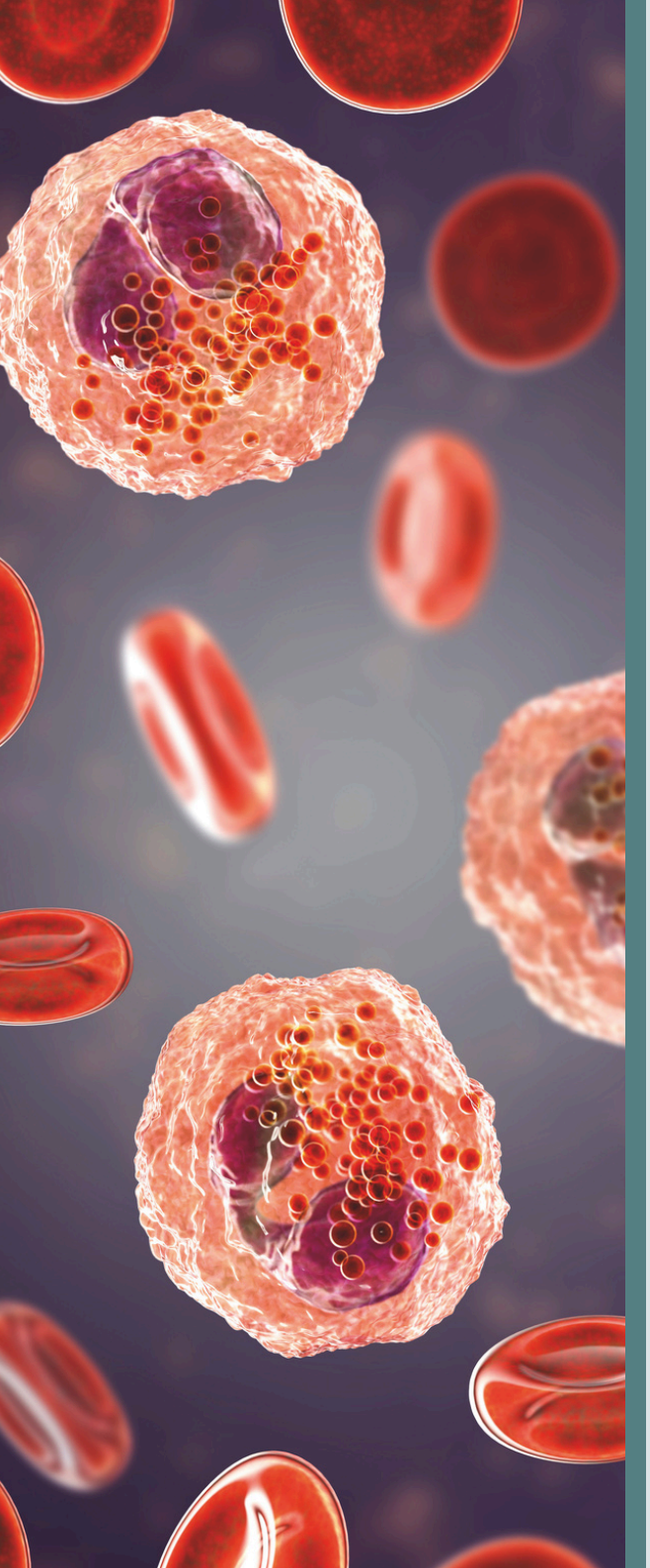


Waldenström Macroglobulinemia (WM)

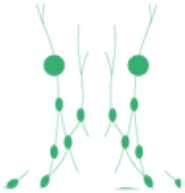
Material for healthcare professional - patient conversation

BeOne

What is Waldenström Macroglobulinemia (WM)?

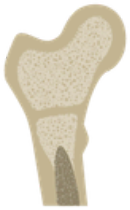
WM is an indolent, malignant disease of the blood system

