

Types of Myelodysplastic Syndromes (MDS)

There are many subtypes of Myelodysplastic Syndromes (MDS). For each patient, the subtype is determined using the results of the blood and bone marrow tests your MDS physician will perform. There are many classification systems.

Generally MDS can be divided into the following subtypes:

- **Refractory anemia.** There are too few red blood cells in the blood and the patient has anemia. The number of white blood cells and platelets is normal.
- **Refractory anemia with ringed sideroblasts.** There are too few red blood cells in the blood and the patient has anemia. The red blood cells have too much iron. The number of white blood cells and platelets is normal.
- **Refractory anemia with excess blasts.** There are too few red blood cells in the blood and the patient has anemia. Five percent to 19% of the cells in the bone marrow are blasts and there are a normal number of blasts found in the blood. There also may be changes to the white blood cells and platelets. Refractory anemia with excess blasts has a higher risk of progressing to acute myeloid leukemia.
- **Refractory cytopenia with multilineage dysplasia.** There are too few of at least two types of blood cells. Less than 5% of the cells in the bone marrow are blasts and less than 1% of the cells in the blood are blasts. If red blood cells are affected, they may have extra iron. Refractory cytopenia may progress to acute leukemia.
- **Myelodysplastic syndrome associated with an isolated del(5q) chromosome abnormality.** There are too few red blood cells in the blood and the patient has anemia. Less than 5% of the cells in the bone marrow and blood are blasts. There is a specific change in the chromosome.
- **Unclassifiable myelodysplastic syndrome.** There are too few of one type of blood cell in the blood. The number of blasts in the bone marrow and blood is normal, and the disease is not one of the other myelodysplastic syndromes.
- **Chronic Myelomonocytic Leukemia (CMML).** Excessive numbers of monocytes (a type of white blood cell) are seen in the marrow and blood. 5 to 20 percent blasts in the bone marrow; less than 5 percent blasts in the blood. Cytopenia of at least two cell lines.