

**HLA mismatched/ haploidentical HSCT without in vitro
T-cell depletion for the treatment of acute leukemia**

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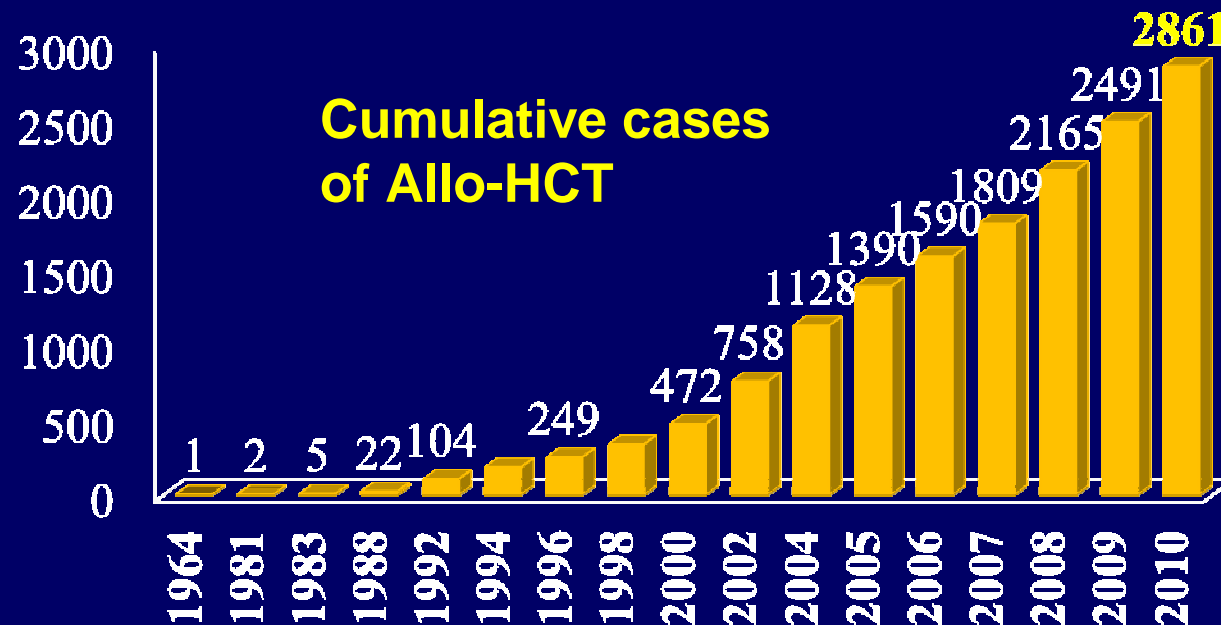
Beijing China Nov. 2011



The largest HCT center in China

24% Allogeneic HCT cases of China

➤ 400 cases each year since 2008



HLA mismatched allo-HSCT from family members

- **without in vitro TCD**
- **G-CSF for all donors**
- **combination of G-CSF-primed PBSCs and BMSC**

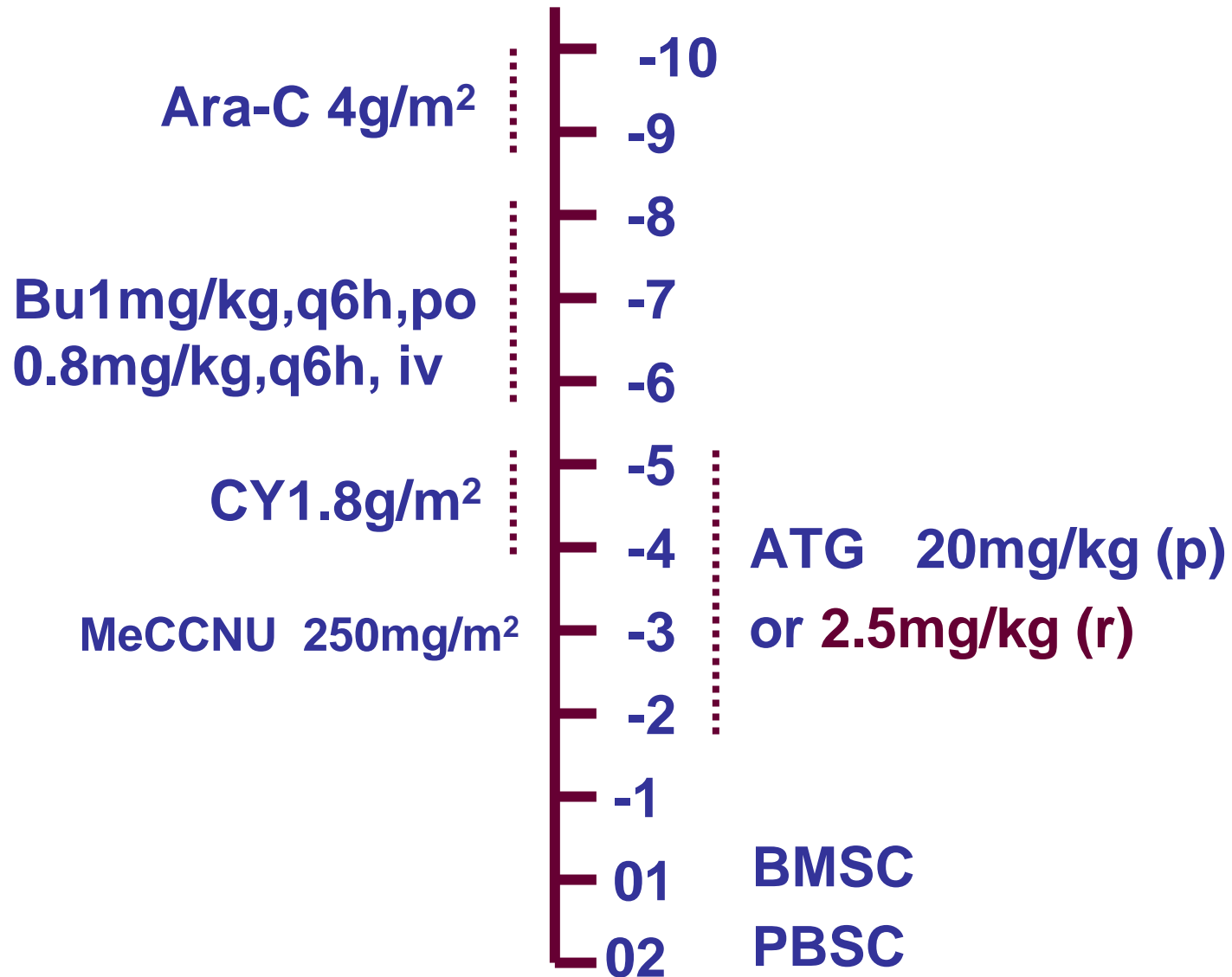
Haploidentical HSCT without ex vivo T-depletion from family members for acute leukemia

n=250 *Biol Blood Marrow Transplant.* 2009; 15:257-65

Peking University Institute of Hematology

Haploidentical HCT n=250

Conditioning



Patient Eligibility

- malignant hematological disease
- Nov of 2001 - May of 2007
- no HLA-identical related, unrelated donors or cord blood
- 117 patients reported in 2006 followed up in this study
- Followed up to: 16-08-2007

