**Supplementary Online Content**

**Supplementary materials**

Supplementary Table 1. Dietary change after cancer diagnosis according to the subtype of surgical treatment: 608 Korean gastric cancer survivors

Supplementary Table 2. Dietary habit change after cancer diagnosis stratified by sex and age at the cancer diagnosis

Supplementary Table 3. Dietary habit change after cancer diagnosis stratified by sex and lapse after cancer diagnosis

This supplementary material has been provided by the authors to give readers additional information about their work.

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| **Supplementary Table 1**. Dietary change after cancer diagnosis according to the subtype of surgical treatment: 608 Korean gastric cancer survivors |
|  | Total gastrectomy(n=142) | Biloth-1 subtotal gastrectomy(n=328) | Biloth-2 subtotal gastrectomy(n=75) | Pylorus preserving gastrectomy(n=63) |  |
| Dietary component | Decreased | Sustained/Increased | Decreased | Sustained/ Increased | Decreased | Sustained/Increased | Decreased | Sustained/ Increased | *p* for difference |
| Total food  | 105 (73.9) | 37 (26.1) | 212 (64.6) | 116 (35.4) | 53 (70.7) | 22 (29.3) | 50 (79.4) | 13 (20.6) | 0.050 |
| Red meat | 81 (57.0) | 61 (43.0) | 187 (57.0) | 141 (43.0) | 42 (56.0) | 33 (44.0) | 32 (50.8) | 31 (49.2) | 0.831 |
| Poultry | 67 (47.2) | 75 (52.8) | 168 (51.2) | 160 (48.8) | 35 (46.7) | 40 (53.3) | 32 (50.8) | 31 (49.2) | 0.809 |
| Processed meat  | 64 (45.1) | 78 (54.9) | 152 (46.3) | 176 (53.7) | 28 (37.3) | 47 (62.7) | 21 (33.3) | 42 (66.7) | 0.170 |
| Fish | 27 (19.0) | 115 (81.0) | 56 (17.1) | 272 (82.9) | 12 (16.0) | 63 (84.0) | 17 (27.0) | 46 (73.0) | 0.284 |
| Vegetable | 11 (7.7) | 131 (92.3) | 29 (8.8) | 299 (91.2) | 5 (6.7) | 70 (93.3) | 9 (14.3) | 54 (85.7) | 0.399 |
| Fruit | 13 (9.2) | 129 (90.8) | 31 (9.5) | 297 (90.5) | 5 (6.7) | 70 (93.3) | 6 (9.5) | 57 (90.5) | 0.896 |
| Legume | 12 (8.5) | 130 (19.5) | 20 (6.1) | 308 (93.9) | 5 (6.7) | 70 (93.3) | 7 (11.1) | 56 (88.9) | 0.495 |
| Dairy product | 38 (26.8) | 104 (73.2) | 86 (26.2) | 242 (73.8) | 17 (22.7) | 58 (77.3) | 16 (25.4) | 47 (74.6) | 0.921 |
| Grains | 21 (14.8) | 121 (85.2) | 42 (12.8) | 286 (87.2) | 5 (6.7) | 70 (93.3) | 11 (17.5) | 52 (82.5) | 0.242 |
| Salt | 98 (69.0) | 44 (31.0) | 225 (68.6) | 103 (31.4) | 55 (73.3) | 20 (26.7) | 45 (71.4) | 18 (28.6) | 0.856 |
| Burnt food | 83 (58.5) | 59 (41.5) | 180 (54.9) | 148 (45.1) | 37 (49.3) | 38 (50.7) | 33 (52.4) | 30 (47.6) | 0.611 |
| Data are presented as number (%). *p* for difference were estimated between subtype of surgical treatment |

