

1 Appendix 1. The original and modified versions of the Mini Nutritional Assessment (MNA)

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3 Original MNA Taiwan version-1^a Taiwan version-2^{a,b}

4 **Screening**

- 5 A. Has food intake declined over the past 3 months
6 due to loss of appetite, digestive problems,
7 chewing or swallowing difficulties?
8 0 = severe loss of appetite
9 1 = moderate loss of appetite
10 2 = no loss of appetite
- 11 B. Weight loss during last months
12 0 = weight loss greater than 3 kg
13 1 = does not know
14 2 = weight loss between 1 and 3 kg
15 3 = no weight loss
- 16 C. Mobility
17 0 = bed or chair bound
18 1 = able to get out of bed/chair but does not go out
19 2 = goes out
- 20 D. Has suffered psychological stress or acute disease
21 in the past 3 months
22 0 = yes, 2 = no
- 23 E. Neuropsychological problems
24 0 = severe dementia or depression
25 1 = mild dementia
26 2 = no psychological problems
- 27 F. Body Mass Index (BMI) (kg/m²) BMI (kg/m²) (Replaced by item R)
28 0 = BMI less than 19 0 = BMI <17
29 1 = BMI 19 to less than 21 1 = BMI 17-19
30 2 = BMI 21 to less than 23 2 = BMI 19-21
31 3 = BMI 23 or greater 3 = BMI ≥21

32 **Assessment**

33 G. Lives independently (not in a nursing home or hospital)

34 0 = no 1 = yes

35 H. Takes more than 3 prescription drugs per day

36 0 = yes 1 = no

37 I. Pressure sores or skin ulcers

38 0 = yes 1 = no

39 J. How many full meals does the patient eat daily?

40 0 = 1 meal

41 1 = 2 meals

42 2 = 3 meals

43 K. Selected consumption markers for protein intake

44 • At least one serving of dairy products (milk, cheese, yogurt) per day? Yes no Dairy products also includes soy milk.
(Frequency of consumption instead of number

46 • Two or more serving of legumes or eggs
47 per week? Yes no

48 • Meat, fish or poultry every day. Yes no

49 0.0 = if 0 or 1 yes

50 0.5 = if 2 yes

51 1.0 = if 3 yes.

52 L. Consumes two or more servings of fruits or
53 vegetables per day?

54 0 = no 1 = yes

55 M. How much fluid (water, juice, coffee, tea, milk, etc.) is consumed per day? Also includes water in soupy foods such as rice,
56 is consumed per day? noodle or vegetable soups.

57 0.0 = less than 3 cups

58 0.5 = 3 to 5 cups

59 1.0 = more than 5 cups.

60 N. Mode of feeding

61 0 = unable to eat without assistance

62 1 = self-fed with some difficulty

63 2 = self-fed without any problem

64	O. Self view of nutritional status		
65	0 = view self as being malnourished		
66	1 = is uncertain of nutritional state		
67	2 = views self as having no nutritional problem		
68	P. In comparison with other people of the same age,		
69	how do they consider their health status?		
70	0.0 = not as good		
71	0.5 = does not know		
72	1.0 = as good		
73	2.0 = better.		
74	Q. Mid-arm circumference (MAC) in cm	MAC (cm)	MAC (cm)
75	0.0 = < 21	0.0 = <22.5/21 ^c	0 = <22.5/21 ^c
76	0.5 = 21 to 22	0.5 = 22.5-23.5/21-22	1 = 22.5-23.5/21-22
77	1.0 = ≥ 22.	1.0 = ≥23.5/22	2 = ≥23.5/22
78	R. Calf circumference (CC) in cm	CC (cm)	CC (cm)
79	0 = CC < 31	0 = <28/25 ^c	0 = <28/25 ^c
80	1 = CC ≥ 31	1 = ≥28/25	1 = 28-29/25-26
81			2 = 29-30/26-27
82			3 = ≥30/27

83 Total score = 30 points. Score ≤ 16.5 points = malnourished; 17-23.5 = at risk of malnutrition; ≥24 = normal.

84 ^aItems not indicated were not modified.

85 ^bTaiwan version-2 does not include Item F (BMI), but the total score is the same (30 points)

86 ^cValues for men/women, respectively.

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