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Skrining dan Assessment Gizi
Pertemuan 5

Mertien Sa'pang; Laras Sitoayu;
Anugrah Novianti
ILMU GIZI / FAKULTAS ILMU KESEHATAN

KEMAMPUAN AKHIR YANG DIHARAPKAN

- Mampu menjelaskan definisi dan metode skrining gizi
- Mampu menjelaskan penggunaan metode skrining gizi menurut kelompok umur
- Mampu melakukan asessment gizi yang merupakan langkah pertama PAGT

Malnutrisi di Rumah Sakit (Meijerd *et al.* 2010)

- Defisiensi energi,
- Defisiensi protein,
- Penurunan masa bebas lemak

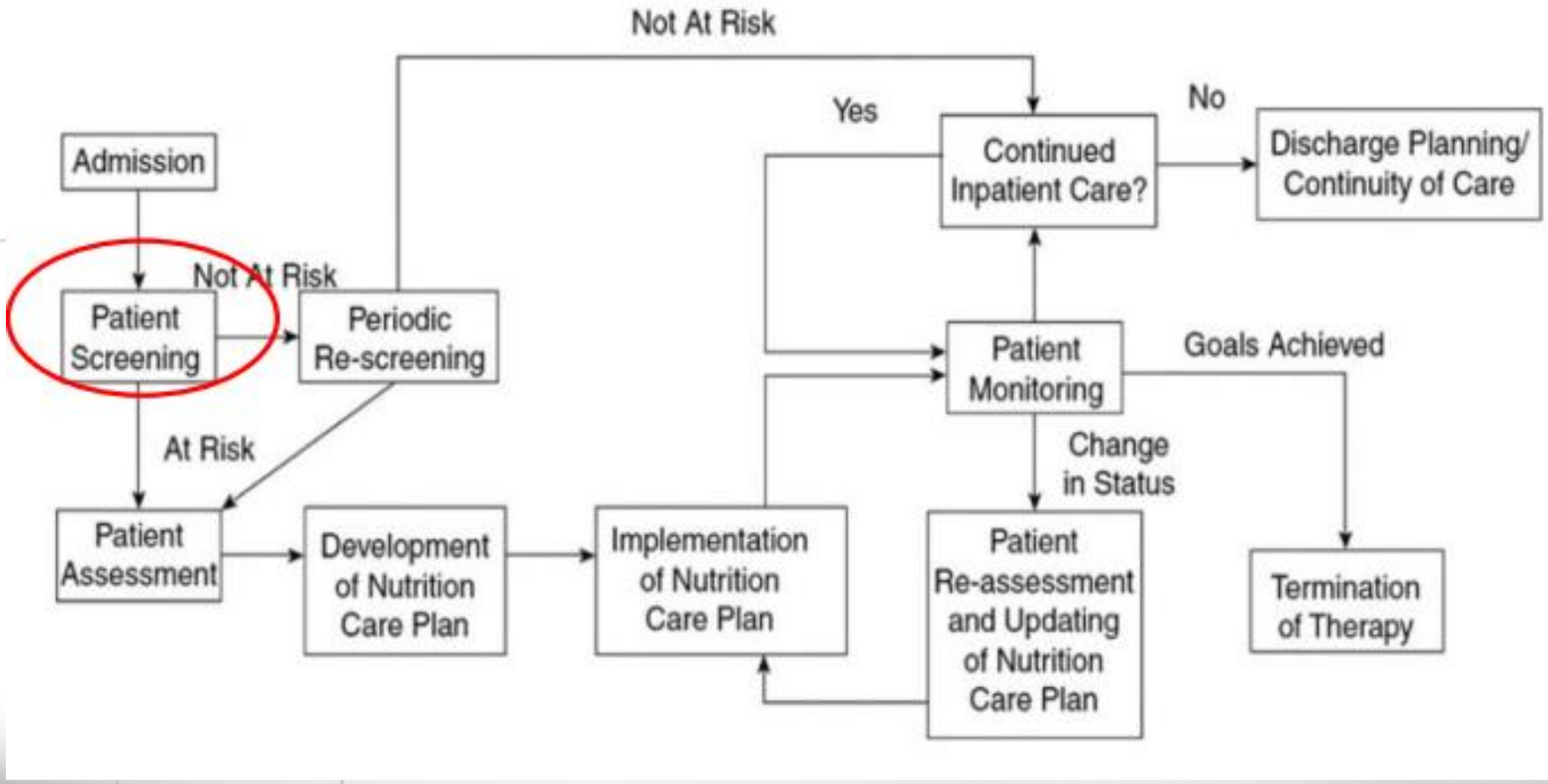
Digambarkan dg kehilangan BB, IMT, dan kurangnya asupan makanan

