Myelodysplastic syndromes are a collection of disorders that affect the hematopoietic development of myeloid cells in the bone marrow. Although this disorder is curable by way of allogeneic stem cell transplantation, advanced age, limited donor availability, and multiple comorbidities often preclude treatment. Developments using the drugs lenalidomide, decitabine, and azacitidine have offered treatment options to patients ineligible for transplantation. Nurses remain instrumental in the administration, patient monitoring, and patient education associated with these new therapies.