GVHD prophylaxis

ATG (CsA+ MMF+ short-term MTX)

- CsA: 2.5 mg/kg/d, i.v. from d-9
- MMF: 0.5g q12h, from day -9 ~ day 30
- Methotrexate: 15 mg/m², i.v. on d1, and 10 mg/m² on d3, 6, and 11

Characteristics

Age (range) 25.1(2-56)

Gender

Male 154 (61.6%)

Female 96 (38.4%)

High-risk 89(35.6%)

Standard-risk 161(64.4%)

ALL 142 (56.8%)

Standard risk 67

High-risk 55

AML 108 (43.2%)

Standard risk 74

High-risk 34

D-Recip. gender and relationship—No. (%)

Male-male	72
Male-female	30
Female-male	85
Female-female	63
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Parent-child	155 (62%)
Siblings	77 (30.8%)
Child-parent	15 (6%)
Uncle/Aunt	3 (1.2%)

HLA mismatched loci (%)

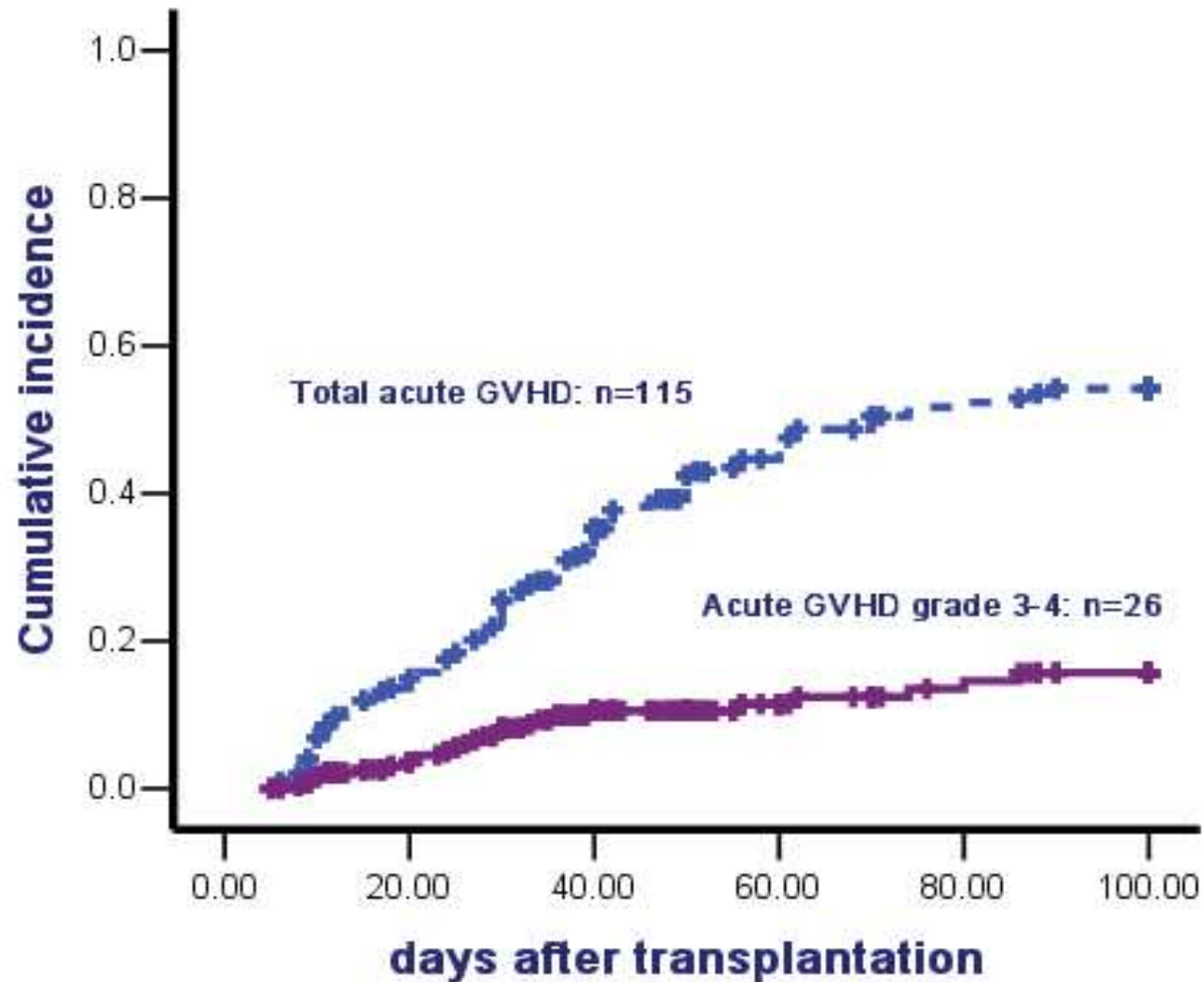
1 locus	40 (16%)
2 loci	105 (42%)
3 loci	105 (42%)

- 249 achieved hematopoietic recovery
- Myeloid engraftment: 12 (9-26) days
- Platelets engraftment: 15 (8-151) days

