



Alan Van Dyne

Bill Analysis
Legislative Service Commission

H.B. 36

126th General Assembly
(As Passed by the House)

Reps. Carmichael, Blasdel, J. Stewart, Daniels, McGregor, C. Evans, Kearns, Hoops, T. Patton, Seitz, Skindell, Flowers, Oelslager, Combs, Hughes, D. Evans, Carano, Hartnett, Aslanides, DeWine, Raga, DeGeeter, Allen, Ujvagi, Setzer, Barrett, Reidelbach, Perry, Miller, Strahorn, Taylor, Chandler, Reinhard, Hagan, Schlichter, Brown, Buehrer, D. Stewart, Book, Walcher, Uecker, Beatty, Boccieri, Brinkman, Bubp, Calvert, Cassell, Coley, Collier, DeBose, Distel, Dolan, Domenick, Driehaus, Faber, Fende, Fessler, Gibbs, Gilb, Harwood, Key, Kilbane, Latta, Law, Martin, Mason, Otterman, S. Patton, Raussen, Redfern, Sayre, Schaffer, Schneider, Seaver, G. Smith, Sykes, Wagoner, Webster, Widener, Willamowski, Williams, Wolpert, Yates, Yuko

BILL SUMMARY

- Designates the month of September as Leukemia, Lymphoma, and Myeloma Awareness Month.

CONTENT AND OPERATION

The bill designates the month of September as "Leukemia, Lymphoma, and Myeloma Awareness Month" to enhance the understanding of blood cancers and encourage participation in voluntary activities that support education programs, services to patients, and the funding of research programs to find cures (R.C. 5.2230).

The bill further states all of the following (Section 2):

- That it is the General Assembly's intent, in enacting this designation, to increase public awareness and understanding of blood cancers.
- That the members of the 126th General Assembly feel it is vitally important that the State of Ohio join with the Leukemia and Lymphoma Society in formally designating September as "Leukemia, Lymphoma, and Myeloma Awareness Month."

- That blood cancers affect many thousands of Americans each year.
- That Ohio is committed to the eradication of these diseases and supports the treatment of its citizens who suffer from them.
- That the state encourages private efforts to enhance research funding, education programs, and patient services that address these diseases.

COMMENT

The major forms of blood cancer are lymphoma, leukemia, and myeloma. All three types of blood cancers involve an uncontrolled growth of abnormal cells within the blood and bone marrow.¹

Leukemia

Leukemia, cancer of the bone marrow and blood, is characterized by the uncontrolled accumulation of abnormal blood cells and may be acute or chronic in nature. With acute leukemia, a rapidly progressing disease, immature, functionless blood cells accumulate in the bone marrow and blood. The marrow often can no longer produce enough normal red blood cells, white blood cells, and platelets. The lack of red blood cells causes anemia; the lack of normal white cells impairs the body's ability to fight infections; and the shortage of platelets results in bruising and easy bleeding. Chronic leukemia, like acute leukemia, also results in the accumulation of abnormal blood cells in the marrow and blood, but progresses at a slower rate than acute leukemia.²

Lymphoma

Lymphoma is a general term for a group of cancers that originate in the lymphatic system. The lymphomas are divided into two major categories: Hodgkin lymphoma and all other lymphomas, called non-Hodgkin lymphomas. Lymphomas, including Hodgkin lymphoma, result from an acquired (not inherited) injury, or mutation, to the DNA of a type of blood cell called a lymphocyte. The mutation causes the lymphocyte to grow to excessive size, and multiply at an abnormally high frequency. The mutated lymphocyte's daughter cells are also mutated, and reproduce rapidly. The accumulation of these dividing

¹ "Blood Cancer Overview." www.intelihealth.com.

² "Disease Information: Leukemia." *The Leukemia and Lymphoma Society*. <http://www.leukemia-lymphoma.org/>.

cells causes tumor masses in lymph nodes and other sites. Usually, lymphomas start in lymph nodes or collections of lymphatic tissue in organs like the stomach or intestines, but may, in some cases, originate in the bone marrow or the blood.³

Certain characteristics distinguish Hodgkin lymphoma from other types of lymphoma: the presence of a particular type of cell, known as the Reed-Sternberg cell (named for the scientists who discovered it) and its pattern of spreading. Hodgkin lymphoma usually begins in the lymph nodes of one region of the body. As the disease progresses, it tends to spread in a fairly predictable manner, from one part of the lymph system to another, then into organs including the lungs, liver, bone, and bone marrow.⁴

Myeloma

Myeloma, also known as "multiple myeloma," is a cancer of the plasma cell, the blood cell that produces antibodies, which help the body to fight infection and disease. Cancerous plasma cells, called myeloma plasma cells, result from an acquired (not inherited) mutation in the DNA of a blood cell that produces plasma cells. Myeloma plasma cells tend to accumulate in the bone marrow, forming tumors. Normally, plasma cells make up only a very small portion of the cells in the bone marrow. Myeloma plasma cells, however, have specific adhesion molecules on their surface allowing them to target bone marrow. After they enter the bone marrow, these adhesion molecules allow them to attach to structural bone cells called stromal cells.

Once myeloma cells attach to bone marrow stromal cells, several interactions cause the myeloma cells to grow into tumors. As the tumors grow, they invade the hard outer part of the bone, the solid tissue. In most cases, the myeloma cells spread into the cavities of all the large bones of the body, forming multiple small lesions (which is why the disease is also known as "multiple myeloma"). Occasionally, however, the myeloma cells collect in a single bone and form a tumor called a plasmacytoma.⁵

³ "Disease Information: Lymphoma." *The Leukemia and Lymphoma Society.* <http://www.leukemia-lymphoma.org/>.

⁴ "Disease Information: Hodgkin Lymphoma." *The Leukemia and Lymphoma Society.* <http://www.leukemia-lymphoma.org/>.

⁵ "About Myeloma: Definition." *Multiple Myeloma Research Center.* <http://www.multiplemyeloma.org/>.

HISTORY

ACTION	DATE	JOURNAL ENTRY
Introduced	02-03-05	pp. 183-184
Reported, H. State Gov't	04-26-05	p. 704
Passed House (97-0)	05-11-05	pp. 786-787

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