

EASIX Score Predicts Severe Acute GVHD and Mortality After Allogeneic Hematopoietic Stem Cell Transplantation: A Single-Center Study

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INTRODUCTION

Endothelial dysfunction plays a central role in post-transplant complications, including acute graft-versus-host disease (GVHD) and non-relapse mortality (NRM).

The Endothelial Activation and Stress Index (EASIX) is a simple biomarker based on routinely available laboratory parameters:

$EASIX = (Creatinine \times LDH) / Platelet\ count$

EASIX has shown prognostic value after allogeneic hematopoietic stem cell transplantation (allo-HSCT).

AIM

To evaluate the prognostic value of pre-transplant and day +30 EASIX for mortality and grade IV acute GVHD in allo-HSCT recipients.

METHOD

Retrospective, single-center study of 62 adults undergoing related-donor allo-HSCT (2015–2021; ≥100-day follow-up).

EASIX was calculated pre-transplant and at day +30.

Outcomes: overall mortality, NRM, and grade IV acute GVHD.

Univariate analysis and ROC curves were used to assess associations and identify optimal cutoffs.

CONCLUSIONS

EASIX was associated with mortality and grade IV acute GVHD after allo-HSCT.

Day +30 EASIX was significantly associated with NRM and grade IV acute GVHD.

EASIX may be a simple and clinically applicable tool for early risk stratification after allo-HSCT.

RESULTS

PATIENTS

62 patients

Median age
39 years (range 18–71)

Sex
33 male (54%) | 29 female (46%)

Donor type
Haploidentical 32 (52%)
HLA-matched 29 (46%)
Syngeneic 1 (2%)

Deaths
28 (45%)

Non-relapse mortality
17 (27%)

Acute GVHD (any grade)
39 (63%)

Grade IV acute GVHD
10 (16%)

