**Supplementary table 1**: Description of the 194* meta-analyses of obesity and cancer incidence or mortality — only cohort studies included.

| Author, year | Exposure | Association of obesity or weight change with | ICD-10 | N | Sample size cases / cohort | Summary relative risk (95% CI) | | | Fixed P-value[¶] | Random P-value[||] | 95% Prediction interval[#] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Fixed Effects[‡] | Random effects[§] | Largest Study[†] | | | |
| Casagrande 2014 | BS, inc density rate after surgery | Overall CA inc | C00-C97 | 9 | 725 / 31,479 | 2.23 (2.08-2.40) | 1.10 (0.67-1.80) | 2.51 (2.24-2.81) | <1E-100 | 0.70 | 0.21-5.91 |
| Casagrande 2014 | BS; surgery vs. no surgery | Overall CA inc | C00-C97 | 4 | 1,745 / 31,807 | 0.61 (0.54-0.69) | 0.40 (0.22-0.71) | 0.75 (0.64-0.88) | 7.1E-15 | 1.8E-3 | 0.03-6.14 |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Oesophageal AdCa inc | C15 | 8 | 1,918 / 6,430,994 | 1.53 (1.41-1.67) | 1.53 (1.41-1.67) | 1.67 (1.44-1.92) | 1.37E-22 | 1.37E-22 | 1.38-1.71 |
| Singh 2013 | Central adiposity | Oesophageal AdCa inc | C15 | 2 | 341 / 565,067 | 1.78 (1.26-2.52) | 1.78 (1.26-2.52) | 1.81 (1.24-2.64) | 0.001 | 0.001 | NA |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Oesophageal AdCa inc, men | C15 | 5 | 996 / 3,196,747 | 1.55 (1.39-1.73) | 1.52 (1.33-1.74) | 1.67 (1.44-1.92) | 7.95E-16 | 1.26E-9 | 1.09-2.11 |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Oesophageal AdCa inc, women | C15 | 3 | 922 / 3,234,247 | 1.51 (1.30-1.75) | 1.51 (1.30-1.75) | 1.54 (1.26-1.89) | 2.76E-8 | 2.76E-8 | 0.59-3.86 |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Oesophageal SqCa inc. | C15 | 5 | 3,545 / 6,369,699 | 0.67 (0.63-0.72) | 0.63 (0.53-0.75) | 0.77 (0.70-0.85) | 8.53E-31 | 1.71E-7 | 0.34-1.15 |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Oesophageal SqCa inc., men | C15 | 3 | 1,787 / 3,145,452 | 0.75 (0.68-0.81) | 0.71 (0.61-0.84) | 0.77 (0.70-0.85) | 4.27E-11 | 6.1E-5 | 0.14-3.69 |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Oesophageal SqCa inc., women | C15 | 2 | 1,758 / 3,224,247 | 0.58 (0.52-0.64) | 0.57 (0.48-0.67) | 0.61 (0.54-0.70) | 2.76E-24 | 1.16E-10 | NA |
| Turati 2013 | BMI 30+ vs. < 25 | Gastrc cardia and oesophageal AdCa | C15-C16.0 | 9 | 2,391 / 5,887,984 | 2.13 (1.88-2.42) | 2.19 (1.84-2.58) | 1.93 (1.56-2.39) | 7.3E-32 | 9.4E-20 | 1.46-3.25 |
| Turati 2013 | BMI 25-29.99 vs. < 25 | Gastrc cardia and oesophageal AdCa | C15-C16.0 | 10 | 2,832 / 6,265,992 | 1.48 (1.35-1.61) | 1.48 (1.35-1.61) | 1.35 (1.11-1.64) | 3.3E-17 | 3.3E-17 | 1.33-1.64 |
| Lin 2014 | BMI 25-29.99 vs. < 25 | Gastric CA inc | C16 | 12 | 24,759 / 4,853,037 | 0.99 (0.94-1.04) | 1.00 (0.93-1.08) | 0.97 (0.87-1.09) | 0.66 | 0.92 | 0.85-1.19 |
| Lin 2014 | BMI 30+ vs. < 25 | Gastric CA inc | C16 | 11 | 25,581 / 5,144,097 | 1.10 (1.01-1.21) | 1.10 (1.00-1.22) | 1.23 (1.02-1.49) | 0.04 | 0.05 | 0.95-1.29 |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Gastric CA inc | C16 | 13 | 8,293 / 2,935,218 | 0.97 (0.93-1.01) | 0.99 (0.92-1.06) | 0.95 (0.90-1.00) | 0.09 | 0.75 | 0.83-1.17 |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Gastric CA inc, men | C16 | 8 | 6,693 / 1,460,332 | 0.96 (0.91-1.00) | 0.97 (0.88-1.06) | 0.95 (0.90-1.00) | 0.05 | 0.48 | 0.77-1.21 |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Gastric CA inc, women | C16 | 5 | 1,600 / 1,474,886 | 1.00 (0.92-1.09) | 1.04 (0.91-1.21) | 0.95 (0.86-1.05) | 1.00 | 0.55 | 0.71-1.55 |
| Larsson 2007 | BMI per 5kg/m$^2$ increase | Colon CA inc | C18 | 44 | 82,766 / 9,434,650 | 1.13 (1.11-1.14) | 1.22 (1.17-1.28) | 1.03 (1.01-1.05) | <1E-100 | 3.9E-16 | 0.95-1.57 |
| Moghaddam 2007 | BMI 30+ vs. < 25 | Colon CA inc | C18 | 28 | 37,136 / 3,946,598 | 1.22 (1.18-1.26) | 1.44 (1.28-1.62) | 1.07 (1.02-1.12) | 5.9E-28 | 1.8E-9 | 0.91-2.28 |
| Larsson 2007 | WC per 10 cm increase | Colon CA inc | C18 | 8 | 3,371 / 869,185 | 1.21 (1.15-1.28) | 1.25 (1.15-1.35) | 1.14 (1.05-1.25) | 5.64E-14 | 2.98E-08 | 1.01-1.54 |
| Keum 2015 | WG per 5kg increase | Colon CA inc | C18 | 7 | 2.909 / 298,174 | 1.07 (1.03-1.10) | 1.07 (1.03-1.10) | 1.10 (1.03-1.17) | 8.3E-5 | 8.3E-5 | 1.02-1.11 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Larsson 2007 | WHR per 0.1 unit increase | Colon CA inc | C18 | 8 | 3,132 / 941,955 | 1.26 (1.18-1.35) | 1.29 (1.17-1.43) | 1.24 (1.10-1.39) | 3.22E-12 | 1.11E-06 | 0.97-1.72 |
| Larsson 2007 | BMI per 5kg/$m^2$ increase | Colon CA inc, men | C18 | 24 | 42,821 / 5,213,139 | 1.29 (1.26-1.32) | 1.30 (1.25-1.35) | 1.27 (1.23-1.31) | <1E-100 | <1E-100 | 1.19-1.42 |
| Moghaddam 2007 | BMI 30+ vs. < 25 | Colon CA inc, men | C18 | 14 | 17,387 / 2,192,572 | 1.53 (1.44-1.63) | 1.53 (1.44-1.63) | 1.49 (1.39-1.60) | <1E-100 | <1E-100 | 1.43-1.64 |
| Larsson 2007 | WC per 10 cm increase | Colon CA inc, men | C18 | 5 | 1,869 / 469,320 | 1.31 (1.21-1.42) | 1.33 (1.18-1.50) | 1.15 (1.01-1.31) | 6.68E-11 | 1.63E-06 | 0.95-1.86 |
| Keum 2015 | WG per 5kg increase | Colon CA inc, men | C18 | 4 | 1,718 / 142,085 | 1.09 (1.05-1.14) | 1.09 (1.05-1.14) | 1.10 (1.03-1.17) | 4.1E-5 | 4.1E-5 | 1.00-1.19 |
| Larsson 2007 | WHR per 0.1 unit increase | Colon CA inc, men | C18 | 4 | 1,563 / 461,754 | 1.38 (1.23-1.54) | 1.43 (1.19-1.71) | 1.24 (1.05-1.46) | 1.08E-8 | 1.0E-5 | 0.71-2.87 |
| Larsson 2007 | BMI per 5kgm2 increase | Colon CA inc, women | C18 | 20 | 39,945 / 4,221,511 | 1.05 (1.03-1.07) | 1.12 (1.06-1.17) | 1.03 (1.01-1.05) | 2.3E-9 | 6.9E-6 | 0.96-1.30 |
| Moghaddam 2007 | BMI 30+ vs. < 25 | Colon CA inc, women | C18 | 14 | 19,749 / 1,754,026 | 1.09 (1.05-1.14) | 1.22 (1.07-1.40) | 1.07 (1.02-1.12) | 4.3E-5 | 3.4E-3 | 0.85-1.75 |
| Larsson 2007 | WC per 10 cm increase | Colon CA inc, women | C18 | 3 | 1,502 / 399,865 | 1.16 (1.08-1.23) | 1.16 (1.08-1.23) | 1.14 (1.05-1.25) | 1.1E-5 | 1.1E-5 | 0.76-1.76 |
| Keum 2015 | WG per 5kg increase | Colon CA inc, women | C18 | 3 | 1,191 / 156,089 | 1.03 (0.98-1.09) | 1.03 (0.98-1.09) | 1.00 (0.93-1.07) | 0.24 | 0.24 | 0.74-1.44 |
| Larsson 2007 | WHR per 0.1 unit increase | Colon CA inc, women | C18 | 4 | 1,569 / 480,201 | 1.20 (1.11-1.30) | 1.20 (1.08-1.33) | 1.24 (1.10-1.39) | 9.2E-6 | 5.0E-5 | 0.86-1.69 |
| Robsham 2013 | BMI, Obese vs. normal** | Colon CA inc; distal colon | C18 | 20 | 4,359 / 1,320,435 | 1.52 (1.36-1.70) | 1.59 (1.34-1.89) | 0.96 (0.75-1.23) | 1.2E-13 | 1.2E-7 | 0.94-2.69 |
| Robsham 2013 | BMI, Obese vs. normal** | Colon CA inc; distal colon, men | C18 | 7 | 1,685 / 643,569 | 1.67 (1.39-1.99) | 1.70 (1.36-2.11) | 1.77 (1.33-2.35) | 1.9E-8 | 2.3E-6 | 1.11-2.60 |
| Robsham 2013 | BMI, Obese vs. normal** | Colon CA inc; distal colon, women | C18 | 12 | 2,565 / 669,300 | 1.44 (1.25-1.66) | 1.53 (1.19-1.97) | 0.96 (0.75-1.23) | 5.8E-7 | 8.3E-4 | 0.74-3.19 |
| Robsham 2013 | BMI, Obese vs. normal** | Colon CA inc; proximal colon | C18 | 20 | 4,680 / 1,320,435 | 1.24 (1.10-1.39) | 1.33 (1.12-1.57) | 1.02 (0.84-1.24) | 2.7E-4 | 9.6E-4 | 0.84-2.09 |
| Robsham 2013 | BMI, Obese vs. normal** | Colon CA inc; proximal colon, men | C18 | 7 | 1,720 / 643.569 | 1.44 (1.18-1.77) | 1.44 (1.18-1.77) | 1.18 (0.86-1.62) | 4.4E-4 | 4.4E-4 | 1.10-1.89 |
| Robsham 2013 | BMI, Obese vs. normal** | Colon CA inc; proximal colon, women | C18 | 12 | 2,772 / 669,300 | 1.12 (0.97-1.29) | 1.18 (0.96-1.44) | 1.02 (0.84-1.24) | 0.11 | 0.11 | 0.76-1.83 |
| Yang 2015 | BS; surgery vs. no surgery | Colorectal CA inc | C18-C20 | 5 | 1,013 / 182,298 | 0.77 (0.62-0.96) | 0.77 (0.62-0.96) | 0.79 (0.57-1.10) | 0.02 | 0.02 | 0.54-1.10 |
| Ma 2013 | BMI, Obese vs. normal** | Colorectal CA inc | C18-C20 | 72 | 166,030 / 15,623,976 | 1.19 (1.17-1.22) | 1.33 (1.25-1.42) | 1.06 (1.02-1.10) | <1E-100 | 1.7E-19 | 0.94-1.50 |
| Ma 2013 | WC, highest vs. lowest category | Colorectal CA inc | C18-C20 | 19 | 12,566 / 2,041,675 | 1.44 (1.32-1.57) | 1.45 (1.33-1.59) | 1.32 (1.11-1.56) | 1.8E-17 | 9.0E-16 | 1.24-1.70 |
| Schlesinger 2015 | WG per 1kg increase / year | Colorectal CA inc | C18-C20 | 17 | 27,638 / 1,974,918 | 1.22 (1.15-1.29) | 1.20 (1.10-1.31) | 1.31 (1.18-1.45) | 1.1E-10 | 3.9E-5 | 0.95-1.52 |
| Schlesinger 2015 | WG: high gain vs. stable weight | Colorectal CA inc | C18-C20 | 19 | 28,530 / 2,110,272 | 1.18 (1.12-1.25) | 1.18 (1.12-1.25) | 1.26 (1.15-1.38) | 3.7E-9 | 3.7E-9 | 1.11-1.26 |
| Moghaddam 2007 | BMI 30+ vs. < 25 | Rectal CA inc | C20 | 21 | 39,384 / 6,768,071 | 1.14 (1.09-1.20) | 1.21 (1.10-1.34) | 1.04 (0.97-1.11) | 1.4E-07 | 1.8E-4 | 0.97-1.52 |
| Harriss 2009 | BMI per 5kg/$m^2$ increase | Rectal CA inc | C20 | 31 | 43,196 / 7,495,868 | 1.05 (1.03-1.07) | 1.07 (1.03-1.10) | 1.01 (0.98-1.04) | 3.2E-8 | 5.9E-5 | 0.98-1.16 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Harriss 2009 | BMI per 5kg/m$^2$ increase | Rectal CA inc, men | C20 | 17 | 23,167 / 4,293,489 | 1.09 (1.06-1.12) | 1.09 (1.06-1.13) | 1.08 (1.05-1.12) | 1.4E-10 | 1.1E-7 | 1.04-1.15 |
| Moghaddam 2007 | BMI: > 30 vs. < 25 | Rectal CA inc, men | C20 | 11 | 12,109 / 2,178,376 | 1.28 (1.19-1.39) | 1.28 (1.19-1.39) | 1.27 (1.16-1.38) | 4.8E-10 | 4.8E-10 | 1.17-1.40 |
| Harriss 2009 | BMI per 5kg/m$^2$ increase | Rectal CA inc, women | C20 | 14 | 20,029 / 3,202,379 | 1.02 (0.99-1.05) | 1.02 (0.99-1.05) | 1.01 (0.98-1.04) | 0.20 | 0.20 | 0.99-1.05 |
| Moghaddam 2007 | BMI 30+ vs. < 25 | Rectal CA inc, women | C20 | 10 | 8,648 / 1,698,601 | 1.06 (0.99-1.13) | 1.09 (0.98-1.22) | 1.04 (0.97-1.11) | 0.08 | 0.12 | 0.90-1.32 |
| Chen 2012 | BMI 25-29.99 vs. < 25 | Liver CA inc | C22 | 14 | 16,382 / 3,976,906 | 1.10 (1.05-1.15) | 1.18 (1.06-1.31) | 1.07 (1.00-1.15) | 5.0E-5 | 1.7E-3 | 0.88-1.58 |
| Chen 2012 | BMI 30+ vs. < 25 | Liver CA inc | C22 | 19 | 22,378 / 8,574,903 | 1.64 (1.54-1.75) | 1.83 (1.59-2.11) | 1.33 (1.19-1.48) | <1E-100 | 6.5E-17 | 1.10-3.04 |
| Wang 2012 | BMI per 5kg/m$^2$ increase | Liver CA inc | C22 | 19 | 17,281 / 4,977,849 | 1.22 (1.17-1.26) | 1.37 (1.23-1.53) | 1.12 (1.05-1.19) | 2.3E-24 | 2.4E-8 | 0.90-2.07 |
| Li 2014 | BMI 25-29.99 vs. < 25 | Cholangiocarcinoma inc | C22.1, C24 | 7 | 1,753 / 2,332,590 | 1.29 (1.11-1.51) | 1.29 (1.11-1.51) | 1.40 (1.11-1.72) | 1.3E-3 | 1.3E-3 | 1.05-1.58 |
| Li 2014 | BMI 30+ vs. < 25 | Cholangiocarcinoma inc | C22.1, C24 | 6 | 1,478 / 10,201,493 | 1.73 (1.32-2.28) | 1.77 (1.32-2.38) | 1.36 (0.92-2.02) | 9.4E-5 | 1.5E-4 | 1.07-2.93 |
| Larsson 2007 | BMI 30+ vs. < 25 | Gallbladder CA inc | C23 | 13 | 5,516 / 12,517,024 | 1.72 (1.55-1.92) | 1.69 (1.48-1.92) | 1.88 (1.60-2.21) | 1.2E-23 | 3.6E-15 | 1.32-2.15 |
| Park 2014 | BMI per 5kg/m$^2$ increase | Biliary tract system CA inc | C23-C24 | 10 | 6,961 / 6,008,270 | 1.64 (1.46-1.83) | 1.56 (1.34-1.81) | 1.88 (1.60-2.21) | 1.3E-17 | 1.3E-8 | 1.13-2.15 |
| Yang 2015 | BS; surgery vs. no surgery | Pancreatic CA inc | C25 | 2 | 37 / 22,819 | 1.17 (0.50-2.77) | 0.86 (0.17-4.35) | 1.61 (0.62-4.18) | 0.72 | 0.86 | NA |
| Alsamarrai 2014 | BMI, 25+ vs. <25 | Pancreatic CA inc | C25 | 9 | 8,133 / 1,986,283 | 1.37 (1.31-1.43) | 1.30 (0.90-1.86) | 1.24 (1.18-1.30) | <1E-100 | 0.16 | 0.35-4.87 |
| Aune 2012 | BMI per 5kg/m$^2$ increase | Pancreatic CA inc | C25 | 22 | 8,987 / 4,978,230 | 1.10 (1.07-1.13) | 1.10 (1.06-1.14) | 1.09 (1.03-1.16) | 4.5E-11 | 2.2E-7 | 1.01-1.21 |
| Aune 2012 | WC per 10cm increase | Pancreatic CA inc | C25 | 5 | 1,365 / 1,154,996 | 1.11 (1.05-1.18) | 1.11 (1.05-1.18) | 1.08 (0.98-1.18) | 2.0E-4 | 2.0E-4 | 1.02-1.22 |
| Keum 2015 | WG per 5kg increase | Pancreatic CA inc | C25 | 2 | 324 / 162,040 | 1.02 (0.91-1.16) | 1.05 (0.87-1.26) | 0.97 (0.84-1.12) | 0.69 | 0.63 | NA |
| Keum 2015 | WG: highest vs. lowest category | Pancreatic CA inc | C25 | 4 | 744 / 327,446 | 1.04 (0.85-1.26) | 1.04 (0.85-1.26) | 1.07 (0.77-1.48) | 0.71 | 0.71 | 0.68-1.59 |
| Aune 2012 | WHR per 0.1 units | Pancreatic CA inc | C25 | 4 | 1,438 / 1,109,945 | 1.20 (1.10-1.30) | 1.20 (1.09-1.31) | 1.32 (1.12-1.56) | 5.0E-5 | 9.5E-5 | 0.96-1.50 |
| Aune 2012 | BMI per 5kg/m$^2$ increase | Pancreatic CA mort | C25 | 7 | 8,921 / 2,568,390 | 1.08 (1.03-1.13) | 1.16 (0.99-1.36) | 1.06 (1.01-1.11) | 0.001 | 0.07 | 0.76-1.77 |
| Yang 2013 | BMI, 25+ vs. <25 | Lung CA inc | C34 | 20 | 13,116 / 7,854,110 | 0.86 (0.84-0.89) | 0.79 (0.73-0.85) | 0.97 (0.93-1.01) | 1.4E-28 | 9.9E-10 | 0.59-1.04 |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Lung CA inc | C34 | 15 | 12,591 / 2,833,306 | 0.82 (0.80-0.85) | 0.77 (0.72-0.83) | 0.86 (0.82-0.90) | <1E-100 | 8.0E-13 | 0.61-0.97 |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Lung CA inc, men | C34 | 10 | 7,569 / 1,387,620 | 0.82 (0.79-0.85) | 0.79 (0.73-0.85) | 0.84 (0.79-0.88) | 3.3E-24 | 1.7E-10 | 0.65-0.95 |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Lung CA inc, women | C34 | 5 | 5,022 / 1,445,686 | 0.83 (0.80-0.87) | 0.76 (0.61-0.94) | 0.86 (0.82-0.90) | 2.2E-17 | 0.01 | 0.36-1.63 |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Lung CA inc, smokers | C34 | 4 | 6,185 / 475,940 | 0.82 (0.79-0.86) | 0.77 (0.69-0.86) | 0.82 (0.77-0.87) | 4.0E-20 | 7.8E-6 | 0.48-1.24 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Lung CA inc, non-smokers | C34 | 4 | 500 / 1,157,223 | 0.90 (0.79-1.02) | 0.89 (0.72-1.09) | 0.91 (0.77-1.07) | 0.09 | 0.26 | 0.40-1.97 |
| Yang 2015 | BS; surgery vs. no surgery | Melanoma inc | C43 | 2 | 75 / 22,819 | 0.75 (0.43-1.31) | 0.75 (0.43-1.31) | 0.84 (0.46-1.53) | 0.32 | 0.32 | NA |
| Sergentanis 2013 | BMI 25-29.99 vs. < 25 | Melanoma inc | C43 | 13 | 6,061 / 5,304,374 | 1.07 (1.00-1.14) | 1.08 (0.94-1.24) | 1.05 (0.95-1.16) | 0.04 | 0.30 | 0.73-1.59 |
| Sergentanis 2013 | BMI 30+ vs. < 25 | Melanoma inc | C43 | 13 | 6,361 / 3,231,952 | 1.09 (1.01-1.18) | 1.07 (0.89-1.30) | 0.94 (0.83-1.07) | 0.02 | 0.46 | 0.61-1.88 |
| Sergentanis 2013 | BMI, 25+ vs. <25, ASE | Melanoma inc | C43 | 7 | 1,629 / 940,536 | 0.85 (0.69-1.05) | 0.86 (0.67-1.10) | 0.99 (0.65-1.50) | 0.13 | 0.22 | 0.51-1.46 |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Melanoma Inc | C43 | 11 | 13,795 / 5,694,985 | 1.02 (0.99-1.05) | 1.07 (0.97-1.17) | 0.97 (0.91-1.00) | 0.22 | 0.17 | 0.81-1.41 |
| Sergentanis 2013 | BMI 25-29.99 vs. < 25 | Melanoma inc, men | C43 | 6 | 1,736 / 2,208,423 | 1.29 (1.15-1.45) | 1.41 (1.09-1.83) | 1.27 (1.12-1.45) | 2.1E-5 | 9.6E-3 | 0.75-2.64 |
| Sergentanis 2013 | BMI 30+ vs. < 25 | Melanoma inc, men | C43 | 7 | 38,39 / 1,399,090 | 1.30 (1.17-1.45) | 1.31 (1.10-1.57) | 1.29 (1.14-1.48) | 1.8E-6 | 3.1E-3 | 0.89-1.93 |
| Sergentanis 2013 | BMI, 25+ vs. <25, ASE | Melanoma inc, men | C43 | 2 | 414 / 137,176 | 1.74 (0.85-3.56) | 1.74 (0.85-3.56) | 2.10 (0.79-5.56) | 0.13 | 0.13 | NA |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Melanoma inc, men | C43 | 6 | 6,647 / 2808095 | 1.17 (1.11-1.24) | 1.17 (1.05-1.30) | 1.16 (1.08-1.26) | 2.9E-08 | 0.005 | 0.89-1.52 |
| Sergentanis 2013 | BMI 25-29.99 vs. < 25 | Melanoma inc, women | C43 | 7 | 4,325 / 3,095,951 | 0.99 (0.92-1.07) | 0.97 (0.87-1.08) | 1.05 (0.95-1.16) | 0.76 | 0.54 | 0.77-1.21 |
| Sergentanis 2013 | BMI 30+ vs. < 25 | Melanoma inc, women | C43 | 6 | 2,522 / 1,832,862 | 0.91 (0.81-1.02) | 0.87 (0.70-1.08) | 0.94 (0.83-1.07) | 0.09 | 0.21 | 0.50-1.50 |
| Sergentanis 2013 | BMI, 25+ vs. <25, ASE | Melanoma inc, women | C43 | 5 | 1,215 / 803,360 | 0.80 (0.65-0.99) | 0.80 (0.65-0.99) | 0.99 (0.65-1.50) | 0.04 | 0.04 | 0.56-1.13 |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Melanoma inc, women | C43 | 5 | 7,148 / 2,886,890 | 0.96 (0.93-1.00) | 0.96 (0.93-1.00) | 0.97 (0.91-1.00) | 0.03 | 0.03 | 0.90-1.02 |
| Yang 2015 | BS; surgery vs. no surgery | Breast CA inc | C50 | 2 | 554 / 22,819 | 0.66 (0.51-0.87) | 0.42 (0.07-2.31) | 0.98 (0.72-1.32) | 0.003 | 0.32 | NA |
| Suzuki 2009 | Obesity±±, high vs. low** | Breast CA inc, ER- PR-, PoMP | C50 | 4 | 3,220 / 142,655 | 0.91 (0.66-1.26) | 0.89 (0.53-1.51) | 0.75 (0.43-1.31) | 0.56 | 0.68 | 0.11-7.57 |
| Suzuki 2009 | Obesity±±, high vs. low** | Breast CA inc, ER- PR+, PoMP | C50 | 2 | 2,127 / 88,952 | 2.03 (1.05-3.94) | 2.03 (1.04-3.95) | 1.46 (0.58-3.68) | 0.04 | 0.04 | NA |
| Suzuki 2009 | Obesity±±, high vs. low** | Breast CA inc, ER+ PR-, PoMP | C50 | 2 | 2,127 / 88,952 | 0.65 (0.42-0.95) | 0.64 (0.42-0.97) | 0.76 (0.49-1.17) | 0.02 | 0.04 | NA |
| Suzuki 2009 | Obesity±±, high vs. low** | Breast CA inc, ER+ PR+, PoMP | C50 | 4 | 3,220 / 142,655 | 1.68 (1.47-1.91) | 1.74 (1.34-2.25) | 1.38 (1.12-1.71) | 1.3E-14 | 3.1E-5 | 0.60-5.06 |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Breast CA inc, PoMP | C50 | 29 | 27,700 / 2,318,992 | 1.14 (1.12-1.16) | 1.13 (1.09-1.17) | 1.18 (1.15-1.22) | <1E-100 | 4.1E-10 | 0.97-1.31 |
| Cheraghi 2012 | BMI 25-29.99 vs. < 25 | Breast CA inc, PoMP | C50 | 8 | 13,878 / 1,008,448 | 1.11 (1.07-1.15) | 1.12 (1.06-1.18) | 1.06 (0.99-1.13) | 8.9E-10 | 5.6E-5 | 0.96-1.30 |
| Cheraghi 2012 | BMI 30+ vs. < 25 | Breast CA inc, PoMP | C50 | 8 | 11,882 / 873,142 | 1.14 (1.10-1.19) | 1.16 (1.08-1.25) | 1.19 (1.10-1.27) | 6.1E-12 | 8.1E-5 | 0.93-1.44 |
| Harvie 2003 | WC: lowest vs. highest category | Breast CA inc, PoMP | C50 | 4 | 948 / 38,402 | 0.69 (0.60-0.79) | 0.75 (0.55-1.04) | 0.59 (0.49-0.70) | 6.3E-8 | 0.08 | 0.20-2.84 |
| Keum 2015 | WG per 5kg increase | Breast CA inc, PoMP, HRT - | C50 | 7 | 10,283 / 342,249 | 1.11 (1.09-1.13) | 1.11 (1.09-1.13) | 1.14 (1.11-1.18) | 1.5E-31 | 5.7E-23 | 1.07-1.15 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Keum 2015 | WG per 5kg increase | Breast CA inc, PoMP, HRT + | C50 | 4 | 4,720 / 100,039 | 1.01 (0.99-1.02) | 1.01 (0.99-1.02) | 1.01 (0.98-1.03) | 0.52 | 0.52 | 0.97-1.05 |
| Keum 2015 | WG: highest vs. lowest category | Breast CA inc, PoMP HRT - | C50 | 7 | 10,283 / 342,249 | 1.75 (1.53-2.00) | 1.75 (1.53-2.00) | 1.98 (1.55-2.53) | 7.8E-17 | 7.8E-17 | 1.47-2.08 |