Organs involved

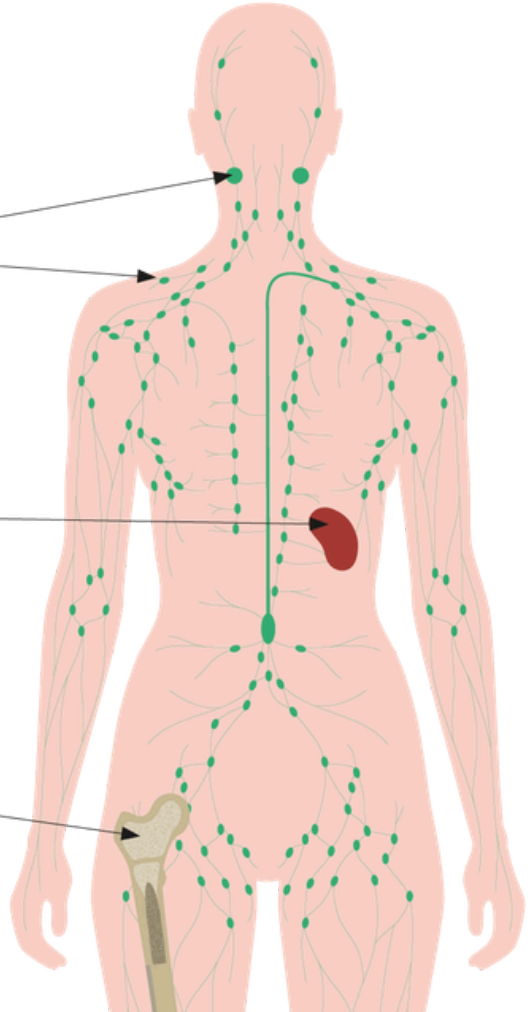


Lymph nodes

Spleen



Bone marrow



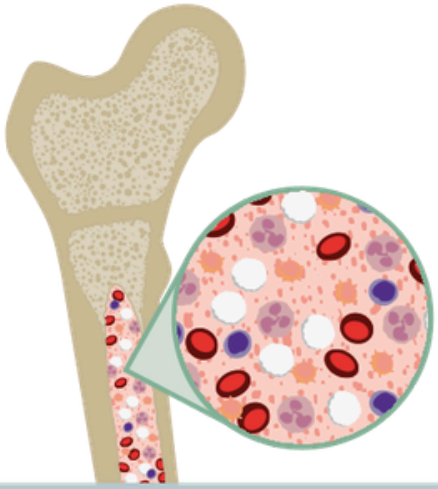
Rare disease:
In Switzerland, fewer than 50 people are diagnosed with it each year. Men are more commonly affected than women.

Risk factors:
First-degree relatives have a 20-fold increased risk of developing WM.

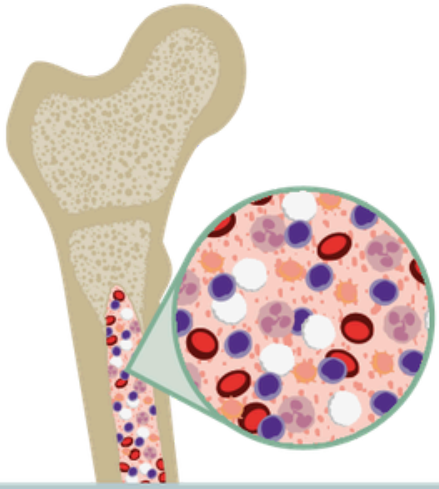
What is Waldenström Macroglobulinemia (WM)?

DISEASE EVOLUTION

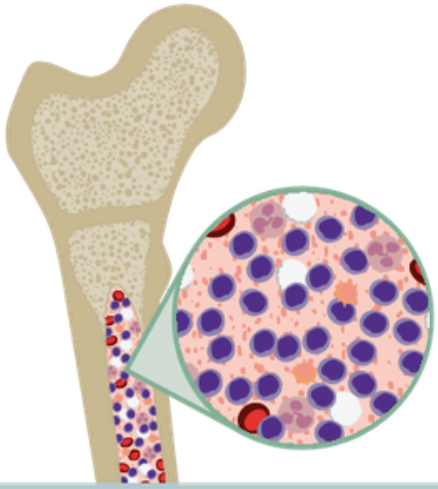
MGUS*



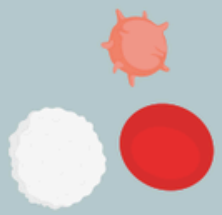
Asymptomatic



Symptomatic



- The disease is caused by uncontrolled proliferation of a certain group of lymphocytes called lymphoplasmacytic lymphocytes (LPL).
- These lymphocytes are pathologically altered (typical gene mutation: MYD88 - page 6).

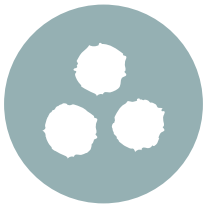


- Normal blood formation is disturbed.
- Too few healthy blood cells are produced in the bone marrow.
- There is a lack of functional red blood cells, white blood cells and platelets.
- Lymph nodes and spleen can be enlarged.

