Over the course of a year of monthly meetings, The CLL Bloodline will teach the BASICS needed to understand CLL, bring news, help with the acronym and new vocabulary, and offer simple fun quizzes.

MONTHLY QUIZ:
Anemia (low red cell count) is a common complication in CLL. All of the following causes are directly related to CLL and its treatment except:

1. Crowding in the bone marrow by the CLL cancer cells so there is not enough room left to make red blood cells (RBC).
2. An enlarged spleen that both hoards and destroys too many red blood cells (RBC).
3. Suppression of the bone marrow by chemotherapy or other drugs used to treat CLL.
4. Nutrient deficiencies such as low iron, folate or B12 limiting the raw material needed to build new RBC.
5. Destruction of the RBC by an auto-immune process (auto-immune hemolytic anemia or AIHA).
6. A rare complication where a secondary cancer called myelodysplastic syndromes or MDS develops leading to bone marrow failure.

The correct answer is #4. Although low iron, folate or B12 may be found in CLL, the disease and its treatment should not directly lead to these deficiencies. All the others are possible causes of anemia in chronic lymphocytic leukemia and thus re-enforce the importance of having the correct assessment of the cause of the anemia, as each is treated differently.

NEWS:
Sept. 2018: The U.S. Food and Drug Administration (FDA) approved Duvelisib (COPIKTRA) an oral inhibitor of phosphoinositide 3-kinase (PI3K), and the first approved dual inhibitor of PI3K-delta and PI3K-gamma. It is approved for relapsed or refractory CLL/SLL after at least two prior therapies.

THE BASICS: Definitions and Diagnosis
In last May’s Bloodline, we discussed some factors that go into deciding your choice of therapy. This month we will start describing large categories of treatment.

Chemo-immunotherapy (CIT) was, until recently, the main treatment for CLL. Today it is a good choice only for a few with the best prognostic markers. It uses chemo drugs that non-specifically kill any fasting growing cells such as cancer cells. In CLL, common drugs are fludarabine (F), cyclophosphamide (C) bendamustine (B) and chlorambucil. Chemo is more effective when combined with immunotherapy (IT), usually a monoclonal antibodies (MAB) including rituximab (R), ofatuzumab, and obinutuzumab) that target a specific marker (CD20) found only on CLL and normal B cells. Common CIT are FCR, BR and chlorambucil and obinutuzumab.

WORD/ACRONYM OF THE MONTH: CD
CD or Clusters of Differentiation are proteins on the cell surface used for immunophenotyping (cellular fingerprinting) for diagnosis or as a target for monoclonal and CAR-T to attack.