| Connolly 2002 | WHR: highest vs lowest category | Breast CA inc, PoMP | C50 | 4 | 2,716 / 89,369 | 1.22 (0.99-1.50) | 1.24 (0.92-1.67) | 1.22 (0.96-1.55) | 0.06 | 0.16 | 0.48-3.18 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Breast CA inc, PrMP | C50 | 20 | 20,820 / 2,200,787 | 0.91 (0.89-0.94) | 0.92 (0.88-0.96) | 0.91 (0.86-0.97) | 2.8E-9 | 4.6E-4 | 0.81-1.05 |
| Cheraghi 2012 | BMI 25-29.99 vs. < 25 | Breast CA inc, PrMP | C50 | 4 | 1,316 / 312,368 | 1.03 (0.91-1.17) | 1.01 (0.77-1.31) | 0.94 (0.80-1.11) | 0.60 | 0.96 | 0.33-3.08 |
| Cheraghi 2012 | BMI 30+ vs. < 25 | Breast CA inc, PrMP | C50 | 4 | 1,146 / 278,307 | 0.91 (0.78-1.07) | 0.91 (0.70-1.18) | 0.90 (0.75-1.08) | 0.26 | 0.48 | 0.37-2.25 |
| Harvie 2003 | WC: lowest vs. highest category | Breast CA inc, PrMP | C50 | 2 | 168 / 7,903 | 0.77 (0.56-1.05) | 0.78 (0.43-1.43) | 0.58 (0.38-0.88) | 0.09 | 0.42 | NA |
| Keum 2015 | WG per 5kg increase | Breast CA inc, PrMP | C50 | 3 | 3,872 / 167,510 | 0.98 (0.95-1.01) | 0.99 (0.95-1.03) | 0.96 (0.92-1.00) | 0.28 | 0.51 | 0.67-1.46 |
| Keum 2015 | WG: highest vs. lowest category | Breast CA inc, PrMP | C50 | 4 | 4,756 / 171,927 | 1.00 (0.84-1.20) | 0.99 (0.81-1.21) | 1.17 (0.90-1.52) | 0.97 | 0.94 | 0.56-1.75 |
| Amadou 2013 | WHR per 0.1 unit increase | Breast CA inc, PrMP | C50 | 3 | 1,245 / 136,148 | 1.02 (0.97-1.07) | 1.02 (0.97-1.07) | 1.03 (0.97-1.10) | 0.48 | 0.48 | 0.74-1.39 |
| Connolly 2002 | WHR: highest vs lowest category | Breast CA inc, PrMP | C50 | 3 | 453 / 56,455 | 1.29 (0.96-1.75) | 1.32 (0.91-1.92 | 0.96 (0.60-1.54) | 0.09 | 0.15 | 0.04-41.43 |
| Poorolajal 2015 | BMI 25-29.99 vs. < 25 | Cervical CA inc | C53 | 2 | 1,453 / 5,318,484 | 1.10 (1.03-1.17) | 1.10 (1.03-1.17) | 1.10 (1.03-1.17) | 4.3E-3 | 4.3E-3 | NA |
| Poorolajal 2015 | BMI 30+ vs. < 25 | Cervical CA inc | C53 | 2 | 1,453 / 5,318,484 | 1.20 (1.05-1.36) | 1.09 (0.70-1.68) | 1.21 (1.06-1.37) | 5.8E-3 | 0.71 | NA |
| Upala 2015 | BS; surgery vs. no surgery | Endometrial CA inc | C54.1 | 3 | 12,288 / 958,988 | 0.46 (0.41-0.52) | 0.39 (0.19-0.79) | 0.48 (0.43-0.55) | 1.45E-36 | 0.009 | 0.0-1314.2 |
| Zhang 2014 | BMI 25-29.99 vs. < 25 | Endometrial CA inc | C54.1 | 7 | 4,548 / 1,489,424 | 1.70 (1.59-1.81) | 1.60 (1.10-2.33) | 1.79 (1.65-1.95) | <1E-100 | 0.01 | 0.42-6.09 |
| Zhang 2014 | BMI 30+ vs. < 25 | Endometrial CA inc | C54.1 | 6 | 4,327 / 1,485,506 | 2.89 (2.69-3.11) | 3.10 (2.63-3.65) | 2.73 (2.48-2.99) | <1E-100 | <1E-100 | 1.92-5.00 |
| Aune 2015 | BMI iya per 5kg/$m^2$ increase | Endometrial CA inc | C54.1 | 9 | 4,345 / 631,915 | 1.41 (1.33-1.49) | 1.45 (1.28-1.64) | 1.23 (1.11-1.35) | 1.0E-33 | 1.9E-9 | 0.98-2.15 |
| Aune 2015 | BMI per 5kg/$m^2$ increase | Endometrial CA inc | C54.1 | 28 | 22,320 / 6,445,255 | 1.57 (1.55-1.60) | 1.54 (1.47-1.61) | 1.65 (1.60-1.71) | <1E-100 | <1E-100 | 1.26-1.89 |
| Aune 2015 | HC per 10cm increase | Endometrial CA inc | C54.1 | 2 | 831 / 255,650 | 1.29 (1.19-1.41) | 1.29 (1.19-1.41) | 1.32 (1.20-1.45) | 2.9E-09 | 2.9E-09 | NA |
| Aune 2015 | WC per 10 cm increase | Endometrial CA inc | C54.1 | 4 | 1,524 / 315,770 | 1.29 (1.23-1.35) | 1.27 (1.17-1.39) | 1.28 (1.19-1.37) | 1.8E-27 | 7.3E-08 | 0.88-1.85 |
| Aune 2015 | WG per 5kg increase | Endometrial CA inc | C54.1 | 7 | 2,806 / 460,901 | 1.16 (1.13-1.19) | 1.16 (1.12-1.20) | 1.17 (1.12-1.22) | 8.8E-37 | 3.7E-18 | 1.06-1.27 |
| Aune 2015 | Weight per 5kg increase | Endometrial CA inc | C54.1 | 7 | 1,778 / 342,382 | 1.15 (1.13-1.18) | 1.17 (1.13-1.22) | 1.11 (1.08-1.15) | <1E-100 | 7.7E-15 | 1.04-1.31 |
| Aune 2015 | WHR per 0.1 unit increase | Endometrial CA inc | C54.1 | 5 | 2,447 / 394,340 | 1.21 (1.13-1.29) | 1.21 (1.13-1.29) | 1.33 (1.18-1.51) | 1.0E-08 | 1.0E-08 | 1.09-1.34 |
| Crosbie 2010 | BMI per 5kg/$m^2$ increase | Endometrial CA inc: PoMP | C54.1 | 6 | 10,075 / 2,558,935 | 1.59 (1.54-1.65) | 1.60 (1.40-1.83) | 1.51 (1.45-1.58) | <1E-100 | 1.4E-11 | 1.01-2.53 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Crosbie 2010 | BMI per 5kg/m$^2$ increase | Endometrial CA inc: PoMP HRT + | C54.1 | 6 | 791 / 679,271 | 1.18 (1.07-1.31) | 1.18 (1.07-1.31) | 1.25 (1.05-1.47) | 1.7E-3 | 1.7E-3 | 1.02-1.37 |
| Crosbie 2010 | BMI per 5kg/m$^2$ increase | Endometrial CA inc: PoMP HRT - | C54.1 | 3 | 699 / 360,326 | 1.84 (1.68-2.02) | 1.90 (1.56-2.30) | 1.61 (1.41-1.85) | <1E-100 | 9.2E-11 | 0.19-18.56 |
| Keum 2015 | WG per 5kg increase | Endometrial CA inc: PoMP, HRT + | C54.1 | 2 | 334 / 35,333 | 1.09 (1.02-1.17) | 1.09 (1.02-1.17) | 1.09 (1.00-1.18) | 0.01 | 0.01 | NA |
| Keum 2015 | WG per 5kg increase | Endometrial CA inc: PoMP, HRT - | C54.1 | 2 | 285 / 33,340 | 1.38 (1.28-1.49) | 1.38 (1.28-1.49) | 1.36 (1.25-1.46) | 3.6E-17 | 3.6E-17 | NA |
| Crosbie 2010 | BMI per 5kg/m$^2$ increase | Endometrial CA inc: PrMP | C54.1 | 6 | 5,981 / 2,558,935 | 1.52 (1.48-1.57) | 1.49 (1.39-1.61) | 1.53 (1.48-1.58) | <1E-100 | 3.1E-27 | 1.27-1.76 |
| Crosbie 2010 | BMI per 5kg/m$^2$ increase | Endometrial CA inc: Type I | C54.1 | 3 | 7,125 / 1,102,927 | 1.60 (1.55-1.64) | 1.75 (1.51-2.03) | 1.58 (1.53-1.62) | <1E-100 | 1.8E-13 | 0.30-10.24 |
| Crosbie 2010 | BMI per 5kg/m$^2$ increase | Endometrial CA inc: Type II | C54.1 | 3 | 1,059 / 1,102,927 | 1.44 (1.35-1.54) | 1.59 (1.29-1.78) | 1.35 (1.25-1.46) | 2.2E-29 | 5.7E-7 | 0.24-9.67 |
| Aune 2015 | BMI per 5kg/m$^2$ increase | Endometrial CA mort | C54.1 | 3 | 962 / 1,781,648 | 1.45 (1.34-1.59) | 1.46 (1.29-1.65) | 1.42 (1.33-1.63) | 1.3E-17 | 1.7E-09 | 0.48-4.48 |
| Aune 2015 | BMI iya per 5kg/m$^2$ increase | Ovarian CA inc | C56 | 6 | 9,452 / 11,085,425 | 1.12 (1.05-1.19) | 1.12 (1.05-1.19) | 1.16 (1.04-1.29) | 3.8E-4 | 3.8E-4 | 1.03-1.23 |
| Aune 2015 | BMI per 5kg/m$^2$ increase | Ovarian CA inc | C56 | 24 | 17,734 / 16,343,135 | 1.06 (1.03-1.08) | 1.08 (1.04-1.12) | 0.97 (0.93-1.01) | 2.1E-7 | 8.6E-5 | 0.96-1.21 |
| Aune 2015 | HC per 10cm | Ovarian CA inc | C56 | 4 | 1,625 / 479,844 | 1.08 (1.00-1.16) | 1.04 (0.82-1.31) | 1.12 (1.03-1.22) | 0.06 | 0.78 | 0.39-2.78 |
| Aune 2015 | WC per 10 cm increase | Ovarian CA inc | C56 | 6 | 1,879 / 530,246 | 1.06 (1.00-1.12) | 1.06 (1.00-1.12) | 1.04 (0.96-1.13) | 0.05 | 0.05 | 0.98-1.15 |
| Aune 2015 | WG per 5kg increase | Ovarian CA inc | C56 | 6 | 1,443 / 428,458 | 1.01 (0.98-1.05) | 1.02 (0.96-1.09) | 1.02 (0.97-1.07) | 0.43 | 0.50 | 0.84-1.25 |
| Aune 2015 | Weight per 5kg increase | Ovarian CA inc | C56 | 4 | 1,281 / 405,655 | 1.03 (1.01-1.05) | 1.03 (1.01-1.05) | 1.02 (1.00-1.05) | 8.0E-4 | 0.001 | 0.98-1.08 |
| Aune 2015 | WHR per 0.1 unit increase | Ovarian CA inc | C56 | 5 | 1,329 / 417,558 | 1.00 (0.93-1.07) | 1.00 (0.93-1.07) | 0.96 (0.88-1.05) | 0.91 | 0.92 | 0.89-1.12 |
| Keum 2015 | WG per 5kg increase | Ovarian CA inc: PoMP, HRT- | C54.1 | 2 | 217 / 23,984 | 1.13 (1.03-1.24) | 1.13 (1.03-1.24) | 1.16 (1.03-1.31) | 8.5E-3 | 8.5E-3 | NA |
| Poorolajal 2014 | BMI 25-29.99 vs. < 25 | Ovarian CA inc | C56 | 13 | 8,713 / 25,513,140 pyrs | 1.15 (1.10-1.20) | 1.08 (0.97-1.19) | 1.19 (1.13-1.25) | 2.9E-10 | 0.17 | 0.81-1.42 |
| Poorolajal 2014 | BMI 30+ vs. < 25 | Ovarian CA inc | C56 | 13 | 6,947 / 20,560,388 pyrs | 1.27 (1.19-1.34) | 1.27 (1.17-1.38) | 1.27 (1.19-1.36) | 2.8E-16 | 2.6E-8 | 1.09-1.47 |
| Poorolajal 2014 | BMI 25-29.99 vs. < 25 | Ovarian CA inc, PoMP | C56 | 5 | 1,318 / 2,210,807 pyrs | 1.02 (0.91-1.14) | 1.03 (0.87-1.21) | 0.88 (0.73-1.06) | 0.74 | 0.74 | 0.62-1.70 |
| Poorolajal 2014 | BMI 30+ vs. < 25 | Ovarian CA inc, PoMP | C56 | 5 | 1,116 / 1,858,520 pyrs | 1.21 (1.06-1.37) | 1.23 (1.03-1.47) | 1.02 (0.82-1.26) | 3.6E-3 | 0.03 | 0.72-2.09 |
| Poorolajal 2014 | BMI 25-29.99 vs. < 25 | Ovarian CA inc, PrMP | C56 | 3 | 317 / 1,940,794 pyrs | 1.21 (0.96-1.53) | 1.21 (0.96-1.53) | 1.34 (1.00-1.80) | 0.11 | 0.11 | 0.27-5.49 |
| Poorolajal 2014 | BMI 30+ vs. < 25 | Ovarian CA inc, PrMP | C56 | 3 | 284 / 1,758,718 pyrs | 1.57 (1.20-2.06) | 1.57 (1.20-2.06) | 1.56 (1.14-2.16) | 9.7E-4 | 9.7E-4 | 0.27-9.02 |
| Zhang 2015 | BMI obese vs. normal weight** | Prostate CA inc | C61 | 14 | 73,851 / 2,342,066 | 1.02 (0.99-1.05) | 1.00 (0.95-1.06) | 1.09 (1.04-1.15) | 0.23 | 0.92 | 0.85-1.18 |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Prostate CA inc | C61 | 26 | 69,740 / 3,027,773 | 1.03 (1.02-1.04) | 1.03 (0.99-1.06) | 1.06 (1.04-1.07) | 1.2E-7 | 0.10 | 0.91-1.16 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MacInnis 2006 | WC per 10 cm increase | Prostate CA inc | C61 | 4 | 1,936 / 56,699 | 1.03 (0.97-1.09) | 1.03 (0.97-1.09) | 1.06 (0.97-1.16) | 0.34 | 0.34 | 0.90-1.17 |
| Keum 2015 | WG per 5kg increase | Prostate CA inc | C61 | 4 | 6,882 / 102,109 | 0.98 (0.96-1.01) | 0.98 (0.94-1.02) | 1.01 (0.98-1.05) | 0.15 | 0.23 | 0.84-1.14 |
| Keum 2015 | WG: highest vs. lowest category | Prostate CA inc | C61 | 8 | 19,377 / 426,104 | 0.99 (0.93-1.04) | 0.98 (0.91-1.06) | 1.03 (0.94-1.12) | 0.61 | 0.59 | 0.83-1.16 |
| Discaccati 2012 | BMI per 5kg/$m^2$ increase | Prostate CA inc, advanced | C61 | 13 | 7,067 / 1,080,790 | 1.07 (1.02-1.11) | 1.09 (1.02-1.16) | 1.00 (0.94-1.08) | 0.003 | 0.01 | 0.92-1.29 |
| Discaccati 2012 | BMI per 5kg/$m^2$ increase | Prostate CA inc, localized | C61 | 12 | 19,130 / 1,033,009 | 0.95 (0.93-0.97) | 0.94 (0.91-0.97) | 0.96 (0.93-0.98) | 1.3E-06 | 4.6E-4 | 0.88-1.01 |
| Keum 2015 | WG per 5kg increase | Prostate CA inc, advanced | C61 | 4 | 1,094 / 101,692 | 1.04 (0.99-1.09) | 1.04 (0.99-1.09) | 1.06 (1.00-1.12) | 0.12 | 0.12 | 0.93-1.16 |
| Keum 2015 | WG per 5kg increase | Prostate CA inc, high screening rate | C61 | 2 | 4,894 / 67,335 | 0.95 (0.92-0.99) | 0.95 (0.92-0.99) | 0.96 (0.92-1.00) | 7.0E-3 | 7.0E-3 | NA |
| Keum 2015 | WG per 5kg increase | Prostate CA inc, localised | C61 | 4 | 5,404 / 101,742 | 0.97 (0.94-1.00) | 0.96 (0.92-1.00) | 0.99 (0.95-1.03) | 0.04 | 0.08 | 0.83-1.12 |
| Keum 2015 | WG per 5kg increase | Prostate CA inc, low screening rate | C61 | 2 | 1,898 / 34,774 | 1.01 (0.97-1.05) | 1.01 (0.97-1.05) | 1.01 (0.96-1.05) | 0.65 | 0.65 | NA |
| Zhang 2015 | BMI obese vs. normal weight** | Prostate CA mort | C61 | 10 | 14,179 / 2,339,669 | 1.24 (1.15-1.33) | 1.24 (1.15-1.33) | 1.20 (1.06-1.36) | 1.8E-08 | 1.8E-08 | 1.13-1.35 |
| Cao 2011 | BMI per 5kg/$m^2$ increase | Prostate CA mort | C61 | 6 | 6,817 / 1,263,483 | 1.10 (1.06-1.13) | 1.15 (1.06-1.25) | 1.08 (1.04-1.12) | 1.8E-08 | 8.3E-4 | 0.92-1.44 |
| Yang 2015 | BS; surgery vs. no surgery | Kidney CA inc | C64 | 2 | 30 / 22,819 | 1.13 (0.52-2.45) | 1.13 (0.52-2.45) | 1.21 (0.54-2.71) | 0.76 | 0.76 | NA |
| Wang 2014 | BMI 25-29.99 vs. < 25 | Kidney CA inc | C64 | 43 | 30,501 / 18,988,116 | 1.28 (1.24-1.33) | 1.35 (1.27-1.43) | 1.18 (1.11-1.26) | <1E-100 | 5.0E-22 | 1.09-1.66 |
| Wang 2014 | BMI 30+ vs. < 25 | Kidney CA inc | C64 | 31 | 29,979 / 15,477,631 | 1.77 (1.68-1.87) | 1.79 (1.64-1.95) | 1.85 (1.66-2.06) | <1E-100 | 3.4E-38 | 1.31-2.43 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Kidney CA inc | C64 | 19 | 17,778 / 8,198,668 | 1.27 (1.24-1.30) | 1.30 (1.23-1.36) | 1.19 (1.13-1.24) | <1E-100 | 9.8E-25 | 1.12-1.50 |
| Keum 2015 | WG: highest vs. lowest category | Kidney CA inc | C64 | 3 | 1,780 / 781,293 | 1.42 (1.13-1.78) | 1.42 (1.11-1.81) | 1.20 (0.90-1.70) | 0.002 | 0.005 | 0.23-8.71 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Kidney CA inc, men | C64 | 9 | 8,983 / 3,945,950 | 1.22 (1.17-1.27) | 1.24 (1.17-1.32) | 1.19 (1.13-1.24) | 1.4E-23 | 5.9E-12 | 1.10-1.41 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Kidney CA inc, women | C64 | 10 | 8,795 / 4,252,718 | 1.32 (1.27-1.37) | 1.33 (1.25-1.42) | 1.35 (1.28-1.42) | <1E-100 | 7.2E-18 | 1.13-1.57 |
| Sun 2015 | BMI 25-29.99 vs. < 25 | Bladder CA inc | C67 | 26 | 28,745 / 12,562,510 | 1.05 (1.02-1.09) | 1.07 (1.01-1.14) | 1.05 (1.00-1.10) | 0.001 | 0.03 | 0.90-1.27 |
| Sun 2015 | BMI 30+ vs. < 25 | Bladder CA inc | C67 | 26 | 73,491 / 26,538,464 | 1.10 (1.06-1.14) | 1.09 (1.04-1.15) | 1.13 (1.06-1.20) | 6.2E-07 | 9.0E-4 | 0.98-1.21 |
| Sun 2015 | BMI per 5kg/$m^2$ increase | Bladder CA inc | C67 | 8 | 11,560 / 6,097,258 | 1.04 (1.01-1.07) | 1.04 (1.00-1.09) | 1.03 (1.00-1.06) | 0.002 | 0.07 | 0.94-1.15 |
| Shao 2014 | BMI 25-29.99 vs. < 25 | Meningeoma inc | C70 | 4 | 799 / 1,995,708 | 1.11 (0.94-1.30) | 1.11 (0.94-1.30) | 1.01 (0.79-1.29) | 0.22 | 0.22 | 0.77-1.58 |
| Shao 2014 | BMI 30+ vs. < 25 | Meningeoma inc | C70 | 4 | 799 / 1,995,708 | 1.55 (1.28-1.86) | 1.55 (1.28-1.86) | 1.40 (1.08-1.87) | 4.4E-6 | 4.4E-6 | 1.03-2.33 |
| Ma 2015 | BMI 30+ vs. < 25 | Thyroid CA inc | C73 | 24 | 16,117 / 22,270,022 | 1.22 (1.18-1.27) | 1.29 (1.20-1.37) | 1.17 (1.11-1.23) | 8.8E-23 | 5.6E-14 | 1.10-1.50 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Thyroid CA inc | C73 | 7 | 6,716 / 5,316,380 | 1.15 (1.09-1.21) | 1.23 (1.10-1.39) | 1.12 (1.05-1.19) | 8.50E-08 | 4.3E-4 | 0.89-1.70 |
| Keum 2015 | WG: highest vs. lowest category | Thyroid CA inc | C73 | 4 | 769 / 744,703 | 1.06 (0.82-1.38) | 1.06 (0.82-1.38) | 0.88 (0.57-1.38) | 0.64 | 0.64 | 0.60-1.88 |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Thyroid CA inc, men | C73 | 4 | 3,526 / 3,157,142 | 1.18 (1.08-1.29) | 1.32 (1.04-1.69) | 1.09 (0.98-1.22) | 3.2E-4 | 0.02 | 0.46-3.84 |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Thyroid CA inc, women | C73 | 3 | 3,190 / 2,159,238 | 1.13 (1.07-1.20) | 1.14 (1.06-1.22) | 1.12 (1.05-1.19) | 5.3E-5 | 4.0E-4 | 0.67-1.93 |
| Larsson 2011 | BMI 25-29.99 vs. < 25 | Hodgkin's lymphoma inc | C81 | 7 | 2,815 / 5,749,783 | 0.96 (0.86-1.07) | 0.97 (0.85-1.12) | 0.89 (0.76-1.04) | 0.45 | 0.72 | 0.74-1.28 |
| Larsson 2011 | BMI 30+ vs. < 25 | Hodgkin's lymphoma inc | C81 | 4 | 2,716 / 4,828,366 | 1.43 (1.19-1.71) | 1.41 (1.14-1.75) | 1.66 (1.28-2.14) | 1.1E-4 | 1.9E-3 | 0.73-2.72 |
| Yang 2015 | BS; surgery vs. no surgery | NHL inc | C82-C85 | 2 | 36 / 22,819 | 0.57 (0.25-1.29) | 0.57 (0.25-1.29) | 0.59 (0.24-1.42) | 0.18 | 0.18 | NA |
| Larsson 2007 | BMI 25-29.99 vs. < 25 | NHL inc | C82-C85 | 15 | 24,421 / 7,611,421 | 1.04 (1.00-1.08) | 1.06 (0.99-1.12) | 1.03 (0.97-1.10) | 0.04 | 0.08 | 0.93-1.20 |
| Larsson 2007 | BMI 30+ vs. < 25 | NHL inc | C82-C85 | 15 | 24,421 / 7,611,421 | 1.17 (1.11-1.24) | 1.19 (1.04-1.37) | 1.09 (1.00-1.19) | 8.8E-8 | 0.01 | 0.78-1.80 |
| Larsson 2011 | BMI per 5kg/m$^2$ increase | NHL inc | C82-C85 | 23 | 29,064 / 9,056,494 | 1.07 (1.04-1.09) | 1.07 (1.04-1.10) | 1.04 (0.99-1.09) | 2.1E-7 | 1.9E-6 | 1.02-1.12 |
| Larsson 2011 | BMI per 5kg/m$^2$ increase | NHL mort | C82-C85 | 7 | 5,920 / 3,511,893 | 1.16 (1.10-1.22) | 1.14 (1.04-1.25) | 1.18 (1.09-1.29) | 1.4E-8 | 5.3E-3 | 0.90-1.45 |
| Castillo 2014 | BMI 25-29.99 vs. < 25 | Diff .large B-cell lymphoma inc | C83.3 | 10 | 2,445 / 2,348,783 | 1.13 (1.02-1.25) | 1.13 (1.02-1.25) | 1.29 (1.04-1.61) | 0.02 | 0.02 | 1.00-1.27 |
| Castillo 2014 | BMI 30+ vs. < 25 | Diff. large B-cell lymphoma inc | C83.3 | 12 | 3,093 / 2,981,742 | 1.27 (1.13-1.43) | 1.25 (1.08-1.44) | 1.64 (1.25-2.16) | 7.9E-5 | 2.6E-3 | 0.89-1.74 |
| Yang 2015 | BS; surgery vs. no surgery | Multiple myeloma inc | C90.0 | 2 | 13 / 22,819 | 0.61 (0.14-2.63) | 0.61 (0.14-2.63) | 0.72 (0.13-3.91) | 0.50 | 0.50 | NA |
| Wallin 2012 | BMI 25-29.99 vs. < 25 | Multiple myelomai nc | C90.0 | 20 | 15,990 / 8,510,803 | 1.12 (1.07-1.18) | 1.12 (1.07-1.18) | 1.14 (1.06-1.22) | 3.4E-7 | 3.4E-7 | 1.07-1.18 |
| Wallin 2012 | BMI 30+ vs. < 25 | Multiple myeloma inc | C90.0 | 19 | 15,887 / 7,729,520 | 1.24 (1.15-1.33) | 1.21 (1.08-1.35) | 1.31 (1.16-1.48) | 4.5E-9 | 1.0E-3 | 0.90-1.62 |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Multiple myeloma inc | C90.0 | 13 | 14,634 / 7,429,478 | 1.12 (1.09-1.15) | 1.12 (1.09-1.15) | 1.11 (1.07-1.15) | 2.8E-15 | 2.8E-15 | 1.08-1.15 |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Multiple myeloma inc, men | C90.0 | 7 | 7,451 / 3,821,528 | 1.12 (1.07-1.17) | 1.12 (1.06-1.18) | 1.13 (1.07-1.19) | 2.0E-06 | 1.1E-4 | 1.02-1.22 |
| Renehan 2008 | BMI per 5kg/m$^2$ increase | Multiple myeloma inc, women | C90.0 | 6 | 7,183 / 3,607,950 | 1.11 (1.08-1.15) | 1.11 (1.08-1.15) | 1.11 (1.07-1.15) | 2.8E-10 | 2.8E-10 | 1.06-1.17 |
| Wallin 2012 | BMI 25-29.99 vs. < 25 | Multiple myeloma mort | C90.0 | 8 | 3,337 / 3,714,187 | 1.15 (1.04-1.26) | 1.15 (1.04-1.26) | 1.18 (1.01-1.39) | 5.9E-3 | 5.9E-3 | 1.02-1.30 |
| Wallin 2012 | BMI 30+ vs. < 25 | Multiple myeloma mort | C90.0 | 7 | 3,239 / 3,604,489 | 1.54 (1.35-1.76) | 1.54 (1.35-1.76) | 1.46 (1.16-1.84) | 2.1E-10 | 2.1E-10 | 1.29-1.83 |
| Castillo 2012 | BMI 30+ vs. < 25 | Leukemia inc | C91-C92 | 25 | 51,914 / 21,228,740 | 1.30 (1.24-1.37) | 1.26 (1.16-1.37) | 1.42 (1.31-1.54) | 6.3E-27 | 1.6E-08 | 0.98-1.62 |
| Castillo 2012 | BMI 30+ vs. < 25 | Leukemia mort | C91-C92 | 8 | 6,527 / 4,205,316 | 1.27 (1.14-1.42) | 1.28 (1.11-1.49) | 1.37 (1.13-1.67) | 1.3E-5 | 7.5E-4 | 0.93-1.77 |
| Renehan 2008 | BMI per 5kgm2 increase | Leukemia inc | C91-C95 | 8 | 15,117 / 6,758,260 | 1.10 (1.06-1.13) | 1.12 (1.05-1.18) | 1.07 (1.02-1.12) | 3.1E-08 | 2.3E-4 | 0.96-1.30 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Leukemia inc, men | C91-C95 | 5 | 7,827 / 3,497,392 | 1.08 (1.02-1.13) | 1.08 (1.02-1.13) | 1.09 (1.02-1.17) | 0.008 | 0.008 | 0.99-1.17 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Leukemia inc, women | C91-C95 | 3 | 7,290 / 3,260,868 | 1.11 (1.06-1.16) | 1.17 (1.04-1.33) | 1.07 (1.02-1.12) | 7.4E-07 | 0.01 | 0.28-4.93 |
| Larsson 2008 | BMI 30+ vs. < 25 | Leukaemia inc, ALL | C91 | 5 | 588 / 13,337,737 | 1.65 (1.19-1.29) | 1.65 (1.16-2.35) | 1.33 (0.82-2.15) | 2.9E-3 | 5.1E-3 | 0.85-3.23 |
| Larsson 2008 | BMI 30+ vs. < 25 | Leukaemia inc, CLL | C91 | 5 | 6,547 / 13,038,983 | 1.25 (1.14-1.36) | 1.25 (1.11-1.41) | 1.30 (1.13-1.49) | 1.8E-6 | 2.3E-4 | 0.92-1.70 |
| Larsson 2008 | BMI 30+ vs. < 25 | Leukaemia inc, AML | C92 | 6 | 4,804 / 13,375,364 | 1.37 (1.24-1.51) | 1.52 (1.19-1.95) | 1.17 (1.00-1.36) | 2.1E-10 | 8.9E-4 | 0.69-3.38 |
| Larsson 2008 | BMI 30+ vs. < 25 | Leukaemia inc, CML | C92 | 5 | 2,530 / 13,337,737 | 1.26 (1.09-1.46) | 1.26 (1.09-1.46) | 1.15 (0.92-1.45) | 1.7E-3 | 1.7E-3 | 1.00-1.60 |