Prevalensi Malnutrisi di Rumah Sakit

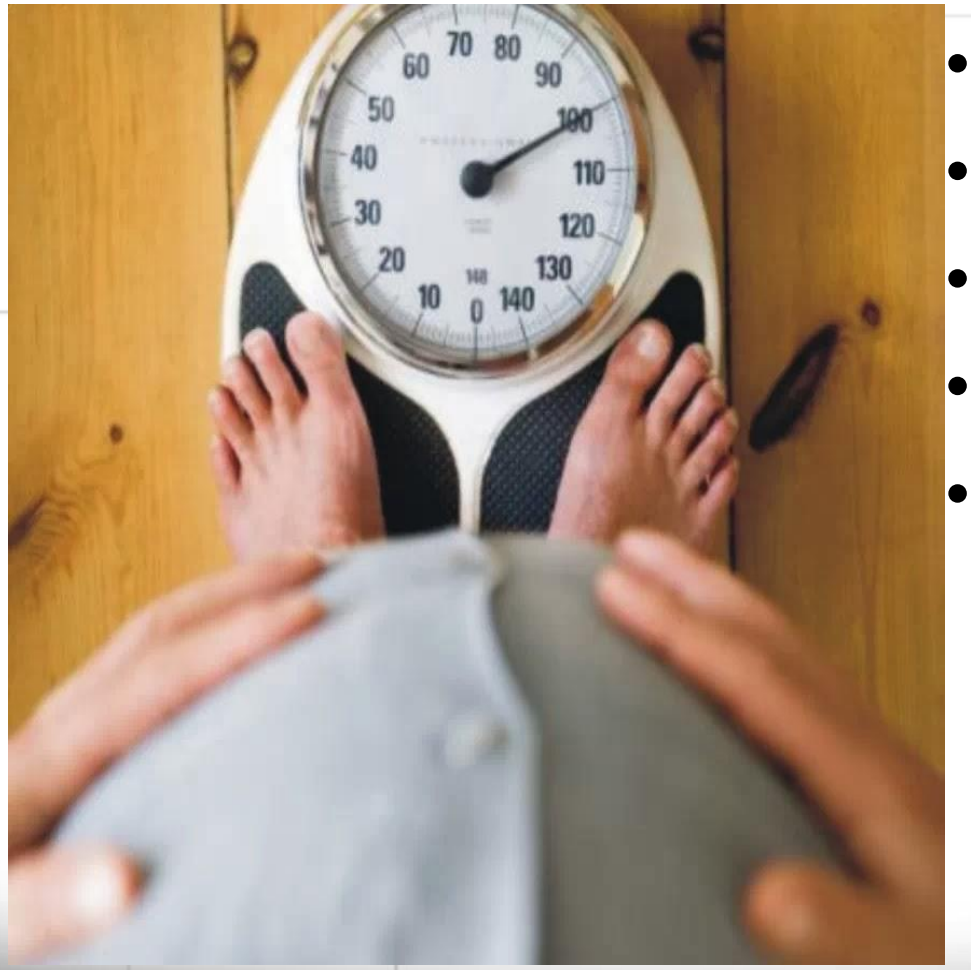
- 30 – 50 % pasien - worldwide
  - US = 30 - 50 %
  - Eropa = 35 – 65 %
  - Amerika Latin = 50.2 %

Prevalensi malnutrisi di Indonesia (2006) → 71,8 % pasien pada saat masuk RS

Nutrition Care Algorithm (ASPEN 2011)



Skrining Gizi



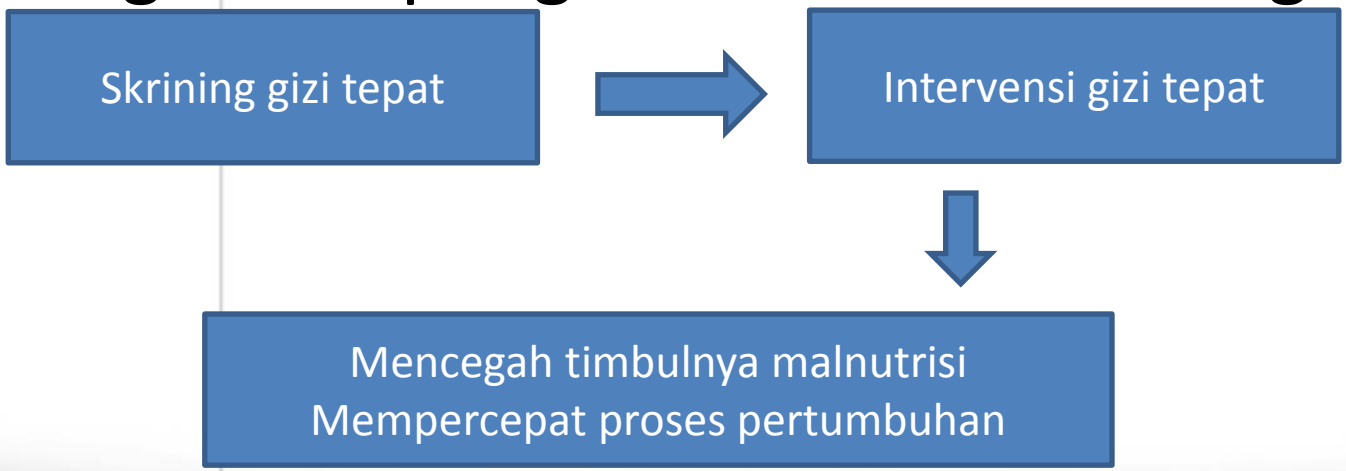
- Apa?
- Siapa yang melakukan?
- Kapan dilakukan?
- Dimana?
- Bagaimana?

