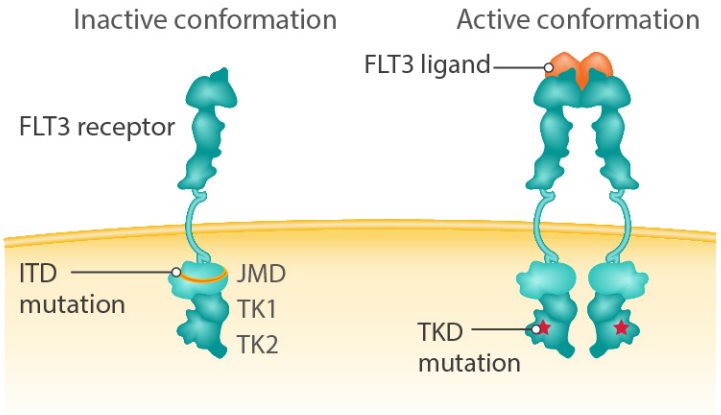
EBMT position statement on best approaches for allogeneic-hematopoietic stem-cell transplantation (allo-SCT) for acute myeloid leukemia with FLT3-ITD



- FMS-like tyrosine kinase 3 (FLT3) receptor is mutated in about **25-30%** of newly diagnosed **acute myeloid leukemia (AML)** cases
- Most common mutations:
  - internal tandem duplications (**FLT3-ITD**)
  - a point mutation in the tyrosine kinase domain (**TKD**)

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Both mutations activate FLT3 causing dimerization

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Proliferation and surival of leukemia cells

EBMT position statement on allo-SCT in FLT3-ITD AML

Indication for allo-SCT in FLT3 mutated AML

- Transplant indication is controversial in patients with FLT3-ITD who belong to the ELN favorable risk group (low allelic ratio <0.5 with concomitant NPM1 mutation) and who achieve MRD negativity
- All other patients with FLT3-ITD should be considered for allo-SCT in CR1 if feasible

Modalities of allo-SCT

- Donor selection according to EBMT general guidelines
- In vivo T-cell depletion decreases the risk of chronic GVHD without an apparent increase in the risk of relapse in FLT3 mutated AML
- The choice of conditioning has no direct link with FLT3 mutation and should be adapted to other individual risk factors such as age, disease status at transplant, and donor type

Post-transplant maintenance

- Post-transplant systemic maintenance therapy with a FLT3 inhibitor for patients who underwent allo-SCT for FLT3-ITD AML is recommended (except for patients with active acute GVHD)
- The recommended post-transplant maintenance is sorafenib at a dose of 400 mg/day in two divided doses
- A minimum of 2 years of maintenance therapy duration is recommended

Bazarbachi *et al.*, Haematologica, 2020