Primary myelofibrosis is a chronic blood disorder that affects males and females in equal numbers. It can occur at any age although it usually affects individuals more than 50 years of age. The median age at diagnosis is approximately 65. The incidence is estimated to be 1.5 cases per 100,000 people in the United States. In studies of Northern European countries, the incidence was estimated to be .5 cases per 100,000 people. The worldwide incidence is unknown. When primary myelofibrosis affects children, it is usually before three years of age. In younger children, girls are affected twice as often as boys. Diagnosis of primary myelofibrosis may be made based upon a thorough clinical evaluation, detailed patient history, and various specialized tests. In many people, the presenting sign of the disorder is an abnormally enlarged spleen (splenomegaly) that may be detected upon routine examination or low levels of circulating red blood cells. A complete blood count (CBC) may demonstrate low levels of red blood cells or elevated levels of platelets or white blood cells. Since blood cell counts vary at different times in affected individuals, blood counts are not definitive in diagnosing primary myelofibrosis. Surgical removal and microscopic examination of bone marrow tissue (biopsy) is often used to confirm a suspected diagnosis of primary myelofibrosis.