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Evaluation of HistoCheck as a predictor of clinical outcomes after haploidentical hematopoietic stem cell transplantation

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Abbreviations: haplo-HSCT: haploidentical hematopoietic stem cell transplantation; HLA: human leukocyte antigen; SSM: sequence similarity matching; TRM: transplant-related mortality; DFS: disease-free survival; OS: overall survival; GVHD: graft-versus-host disease; CREG: cross reactive groups; PIRCHE: Predicted Indirectly ReCognizable HLA Epitopes; AML: acute myeloid leukemia; ALL: acute lymphoid leukemia; MDS: myelodysplastic syndrome; rhG-CSF: recombinant human granulocyte colony-stimulating factor; CsA: cyclosporine A; MTX: methotrexate; MMF: mycophenolate mofetil; PCR: polymerase chain reaction; CTLp-f: Cytotoxic T-lymphocyte precursor frequency

Running title: Evaluation of HistoCheck as a predictor of clinical outcomes

Highlights

- The total HistoCheck SSM score had no association with clinical outcomes.
- High HLA-C SSM score was associated with lower transplant-related mortality.
- High HLA-C SSM score was associated with better disease-free survival.
- High HLA-C SSM score was associated with better overall survival.
- No associations were observed between other locus SSM score and clinical outcomes.

Abstract

Haploidentical hematopoietic stem cell transplantation (haplo-HSCT) is available for nearly all