The use of the strains NSG and NSG-S to study the effects of human cytokines on engraftment and growth of AML and MDS

**Specimens**

**Acute myeloid leukemia (AML)**
- T-cell AML cells

**Myelodysplastic syndrome (MDS)**
- Human bone MNC alone
- Human bone MNC + MSC

**Engraftment**

**NSG mice**
**NSG-S mice** expressing SCF, GM-CSF, IL-3

**AML**
- 50% of primary AML samples transplanted in NSG mice were able to engraft (>0.5% human blasts in marrow)
- 82% of primary AML samples transplanted in NSG-S mice were able to engraft
- Significantly higher leukemia burden in NSG-S compared to NSG mice

**MDS**
- 2% of primary MDS samples transplanted in NSG-S mice were able to engraft
- Co-injection of MSC did not enhance human MDS cells engraftment

Krevvata et al., Haematologica, 2018