Definisi

- Skrining gizi merupakan proses yang cepat dan sederhana→mendeteksi pasien yang berisiko malnutrisi sebelum memasuki proses PAGT.

Tujuan

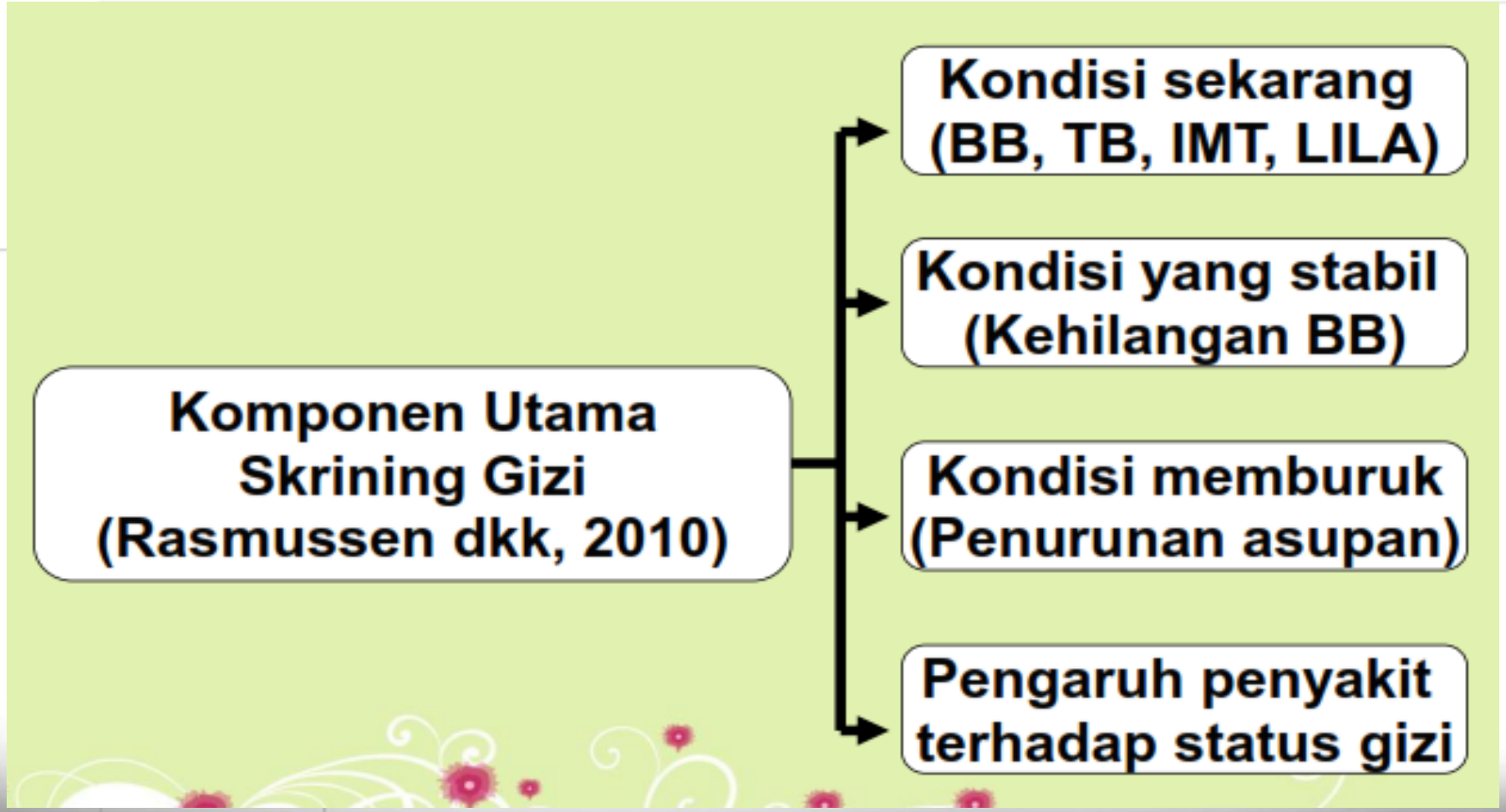
- Tujuan skrining gizi
- Memprediksi outcome yang berkaitan dengan faktor gizi
- Mengetahui pengaruh dari intervensi gizi



Kapan dan Siapa Melakukan?

