

Azacitidine Before Allogeneic Hematopoietic Cell Transplantation (AHCT) for Myelodysplasias

Presentation discussed in this issue:

Field T et al. **5-Azacitidine for myelodysplasia before allogeneic hematopoietic cell transplantation.** *Bone Marrow Transplant* 2009;[Epub ahead of print]. **Abstract**

Slides from journal article

5-Azacitidine For Myelodysplasia Before Allogeneic Hematopoietic Cell Transplantation

Field T et al.

Bone Marrow Transplant 2009:[Epub ahead of print].

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Introduction

- Patients with intermediate- or high-risk myelodysplastic syndrome (MDS) have a significant risk of relapse after hematopoietic cell transplantation (HCT).
- The use of induction chemotherapy as pretransplant therapy can increase the risk of death or prevent proceeding to HCT because of associated toxicities.
- 5-azacitidine therapy was shown to prolong overall survival and decrease the risk of progressing to acute myelogenous leukemia versus conventional care regimens in patients with intermediate-2 and high-risk MDS (*Lancet Oncol* 2009;10:223), providing an alternative strategy to inhibit disease progression in transplant-eligible patients.
- **Current study objectives (N = 54):**
 - Assess the effect of pretransplant 5-azacitidine treatment on post-transplant outcomes using a retrospective analysis of the institutional experiences of patients with intermediate-2 and high-risk MDS.

Source: Field et al. *Bone Marrow Transplant* 2009:[Epub ahead of print].

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Retrospective Analysis of Patients with Myelodysplasia Receiving 5-Azacitidine Therapy Pre-HCT

- Medical record review of consecutive patients (n=54) with MDS or chronic myelomonocytic leukemia who received allogeneic HCT between July 2004 and December 2007 at the H Lee Moffitt Cancer Center.
- Patients were assigned to two groups based on whether they had received 5-azacitidine therapy at any time prior to transplant.
- Patient characteristics were balanced in both study arms.
 - All patients and donors received high-resolution molecular typing for HLA-DRB1 and DQB1.
 - All patients received the same conditioning regimen (*Blood* 2004;104:857).
 - All patients received similar supportive care measures, including antiseizure and graft versus host disease (GVHD) prophylaxes.

Source: Field et al. *Bone Marrow Transplant* 2009:[Epub ahead of print].

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Post-HCT Outcomes in Patients with Myelodysplasia with or without Pre-HCT 5-Azacitidine Therapy

Outcome Parameter ¹	With 5-Azacitidine (n=30)	Without 5-Azacitidine (n=24)
Overall survival rate - 1 yr	47%	60%
Relapse-free survival rate - 1 yr	41%	51%
Cumulative incidence of GVHD		
Grade 2-4	79%	71%
Grade 3-4	13%	4%
Cumulative incidence of relapse ¹		
1 year	20%	32%
2 year	31%	36%

¹p-values for all outcome parameters were nonsignificant

Multivariate analyses demonstrated that pretransplant treatment with 5-azacitidine does not appear to be a significant predictor of relapse, nonrelapse mortality, overall and relapse-free survival, and grade 2-4 acute GVHD.

Source: Field et al. *Bone Marrow Transplant* 2009:[Epub ahead of print].

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Summary and Conclusions

- Treatment of patients with high-risk MDS with 5-azacitidine prior to HCT did not significantly affect rates of remission, relapse, acute and chronic GVHD, and survival after transplant.
 - A trend toward decreased early relapse in patients who had received 5-azacitidine was observed.
- 5-azacitidine therapy may stabilize disease while patients await HCT.

Source: Field et al. *Bone Marrow Transplant* 2009:[Epub ahead of print].

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