Abbreviations: AdCa, adenocarcinoma; ALL, chronic lymphatic leukemia; AML, chronic myeloic leukemia; ASE, adjusted for sunlight exposure; biliary tract system cancer, includes cancers of gallbladder, extrahepatic bile duct and ampulla of Vateri; BMI, Body Mass Index; BMI iya, Body Mass Index in young adulthood; BS, bariatric surgery; CA, cancer; CI, confidence interval; CLL, chronic lymphatic leukemia; CML, chronic myeloic leukemia; ER = estrogen receptor status ; HC, hip circumference; HRT, hormone replacement therapy; inc, incidence; mort, mortality; NA: Not available, due to <3 included studies; NHL, Non-Hodgkin lymphoma; NP: Not Pertinent, because the estimated is larger than the observed, and there is no evidence of excess statistical significance based on the assumption made for the plausible effect size; PoMP, postmenopausal; PR = progesterone receptor status; PrMP, premenopausal; pyrs, person-years; RR, relative risk; SqCa, squamous cell carcinoma; WC, waist circumference; WG, weight gain; WHR, waist-to-hip ratio;

* 10 out of 202 original meta-analyses included less than 2 cohort studies.
‡ Fixed effects refers to summary relative risk (95% CI) using the meta-analysis fixed-effects model.
§ Random effects refers to summary relative risk (95% CI) using the meta-analysis random-effects model.
† Relative risk and 95% confidence interval of largest study (smallest SE) in each meta-analysis.
¶ P value of summary fixed effects estimate.
|| P value of summary random effects estimate.
# Prediction intervals are reported only for meta-analyses including at least 3 studies.
** cut-offs in categories varied between included studies
±± BMI, weight gain or weight change, varies between included studies
All statistical tests were two-sided.

**Supplementary Table 2:** Evaluation of heterogeneity, small study effects and excess significance bias in the 194 meta-analyses investigating the associations between obesity and the risk of cancer development or mort (only cohort studies included).