- Dalam kurun waktu 24 jam dari kedatangan pasien di rumah sakit.
- Tenaga medis (perawat, dokter, ahli gizi) dan tenaga non-medis

Bagaimana?


Komponen Utama Skrining Gizi (Rasmussen dkk, 2010)
Kondisi sekarang (BB, TB, IMT, LILA)
Kondisi yang stabil (Kehilangan BB)
Kondisi memburuk (Penurunan asupan)
Pengaruh penyakit terhadap status gizi

SKRINING GIZI PASIEN

FORMULIR SKRINING GIZI PASIEN RAWAT INAP

Nama : ..... Tanggal: .....

Umur : ..... tahun Jenis L/P: .....

No. MR: ..... Ruang Perawatan: .....

- **Diagnosis Penyakit**: Apakah pasien menderita salah satu penyakit dibawah ini? Diabetes, Penyakit Ginjal Kronik, Sirosis hati, PPOK, HD, Kanker, Stroke, Pneumonia, Transplantasi Sumsum tulang, Cedera kepala Berat, Luka Bakar, pasien kebidanan, pasien anak.
- **Status Gizi**: Tinggi Badan: ..... cm Berat Badan: ..... kg
- **Risiko Malnutrisi**

a. Apakah pasien mengalami penurunan Berat Badan yang tidak diinginkan dalam 6 bulan terakhir?

Jawaban:	skor
- Tidak ada	0
- Tidak yakin	2
- Ya ada penurunan Berat Badan sebanyak:	
1-5 kg	1
6-10 kg	2
11-15 kg	3
> 15 kg	4
Tidak yakin	2

b. Apakah asupan makan berkurang karena tidak nafsu makan?

- Tidak	0
- Ya	1

Total Skor:	

Pasien dengan diagnosa khusus ☐ Ya ☐ Tidak

(kondisi khusus: pasien dengan penurunan imunitas, penyakit ginjal kronik hemodialisis, geriatri, kanker kemoterapi, , luka bakar, Diabetes Mellitus, penurunan fungsi ginjal berat, sirosis hepatis, transplantasi, cidera kepala berat, , pneumonia berat, stroke, bedah digestif, patah tulang pinggul, dll)

Bila skor ≥ 2 dan atau pasien dengan kondisi khusus dilakukan pengkajian lanjut oleh tenaga gizi.

Sudah dibaca dan diketahui oleh tenaga gizi ☐ Ya ☐ Tidak

Catatan:

Jumlahkan nilai skore dua pertanyaan diatas

- Skore 0 – 1	Risiko malnutrisi rendah
- Skore 2 – 3	Risiko malnutrisi sedang
- Skore 4 – 5	Risiko malnutrisi tinggi

Standar Prosedur operasional pengisian skrining gizi pasien dewasa

- Pengertian :

Skrining gizi adalah proses identifikasi adanya risiko malnutrisi akibat penyakit pada pasien baru secara cepat dan tepat

- Tujuan

Mengaetahui tingkat resiko malnutri pasien baru sedini mungkin, → resiko malnutri → pengkajian ulang → intervensi tepat → memperbaiki status gizi

- Kebijakan

Mengacu pada kebijakan Rumah Sakit

- Prosedur → Con't

- Unit Terkait :

Instalasi Gizi, Bidang keprawatan, Departemen terkait, unit rawat inap

- Dokumen Terkait :

Form pengkajian keperawatn

Prosedur

1. semua pasien baru → TB & BB → perawat , 24 jam
2. data TB & BB ditulis di **Form Pengkajian Keperawatan Awal**
3. Skrining gizi oleh perawat → *Malnutrition Screening Tool (MST) ataiu metode lainnya* → Risiko malnutrisi: *Riwayat penurunan BB, Nafsu makan*
4. Perawat akan menentukan tingkat risiko malnutri
5. Dietisien → visit pasien → cek hasil skrining perawat
6. Jika pasien tidak dapat ditimbang → ukur lingkar lengan atas u/ perkiraan BB & tinggi lutut u/ perkiraan TB

Con't...