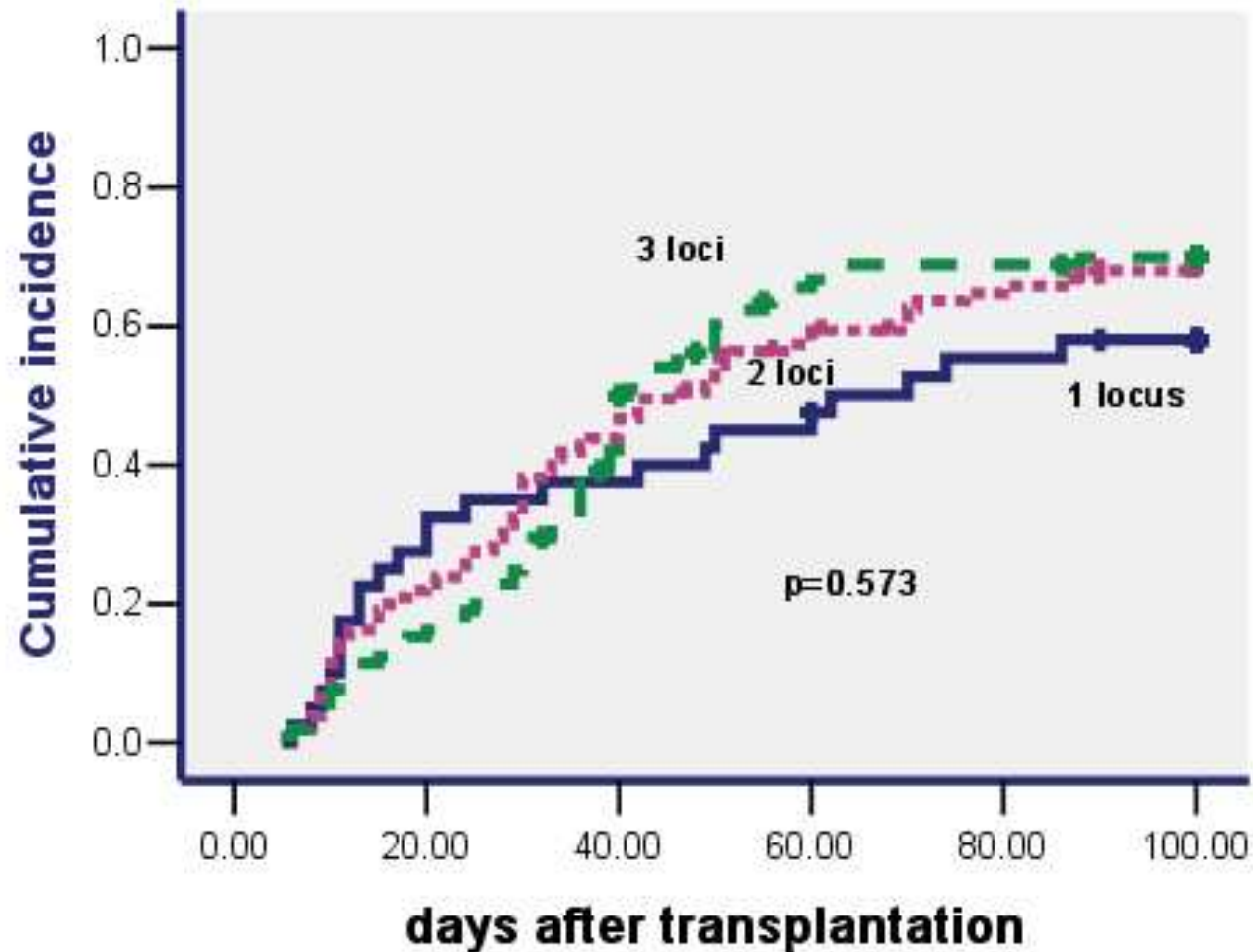
Acute graft-versus-host disease

Grade	Case(percent)
none	86 (34.4%)
grade 1	49 (19.6%)
grade 2	89 (35.6%)
grade 3	11 (4.4%)
grade 4	15 (6%)

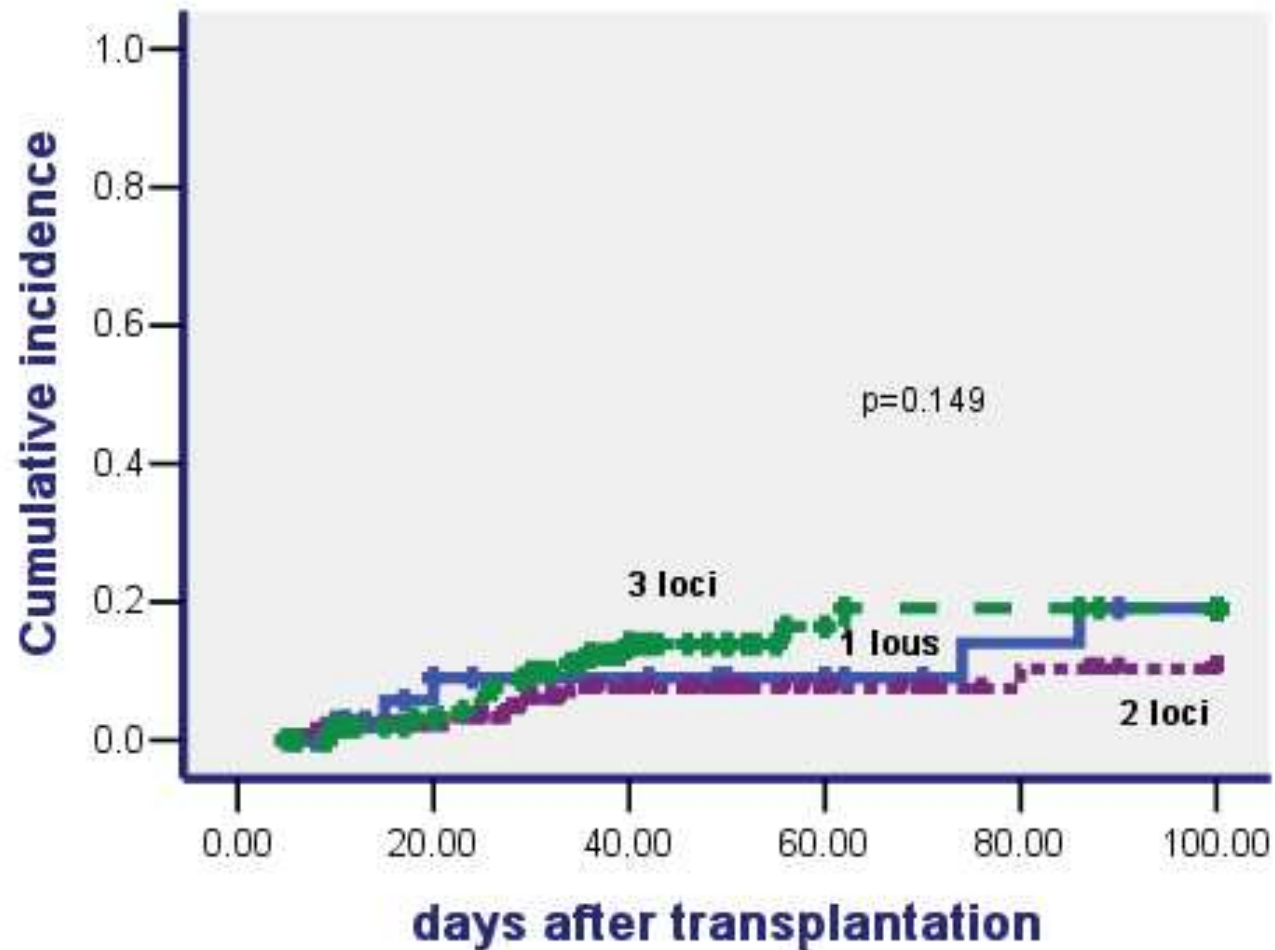
Incidence of total acute GVHD and severe acute GVHD after HLA-mismatched/haploidentical HSCT



Incidence of acute GVHD after HLA-mismatched/haploidentical HSCT with HLA disparity