*Monoclonal Gammopathy of Undetermined Significance

Diagnosis

Laboratory tests



Differential blood count, reticulocytes (not yet matured erythrocytes)

ESR (erythrocyte sedimentation rate)

Creatinine, uric acid, blood glucose

GOT, GPT, AP, γ-GT, bilirubin

Total protein, electrophoresis light chain

Free kappa and lambda light chains in the blood serum

24-h-collection urine (protein and light chain excretion)

Immunoglobulins (IgG, IgA, IgM) in blood serum

Immunofixation electrophoresis (blood serum and urine)

LDH, anti-MAG viscosity, β2-microglobulin

Quick value, PTT

Molecular genetics (MYD88, CXCR4)

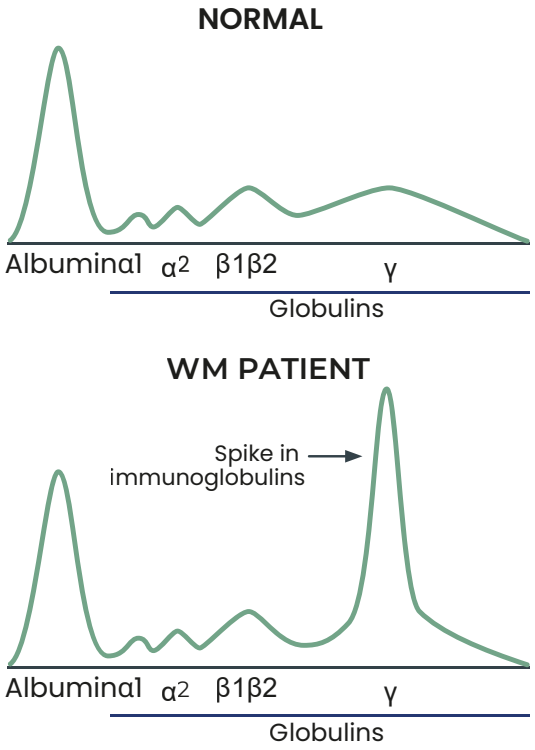
CT scan, sonography or MRI

Diagnosis

Laboratory analysis + bone marrow biopsy

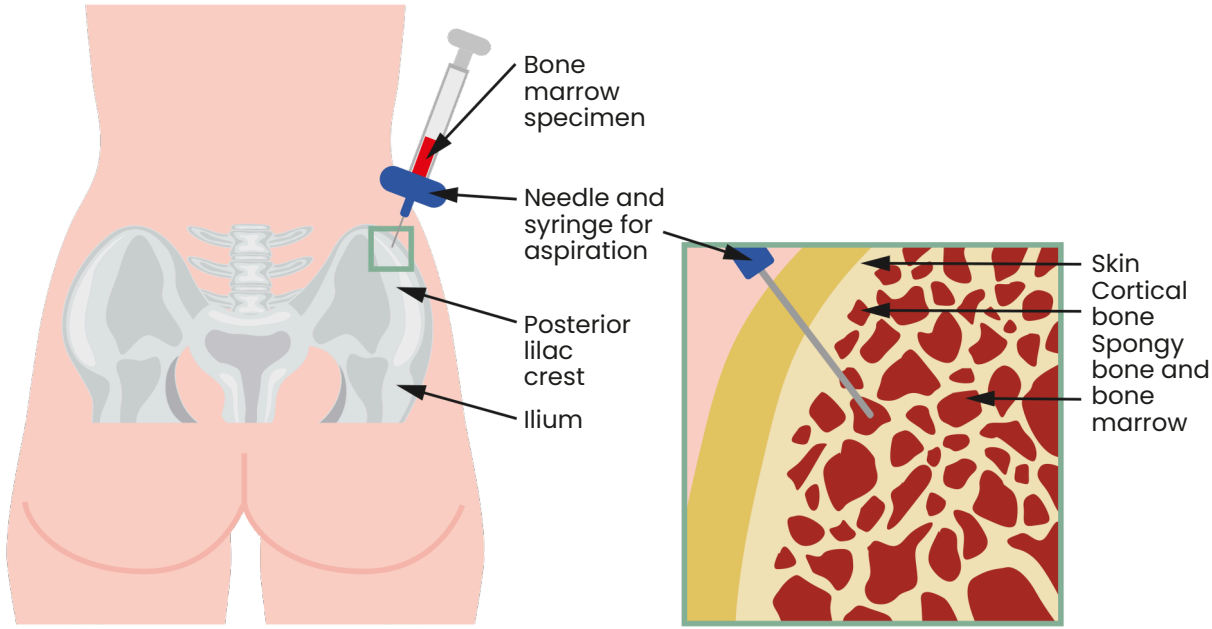
M-Gradient

This test separates serum proteins by size, shape, and charge, allowing detection of monoclonal IgM.