7. Dietisien akan melakukan asesment /pengkajian gizi pada pasien malnutrisi sedang dan tinggi berdasarkan MST dan pasien dgn penyakit tertentu → dalam 1 x 24 jam setelah skrining

Metode Skrining Pada Anak (Jossten&Hulst, 2014)

- Nutrition Risk Score (NRS)
- Pediatric Nutrition Risk Score (PNRS)
- The Screening Tool for the Assessment of Malnutrition in Paediatrics (STAMP)
- Subjective Global Nutrition Assessment (SGNA)
- Paediatric Yorkhill Malnutrition Score (PYMS)
- The Screening Tool for Risk Of ipaired Nutritional Status and Growth (STRONGkids)

Metode Skrining Pada Dewasa

- **Nutrition Risk Screening 2002 (NRS-2002)→Terbaik versi ADA**
- Malnutrition Universal Screening Tool (MUST)
- Malnutrition Screening Tool (MST)
- Nutrition Service Screening Assessment (NSSA)
- Short Nutrition Assessment Questionnaire (SNAQ)
- Subjective Global Assessment (SGA)
- Patient Generated- Subjective Global Assessment (PG-SGA)
- dll

Metode Skrining Pada Manula

- Nutrition Risk Index (NRI)
- Geriatric Nutrition Risk Index (GNRI)
- **Mini Nutritional Assessment (MNA)→ paling sering digunakan dan mamiliki nilai sensitivitas, spesifitas dan reliabilitas yang baik.**
- Nutrition Screening Initiative (NSI)

Malnutrition Screening Tool (MST)

STEP 1: Screen with the MST

1 Have you recently lost weight without trying?

No	0
Unsure	2

If yes, how much weight have you lost?

2-13 lb	1
14-23 lb	2
24-33 lb	3
34 lb or more	4
Unsure	2

Weight loss score: ____

2 Have you been eating poorly because of a decreased appetite?

No	0
Yes	1

Appetite score: ____

Add weight loss and appetite scores

MST SCORE: ____

STEP 2: Score to determine risk

MST = 0 OR 1
NOT AT RISK
Eating well with little or no weight loss

If length of stay exceeds 7 days, then rescreen, repeating weekly as needed.

MST = 2 OR MORE
AT RISK
Eating poorly and/or recent weight loss

Rapidly implement nutrition interventions. Perform nutrition consult within 24-72 hrs, depending on risk.

STEP 3: Intervene with nutritional support for your patients at risk of malnutrition.

Notes: _____

Ferguson, M et al. Nutrition 1999 15:458-464

Abbott Nutrition

Mini Nutritional Assessment MNA®

Nestlé Nutrition Institute

Last name: _____ First name: _____

Sex: _____ Age: _____ Weight, kg: _____ Height, cm: _____ Date: _____

Complete the screen by filling in the boxes with the appropriate numbers. Total the numbers for the final screening score.

Screening

A Has food intake declined over the past 3 months due to loss of appetite, digestive problems, chewing or swallowing difficulties?
0 = severe decrease in food intake
1 = moderate decrease in food intake
2 = no decrease in food intake ☐

B Weight loss during the last 3 months
0 = weight loss greater than 3 kg (6.6 lbs)
1 = does not know
2 = weight loss between 1 and 3 kg (2.2 and 6.6 lbs)
3 = no weight loss ☐

C Mobility
0 = bed or chair bound
1 = able to get out of bed / chair but does not go out
2 = goes out ☐

D Has suffered psychological stress or acute disease in the past 3 months?
0 = yes 2 = no ☐

E Neuropsychological problems
0 = severe dementia or depression
1 = mild dementia
2 = no psychological problems ☐

F1 Body Mass Index (BMI) (weight in kg) / (height in m²)
0 = BMI less than 19
1 = BMI 19 to less than 21
2 = BMI 21 to less than 23
3 = BMI 23 or greater ☐

IF BMI IS NOT AVAILABLE, REPLACE QUESTION F1 WITH QUESTION F2.
DO NOT ANSWER QUESTION F2 IF QUESTION F1 IS ALREADY COMPLETED.

F2 Calf circumference (CC) in cm
0 = CC less than 31
3 = CC 31 or greater ☐

Screening score ☐☐
(max. 14 points)

12-14 points:	Normal nutritional status
8-11 points:	At risk of malnutrition
0-7 points:	Malnourished

For a more in-depth assessment, complete the full MNA® which is available at www.mna-elderly.com

Ref. Vellas B, Villars H, Abellan G, et al. Overview of the MNA® - Its History and Challenges. J Nutr Health Aging 2006;10:456-465.
Rubenstein LZ, Harker JO, Salva A, Guigoz Y, Vellas B. Screening for Undernutrition in Geriatric Practice: Developing the Short-Form Mini Nutritional Assessment (MNA-SF). J. Geront 2001;56A: M366-377.
Guigoz Y. The Mini-Nutritional Assessment (MNA®) Review of the Literature - What does it tell us? J Nutr Health Aging 2006; 10:466-487.

