



The CLL Society  
Support & Education Network

## The CLL Bloodline

APRIL 2016

### MONTHLY QUIZ:

#### T cells are:

- 1: Lymphocytes that direct cellular defenses. (correct)
- 2: Lymphocytes that make antibodies.
- 3: White blood cells that have "gone bad" and caused our cancer.
- 4: Where you place your golf ball when you are about to hit the first shot on each hole.

T-cells are lymphocytes that mature in the thymus, hence the T, in contrast to the B cells that mature in the bone marrow. They are part of the advanced adaptive immune system and they co-ordinate our cell mediated defenses against invaders. A simplified list of the main T cell subtypes are: helpers (CD4+) that assist other cells mature; cytotoxic (CD8+) that destroy cancer cells; memory cells that are long lived and remember past attacks; and suppressor cells that turn off the immune response. The suppressor and helper cells together are called the regulatory T cells or T-regs.

### NEWS:

On 3/14/16, the FDA alerted health care professionals as to the increased rate of serious infections and deaths in front line trials with Zydelig (idelalisib) in combination with other medicines. Gilead has halted 6 clinical trials in patients with CLL/SLL and indolent non-Hodgkin lymphomas.

The FDA's goal with this warning is not to eliminate idelalisib use, but to make sure that physicians and patients take these data into account when making an informed treatment decision. For those patients going on idelalisib treatment, there are also specific recommendations to help lessen the risks:

- Patients should receive PCP prophylaxis (Bactrim, dapsone or atovoquone)
- Patients should have monthly CMV monitoring

For those patients who are currently doing well on idelalisib, discontinuing is an option, but interrupting an agent that is working well is often not the best choice.

### THE BASICS:

CLL is a slow growing or indolent lymphoma of the B-lymphocytes. CLL is both a leukemia and lymphoma and can be found in blood, marrow and lymph tissue. SLL is the same disease, but has not significantly spilled over into the blood. CL/SLL is a cancer of the B cells that are involved in making antibodies. It is diagnosed by finding  $\geq 5000$  monoclonal (genetically identical) B-lymphocytes in the blood for the duration of at least three months. The clonal nature of the circulating B-lymphocytes should be confirmed by flow cytometry, a test that identifies specific surface markers on the cell.

### WORD/ACRONYM OF THE MONTH:

**Apoptosis:** Cells that are no longer needed or that are a threat such as cancer cells are destroyed by a tightly regulated cell suicide process known as programmed cell death or apoptosis. Many older chemotherapy drugs used in CLL/SLL work by inducing apoptosis. Apoptosis depends on an intact P53 pathway that is missing in most patients with deletion 17p.