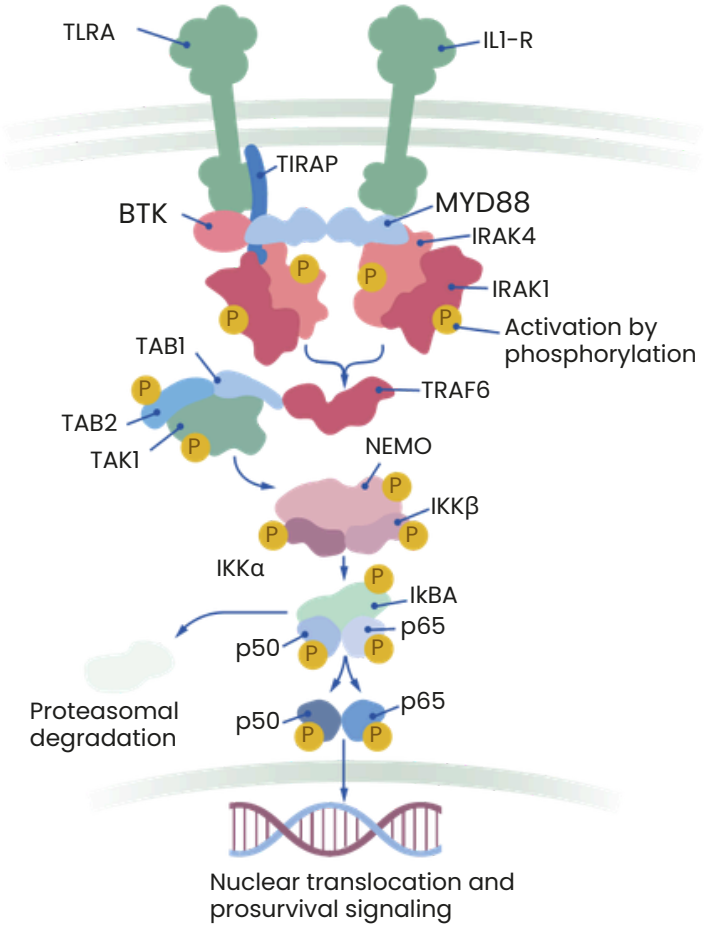


Bone marrow biopsy

The physician administers a local anesthetic and then takes a sample of bone marrow fluid. Most often a small piece of bone is also taken from the bone marrow of the pelvic bones. The extracted material is examined microscopically.



Genetics and scoring system



The majority (~90%) of WM patients have the MYD88L265P mutation, that triggers BTK-mediated NF-kB signaling and may prevent malignant cells from undergoing apoptosis (cell death).

IPSSWM Scoring System

Risk Group	Score	Median Survival	5-Year OS
Low	0 or 1 factor in the absence of advanced age	142.5 months (~11.9 years)	87%
Intermediate	Advanced age or 2 factors	98.6 months (~8.2 years)	68%
High	≥3 factors	43.5 months (~3.6 years)	36%

OS, overall survival

In the 2019 revised IPSSWM scoring system, points are assigned based on age, β2-microglobulin level, lactate dehydrogenase (LDH) level and serum albumin level. Patients are then assigned to risk groups based on the number of points.

