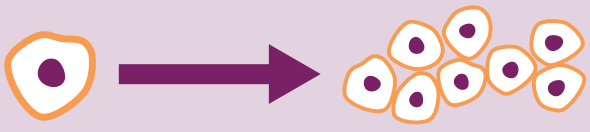
Media Backgrounder

Waldenström's Macroglobulinemia (WM)

What is Waldenström's Macroglobulinemia?[1,2,3,4]

Waldenström's macroglobulinemia (WM), pronounced 'val-den-strem', is named after Swedish physician Jan Gösta Waldenström, who first described the disease's clinical features.

It is a slow-growing and rare type of blood cancer that originates from B cells, a type of white blood cell (lymphocyte) that develops in the bone marrow.



B cells are part of the immune system and play an important role in fighting infection in the body.

B-cell malignancies, such as WM, are the result of a malfunction in the healthy lifecycle of a B cell. The malfunction causes the cell to become malignant and reproduce at an abnormal rate.

In certain malignant B cells there is a malfunction in the cellular signaling pathways which control tumour cell growth and survival. In addition, abnormal movement and adhesion cause the malignant B cells to congregate within the protective environment of the lymphatic system, such as the bone marrow and the lymph nodes. In this environment, the malignant cells are supported and continue to grow. The overcrowding in the bone marrow can hamper the normal production and function of red blood cells, platelets and white blood cells. Overcrowding the lymph nodes, spleen and liver can result in their enlargement.

A unique characteristic of WM is that the malignant B cells produce large amounts of an abnormal type of antibody protein called immunoglobulin M (IgM). Antibodies such as IgM normally help the body to fight infection. Excess IgM causes the blood to thicken and causes many of the symptoms of WM.

Signs and Symptoms[3,5]

Possible signs of WM may include:

- Excessive sweating at night, recurring fevers
- Unintentional weight loss
- Anaemia, which may cause tiredness, weakness, and shortness of breath
- Vision problems
- Nervous system problems caused by poor circulation, including headache, confusion, and dizziness
- Infections
- Numbness, or a painful "pins and needles" sensation
- Abnormal bleeding (including frequent or severe nosebleeds)
- Cryoglobulinemia (abnormal proteins which cause the blood to become thick and gel-like in cold temperatures)
- Abdominal pain
- Swollen abdomen and swollen lymph nodes
- Lymph nodes

Prevalence and Patients[3,6,7,8,9,10]

WM is more common in men than it is in women

Incidence rates among men and women in Europe are approximately

7.3 and 4.2

per million persons, respectively

The median age at diagnosis is

63 – 68

years of age

Median overall survival rate

5 – 11

years

Diagnosis[3,4]

Several exams and tests may be used to help diagnose WM:

- Physical examination
- Blood tests
- Imaging tests
- Biopsy

Staging and Prognosis[3]

The International Prognostic Scoring System for WM (IPSSWM) is used to help predict the prognosis for patients with WM.

This system divides patients into low, intermediate, or high risk groups, and accounts for factors that may predict worse outcomes, such as:

- **Older age**
- **Low haemoglobin levels**
- **Low platelet count**
- **Elevated IgM levels**
- **High beta-2-microglobulin**

Treatment[3,5]

Current options for WM vary depending on the patient's prognosis, age and general health.

Treatments and outcomes have improved in recent years and many promising new therapies are currently being researched. Treatments can include:

- Chemotherapy
- Biologic therapy
- Plasmapheresis
- Stem cell transplant therapy
- Radiotherapy
- Small molecule therapies

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