Incidence of acute GVHD grade 3-4 after HLA-mismatched/haploidentical HSCT with HLA disparity



aGVHD Grade	3	4*
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Death (GVHD)	1	8 (DLI:1)
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VOD	1	
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Death (infection)	2	4
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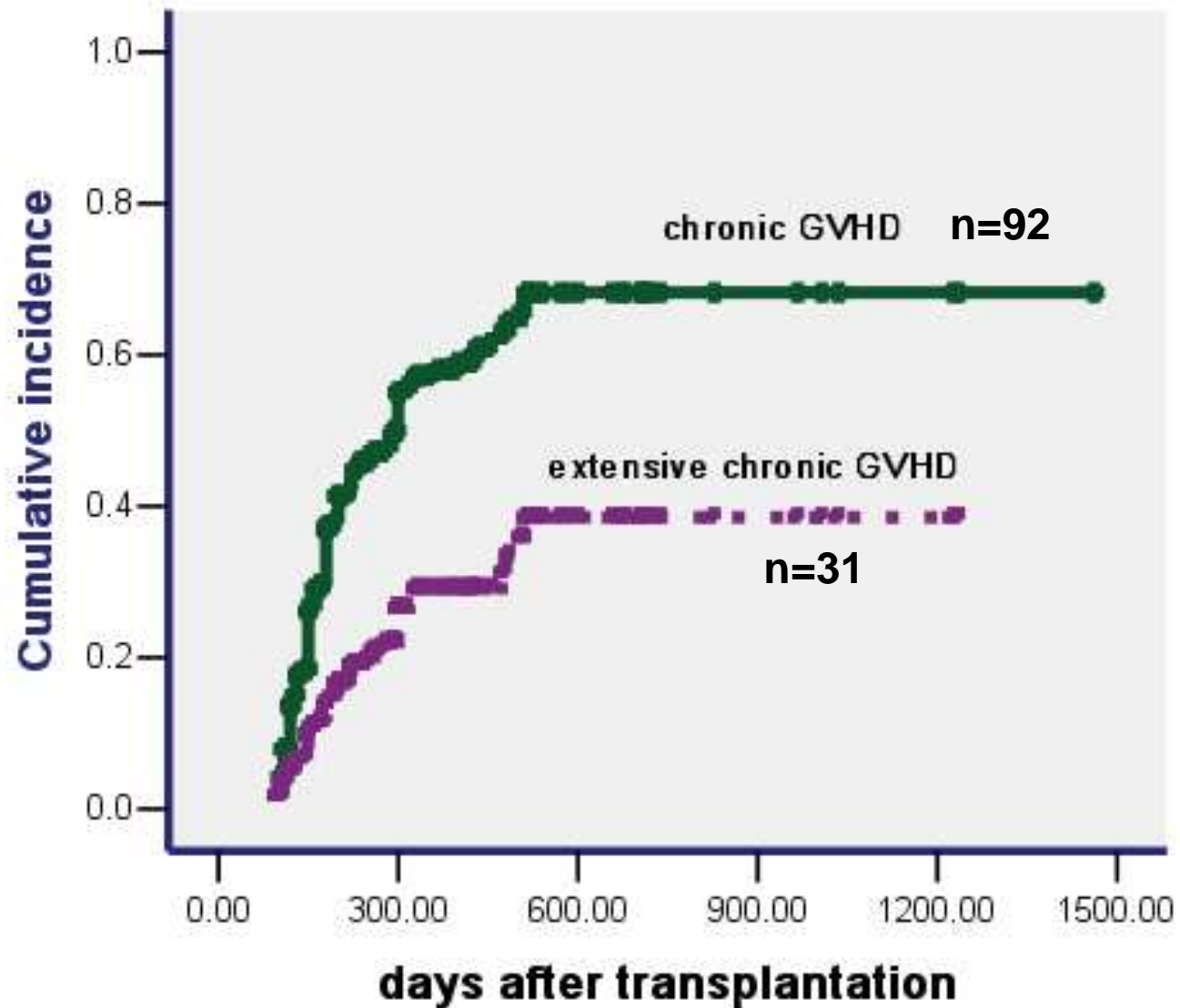
LFS survival	7	3 (217,941,958d)
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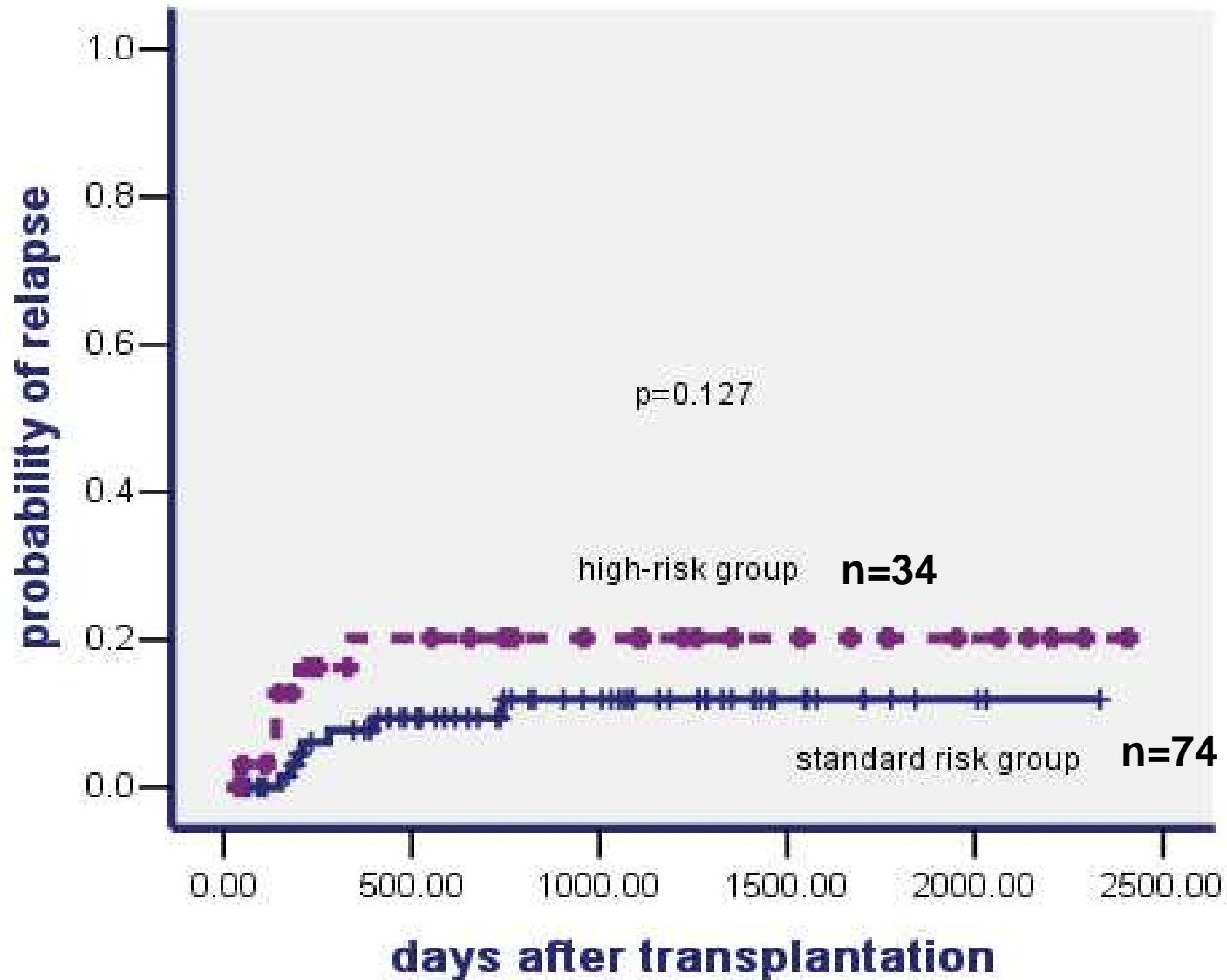
Total	11	15
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Follow-up of survivors	1092 (442~ 2437) d	
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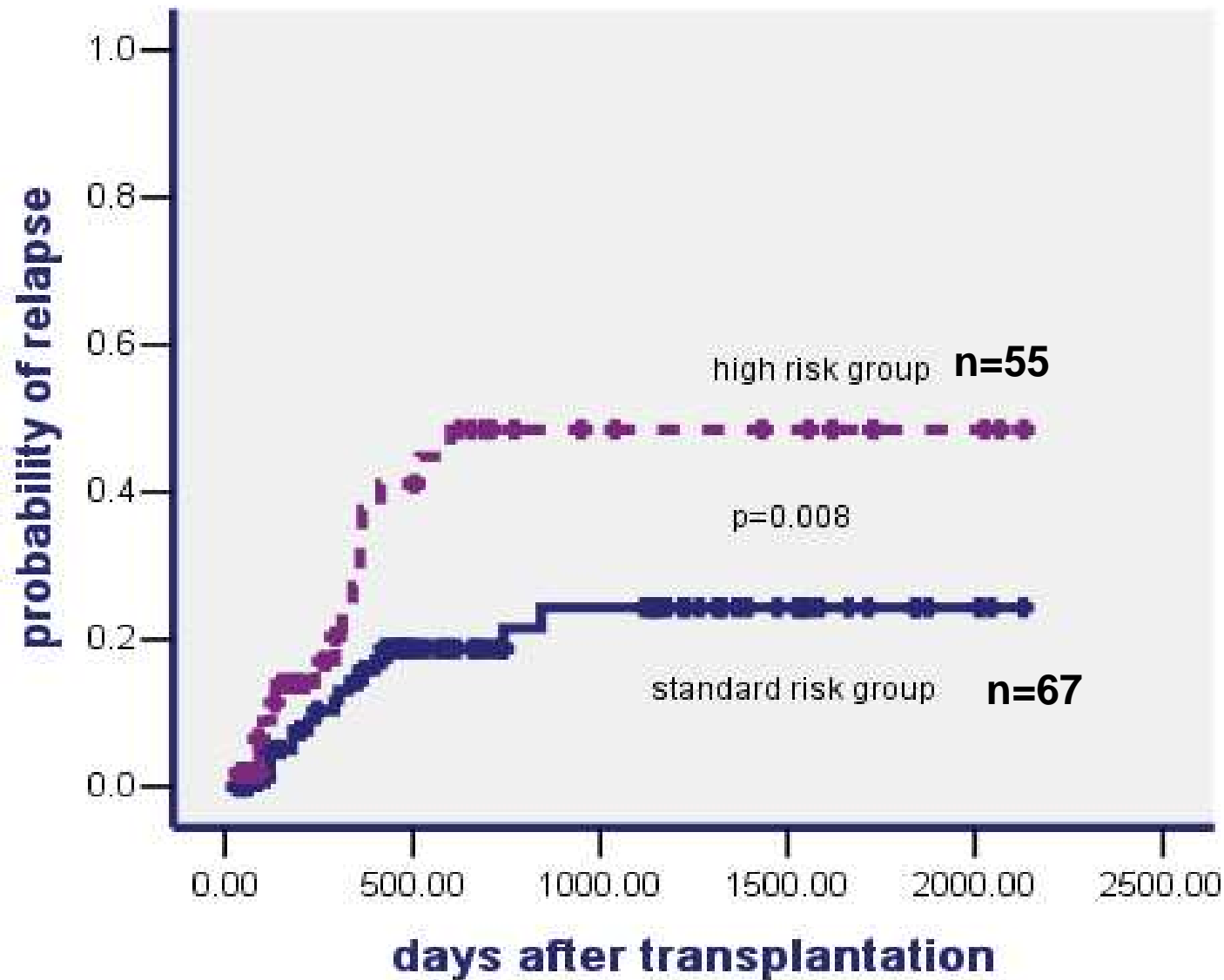
Cumulative incidence of chronic graft-versus-host disease after HLA-mismatched/haploidentical HSCT



