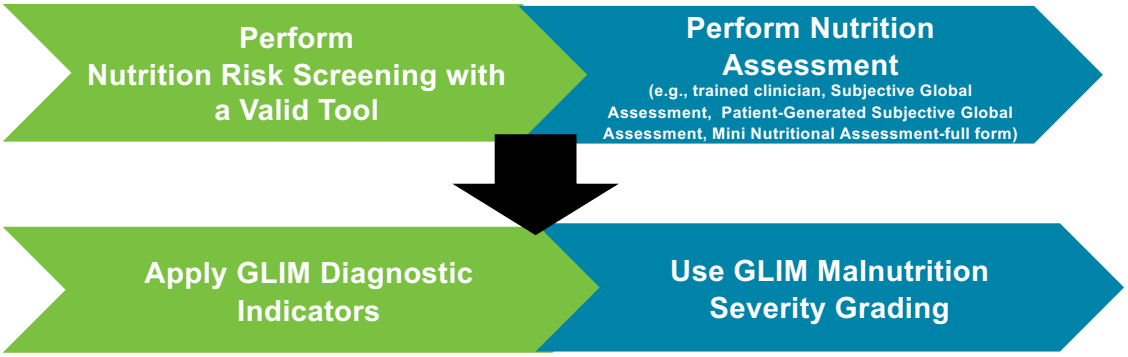
Global Leadership Initiative on Malnutrition (GLIM):
A Framework for Diagnosing Adult Malnutrition

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



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

HOW TO USE THE GLIM FRAMEWORK

	Phenotypic criteria	Check if present
Unintentional Weight loss (%)	> 5% within past 6 months	
	> 10% beyond 6 months	
BMI (kg/m^2)	< 20 if < 70 years (Asia: < 18.5)	
	< 22 if ≥ 70 years (Asia: < 20)	
Muscle mass	Reduced	

	Etiologic criteria	Check if present
Reduced food intake	Ingestion ≤ 50% of needs from 1 to 2 weeks	
	Any reduction for > 2 weeks	
or	Any chronic GI condition that adversely impacts food assimilation or absorption	
Assimilation		
Disease burden/ Inflammation	Presence of acute disease/injury or chronic disease related	

Malnutrition: if at least one criterion was checked in each section

Determine Malnutrition Severity

Severity Grade	Phenotypic Criteria		
	Unintentional Weight Loss (%)	**Low BMI (kg/m^2) [a]**	**Reduced Muscle Mass**
Stage 1: Moderate Malnutrition Patient requires 1 phenotypic criterion that meets this grade.	• 5-10% in 6 months; or • 10-20% in more than 6 months	• <20 if <70 years; or • <22 if ≥70 years	• Mild-to-moderate deficit (per validated assessment methods on previous page)
Stage 2: Severe Malnutrition Patient requires 1 phenotypic criterion that meets this grade.	• >10% in 6 months; or • >20% in more than 6 months	• 18.5 if <70 years; or • <20 if ≥70 years	• Severe deficit (per validated assessment methods on previous page)

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:
Jensen, G.L., et al. (2018). *Journal of Parenteral and Enteral Nutrition*, 43(1), 32-40.
Keller, H.H., et al. (2020). *Journal of Parenteral and Enteral Nutrition*, 44(6), 992-1003.