

**Supplementary Material for ‘Infrequent Denture Cleaning Increased the Risk of Pneumonia among Community-dwelling Older Adults: A Population-based Cross-sectional Study.’**

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**Supplementary Table 1.** Standardized differences of covariate before and after stabilized average treatment effect weighting

	All participants (n = 71,227)		65 - 74y (n = 35,349)		≥75y (n = 35,878)	
	Raw	Weighted	Raw	Weighted	Raw	Weighted
<b>Age</b>						
65 - 69y	0.115	0.021	0.124	0.045	—	—
70 - 74y	0.031	0.021	0.124	0.045	—	—
75 - 79y	0.132	0.023	—	—	0.157	0.026
80 - 84y	0.008	0.019	—	—	0.041	0.024
≥85y	0.069	0.009	—	—	0.144	0.004
<b>Sex</b>	0.473	0.051	0.546	0.029	0.393	0.087
<b>Education</b>						
≤9y	0.100	0.019	0.048	0.003	0.181	0.017
10 - 12y	0.139	0.020	0.104	0.008	0.196	0.023
≥13y	0.043	0.002	0.066	0.011	0.002	0.005
<b>Equivalent income</b>						
<1,000,000JPY	0.090	0.014	0.080	0.012	0.111	0.016
1,000,0000 - 1,999,999 JPY	0.020	0.005	0.047	0.010	0.014	0.014
2,000,0000 - 2,999,999 JPY	0.042	0.011	0.041	0.017	0.043	0.004
3,000,0000 - 3,999,999 JPY	0.042	0.012	0.045	0.017	0.043	0.008
≥4,000,000 JPY	0.036	0.020	0.055	0.015	0.015	0.016
<b>Smoking status</b>						
never	0.335	0.047	0.397	0.039	0.257	0.067
quite	0.158	0.040	0.165	0.027	0.147	0.067
current	0.244	0.012	0.273	0.014	0.189	0.005
<b>Dementia</b>	0.184	0.005	0.122	0.005	0.242	0.007
<b>Stroke</b>	0.098	0.013	0.090	0.000	0.111	0.023
<b>Activities of daily living</b>	0.272	0.023	0.198	0.007	0.366	0.029
<b>Number of teeth</b>						
0	0.163	0.007	0.182	0.015	0.172	0.002
1 - 4	0.000	0.002	0.024	0.037	0.015	0.022
5 - 9	0.029	0.020	0.022	0.006	0.032	0.049
10 - 19	0.114	0.022	0.133	0.029	0.102	0.011
≥20	0.003	0.034	0.002	0.036	0.029	0.041
<b>Experience of pneumococcal vaccination within last five-year</b>	0.217	0.012	0.128	0.001	0.292	0.016

**Supplementary Table 2.** Effect modification of frequency of denture cleaning on the incidence of pneumonia within last one-year by age (n = 71,227)

	Cleaning denture daily		Cleaning denture non-daily		aORs (95% CIs) for frequency of denture cleaning within strata of age group
	n with/without the incidence of pneumonia	aOR (95% CI)	n with/without the incidence of pneumonia	aOR (95% CI)	
65-74y	575/32,723	1.00	34/1,720	0.99 (0.69 - 1.40)	1.03 (0.72 - 1.47)
≥75y	972/32,928	1.20 (1.08 - 1.35)	66/1,473	1.65 (1.26 - 2.16)	1.37 (1.06 - 1.78)

Measure of effect modification on additive scale: RERI (95% CI) = 0.46 (-0.08 - 1.00); *P* = 0.098

Measure of effect modification on multiplicative scale: aOR (95% CI) = 1.38 (0.90 - 2.15); *P* = 0.141

aORs are adjusted for age, sex, education, equivalent income, smoking status, dementia, stroke, ADL, number of teeth, and experience of pneumococcal vaccination within last five-year

Note: aOR = adjusted odds ratio, 95%CI = 95% confidence interval, RERI = relative excess risk due to interaction, ADL = Activities of daily living