Global Leadership Initiative on Malnutrition (GLIM): A Framework for Diagnosing Adult Malnutrition

GLIM
- Is a new approach that offers a framework for diagnosing malnutrition in adult patients
- Includes five practicable indicators that can be used in routine clinical practice
- Clinicians are encouraged to complete a comprehensive nutrition assessment to use as a basis for the GLIM diagnosis and/or to triage for interventions.

GLIM ORDER OF OPERATIONS

Perform Nutrition Risk Screening with a Valid Tool

Perform Nutrition Assessment (e.g., trained clinician, Subjective Global Assessment, Patient-Generated Subjective Global Assessment, Mini Nutritional Assessment-full form)

Apply GLIM Diagnostic Indicators

Use GLIM Malnutrition Severity Grading

GLIM CRITERIA

Phenotypic criteria:
- Unintentional weight loss by time frame
- Low body mass index (BMI; kg/m^2) according to age and ethnicity
- Reduced muscle mass based on valid body composition assessment methods
  - Examples: physical exam, dual-energy absorptiometry, bioelectrical impedance analysis, ultrasound, computed tomography, magnetic resonance imaging, mid upper arm circumference, or calf circumference

Etiologic criteria:
- Reduced food intake or assimilation based on quantitative or qualitative report
  - Examples: 3-day food record, food frequency questionnaire, or patient self-report
  - Considerations:
    - Gastrointestinal symptoms that impact food intake or absorption (e.g., dysphagia, nausea, vomiting, diarrhea, constipation, abdominal pain, etc.)
    - Presence of malabsorptive disorders (e.g., intestinal failure, pancreatic insufficiency, post-operative bariatric surgery, etc.)
    - Other relevant clinical situations affecting food intake (e.g., esophageal strictures, gastroparesis, intestinal pseudo-obstruction, etc.)
- Inflammation and Disease Burden from acute or chronic injury or disease
  - Acute: major infection, burns, trauma, or closed head injury
  - Chronic: malignant disease, chronic obstructive pulmonary disease, congestive heart failure, or chronic kidney disease
  - Supportive laboratory tests: C-reactive protein, albumin, or pre-albumin
## Determine Malnutrition Severity

<table>
<thead>
<tr>
<th>Severity Grade</th>
<th>Unintentional Weight Loss (%)</th>
<th>Low BMI (kg/m²) a</th>
<th>Reduced Muscle Mass</th>
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</thead>
<tbody>
<tr>
<td><strong>Stage 1: Moderate Malnutrition</strong>&lt;br&gt; Patient requires 1 phenotypic criterion that meets this grade.</td>
<td>• 5-10% in 6 months; or • 10-20% in more than 6 months</td>
<td>• &lt;20 if &lt;70 years; or • &lt;22 if ≥70 years</td>
<td>• Mild-to-moderate deficit (per validated assessment methods on previous page)</td>
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<td><strong>Stage 2: Severe Malnutrition</strong>&lt;br&gt; Patient requires 1 phenotypic criterion that meets this grade.</td>
<td>• &gt;10% in 6 months; or • &gt;20% in more than 6 months</td>
<td>• 18.5 if &lt;70 years; or • &lt;20 if ≥70 years</td>
<td>• Severe deficit (per validated assessment methods on previous page)</td>
</tr>
</tbody>
</table>

### Definitions and Footnotes:
- ER= energy requirement; GI= gastrointestinal
- a Further research is needed for consensus on reference body mass index data for Asian populations in clinical settings.

### References: