

Supplementary Materials

Supplementary File S1. Food Frequency Questionnaire (FFQ).

Supplementary File S2. Frailty Score (FQ).

Supplementary Table S1. Logistic regression analysis on the predictor of frailty

Factor	Adjusted odds ratio (95% confidence interval)	P-value
Dietary zinc intake	0.96 (0.93 – 0.99)	p = 0.009
Malnutrition-Inflammation Score	1.24 (1.10 – 1.39)	p < 0.001

Covariates added into the model: age, baseline SGA score, baseline MIS score, dietary energy, protein, zinc, saturated fatty acid, calcium, and vitamin D intake.

Supplementary Table S2. Relationship between micronutrient intake and components of frailty, nutritional and inflammatory markers.

(A) Zinc intake

Frailty Score parameters	Odds ratio (95% confidence interval)	P-value
- Q2: Doctor consultation in the past year 6+ times	0.66 (0.53 – 0.81)	p < 0.001
- Q3: Hospital admission in the past year 2+ times	0.88 (0.81 – 0.95)	p = 0.001
- Q25: Need a walking aid usually	0.79 (0.66 – 0.95)	p = 0.01
- Q26: Walking unsteadily or stagger	0.72 (0.54 – 0.95)	p = 0.02
- Q27: Feeling your money/income is not enough	0.81 (0.72 – 0.91)	p < 0.001
- Q30: Feeling unhappy most of the time in the past week	0.92 (0.87 – 0.97)	p = 0.004
SGA parameters		
- SGA muscle	0.04 (0.02 – 0.07)	p = 0.002
MIS parameters		
- MIS A	-0.01 (-0.02 - -0.003)	p = 0.004

(B) Vitamin D

Frailty Score parameters	Odds ratio (95% confidence interval)	P-value
- Q5: Weight loss \geq 5lbs in past year	0.53 (0.34 – 0.81)	p = 0.003
- Q7: Dizziness in the past month	0.57 (0.38 – 0.86)	p = 0.007
- Q25: Need a walking aid usually	0.63 (0.46 – 0.88)	p = 0.006
- Q26: Walking unsteadily or stagger	0.36 (0.19 – 0.69)	p = 0.002

- Q27: Feeling your money/income is not enough	0.79 (0.66 – 0.94)	p = 0.008
- Q29: Did not participate in social activity in the past month	0.08 (0.02 – 0.38)	p = 0.001
MIS parameters		
- MIS B	-0.03 (-0.05 – 0.007)	p = 0.007

(C) Calcium

Frailty Score parameters	Odds ratio (95% confidence interval)	P-value
- Q26: Walking unsteadily or stagger	0.99 (0.99 – 0.99)	p < 0.001