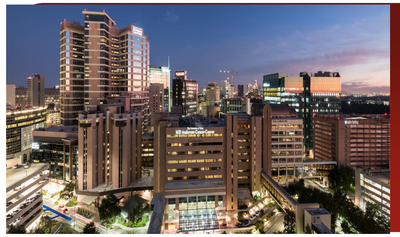

Long-term outcomes after haploidentical stem cell transplantation (haplo-SCT) for hematologic malignancies

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Background

- Allogeneic SCT is curative for large proportion of patients with high-risk hematologic malignancies
- The introduction of posttransplant cyclophosphamide (PTCy)-based GVHD prophylaxis led to significant improvements in haplo-SCT outcomes and a remarkable increase in its use in the past decade
- We aimed from this study to assess long-term outcomes of patients who underwent haplo-SCT

Methods

- All consecutive adult patients who had their first haplo-SCT between 2/2009 and 3/2019
- Long-term survivors defined as patients who were alive and disease free at 2 years after transplant

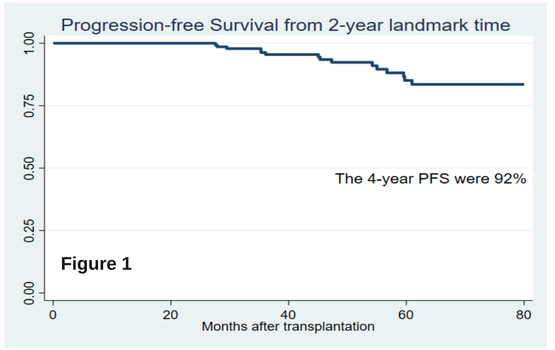
✓ **Primary end points:** PFS and OS
✓ **Secondary endpoints:** cumulative incidence of relapse (CIR) and non-relapse mortality (NRM)

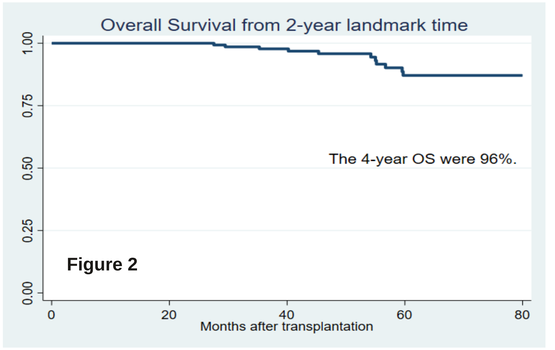
Results

- Table 1 summarizes baseline characteristics of all patients and the long-term survivors
- The 4-year PFS and OS for all study patients were 42% and 47%
- **With a median follow-up of 52 months for the long-term survival group, the 4-year PFS and OS were 92% and 96%, respectively (Figure 1&2)**

Table 1 Baseline characteristics

Variable	All Patients (N=366)	2-year landmark (N=144)
Age years		
Median (range)	48 (18-72)	45 (18-72)
Age at transplant		
<55 years	206 (61.31%)	97 (67.36%)
≥55 years	130 (38.69%)	47 (32.64%)
Gender		
Male	196 (58.33%)	84 (58.33%)
Female	140 (41.67%)	60 (41.67%)
Disease Subtype		
AML/MDS	196 (58.33%)	80 (55.56%)
ALL	55 (16.37%)	22 (15.28%)
MPN	37 (11.01%)	22 (15.28%)
Lymphoid malignancies	48 (14.29%)	20 (13.89%)
KPS at transplant		
KPS 90-100	207 (68.32%)	93 (69.92%)
KPS<90	96 (31.68%)	40 (30.08%)
DRI		
Low/Intermediate DRI	189 (58.88%)	100 (72.46%)
High/Very High DRI	132 (41.12%)	38 (27.54%)
HCT-CI		
HCT-CI ≤ 3	218 (64.88%)	101 (70.14%)
HCT-CI>3	118 (35.12%)	43 (29.86%)
Stem cell source		
Peripheral blood	54 (16.07%)	18 (12.50%)
Bone marrow	282 (83.93%)	126 (87.50%)
Conditioning regimen		
Reduced intensity	298 (88.69%)	127 (88.19)
Myeloablative	38 (11.31%)	17 (11.81%)
Patient-Donor CMV		
R-R	186 (64.14%)	79 (66.39%)
R-NR	104 (35.86%)	40 (33.61%)
Acute GVHD Gr2-4 at 2 years		
No	192 (57.14%)	90 (62.50%)
Yes	144 (42.86%)	54 (37.50%)
Chronic GVHD at 2 years		
No	291 (86.61%)	116 (80.56%)
Yes	45 (13.39%)	28 (19.44%)

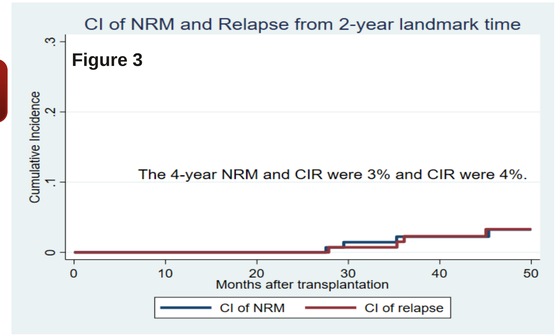




Results Continued

- **In MVA, age ≥ 55** was the only predictive for inferior PFS (HR 2.63, 95% CI: 1.01-6.84; p=0.047) and OS (HR 3.33, 95% CI: 1.08-12.23; p=0.036)
- Figure 3 shows NRM and CIR rates
- **Thirteen patients (9%) died in the long-term survivor group:**

✓ Two died of relapse
✓ Secondary primary malignancy was the most frequent cause of NRM (n=4)
✓ Two patients died from infection
✓ One patient each from GVHD and sudden death
✓ For 3 patients, the cause of death was unknown



Conclusion

- **Our findings suggest an excellent long-term survival for patients who were disease-free at 2 years after haplo-SCT**
- **Late relapses were low**
- **Age was the only predictive factor for survival**