

AML POSES A CRITICAL CLINICAL CHALLENGE

A growing global burden

Acute myeloid leukemia (AML) is the most common acute leukemia in adults, accounting for **~23.1% of all leukemia cases worldwide** (2017) ^[1]

It is highly aggressive with poor survival outcomes:

- ▶ 5-year relative survival: **32.9%** ^[2]
- ▶ With current SOC, this falls to **<10-15%** in older patients (≥60 years) ^[3]
- ▶ Once patients relapse, median overall survival drops **<6 months** ^[4]

The global burden has escalated over recent decades, with morbidity and mortality continuing to rise ^[5]:

In the US alone, projections for 2025 estimate **~22,010 new diagnoses** and **~11,090 deaths** ^[6]



Median age of diagnosis:
68 years in US ^[7]



Incidence higher **in men** ^[5]



Most common potential risk factors related to AML:
smoking, previous chemo- or radiotherapies, history of blood disorders, genetic disorders ^[5]

These poor outcomes are driven by limited treatment options and the underlying complexity of AML biology.

COMPLEXITY OF THE DISEASE



Similarity between AML blasts and normal hematopoietic cells ^[10]



Genetic and molecular heterogeneity ^[10]



Clonal evolution and therapy resistance ^[11]



Bone marrow niche protects leukemic cells ^[12]

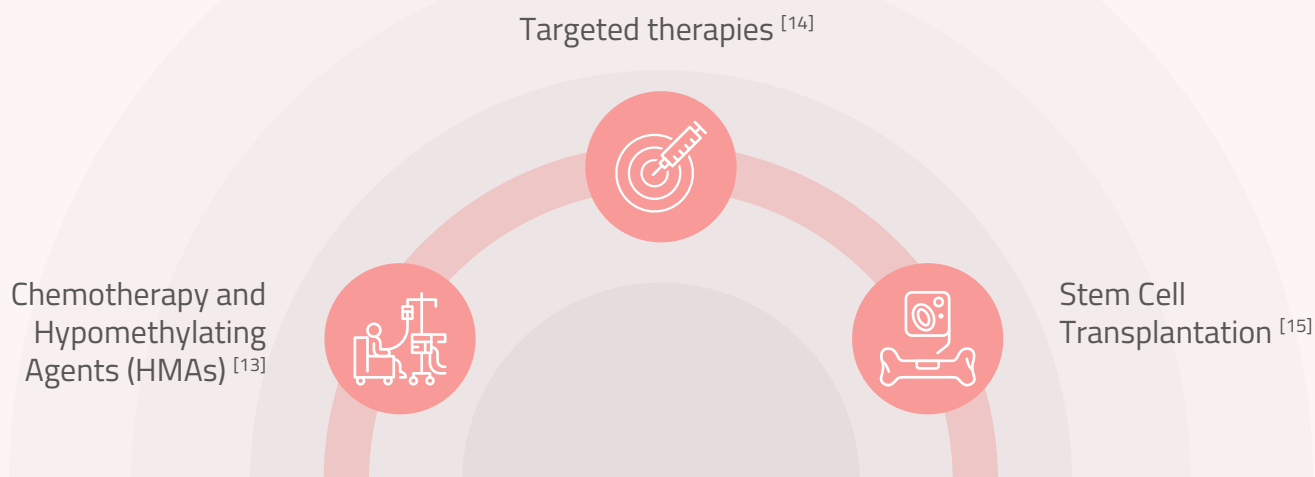
What exactly is AML?

AML is ^[8,9]

- ▶ A blood and bone marrow cancer that predominantly impacts older adults
- ▶ A heterogeneous and malignant clonal disorder of the bone marrow/hematopoietic system
- ▶ Driven by chromosomal rearrangements and gene mutations in hematopoietic stem and progenitor cells
- ▶ Characterized by an accumulation of undifferentiated myeloid blasts
- ▶ Associated with impaired production of normal blood cells

THE CURRENT TREATMENT LANDSCAPE

Types of treatment available



Where current therapies fall short

Survival is poorest in **older** (<15% 5-year survival in patients ≥ 60 years) [3] **and R/R AML patients** (OS <6 months) [4]
Yet treatment choices remain limited

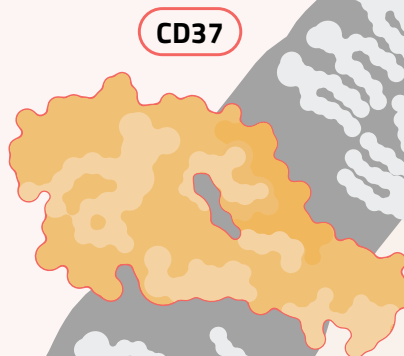
~30–35% relapse rates in younger patients with favorable risk factors, but **~80%** in older patients with adverse risk factors [16]

More than **50%** of patients with AML are ineligible for intensive chemotherapy regimens [17]

CD37 PLAYS A ROLE IN AML PATHOGENESIS

CD37 expression

- ▶ CD37 is a cell-surface glycoprotein with restricted expression to the hematopoietic system
- ▶ Overexpressed in AML blasts and leukemic stem cells compared to normal hematopoietic stem cells ^[18–20]
- ▶ Prognostic biomarker in AML related to the poor prognosis: shorter overall survival and disease-free survival ^[21]
- ▶ Expressed in multiple subtypes of AML ^[18–20] – found in most primary AML blasts



Why is it a promising therapeutic target for AML?

- ▶ CD37 possesses excellent internalization properties in leukemic blasts compared to normal blood cells, even when surface expression is low ^[20]
- ▶ CD37 is expressed broadly, covering all genetic alteration subgroups and patient's treatment history

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