AAIM 2025 Triennial Hematology Workshop

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Objectives

1. Evaluate the different types of anemia and their implications for underwriting
2. Assess the mortality risk of common hematologic malignancies
3. Determine the underwriting risks for thromboembolic and coagulation disorders
4. Review the underwriting considerations for various platelet disorders

Case #1: Anemia

46F FA $1MM

- Hx of chronic fatigue and heavy menses
  - 2021 Hb 8.5mg/dL, MCV 68
  - 2022 s/p TAH due to fibroids, post-op Hb 10.5mg/dL, MCV 67 and fatigue resolved
  - 2024 normal screening colonoscopy
  - 2025 Hb 11.3, MCV 69

Favorables vs. **Unfavorables**

Underwriting Risk

A. Average mortality risk

B. Moderately elevated mortality risk

C. High mortality risk

Course of Action:

A. Rate per your manual with what you have
B. Postpone for hematology evaluation
C. Other Ideas?

Case #2: Anemia

30M FA $1MM

- State of residence: CO
- 2021 Hb 16.2 mg/dL, MCV 80
- 2023 Hb 13.5 mg/dL, MCV 76 symptoms of abdominal cramps worse with meals and underwent successful treatment for rectal fistula
- 2024 Hb 12.4 mg/dL, MCV 73 abdominal symptoms improved but not resolved; referred to GI

Favorables vs. **Unfavorables**

Underwriting Risk

A. Average mortality risk

B. Moderately elevated mortality risk

C. High mortality risk

Course of Action:

A. Rate per your manual with what you have
B. Obtain GI records
C. Other Ideas?

Case #3: Anemia

58M FA $1MM, +tob

- 2020 Hb 11.8 mg/dL, MCV 99
- 2021 colonoscopy poor prep, repeated in 2023 but results not available
- 2022 Hb 12.0, MCV 100
- Alcohol intake reported as 2 beers/day
- Insurance labs:
  - Normal LFTs
  - HDL 58

Favorables vs. **Unfavorables**

Underwriting Risk

A. Average mortality risk

B. Moderately elevated mortality risk

C. High mortality risk

Course of Action:

A. Rate per your manual with what you have
B. Obtain GI records
C. Other Ideas?

Predictors of Mortality: Unexplained Anemia

- Gender (M> F) and Age (age above 50 > age under 50)
- Presence of associated symptoms: fatigue, SOB, pica, palpitations
  - Gradual onset may have no symptoms
- Hemoglobin level (compared to usual baseline)
- Years of hemoglobin stability
- Additional CBC abnormalities: MCV, Plt count, differential
  - RDW = independent risk factor for mortality
    - Inflammation and oxidative stress
    - Dimorphic anemia (normal MCV)
    - Precedes changes in other red cell indices
    - Reflects a general state of poor health

Case #4: Hematologic Malignancy

32F FA $1.5MM

- 3/2021 dx Stage IIA bulky nodular sclerosing Hodgkin lymphoma
- Received chemotherapy and proton therapy RT completed 9/2021
- 8/2022 CT scans showed no evidence of disease
- 9/2023 CT scans showed new lung nodules; on PET scan nodules not hypermetabolic, repeat CT scan advised in 3 months

Favorables vs. **Unfavorables**

Underwriting Risk

A. Average mortality risk

B. Moderately elevated mortality risk

C. High mortality risk

Course of Action:

A. Flat extra
B. Decline
C. Permanent decline?
D. Other?

What if?

Treatment completed 5 yrs ago? 10 yrs ago?
Treatment included bone marrow transplantation?
What would it take to attain average mortality risk?

Predictors of Mortality: Hodgkin lymphoma

- Stage: I to IV
- Qualifiers:
  - B symptoms
  - E: extranodal sites
  - S: splenic involvement
  - B: bulky disease
  - U: uncertain/unconfirmed remission
  - RS: relapse stage
- Treatment: chemotherapy +/- XRT, BMT

Predictors of Mortality: Hodgkin lymphoma

- Treatment complications: XRT-induced cardiac disease, vascular disease, immune dysfunction, peripheral neuropathy, pulmonary fibrosis
- Relapse(s)
- Secondary malignancies:
  - Acute leukemia: < 5 years
  - NHL: ~7 yrs
  - Solid tumors (breast, lung, colon, melanoma, etc.): > 10 yrs

Case #5: Thromboembolic Disease

47M NT, FA $1.5MM

- 12/2020 R popliteal pain noted after returning flight from Asia
- 1/2021 RLE venous doppler showed acute DVT R popliteal vein. Began treatment with Xarelto
- 4/2021 Repeat US: improved R popliteal DVT and new distal R femoral DVT (missed on prior report?) Continue Xarelto
- 4/2022 Repeat US: new proximal mid-femoral DVT. Hypercoagulable work-up normal. Changed from Xarelto to Eliquis.

Case #5: Thromboembolic Disease (cont'd)

- 4/2023 Hematology OV: provoked DVT with likely 1 recurrence and completion of 2+ yrs of anticoagulation. MD ordered additional labs: d-dimer and JAK-2 (due to borderline elevated Hb at 16.3).
  - d-dimer elevated at 0.85 (normal ≤ 0.49)
  - JAK-2 mutation negative
- Based on elevated d-dimer, hematology advised continued anticoagulation.
- 7/2024 repeat US: overall decreased clot burden since 2/2023

Favorables vs. **Unfavorables**

Case #5: Thromboembolic Disease (cont'd)

A. Average mortality risk

B. Moderately elevated mortality risk

C. High mortality risk

Case #5: Thromboembolic Disease (cont'd)

Course of Action:

A. Rate per your manual with what you have
B. Get the Hematology APS
C. Other Ideas?

Predictors of Mortality: Thromboembolic Disease

- Age
- Number of clotting episodes
- Provoked vs Unprovoked
- Compliance with eliminating reversible factors
- Treatment
- Time since last episode
- Complications
  - PE
  - Post-thrombotic syndrome
  - Pulmonary HTN

Case #6: Platelet Disorders

33M FA $2.5MM

- 2016 dx'd with ITP, plt count 17k
- Treated with steroids, tapered off and plt count dropped down to 25k
- Underwent splenectomy in 2017 and started on Cellcept
- Since 2017, plt counts remained near normal and stable
- 4/2021 plt count 134k, no complaints

Favorables vs. **Unfavorables**

Case #6: Platelet Disorders

A. Average mortality risk

B. Moderately elevated mortality risk

C. High mortality risk

Case #6: Platelet Disorders

Initial Course of Action:

A. Rate per your manual with what you have
B. Get the Hematology APS
C. Other Ideas?

Predictors of Mortality: Thrombocytopenia

- Degree of thrombocytopenia
- Cause: ITP, autoimmune disease, hematologic disease, medication side effect (NSAIDS, Rifampin, Eliquis, Lasix, any sulfa-containing medication)
- Acute vs chronic
- Stability over time
- Treatment
- Risk of bleeding complications
  - Epistaxis
  - GI bleeding
  - Intracranial hemorrhage
  - Excess bleeding from traumatic injuries

Conclusions

- Hematologic conditions can have a significant impact on mortality risk depending on case details
- Be sure to review the entire CBC including MCV and RDW in addition to trends from prior CBCs
- Many recent advances in the treatment of hematologic malignancies have led to improvements in life expectancy for these conditions

Questions?