| Author, year | Exposure | Association of obesity or weight change with | ICD-10 | Egger 's P[¶] | $I^2$ (95% CI) P[‡] | Studies | Observed | Expected[§], P-value[‖] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Fixed effects | | Random effects | | Largest study | |
| Casagrande 2014 | BS inc dens. rate after surg | Overall CA inc | C00-C97 | 0.20 | 96 (95-97) <0.01 | 9 | 6 | 4.6 | 0.51 | 0.7 | <0.01 | 5.0 | 0.74 |
| Casagrande 2014 | BS; surgery vs. no surgery | Overall CA inc | C00-C97 | 0.03 | 94 (88-96) <0.01 | 4 | 4 | 4.0 | 1.00 | 4.0 | 1.00 | 3.3 | 1.00 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Oesophageal AdCa inc | C15 | 0.19 | 0 (0-56) 0.60 | 8 | 6 | 6.0 | 1.00 | 6.0 | 1.00 | 6.5 | NP |
| Singh 2013 | Central adiposity | Oesophageal AdCa inc | C15 | NA | 0 | 2 | 1 | 1.9 | NP | 1.9 | NP | 1.9 | NP |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Oesophageal AdCa inc, men | C15 | 0.37 | 24 (0-72) 0.26 | 5 | 4 | 3.3 | 0.67 | 3.2 | 0.66 | 3.6 | 1.00 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Oesophageal AdCa inc, wom | C15 | 0.44 | 0 (0-73) 0.96 | 3 | 2 | 2.7 | NP | 2.7 | NP | 2.7 | NP |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Oesophageal SqCa inc | C15 | 0.26 | 80 (35-90) <0.01 | 5 | 5 | 4.4 | 1.00 | 4.6 | 1.00 | 3.5 | 0.33 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Oesophageal SqCa inc, men | C15 | 0.03 | 44 (0-83) 0.17 | 3 | 3 | 2.0 | 0.56 | 2.2 | 0.57 | 1.8 | 0.28 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Oesophageal SqCa inc, wom | C15 | NA | 58 | 2 | 2 | 2.0 | 1.00 | 2.0 | 1.00 | 2.0 | 1.00 |
| Turati 2013 | BMI 25-29.99 vs. < 25 | Gastrc cardia and oesophageal AdCa | C15-C16.0 | 0.50 | 0 (0-53) 0.47 | 10 | 6 | 7.9 | NP | 7.9 | NP | 6.7 | NP |
| Turati 2013 | BMI 30+ vs. < 25 | Gastrc cardia and oesophageal AdCa | C15-C16.0 | 0.29 | 34 (0-69) 0.15 | 9 | 8 | 8.6 | NP | 8.6 | NP | 8.4 | NP |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lin 2014 | BMI 25-29.99 vs. < 25 | Gastric CA inc | C16 | 0.18 | 30 (0-64) 0.15 | 12 | 2 | 0.7 | 0.16 | 0.6 | 0.12 | 1.4 | 0.64 |
| Lin 2014 | BMI 30+ vs. < 25 | Gastric CA inc | C16 | 0.99 | 7 (0-55) 0.38 | 11 | 2 | 4.0 | NP | 4.0 | NP | 8.3 | NP |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Gastric CA inc | C16 | 0.28 | 37 (0-66) 0.08 | 13 | 1 | 1.0 | 1.00 | 0.7 | 0.51 | 1.4 | NP |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Gastric CA inc, men | C16 | 0.64 | 39 (0-72) 0.12 | 8 | 1 | 0.9 | 1.00 | 0.7 | 0.51 | 1.0 | NP |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Gastric CA inc, wom | C16 | 0.44 | 41 (0-77) 0.15 | 5 | 0 | 0.3 | NP | 0.36 | NP | 0.4 | NP |
| Larsson 2007 | BMI per 5kg/$m^2$ increase | Colon CA inc | C18 | <0.01 | 84 (79-87) <0.01 | 44 | 27 | 13.4 | <0.01 | 23.9 | 0.37 | 4.4 | <0.01 |
| Larsson 2007 | WC per 10cm increase | Colon CA inc | C18 | 0.06 | 50 (0-76) 0.05 | 8 | 7 | 4.0 | 0.07 | 4.6 | 0.15 | 2.4 | <0.01 |
| Larsson 2007 | WHR per 0.1 unit increase | Colon CA inc | C18 | 0.16 | 53 (0-77) 0.04 | 8 | 6 | 4.5 | 0.48 | 4.9 | 0.71 | 4.2 | 0.29 |
| Keum 2015 | WG per 5kg increase | Colon CA inc, overall | C18 | 0.88 | 0 (0-58) 0.46 | 7 | 2 | 0.8 | 0.14 | 0.8 | 0.14 | 1.3 | 0.50 |
| Moghaddam 2007 | BMI 30+ vs. < 25 | Colon CA inc, overall | C18 | 0.01 | 76 (65-82) <0.001 | 28 | 15 | 11.9 | 0.23 | 21 | NP | 4.4 | <0.01 |
| Larsson 2007 | BMI per 5kgm2 increase | Colon CA inc, men | C18 | 0.30 | 24 (0-53) 0.15 | 24 | 18 | 16.1 | 0.52 | 16.7 | 0.67 | 15.4 | 0.39 |
| Keum 2015 | WG per 5kg increase | Colon CA inc, men | C18 | 0.56 | 0 (0-68) 0.72 | 4 | 2 | 0.7 | 0.07 | 0.7 | 0.07 | 0.8 | 0.12 |
| Moghaddam 2007 | BMI 30+ vs. < 25 | Colon CA inc, men | C18 | 0.02 | 0 (0-47) 0.66 | 14 | 9 | 11.5 | NP | 11.5 | NP | 11.1 | NP |
| Larsson 2007 | WC per 10cm increase | Colon CA inc, men | C18 | 0.51 | 45 (0-78) 0.12 | 5 | 4 | 3.3 | 0.66 | 3.5 | 1.00 | 1.5 | 0.03 |
| Larsson 2007 | WHR per 0.1 unit increase | Colon CA inc, men | C18 | 0.32 | 56 (0-83) 0.08 | 4 | 4 | 3.0 | 0.57 | 3.2 | 0.59 | 2.1 | 0.13 |
| Larsson 2007 | BMI per 5kg/$m^2$ increase | Colon CA inc, wom | C18 | <0.01 | 59 (26-74) <0.01 | 20 | 9 | 2.8 | <0.01 | 5.5 | 0.13 | 2.1 | <0.01 |
| Larsson 2007 | WC per 10cm increase | Colon CA inc, wom | C18 | 0.25 | 0 (0-73) 0.52 | 3 | 3 | 1.2 | 0.06 | 1.2 | 0.06 | 1.0 | 0.04 |
| Larsson 2007 | WHR per 0.1 unit increase | Colon CA inc, wom | C18 | 0.90 | 30 (0-77) 0.23 | 4 | 2 | 1.8 | 1.00 | 1.8 | 1.00 | 2.1 | NP |
| Keum 2015 | WG per 5kg increase | Colon CA inc, women | C18 | 0.66 | 0 (0-73) 0.45 | 3 | 0 | 0.2 | NP | 0.2 | NP | 0.2 | NP |
| Moghaddam 2007 | BMI 30+ vs. < 25 | Colon CA inc, women | C18 | 0.04 | 51 (0-72) 0.01 | 14 | 6 | 2.6 | 0.02 | 5.9 | 0.94 | 2.2 | <0.01 |
| Robsham 2013 | BMI, Obese vs. normal** | Colon CA inc; distal colon | C18 | 0.49 | 44 (0-66) 0.02 | 20 | 7 | 15.5 | NP | 16.6 | NP | 1.3 | <0.01 |
| Robsham 2013 | BMI, Obese vs. normal** | Colon CA inc; distal colon, men | C18 | 0.64 | 17 (0-65) 0.30 | 7 | 3 | 6.2 | NP | 6.3 | NP | 6.5 | NP |
| Robsham 2013 | BMI, Obese vs. normal** | Colon CA inc; distal colon, women | C18 | 0.51 | 56 (0-76) 0.009 | 12 | 4 | 8.3 | NP | 9.4 | NP | 0.7 | <0.01 |
| Robsham 2013 | BMI, Obese vs. normal** | Colon CA inc; proximal colon | C18 | 0.12 | 33 (0-60) 0.07 | 20 | 3 | 7.9 | NP | 11.0 | NP | 1.1 | 0.053 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Robsham 2013 | BMI, Obese vs. normal** | Colon CA inc; prox. colon, men | C18 | 0.44 | 0 (0-58) 0.46 | 7 | 1 | 4.9 | NP | 4.9 | NP | 2.0 | NP |
| Robsham 2013 | BMI, Obese vs. normal** | Colon CA inc; prox. colon, women | C18 | 0.41 | 25 (0-62) 0.20 | 12 | 1 | 1.9 | NP | 3.2 | NP | 0.6 | 0.64 |
| Yang 2015 | BS; surgery vs. no surgery | Colorectal CA inc | C18-C20 | 0.06 | 0 (0-64) 0.56 | 5 | 0 | 2.2 | NP | 2.2 | NP | 2.0 | NP |
| Ma 2013 | BMI, Obese vs. normal** | Colorectal CA inc | C18-C20 | 0.001 | 69 (60-75) <0.01 | 72 | 31 | 47.0 | NP | 62.4 | NP | 14.2 | <0.01 |
| Ma 2013 | WC, highest vs. lowest category | Colorectal CA inc | C18-C20 | 0.015 | 9 (0-48) 0.35 | 19 | 13 | 16.8 | NP | 16.9 | NP | 14.5 | NP |
| Schlesinger 2015 | WG per 1kg increase / year | Colorectal CA inc | C18-C20 | 0.72 | 37 (0-63) 0.07 | 17 | 4 | 12.9 | NP | 12.4 | NP | 15.3 | NP |
| Schlesinger 2015 | WG: high gain vs. stable weight | Colorectal CA inc | C18-C20 | 0.83 | 0 (0-43), 0.50 | 19 | 2 | 12.7 | NP | 12.7 | NP | 15.8 | NP |
| Moghaddam 2007 | BMI 30+ vs. < 25 | Rectal CA inc | C20 | 0.08 | 31 (0-58) 0.09 | 21 | 3 | 6.6 | NP | 9.7 | NP | 2.9 | 1.00 |
| Harriss 2009 | BMI per 5kg/$m^2$ increase | Rectal CA inc | C20 | 0.35 | 27 (0-52) 0.09 | 31 | 4 | 4.3 | NP | 5.0 | NP | 1.7 | 0.09 |
| Harriss 2009 | BMI per 5kg/$m^2$ increase | Rectal CA inc, men | C20 | 0.66 | 6 (0-48) 0.66 | 17 | 3 | 3.5 | NP | 3.6 | NP | 3.2 | NP |
| Moghaddam 2007 | BMI 30+ vs. < 25 | Rectal CA inc, men | C20 | 0.44 | 0 (0-51) 0.88 | 11 | 2 | 5.5 | NP | 5.5 | NP | 5.3 | NP |
| Harriss 2009 | BMI per 5kg/$m^2$ increase | Rectal CA inc, wom | C20 | 0.47 | 0 (0-47) 0.56 | 14 | 1 | 0.9 | 0.62 | 0.9 | 0.62 | 0.8 | 0.55 |
| Moghaddam 2007 | BMI 30+ vs. < 25 | Rectal CA inc, women | C20 | 0.13 | 7 (0-56) 0.37 | 10 | 1 | 1.3 | NP | 1.8 | NP | 1.0 | 1.00 |
| Chen 2012 | BMI 25-29.99 vs. < 25 | Liver CA inc | C22 | 0.08 | 61 (19-77) <0.01 | 14 | 4 | 3.4 | 0.76 | 5.5 | NP | 2.6 | 0.31 |
| Chen 2012 | BMI 30+ vs. < 25 | Liver CA inc | C22 | 0.03 | 68 (44-79) <0.01 | 19 | 15 | 15.2 | NP | 16.6 | NP | 10.9 | 0.07 |
| Wang 2012 | BMI per 5kg/$m^2$ increase | Liver CA inc | C22 | 0.05 | 81 (71-87) <0.01 | 19 | 10 | 7.6 | 0.35 | 11.3 | NP | 4.7 | 0.01 |
| Li 2014 | BMI 25-29.99 vs. < 25 | Cholangiocarcinoma inc | C22.1, C24 | 0.22 | 0 (0-58) 0.87 | 7 | 1 | 4.0 | NP | 4.0 | NP | 5.4 | NP |
| Li 2014 | BMI 30+ vs. < 25 | Cholangiocarcinoma inc | C22.1, C24 | 0.09 | 7 (0-64) 0.37 | 6 | 2 | 3.8 | NP | 3.8 | NP | 3.2 | NP |
| Larsson 2007 | BMI 30+ vs. < 25 | Gallbladder CA inc | C23 | 0.11 | 14 (0-56) 0.30 | 13 | 7 | 9.8 | NP | 9.6 | NP | 10.4 | NP |
| Park 2014 | BMI per 5kg/$m^2$ increase | Biliary tract system CA inc | C23-C24 | 0.24 | 25 (0-64) 0.21 | 10 | 4 | 8.5 | NP | 8.2 | NP | 9.0 | NP |
| Yang 2015 | BS; surgery vs. no surgery | Pancreatic CA inc | C25 | NA | 57 | 2 | 0 | 0.1 | NP | 0.1 | NP | 0.5 | NP |
| Alsamarrai 2014 | BMI, 25+ vs. <25 | Pancreatic CA inc | C25 | 0.88 | 97 (95-97) <0.01 | 9 | 3 | 5.7 | NP | 4.8 | NP | 4.1 | NP |
| Aune 2012 | BMI per 5kg/$m^2$ increase | Pancreatic CA inc | C25 | 0.34 | 25 (0-55) 0.14 | 22 | 4 | 3.8 | 0.78 | 4.0 | 1.00 | 3.4 | 0.77 |
| Aune 2012 | WC per 10cm | Pancreatic CA inc | C25 | 0.11 | 0 (0-64) 0.74 | 5 | 2 | 0.8 | 0.19 | 0.8 | 0.19 | 0.5 | 0.09 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Keum 2015 | WG per 5kg increase | Pancreatic CA inc | C25 | NA | 50 | 2 | 0 | 0.1 | NP | 0.1 | NP | 0.1 | NP |
| Keum 2015 | WG: highest vs. lowest category | Pancreatic CA inc | C25 | 0.42 | 0 (0-68) 0.48 | 4 | 0 | 0.2 | NP | 0.2 | NP | 0.3 | NP |
| Aune 2012 | WHR per 0.1 unit increase | Pancreatic CA inc | C25 | 0.54 | 7 (0-70) 0.36 | 4 | 2 | 1.8 | 1.00 | 1.8 | 1.00 | 3.0 | NP |
| Aune 2012 | BMI per 5kg/$m^2$ increase | Pancreatic CA mort | C25 | 0.44 | 54 (0-79) 0.04 | 7 | 3 | 1.7 | 0.37 | 2.9 | 1.00 | 1.4 | 0.14 |
| Yang 2013 | BMI, 25+ vs. <25 | Lung CA inc | C34 | 0.02 | 80 (69-86) <0.01 | 20 | 10 | 8.4 | 0.50 | 13.6 | NP | 1.4 | <0.01 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Lung CA inc | C34 | 0.05 | 71 (47-82) <0.01 | 15 | 10 | 8.9 | 0.61 | 11.3 | NP | 7.1 | 0.19 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Lung CA inc, men | C34 | 0.07 | 53 (0-75) 0.02 | 10 | 7 | 5.6 | 0.53 | 6.6 | 1.00 | 5.0 | 0.23 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Lung CA inc, wom | C34 | 0.46 | 86 (66-92) <0.01 | 5 | 3 | 3.3 | NP | 4.4 | NP | 3.0 | 1.00 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Lung CA inc, smokers | C34 | 0.12 | 78 (1-90) 0.003 | 4 | 4 | 2.9 | 0.58 | 3.2 | 1.00 | 2.9 | 0.58 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Lung CA inc, non-smokers | C34 | 0.83 | 54 (0-83) 0.09 | 4 | 1 | 0.4 | 0.35 | 0.5 | 0.39 | 0.4 | 0.31 |
| Yang 2015 | BS; surgery vs. no surgery | Melanoma inc | C43 | NA | 0 | 2 | 0 | 0.3 | NP | 0.3 | NP | 0.2 | NP |
| Sergentanis 2013 | BMI 25-29.99 vs. < 25 | Melanoma inc | C43 | 0.48 | 59 (9-76) <0.01 | 13 | 3 | 1.7 | 0.22 | 1.9 | 0.42 | 1.2 | 0.11 |
| Sergentanis 2013 | BMI 30+ vs. < 25 | Melanoma inc | C43 | 1.00 | 67 (32-80) <0.01 | 13 | 3 | 2.5 | 0.72 | 1.8 | 0.41 | 1.5 | 0.19 |
| Sergentanis 2013 | BMI, 25+ vs. <25, ASE | Melanoma inc | C43 | 0.29 | 25 (0-68) 0.24 | 7 | 1 | 1.9 | NP | 1.7 | NP | 0.4 | 0.31 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Melanoma Inc | C43 | 0.26 | 79 (59-87) <0.01 | 11 | 4 | 0.7 | <0.01 | 2.5 | 0.28 | 1.0 | 0.01 |
| Sergentanis 2013 | BMI 25-29.99 vs. < 25 | Melanoma inc, men | C43 | 0.16 | 35 (0-73) 0.17 | 6 | 2 | 2.8 | NP | 3.6 | NP | 2.6 | NP |
| Sergentanis 2013 | BMI 30+ vs. < 25 | Melanoma inc, men | C43 | 0.89 | 26 (0-69) 0.23 | 7 | 3 | 4.6 | NP | 4.7 | NP | 4.5 | NP |
| Sergentanis 2013 | BMI, 25+ vs. <25, ASE | Melanoma inc, men | C43 | NA | 0 | 2 | 0 | 2.0 | NP | 2.0 | NP | 1.9 | NP |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Melanoma inc, men | C43 | 0.89 | 46 (0-77) 0.10 | 6 | 3 | 2.6 | 1.00 | 2.5 | 0.70 | 2.5 | 0.69 |
| Sergentanis 2013 | BMI 25-29.99 vs. < 25 | Melanoma inc, wom | C43 | 0.43 | 22 (0-67) 0.26 | 7 | 1 | 0.4 | 0.32 | 0.5 | 0.43 | 0.7 | 0.53 |
| Sergentanis 2013 | BMI 30+ vs. < 25 | Melanoma inc, wom | C43 | 0.86 | 37 (0-74) 0.16 | 6 | 0 | 1.1 | NP | 1.8 | NP | 0.7 | NP |
| Sergentanis 2013 | BMI, 25+ vs. <25, ASE | Melanoma inc, wom | C43 | 0.12 | 0 (0-64) 0.48 | 5 | 1 | 2.4 | NP | 2.4 | NP | 0.3 | 0.23 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Melanoma inc, wom | C43 | 0.28 | 0 (0-64) 0.46 | 5 | 1 | 0.7 | 0.52 | 0.7 | 0.52 | 0.5 | 0.40 |
| Yang 2015 | BS; surgery vs. no surgery | Breast CA inc | C50 | NA | 97 | 2 | 1 | 1.9 | NP | 2.0 | NP | 0.1 | 0.10 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Suzuki 2009 | Obesity‡‡, high vs. low** | Breast CA inc, ER- PR-, PoMP | C50 | 0.80 | 61 (0-85) 0.05 | 4 | 0 | 1.3 | NP | 1.6 | NP | 3.9 | NP |
| Suzuki 2009 | Obesity‡‡, high vs. low** | Breast CA inc, ER- PR+, PoMP | C50 | NA | 61 | 2 | 1 | 2.0 | NP | 2.0 | NP | 2.0 | NP |
| Suzuki 2009 | Obesity‡‡, high vs. low** | Breast CA inc, ER+ PR-, PoMP | C50 | NA | 27 | 2 | 1 | 2.0 | NP | 2.0 | NP | 0.1 | 0.10 |
| Suzuki 2009 | Obesity‡‡, high vs. low** | Breast CA inc, ER+ PR+, PoMP | C50 | 0.70 | 69 (0-87) 0.02 | 4 | 3 | 4.0 | NP | 4.0 | NP | 4.0 | NP |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Breast CA inc, PoMP | C50 | 0.67 | 61 (38-73) <0.01 | 29 | 12 | 13.3 | NP | 11.9 | 1.00 | 16.6 | NP |
| Harvie 2003 | WC: lowest vs. highest category | Breast CA inc, PoMP | C50 | 0.60 | 73 (0-88) 0.01 | 4 | 1 | 2.6 | NP | 2.2 | NP | 3.1 | NP |
| Keum 2015 | WG per 5kg increase | Breast CA inc, PoMP HRT - | C50 | 0.66 | 17 (0-65) 0.30 | 7 | 5 | 3.6 | 0.45 | 3.5 | 0.45 | 4.5 | 1.00 |
| Keum 2015 | WG: highest vs. lowest category | Breast CA inc, PoMP HRT - | C50 | 0.43 | 0 (0-58) 0.55 | 7 | 5 | 6.8 | NP | 6.8 | NP | 6.9 | NP |
| Connolly 2002 | WHR: highest vs lowest category | Breast CA inc, PoMP | C50 | 0.65 | 23 (0-75) 0.27 | 4 | 1 | 2.3 | NP | 2.4 | NP | 2.3 | NP |
| Keum 2015 | WG per 5kg increase | Breast CA inc, PoMP HRT + | C50 | 0.47 | 0 (0-68) 0.48 | 4 | 0 | 0.2 | NP | 0.2 | NP | 0.2 | NP |
| Cheraghi 2012 | BMI 25-29.99 vs. < 25 | Breast CA inc, PoMP | C50 | 0.16 | 57 (0-78) 0.02 | 8 | 4 | 4.6 | NP | 5.0 | NP | 2.1 | 0.12 |
| Cheraghi 2012 | BMI 30+ vs. < 25 | Breast CA inc, PoMP | C50 | 0.37 | 65 (1-82) 0.005 | 8 | 4 | 5.5 | NP | 5.9 | NP | 6.4 | NP |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Breast CA inc, PrMP | C50 | 0.28 | 38 (0-63) 0.05 | 20 | 7 | 6.0 | 0.63 | 5.2 | 0.44 | 6.3 | 0.81 |
| Harvie 2003 | WC: highest vs. lowest category | Breast CA inc, PrMP | C50 | NA | 73 | 2 | 1 | 0.5 | 0.45 | 0.5 | 0.41 | 1.6 | NP |
| Keum 2015 | WG per 5kg increase | Breast CA inc, PrMP | C50 | 0.74 | 35 (0-81) 0.21 | 3 | 0 | 0.2 | NP | 0.2 | NP | 0.4 | NP |
| Keum 2015 | WG: highest vs. lowest category | Breast CA inc, PrMP | C50 | 0.42 | 17 (0-73) 0.31 | 4 | 0 | 0.2 | NP | 0.2 | NP | 3.2 | NP |
| Amadou 2013 | WHR per 0.1 unit increase | Breast CA inc, PrMP | C50 | 0.08 | 0 (0-73) 0.73 | 3 | 0 | 0.2 | NP | 0.2 | NP | 0.2 | NP |
| Connolly 2002 | WHR: highest vs lowest category | Breast CA inc, PrMP | C50 | 0.27 | 34 (0-81) 0.22 | 3 | 1 | 1.2 | NP | 1.4 | NP | 0.2 | 0.17 |
| Cheraghi 2012 | BMI 25-29.99 vs. < 25 | Breast CA inc, PrMP | C50 | 0.79 | 72 (0-88) 0.01 | 4 | 1 | 0.2 | 0.12 | 0.2 | 0.07 | 0.4 | 0.29 |
| Cheraghi 2012 | BMI 30+ vs. < 25 | Breast CA inc, PrMP | C50 | 0.56 | 37 (0-78) 0.19 | 4 | 0 | 0.5 | NP | 0.6 | NP | 0.7 | NP |
| Poorolajal 2015 | BMI 25-29.99 vs. < 25 | Cervical CA inc | C53 | NA | 0 | 2 | 1 | 0.5 | 0.47 | 0.5 | 0.47 | 0.6 | 0.49 |
| Poorolajal 2015 | BMI 30+ vs. < 25 | Cervical CA inc | C53 | NA | 36 | 2 | 1 | 1.1 | NP | 0.5 | 0.41 | 1.1 | NP |
| Upala 2015 | BS; surgery vs. no surgery | Endometrial CA inc | C54.1 | 0.74 | 80 (0-92) <0.01 | 3 | 2 | 2.5 | NP | 2.7 | NP | 2.5 | NP |
| Zhang 2014 | BMI 25-29.99 vs. < 25 | Endometrial CA inc | C54.1 | 0.71 | 96 (93-97) <0.01 | 7 | 7 | 6.9 | 1.00 | 6.7 | 1.00 | 6.9 | 1.00 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zhang 2014 | BMI 30+ vs. < 25 | Endometrial CA inc | C54.1 | 0.24 | 66 (0-84) 0.01 | 6 | 6 | 6.0 | 1.00 | 6.0 | 1.00 | 6.0 | 1.00 |
| Aune 2015 | BMI iya per 5kg/$m^2$ increase | Endometrial CA inc | C54.1 | 0.41 | 75 (45-86) <0.01 | 9 | 8 | 7.5 | 1.00 | 7.8 | 1.00 | 5.2 | 0.09 |
| Aune 2015 | BMI per 5kg/$m^2$ increase | Endometrial CA inc | C54.1 | 0.35 | 81 (73-86) <0.01 | 28 | 26 | 24.4 | 0.57 | 24.0 | 0.42 | 25.2 | 1.00 |
| Aune 2015 | HC per 10cm increase | Endometrial CA inc | C54.1 | NA | 0 | 2 | 1 | 1.6 | NP | 1.6 | NP | 1.7 | NP |
| Aune 2015 | WC per 10cm increase | Endometrial CA inc | C54.1 | 0.59 | 70 (0-88) 0.02 | 4 | 3 | 3.0 | 1.00 | 2.9 | 1.00 | 2.9 | 1.00 |
| Aune 2015 | WG per 5kg increase | Endometrial CA inc | C54.1 | 0.95 | 47 (0-76) 0.08 | 7 | 6 | 2.5 | 0.01 | 2.5 | 0.01 | 2.8 | 0.02 |
| Aune 2015 | Weight per 5kg increase | Endometrial CA inc | C54.1 | 0.29 | 62 (0-81) 0.01 | 7 | 6 | 1.7 | <0.01 | 1.9 | <0.01 | 1.0 | <0.01 |
| Aune 2015 | WHR per 0.1 unit increase | Endometrial CA inc | C54.1 | 0.54 | 0 (0-64) 0.48 | 5 | 3 | 3.0 | 1.00 | 3.0 | 1.00 | 4.4 | NP |
| Crosbie 2010 | BMI per 5kg/$m^2$ increase | Endometrial CA inc: PoMP | C54.1 | 0.88 | 89 (79-83) <0.001 | 6 | 6 | 5.3 | 1.00 | 5.3 | 1.00 | 5.0 | 0.60 |
| Crosbie 2010 | BMI per 5kg/$m^2$ increase | Endometrial CA inc: PoMP HRT + | C54.1 | 0.77 | 0 (0-61) 0.87 | 6 | 1 | 1.1 | NP | 1.1 | NP | 1.7 | NP |
| Crosbie 2010 | BMI per 5kg/$m^2$ increase | Endometrial CA inc: PoMP HRT- | C54.1 | 0.005 | 77 (0-91) 0.01 | 3 | 3 | 3.0 | 1.00 | 3.0 | 1.00 | 2.9 | 1.00 |
| Keum 2015 | WG per 5kg increase | Endometrial CA inc: PoMP, HRT+ | C54.1 | NA | 0 (.-.) 1.00 | 2 | 1 | 0.2 | 0.18 | 0.2 | 0.18 | 0.2 | 0.18 |
| Keum 2015 | WG per 5kg increase | Endometrial CA inc: PoMP, HRT- | C54.1 | NA | 0 (.-.) 0.42 | 2 | 2 | 1.1 | 0.51 | 1.1 | 0.51 | 1.0 | 0.50 |
| Crosbie 2010 | BMI per 5kg/$m^2$ increase | Endometrial CA inc: PrMP | C54.1 | 0.56 | 20 (0-68) 0.28 | 6 | 5 | 4.1 | 0.67 | 4.0 | 0.67 | 4.2 | 0.67 |
| Crosbie 2010 | BMI per 5kg/$m^2$ increase | Endometrial CA inc: Type I | C54.1 | 0.26 | 82 (0-92) 0.004 | 3 | 3 | 2.9 | 1.00 | 3.0 | 1.00 | 2.9 | 1.00 |
| Crosbie 2010 | BMI per 5kg/$m^2$ increase | Endometrial CA inc: Type II | C54.1 | 0.52 | 76 (0-91) 0.02 | 3 | 3 | 1.7 | 0.27 | 1.9 | 0.30 | 1.5 | 0.25 |
| Aune 2015 | BMI per 5kgm2 increase | Endometrial CA mort | C54.1 | 0.64 | 29 (0-80) 0.25 | 3 | 2 | 2.1 | NP | 2.1 | NP | 2.0 | 1.00 |
| Aune 2015 | BMI iya per 5kg/$m^2$ increase | Ovarian CA inc | C56 | 0.60 | 0 (0-61) 0.56 | 6 | 1 | 2.0 | NP | 2.0 | NP | 2.5 | NP |
| Aune 2015 | BMI per 5kg/$m^2$ increase | Ovarian CA inc | C56 | 0.07 | 48 (5-66) <0.01 | 24 | 6 | 3.0 | 0.11 | 4.0 | 0.27 | 1.8 | <0.01 |
| Poorolajal 2014 | BMI 25-29.99 vs. < 25 | Ovarian CA inc | C56 | 0.16 | 49 (0-71) 0.02 | 13 | 2 | 3.2 | NP | 1.9 | 1.00 | 4.0 | NP |
| Poorolajal 2014 | BMI 30+ vs. < 25 | Ovarian CA inc | C56 | 0.88 | 12 (0-54) 0.33 | 13 | 3 | 5.2 | NP | 5.2 | NP | 5.3 | NP |
| Aune 2015 | HC per 10cm increase | Ovarian CA inc | C56 | 0.77 | 72 (0-88) 0.01 | 4 | 2 | 0.5 | 0.09 | 0.3 | 0.02 | 1.0 | 0.25 |
| Aune 2015 | WC per 10cm increase | Ovarian CA inc | C56 | 0.33 | 0 (0-61) 0.50 | 6 | 0 | 0.5 | NP | 0.5 | NP | 0.4 | NP |
| Aune 2015 | WG per 5kg increase | Ovarian CA inc | C56 | 0.68 | 67 (0-84) 0.01 | 6 | 2 | 0.3 | 0.03 | 0.3 | 0.04 | 0.3 | 0.04 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aune 2015 | Weight per 5kg increase | Ovarian CA inc | C56 | 0.42 | 7 (0-70) 0.36 | 4 | 1 | 0.2 | 0.22 | 0.2 | 0.22 | 0.2 | 0.20 |
| Aune 2015 | WHR per 0.1 unit increase | Ovarian CA inc | C56 | 0.22 | 0 (0-64) 0.48 | 5 | 0 | 0.3 | NP | 0.3 | NP | 0.3 | NP |
| Poorolajal 2014 | BMI 25-29.99 vs. < 25 | Ovarian CA inc, PoMP | C56 | 0.70 | 52 (0-80) 0.08 | 5 | 1 | 0.3 | 0.14 | 1.3 | 0.17 | 1.0 | 0.96 |
| Poorolajal 2014 | BMI 30+ vs. < 25 | Ovarian CA inc, PoMP | C56 | 0.52 | 46 (0-79) 0.12 | 5 | 1 | 1.7 | NP | 1.9 | NP | 0.3 | 0.14 |
| Keum 2015 | WG per 5kg increase | Ovarian CA inc, PoMP, HRT- | C54.1 | NA | 0 (.-.) 0.50 | 2 | 1 | 0.2 | 0.20 | 0.2 | 0.20 | 0.27 | 0.25 |
| Poorolajal 2014 | BMI 25-29.99 vs. < 25 | Ovarian CA inc, PrMP | C56 | 0.50 | 0 (0-73) 0.51 | 3 | 0 | 0.6 | NP | 0.6 | NP | 1.1 | NP |
| Poorolajal 2014 | BMI 30+ vs. < 25 | Ovarian CA inc, PrMP | C56 | 0.61 | 0 (0-73) 0.86 | 3 | 1 | 1.7 | NP | 1.7 | NP | 1.7 | NP |
| Zhang 2015 | BMI obese vs. normal weight** | Prostate CA inc | C61 | 0.64 | 40 (0-64) 0.04 | 14 | 2 | 1.6 | 0.66 | 0.7 | 0.16 | 7.8 | NP |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Prostate CA inc | C61 | 0.72 | 76 (64-83) <0.01 | 26 | 6 | 3.0 | 0.11 | 3.0 | 0.11 | 6.1 | NP |
| MacInnis 2006 | WC per 10cm increase | Prostate CA inc | C61 | 0.44 | 0 (0-68) 0.41 | 4 | 0 | 0.3 | NP | 0.3 | NP | 0.4 | NP |
| Keum 2015 | WG per 5kg increase | Prostate CA inc | C61 | 0.67 | 51 (0-82) 0.11 | 4 | 1 | 0.3 | 0.25 | 0.3 | 0.30 | 0.2 | 0.20 |
| Keum 2015 | WG: highest vs. lowest category | Prostate CA inc | C61 | 0.67 | 31 (0-69) 0.18 | 8 | 0 | 0.5 | NP | 0.7 | NP | 0.9 | NP |
| Discaccati 2012 | BMI per 5kg/$m^2$ increase | Prostate CA inc, adv | C61 | 0.02 | 40 (0-68) 0.07 | 13 | 3 | 1.7 | 0.24 | 2.5 | 0.72 | 0.6 | 0.02 |
| Discaccati 2012 | BMI per 5kg/$m^2$ increase | Prostate CA inc, loc | C61 | 0.46 | 20 (0-59) 0.25 | 12 | 3 | 2.3 | 0.71 | 2.7 | 0.74 | 1.7 | 0.40 |
| Keum 2015 | WG per 5kg increase | Prostate CA inc, advanced | C61 | <0.01 | 0 (0-68) 0.46 | 4 | 1 | 0.3 | 0.13 | 0.3 | 0.13 | 0.3 | 0.22 |
| Keum 2015 | WG per 5kg increase | Prostate CA inc, high screening rate | C61 | NA | 0 (.-.) 0.44 | 2 | 1 | 0.5 | 0.41 | 0.5 | 0.41 | 0.4 | 0.25 |
| Keum 2015 | WG per 5kg increase | Prostate CA inc, localised | C61 | 0.12 | 35 (0-78) 0.20 | 4 | 1 | 0.4 | 0.28 | 0.5 | 0.45 | 0.22 | 0.08 |
| Keum 2015 | WG per 5kg increase | Prostate CA inc, low screening rate | C61 | NA | 0 (.-.) 1.00 | 2 | 0 | 0.1 | NP | 0.1 | NP | 0.1 | NP |
| Zhang 2015 | BMI obese vs. normal weight** | Prostate CA mort | C61 | 0.03 | 0 (0-53) 0.85 | 10 | 4 | 6.2 | NP | 6.2 | NP | 5.7 | NP |
| Cao 2011 | BMI per 5kg/$m^2$ increase | Prostate CA mort | C61 | 0.30 | 59 (0-81) 0.03 | 6 | 4 | 2.0 | 0.10 | 2.9 | 0.44 | 1.6 | 0.049 |
| Yang 2015 | BS; surgery vs. no surgery | Kidney CA inc | C64 | NA | 0 | 2 | 0 | 0.1 | NP | 0.1 | NP | 0.1 | NP |
| Wang 2014 | BMI 25-29.99 vs. < 25 | Kidney CA inc | C64 | 0.003 | 36 (0-55) 0.01 | 43 | 19 | 28.4 | NP | 32.7 | NP | 19.0 | 1.00 |
| Wang 2014 | BMI 30+ vs. < 25 | Kidney CA inc | C64 | 0.53 | 44 (6-63) <0.01 | 31 | 22 | 30.0 | NP | 30.0 | NP | 30.2 | NP |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Kidney CA inc | C64 | 0.11 | 49 (0-69) <0.01 | 19 | 14 | 10.9 | 0.17 | 11.8 | 0.35 | 7.9 | <0.01 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Keum 2015 | WG: highest vs. lowest category | Kidney CA inc | C64 | 0.89 | 10 (0-75) 0.33 | 3 | 1 | 3.0 | NP | 3.0 | NP | 2.0 | NP |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Kidney CA inc, men | C64 | 0.16 | 22 (0-64) 0.24 | 9 | 5 | 4.5 | 1.00 | 4.9 | 1.00 | 4.0 | 0.52 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Kidney CA inc, wom | C64 | 0.39 | 45 (0-72) 0.06 | 10 | 9 | 6.4 | 0.11 | 6.6 | 0.18 | 6.9 | 0.19 |
| Sun 2015 | BMI 25-29.99 vs. < 25 | Bladder CA inc | C67 | 0.29 | 38 (0-60) 0.03 | 26 | 5 | 4.2 | 0.59 | 5.6 | NP | 3.7 | 0.41 |
| Sun 2015 | BMI 30+ vs. < 25 | Bladder CA inc | C67 | 0.71 | 15 (0-48) 0.24 | 26 | 4 | 10.8 | NP | 10.0 | NP | 13.4 | NP |
| Sun 2015 | BMI per 5kg/$m^2$ increase | Bladder CA inc | C67 | 0.86 | 32 (0-69) 0.17 | 8 | 2 | 1.0 | 0.28 | 1.1 | 0.31 | 0.8 | 0.18 |
| Shao 2014 | BMI 25-29.99 vs. < 25 | Meningeoma inc | C70 | 0.87 | 0 (0-68) 0.43 | 4 | 0 | 0.5 | NP | 0.5 | NP | 0.2 | NP |
| Shao 2014 | BMI 30+ vs. < 25 | Meningeoma inc | C70 | 0.54 | 0 (0-68) 0.45 | 4 | 2 | 3.3 | NP | 3.3 | NP | 2.6 | NP |
| Ma 2015 | BMI 30+ vs. < 25 | Thyroid CA inc | C73 | <0.01 | 21 (0-52) 0.18 | 24 | 9 | 14.8 | NP | 18.0 | NP | 11.3 | NP |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Thyroid CA inc | C73 | 0.09 | 62 (0-82) 0.01 | 7 | 4 | 2.7 | 0.43 | 3.2 | 0.71 | 2.4 | 0.24 |
| Keum 2015 | WG: highest vs. lowest category | Thyroid CA inc | C73 | 0.14 | 0 (0-68) 0.42 | 4 | 0 | 0.3 | NP | 0.3 | NP | 0.7 | NP |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Thyroid CA inc, men | C73 | 0.23 | 77 (0-90) <0.01 | 4 | 2 | 1.6 | 1.00 | 2.5 | NP | 1.0 | 0.27 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Thyroid CA inc, wom | C73 | 0.41 | 3 (0-74) 0.36 | 3 | 2 | 1.1 | 0.56 | 1.2 | 0.56 | 1.1 | 0.30 |
| Larsson 2011 | BMI 25-29.99 vs. < 25 | Hodgkin's lymphoma inc | C81 | 0.10 | 17 (0-65) 0.30 | 7 | 1 | 0.5 | 0.43 | 0.4 | 0.35 | 1.7 | NP |
| Larsson 2011 | BMI 30+ vs. < 25 | Hodgkin's lymphoma inc | C81 | 0.74 | 22 (0-74) 0.28 | 4 | 1 | 3.1 | NP | 3.1 | NP | 3.5 | NP |
| Yang 2015 | BS; surgery vs. no surgery | NHL inc | C82-C85 | NA | 0 | 2 | 0 | 0.5 | NP | 0.5 | NP | 0.5 | NP |
| Larsson 2007 | BMI 25-29.99 vs. < 25 | NHL inc | C82-C85 | 0.45 | 28 (0-61) 0.15 | 15 | 1 | 2.2 | NP | 3.0 | NP | 1.5 | NP |
| Larsson 2007 | BMI 30+ vs. < 25 | NHL inc | C82-C85 | 0.91 | 66 (33-79) <0.01 | 15 | 5 | 6.8 | NP | 7.1 | NP | 4.5 | 0.78 |
| Larsson 2011 | BMI per 5kg/$m^2$ increase | NHL inc | C82-C85 | 0.26 | 9 (0-45) 0.34 | 23 | 5 | 4.7 | 0.80 | 4.8 | 1.00 | 2.7 | 0.18 |
| Larsson 2011 | BMI per 5kg/$m^2$ increase | NHL mort | C82-C85 | 0.57 | 53 (0-78) 0.05 | 7 | 3 | 3.1 | NP | 2.9 | 1.00 | 3.4 | NP |
| Castillo 2014 | BMI 25-29.99 vs. < 25 | Diff. large B-cell lymphoma inc | C83.3 | 0.37 | 0 (0-53) 0.65 | 10 | 1 | 1.8 | NP | 1.8 | NP | 5.7 | NP |
| Castillo 2014 | BMI 30+ vs. < 25 | Diff. large B-cell lymphoma inc | C83.3 | 0.05 | 27 (0-63) 0.18 | 12 | 3 | 6.6 | NP | 5.9 | NP | 11.6 | NP |
| Yang 2015 | BS; surgery vs. no surgery | Multiple myeloma inc | C90.0 | NA | 0 | 2 | 0 | 0.2 | NP | 0.2 | NP | 0.2 | NP |
| Wallin 2012 | BMI 25-29.99 vs. < 25 | Multiple myeloma inc | C90.0 | 0.72 | 0 (0-42) 0.73 | 20 | 2 | 4.8 | NP | 4.8 | NP | 5.3 | NP |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wallin 2012 | BMI 30+ vs. < 25 | Multiple myeloma inc | C90.0 | 0.56 | 34 (0-61) 0.07 | 19 | 5 | 8.7 | NP | 7.5 | NP | 11.2 | NP |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Multiple myeloma inc | C90.0 | 0.65 | 0 (0-49) 0.66 | 13 | 4 | 3.6 | 0.76 | 3.6 | 0.76 | 3.5 | 0.76 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Multiple myeloma inc, men | C90.0 | 0.76 | 5 (0-61) 0.39 | 7 | 2 | 1.9 | 1.00 | 1.9 | 1.00 | 2.0 | NP |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Multiple myeloma inc, wom | C90.0 | 0.82 | 0 (0-61) 0.68 | 6 | 2 | 1.7 | 0.68 | 1.7 | 0.68 | 1.7 | 0.67 |
| Wallin 2012 | BMI 25-29.99 vs. < 25 | Multiple myeloma mort | C90.0 | 0.46 | 0 (0-56) 0.58 | 8 | 1 | 2.3 | NP | 2.3 | NP | 2.8 | NP |
| Wallin 2012 | BMI 30+ vs. < 25 | Mult myel mort | C90.0 | 0.32 | 0 (0-58) 0.60 | 7 | 4 | 5.1 | NP | 5.1 | NP | 4.7 | NP |
| Castillo 2012 | BMI 30+ vs. < 25 | Leukemia inc | C91-C92 | 0.29 | 43 (0-63) 0.01 | 25 | 7 | 16.4 | NP | 15.2 | NP | 19.3 | NP |
| Castillo 2012 | BMI 30+ vs. < 25 | Leukemia mort | C91-C92 | 0.99 | 30 (0-68) 0.19 | 8 | 4 | 5.9 | NP | 6.0 | NP | 6.6 | NP |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Leukemia inc | C91-C95 | 0.22 | 51 (0-76) 0.04 | 8 | 4 | 3.0 | 0.48 | 3.3 | 0.72 | 2.4 | 0.25 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Leukemia inc, men | C91-C95 | 0.47 | 0 (0-64) 0.42 | 5 | 1 | 1.4 | NP | 1.4 | NP | 1.5 | NP |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Leukemia inc, wom | C91-C95 | 0.20 | 79 (0-92) <0.01 | 3 | 3 | 1.4 | 0.11 | 1.9 | 0.29 | 1.1 | 0.047 |
| Larsson 2008 | BMI 30+ vs. < 25 | Leukaemia inc, ALL | C91 | 0.67 | 7 (0-66) 0.37 | 5 | 1 | 3.6 | NP | 3.6 | NP | 1.9 | NP |
| Larsson 2008 | BMI 30+ vs. < 25 | Leukaemia inc, CLL | C91 | 0.78 | 31 (0-74) 0.21 | 5 | 2 | 4.0 | NP | 4.0 | NP | 4.2 | NP |
| Larsson 2008 | BMI 30+ vs. < 25 | Leukaemia inc, AML | C92 | 0.27 | 79 (44-89) <0.001 | 6 | 4 | 4.9 | NP | 5.4 | NP | 3.4 | 0.61 |
| Larsson 2008 | BMI 30+ vs. < 25 | Leukaemia inc, CML | C92 | 0.47 | 0 (0-64) 0.51 | 5 | 1 | 3.4 | NP | 3.4 | NP | 1.9 | NP |