For more information: www.mna-elderly.com

Table 1 Initial screening

		Yes	No
1	Is BMI <20.5?		
2	Has the patient lost weight within the last 3 months?		
3	Has the patient had a reduced dietary intake in the last week?		
4	Is the patient severely ill ? (e.g. in intensive therapy)		

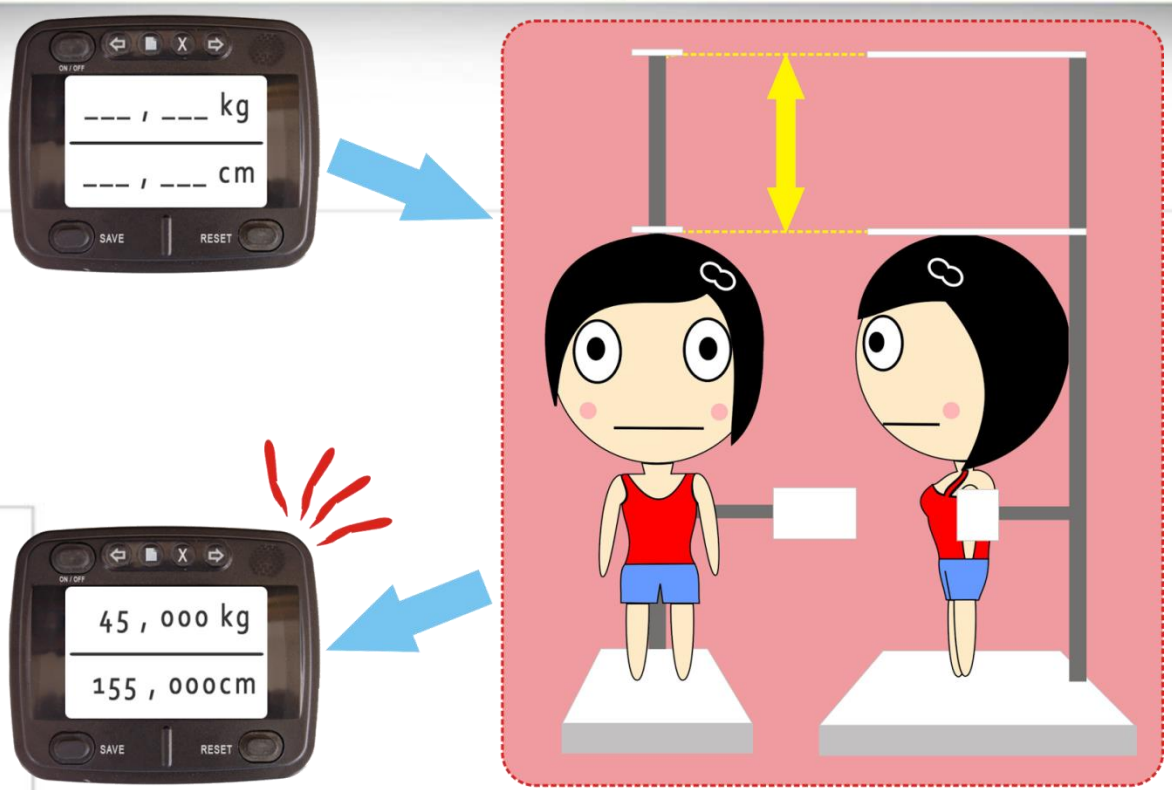
Yes: If the answer is 'Yes' to any question, the screening in Table 2 is performed.
No: If the answer is 'No' to all questions, the patient is re-screened at weekly intervals. If the patient e.g. is scheduled for a major operation, a preventive nutritional care plan is considered to avoid the associated risk status.

Table 2 Final screening

Impaired nutritional status		**Severity of disease (≈ increase in requirements)**	
Absent **Score 0**	Normal nutritional status	Absent **Score 0**	Normal nutritional requirements
Mild **Score 1**	Wt loss > 5% in 3 mths or Food intake below 50–75% of normal requirement in preceding week	Mild **Score 1**	Hip fracture* Chronic patients, in particular with acute complications: cirrhosis*, COPD*. *Chronic hemodialysis, diabetes, oncology*
Moderate **Score 2**	Wt loss > 5% in 2 mths or BMI 18.5 – 20.5 + impaired general condition or Food intake 25–60% of normal requirement in preceding week	Moderate **Score 2**	Major abdominal surgery* Stroke* *Severe pneumonia, hematologic malignancy*
Severe **Score 3**	Wt loss > 5% in 1 mth (>15% in 3 mths) or BMI <18.5 + impaired general condition or Food intake 0-25% of normal requirement in preceding week in preceding week.	Severe **Score 3**	Head injury* Bone marrow transplantation* *Intensive care patients (APACHE>10).*
Score:	+	**Score:**	**=Total score**
Age	if ≥70 years: add 1 to total score above	**=age-adjusted total score**	

Score ≥3: the patient is nutritionally at-risk and a nutritional care plan is initiated
Score <3: weekly rescreening of the patient. If the patient e.g. is scheduled for a major operation, a preventive nutritional care plan is considered to avoid the associated risk status.