Symptoms

No symptom

66% Weakness, Fatigue

25% Anorexia (Loss of appetite)

24% Peripheral neuropathy

20% Hepatomegaly

19% Splenomegaly

17% Weight loss

15% Fever

15% Lymphadenopathy (Swelling of lymph nodes)

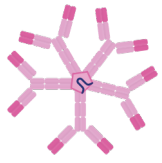
11% Raynaud phenomenon

9% Purpura

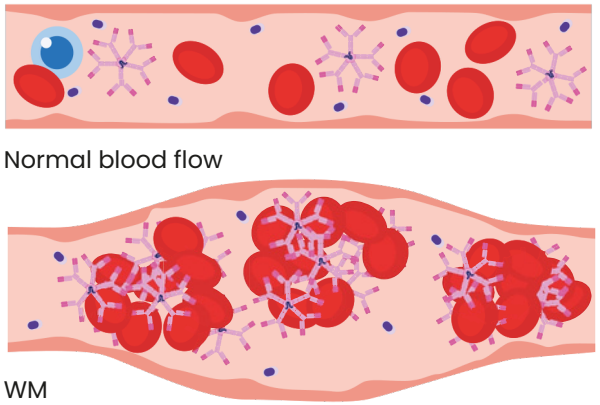
7% Hemorrhagic manifestations (Bleedings)

In more than 30% of all WM patients, IgM macroglobulins can aggregate together in the blood, causing the so-called **hyperviscosity syndrome.**

This condition causes blood thickness, resulting in blood vessel engorgement and decreased blood flow, leading to a vast range of serious clinical complications.



IgM



Normal blood flow

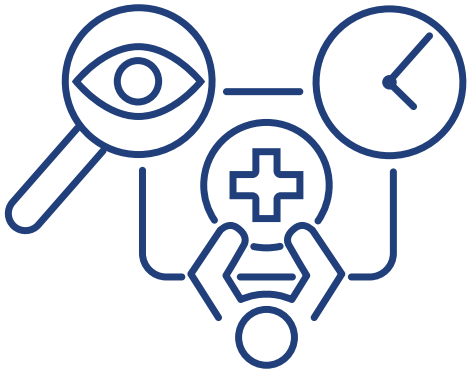
WM

This causes:

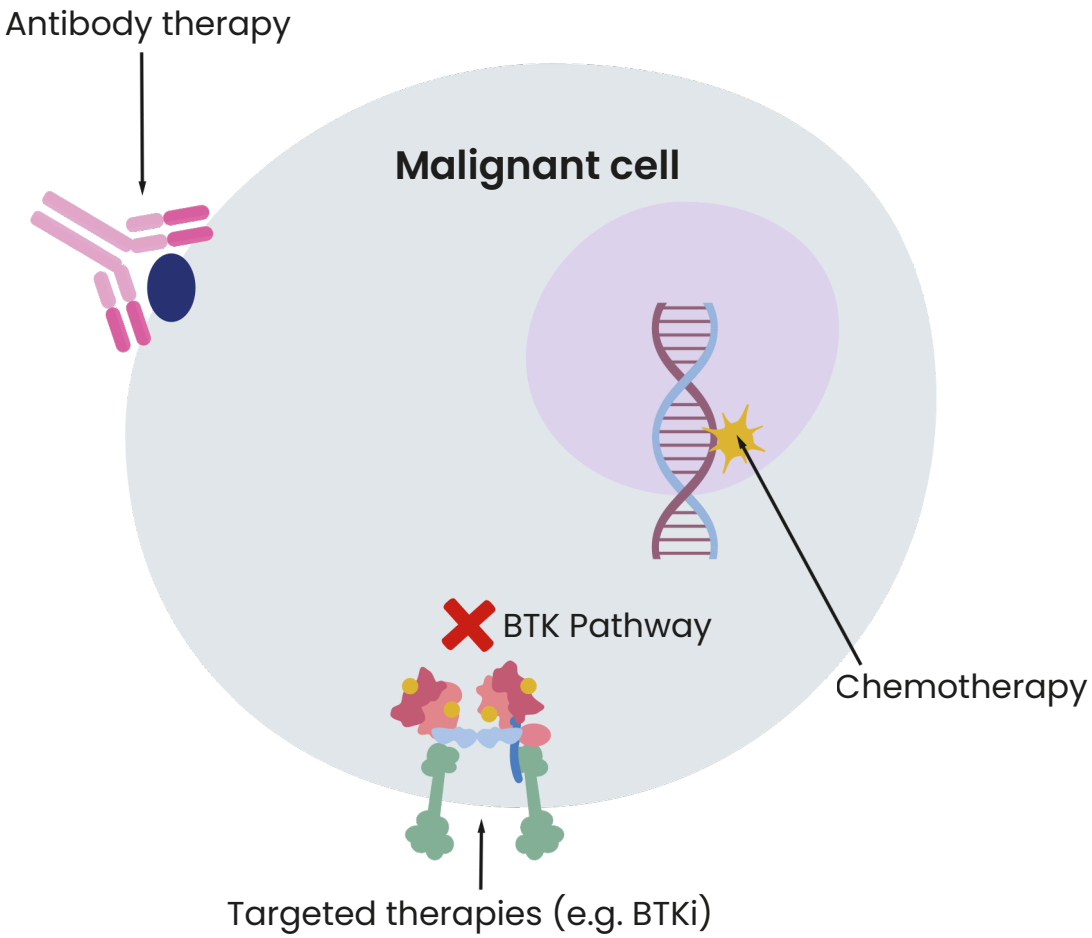
- Dizziness
- Vision problems
- Hearing problems
- Headache
- Bleeding
- Shortness of breath
- Difficulty walking

