

# Symptoms, Mobility and Function, and Quality of Life in Adults With Acute Leukemia During Initial Hospitalization

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**OBJECTIVES:** To examine longitudinal symptoms, mobility and function, and quality of life (QOL) in adults newly diagnosed with acute leukemia.

**SAMPLE & SETTING:** 55 adults undergoing induction chemotherapy at the University of North Carolina Lineberger Comprehensive Cancer Center and the Duke Cancer Institute.

**METHODS & VARIABLES:** A prospective, longitudinal study with measures of mobility and function, global physical and mental health, cancer-related fatigue, anxiety, depression, sleep disturbance, pain intensity, and leukemia-specific QOL was conducted. Data were analyzed using descriptive statistics, linear mixed modeling, and one-way analysis of variance.

**RESULTS:** 49 adults with acute leukemia completed assessments during hospitalizations. Global mental health and pain intensity did not change significantly. Global physical health significantly improved. Fatigue, anxiety, depression, and sleep disturbance decreased significantly. QOL increased significantly.

**IMPLICATIONS FOR NURSING:** The significant decrease in anxiety and fatigue during hospitalization may be attributable to understanding of the disease process, familiarity with the staff, and ability to communicate concerns.

**KEYWORDS** acute leukemia; PROMIS; mobility; function; quality of life; hospitalization; symptoms  
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Acute leukemias are hematologic cancers of the bone marrow and blood (Sekeres & Stone, 2002). The three most common acute leukemias are acute myeloid leukemia (AML), acute promyelocytic leukemia (APML), and acute lymphocytic leukemia (ALL). In 2018, an estimated 25,480 people will be diagnosed with AML and ALL, and more than half will die from the disease (American Cancer Society, 2018). Newly diagnosed acute leukemia is usually treated in a specialized cancer care center with an average stay of four to six weeks (Sekeres & Stone, 2002). Although various treatments exist for AML, intensive chemotherapy is the treatment of choice to achieve remission and prolong survival (Alibhai et al., 2015; Ghodrati-Jabloo, Alibhai, Breunis, & Puts, 2015, 2016). Chemotherapy treatment has two phases: (a) induction to put the disease into complete remission (typically 30 days) and (b) consolidation to kill any remaining leukemia cells that cannot be seen (four to six subsequent monthly cycles) (Stone, 2008). Patients with AML typically receive aggressive inpatient induction chemotherapy for one week and then remain hospitalized for at least one month because of treatment-associated complications, such as neutropenic fever, anemia, and thrombocytopenia (Sekeres & Stone, 2002). Patients with acute leukemia are particularly vulnerable during induction chemotherapy because they are at high risk for symptom toxicities. It is common for patients to have fluctuating symptoms associated with the disease and its treatment, such as myelosuppression, stomatitis, and nausea, throughout hospitalization (Albrecht, 2014; Bryant, Walton, Shaw-Kokot, Mayer, & Reeve, 2015).

Symptom management is the foundation of oncology nursing care. One way to assess symptoms is through patient-reported outcomes (PROs),