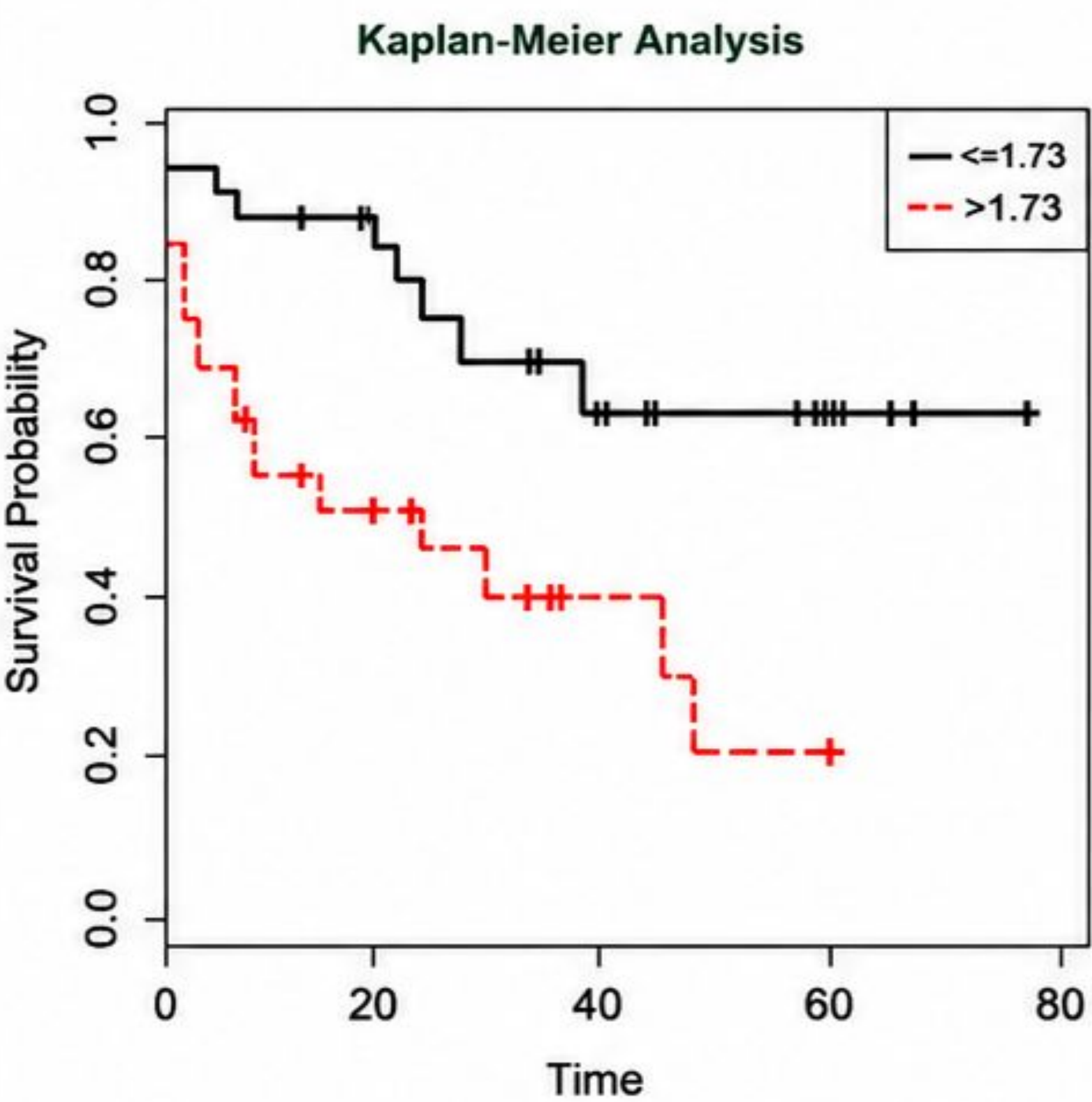
Mean follow-up
25 months

PRE-TRANSPLANT EASIX

Overall mortality

EASIX >1.73

66% sensitivity | 65% specificity | p = 0.011



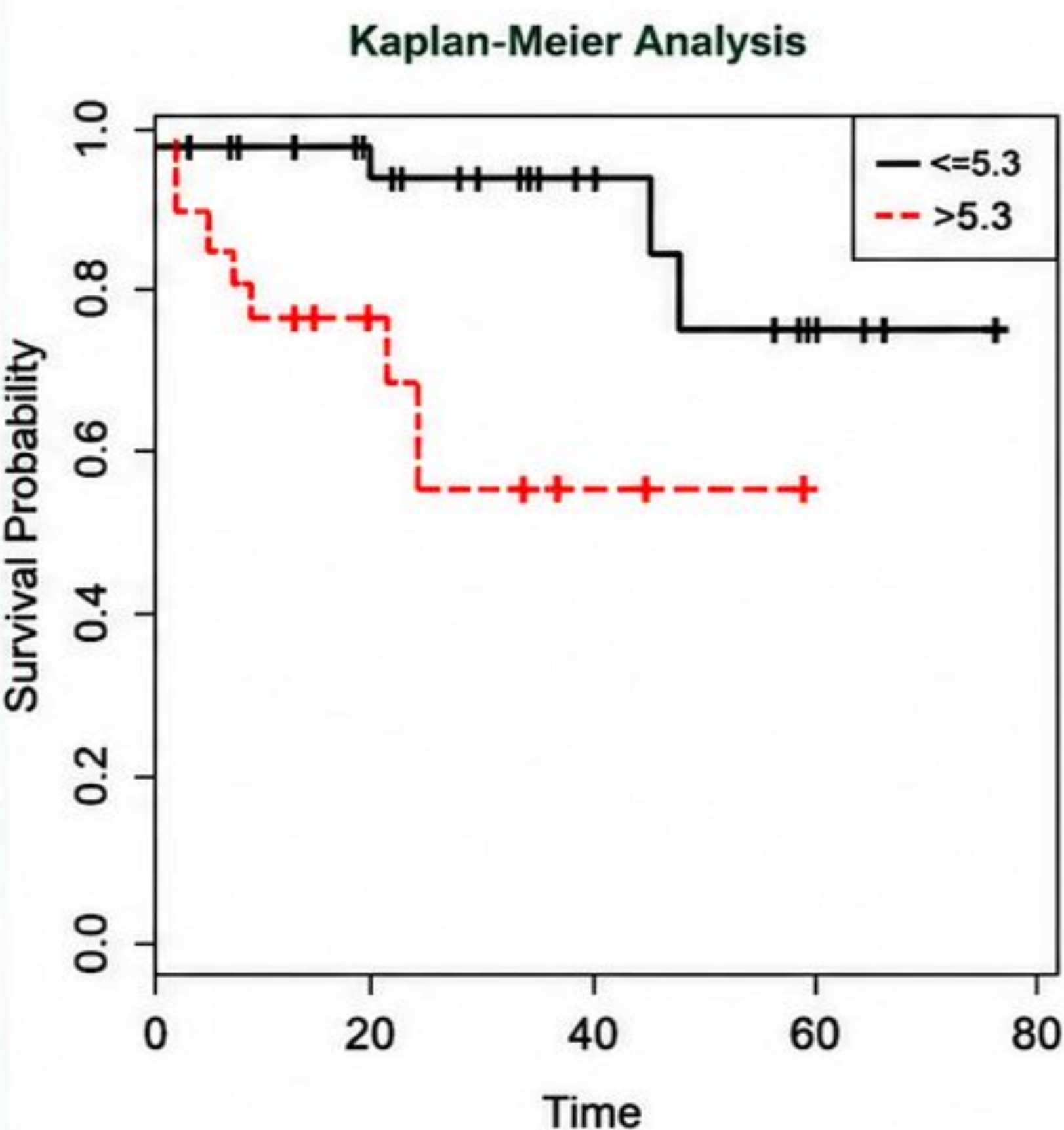
Higher pre-transplant EASIX was associated with increased overall mortality.

