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

<table>
<thead>
<tr>
<th>Original MNA</th>
<th>Taiwan version-1\textsuperscript{a}</th>
<th>Taiwan version-2\textsuperscript{ab}</th>
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</thead>
</table>

**Screening**

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

B. Weight loss during last months
0 = weight loss greater than 3 kg
1 = does not know
2 = weight loss between 1 and 3 kg
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

F. Body Mass Index (BMI) (kg/m\textsuperscript{2})
0 = BMI less than 19
1 = BMI 19 to less than 21
2 = BMI 21 to less than 23
3 = BMI 23 or greater

BMI (kg/m\textsuperscript{2}) (Replaced by item R)
0 = BMI <17
1 = BMI 17-19
2 = BMI 19-21
3 = BMI \geq 21
Assessment

G. Lives independently (not in a nursing home or hospital)
   0 = no  1 = yes

H. Takes more than 3 prescription drugs per day
   0 = yes  1 = no

I. Pressure sores or skin ulcers
   0 = yes  1 = no

J. How many full meals does the patient eat daily?
   0 = 1 meal
   1 = 2 meals
   2 = 3 meals

K. Selected consumption markers for protein intake
   • At least one serving of dairy products (milk, cheese, yogurt) per day?
     Yes ☐  no ☐
     (Frequency of consumption instead of number of serving was used).
   • Two or more serving of legumes or eggs per week?
     Yes ☐  no ☐
   • Meat, fish or poultry every day. Yes ☐  no ☐
     0.0 = if 0 or 1 yes
     0.5 = if 2 yes
     1.0 = if 3 yes.

L. Consumes two or more servings of fruits or vegetables per day?
   0 = no  1 = yes

M. How much fluid (water, juice, coffee, tea, milk, etc.) is consumed per day?
   0.0 = less than 3 cups
   0.5 = 3 to 5 cups
   1.0 = more than 5 cups.

N. Mode of feeding
   0 = unable to eat without assistance
   1 = self-fed with some difficulty
   2 = self-fed without any problem
O. Self view of nutritional status
   0 = view self as being malnourished
   1 = is uncertain of nutritional state
   2 = views self as having no nutritional problem

P. In comparison with other people of the same age,
   how do they consider their health status?
   0.0 = not as good
   0.5 = does not know
   1.0 = as good
   2.0 = better.

Q. Mid-arm circumference (MAC) in cm
   MAC (cm)   MAC (cm)
   0.0 = < 21  0.0 = <22.5/21\(^c\)  0 = <22.5/21\(^c\)
   0.5 = 21 to 22  0.5 = 22.5-23.5/21-22 1 = 22.5-23.5/21-22
   1.0 = ≥ 22.  1.0 = ≥23.5/22  2 = ≥23.5/22

R. Calf circumference (CC) in cm
   CC (cm)   CC (cm)
   0 = CC < 31  0 = <28/25\(^c\)  0 = <28/25\(^c\)
   1 = CC ≥ 31  1 = ≥28/25  1 = 28-29/25-26
   2 = 29-30/26-27
   3 = ≥30/27

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

\(^a\)Items not indicated were not modified.
\(^b\)Taiwan version-2 does not include Item F (BMI), but the total score is the same (30 points)
\(^c\)Values for men/women, respectively.