Classification of CMML, special CMML variants and pre-CMML conditions

Chronic myelomonocytic leukemia (CMML)

Myeloid neoplasm characterized by
- accumulation of monocytic cells
- abnormal differentiation of the erythroid, granulocytic and/or megakaryocytic lineages
- elevated risk to transform into acute leukemia

Classification

Classical CMML
- Persistent (at least 3 months) absolute PB monocytes (1×10⁹/L) and relative monocytes (10% of PB leukocytes)
- Exclusion of BCR-ABL1+ leukemia and classical myeloproliferative neoplasms (MPN)
- A blast cell count of 0-19% in peripheral blood and/or bone marrow smears

CMML variants
- Heterogeneous group of neoplasms comprising distinct clinical and biological entities
- Oligomonocytic CMML
- Systemic mastocytosis (SM) with concomitant CMML
- CMML with a concomitant myeloid neoplasm expressing a classical MPN-driver
- CMML with expression of a molecular MPN-driver
- CMML with a concomitant lymphoid/lymphoproliferative neoplasm

pre-CMML conditions
- Idiopathic monocytosis of unknown significance (IMUS)
- Clonal monocytosis of unknown significance (CMUS)
- Idiopathic cytopenias of unknown significance (ICUS)
- Clonal cytopenias of unknown significance (CCUS)

Valent et al., Haematologica, 2019