**Conclusion:** Even if a high-risk MDS patient is eligible for allogeneic stem cell transplantation (SCT), a hypomethylating agent (HMA; azacitidine [Aza] or decitabine [Dct]) might be indicated as a bridge to transplant or as a substitute. Azacitidine is the preferred therapy for patients who are not SCT candidates. When possible, enrollment in clinical trials is crucial for patients with this diagnosis.