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Identifying Refractory AML Patients Using Rate of WBC Decline in Order to Reduce Length of Stay

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IDENTIFYING REFRACTORY AML PATIENTS USING RATE OF WBC DECLINE IN ORDER TO REDUCE LENGTH OF STAY

Introduction: Acute Myeloid Leukemia (AML) is the most common acute leukemia in the United States. At diagnosis, these patients are admitted to begin induction chemotherapy and remain in the hospital throughout treatment. Response to therapy is assessed with bone marrow biopsy one month later. However, rate of white blood cell (WBC) and absolute blast count (ABC) decline can be useful in predicting bone marrow blast clearance and complete remission.

Objective: Therefore, our goal is to identify AML patients refractory to induction therapy using rate of WBC, ABC, and ANC decline as prognostic markers in order to reduce length of stay.

Methods: Combined retrospective/prospective chart review of AML patients seen by the Hematologic Malignancies team at Thomas Jefferson University Hospital between September 2017 and December 2018. We will use logistic regression to determine the association between rates of WBC, ABC, and ANC decline and the result of the first post-induction bone marrow biopsy.

Results: At this time, over 700 patient charts have been reviewed and thus far, 13 patients have met the stringent inclusion criteria set by the research team. All patients who met our diagnostic and treatment criteria achieved clinical remission on follow up bone marrow biopsy.

Discussion: Recruitment of additional patient charts is needed. Our research team has discussed potentially expanding our criteria to include patients further back in time from the last five years. More patient charts will allow us to more accurately compare rates of WBC decline between patients who do and do not achieve clinical remission.