Leukemia - Chronic Lymphocytic - CLL - Staging

This section has been reviewed and approved by the Cancer.Net Editorial Board [1], April / 2012

Stages

Staging is a way of describing where the cancer is located, if or where it has spread, and whether it is affecting the functions of other organs in the body. Doctors use diagnostic tests to determine the cancer's stage, so staging may not be complete until all of the tests are finished. Knowing the stage helps the doctor to decide what kind of treatment is best and can help predict a patient's prognosis. There are different stage descriptions for different types of cancer.

There is a relationship between the stage of the CLL and the prognosis. In general, patients diagnosed at an earlier stage have better long-term survival. Importantly, however, there is a wide range of outcomes even for patients who have the same stage, and the stage alone cannot predict the prognosis with certainty for each person.

Below are explanations of commonly used staging and classification systems used by doctors to describe CLL:

Rai staging system (stage 0, I, II, III, or IV)

In this staging system, CLL is divided into different stages from 0 (zero) to IV (four). This staging system classifies the leukemia according to whether a patient has, or does not have, any of the following:

- Lymphocytosis (high levels of lymphocytes)
- Lymphadenopathy (swollen lymph nodes)
- Splenomegaly (an enlarged spleen)
- Anemia (low levels of red blood cells)
- Thrombocytopenia (low levels of platelets)

This chart summarizes the Rai stages.

Rai Stage	High levels of lymphocytes	Enlarged lymph nodes	Enlarged spleen	Anemia	Low levels of p
0	Yes	No	No	No	No
I	Yes	Yes	No	No	No
II	Yes	Yes or no	Yes	No	No
III	Yes	Yes or no	Yes or no	Yes	No
IV	Yes	Yes or no	Yes or no	Yes or no	Yes

Chart adapted from theAmerican Society of Hematology, Kay et. al. 2002, vol. 1:193, Table 8[2])

Stage 0: The patient has lymphocytosis (more than 5000 lymphocytes per microliter of blood), but no other physical signs.

Stage I: The patient has lymphocytosis and enlarged lymph nodes. The patient does not have an enlarged liver or spleen, anemia, or low levels of platelets.

Stage II: The patient has lymphocytosis and an enlarged spleen and may or may not have swollen lymph nodes.

Stage III: The patient has lymphocytosis and anemia. The patient may or may not have swollen lymph nodes and an enlarged liver or spleen.

Stage IV: The patient has lymphocytosis and low levels of platelets. The patient may or may not have swollen lymph nodes, an enlarged liver or spleen, or anemia.

If the CLL grows and worsens, the stage may change over time.

Risk group

Sometimes the phrase ?risk group? is used to indicate the likelihood that the disease may worsen and require treatment [3].

Low risk: Rai stage 0

Intermediate risk: Rai stages I and II

High risk: Rai stages III and IV

Binet classification (stage A, B, or C)

European doctors use a different staging system, based on whether the CLL is found in the lymph nodes (in the neck, under the arms, or in the groin area) and whether the patient has low levels of red blood cells or platelets. The stages are called A, B, and C.

Binet stage	Number of enlarged lymph node areas	Anemia	Low levels of platelets
A	Less than 3	No	No
B	3 or more	No	No
C	Any number	Yes (or low platelets)	Yes (or anemia)

Chart adapted from theAmerican Society of Hematology, Kay et. al.2002, vol. 1:193, Table 8 [2])

Stage A: The patient does not have anemia or low levels of platelets. The cancer can be felt in fewer than three areas of lymph nodes (Rai stages 0, I, and II).

Stage B: The patient does not have anemia or low levels of platelets. The cancer is in three or more areas of lymph nodes (Rai stages I and II).

Stage C: The patient has anemia and/or low levels of platelets. The cancer is in any number of lymph nodes (Rai stages III and IV).

Recurrent CLL

Recurrent CLL is CLL that comes back after treatment. If there is a recurrence, the cancer may need to be staged again (called re-staging) using one of the systems above.

Links:
[1] http://www.cancer.net/about-us
[2] http://www.asheducationbook.org/cgi/content-nw/full/2002/1/193/T8
[3] http://www.cancer.net/node/19099