Stem Cell Biology of Myelodysplastic Syndrome: Preliminary Findings from Sri Lankan Studies and their Diagnostic and Therapeutic Implications

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Myelodysplstic syndromes (MDS) is a phenotypically heterogeneous bone marrow - haematopoietic stem cell (BM-HSC) disorder; a third of patients transform to acute leukemia. There's paucity of MDS-specific diagnostic markers and current disease biology based therapies are non-curative. Genomic changes in BM milieu resident Mesenchymal stem cells (BM-MSC) could indicate promise of milieu targeted diagnostic targets and curative therapies. We performed next generation sequencing based variant analysis and conventional cytogenetics on BM-HSCs and BM-MSCs in a cohort of Sri Lankan de novo-MDS patients and discovered known and unique genetic markers in this South Asian population; their biological implications will be discussed.