venous catheters were implanted in all patients prior to transplantation. During follow-up, patients who had symptoms were evaluated by venous doppler ultrasound to detect venous thrombosis.

Results: The median age of the patients was 36 (range, 16-71), 298 (60.2%) were male. Hematological malignancies (acute leukemia, chronic leukemia, chronic myeloproliferative disease, lymphoma, plasma cell disorders) was detected in 412 patients (83.2%) while 83 patients (16.8%) were underwent allo-HSCT for benign hematological diseases (aplastic anemia, thalassemia, immune deficiency). Allo-HSCT from unrelated donors were done in 143 patients (28.9%). Up to patients general conditions, tunneled central venous catheters were inserted in 374 patients (75.6%) while non-tunelled central venous catheters in 121 patients (24.4%). The venous sites preferred up to frequency were as follows: 322 (65%) patients internal juguler vene, 156 patients (32%) subclavian vene, 17 patients (3%) femoral vene. Totally 52 patients had symptoms of pain, redness in place of catheter and evaluated by doppler ultrasound and acute catheter thrombosis detected in 25 patients (5.1%). Thrombus was detected within one month of insertion in 14 of 25 patients (56%). Right internal venous thrombosis were detected higher in incidence compared to femoral and subclavian venes ($P = .009$). The incidence of thrombosis were increased in tunneled venous catheter, related transplants, diagnosis of hematological malignancies, and older age however there were no statically significance. ($P > .05$). All patients were successfully treated with low molecular weight heparin.
Conclusion: The incidence of catheter thrombosis in allo-HSCT in our series was 5.1%. Right internal venous thrombosis was detected most frequently. The urgent evaluation and treatment of catheter thrombosis is important for prevention of complications.

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Allogeneic Stem Cell Transplantation At-Home Program, Experience and Safety in Hospital Clinic of Barcelona

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Background and Objectives: Allogeneic stem cell transplantation (SCT) is a procedure with high morbidity and mortality (10-20%) requiring a complex hospital infrastructure. Improved support measures and development of homecare units has bolstered allogeneic SCT at-home programs to develop. Our center has launched a pioneering program in our country in patients with allogeneic SCT to perform at home the following of aplasia, control of immunosuppressive therapy (IST) and intravenous support from the D+1 of allogeneic SCT until the engraftment and independent ambulatory patient. To evaluate the patient safety, we compared the group of patients at-home (ASCT-OP) with a cohort of ASCT "in patient" with the same characteristics (ASCT-IP).
Patients and Methods: 20 allogeneic SCT patients between January 2014 and July 2016 at the Hospital Clinic of Barcelona. 10 patients performed ASCT-OP and 10 had an ASCT-IP. All patients received conditioning (myeloablative –MAC- or reduce intensity- RIC-) in the hospital with fludarabine 40 mg/m2 (D1-4) and busulphan 3,2 mg/kg (2-4 doses), prophylaxis of GvHD was performed with tacrolimus/mycophenolate (MMF) in ASCT-OP group and cyclosporine(CsA) and methotrexate (MTX) or MMF in ASCT-IP group. In all patients, the infectious prophylaxis was conventional (levofloxacin, fluconazole and acyclovir). Moreover, the ASCT-OP group received prophylaxis with ceftriaxone 1g intravenous (IV) once daily and liposomal amphotericin B inhaled 25 mg twice a week during neutropenia. The ASCT-OP group from D+1 received a nurse visit once daily and physician visits twice a week in the hospital.

Table 1

N = 20	ASCT-OP (N = 10) N (%)	ASCT-IP (N = 10) N (%)
Age, median (range)	55 (48-69)	62 (55-66)
Gender	7 (70%)	5 (50%)
Male		
Donor	9 (90%)	8 (80%)
Unreated		
CD34+,10^6/Kg	5.5 (2.3-8)	6.1 (3.8-8)
Median (range)		
Diagnostic	9 (90)	5 (50)
AML	1 (10)	3 (30)
MDS	0 (0)	2 (20)
Primari myelophibrosis		
Conditioning*	5 (50)	0 (0)
MAC	5 (50)	10 (100)
RIC		
GvHD prophylaxis*	0 (0)	5 (50)
CsA/MTX	10 (100)	5 (50)
CsA or TK/MMF		
Days of admission, median (range)	21 (16-27)	21 (20-38)
Days of neutropenia <0,5 × 10^9/L*	8 (7-21)	14 (8-23)
median (range)		
Days of platelets <20 × 10^9/L*	3.5 (0-5)	8.5 (0-27)
median (range)		
Neutropenic fever*	3 (30%)	10 (100%)
Days of neutropenic fever*	0 (0-1)	4 (2-6)
median (range)		
Mucositis*	0 (0)	4 (40)
Grade 3-4		
GvHD +30d	0 (0)	3 (30)
TRM +100d	0 (0)	0 (0)

* $p < 0,05$.

Results: Baseline characteristics related to toxicity and patient outcomes were analyzed. The median age was 60 years (range, 48-69), male/female 12/8; (60% male). The source of the progenitors was peripheral blood in all cases and analysis of the results are detailed in Table 1.
Conclusions: The allogeneic SCT, MAC or RIC underwent at home is a safe procedure. There seems to be a trend in lower incidence of neutropenic fever and early GvHD in the ASCT-OP group.

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Cytomegalovirus Reactivation after Allogeneic Hematopoietic Stem Cell Transplantation with Post-Transplant Cyclophosphamide

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Introduction: Human cytomegalovirus (CMV) infection remains one of the major complications after allogeneic hematopoietic stem cell transplantation (HCT) as it is associated with considerable morbidity and mortality. Many factors can attribute in CMV reactivation such as CMV donor and recipient status, and low CD4+ T-cell count post HCT. Post-transplant cyclophosphamide (PTCy) has been shown to