

MEDICAL BREAKTHROUGHS **RESEARCH SUMMARY**

TOPIC: LGL LEUKEMIA: MANAGING A RARE FORM OF CANCER
REPORT: MB #5095

BACKGROUND: Large granular lymphocytic (LGL) leukemia is a type of chronic leukemia affecting white blood cells called "lymphocytes." Lymphocytes are part of the body's immune system and help fight certain infections. LGL leukemia is characterized by enlarged lymphocytes, containing noticeable granules, which can be seen when the blood is examined under the microscope. There are two types of LGL leukemia: T-cell (T-LGL) and natural killer cell (NK-LGL). Each type may be chronic (slow growing) or aggressive (fast-growing). The disease is rare: Only about 1,000 people per year are diagnosed with it. It affects men and women in roughly equal numbers, and most of those diagnosed are over 60 years old. (Sources: <https://www.lls.org/leukemia/large-granular-lymphocytic-leukemia> [https://www.healthline.com/health/leukemia/lgl-leukemia#:~:text=Large%20granular%20lymphocytic%20\(LGL\)%20leukemia,are%20over%2060%20years%20old.](https://www.healthline.com/health/leukemia/lgl-leukemia#:~:text=Large%20granular%20lymphocytic%20(LGL)%20leukemia,are%20over%2060%20years%20old.))

DIAGNOSING: Most people who are diagnosed with LGL leukemia will experience some symptoms like fatigue, anemia, night sweats, infections that keep coming back (neutropenia), weight loss, fever, and swollen lymph nodes. A healthcare professional may look for other symptoms, too, including decreased number of platelets in your blood, lower numbers of neutrophils (a subtype of white blood cell that's an immune system "first responder"), and enlargement of your liver or spleen. To find out if you have LGL leukemia, a healthcare professional will analyze a sample of your blood. Your doctor may also take a sample of your bone marrow, often from your hip area, to look for abnormal cells. To determine which type of LGL leukemia you have, your doctor could use a laser technology called flow cytometry to identify whether T-cells or NK-cells are replicating too much. (Source: <https://www.healthline.com/health/leukemia/lgl-leukemia#diagnosis>)

NEW TECHNOLOGY: Everyone responds differently to the disease and to treatments. Your doctor may perform a blood test about four months into treatment to check your progress. The goal is to have a neutrophil count above 500, circulating LGL cells in a normal range and no further need for transfusions. Alemtuzumab (Campath) is the next option. It is used to treat B-cell chronic lymphocytic leukemia and has shown promising results in LGL patients as well. Rare diseases present challenges in research because such small numbers of people are affected. However, researchers at UVA Cancer Center and around the world participate in clinical trials and research efforts to better understand the disease and possible treatments. (Source: [https://blog.uvahealth.com/2019/10/01/lgl-leukemia-treatment-options-past-present-and-future/#:~:text=Alemtuzumab%20\(Campath\)%20is%20the%20next,best%20treatment%20option%20for%20you.](https://blog.uvahealth.com/2019/10/01/lgl-leukemia-treatment-options-past-present-and-future/#:~:text=Alemtuzumab%20(Campath)%20is%20the%20next,best%20treatment%20option%20for%20you.))

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If this story or any other Ivanhoe story has impacted your life or prompted you or someone you know to seek or change treatments, please let us know by contacting Marjorie Bekaert Thomas at mthomas@ivanhoe.com