

Acute Leukemias (AML and ALL) and Chronic Myelogenous Leukemia (CML) Outcomes Analysis Report

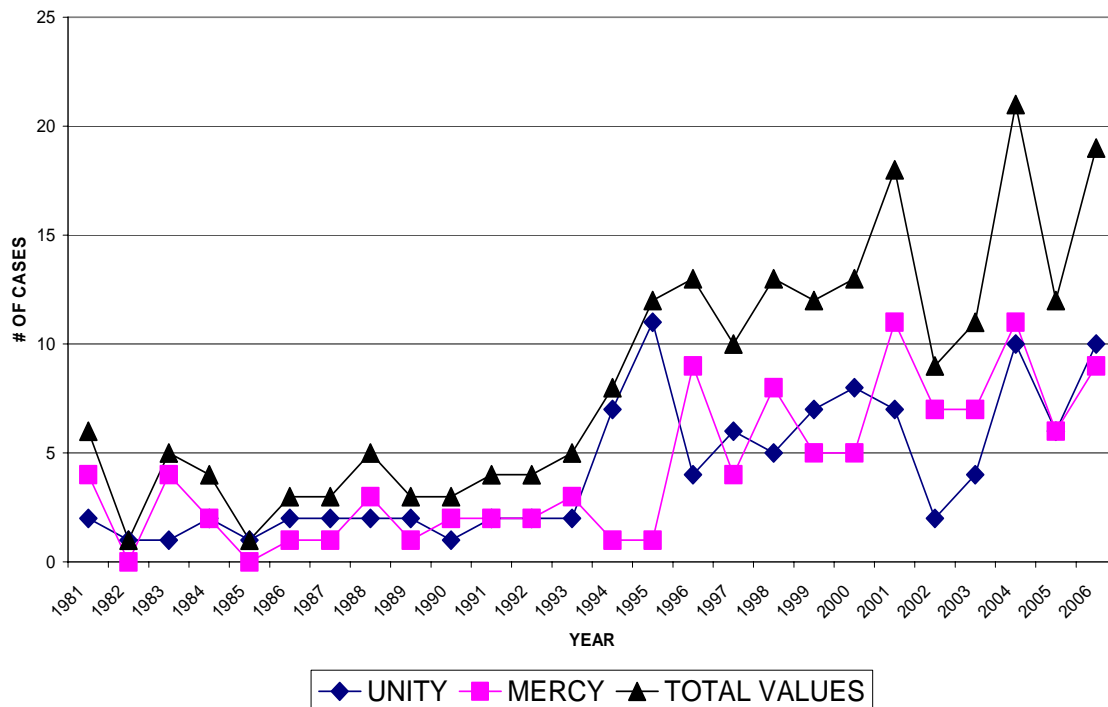
By Stephen Mann, MD
Medical Director of Oncology
Mercy and Unity Hospitals

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Volumes

Figure 1 shows the trend in acute leukemia (acute myeloid and lymphoblastic leukemias) diagnoses at Unity and Mercy Hospitals since 1981. Starting in the mid 1990's, volumes have increased significantly and continue an upward trend. Nevertheless, acute leukemias comprise only a small fraction of our total cancer accessions (1-2%). This proportion is also seen nationally. In adults acute myeloid leukemia (AML) is about 10 times more common than acute lymphoblastic leukemia (ALL).

Acute Leukemias (AML AND ALL) VOLUMES
FIGURE 1



Chronic myelogenous leukemia (CML) volumes have been about 30-40% of AML volumes both at Unity and Mercy and nationally. Chronic lymphocytic leukemia (CLL) has been discussed as part of our lymphoma review.

