



**Differential Diagnosis of AML** (French-British-American classification)

Disease	Notes
AML-M0 Undifferentiated AML	>30% blasts, cytochemistry negative. Either CD13 or CD33 + establishes diagnosis.
AML-M1 AML with minimal maturation	>30% blasts; Sudan black B/myeloperoxidase + in blasts <10% cells maturing myeloid beyond blast. inv (3) associated with thrombocytosis.
AML-M2 AML with maturation	>30% blasts; < 20% monocytes; >10% cells exhibiting myeloid maturation. t(8:21) favorable prognosis.
AML-M3 Promyelocytic leukemia	>30% blasts + promyelocytes intense myeloperoxidase/Sudan black staining. t(15;17); responds to retinoic acid; multiple Auer rods noted in blasts/promyelocytes ("faggot cells").
AML-M3 Variant (microgranular) APL	Abnormal promyelocytes may lack characteristic granulation. Also t(15;17); responds to retinoic acid.
AML-M4 Myelomonocytic leukemia	>30% myeloblasts + monoblasts + promonocytes >20% Sudan black/myeloperoxidase + cells >20% nonspecific esterase + cells. Evidence of granulocytic and monocytic differentiation.
AML-M4eo Myelomonocytic leukemia with eosinophilia	As above but with abnormal basophilic eosinophils. inv 16 or t(16;16); favorable prognosis.
AML-M5a Monocytic leukemia	>80% monoblasts; <20% Sudan black/myeloperoxidase + cells. Extramedullary disease common.
AML-M5b Monocytic leukemia with differentiation	As above except <80% monocytic lineage are blasts. t(8;16) associated with erythrophagocytosis.
AML-M6 Erythroleukemia	>30% of nonerythroid cells are myeloblasts >50% erythroid elements. Often preceded by myelodysplastic syndrome.
AML-M7 Megakaryoblastic leukemia	>30% myeloblasts + megakaryoblasts/megakaryocytic elements defined by immunophenotyping or electron microscopy. Fibrotic marrow makes diagnosis difficult; CD41 or CD61 useful.

AML = acute myelogenous leukemia; APL = acute promyelocytic leukemia.

Adapted table from *Physicians Information and Education Resource (PIER)*, Acute Myelogenous Leukemia module.