NRS 2002



ASSESSMENT GIZI

FIRST STEP OF NCP

ASSESSMENT

- Food History (FH)
- Data Biokimia (BD)
- Anthropometry Data (AD)
- Physical Data (PD)
- Client History (CH)

Riwayat Gizi

- Asupan makanan dan gizi
- Pengetahuan dan praktek Gizi
- Aktifitas Fisik
- Akses Pangan

Data Biokimia

- Data Laboratorium:
  - Diabetes Mellitus: GDP, GD2PP, HbA1C, Kadar Insulin Plasma dll
  - Gangg. pada hati: SGPT, SGOT, Bilirubin
  - Gangg. Pada Ginjal: Ureum, Kreatinin, Albumin, dll
  - Gangg. Jantung dan atau dislipidemia: Profil Lipid (total kolesterol, trigliserida, LDL, dan HDL)
  - dll

Data Antropometri

- TB
- BB
- LILA
- Lingkar Kepala
- Lingkar perut
- dll

Kondisi Fisik

- Kemampuan makan (menguyah dan menelan)
- Tanda penyakit yang terlihat secara fisik
- dll

Riwayat Lain

- Konsumsi suplemen dan obat
- Riwayat penyakit terdahulu
- Riwayat penyakit turunan

Nutrition Assessment and Monitoring and Evaluation Terminology

This is a combined list of Nutrition Assessment and Monitoring and Evaluation terms. Indicators that are shaded are used ONLY for nutrition assessment. The rest of the indicators are used for assessment and monitoring and evaluation. Each term has an Academy unique identifier, a five-digit number (e.g., 99999) following the alpha-numeric IDNT code. Neither should be visible in nutrition documentation. The Academy unique identifier is for data tracking purposes in electronic health records.

FOOD/NUTRITION-RELATED HISTORY (FH)

Food and nutrient intake, food and nutrient administration, medication and complementary/alternative medicine use, knowledge/beliefs/attitudes, behavior, food and supply availability, physical activity and function, nutrition-related patient/client-centered measures.

Food and Nutrient Intake (1)

Composition and adequacy of food and nutrient intake, meal and snack patterns, current and previous diets and/or food modifications, and eating environment.

Energy Intake (1.1)

Total energy intake from all sources including food, beverages, breastmilk/formula, supplements, and via enteral and parenteral routes.

Energy intake (1.1.1)

☐ Total energy intake	FH-1.1.1.1	10005

Food and Beverage Intake (1.2)

Type, amount, and pattern of intake of foods and food groups, indices of diet quality, intake of fluids, breastmilk and infant formula

Fluid/beverage intake (1.2.1)

☐ Oral fluids	FH-1.2.1.1	10008
☐ Food-derived fluids	FH-1.2.1.2	10009
☐ Liquid meal replacement or supplement	FH-1.2.1.3	10010

Food intake (1.2.2)

☐ Amount of food	FH-1.2.2.1	10012
☐ Types of food/meals	FH-1.2.2.2	10013
☐ Meal/snack pattern	FH-1.2.2.3	10014
☐ Diet quality index	FH-1.2.2.4	10015
☐ Food variety	FH-1.2.2.5	10016

Breastmilk/infant formula intake (1.2.3)

☐ Breastmilk intake	FH-1.2.3.1	10018
☐ Infant formula intake	FH-1.2.3.2	10019

Enteral and Parenteral Nutrition Intake (1.3)

Specialized nutrition support intake from all sources, e.g., enteral and parenteral routes.

Enteral nutrition intake (1.3.1)

☐ Formula/solution	FH-1.3.1.1	10022
☐ Feeding tube flush	FH-1.3.1.2	10023

Parenteral nutrition intake (1.3.2)

☐ Formula/solution	FH-1.3.2.1	10025
☐ IV fluids	FH-1.3.2.2	10026

Bioactive Substance Intake (1.4)

Alcohol, plant stanol and sterol esters, soy protein, psyllium and β-glucan, and caffeine intake from all sources, e.g., food, beverages, supplements, and via enteral and parenteral routes.