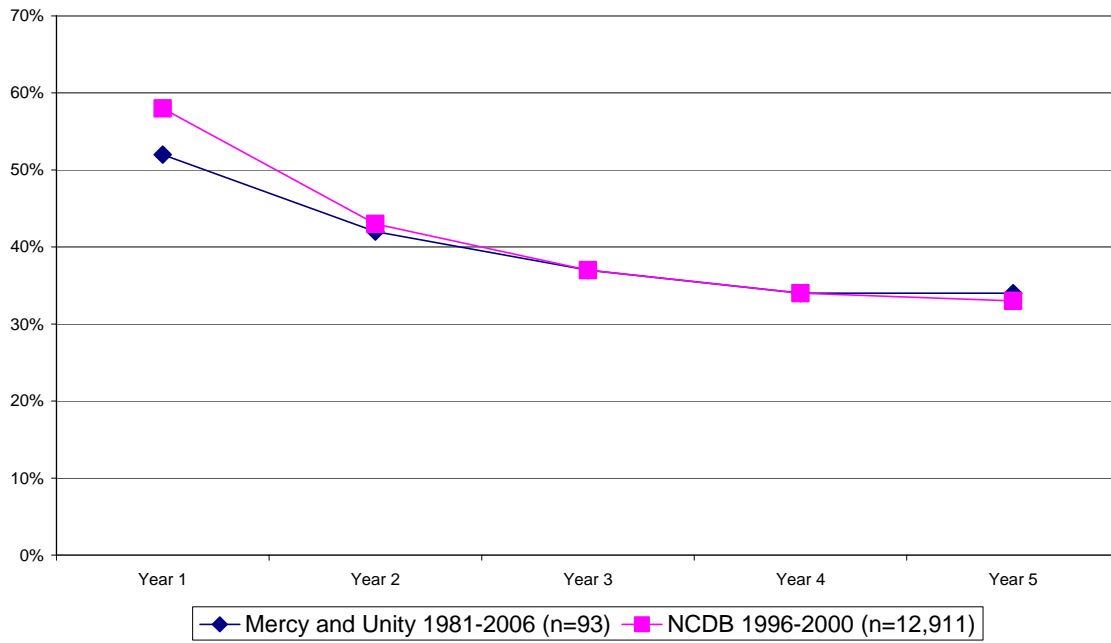
Treatment and Outcomes

As for other cancers, our treatment for leukemias follows national guidelines. Currently, the National Comprehensive Cancer Network (NCCN) offers treatment guidelines for AML and CML.

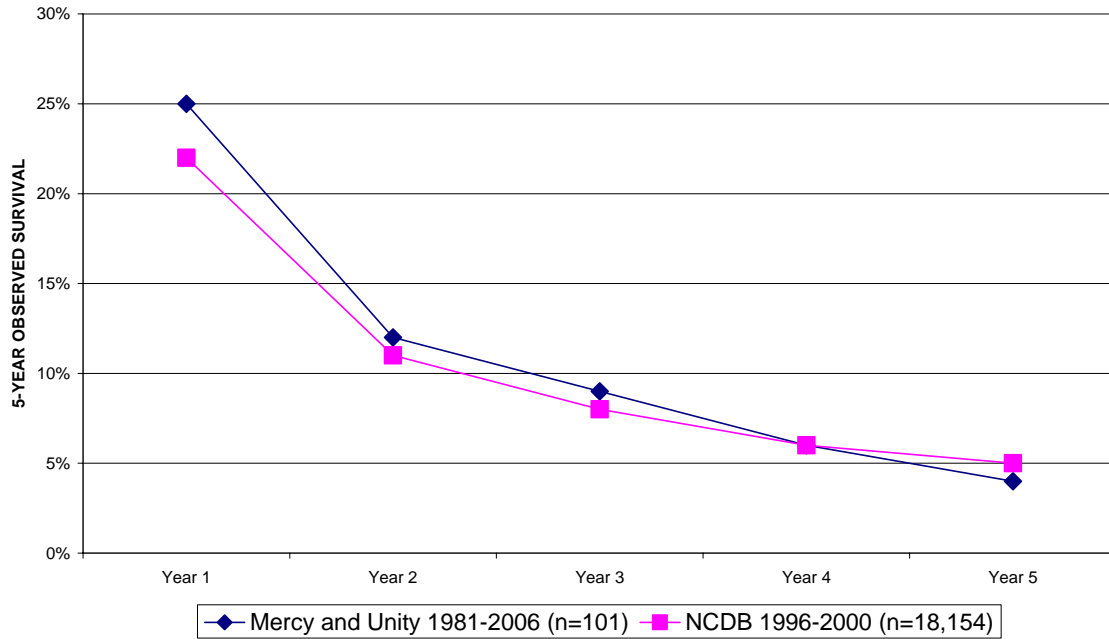
The acute leukemias include AML & ALL. AML treatment typically involves an induction phase consisting of a 7-day IV infusion of cytarabine and 3 days of an anthracycline. Following successful induction, an intensification treatment phase consists of high dose cytarabine or various hematopoietic stem cell transplant protocols. ALL treatment involves an intensive induction phase using drugs including adriamycin, prednisone, cytoxan, vincristine, cytarabine, and methotrexate. Depending on specific diagnostic variants, additional treatments such as rituximab (a monoclonal anti B cell antibody) or imatinib (an oral protein kinase inhibitor) are recommended. After successful induction, an extended maintenance treatment phase follows.

