**Leukemia, MDS, MPD**

**Acute lymphoblastic leukemia**
HLA typing and marrow cytogenetics at diagnosis

**Allogeneic HSCT**
- In first remission, if matched sibling donor available
- For high-risk (MLL, Ph+, etc.) in first remission, consider matched sibling, matched unrelated or cord blood donor
- Beyond first remission, consider matched sibling, matched unrelated or cord blood donor

**Acute myelocytic leukemia**
- HLA typing and marrow cytogenetics at diagnosis
- If normal cytogenetics: FLT3, NPM1, CEBPA mutation analysis

**Allogeneic HSCT**
- In first remission if antecedent hematological disease, Rx related AML, intermediate and poor prognosis karyotype – consider good risk CBF, if c-kit+
- Low residual blast count induction failure, any age
- At relapse after salvage therapy, any age

**Acute promyelocytic leukemia**
HLA typing and marrow cytogenetics at diagnosis

**Allogeneic HSCT**
- Induction failure; and beyond second remission or failed re-induction
- Prior auto HSCT

**Autologous HSCT**
- In second remission if PCR negative

**Chronic myelogenous leukemia**
- HLA typing and marrow cytogenetics at diagnosis
- Discuss imatinib and HSCT with all patients

**Allogeneic HSCT**
- Tyrosine kinase inhibitors (TKI) failure
- Accelerated Phase/Blast Phase, T3151 mutation and others

**Small lymphocytic leukemia/chronic lymphoid leukemia (SLL/CLL)**

**Allogeneic (myeloablative) HSCT**
- At first relapse after initial chemotherapy with or without pretransplant salvage
- In CR or PR after salvage therapy for any transformation

**Aplastic anemia**
HLA typing and marrow cytogenetics at diagnosis

**Allogeneic HSCT**
- At diagnosis if age < 40, if matched sibling donor available; may also consider molecular matched unrelated donor
- Age > 40, if failure of immunosuppressive therapy and matched sibling/matched unrelated donor available
Blood and Marrow Transplant Program Adult HSCT
Referral Guidelines

Myelodysplastic syndromes
HLA typing and marrow cytogenetics at diagnosis

Allogeneic HSCT
• Stage INT-1, if progressive disease on observation or any Rx
• Stage INT-2, at diagnosis or any subsequent status
• Poor risk cytogenetics

Myeloproliferative diseases
Dependent on risk stratification and availability of donor

Multiple myeloma (stage > 1)
HSCT consult and HSC collection sufficient for 2 transplants
• Responding to initial conventional dose chemotherapy

Autologous HSCT
• Responding to or failing initial induction chemotherapy
• After salvage chemotherapy for progressive disease if no prior BMT

Allogeneic HSCT
• Only in clinical trial setting

Lymphoma
Hodgkin lymphoma
Autologous or allogeneic HSCT
• < CRU or CR with positive PET if biopsy confirmed
• After salvage therapy for relapse if original therapy was chemo with/without XRT

NHL: Diffuse large B-cell lymphoma
Autologous or allogeneic HSCT
• PR or CR after any relapse or PR after initial combination chemotherapy

Lymphoblastic lymphoma
Autologous HSCT
• Select (case-by-case) patients in first CR

Allogeneic HSCT
• < CR after initial therapy or at relapse

Peripheral T-cell lymphoma
Autologous or allogeneic HSCT
• Select (case-by-case) patients in first CR

Adult T-cell leukemia/lymphoma
Allogeneic HSCT
• < CR after initial or salvage therapy

Other
Mycosis fungoides/Sezary syndrome
Allogeneic HSCT
• Stage III patients < PR after first combination chemotherapy, or
• In PR or CR after salvage or relapse
• Stage IV patients in CR or PR after initial or salvage therapy

Testicular cancer/Germ cell tumor
Autologous HSCT
• Recurrence or progression after primary therapy if unfavorable prognosis
• Recurrence after failure of salvage therapy if favorable prognosis at first recurrence

Sickle cell disease
• HLA typing and marrow cytogenetics at diagnosis

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