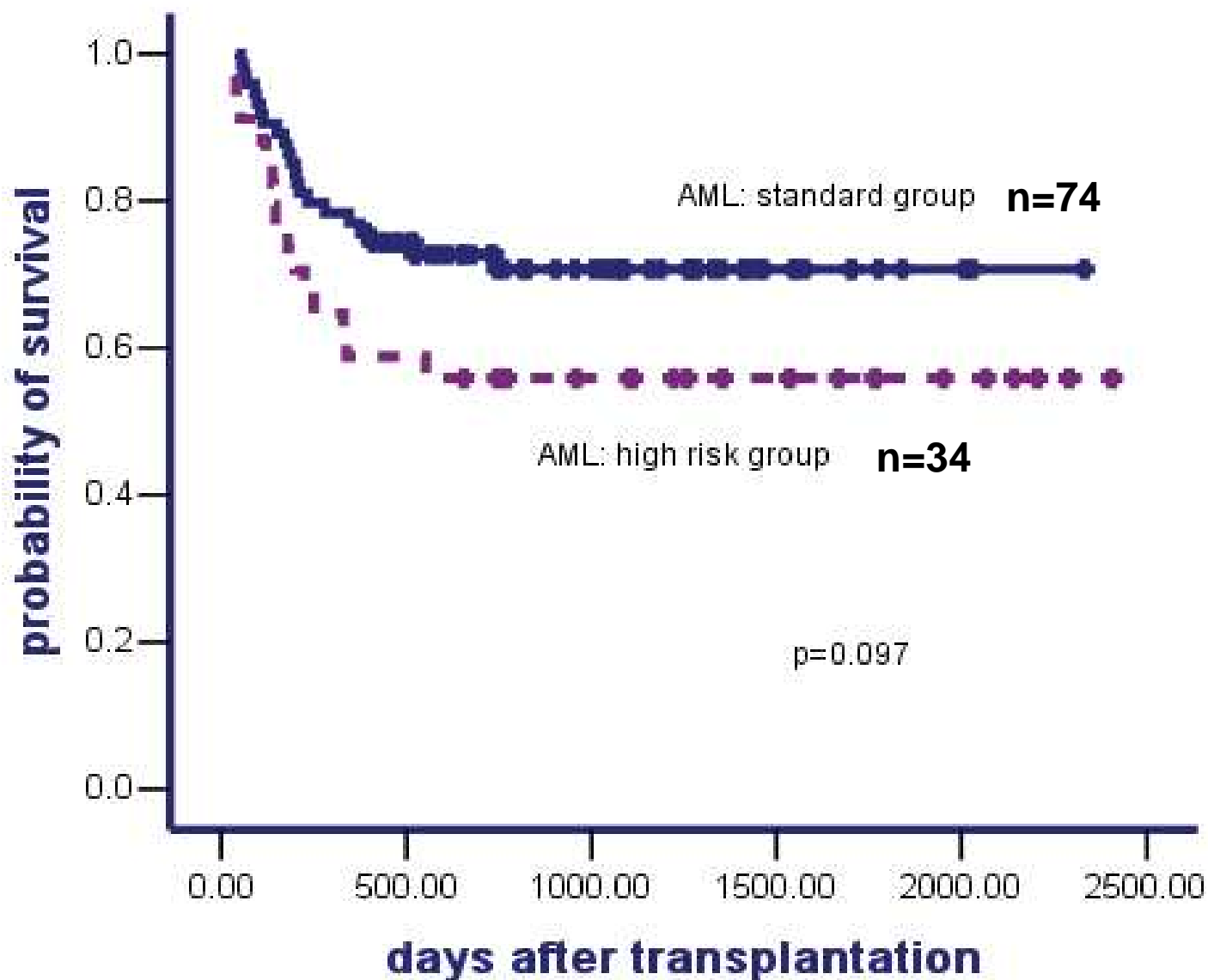
Relapse of patients with **AML** after HLA-mismatched/haploidentical HSCT