Abbreviations: AdCa, adenocarcinoma; adv, advanced; ALL, acute lymphatic leukemia; AML, acutel myeloic leukemia; ASE, adjusted for sunlight exposure; biliary tract system cancer, includes cancers of gallbladder, extrahepatic bile duct and ampulla of Vateri; BMI, Body Mass Index; BMI iya, Body Mass Index in young adulthood; BS, bariatric surgery; CA, cancer; CI, confidence interval; CLL, chronic lymphatic leukemia; CML, chronic myeloic leukemia; ER = estrogen receptor status; HC, hip circumference; HRT, hormone replacement therapy; inc, incidence; loc, localised; mort, mortality; NA: Not available, due to <3 included studies; NHL, Non-Hodgkin lymphoma; NP: Not Pertinent, because the estimated is larger than the observed, and there is no evidence of excess statistical significance based on the assumption made for the plausible effect size; PoMP, postmenopausal; PR = progesterone receptor status; PrMP, premenopausal; RR, relative risk; SqCa, squamous cell carcinoma; WC, waist circumference; WG, weight gain; WHR, waist-to-hip ratio;

¶ P-value from te Egger's regression asymmetry test.

‡ $I^2$ metric of inconsistency (95% CI) and the P-value of the Q test.

§ Expected number of statistically significant studies using the point estimate of each meta-analysis (from fixed effect, random effect of largest study accordingly) as the plausible effect size.

|| P value of the excess statistical significance test.

** cut-offs in categories varied between included studies

±± BMI, weight gain or weight change, varies between included studies

All statistical tests were two-sided.

