The James
THE OHIO STATE UNIVERSITY
WEXNER MEDICAL CENTER

Acute Leukemia

Leukemia is cancer of the blood cells. Leukemia usually begins in the bone marrow. The bone marrow (spongy center of a bone) makes three types of blood cells and each type has a special job:

- White blood cells help fight infection and disease
- Red blood cells carry oxygen throughout the body
- Platelets help control bleeding by forming blood clots

When you have leukemia, the bone marrow makes a high number of abnormal white blood cells (myeloblasts or lymphoblasts). Over time, the blast cells build up and crowd out the normal cells in the bone marrow. This makes it hard for the blood to do its job and can lead to problems such as a low red blood cell count (anemia), bleeding or infections.

The changes in the blast cells will determine your type of leukemia. The rate at which the cells grow will tell if your type of leukemia is chronic or acute. Acute leukemia is a fast growing cancer. It is very important to start treatment as soon as possible after your diagnosis.

Common types of acute leukemia include:

- **AML** (Acute Myeloid Leukemia)
  - ▶ A subtype of AML is **APL** (Acute Promyelocytic Leukemia)
- **ALL** (Acute Lymphoblastic Leukemia)

Treatment

Your doctor will determine the best treatment for you depending on your type of leukemia. The most common treatment for leukemia is chemotherapy.

The first part of chemotherapy (**induction**) begins shortly after diagnosis and is given in the hospital. This hospital stay may be 6 weeks or longer. The goal of treatment is a **complete remission**. This means that after treatment, there is no sign of the cancer cells.

More inpatient treatment is usually needed even after you are in remission. The second part of treatment includes getting chemotherapy in cycles (**consolidation**) to prevent the leukemia from coming back.

At times, treatment may include long-term chemotherapy **(maintenance)**. For certain high risk leukemias, a **stem cell transplant** may be needed.