Therapeutic approaches

Active monitoring

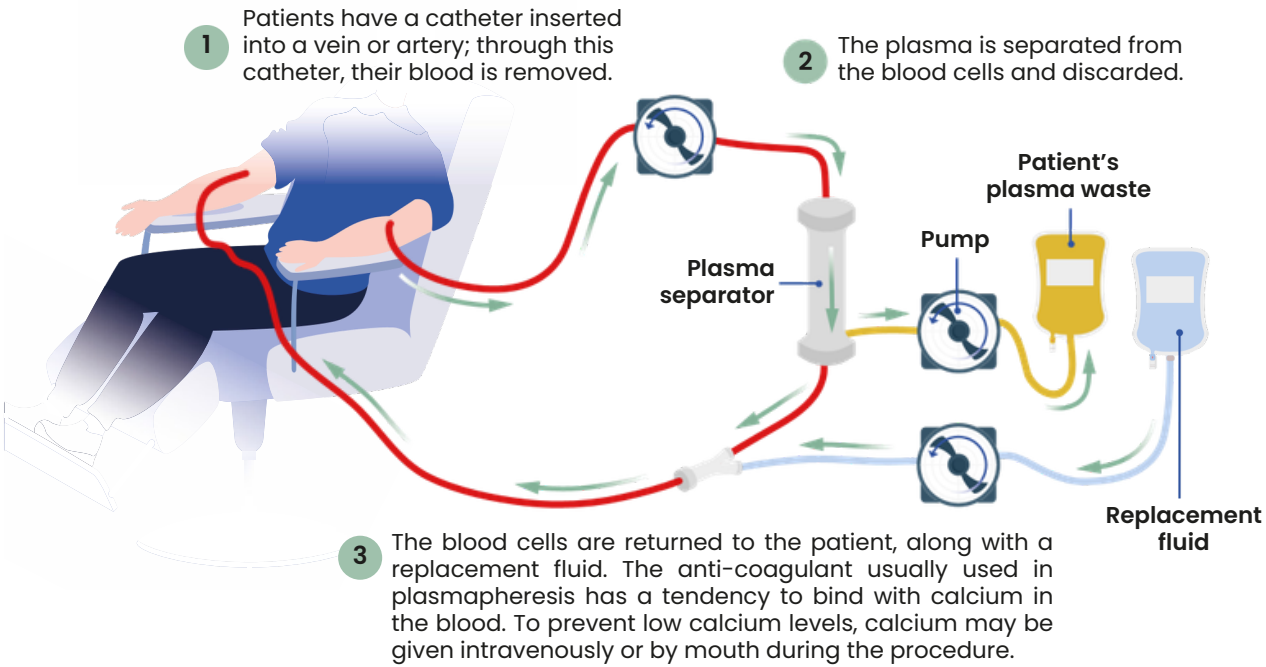


Asymptomatic phase, also known as ‘Watch and Wait’. You will have regular check-ups and tests. There is no need for treatment in this phase; an early therapy would not be beneficial.



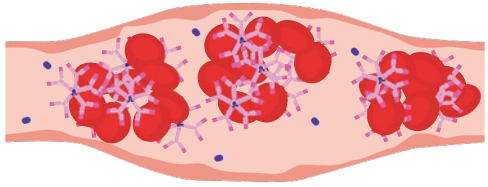
Plasmapheresis

in hyperviscosity

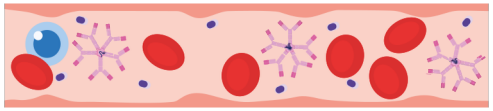


Possible side effects:

- Discomfort at the needle site
- Occasional fatigue
- Low blood pressure
- Dizziness
- Feeling cold
- Tingling in the fingers and around the mouth



Plasmapheresis is used to reduce the risk of hyperviscosity caused by large IgM proteins in patients with serum IgM levels ≥4000 mg/dL.