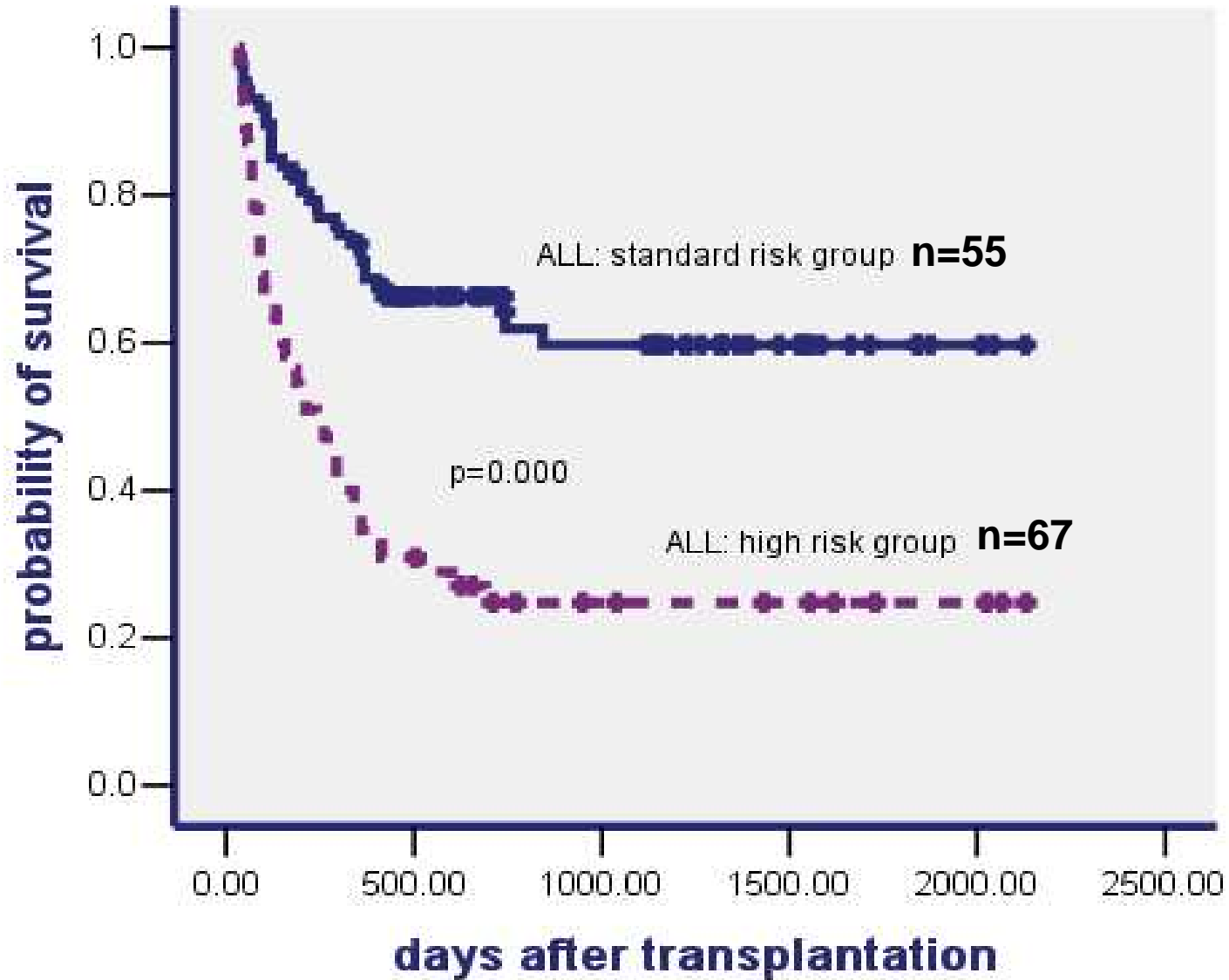
Relapse of patients with ALL after HLA-mismatched/haploidentical HSCT



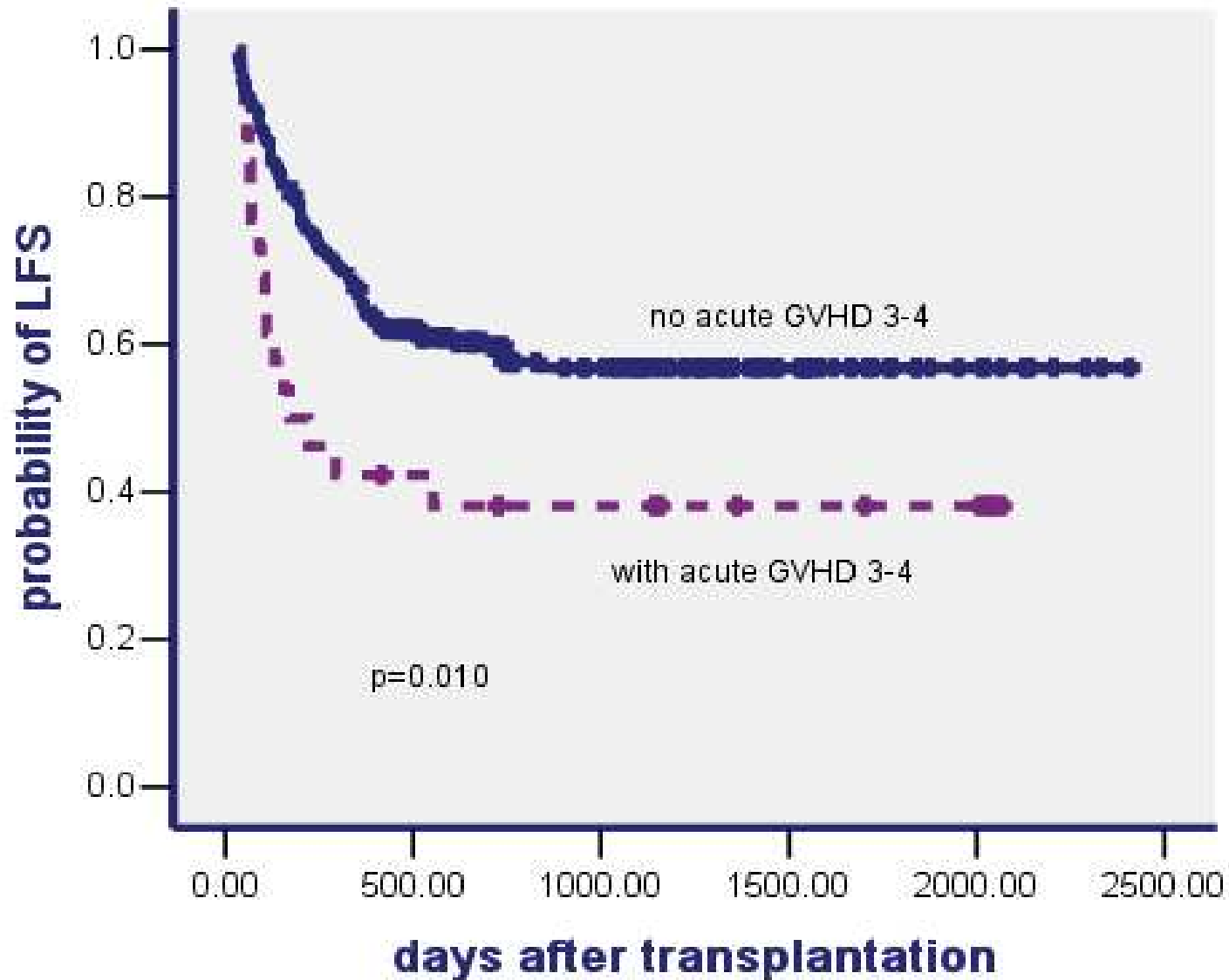
Leukemia-free survival of patients with AML after HLA-mismatched/haploidentical HSCT



