

Bio Jaap Jan Boelens

I am a pediatric hematologist/oncologist and have served as the Chief of the Pediatric Stem Cell Transplantation and Cellular Therapies Service at Memorial Sloan Kettering (MSK) since 2018.

Previously, I spent a decade developing a cord blood transplant program in the Netherlands which is now the largest in Europe. I am continuing to build on this work by looking for ways to incorporate cellular therapies with transplants. I have a special interest in rare diseases as indications for hematopoietic stem cell transplantation (HCT), particularly lysosomal storage diseases and hemoglobinopathies, and in finding strategies to get better disease control in malignant diseases. My research focuses on developing advanced therapies from cord blood to target blood disorders at the cellular level, including dendritic cell vaccines (anti-acute myeloid leukemia [AML], anti-neuroblastoma). We are also creating mathematical models that can help us predict how a young person's immune system will respond to receiving such treatments.

Additionally, I am interested in designing a predictable low-toxicity conditioning regimen using pharmacokinetic/pharmacodynamic (PK/PD)-models (eg, anti-thymocyte globuline [ATG], fludarabine, clofarabine) to better predict immune reconstitution, which is necessary for the optimal effect of vaccines. At MSK, I also serve as Director of the Immune Discovery & Modeling Service (IDMS) core facility (7FTE, 3 Fellows). This latter role will be instrumental to the analyses conducted in the proposed project