Notes

Useful links and contacts

lymphome.ch

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HOPOS Umbrella Organization of Hemato-Oncological Patient Organizations Switzerland

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4147 Aesch BL

+41 (0)76 296 06 55
Info@hopos.ch
www.hopos.ch

Krebsliga Switzerland

Effingerstrasse 40
P.O. box
3001 Bern

+41 (0)31 389 91 00
www.krebsliga.ch

SCI - Swiss Cancer Insitute

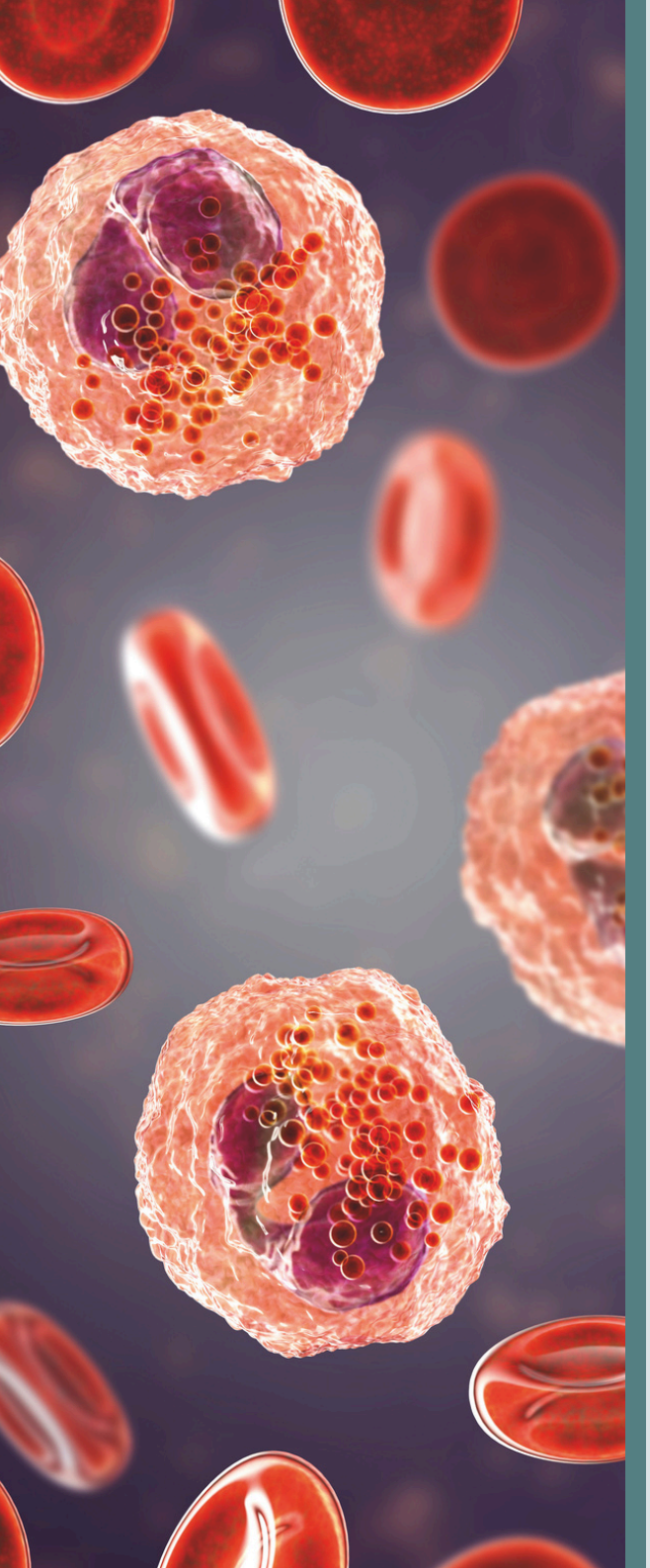
Effingerstrasse 33
3008 Bern

+41 (0)31 389 91 91
info@swisscancerinstitute.ch
www.swisscancerinstitute.ch

Swissmedic

Hallerstrasse 7
3012 Bern

www.swissmedic.ch



In collaboration with:
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Erik Aerts
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BeOne

This material is provided to the healthcare professional as a support for discussion with the patient and allows for the inclusion of notes related to the discussion between healthcare professional and patient for use by the patient.

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