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| **Supplementary Table 2**. Dietary habit change after cancer diagnosis stratified by sex and age at the cancer diagnosis |
|  | Age at diagnosis | Dietary change | Total food | Red meat | Poultry | Processed meat | Fish | Vegetable | Fruit | Legume | Dairy product | Grains | Salt | Burnt food |
| Total(n=624) | < 45 years(n=138) | Sustained/ Increased | 38 (27.5) | 69 (50.0) | 78 (56.5) | 53 (38.4) | 115 (83.3) | 135 (97.8) | 134 (97.1) | 134 (97.1) | 100 (72.5) | 119 (83.2) | 35 (25.4) | 42 (30.4) |
| Decreased | 100 (72.5) | 69 (50.0) | 60 (43.5) | 85 (61.6) | 23 (16.7) | 3 (2.2) | 4 (2.9) | 4 (2.9) | 38 (27.5) | 19 (13.8) | 103 (74.6) | 96 (69.6) |
| 45-<55 years(n=231) | Sustained/ Increased | 74 (32.0) | 100 (43.3) | 120 (51.9) | 123 (53.2) | 187 (81.0) | 211 (91.3) | 213 (92.2) | 215 (93.1) | 165 (71.4) | 204 (88.3) | 63 (27.3) | 88 (38.1) |
| Decreased | 157(68.0) | 131 (56.7) | 111 (48.1) | 108 (46.8) | 44 (19.0) | 20 (8.7) | 18 (7.8) | 16 (6.9) | 66 (28.6) | 27 (11.7) | 168 (72.7) | 143 (61.9) |
| ≥ 55 years(n=255) | Sustained/ Increased | 86 (33.7) | 108 (42.4) | 119 (46.7) | 180 (70.6) | 208 (81.6) | 223 (87.5) | 221 (86.7) | 231 (90.6) | 202 (79.2) | 220 (86.3) | 94 (36.9) | 155 (60.8) |
| Decreased | 169 (66.3) | 147 (57.6) | 136 (53.3) | 75 (29.4) | 47 (18.4) | 32 (12.5) | 34 (13.3) | 24 (9.4) | 53 (20.8) | 35 (13.7) | 161 (63.1) | 100 (39.2) |
| P for difference | 0.450 | 0.316 | 0.159 | **<0.001** | 0.846 | **0.002** | **0.002** | 0.055 | 0.109 | 0.762 | **0.022** | **<0.001** |
| Male(n=362) | < 45 years(n=60) | Sustained/ Increased | 12 (20.0) | 26 (43.3) | 31 (51.7) | 25 (41.7) | 50 (83.3) | 59 (98.3) | 58 (96.7) | 59 (98.3) | 45 (75.0) | 51 (85.0) | 13 (21.7) | 9 (15.0) |
| Decreased | 48 (80.0) | 34 (56.7) | 29 (48.3) | 35 (58.3) | 10 (16.7) | 1 (1.7) | 2 (3.3) | 1 (1.7) | 15 (25.0) | 9 (15.0) | 47 (78.3) | 51 (85.0) |