Alcohol intake (1.4.1)

☐ Drink size/volume	FH-1.4.1.1	10029
☐ Frequency	FH-1.4.1.2	10030
☐ Pattern of alcohol consumption	FH-1.4.1.3	10031

Bioactive substance intake (1.4.2)

☐ Plant stanol esters	FH-1.4.2.1	10034
☐ Plant sterol esters	FH-1.4.2.2	10807
☐ Soy protein	FH-1.4.2.3	10035
☐ Psyllium	FH-1.4.2.4	10827
☐ β-glucan	FH-1.4.2.5	10037
☐ Food additives (*specify*)	FH-1.4.2.6	10038
☐ Other (*specify*)	FH-1.4.2.7	10039

Caffeine intake (1.4.3)

☐ Total caffeine	FH-1.4.3.1	10041

Macronutrient Intake (1.5)

Fat and cholesterol, protein, carbohydrate, and fiber intake from all sources including food, beverages, supplements, and via enteral and parenteral routes.

Fat and cholesterol intake (1.5.1)

☐ Total fat	FH-1.5.1.1	10044
☐ Saturated fat	FH-1.5.1.2	10045
☐ Trans fatty acids	FH-1.5.1.3	10046

Fat and cholesterol intake (1.5.1), cont'd

☐ Polyunsaturated fat	FH-1.5.1.4	10047
☐ Monounsaturated fat	FH-1.5.1.5	10048
☐ Omega-3 fatty acids	FH-1.5.1.6	10049
☐ Dietary cholesterol	FH-1.5.1.7	10050
☐ Essential fatty acids	FH-1.5.1.8	10051

Protein intake (1.5.2)

☐ Total protein	FH-1.5.2.1	10053
☐ High biological value protein	FH-1.5.2.2	10054
☐ Casein	FH-1.5.2.3	10055
☐ Whey	FH-1.5.2.4	10056
☐ Amino acids	FH-1.5.2.5	10057
☐ Essential amino acids	FH-1.5.2.6	10058

Carbohydrate intake (1.5.3)

☐ Total carbohydrate	FH-1.5.3.1	10060
☐ Sugar	FH-1.5.3.2	10061
☐ Starch	FH-1.5.3.3	10062
☐ Glycemic index	FH-1.5.3.4	10063
☐ Glycemic load	FH-1.5.3.5	10064
☐ Source of carbohydrate	FH-1.5.3.6	10065
☐ Insulin-to-carbohydrate ratio	FH-1.5.3.7	10066

Fiber intake (1.5.4)

☐ Total fiber	FH-1.5.4.1	10068
☐ Soluble fiber	FH-1.5.4.2	10069
☐ Insoluble fiber	FH-1.5.4.3	10070

Micronutrient Intake (1.6)

Vitamin and mineral intake from all sources, e.g., food, beverages, supplements, and via enteral and parenteral routes.

Vitamin intake (1.6.1)

☐ A (1)	10073	☐ Niacin (8)	10080
☐ C (2)	10074	☐ Folate (9)	10081
☐ D (3)	10075	☐ B6 (10)	10082
☐ E (4)	10076	☐ B12 (11)	10083
☐ K (5)	10077	☐ Pantothenic acid (12)	10084
☐ Thiamin (6)	10078	☐ Biotin (13)	10085
☐ Riboflavin (7)	10079	☐ Multivitamin (14)	10086

Mineral/element intake (1.6.2)

☐ Calcium (1)	10089	☐ Copper (11)	10099
☐ Chloride (2)	10090	☐ Iodine (12)	10100
☐ Iron (3)	10091	☐ Selenium (13)	10101
☐ Magnesium (4)	10092	☐ Manganese (14)	10102
☐ Potassium (5)	10093	☐ Chromium (15)	10103
☐ Phosphorus (6)	10094	☐ Molybdenum (16)	10104
☐ Sodium (7)	10095	☐ Boron (17)	10105
☐ Zinc (8)	10096	☐ Cobalt (18)	10106
☐ Sulfate (9)	10097	☐ Multi-mineral (19)	10107
☐ Fluoride (10)	10098	☐ Multi-trace element (20)	10108

Food and Nutrient Administration (2)

Current and previous diets and/or food modifications, eating environment, and enteral and parenteral nutrition administration.

Diet History (2.1)

Description of food and drink regularly provided or consumed, past diets followed or prescribed and counseling received, and the eating environment.

Diet order (2.1.1)

☐ General, healthful diet	FH-2.1.1.1	10113
☐ Modified diet	FH-2.1.1.2	10114
☐ Enteral nutrition order	FH-2.1.1.3	10115
☐ Parenteral nutrition order	FH-2.1.1.4	10116

Diet experience (2.1.2)

☐ Previously prescribed diets	FH-2.1.2.1	10118
☐ Previous diet/nutrition education/counseling	FH-2.1.2.2	10119
☐ Self-selected diet/s followed	FH-2.1.2.3	10120
☐ Dieting attempts	FH-2.1.2.4	10121
☐ Food allergies	FH-2.1.2.5	10805
☐ Food intolerance	FH-2.1.2.6	10806

Assessment & Monitoring & Evaluation

TERIMA KASIH