



Managing Common Side Effects of MDS Treatment

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Choosing Treatment Recommendations

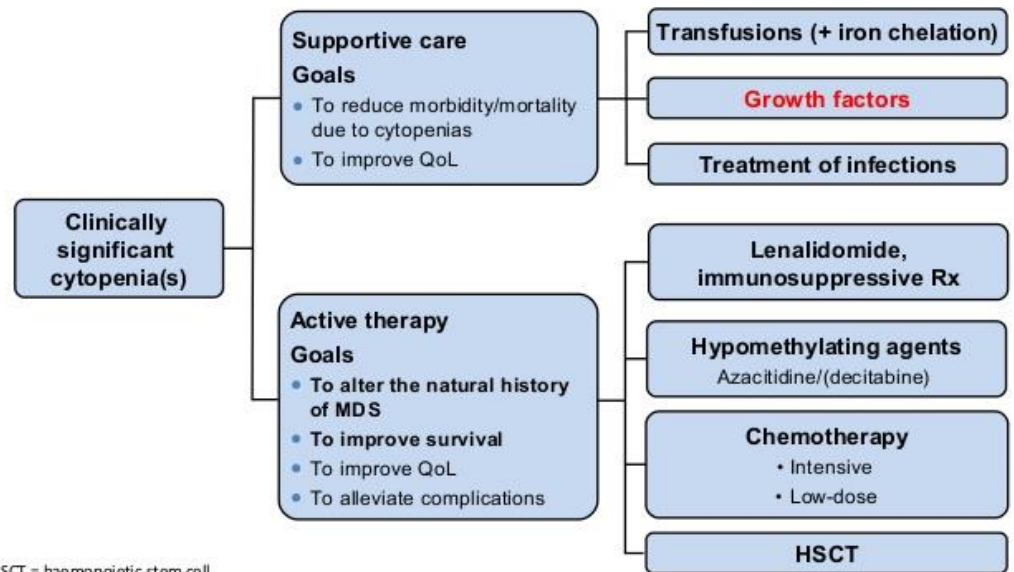
- Type of MDS
- How MDS is affecting you
- Availability of treatments



3 Different MDS Treatment Strategies

- Observation
- Supportive Care
- Disease-Modifying Treatment

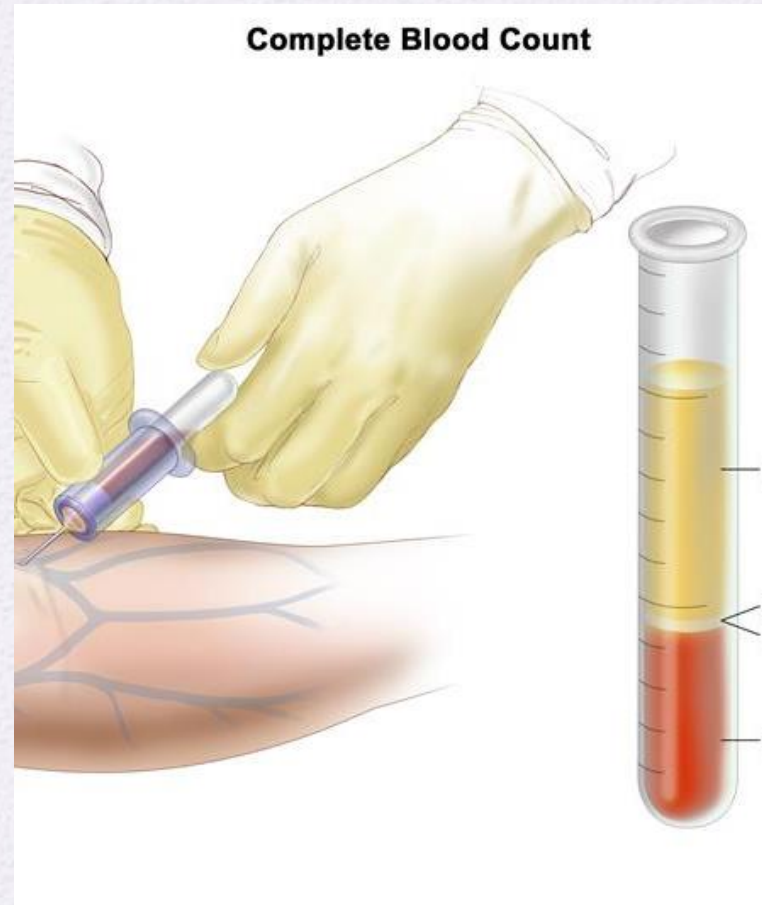
Treatment of patients with MDS: goals and options



HSCT = haemopoietic stem cell transplantation; QoL = quality of life.