| 45-<55 years(n=143) | Sustained/ Increased | 48 (33.6) | 54 (37.8) | 66 (46.2) | 71 (49.7) | 116 (81.1) | 130 (90.9) | 132 (92.3) | 135 (94.4) | 102 (71.3) | 126 (88.1) | 41 (28.7) | 47 (32.9) |
| Decreased | 95( 66.4) | 89 (62.2) | 77 (53.8) | 72 (50.3) | 27 (18.9) | 13 (9.1) | 11 (7.7) | 8 (5.6) | 41 (28.7) | 17 (11.9) | 102 (71.3) | 96 (67.1) |
| ≥ 55 years(n=159) | Sustained/ Increased | 49 (30.8) | 64 (40.3) | 74 (46.5) | 106 (66.7) | 131 (82.4) | 140 (88.1) | 139 (87.4) | 146 (91.8) | 130 (81.8) | 138 (86.8) | 61 (38.4) | 88 (55.3) |
| Decreased | 110 (69.2) | 95 (59.7) | 85 (53.5) | 53 (33.3) | 28 (17.6) | 19 (11.9) | 20 (12.6) | 13 (8.2) | 29 (18.2) | 21 (13.2) | 98 (61.6) | 71 (44.7) |
| P for difference | 0.152 | 0.750 | 0.752 | **0.001** | 0.921 | 0.062 | 0.079 | 0.189 | 0.098 | 0.829 | **0.036** | **<0.001** |
| Female(n=262) | < 45 years(n=78) | Sustained/ Increased | 26 (33.3) | 43 (55.1) | 47 (60.3) | 28 (35.9) | 65 (83.3) | 76 (97.4) | 76 (97.4) | 75 (96.2) | 55 (70.5) | 68 (87.2) | 22 (28.2) | 33 (42.3) |
| Decreased | 52 (66.7) | 35 (44.9) | 31 (39.7) | 50 (64.1) | 13 (16.7) | 2 (2.6) | 2 (2.6) | 3 (3.8) | 23 (29.5) | 10 (12.8) | 56 (71.8) | 45 (57.7) |
| 45-<55 years(n=88) | Sustained/ Increased | 26 (29.5) | 46 (52.3) | 54 (61.4) | 52 (59.1) | 71 (80.7) | 81 (92.0) | 81 (92.0) | 80 (90.9) | 63 (71.6) | 78 (88.6) | 22 (25.0) | 41 (46.6) |
| Decreased | 62 (70.5) | 42 (47.7) | 34 (38.6) | 36 (40.9) | 17 (19.3) | 7 (8.0) | 7 (8.0) | 8 (9.1) | 25 (28.4) | 10 (11.4) | 66 (75.0) | 47 (53.4) |
| ≥ 55 years(n=96) | Sustained/ Increased | 37 (38.5) | 44 (45.8) | 45 (46.9) | 74 (77.1) | 77 (80.2) | 83 (86.5) | 82 (85.4) | 85 (88.5) | 72 (75.0) | 82 (85.4) | 33 (34.4) | 67 (69.8) |
| Decreased | 59 (61.5) | 52 (54.2) | 51 (53.1) | 22 (22.9) | 19 (19.8) | 13 (13.5) | 14 (14.6) | 11 (11.5) | 24 (25.0) | 14 (14.6) | 63 (65.6) | 29 (30.2) |
| P for difference | 0.432 | 0.447 | 0.089 | <**0.001** | 0.857 | **0.034** | **0.019** | 0.190 | 0.782 | 0.809 | 0.364 | **<0.001** |
| Data are presented as number (%). Bold values denote statistical significant at the p<0.05 level |