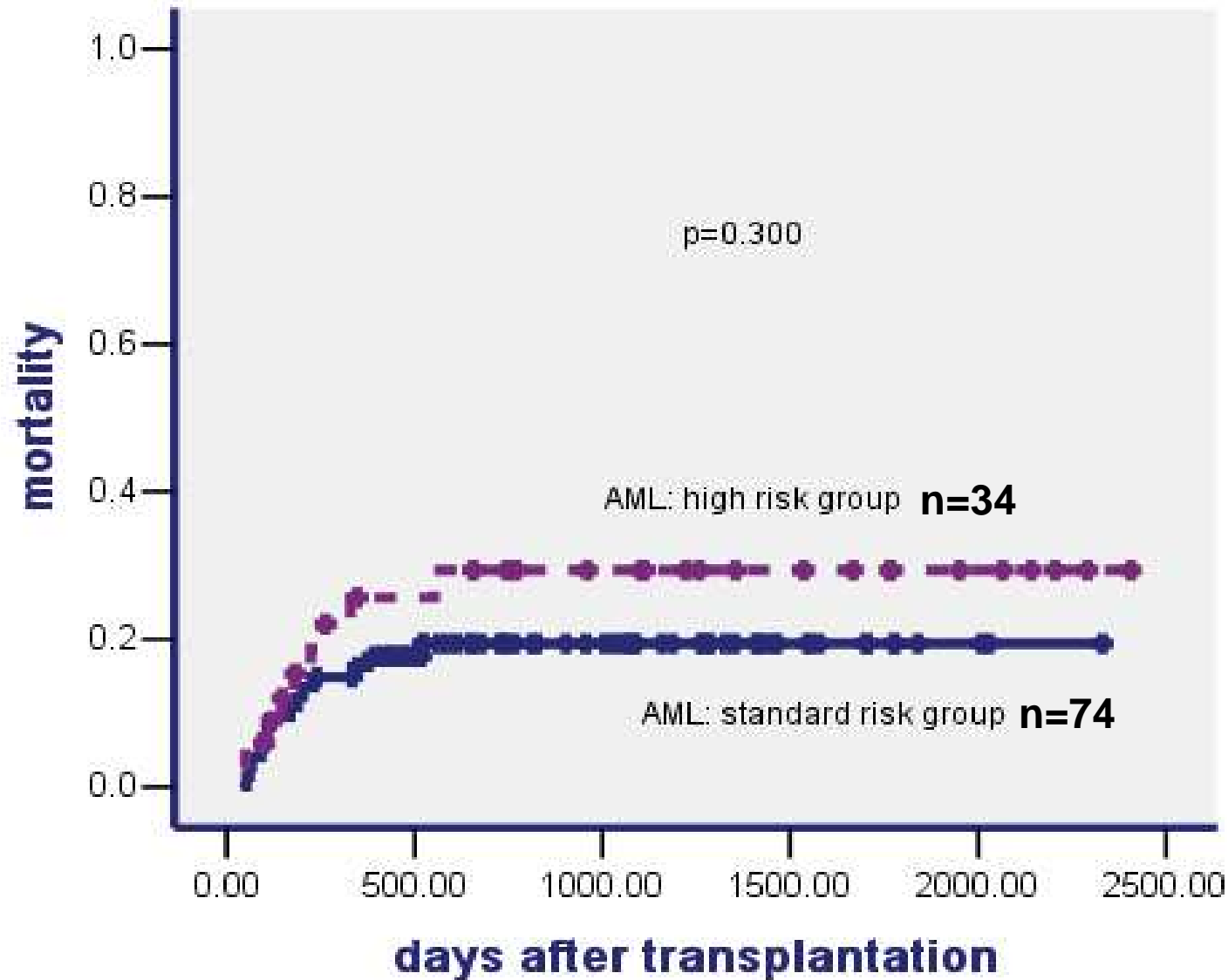
Leukemia-free survival of patients with ALL after HLA-mismatched/haploidentical HSCT