DAY +30 EASIX

Non-relapse mortality

EASIX day +30 >5.31

72% sensitivity | 71% specificity | p < 0.001



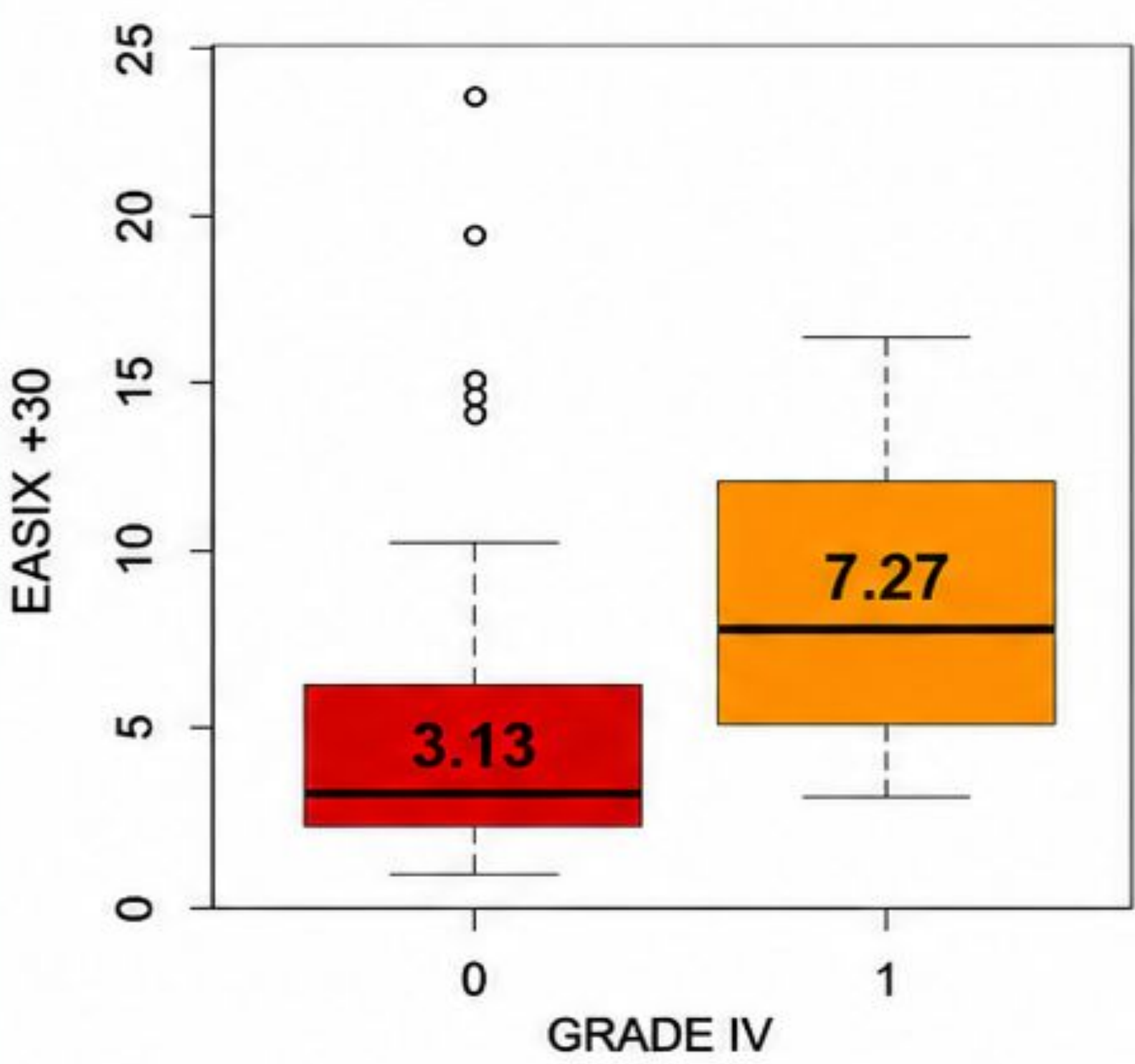
Patients with day +30 EASIX >5.31 had significantly higher non-relapse mortality.

DAY +30 EASIX

Grade IV acute GVHD

EASIX day +30 >5.71

75% sensitivity | 77% specificity | p < 0.001



Day +30 EASIX values were significantly higher in patients who developed grade IV acute GVHD.

CONTACT INFORMATION

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REFERENCES

- Luft T, Benner A, Jodele S, et al. EASIX in patients with acute graft-versus-host disease: a retrospective cohort analysis. *Lancet Haematol*. 2017;4(9).
- Nawas MT, Sanchez-Escamilla M, Devlin SM, et al. Dynamic EASIX scores closely predict nonrelapse mortality after allogeneic hematopoietic cell transplantation. *Blood Adv*. 2022;6(22):5898-5907.
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- Penack O, Luft T, Peczynski C, et al. Endothelial Activation and Stress Index (EASIX) to predict mortality after allogeneic stem cell transplantation: a prospective study. *J Immunother Cancer*. 2024;12(1).