INPLASY

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Mortality and prognostic factors of patients with acute leukemia admitted to the ICU: a systematic review

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ADMINISTRATIVE INFORMATION

Support - N/A.

Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 11 July 2025 and was last updated on 11 July 2025.

INTRODUCTION

Review question / Objective What is the mortality rate of ICU admission in patients with acute leukemia and what are the prognostic factors related to survival?

Condition being studied Acute leukemia.

METHODS

Participant or population All adult (18 years or older) patients with acute leukemia (including acute myeloid and lymphoblastic leukemia) who were admitted to the intensive care unit (ICU).

Intervention None.

Comparator N/A.

Study designs to be included Retrospective and prospective cohort.

Eligibility criteria Inclusion criteria: retrospective and prospective observational studies that reported mortality outcomes of patients with acute leukemia who were admitted in the ICU. Due to substantial improvement in OS of patients with AML , only studies that were published as of 2005 were included. Reports published in English or Portuguese were included.
Exclusion criteria: Editorials, case reports and small case series; studies with no separate report of acute leukemias; studies including pediatric population (< 18 years old) or those that did not clearly state the age range were excluded.

Information sources Electronic databases searched: Medline, Cochrane and Embase.

Main outcome(s) Intensive care unit and hospital mortality, 1-year survival.

Additional outcome(s) 30,60, and 90-day mortality; 6-month survival.

Quality assessment / Risk of bias analysis Risk of bias was assessed using the Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Studies Reporting Prevalence Data.

Strategy of data synthesis Demographic and mortality data was extracted from each study and included in a pooled analysis. Risk factors for ICU mortality were described in a summary table.

Subgroup analysis Acute myeloid leukemia.

Sensitivity analysis N/A.

Country(ies) involved United States.

Keywords Acute leukemia; outcomes; intensive care unit.

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