**Supplementary Table 3:** Excluded studies and studies selected in their place to be included in the analysis.

| Author, year | Exposure | Association of obesity or weight change with | ICD-10 | N studies | N cohort Studies | Summary relative risk & 95% CI\| | Included |
|---|---|---|---|---|---|---|---|
| Renehan 2008 (1) | BMI per 5kg/$m^2$ increase | Oesophageal AdCa inc | C15 | 8 | 8 | 1.53 (1.41-1.67) | Yes |
| Turati 2013 (2) | BMI 25-29.99 vs. < 25 | Oesophageal and gastric cardia AdCa inc | C15-C16 | 10 | 10 | 1.71 (1.50-1.96) | Yes |
| Turati 2013 | BMI 30+ vs. < 25 | Oesophageal and gastric cardia AdCa inc | C15-C16 | 9 | 9 | 2.34 (1.95-2.81) | Yes |
| Hampel 2005 (3) | BMI 25-29.99 vs. < 25 | Oesophageal AdCa inc | C15 | 6 | 0 | 1.51 (1.15-2.01) | No |
| Hampel 2005 | BMI 30+ vs. < 25 | Oesophageal AdCa inc | C15 | 6 | 0 | 2.78 (1.85-4.16) | No |
| Lin 2014 (4) | BMI 25-29.99 vs. < 25 | Gastric cancer inc | C16 | 15 | 12 | 1.04 (0.96-1.12) | Yes |
| Lin 2014 | BMI 30+ vs. < 25 | Gastric cancer inc | C16 | 15 | 11 | 1.13 (1.03-1.24) | Yes |
| Yang 2009 (5) | BMI > 25 vs. < 25 | Gastric cancer inc | C16 | 10 | 10 | 1.22 (1.06-1.41) | No |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Chen 2013 (6) | BMI 25-29.99 vs. < 25 | Gastric cancer inc | C16 | 10 | 10 | 1.01 (0.96-1.07) | No |
| Chen 2013 | BMI 30+ vs. < 25 | Gastric cancer inc | C16 | 13 | 13 | 1.06 (0.99-1.12) | No |
| Yang 2015 (7) | bariatric surgery | Colorectal cancer inc. | C18-C20 | 5 | 5 | 0.77 (0.62-0.96) | Yes |
| Afshar 2014 (8) | bariatric surgery | Colorectal cancer inc. | C18-C20 | 4 | 4 | 0.73 (0.58-0.90) | No |
| Wang 2012 (9) | BMI per 5kg/$m^2$ increase | Liver cancer inc | C22 | 21 | 19 | 1.39 (1.25-1.55) | Yes |
| Chen 2012 (10) | BMI 25-29.99 vs. < 25 | Liver cancer inc | C22 | 14 | 14 | 1.18 (1.06-1.31) | Yes |
| Chen 2012 | BMI 30+ vs. < 25 | Liver cancer inc | C22 | 19 | 19 | 1.83 (1.59-2.11) | Yes |
| Tanaka 2012 (11) | BMI per 1kg/$m^2$ increase | Liver cancer inc | C22 | 10 | 10 | 1.07 (1.03-1.10) | No |
| Larsson 2007 (12) | BMI 25-29.99 vs. < 25 | Liver cancer inc | C22 | 11 | 11 | 1.17 (1.02-1.34) | No |
| Larsson 2007 | BMI 30+ vs. < 25 | Liver cancer inc | C22 | 11 | 11 | 1.89 (1.51-2.36) | No |
| Aune 2012 (13) | BMI per 5kg/$m^2$ increase | Pancreatic cancer inc. | C25 | 22 | 22 | 1.10 (1.06-1.14) | Yes |
| Berrington de Gonzales 2003 (14) | BMI per 1kg/$m^2$ increase | Pancreatic cancer inc. | C25 | 14 | 7 | 1.02 (1.01-1.03) | No |
| Larsson 2007 (15) | BMI per 1kg/$m^2$ increase | Pancreatic cancer inc. | C25 | 21 | 21 | 1.12 (1.06-1.17) | No |
| Suzuki 2009 (16) | Obesity±, high vs. low* | Breast cancer inc, ER- PR-, MxMP | C50 | 4 | 1 | 0.96 (0.79-1.17) | Yes |
| Suzuki 2009 | Obesity±, high vs. low* | Breast cancer inc, ER- PR-, PoMP | C50 | 10 | 4 | 1.06 (0.84-1.33) | Yes |
| Suzuki 2009 | Obesity±, high vs. low* | Breast cancer inc, ER- PR-, PrMP | C50 | 6 | 6 | 1.03 (0.87-1.22) | Yes |
| Suzuki 2009 | Obesity±, high vs. low* | Breast cancer inc, ER- PR+, MxMP | C50 | 2 | 1 | 1.12 (0.79-1.58) | Yes |
| Suzuki 2009 | Obesity±, high vs. low* | Breast cancer inc, ER- PR+, PoMP | C50 | 4 | 2 | 2.01 (1.22-3.31) | Yes |
| Suzuki 2009 | Obesity±, high vs. low* | Breast cancer inc, ER- PR+, PrMP | C50 | 2 | 2 | 1.01 (0.73-1.39) | Yes |
| Suzuki 2009 | Obesity±, high vs. low* | Breast cancer inc, ER+ PR-, MxMP | C50 | 2 | 1 | 0.82 (0.66-1.02) | Yes |
| Suzuki 2009 | Obesity±, high vs. low* | Breast cancer inc, ER+ PR-, PoMP | C50 | 6 | 2 | 0.93 (0.72-1.21) | Yes |
| Suzuki 2009 | Obesity±, high vs. low* | Breast cancer inc, ER+ PR-, PrMP | C50 | 3 | 3 | 1.06 (0.76-1.49) | Yes |
| Suzuki 2009 | Obesity±, high vs. low* | Breast cancer inc, ER+ PR+, MxMP | C50 | 4 | 1 | 1.28 (0.91-1.82) | Yes |
| Suzuki 2009 | Obesity±, high vs. low* | Breast cancer inc, ER+ PR+, PoMP | C50 | 10 | 4 | 1.82 (1.55-2.14) | Yes |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Suzuki 2009 | Obesity±, high vs. low* | Breast cancer inc, ER+ PR+, PrMP | C50 | 6 | 6 | 0.80 (0.70-0.92) | Yes |
| Renehan 2008 (1) | BMI per 5kg/$m^2$ increase | Breast cancer inc, PrMP | C50 | 20 | 20 | 0.92 (0.88-0.96) | Yes |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Breast cancer inc, PoMP | C50 | 31 | 29 | 1.12 (1.08-1.16) | Yes |
| Keum 2015 (17) | WG per 5kg increase | Breast CA inc, PrMP | C50 | 3 | 3 | 0.99 (0.95-1.03) | Yes |
| Keum 2015 | WG: highest vs. lowest category | Breast CA inc, PrMP | C50 | 4 | 4 | 0.99 (0.81-1.21) | Yes |
| Keum 2015 | WG per 5kg increase | Breast CA inc, PoMP | C50 | 7 | 7 | 1.11 (1.09-1.13) | Yes |
| Keum 2015 | WG: highest vs. lowest category | Breast CA inc, PoMP | C50 | 7 | 7 | 1.75 (1.53-2.00) | Yes |
| Pierobon 2013 (18) | BMI, obese vs. normal weight* | Breast cancer inc, triple negative, case-case | C50 | 11 | 0 | 1.20 (1.03-1.40) | Yes |
| Pierobon 2013 | BMI, obese vs. normal weight* | Breast cancer inc, triple negative, case-control | C50 | 5 | 0 | 1.24 (1.06-1.46) | Yes |
| Cheraghi 2012 (19) | BMI 25-29.99 vs. < 25 | Breast cancer inc, PrMP | C50 | 4 | 4 | 1.01 (0.77-1.31) | Yes |
| Cheraghi 2012 | BMI 30+ vs. < 25 | Breast cancer inc, PrMP | C50 | 4 | 4 | 0.91 (0.70-1.18) | Yes |
| Cheraghi 2012 | BMI 25-29.99 vs. < 25 | Breast cancer inc, PoMP | C50 | 8 | 8 | 1.12 (1.06-1.18) | Yes |
| Cheraghi 2012 | BMI 30+ vs. < 25 | Breast cancer inc, PoMP | C50 | 8 | 8 | 1.16 (1.08-1.25) | Yes |
| Jung 2009 (20) | BMI, obese vs. normal weight* | Breast cancer inc, PrMP | C50 | 11 | 1 | 1.39 (1.13-1.70) | No |
| Jung 2009 | BMI, obese vs. normal weight* | Breast cancer inc, PoMP | C50 | 11 | 1 | 1.68 (1.15-2.46) | No |
| Vrieling 2010 (21) | WG, highest vs. lowest | Breast cancer inc, ER-, PR-, PoMP | C50 | 3 | 3 | 1.23 (0.57-1.90) | No |
| Vrieling 2010 | WG, highest vs. lowest | Breast cancer inc, ER+, PR+, PoMP | C50 | 3 | 3 | 2.17 (1.48-2.85) | No |
| Discaccati 2012 (22) | BMI per 5kg/$m^2$ increase | Prostate cancer inc, loc | C61 | 12 | 12 | 0.94 (0.91-0.97) | Yes |
| Discaccati 2012 | BMI per 5kg/$m^2$ increase | Prostate cancer inc, adv | C61 | 13 | 13 | 1.09 (1.02-1.16) | Yes |
| Hu 2014 (23) | BMI per 5kg/$m^2$ increase | Prostate cancer inc | C61 | 8 | 8 | 1.18 (1.00-1.39) | No |
| Hu 2014 | BMI per 5kg/$m^2$ increase | Prostate cancer inc, HG only | C61 | 6 | 6 | 1.50 (1.31-1.70) | No |
| Aune 2015 (24) | BMI per 5kg/$m^2$ increase | Ovarian cancer inc | C56 | 25 | 24 | 1.07 (1.03-1.12) | Yes |
| Coll. Gr. (25) | BMI per 5kg/$m^2$ increase | Ovarian cancer inc | C56 | 17 | 17 | 1.03 (1.00-1.06) | No |
| Sun 2015 (26) | BMI 25-29.99 vs. < 25 | Bladder CA inc | C67 | 26 | 26 | 1.07 (1.01-1.14) | Yes |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sun 2015 | BMI 30+ vs. < 25 | Bladder CA inc | C67 | 26 | 26 | 1.09 (1.04-1.15) | Yes |
| Qin 2013 (27) | BMI, obese vs. normal weight** | Bladder CA inc | C67 | 11 | 11 | 1.10 (1.06-1.16) | No |
| Wallin 2012 (28) | BMI 25-29.99 vs. < 25 | Multiple myeloma inc | C90.0 | 20 | 20 | 1.12 (1.07-1.18) | Yes |
| Wallin 2012 | BMI 30+ vs. < 25 | Multiple myeloma inc | C90.0 | 19 | 19 | 1.21 (1.08-1.35) | Yes |
| Larsson 2007 (29) | BMI 25-29.99 vs. < 25 | Multiple myeloma inc | C90.0 | 11 | 11 | 1.12 (1.07-1.18) | No |
| Larsson 2007 | BMI 30+ vs. < 25 | Multiple myeloma inc | C90.0 | 11 | 11 | 1.27 (1.15-1.41) | No |

Abbreviations: AdCa, adenocarcinoma; adv, advanced; BMI, Body Mass Index; CA, cancer; CI, confidence interval; ER = estrogen receptor status; inc, incidence; loc, localised; mort, mortality; PoMP, postmenopausal; PR = progesterone receptor status; PrMP, premenopausal; RR, relative risk; WG, weight gain.

± BMI, weight gain or weight change, varies between included studies
* cut-offs for categories varied between studies
| Summary relative risk of random effects model including all study types.

## References for supplementary table 3:


1. Renehan AG, Tyson M, Egger M, Heller RF, Zwahlen M. Body-mass index and incidence of cancer: a systematic review and meta-analysis of prospective observational studies. Lancet. 2008;371(9612):569-78.
2. Turati F, Tramacere I, La Vecchia C, Negri E. A meta-analysis of body mass index and esophageal and gastric cardia adenocarcinoma. Ann Oncol. 2013;24(3):609-17.
3. Hampel H, Abraham NS, El-Serag HB. Meta-analysis: obesity and the risk for gastroesophageal reflux disease and its complications. Ann Intern Med. 2005;143(3):199-211.
4. Lin XJ, Wang CP, Liu XD, Yan KK, Li S, Bao HH, et al. Body mass index and risk of gastric cancer: a meta-analysis. Jpn J Clin Oncol. 2014;44(9):783-91.
5. Yang P, Zhou Y, Chen B, Wan HW, Jia GQ, Bai HL, et al. Overweight, obesity and gastric cancer risk: results from a meta-analysis of cohort studies. Eur J Cancer. 2009;45(16):2867-73.

6. Chen Y, Liu L, Wang X, Wang J, Yan Z, Cheng J, et al. Body mass index and risk of gastric cancer: a meta-analysis of a population with more than ten million from 24 prospective studies. Cancer Epidemiol Biomarkers Prev. 2013;22(8):1395-408.
7. Yang XW, Li PZ, Zhu LY, Zhu S. Effects of bariatric surgery on incidence of obesity-related cancers: a meta-analysis. Med Sci Monit. 2015;21:1350-7.
8. Afshar S, Kelly SB, Seymour K, Lara J, Woodcock S, Mathers JC. The effects of bariatric surgery on colorectal cancer risk: systematic review and meta-analysis. Obes Surg. 2014;24(10):1793-9.
9. Wang Y, Wang B, Shen F, Fan J, Cao H. Body mass index and risk of primary liver cancer: a meta-analysis of prospective studies. Oncologist. 2012;17(11):1461-8.
10. Chen Y, Wang X, Wang J, Yan Z, Luo J. Excess body weight and the risk of primary liver cancer: an updated meta-analysis of prospective studies. Eur J Cancer. 2012;48(14):2137-45.
11. Tanaka K, Tsuji I, Tamakoshi A, Matsuo K, Ito H, Wakai K, et al. Obesity and liver cancer risk: an evaluation based on a systematic review of epidemiologic evidence among the Japanese population. Jpn J Clin Oncol. 2012;42(3):212-21.
12. Larsson SC, Wolk A. Overweight, obesity and risk of liver cancer: a meta-analysis of cohort studies. Br J Cancer. 2007;97(7):1005-8.
13. Aune D, Greenwood DC, Chan DS, Vieira R, Vieira AR, Navarro Rosenblatt DA, et al. Body mass index, abdominal fatness and pancreatic cancer risk: a systematic review and non-linear dose-response meta-analysis of prospective studies. Ann Oncol. 2012;23(4):843-52.
14. Berrington de Gonzalez A, Sweetland S, Spencer E. A meta-analysis of obesity and the risk of pancreatic cancer. Br J Cancer. 2003;89(3):519-23.
15. Larsson SC, Orsini N, Wolk A. Body mass index and pancreatic cancer risk: A meta-analysis of prospective studies. Int J Cancer. 2007;120(9):1993-8.
16. Suzuki R, Orsini N, Saji S, Key TJ, Wolk A. Body weight and incidence of breast cancer defined by estrogen and progesterone receptor status--a meta-analysis. Int J Cancer. 2009;124(3):698-712.
17. Keum N, Greenwood DC, Lee DH, Kim R, Aune D, Ju W, et al. Adult weight gain and adiposity-related cancers: a dose-response meta-analysis of prospective observational studies. J Natl Cancer Inst. 2015;107(2).
18. Pierobon M, Frankenfeld CL. Obesity as a risk factor for triple-negative breast cancers: a systematic review and meta-analysis. Breast Cancer Res Treat. 2013;137(1):307-14.
19. Cheraghi Z, Poorolajal J, Hashem T, Esmailnasab N, Doosti Irani A. Effect of body mass index on breast cancer during premenopausal and postmenopausal periods: a meta-analysis. PLoS One. 2012;7(12):e51446.

20. Jung D, Lee SM. BMI and Breast Cancer in Korean Women: A Meta-Analysis. Asian Nurs Res (Korean Soc Nurs Sci). 2009;3(1):31-40.
21. Vrieling A, Buck K, Kaaks R, Chang-Claude J. Adult weight gain in relation to breast cancer risk by estrogen and progesterone receptor status: a meta-analysis. Breast Cancer Res Treat. 2010;123(3):641-9.
22. Discacciati A, Orsini N, Wolk A. Body mass index and incidence of localized and advanced prostate cancer--a dose-response meta-analysis of prospective studies. Ann Oncol. 2012;23(7):1665-71.
23. Hu MB, Liu SH, Jiang HW, Bai PD, Ding Q. Obesity affects the biopsy-mediated detection of prostate cancer, particularly high-grade prostate cancer: a dose-response meta-analysis of 29,464 patients. PLoS One. 2014;9(9):e106677.
24. Aune D, Navarro Rosenblatt DA, Chan DS, Abar L, Vingeliene S, Vieira AR, et al. Anthropometric factors and ovarian cancer risk: a systematic review and nonlinear dose-response meta-analysis of prospective studies. Int J Cancer. 2015;136(8):1888-98.
25. Collaborative Group on Epidemiological Studies of Ovarian C. Ovarian cancer and body size: individual participant meta-analysis including 25,157 women with ovarian cancer from 47 epidemiological studies. PLoS Med. 2012;9(4):e1001200.
26. Sun JW, Zhao LG, Yang Y, Ma X, Wang YY, Xiang YB. Obesity and risk of bladder cancer: a dose-response meta-analysis of 15 cohort studies. PLoS One. 2015;10(3):e0119313.
27. Qin Q, Xu X, Wang X, Zheng XY. Obesity and risk of bladder cancer: a meta-analysis of cohort studies. Asian Pac J Cancer Prev. 2013;14(5):3117-21.
28. Wallin A, Larsson SC. Body mass index and risk of multiple myeloma: a meta-analysis of prospective studies. Eur J Cancer. 2011;47(11):1606-15.
29. Larsson SC, Wolk A. Body mass index and risk of multiple myeloma: a meta-analysis. Int J Cancer. 2007;121(11):2512-6.

**Supplementary Table 4:** Sensitivity analysis using credibility ceilings of 10% in the 194 meta-analyses investigating the associations between obesity and the risk of cancer development or mort (only cohort studies included).