Observation

- Monitor blood counts
- Monitor symptoms (based on blood cell line affected by MDS)
- For people with low-risk MDS not requiring transfusions OR very infrequent transfusions



Supportive Care

- Goal is to improve symptoms
- Applicable to any type of MDS
- Temporary benefits
 - Blood transfusions, growth factors (Eprex)
 - Antibiotics for infection
 - Nutritional support
 - Spiritual/emotional support



Disease-Modifying Treatment

- **Goals:** improve survival, alter natural history of MDS, improve QOL
- **Examples:**
 - Azacitidine (Vidaza)
 - Lenalidomide (Revlimid)
 - ATG/cyclosporin
 - Chemotherapy
 - HSCT
- For people with higher-risk MDS (or change in status such as; blood counts getting worse, increasing need for transfusions)



Fatigue: Under-reported, under-recognized & under-treated

- “distressing, persistent, subjective sense of physical, emotional +/- or cognitive tiredness or exhaustion NOT proportional to recent activity & interferes with usual functioning”
- Differs from normal:
 - more severe
 - more distressing
 - less likely relieved by rest

(NCCN Guidelines. 2015)

Fatigue: Management Strategies

General	Non-pharmacologic	Pharmacologic
<p>Conserve energy:</p> <ul style="list-style-type: none">• Set priorities & realistic expectations• Pace yourself• Schedule activities (at times of peak energy)• Limit naps (< 1 hour)• Structure daily routine	<p>Physical Activity:</p> <ul style="list-style-type: none">• Maintain best levels• Exercise program (endurance & resistance)• PT/OT <p>Psychosocial Interventions:</p> <ul style="list-style-type: none">• CB/BT• Stress reduction• Nutrition consultation	<p>Psychostimulants (ritalin)</p> <p>Treat pain, anemia, emotional stress</p>

Blood Transfusions: Side Effects

- **Short-term:** fever, rash, itching, hives, allergic reaction
- **Long-term:** transmission of infection, antibodies to donor blood (more difficult to match blood), iron overload



Growth Factors: Side Effects

- **WBCs:** neupogen, neulasta, G-CSF
- **RBCs:** eprex, aranesp, procrit
- **Flu-like symptoms:** fever, headache, muscle/joint pain, elevated BP (ESA)



Azacitidine

- Subcutaneous injection (daily for 1 week every month)
- Not a cure; improves counts & reduces transfusion requirements
- Given as long as response is demonstrated
- **Side Effects:**
 - Drop in blood cell counts
 - Injection site reactions
 - Some nausea & constipation



Lenalidomide (Revlimid)

- For MDS with a 5q-chromosome abnormality
- Reduces need for blood transfusions
- **Side effects:** rash, itching, fatigue, diarrhea, nausea



Fever

- **Signs & Symptoms:**

- Flushing
- Chills
- Temperature >38 C or 100.4 F (normal body temperature increase up to 1 higher in evening)

