Myelofibrosis

Myelofibrosis is a rare but serious cancer of the bone marrow that disrupts the body’s normal production of blood cells.

### About Myelofibrosis

Myelofibrosis is a myeloproliferative neoplasm (MPN), a group of blood cancers that derive from blood-forming stem cells. Two other blood cancers that are also grouped as MPNs are essential thrombocytopenia and polycythemia vera.

There are two main types of myelofibrosis:

- **Primary myelofibrosis:** Patient has no prior history of another MPN
- **Secondary myelofibrosis:** Patient develops the condition as a complication of essential thrombocytopenia or polycythemia vera

The cause of myelofibrosis remains unclear, but more than half of patients have a mutation in the Janus Kinase 2 (JAK2) gene.

### Incidence

Primary myelofibrosis is rare, affecting approximately 1 in 500,000 people worldwide.

### Symptoms

About one-third of patients with myelofibrosis in its very early stages may have no symptoms of the disease.

**Signs and symptoms of myelofibrosis can include:**

- Weakness or fatigue
- Bruising or bleeding easily
- Bone or joint pain
- Night sweats
- Itching
- Mild fever
- Splenomegaly (enlarged spleen)

### Risk Factors

- Age
- History of thrombocytopenia or polycythemia vera
- Exposure to certain industrial chemicals or high radiation levels

### Prognosis

**Median survival:** 3.5 to 5.5 years

People younger than 55 and with good prognostic factors can have a median survival of 11 years.

### Treatment Options

Treatment approaches for myelofibrosis are determined by age, abnormal blood cell counts, disease progression and overall health, but may include:

- JAK inhibitors
- Blood transfusions, androgen therapy or other anemia treatments
- Chemotherapy
- Alternate drug treatments
- Radiation
- Splenectomy (surgical removal of the spleen)
- Stem cell transplant

*Typically appropriate for <5% of patients due to risks associated with the procedure*

**It is important** for people with myelofibrosis to understand the symptoms of their disease and to talk to a healthcare professional about appropriate treatment options.