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"The Prognostic Implications of Tetraploidy/Near-Tetraploidy in Acute Myeloid Leukemia: A Case Series and Systematic Review of the Literature"

The prognostic significance and optimal management of tetraploidy/near-tetraploidy acute myeloid leukemia (T/NT AML) remains unclear given its limited data. This is especially true after factoring in additional chromosomal alterations, which carry their own prognostic weight. Here, we analyze 128 cases of T/NT in AML from the literature along with two additional cases, which is the largest review of this subject to date. Based on our retrospective analysis, we found that regardless of the risk status attributed to cytogenetics, the prognosis of tetraploid or near-tetraploid AML is dismal and should be incorporated within the unfavorable risk group. Complete remission is paramount to survival in this population. Specific induction protocols for high-risk AML appear to have higher rates of complete remission in the T/NT AML population. Moreover, longer overall survival can be achieved with chemotherapy followed by allogeneic stem cell transplantation at first complete remission.