WHO myeloid neoplasm and acute leukemia classification

Myeloproliferative neoplasms (MPN)
- Chronic myeloid leukemia (CML), BCR-ABL1
- Chronic neutrophilic leukemia (CNL)
- Polycythemia vera (PV)
- Primary myelofibrosis (PMF)
  - PMF, prefibrotic/early stage
  - PMF, overt fibrotic stage
- Essential thrombocythemia (ET)
- Chronic eosinophilic leukemia, not otherwise specified (NOS)
- MPN, unclassifiable

Myeloid/lymphoid neoplasms with eosinophilia and rearrangement of PDGFA, PDGFRB, or FGFR1, or with
- Myeloid/lymphoid neoplasms with PDGFA rearrangement
- Myeloid/lymphoid neoplasms with PDGFRB rearrangement
- Myeloid/lymphoid neoplasms with FGFR1 rearrangement
  *Provisional entity: Myeloid/lymphoid neoplasms with PCM1-JAK2*

Myelodysplastic/myeloproliferative neoplasms (MDS/MPN)
- Chronic myelomonocytic leukemia (CMML)
- Atypical chronic myeloid leukemia (aCML), BCR-ABL1
- Juvenile myelomonocytic leukemia (JMMML)
  - MDS/MPN with ring sideroblasts and thrombocytosis (MDS/MPN-RS-T)
  - MDS/MPN, unclassifiable

Myelodysplastic syndromes (MDS)
- MDS with single lineage dysplasia
- MDS with ring sideroblasts (MDS-RS)
  - MDS-RS and single lineage dysplasia
  - MDS-RS and multilineage dysplasia
- MDS with multilineage dysplasia
- MDS with excess blasts
- MDS with isolated del(5q)
- MDS, unclassifiable
  *Provisional entity: Refractory cytopenia of childhood*

Myeloid neoplasms with germ line predisposition

Acute myeloid leukemia (AML) and related neoplasms
- AML with recurrent genetic abnormalities
  - AML with t(8;21)(q22;q22.1);RUNX1-RUNX1T1
  - AML with inv(16)(p13.1q22) or t(16;16)(p13.1;q22);CBFB-MYH11
  - APL with PML-RARA
  - AML with t(9;11)(p21.3;q23.3);MLLT3-KMT2A
  - AML with t(6;9)(p23;q34.1);DEK-NUP214
  - AML with inv(3)(q21.3q26.2) or t(3;3)(q21.3;q26.2); GATA2 , MECOM
  - AML (megakaryoblastic) with t(1;22)(p13.3;q13.3);RBM15-MKL1
  *Provisional entity: AML with BCR-ABL1*
  - AML with mutated NPM1
  - AML with biallelic mutations of CEBPA
  *Provisional entity: AML with mutated RUNX1*
- AML with myelodysplasia-related changes
- Therapy-related myeloid neoplasms
- AML, NOS
AML with minimal differentiation
AML without maturation
AML with maturation
Acute myelomonocytic leukemia
Acute monoblastic/monocytic leukemia
Pure erythroid leukemia
Acute megakaryoblastic leukemia
Acute basophilic leukemia
Acute panmyelosis with myelofibrosis
Myeloid sarcoma
Myeloid proliferations related to Down syndrome
  Transient abnormal myelopoiesis (TAM)
  Myeloid leukemia associated with Down syndrome

**Blastic plasmacytoid dendritic cell neoplasm**
**Acute leukemias of ambiguous lineage**

Acute undifferentiated leukemia
Mixed phenotype acute leukemia (MPAL) with t(9;22)(q34.1;q11.2); BCR-ABL1
MPAL with t(v;11q23.3); KMT2A rearranged
MPAL, B/myeloid, NOS
MPAL, T/myeloid, NOS

**B-lymphoblastic leukemia/lymphoma**
B-lymphoblastic leukemia/lymphoma, NOS
B-lymphoblastic leukemia/lymphoma with recurrent genetic abnormalities
B-lymphoblastic leukemia/lymphoma with t(9;22)(q34.1;q11.2); BCR-ABL1
B-lymphoblastic leukemia/lymphoma with t(v;11q23.3); KMT2A rearranged
B-lymphoblastic leukemia/lymphoma with t(12;21)(p13.2;q22.1); ETV6-RUNX1
B-lymphoblastic leukemia/lymphoma with hyperdiploidy
B-lymphoblastic leukemia/lymphoma with hypodiploidy
B-lymphoblastic leukemia/lymphoma with t(5;14)(q31.1;q32.3) IL3-IGH
B-lymphoblastic leukemia/lymphoma with t(1;19)(q23;p13.3); TCF3-PBX1
  **Provisional entity:** B-lymphoblastic leukemia/lymphoma, BCR-ABL1–like
  **Provisional entity:** B-lymphoblastic leukemia/lymphoma with iAMP21

**T-lymphoblastic leukemia/lymphoma**
  **Provisional entity:** Early T-cell precursor lymphoblastic leukemia
  **Provisional entity:** Natural killer (NK) cell lymphoblastic leukemia/lymphoma