



WHAT IS MONOCLONAL B-CELL LYMPHOCYTOSIS (MBL)?

MBL is a condition where there is an accumulation of abnormal B-cells in the blood. B-cells, also known as B-lymphocytes, are a type of white blood cell that makes antibodies to fight infections.

IS MONOCLONAL B-CELL LYMPHOCYTOSIS A TYPE OF CANCER?

No, MBL is not cancer. It is a pre-cancerous condition that has the potential to evolve into cancer over time in a small percentage of people. Most people with MBL live a normal life and never develop a cancer that requires treatment.

WHAT ARE THE SYMPTOMS OF MONOCLONAL B-CELL LYMPHOCYTOSIS?

People with MBL do not have any symptoms.

HOW DOES MONOCLONAL B-CELL LYMPHOCYTOSIS OCCUR?

MBL develops when a B-cell makes abnormal copies of itself and this group of identical cells accumulates in the blood. A group of cells that is identical is called a monoclonal population of cells. The normal function of B-cells is to make antibodies and each antibody is specific for one type of infection. Therefore, there are billions of unique B-cells in the body to protect against infections. The term polyclonal means that there are many unique B-cells present. If mutations (DNA changes) occur in a single B-cell, it can become abnormal and start making copies of itself so that there is an excess of a single B-cell. It is not normal to have a group of B-cells that are all the same (monoclonal). There should be a wide variety of B cells that are unique (polyclonal).

HOW IS MONOCLONAL B-CELL LYMPHOCYTOSIS USUALLY DISCOVERED?

The condition is typically diagnosed when bloodwork is being performed for other reasons and a higher than normal number of lymphocytes are found in the blood. Then an additional special blood test called flow cytometry is performed to determine if there are monoclonal B-cells present.

ARE THOSE WITH MONOCLONAL B-CELL LYMPHOCYTOSIS CONSIDERED IMMUNOCOMPROMISED?

B-cells are a part of the immune system that produce antibodies to fight off viruses, toxins, and bacteria that invade the body. People with MBL have some abnormal B-cells that do not function correctly. People with MBL have a slightly higher risk of infection compared to those who do not have MBL. It is recommended that people with MBL stay up to date with age-appropriate vaccinations. Symptoms of infection should be promptly evaluated by a healthcare provider since severe complications from certain infections can occur.

WHO IS AT RISK FOR DEVELOPING MONOCLONAL B-CELL LYMPHOCYTOSIS?

The probability of developing MBL increases with age, and it is more common in males than females. MBL is rare for people younger than 40 years old. MBL can be found in more than 20% of people 70 years or older and in up to 75% of individuals over 90 years old. MBL is also more common in people who have family members with CLL.

WHAT IS THE CORRELATION BETWEEN MONOCLONAL B-CELL LYMPHOCYTOSIS AND CHRONIC LYMPHOCYTIC LEUKEMIA (CLL)?

MBL can lead to CLL over time, but this does not usually happen. The number of abnormal B-cells found in MBL is lower than it is in a person with CLL.

- A diagnosis of MBL requires the number of abnormal monoclonal B-cells to be less than 5,000 per microliter of blood.
- A diagnosis of CLL requires the number of abnormal monoclonal B-cells to be more than 5,000 per microliter of blood.



ARE THERE DIFFERENT TYPES OF MONOCLONAL B-CELL LYMPHOCYTOSIS?

There are two subtypes of MBL known as High-Count MBL (HC-MBL) and Low Count MBL (LC-MBL). The subtype is determined based on the concentration of abnormal B-cells present in the blood.

- **High-Count MBL:** In HC-MBL, there are more than 500, but less than 5,000, abnormal monoclonal B-cells in a microliter of blood. The risk of HC-MBL progressing to CLL is 1-2% per year. However, most people with HC-MBL never develop CLL.
- **Low-Count MBL:** In LC-MBL, there are less than 500 abnormal monoclonal B-cells in a microliter of blood. LC-MBL appears to be a condition that is associated with a gradual decline in the immune system due to aging rather than a condition that can eventually progress to cancer.

DOES MONOCLONAL B-CELL LYMPHOCYTOSIS REQUIRE ANY TREATMENT?

No, MBL does not require any treatment. People with HC-MBL should have regular blood testing to monitor lymphocyte count and to monitor for transformation into CLL. People with LC-MBL generally do not require regular blood test monitoring, as there is little risk of progression to CLL.

ARE THERE ANY SYMPTOMS THAT SHOULD BE REPORTED TO MY HEALTHCARE PROVIDER?

You should contact your healthcare provider if you develop persistent fatigue, shortness of breath during normal physical activity, anemia (decreased red blood cell count), enlarged lymph nodes, fevers, frequent infections, unexplained weight loss, drenching night sweats, or an enlarged spleen or liver (this can cause a feeling of fullness in the abdomen or fullness after eating a small amount of food).

WHAT ELSE SHOULD I KNOW ABOUT MONOCLONAL B-CELL LYMPHOCYTOSIS?

People with MBL have a slightly increased risk of cancer in general, especially skin cancers. It is important to have regular cancer screenings including an annual skin examination, routine colonoscopy, mammography, and prostate cancer screening as recommended by your health care provider. Individuals with MBL are also immunocompromised, so actions should be taken to stay up to date on all recommended vaccinations and additional precautions should be taken to avoid infections when possible.

CLL SOCIETY MISSION

CLL Society is an inclusive, patient-centric, physician-curated nonprofit organization that addresses the unmet needs of the chronic lymphocytic leukemia and small lymphocytic lymphoma (CLL/SLL) community through patient education, advocacy, support, and research.