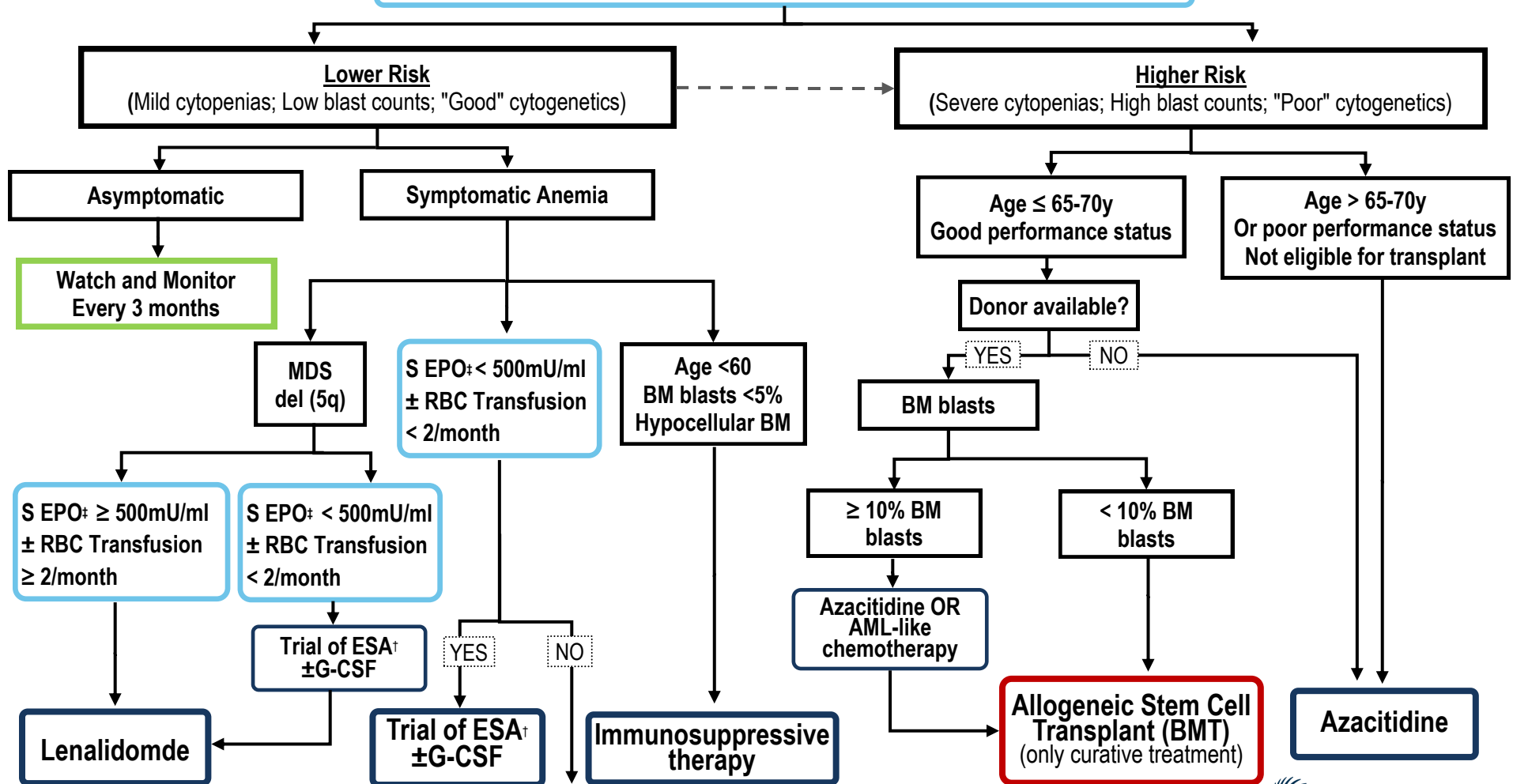# Algorithm for **Myelodysplastic Syndrome (MDS)**

MDS is one of the causes of cytopenias

Criteria for Observation vs Urgent or Emergent referral given in Algorithms for Anemia, Leucopenia, Thrombocytopenia and Pancytopenia

DIAGNOSIS: Peripheral Blood: (1) Cytopenia(s): Hb<100g/L; Platelets <100x10 /L; ANC <1.8 x10/L AND (2) Bone Marrow (BM): Dysplasia: 10% or more in erythroid, myeloid or megakaryocytes OR Myeloblasts ≥5% (or ≥1% in blood) OR Cytogenetics MDS defining (by conventional karyotyping) (3) Exclude Reactive Causes of dysplasia

MDS more likely in: Elderly (median age 70 years); Unexplained macrocytic anemia; Previous myelotoxic drugs, radiation.
Even normal individuals may have dysplasia. Identification of dysplasia not always reproducible (i.e. inter-observer variation). Diagnosis of MDS should be made in a Hematology Centre.

Risk Stratification according to Scoring Systems (IPSS / IPSS-R / WPSS / MPSS)

Lower Risk
(Mild cytopenias; Low blast counts; "Good" cytogenetics)

Higher Risk
(Severe cytopenias; High blast counts; "Poor" cytogenetics)

Asymptomatic

Symptomatic Anemia

Watch and Monitor Every 3 months

MDS del (5q)

S EPO‡ < 500mU/ml ± RBC Transfusion < 2/month

Age <60 BM blasts <5% Hypocellular BM

S EPO‡ ≥ 500mU/ml ± RBC Transfusion ≥ 2/month

S EPO‡ < 500mU/ml ± RBC Transfusion < 2/month

Trial of ESA† ±G-CSF

YES   NO

Lenalidomde

Trial of ESA† ±G-CSF

Immunosuppressive therapy

Age ≤ 65-70y Good performance status

Age > 65-70y Or poor performance status Not eligible for transplant

Donor available?

YES   NO

BM blasts

≥ 10% BM blasts

< 10% BM blasts

Azacitidine OR AML-like chemotherapy

Allogeneic Stem Cell Transplant (BMT) (only curative treatment)

Azacitidine

Supportive Care at all stages: RBC transfusion, Platelet transfusion (for thrombocytopenia); Antibiotics for neutropenic infections, ?Fe chelation

† Erythropoietic Stimulating Agents   ‡ Erythropoietin
Pathways are subject to clinical judgment and actual practice patterns may not always follow the proposed steps in this pathway.

CancerCareManitoba
ActionCancerManitoba

2016 ©Hematology DSG FINAL (Kumar)