## **Supplementary**

Table S1 The odds ratio of intensive care unit admission and emergency department visit of the low protein intake group compared with the non-low protein intake group in mild to moderate chronic obstructive pulmonary disease

| Model      | ICU admission       |         | ED visit            |         |
|------------|---------------------|---------|---------------------|---------|
|            | Odds ratio (95% CI) | P value | Odds ratio (95% CI) | P value |
| Unadjusted | 1.56 (0.75, 3.26)   | 0.236   | 6.75 (2.07, 22.01)  | 0.002   |
| 1          | 1.53 (0.73,3.20)    | 0.258   | 6.10 (1.86,20.03)   | 0.003   |
| 2          | 1.23 (0.58,2.63)    | 0.592   | 5.14 (1.54,17.15)   | 0.008   |
| 3          | 1.24 (0.58,2.66)    | 0.575   | 5.20 (1.52,17.75)   | 0.009   |
| 4          | 1.32 (0.61,2.89)    | 0.482   | 4.74 (1.36,16.56)   | 0.015   |

Model 1:  $FEV_1$  % predicted; Model 2:  $FEV_1$  % predicted, weight; Model 3:  $FEV_1$  % predicted, weight, smoking pack-years; Model 4:  $FEV_1$  % predicted, weight, smoking pack-years, household income. ICU, intensive care unit; ED, emergency department, CI, confidence interval.

Table S2 The odds ratio of exacerbation leading to hospitalization of the low protein intake group compared with the non-low protein intake group in both sex

|            | Men                 |         | Women               |         |
|------------|---------------------|---------|---------------------|---------|
|            | Odds ratio (95% CI) | P value | Odds ratio (95% CI) | P value |
| Unadjusted | 1.89 (1.33-2.69)    | <0.001  | 1.83 (1.16-2.87)    | 0.009   |
| Model 1    | 1.86 (1.31-2.65)    | < 0.001 | 1.87 (1.19-2.95)    | 0.007   |
| Model 2    | 1.62 (1.13-2.32)    | 0.009   | 1.85 (1.18-2.93)    | 0.008   |
| Model 3    | 1.62 (1.13-2.33)    | 0.009   | 1.83 (1.15-2.90)    | 0.011   |
| Model 4    | 1.53 (1.05-2.22)    | 0.025   | 1.71 (1.07-2.76)    | 0.027   |

Low protein intake was defined as the lowest quartile of protein intake among all men and women, with <46 g/day for men and <32 g/day for women, respectively. Model 1:  $FEV_1$  % predicted; Model 2:  $FEV_1$  % predicted, weight; Model 3:  $FEV_1$  % predicted, weight, smoking pack-years; Model 4:  $FEV_1$  % predicted, weight, smoking pack-years, household income. CI, confidence interval.