Survival results for AML and ALL are presented in figures 2 and 3. Outcomes in acute leukemias are strongly age dependent. Accordingly, each survival figure is divided into <60 and >60 parts. Survival in our acute leukemia patients at Mercy and Unity agree very closely with national results. Our volumes for ALL patients older than 60 are too low for meaningful comparisons.

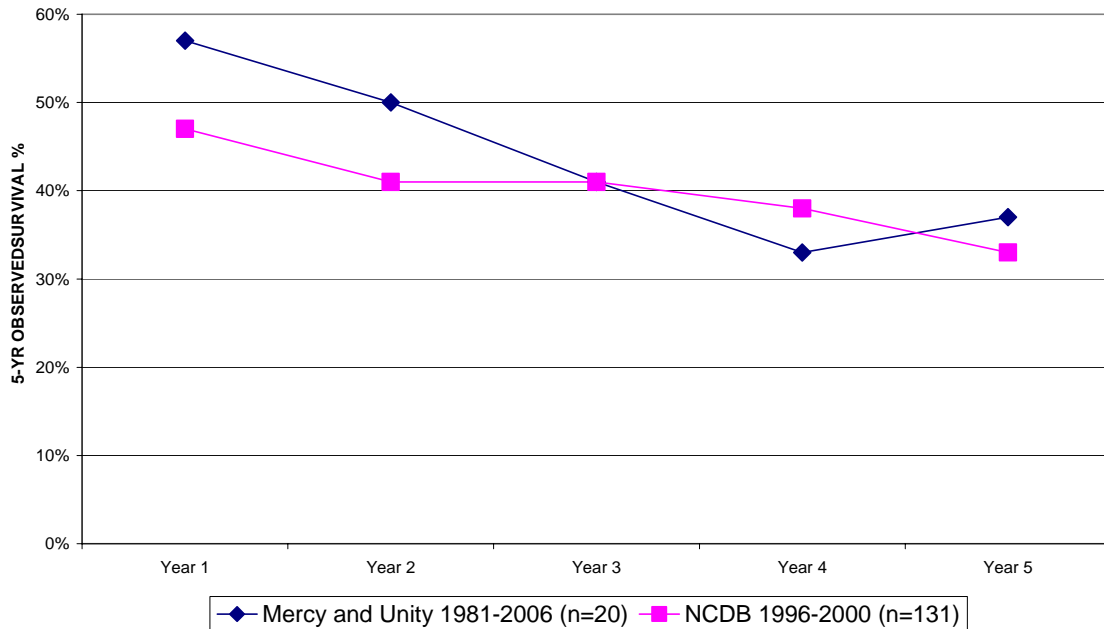
ACUTE MYELOID LEUKEMIA SURVIVAL
(Age <=60)
FIGURE 2A



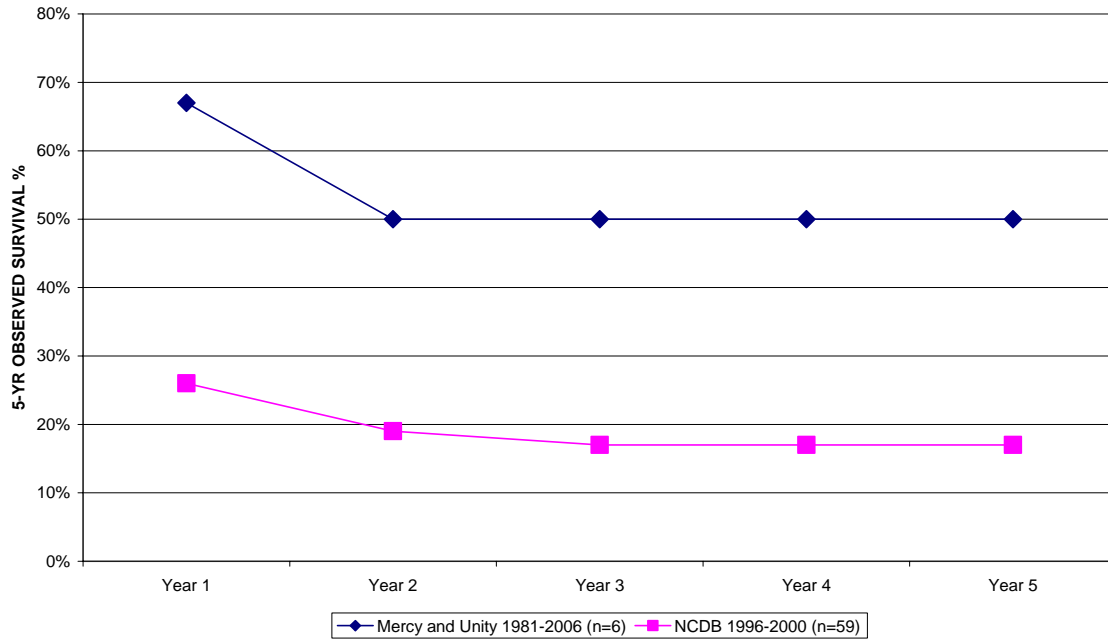
ACUTE MYELOID LEUKEMIA SURVIVAL
 (Age >60)
FIGURE 2B