| Author, year | Exposure | Association of obesity or weight change with | ICD-10 | Studies | Credibility Ceiling 0% | | | Credibility Ceiling 10% | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | RR (95% CI) | $I^2$ (%) | LR | RR (95% CI) | $I^2$ (%) | LR |
| Casagrande 2014 | BS inc density rate after surgery | Overall CA inc | C00-C97 | 9 | 1.10 (0.67-1.80) | 96 | 0.4 | 1.29 (0.87-1.90) | 22 | 4.0 |
| Casagrande 2014 | BS; surgery vs. no surgery | Overall CA inc | C00-C97 | 4 | 0.40 (0.22-0.71) | 94 | 531.9 | 0.69 (0.49-0.97) | 0 | 28.6 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Oesophageal AdCa inc | C15 | 8 | 1.53 (1.41-1.67) | 0 | > 1000.0 | 1.36 (1.12-1.65) | 0 | 606.7 |
| Singh 2013 | Central adiposity | Oesophageal AdCa inc | C15 | 2 | 1.78 (1.26-2.52) | 0 | 992.9 | 1.73 (0.93-1.21) | 0 | 11.0 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Oesophageal AdCa inc, men | C15 | 5 | 1.52 (1.33-1.74) | 24 | > 1000.0 | 1.31 (1.04-1.64) | 0 | 47.6 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Oesophageal AdCa inc, women | C15 | 3 | 1.51 (1.30-1.75) | 0 | > 1000.0 | 1.49 (1.05-2.12) | 0 | 36.5 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Oesophageal SqCa inc | C15 | 5 | 0.63 (0.53-0.75) | 80 | > 1000.0 | 0.68 (0.52-0.91) | 0 | 126.4 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Oesophageal SqCa inc, men | C15 | 3 | 0.71 (0.61-0.84) | 44 | > 1000.0 | 0.72 (0.52-0.98) | 0 | 24.8 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Oesophageal SqCa inc, women | C15 | 2 | 0.57 (0.48-0.67) | 58 | > 1000.0 | 0.57 (0.31-1.05) | 0 | 12.7 |
| Turati 2013 | BMI 25-29.99 vs. < 25 | Gastrc cardia and oesophageal AdCa | C15-C16.0 | 10 | 1.48 (1.35-1.61) | 0 | > 1000.0 | 1.41 (1.18-1.68) | 0 | > 1000.0 |
| Turati 2013 | BMI 30+ vs. < 25 | Gastrc cardia and oesophageal AdCa | C15-C16.0 | 9 | 2.19 (1.84-2.58) | 34 | > 1000.0 | 1.93 (1.35-2.76) | 0 | > 1000.0 |
| Lin 2014 | BMI 25-29.99 vs. < 25 | Gastric CA inc | C16 | 12 | 1.00 (0.93-1.08) | 30 | 0.1 | 1.00 (0.94-1.06) | 0 | 0.01 |
| Lin 2014 | BMI 30+ vs. < 25 | Gastric CA inc | C16 | 11 | 1.10 (1.00-1.22) | 7 | 17.9 | 1.07 (0.95-1.20) | 0 | 2.8 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Gastric CA inc | C16 | 13 | 0.99 (0.92-1.06) | 37 | 0.4 | 0.98 (0.93-1.03) | 0 | 1.0 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Gastric CA inc, men | C16 | 8 | 0.97 (0.88-1.06) | 39 | 1.1 | 0.98 (0.92-1.04) | 0 | 1.1 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Gastric CA inc, women | C16 | 5 | 1.04 (0.91-1.21) | 41 | 0.8 | 1.03 (0.90-1.17) | 30 | 0.4 |
| Larsson 2007 | BMI per 5kg/$m^2$ increase | Colon CA inc | C18 | 44 | 1.22 (1.17-1.28) | 84 | > 1000.0 | 1.08 (1.05-1.11) | 0 | > 1000.0 |
| Larsson 2007 | WC per 10cm increase | Colon CA inc | C18 | 8 | 1.25 (1.15-1.35) | 50 | > 1000.0 | 1.18 (1.07-1.31) | 0 | 797.0 |
| Larsson 2007 | WHR per 0.1 unit increase | Colon CA inc | C18 | 8 | 1.29 (1.17-1.43) | 53 | > 1000.0 | 1.17 (1.05-1.31) | 0 | 124.3 |
| Keum 2015 | WG per 5kg increase | Colon CA inc | C18 | 7 | 1.07 (1.03-1.10) | 0 | > 1000.0 | 1.04 (1.00-1.09) | 0 | 21.7 |
| Moghaddam 2007 | BMI 30+ vs. < 25 | Colon CA inc | C18 | 28 | 1.44 (1.28-1.62) | 76 | > 1000.0 | 1.15 (1.06-1.24) | 0 | > 1000.0 |
| Larsson 2007 | BMI per 5kg/$m^2$ increase | Colon CA inc, men | C18 | 24 | 1.30 (1.25-1.35) | 24 | > 1000.0 | 1.24 (1.14-1.34) | 0 | > 1000.0 |
| Larsson 2007 | WC per 10cm increase | Colon CA inc, men | C18 | 5 | 1.33 (1.18-1.50) | 45 | > 1000.0 | 1.23 (1.04-1.44) | 0 | 73.4 |
| Larsson 2007 | WHR per 0.1 unit increase | Colon CA inc, men | C18 | 4 | 1.43 (1.19-1.71) | 56 | > 1000.0 | 1.33 (1.05-1.68) | 0 | 56.3 |
| Keum 2015 | WG per 5kg increase | Colon CA inc, men | C18 | 4 | 1.09 (1.05-1.14) | 0 | > 1000.0 | 1.07 (1.00-1.14) | 0 | 22.4 |
| Moghaddam 2007 | BMI 30+ vs. < 25 | Colon CA inc, men | C18 | 14 | 1.53 (1.44-1.63) | 0 | > 1000.0 | 1.60 (1.28-1.98) | 0 | > 1000.0 |
| Larsson 2007 | BMI per 5kg/$m^2$ increase | Colon CA inc, women | C18 | 20 | 1.12 (1.06-1.17) | 59 | > 1000.0 | 1.05 (1.02-1.09) | 0 | 334.0 |
| Larsson 2007 | WC per 10cm increase | Colon CA inc, women | C18 | 3 | 1.16 (1.08-1.23) | 0 | > 1000.0 | 1.16 (1.01-1.32) | 0 | 30.5 |
| Larsson 2007 | WHR per 0.1 units increase | Colon CA inc, women | C18 | 4 | 1.20 (1.08-1.33) | 30 | > 1000.0 | 1.12 (0.98-1.28) | 0 | 10.5 |
| Keum 2015 | WG per 5kg increase | Colon CA inc, women | C18 | 3 | 1.03 (0.98-1.09) | 0 | 3.2 | 1.03 (0.97-1.08) | 0 | 1.8 |
| Moghaddam 2007 | BMI 30+ vs. < 25 | Colon CA inc, women | C18 | 14 | 1.22 (1.07-1.40) | 51 | 294.7 | 1.09 (1.01-1.19) | 0 | 30.5 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Robsham 2013 | BMI, Obese vs. normal** | Colon CA inc; distal colon | C18 | 20 | 1.59 (1.34-1.89) | 44 | > 1000.0 | 1.25 (1.07-1.46) | 0 | 193.7 |
| Robsham 2013 | BMI, Obese vs. normal** | Colon CA inc; distal colon, men | C18 | 7 | 1.70 (1.36-2.11) | 17 | > 1000.0 | 1.53 (1.12-2.09) | 0 | 122.4 |
| Robsham 2013 | BMI, Obese vs. normal** | Colon CA inc; distal colon, women | C18 | 12 | 1.53 (1.19-1.97) | 56 | > 1000.0 | 1.17 (0.97-1.40) | 0 | 9.4 |
| Robsham 2013 | BMI, Obese vs. normal** | Colon CA inc; proximal colon | C18 | 20 | 1.33 (1.12-1.57) | 33 | > 1000.0 | 1.14 (1.00-1.29) | 0 | 21.0 |
| Robsham 2013 | BMI, Obese vs. normal** | Colon CA inc; proximal colon, men | C18 | 7 | 1.44 (1.18-1.77) | 0 | > 1000.0 | 1.30 (1.03-1.64) | 0 | 34.4 |
| Robsham 2013 | BMI, Obese vs. normal** | Colon CA inc; proximal colon, women | C18 | 12 | 1.18 (0.96-1.44) | 25 | 7.8 | 1.07 (0.92-1.24) | 0 | 1.6 |
| Yang 2015 | BS; surgery vs. no surgery | Colorectal CA inc | C18-C20 | 5 | 0.77 (0.62-0.96) | 0 | 45.3 | 0.78 (0.61-0.99) | 0 | 23.0 |
| Ma 2013 | BMI, Obese vs. normal weight* | Colorectal CA inc | C18-C20 | 72 | 1.33 (1.25-1.42) | 69 | > 1000.0 | 1.11 (1.06-1.16) | 0 | > 1000.0 |
| Ma 2013 | WC, highest vs. lowest cat | Colorectal CA inc | C18-C20 | 19 | 1.45 (1.33-1.59) | 9 | > 1000.0 | 1.35 (1.19-1.55) | 0 | > 1000.0 |
| Schlesinger 2015 | WG per 1kg increase / year | Colorectal CA inc | C18-C20 | 17 | 1.20 (1.10-1.31) | 37 | > 1000.0 | 1.11 (1.03-1.21) | 0 | 103.3 |
| Schlesinger 2015 | WG: high gain vs. stable weight | Colorectal CA inc | C18-C20 | 19 | 1.18 (1.12-1.25) | 0 | > 1000.0 | 1.11 (1.03-1.20) | 0 | 126.4 |
| Moghaddam 2007 | BMI 30+ vs. < 25 | Rectal CA inc | C20 | 21 | 1.21 (1.10-1.34) | 31 | > 1000.0 | 1.07 (1.01-1.14) | 0 | 49.6 |
| Harriss 2009 | BMI per 5kg/$m^2$ increase | Rectal CA inc | C20 | 31 | 1.07 (1.03-1.10) | 27 | > 1000.0 | 1.03 (1.00-1.05) | 0 | 52.0 |
| Harriss 2009 | BMI per 5kg/$m^2$ increase | Rectal CA inc, men | C20 | 17 | 1.09 (1.06-1.13) | 6 | > 1000.0 | 1.08 (1.02-1.13) | 0 | 264.9 |
| Moghaddam 2007 | BMI 30+ vs. < 25 | Rectal CA inc, men | C20 | 11 | 1.28 (1.19-1.39) | 0 | > 1000.0 | 1.27 (1.06-1.51) | 0 | 102.8 |
| Harriss 2009 | BMI per 5kg/$m^2$ increase | Rectal CA inc, women | C20 | 14 | 1.02 (0.99-1.05) | 0 | 4.1 | 1.02 (0.99-1.04) | 0 | 2.7 |
| Moghaddam 2007 | BMI 30+ vs. < 25 | Rectal CA inc, women | C20 | 10 | 1.09 (0.98-1.22) | 7 | 7.5 | 1.05 (0.99-1.12) | 0 | 7.2 |
| Chen 2012 | BMI 25-29.99 vs. < 25 | Liver CA inc | C22 | 14 | 1.18 (1.06-1.31) | 61 | 586.5 | 1.07 (1.01-1.14) | 0 | 38.6 |
| Chen 2012 | BMI 30+ vs. < 25 | Liver CA inc | C22 | 19 | 1.83 (1.59-2.11) | 68 | > 1000.0 | 1.51 (1.26-1.81) | 0 | > 1000.0 |
| Wang 2012 | BMI per 5kg/$m^2$ increase | Liver CA inc | C22 | 19 | 1.37 (1.23-1.53) | 81 | > 1000.0 | 1.12 (1.04-1.20) | 0 | 441.5 |
| Li 2014 | BMI 25-29.99 vs. < 25 | Cholangiocarcinoma inc | C22.1, C24 | 7 | 1.29 (1.11-1.51) | 0 | 792.8 | 1.22 (1.00-1.48) | 0 | 20.5 |
| Li 2014 | BMI 30+ vs. < 25 | Cholangiocarcinoma inc | C22.1, C24 | 6 | 1.77 (1.32-2.38) | 7 | > 1000.0 | 1.61 (1.15-2.25) | 0 | 186.2 |
| Larsson 2007 | BMI 30+ vs. < 25 | Gallbladder CA inc | C23 | 13 | 1.69 (1.48-1.92) | 14 | > 1000.0 | 1.43 (1.15-1.79) | 0 | 816.7 |
| Park 2014 | BMI per 5kg/$m^2$ increase | Biliary tract system CA inc | C23-C24 | 10 | 1.56 (1.34-1.81) | 25 | > 1000.0 | 1.38 (1.13-1.68) | 0 | 613.6 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Yang 2015 | BS; surgery vs. no surgery | Pancreatic CA inc | C25 | 2 | 0.86 (0.17-4.35) | 57 | 0.2 | 0.86 (0.17-4.34) | 57 | 0.2 |
| Alsamarrai 2014 | BMI, 25+ vs. <25 | Pancreatic CA inc | C25 | 9 | 1.30 (0.90-1.86) | 97 | 5.3 | 1.05 (0.93-1.20) | 0 | 1.3 |
| Aune 2012 | BMI per 5kg/$m^2$ increase | Pancreatic CA inc | C25 | 22 | 1.10 (1.06-1.14) | 25 | > 1000.0 | 1.06 (1.02-1.10) | 0 | 646.4 |
| Aune 2012 | WC per 10cm increase | Pancreatic CA inc | C25 | 5 | 1.11 (1.05-1.18) | 0 | > 1000.0 | 1.11 (1.02-1.20) | 0 | 92.4 |
| Keum 2015 | WG per 5kg increase | Pancreatic CA inc | C25 | 2 | 1.05 (0.87-1.26) | 50 | 0.6 | 1.04 (0.87-1.26) | 43 | 0.5 |
| Keum 2015 | WG: highest vs. lowest cat. | Pancreatic CA inc | C25 | 4 | 1.04 (0.85-1.26) | 0 | 0.4 | 1.03 (0.84-1.25) | 0 | 0.3 |
| Aune 2012 | WHR per 0.1 unit increase | Pancreatic CA inc | C25 | 4 | 1.20 (1.09-1.31) | 7 | > 1000.0 | 1.14 (1.01-1.28) | 0 | 24.8 |
| Aune 2012 | BMI per 5kg/$m^2$ increase | Pancreatic CA mort | C25 | 7 | 1.16 (0.99-1.36) | 54 | 12.6 | 1.06 (0.98-1.15) | 0 | 6.9 |
| Yang 2013 | BMI, 25+ vs. <25 | Lung CA inc | C34 | 20 | 0.79 (0.73-0.85) | 80 | > 1000.0 | 0.94 (0.90-0.98) | 0 | 249.7 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Lung CA inc | C34 | 15 | 0.77 (0.72-0.83) | 71 | > 1000.0 | 0.84 (0.78-0.92) | 0 | > 1000.0 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Lung CA inc, men | C34 | 10 | 0.79 (0.73-0.85) | 53 | > 1000.0 | 0.83 (0.75-0.92) | 0 | > 1000.0 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Lung CA inc, women | C34 | 5 | 0.76 (0.61-0.94) | 86 | 78.6 | 0.88 (0.75-1.03) | 0 | 8.8 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Lung CA in, smokers | C34 | 4 | 0.77 (0.69-0.86) | 78 | > 1000.0 | 0.81 (0.68-0.97) | 0 | 53.3 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Lung CA inc, non-smokers | C34 | 4 | 0.89 (0.72-1.09) | 54 | 2.9 | 0.94 (0.83-1.08) | 0 | 1.6 |
| Yang 2015 | BS; surgery vs. no surgery | Melanoma inc | C43 | 2 | 0.75 (0.43-1.31) | 0 | 2.2 | 0.75 (0.43-1.31) | 0 | 2.2 |
| Sergentanis 2013 | BMI 25-29.99 vs. < 25 | Melanoma inc | C43 | 13 | 1.08 (0.94-1.24) | 59 | 2.3 | 1.02 (0.93-1.11) | 6 | 0.5 |
| Sergentanis 2013 | BMI 30+ vs. < 25 | Melanoma inc | C43 | 13 | 1.07 (0.89-1.30) | 67 | 1.2 | 1.00 (0.85-1.18) | 20 | 0.01 |
| Sergentanis 2013 | BMI, 25+ vs. <25, ASE | Melanoma inc | C43 | 7 | 0.86 (0.67-1.10) | 25 | 3.5 | 0.89 (0.72-1.12) | 0 | 2.1 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Melanoma Inc | C43 | 11 | 1.07 (0.97-1.17) | 79 | 4.8 | 0.99 (0.94-1.05) | 10 | 0.3 |
| Sergentanis 2013 | BMI 25-29.99 vs. < 25 | Melanoma inc, men | C43 | 6 | 1.41 (1.09-1.83) | 35 | 103.7 | 1.26 (0.99-1.61) | 0 | 16.7 |
| Sergentanis 2013 | BMI 30+ vs. < 25 | Melanoma inc, men | C43 | 7 | 1.31 (1.10-1.57) | 26 | 319.8 | 1.24 (0.98-1.57) | 0 | 13.8 |
| Sergentanis 2013 | BMI, 25+ vs. <25, ASE | Melanoma inc, men | C43 | 2 | 1.74 (0.85-3.56) | 0 | 6.8 | 1.69 (0.78-3.65) | 0 | 4.5 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Melanoma inc, men | C43 | 6 | 1.17 (1.05-1.30) | 46 | 200.5 | 1.11 (0.96-1.27) | 2 | 5.4 |
| Sergentanis 2013 | BMI 25-29.99 vs. < 25 | Melanoma inc, women | C43 | 7 | 0.97 (0.87-1.08) | 22 | 0.9 | 1.00 (0.92-1.08) | 0 | 0.08 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sergentanis 2013 | BMI 30+ vs. < 25 | Melanoma inc, women | C43 | 6 | 0.87 (0.70-1.08) | 37 | 3.8 | 0.91 (0.81-1.03) | 0 | 6.8 |
| Sergentanis 2013 | BMI, 25+ vs. <25, ASE | Melanoma inc, women | C43 | 5 | 0.80 (0.65-0.99) | 0 | 23.4 | 0.84 (0.67-1.07) | 0 | 5.5 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Melanoma inc, women | C43 | 5 | 0.96 (0.93-1.00) | 0 | 31.2 | 0.97 (0.93-1.01) | 0 | 6.5 |
| Yang 2015 | BS; surgery vs. no surgery | Breast CA inc | C50 | 2 | 0.42 (0.07-2.31) | 97 | 2.2 | 0.70 (0.18-2.71) | 37 | 0.7 |
| Suzuki 2009 | Obesity±, high vs. low* | Breast CA inc, ER- PR-, PoMP | C50 | 4 | 0.89 (0.53-1.51) | 61 | 0.5 | 0.87 (0.56-1.35) | 21 | 0.8 |
| Suzuki 2009 | Obesity±, high vs. low* | Breast CA inc, ER- PR+, PoMP | C50 | 2 | 2.03 (1.04-3.95) | 61 | 25.9 | 1.73 (0.77-3.85) | 0 | 4.5 |
| Suzuki 2009 | Obesity±, high vs. low* | Breast CA inc, ER+ PR-, PoMP | C50 | 2 | 0.64 (0.42-0.97) | 27 | 25.9 | 0.72 (0.48-1.07) | 0 | 8.6 |
| Suzuki 2009 | Obesity±, high vs. low* | Breast CA inc, ER+ PR+, PoMP | C50 | 4 | 1.74 (1.34-2.25) | 69 | > 1000.0 | 1.55 (1.09-2.21) | 0 | 64.1 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Breast CA inc, PoMP | C50 | 29 | 1.13 (1.09-1.17) | 61 | > 1000.0 | 1.06 (1.03-1.10) | 0 | > 1000.0 |
| Harvie 2003 | WC: lowest vs. highest cat. | Breast CA inc, PoMP | C50 | 4 | 0.75 (0.55-1.04) | 73 | 11.2 | 0.84 (0.60-1.19) | 33 | 2.1 |
| Keum 2015 | WG per 5kg increase | Breast CA inc, PoMP HRT - | C50 | 7 | 1.11 (1.09-1.13) | 17 | > 1000.0 | 1.08 (1.03-1.14) | 0 | 313.8 |
| Keum 2015 | WG: highest vs. lowest | Breast CA inc, PoMP | C50 | 7 | 1.75 (1.53-2.00) | 0 | > 1000.0 | 1.57 (1.19-2.06) | 0 | 711.1 |
| Connolly 2002 | WHR: highest vs lowest cat. | Breast CA inc, PoMP | C50 | 4 | 1.24 (0.92-1.67) | 23 | 5.3 | 1.17 (0.91-1.51) | 0 | 3.8 |
| Keum 2015 | WG per 5kg increase | Breast CA inc, PoMP HRT + | C50 | 4 | 1.01 (0.99-1.02) | 0 | 0.9 | 1.01 (0.99-1.02) | 0 | 0.9 |
| Cheraghi 2012 | BMI 25-29.99 vs. < 25 | Breast CA inc, PoMP | C50 | 8 | 1.12 (1.06-1.18) | 57 | > 1000.0 | 1.08 (1.02-1.13) | 0 | 201.9 |
| Cheraghi 2012 | BMI 30+ vs. < 25 | Breast CA inc, PoMP | C50 | 8 | 1.16 (1.08-1.25) | 65 | > 1000.0 | 1.09 (1.02-1.16) | 0 | 103.4 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Breast CA inc, PrMP | C50 | 20 | 0.92 (0.88-0.96) | 38 | > 1000.0 | 0.95 (0.90-0.99) | 0 | 35.7 |
| Harvie 2003 | WC: lowest vs. highest cat. | Breast CA inc, PrMP | C50 | 2 | 0.78 (0.43-1.43) | 73 | 1.4 | 0.87 (0.50-1.54) | 37 | 0.6 |
| Keum 2015 | WG per 5kg increase | Breast CA inc, PrMP | C50 | 3 | 0.99 (0.95-1.03) | 35 | 0.9 | 0.99 (0.96-1.03) | 4 | 0.4 |
| Keum 2015 | WG: highest vs. lowest cat. | Breast CA inc, PrMP | C50 | 4 | 0.99 (0.81-1.21) | 17 | 0.1 | 1.01 (0.83-1.22) | 10 | 0.05 |
| Amadou 2013 | WHR per 0.1 unit increase | Breast CA inc, PrMP | C50 | 3 | 1.02 (0.97-1.07) | 0 | 1.1 | 1.02 (0.97-1.07) | 0 | 1.1 |
| Connolly 2002 | WHR: highest vs lowest cat. | Breast CA inc, PrMP | C50 | 3 | 1.32 (0.91-1.92 | 34 | 5.8 | 1.21 (0.86-1.71) | 0 | 2.7 |
| Cheraghi 2012 | BMI 25-29.99 vs. < 25 | Breast CA inc, PrMP | C50 | 4 | 1.01 (0.77-1.31) | 72 | 0.1 | 0.94 (0.82-1.09) | 1 | 1.5 |
| Cheraghi 2012 | BMI 30+ vs. < 25 | Breast CA inc, PrMP | C50 | 4 | 0.91 (0.70-1.18) | 37 | 1.1 | 0.92 (0.79-1.08) | 0 | 2.2 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Poorolajal 2015 | BMI 25-29.99 vs. < 25 | Cervical CA inc | C53 | 2 | 1.10 (1.03-1.17) | 0 | 233.2 | 1.08 (0.94-1.25) | 0 | 2.8 |
| Poorolajal 2015 | BMI 30+ vs. < 25 | Cervical CA inc | C53 | 2 | 1.09 (0.70-1.68) | 36 | 0.4 | 1.07 (0.68-1.69) | 30 | 0.3 |
| Upala 2015 | BS; surgery vs. no surgery | Endometrial CA inc | C54.1 | 3 | 0.39 (0.19-0.79) | 80 | 115.2 | 0.55 (0.25-1.20) | 0 | 6.4 |
| Zhang 2014 | BMI 25-29.99 vs. < 25 | Endometrial CA inc | C54.1 | 7 | 1.60 (1.10-2.33) | 96 | 75.1 | 1.67 (1.13-2.45) | 0 | 101.1 |
| Zhang 2014 | BMI 30+ vs. < 25 | Endometrial CA inc | C54.1 | 6 | 3.10 (2.63-3.65) | 66 | > 1000.0 | 2.99 (1.49-6.02) | 0 | 472.8 |
| Aune 2015 | BMI iya per 5kg/$m^2$ increase | Endometrial CA inc | C54.1 | 9 | 1.45 (1.28-1.64) | 75 | > 1000.0 | 1.33 (1.14-1.55) | 0 | > 1000.0 |
| Aune 2015 | BMI per 5kg/$m^2$ increase | Endometrial CA inc | C54.1 | 28 | 1.54 (1.47-1.61) | 81 | > 1000.0 | 1.41 (1.26-1.57) | 0 | > 1000.0 |
| Aune 2015 | HC per 10cm increase | Endometrial CA inc | C54.1 | 2 | 1.29 (1.19-1.41) | 0 | > 1000.0 | 1.23 (0.98-1.54) | 0 | 11.9 |
| Aune 2015 | WC per 10cm increase | Endometrial CA inc | C54.1 | 4 | 1.27 (1.17-1.39) | 70 | > 1000.0 | 1.19 (1.03-1.38) | 0 | 61.2 |
| Aune 2015 | WG per 5kg increase | Endometrial CA inc | C54.1 | 7 | 1.16 (1.12-1.20) | 47 | > 1000.0 | 1.13 (1.05-1.22) | 0 | 895.1 |
| Aune 2015 | Weight per 5kg increase | Endometrial CA inc | C54.1 | 7 | 1.17 (1.13-1.22) | 62 | > 1000.0 | 1.15 (1.06-1.25) | 0 | 942.2 |
| Aune 2015 | WHR per 0.1 unit increase | Endometrial CA inc | C54.1 | 5 | 1.21 (1.13-1.29) | 0 | > 1000.0 | 1.16 (1.04-1.32) | 0 | 95.1 |
| Crosbie 2010 | BMI per 5kg/$m^2$ increase | Endometrial CA inc: PoMP | C54.1 | 6 | 1.60 (1.40-1.83) | 89 | > 1000.0 | 1.52 (1.16-1.98) | 0 | 462.3 |
| Crosbie 2010 | BMI per 5kg/$m^2$ increase | Endometrial CA inc: PoMP HRT + | C54.1 | 6 | 1.18 (1.07-1.31) | 0 | 601.3 | 1.16 (1.02-1.31) | 0 | 38.1 |
| Crosbie 2010 | BMI per 5kg/$m^2$ increase | Endometrial CA inc: PoMP HRT - | C54.1 | 3 | 1.90 (1.56-2.30) | 77 | > 1000.0 | 1.80 (1.06-3.07) | 0 | 32.0 |
| Keum 2015 | WG per 5kg increase | Endometrial CA inc: PoMP, HRT+ | C54.1 | 2 | 1.09 (1.02-1.17) | 0 | 83.5 | 1.09 (0.99-1.20) | 0 | 13.3 |
| Keum 2015 | WG per 5kg increase | Endometrial CA inc: PoMP, HRT - | C54.1 | 2 | 1.38 (1.28-1.49) | 0 | > 1000.0 | 1.40 (0.97-2.02) | 0 | 13.0 |
| Crosbie 2010 | BMI per 5kg/$m^2$ increase | Endometrial CA inc: PrMP | C54.1 | 6 | 1.49 (1.39-1.61) | 20 | > 1000.0 | 1.36 (1.11-1.67) | 0 | 285.2 |
| Crosbie 2010 | BMI per 5kg/$m^2$ increase | Endometrial CA inc: Type I | C54.1 | 3 | 1.75 (1.51-2.03) | 82 | > 1000.0 | 1.71 (1.06-2.77) | 0 | 33.8 |
| Crosbie 2010 | BMI per 5kg/$m^2$ increase | Endometrial CA inc: Type II | C54.1 | 3 | 1.59 (1.29-1.78) | 76 | > 1000.0 | 1.47 (1.03-2.08) | 0 | 30.6 |
| Aune 2015 | BMI per 5kg/$m^2$ increase | Endometrial CA mort | C54.1 | 3 | 1.46 (1.29-1.65) | 29 | > 1000.0 | 1.35 (0.90-2.05) | 0 | 6.0 |
| Aune 2015 | BMI iya per 5kg/$m^2$ increase | Ovarian CA inc | C56 | 6 | 1.12 (1.05-1.19) | 0 | > 1000.0 | 1.10 (1.01-1.19) | 0 | 33.2 |
| Aune 2015 | BMI per 5kg/$m^2$ increase | Ovarian CA inc | C56 | 24 | 1.08 (1.04-1.12) | 48 | > 1000.0 | 1.03 (1.00-1.06) | 0 | 17.5 |
| Poorolajal 2014 | BMI 25-29.99 vs. < 25 | Ovarian CA inc | C56 | 13 | 1.08 (0.97-1.19) | 49 | 4.8 | 1.02 (0.93-1.11) | 0 | 0.4 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Poorolajal 2014 | BMI 30+ vs. < 25 | Ovarian CA inc | C56 | 13 | 1.27 (1.17-1.38) | 12 | > 1000.0 | 1.16 (1.02-1.30) | 0 | 51.9 |
| Aune 2015 | HC per 10cm increase | Ovarian CA inc | C56 | 4 | 1.04 (0.82-1.31) | 72 | 0.3 | 1.09 (0.91-1.29) | 17 | 1.8 |
| Aune 2015 | WC per 10cm increase | Ovarian CA inc | C56 | 6 | 1.06 (1.00-1.12) | 0 | 18.1 | 1.05 (0.99-1.11) | 0 | 7.3 |
| Aune 2015 | WG per 5kg increase | Ovarian CA inc | C56 | 6 | 1.02 (0.96-1.09) | 67 | 1.0 | 1.02 (0.98-1.06) | 0 | 2.9 |
| Aune 2015 | Weight per 5kg increase | Ovarian CA inc | C56 | 4 | 1.03 (1.01-1.05) | 7 | 715.3 | 1.03 (1.00-1.05) | 0 | 23.2 |
| Aune 2015 | WHR per 0.1 unit increase | Ovarian CA inc | C56 | 5 | 1.00 (0.93-1.07) | 0 | 0.1 | 0.99 (0.93-1.07) | 0 | 0.1 |
| Poorolajal 2014 | BMI 25-29.99 vs. < 25 | Ovarian CA inc, PoMP | C56 | 5 | 1.03 (0.87-1.21) | 52 | 0.4 | 0.99 (0.86-1.15) | 23 | 0.1 |
| Poorolajal 2014 | BMI 30+ vs. < 25 | Ovarian CA inc, PoMP | C56 | 5 | 1.23 (1.03-1.47) | 46 | 37.6 | 1.12 (0.97-1.29) | 0 | 6.7 |
| Keum 2015 | WG per 5kg increase | Ovarian CA inc, PoMP, HRT - | C54.1 | 2 | 1.13 (1.03-1.24) | 0 | 116.4 | 1.11 (0.99-1.25) | 0 | 10.6 |
| Poorolajal 2014 | BMI 25-29.99 vs. < 25 | Ovarian CA inc, PrMP | C56 | 3 | 1.21 (0.96-1.53) | 0 0 | 7.9 | 1.14 (0.85-1.53) | 0 | 1.6 |
| Poorolajal 2014 | BMI 30+ vs. < 25 | Ovarian CA inc, PrMP | C56 | 3 | 1.57 (1.20-2.06) | 0 | > 1000.0 | 1.54 (0.95-2.51) | 0 | 11.4 |
| Zhang 2015 | BMI obese vs. normal weight* | Prostate CA inc | C61 | 14 | 1.00 (0.95-1.06) | 40 | 0.1 | 0.99 (0.95-1.03) | 1 | 0.6 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Prostate CA inc | C61 | 26 | 1.03 (0.99-1.06) | 76 | 8.5 | 1.00 (0.97-.03) | 19 | 0.02 |
| MacInnis 2006 | WC per 10cm increase | Prostate CA inc | C61 | 4 | 1.03 (0.97-1.09) | 0 | 2.0 | 1.03 (0.97-1.09) | 0 | 2.0 |
| Keum 2015 | WG per 5kg increase | Prostate CA inc | C61 | 4 | 0.98 (0.94-1.02) | 51 | 3.3 | 0.99 (0.96-1.02) | 13 | 0.8 |
| Keum 2015 | WG: highest vs. lowest cat. | Prostate CA inc | C61 | 8 | 0.98 (0.91-1.06) | 31 | 0.7 | 1.01 (0.95-1.07) | 0 | 0.3 |
| Discaccati 2012 | BMI per 5kg/$m^2$ increase | Prostate CA inc, advanced | C61 | 13 | 1.09 (1.02-1.16) | 40 | 98.0 | 1.04 (0.99-1.09) | 0 | 10.6 |
| Discaccati 2012 | BMI per 5kg/$m^2$ increase | Prostate CA inc, localized | C61 | 12 | 0.94 (0.91-0.97) | 20 | > 1000.0 | 0.95 (0.91-0.99) | 0 | 76.7 |
| Keum 2015 | WG per 5kg increase | Prostate CA inc, advanced | C61 | 4 | 1.04 (0.99-1.09) | 0 | 7.6 | 1.02 (0.96-1.10) | 0 | 1.1 |
| Keum 2015 | WG per 5kg increase | Prostate CA inc, high screening rate | C61 | 2 | 0.95 (0.92-0.99) | 0 | 141.4 | 0.95 (0.90-1.01) | 0 | 11.4 |
| Keum 2015 | WG per 5kg increase | Prostate CA inc, localised | C61 | 4 | 0.96 (0.92-1.00) | 35 | 12.2 | 0.98 (0.94-1.01) | 0 | 5.8 |
| Keum 2015 | WG per 5kg increase | Prostate CA inc, low screening rate | C61 | 2 | 1.01 (0.97-1.05) | 0 | 0.5 | 1.01 (0.97-1.05) | 0 | 0.5 |
| Zhang 2015 | BMI obese vs. normal weight* | Prostate CA mort | C61 | 10 | 1.24 (1.15-1.33) | 0 | > 1000.0 | 1.22 (1.09-1.37) | 0 | > 1000.0 |
| Cao 2011 | BMI per 5kg/$m^2$ increase | Prostate CA mort | C61 | 6 | 1.15 (1.06-1.25) | 59 | > 1000.0 | 1.10 (1.02-1.18) | 0 | 51.4 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Yang 2015 | BS; surgery vs. no surgery | Kidney CA inc | C64 | 2 | 1.13 (0.52-2.45) | 0 | 0.3 | 1.13 (0.52-2.45) | 0 | 0.3 |
| Wang 2014 | BMI 25-29.99 vs. < 25 | Kidney CA inc | C64 | 43 | 1.35 (1.27-1.43) | 36 | > 1000.0 | 1.25 (1.16-1.35) | 0 | > 1000.0 |
| Wang 2014 | BMI 30+ vs. < 25 | Kidney CA inc | C64 | 31 | 1.79 (1.64-1.95) | 44 | > 1000.0 | 1.52 (1.32-1.75) | 0 | > 1000.0 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Kidney CA inc | C64 | 19 | 1.30 (1.23-1.36) | 49 | > 1000.0 | 1.23 (1.12-1.34) | 0 | > 1000.0 |
| Keum 2015 | WG: highest vs. lowest cat. | Kidney CA inc | C64 | 3 | 1.42 (1.11-1.81) | 10 | 210.1 | 1.28 (0.97-1.69) | 0 | 10.5 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Kidney CA inc, men | C64 | 9 | 1.24 (1.17-1.32) | 22 | > 1000.0 | 1.19 (1.06-1.33) | 0 | 329.3 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Kidney CA inc, women | C64 | 10 | 1.33 (1.25-1.42) | 45 | > 1000.0 | 1.28 (1.12-1.46) | 0 | > 1000.0 |
| Sun 2015 | BMI 25-29.99 vs. < 25 | Bladder CA inc | C67 | 26 | 1.07 (1.01-1.14) | 38 | 38.0 | 1.04 (0.99-1.08) | 43 | 6.8 |
| Sun 2015 | BMI 30+ vs. < 25 | Bladder CA inc | C67 | 26 | 1.09 (1.04-1.15) | 15 | > 1000.0 | 1.06 (1.00-1.12) | 0 | 28.0 |
| Sun 2015 | BMI per 5kg/$m^2$ increase | Bladder CA inc | C67 | 8 | 1.04 (1.00-1.09) | 32 | 13.6 | 1.04 (1.00-1.08) | 0 | 16.4 |
| Shao 2014 | BMI 25-29.99 vs. < 25 | Meningeoma inc | C70 | 4 | 1.11 (0.94-1.30) | 0 | 3.5 | 1.08 (0.91-1.28) | 0 | 1.6 |
| Shao 2014 | BMI 30+ vs. < 25 | Meningeoma inc | C70 | 4 | 1.55 (1.28-1.86) | 0 | > 1000.0 | 1.49 (1.09-2.04) | 0 | 75.6 |
| Ma 2015 | BMI 30+ vs. < 25 | Thyroid CA inc | C73 | 24 | 1.29 (1.20-1.37) | 21 | > 1000.0 | 1.22 (1.12-1.33) | 0 | > 1000.0 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Thyroid CA inc | C73 | 7 | 1.23 (1.10-1.39) | 62 | > 1000.0 | 1.13 (1.03-1.24) | 0 | 134.9 |
| Keum 2015 | WG: highest vs. lowest cat. | Thyroid CA inc | C73 | 4 | 1.06 (0.82-1.38) | 0 | 0.6 | 1.03 (0.79-1.35) | 0 | 0.2 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Thyroid CA inc, men | C73 | 4 | 1.32 (1.04-1.69) | 77 | 39.3 | 1.12 (1.00-1.25) | 0 | 12.2 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Thyroid CA inc, women | C73 | 3 | 1.14 (1.06-1.22) | 3 | > 1000.0 | 1.15 (0.99-1.33) | 0 | 15.3 |
| Larsson 2011 | BMI 25-29.99 vs. < 25 | Hodgkin's lymphoma inc | C81 | 7 | 0.97 (0.85-1.12) | 17 | 0.4 | 0.96 (0.85-1.08) | 0 | 1.1 |
| Larsson 2011 | BMI 30+ vs. < 25 | Hodgkin's lymphoma inc | C81 | 4 | 1.41 (1.14-1.75) | 22 | 534.2 | 1.24 (0.96-1.59) | 0 | 9.4 |
| Yang 2015 | BS; surgery vs. no surgery | NHL inc | C82-C85 | 2 | 0.57 (0.25-1.29) | 0 | 4.5 | 0.57 (0.25-1.29) | 0 | 4.5 |
| Larsson 2007 | BMI 25-29.99 vs. < 25 | NHL inc | C82-C85 | 15 | 1.06 (0.99-1.12) | 28 | 12.3 | 1.03 (0.99-1.07) | 0 | 5.7 |
| Larsson 2007 | BMI 30+ vs. < 25 | NHL inc | C82-C85 | 15 | 1.19 (1.04-1.37) | 66 | 67.7 | 1.09 (0.99-1.19) | 0 | 13.1 |
| Larsson 2011 | BMI per 5kg/$m^2$ increase | NHL inc | C82-C85 | 23 | 1.07 (1.04-1.10) | 9 | > 1000.0 | 1.05 (1.02-1.09) | 0 | 772.7 |
| Larsson 2011 | BMI per 5kg/$m^2$ increase | NHL mort | C82-C85 | 7 | 1.14 (1.04-1.25) | 53 | 188.6 | 1.10 (1.01-1.20) | 0 | 33.2 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Castillo 2014 | BMI 25-29.99 vs. < 25 | Diff. large B-cell lymphoma inc | C83.3 | 10 | 1.13 (1.02-1.25) | 0 | 52.5 | 1.10 (0.98-1.23) | 0 | 9.3 |
| Castillo 2014 | BMI 30+ vs. < 25 | Diff. large B-cell lymphoma inc | C83.3 | 12 | 1.25 (1.08-1.44) | 27 | 390.6 | 1.15 (1.00-1.32) | 0 | 18.4 |
| Yang 2015 | BS; surgery vs. no surgery | Multiple myeloma inc | C90.0 | 2 | 0.61 (0.14-2.63) | 0 | 1.0 | 0.61 (0.14-2.63) | 0 | 1.0 |
| Wallin 2012 | BMI 25-29.99 vs. < 25 | Multiple myeloma inc | C90.0 | 20 | 1.12 (1.07-1.18) | 0 | > 1000.0 | 1.10 (1.02-1.18) | 0 | 85.2 |
| Wallin 2012 | BMI 30+ vs. < 25 | Multiple myeloma inc | C90.0 | 19 | 1.21 (1.08-1.35) | 34 | 978.8 | 1.14 (1.01-1.28) | 0 | 32.5 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Multiple myeloma inc | C90.0 | 13 | 1.12 (1.09-1.15) | 0 | > 1000.0 | 1.09 (1.03-1.17) | 0 | 171.3 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Multiple myeloma inc, men | C90.0 | 7 | 1.12 (1.06-1.18) | 5 | > 1000.0 | 1.07 (0.98-1.17) | 0 | 7.3 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Multiple myeloma inc, women | C90.0 | 6 | 1.11 (1.08-1.15) | 0 | > 1000.0 | 1.12 (1.02-1.23) | 0 | 58.0 |
| Wallin 2012 | BMI 25-29.99 vs. < 25 | Multiple myeloma mort | C90.0 | 8 | 1.15 (1.04-1.26) | 0 | 168.5 | 1.12 (0.99-1.27) | 0 | 13.8 |
| Wallin 2012 | BMI 30+ vs. < 25 | Multiple myeloma mort | C90.0 | 7 | 1.54 (1.35-1.76) | 0 | > 1000.0 | 1.50 (1.12-2.02) | 0 | 147.1 |
| Castillo 2012 | BMI 30+ vs. < 25 | Leukemia inc | C91-C92 | 25 | 1.26 (1.16-1.37) | 43 | > 1000.0 | 1.17 (1.07-1.27) | 0 | > 1000.0 |
| Castillo 2012 | BMI 30+ vs. < 25 | Leukemia mort | C91-C92 | 8 | 1.28 (1.11-1.49) | 30 | > 1000.0 | 1.18 (1.02-1.37) | 0 | 32.3 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Leukemia inc | C91-C95 | 8 | 1.12 (1.05-1.18) | 51 | > 1000.0 | 1.07 (1.01-1.14) | 0 | 52.0 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Leukemia inc, men | C91-C95 | 5 | 1.08 (1.02-1.13) | 0 | 118.0 | 1.06 (0.98-1.14) | 0 | 6.7 |
| Renehan 2008 | BMI per 5kg/$m^2$ increase | Leukemia inc, women | C91-C95 | 3 | 1.17 (1.04-1.33) | 79 | 100.0 | 1.10 (1.00-1.21) | 0 | 15.7 |
| Larsson 2008 | BMI 30+ vs. < 25 | Leukaemia inc, ALL | C91 | 5 | 1.65 (1.16-2.35) | 7 | 195.6 | 1.40 (0.96-2.04) | 0 | 11.3 |
| Larsson 2008 | BMI 30+ vs. < 25 | Leukaemia inc, CLL | C91 | 5 | 1.25 (1.11-1.41) | 31 | > 1000.0 | 1.17 (1.02-1.34) | 0 | 45.8 |
| Larsson 2008 | BMI 30+ vs. < 25 | Leukaemia inc, AML | C92 | 6 | 1.52 (1.19-1.95) | 79 | > 1000.0 | 1.20 (1.03-1.40) | 0 | 45.2 |
| Larsson 2008 | BMI 30+ vs. < 25 | Leukaemia inc, CML | C92 | 5 | 1.26 (1.09-1.46) | 0 | 592.7 | 1.20 (1.03-1.41) | 0 | 45.3 |