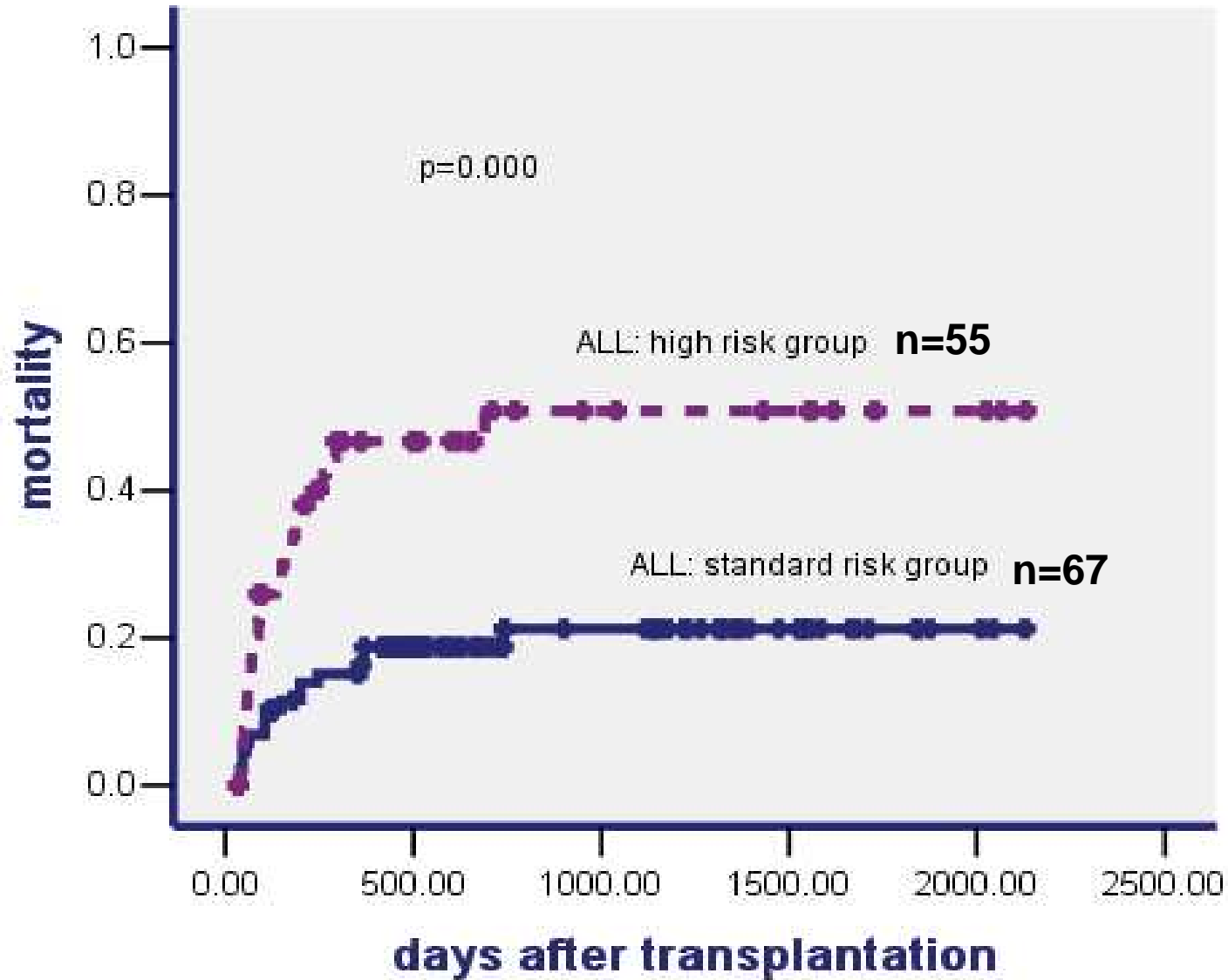
Influence of acute GVHD 3-4 on leukemia-free survival of patients with acute leukemia after HLA-haploidentical HSCT



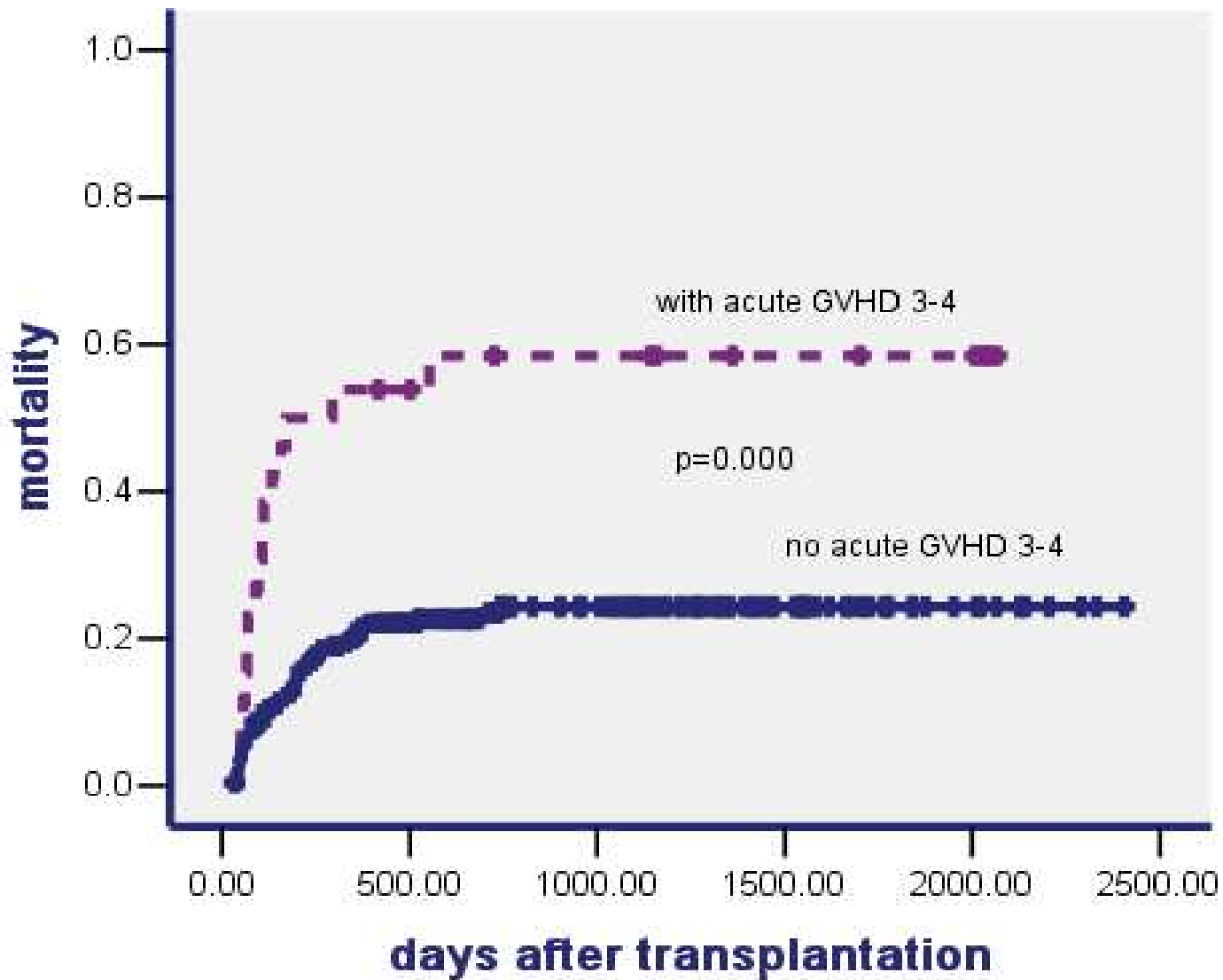
Transplantation related mortality in patients with AML after HLA-mismatched/haploidentical HSCT



Transplantation related mortality of patients with ALL after HLA-mismatched/haploidentical HSCT



Influence of acute GVHD 3-4 on transplantation related mortality in patients with acute leukemia after HLA-mismatched/haploidentical HSCT



Partially Matched Related Donor Transplantation Can Achieve Outcomes Comparable with Unrelated Donor Transplantation for Patients with Hematologic Malignancies

Huang Xiao-Jun, Xu Lan-Ping, Liu Kai-Yan, Liu Dai-Hong, Wang Yu, Chen Huan, Chen Yu-Hong, Han Wei, Wang Jing-Zhi, Chen Yao, Zhang Xiao-Hui, Shi Hong-Xia, Wang Feng-Rong, and Tang Fei-Fei

URD: n=78

Haplo: n=219

Clin Cancer Res 2009;15(14)