ACUTE LYMPHOBLASTIC LEUKEMIA SURVIVAL
 (Age <=60)
FIGURE 3A



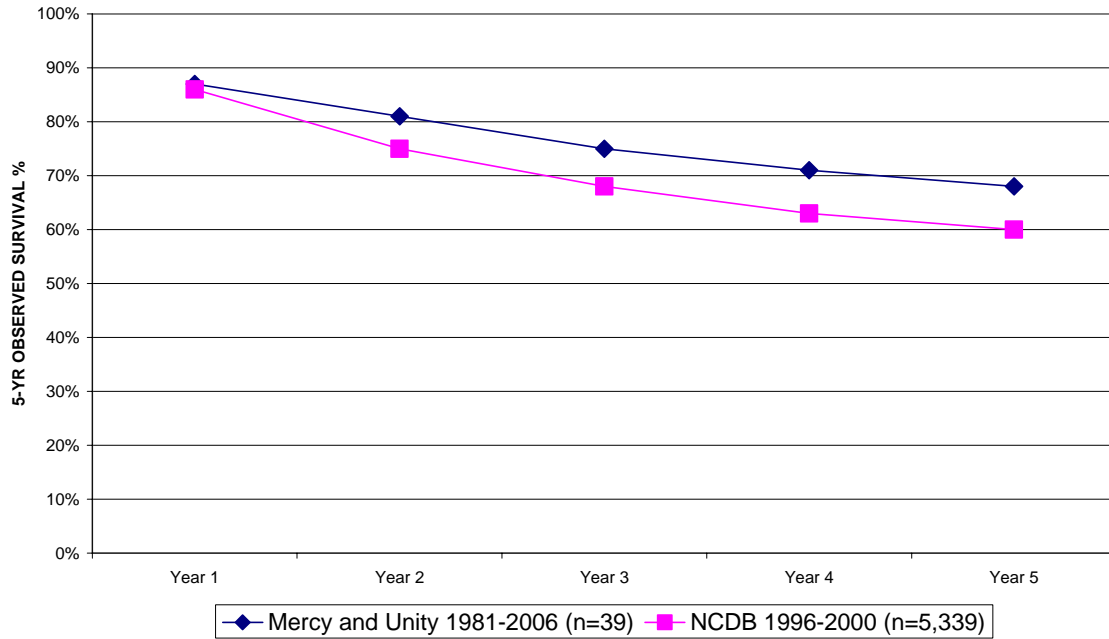
ACUTE LYMPHOBLASTIC LEUKEMIA SURVIVAL
(Age >60)
FIGURE 3B



CML treatment has been revolutionized since 2001 by the development of oral protein kinase inhibitors (e.g., imatinib, dasatinib) which inactivate a protein generated by the chromosome 9/22 translocation, present in all CML cases. These drugs have superseded the previous interferon-based therapies. Because of these significant treatment advances, 5-year survivals for CML patients may exceed 80% into the future.

Survival results for CML are presented in figure 4A & B. Mercy and Unity outcomes compare favorably with national data.

CHRONIC MYELOGENOUS LEUKEMIA SURVIVAL
(Age <=60)
FIGURE 4A



CHRONIC MYELOGENOUS LEUKEMIA SURVIVAL
(Age >60)
FIGURE 4B