- **What you can do:**

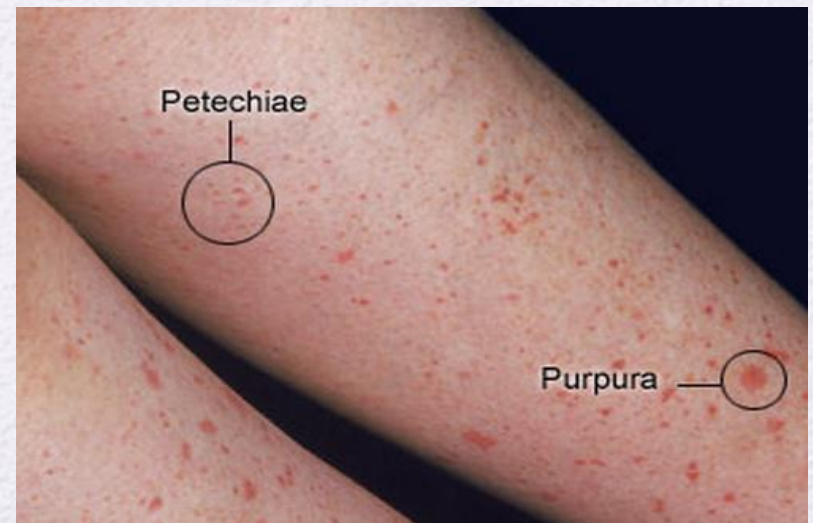
- Make sure you have a thermometer
- Know your blood counts
- Stay hydrated

Neutropenia (low neutrophils)

- **WBCs:** 3.5-10 X 10/L
- **Neutrophils:** type of WBC important for fighting infections
- Low neutrophils = increased risk of infection
 - **Mild**= 1.0-1.5 X 10/L
 - **Moderate**= 0.5-1.0 X 10/L
 - **Severe**= <0.5 X 10/L
- **What you can do:**
 - Know your blood counts
 - Monitor your temperature

Thrombocytopenia (low platelets)

- **Normal platelet count:**
150-450 X 10/L
 - **Mild:** 50-100 X 10/L
 - **Moderate:** 25-50 X 10/L
 - **Severe:** < 25 X 10/L
- **Signs & Symptoms:**
 - Excessive bruising
 - Nose bleeding
 - Bleeding gums
 - Cuts that won't stop bleeding



Rashes

- Change in skin colour, appearance or texture
- Localized (1 area) or systemic (multiple areas of body)
- Often resolve gradually



- **What you can do:**
 - Examine skin daily
 - Avoid sun exposure
 - Use mild, non-perfumed soaps
 - Short, cool baths instead of long, hot showers
 - Topical antihistamines or steroid creams

Stool Consistency

BRISTOL STOOL CHART



Type 1 Separate hard lumps

Very constipated



Type 2 Lumpy and sausage like

Slightly constipated



Type 3 A sausage shape with cracks in the surface

Normal



Type 4 Like a smooth, soft sausage or snake

Normal



Type 5 Soft blobs with clear-cut edges

Lacking fibre



Type 6 Mushy consistency with ragged edges

Inflammation



Type 7 Liquid consistency with no solid pieces

Inflammation

Diarrhea

- Frequent, liquid bowel movements
- Severity= number of liquid stools/day (moderate=4-6; severe=>7)
- **What can you do:**
 - Stay hydrated; drink 2-3 litres daily (avoid caffeine & high sugar drinks)
 - Anti-diarrheal medications (Pepto-Bismol, imodium, Kaopectate)
 - Small frequent meals
 - BRAT diet
 - Good hygiene



Constipation

- Infrequent with difficulty in passing stools
- Causes: bloating, painful BMs, nausea, lower back or abdominal pain
- **What you can do:**
 - Stay hydrated (2-3 litres daily)
 - Fruits & other sources of fibre
 - Laxatives/stool softeners
 - Stay active
 - Don't go >3 days without BM

Nausea & Vomiting

- Nausea: unpleasant feeling associated with flushing, fast heart rate & urge to vomit
- Vomit: expulsion of stomach contents



- **What you can do:**
 - Avoid strong odours
 - Small, frequent meals
 - ginger or peppermint supplements
 - Contact HCP if >5-6X in 24 hours
 - Anti-nausea medications

Anxiety & Depression

- **Anxiety:**

- **Symptoms:** inability to concentrate or remember, eat or sleep, difficulty in decision-making, physical symptoms
- **What you can do:** simplify your life, support group, meditation, yoga, counselling, avoid alcohol

- **Depression:**

- **Symptoms:** lack of interest or pleasure, difficulty sleeping, decreased appetite, teary
- **What you can do:** avoid alcohol, support group, talk with your HCP, anti-depressant medications