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| **Supplementary Table 3**. Dietary habit change after cancer diagnosis stratified by sex and lapse after cancer diagnosis |
|  | Lapse after diagnosis | Dietary change | Total food | Red meat | Poultry | Processed meat | Fish | Vegetable | Fruit | Legume | Dairy product | Grains | Salt | Burnt food |
| Total(n=624) | < 5 years(n=166) | Sustained/ Increased | 45 (27.1) | 70 (42.2) | 79 (47.6) | 94 (56.6) | 127 (76.5) | 142 (85.5) | 143 (86.1) | 146 (88.0) | 124 (74.7) | 137 (82.5) | 33 (19.9) | 76 (45.8) |
| Decreased | 121 (72.9) | 96 (57.8) | 87 (52.4) | 72 (43.4) | 39 (23.5) | 24 (14.5) | 23 (13.9) | 20 (12.0) | 42 (25.3) | 29 (17.5) | 133 (80.1) | 90 (54.2) |
| 5- <10 years(n=395) | Sustained/ Increased | 131 (33.2) | 178 (45.1) | 208 (52.7) | 223 (56.5) | 329 (83.3) | 368 (93.2) | 366 (92.7) | 373 (94.4) | 296 (74.9) | 345 (87.3) | 133 (33.7) | 174 (44.1) |
| Decreased | 264 (66.8) | 217 (54.9) | 187 (47.3) | 172 (43.5) | 66 (16.7) | 27 (6.8) | 29 (7.3) | 22 (5.6) | 99 (25.1) | 50 (12.7) | 262 (66.3) | 221 (55.9) |
| ≥ 10 years(n=63) | Sustained/ Increased | 22 (34.9) | 29 (46.0) | 30 (47.6) | 39 (61.9) | 54 (85.7) | 59 (93.7) | 59 (93.7) | 61 (96.8) | 47 (74.6) | 61 (96.8) | 26 (41.3) | 35 (55.6) |
| Decreased | 41 (65.1) | 34 (54.0) | 33 (52.4) | 24 (38.1) | 9 (14.3) | 4 (6.3) | 4 (6.3) | 2 (3.2) | 16 (25.4) | 2 (3.2) | 37 (58.7) | 28 (44.4) |
| P for difference | 0.315 | 0.789 | 0.476 | 0.714 | 0.114 | **0.011** | **0.036** | **0.011** | 0.997 | **0.015** | **0.001** | 0.235 |
| Male(n=362) | < 5 years(n=101) | Sustained/ Increased | 24 (23.8) | 39 (38.6) | 44 (43.6) | 53 (52.5) | 79 (78.2) | 88 (87.1) | 88 (87.1) | 92 (91.1) | 78 (77.2) | 84 (83.2) | 18 (17.8) | 38 (37.6) |
| Decreased | 77 (76.2) | 62 (61.4) | 57 (56.4) | 48 (47.5) | 22 (21.8) | 13 (12.9) | 13 (12.9) | 9 (8.9) | 23 (22.8) | 17 (16.8) | 83 (82.2) | 63 (62.4) |
| 5- <10 years(n=223) | Sustained/ Increased | 70 (31.4) | 87 (39.0) | 109 (48.9) | 126 (56.5) | 185 (83.0) | 205 (91.9) | 205 (91.9) | 211 (94.6) | 168 (75.3) | 194 (87.0) | 81 (36.3) | 89 (39.9) |
| Decreased | 153 (68.6) | 136 (61.0) | 114 (51.1) | 97 (43.5) | 38 (17.0) | 18 (8.1) | 18 (8.1) | 12 (5.4) | 55 (24.7) | 29 (13.0) | 142 (63.7) | 134 (60.1) |
| ≥ 10 years(n=38) | Sustained/ Increased | 15 (39.5) | 18 (47.4) | 18 (47.4) | 23 (60.5) | 33 (86.8) | 36 (94.7) | 36 (94.7) | 37 (97.4) | 31 (81.6) | 37 (97.4) | 16 (42.1) | 17 (44.7) |
| Decreased | 23 (60.5) | 20 (52.6) | 20 (52.6) | 15 (39.5) | 5 (13.2) | 2 (5.3) | 2 (5.3) | 1 (2.6) | 7 (18.4) | 1 (2.6) | 22 (57.9) | 21 (55.3) |
| P for difference | 0.158 | 0.599 | 0.674 | 0.657 | 0.422 | 0.260 | 0.260 | 0.301 | 0.690 | 0.085 | **0.001** | 0.746 |
| Female(n=262) | < 5 years(n=65) | Sustained/ Increased | 21 (32.3) | 31( 47.7) | 35 (53.8) | 41 (63.1) | 48 (73.8) | 54 (83.1) | 55 (84.6) | 54 (83.1) | 46 (70.8) | 53 (81.5) | 15 (23.1) | 38 (58.5) |
| Decreased | 44 (67.7) | 34 (52.3) | 30 (46.2) | 24 (36.9) | 17 (26.2) | 11 (16.09) | 10 (15.4) | 11 (16.9) | 19 (29.2) | 12 (18.5) | 50 (76.9) | 27 (41.5) |
| 5- <10 years(n=172) | Sustained/ Increased | 61 (35.5) | 91 (52.9) | 99 (57.69) | 97 (56.4) | 144 (83.7) | 163 (94.8) | 161 (93.6) | 162 (94.2) | 128 (74.4) | 151 (87.8) | 52 (30.2) | 85 (49.4) |
| Decreased | 111 (64.5) | 81 (47.1) | 73 (42.4) | 75 (43.6) | 28 (16.3) | 9 (5.2) | 11 (6.4) | 10 (5.8) | 44 (25.6) | 21 (12.2) | 120 (69.8) | 87 (50.6) |
| ≥ 10 years(n=25) | Sustained/ Increased | 7 (28.0) | 11 (44.0) | 12 (48.0) | 16 (64.0) | 21 (84.0) | 23 (92.0) | 23 (92.0) | 24 (96.0) | 16 (64.0) | 24 (96.0) | 10 (40.0) | 18 (72.0) |
| Decreased | 18 (72.0) | 14 (56.0) | 13 (52.0) | 9 (36.0) | 4 (16.0) | 2 (8.0) | 2 (8.0) | 1 (4.0) | 9 (36.0) | 1 (4.0) | 15 (60.0) | 7 (28.0) |
| P for difference | 0.723 | 0.601 | 0.628 | 0.554 | 0.206 | **0.015** | 0.092 | **0.016** | 0.516 | 0.165 | 0.264 | 0.073 |
| Data are presented as number (%). Bold values denote statistical significant at the p<0.05 level |