**Supplementary Table 1**: Baseline characteristics of participants per tertile of adherence to the “staple food and processed meats”, “home-cooking and whole foods”, “snacking”, or “high sugar” dietary patterns

|                  | “Staple food and processed meats” pattern | “Home-cooking and whole foods” pattern | “Snacking” pattern | “High sugar” pattern |
|------------------|------------------------------------------|----------------------------------------|--------------------|---------------------|
|                  | 1st tertile | 2nd tertile | 3rd tertile | 1st tertile | 2nd tertile | 3rd tertile | 1st tertile | 2nd tertile | 3rd tertile | 1st tertile | 2nd tertile | 3rd tertile |
| Age (yr)         | 61±8       | 63±10      | 59±7.5     | 61±10      | 61±9       | 61±7       | 61±9       | 61±10      | 61±8       | 61±10      | 60±8       |
| Body mass index (kg/m²) | 28±8       | 29±7       | 28±7       | 29±7       | 28±7       | 28±7       | 26±6†      | 28±6†      | 31±8       | 29±7       | 27±7       | 29±7       |
| Weight (kg)      | 69±19      | 68±19      | 69±16      | 69±18      | 69±19      | 68±18      | 63±17†     | 67±14      | 75±20      | 69±18      | 66±18      | 70±19      |
| Waist circumference (cm) | 86±13      | 87±15      | 85±12      | 86±14      | 86±12      | 86±13      | 80±14†     | 87±10      | 91±13      | 88±12      | 83±14      | 88±13      |
| CTx-11 (ng/ml)   | 0.54±0.3   | 0.49±0.2   | 0.54±0.3   | 0.48±0.2   | 0.58±0.3   | 0.51±0.3   | 0.50±0.2†  | 0.57±0.3   | 0.49±0.3   | 0.53±0.3   | 0.56±0.3   | 0.48±0.3   |
| PTH (ng/L)       | 43±21      | 51±27      | 45±28      | 45±17      | 48±31      | 46±27      | 46±24      | 52±33      | 41±17      | 42±19      | 51±29      | 45±27      |
| 25(OH)D3 (ng/ml)| 37±12      | 36±13      | 37±14      | 37±12      | 35±13      | 38±13      | 39±15      | 35±13      | 36±10      | 37±13      | 34±14      | 38±12      |
| Distal radius BMD (g/cm²) | 0.41±0.1   | 0.40±0.1   | 0.44±0.1   | 0.43±0.1   | 0.40±0.1   | 0.42±0.1   | 0.41±0.1   | 0.41±0.1   | 0.43±0.1   | 0.42±0.1   | 0.40±0.1   | 0.43±0.1   |
| Spine BMD (g/cm²) | 0.84±0.2   | 0.83±0.2   | 0.85±0.1   | 0.85±0.1   | 0.84±0.2   | 0.83±0.1   | 0.84±0.2   | 0.84±0.2   | 0.83±0.2   | 0.84±0.2   | 0.82±0.2   | 0.86±0.2   |
| Femoral neck BMD (g/cm²) | 0.84±0.1   | 0.80±0.1   | 0.84±0.2   | 0.83±0.2   | 0.82±0.2   | 0.81±0.1†  | 0.83±0.1   | 0.84±0.2   | 0.83±0.1   | 0.81±0.2   | 0.84±0.2   |
| Physical activity Index | 7.1±1.2   | 7.7±1.2   | 7.4±1.4   | 7.3±1.1   | 7.7±1.3   | 7.2±1.4   | 7.6±1.4   | 7.1±1.1   | 7.5±1.3   | 7.5±1.2   | 7.2±1.1   | 7.4±1.5   |

Data reported as mean with standard deviation. 1-C-Telopeptide of type 1 collagen; 2-Parathyroid hormone; 3-25-hydroxyvitamin D; 4-Bone mineral density. †Significantly different from “snacking” pattern tertile 3 (p < 0.05); ‡Significantly different from “snacking” pattern tertile 2 (p < 0.05).