Abbreviations: AdCa, adenocarcinoma; adv, advanced; ALL, acute lymphatic leukemia; AML, acute myeloic leukemia; ASE, adjusted for sunlight exposure; biliary tract system cancer, includes cancers of gallbladder, extrahepatic bile duct and ampulla of Vateri; BMI, Body Mass Index; BMI iya, Body Mass Index in young adulthood; BS, bariatric surgery; CA, cancer; CI, confidence interval; CLL, chronic lymphatic leukemia; CML, chronic myeloic leukemia; ER = estrogen receptor status; HC, hip circumference; HRT, hormone replacement therapy; inc, incidence; loc, localised; ; LR: Likelihood Ratio for the corresponding credibility ceiling; mort, mortality; NHL, Non-Hodgkin lymphoma; PoMP, postmenopausal; PR = progesterone receptor status; PrMP, premenopausal; RR, relative risk; SqCa, squamous cell carcinoma; WC, waist circumference; WG, weight gain; WHR, waist-to-hip ratio;

*cut-offs in categories varied between included studies

± BMI, weight gain or weight change, varies between included studies

All statistical tests were two-sided

**Supplementary Table 5:** Details of evidence grading for meta-analyses associating continuous contrasts of obesity and risk of cancer incidence or mortality — only cohort studies included.

| Obesity indices | Exposure contrast | Outcome | N * | Sample size Cases/Cohort | Largest study# | Random effects Summary RR (95% CI)† | Random P-value¶ | 95% Prediction interval | 10% credibility RR (95% CI) | Egger's P‡ | $I^2$ (%) | Excess significance§ O/E** | Excess significance§ P-value ‖ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Associations supported by strong evidence** | | | | | | | | | | | | | |
| BMI | per 5kg/$m^2$ increase | Oesophageal AdCa inc | 8 | 1,918 / 6,430,994 | 1.67 (1.44-1.92) | 1.53 (1.41-1.67) | 1.4E-22 | 1.38-1.71 | 1.36 (1.12-1.65) | 0.19 | 0 | 6/6.5 | NP |
| BMI | per 5kg/$m^2$ increase | Colon CA inc, men | 24 | 42,821 / 5,213,139 | 1.27 (1.23-1.31) | 1.30 (1.25-1.35) | <1E-100 | 1.19-1.42 | 1.24 (1.14-1.34) | 0.30 | 24 | 18/15.4 | 0.39 |
| BMI | per 5kg/$m^2$ increase | Rectal CA inc, men | 17 | 23,167 / 4,293,489 | 1.08 (1.05-1.12) | 1.09 (1.06-1.13) | 1.1E-7 | 1.04-1.15 | 1.08 (1.02-1.13) | 0.66 | 6 | 3/3.2 | NP |
| BMI | per 5kg/$m^2$ increase | Biliary tract system CA inc | 10 | 6,961 / 6,008,270 | 1.88 (1.60-2.21) | 1.56 (1.34-1.81) | 1.3E-8 | 1.13-2.15 | 1.38 (1.13-1.68) | 0.24 | 25 | 4/9.00 | NP |
| BMI | per 5kg/$m^2$ increase | Pancreatic CA inc | 22 | 8,987 / 4,978,230 | 1.09 (1.03-1.16) | 1.10 (1.06-1.14) | 2.2E-7 | 1.01-1.21 | 1.06 (1.02-1.10) | 0.34 | 25 | 4/3.4 | 0.77 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WG | per 5kg increase | Breast CA inc, PoMP, HRT- | 7 | 10,283 / 342,249 | 1.14 (1.11-1.18) | 1.11 (1.09-1.13) | 5.7E-23 | 1.07-1.15 | 1.08 (1.03-1.14) | 0.66 | 17 | 5/4.5 | 1.00 |
| WHR | per 0.1 unit increase | Endometrial CA inc | 5 | 2,447 / 394,340 | 1.33 (1.18-1.51) | 1.21 (1.13-1.29) | 1.0E-8 | 1.09-1.34 | 1.16 (1.04-1.32) | 0.54 | 0 | 3/4.4 | NP |
| BMI | per 5kg/m$^2$ increase | Endometrial CA inc, PrMP | 6 | 5,981 / 2,558,935 | 1.53 (1.48-1.58) | 1.49 (1.39-1.61) | 3.1E-27 | 1.27-1.76 | 1.36 (1.11-1.67) | 0.56 | 20 | 5/4.2 | 0.67 |
| BMI | per 5kg/m$^2$ increase | Kidney CA inc, men | 9 | 8,983 / 3,945,950 | 1.19 (1.13-1.24) | 1.24 (1.17-1.32) | 5.9E-12 | 1.10-1.41 | 1.19 (1.06-1.33) | 0.16 | 22 | 5/4.0 | 0.52 |
| BMI | per 5kg/m$^2$ increase | Kidney CA inc, women | 10 | 8,795 / 4,252,718 | 1.35 (1.28-1.42) | 1.33 (1.25-1.42) | 7.2E-18 | 1.13-1.57 | 1.28 (1.12-1.46) | 0.39 | 45 | 9/6.9 | 0.19 |
| BMI | per 5kg/m$^2$ increase | Multiple myeloma inc | 13 | 14,634 / 7,429,478 | 1.11 (1.07-1.15) | 1.12 (1.09-1.15) | 2.8E-15 | 1.08-1.15 | 1.09 (1.03-1.17) | 0.65 | 0 | 4/3.5 | 0.76 |
| BMI | per 5kg/m$^2$ increase | Multiple myeloma inc, women | 6 | 7,183 / 3,607,950 | 1.11 (1.07-1.15) | 1.11 (1.08-1.15) | 2.8E-10 | 1.06-1.17 | 1.12 (1.02-1.23) | 0.82 | 0 | 2/1.7 | 0.67 |
| **Associations supported by highly suggestive evidence** | | | | | | | | | | | | | |
| BMI | per 5kg/m$^2$ increase | Oesophageal SqCa inc | 5 | 3,545 / 6,369,699 | 0.77 (0.70-0.85) | 0.63 (0.53-0.75) | 1.7E-7 | 0.34-1.15 | 0.68 (0.52-0.91) | 0.26 | 80 | 5/3.5 | 0.33 |
| BMI | per 5kg/m$^2$ increase | Oesophageal SqCa inc, women | 2 | 1,758 / 3,224,247 | 0.61 (0.54-0.70) | 0.57 (0.48-0.67) | 1.2E-10 | NA | 0.57 (0.31-1.05) | NA | 58 | 2/2.0 | 1.00 |
| BMI | per 5kg/m$^2$ increase | Colon CA inc | 44 | 82,766 / 9,434,650 | 1.03 (1.01-1.05) | 1.22 (1.17-1.28) | 3.9E-16 | 0.95-1.57 | 1.08 (1.05-1.11) | <0.01 | 84 | 27/4.4 | <0.01 |
| WC | per 10cm increase | Colon CA inc | 8 | 3,371 / 869,185 | 1.14 (1.05-1.25) | 1.25 (1.15-1.35) | 3.0E-8 | 1.01-1.54 | 1.18 (1.07-1.31) | 0.06 | 50 | 7/2.4 | <0.01 |
| BMI | per 5kg/m$^2$ increase | Liver CA inc | 19 | 17,281 / 4,977,849 | 1.12 (1.05-1.19) | 1.37 (1.23-1.53) | 2.4E-8 | 0.90-2.07 | 1.12 (1.04-1.20) | 0.05 | 81 | 10/4.7 | 0.01 |
| BMI | per 5kg/m$^2$ increase | Lung CA inc | 15 | 12,591 / 2,833,306 | 0.86 (0.82-0.90) | 0.77 (0.72-0.83) | 8.0E-13 | 0.61-0.97 | 0.84 (0.78-0.92) | 0.05 | 71 | 10/7.1 | 0.19 |
| BMI | per 5kg/m$^2$ increase | Lung CA inc, men | 10 | 7,569 / 1,387,620 | 0.84 (0.79-0.88) | 0.79 (0.73-0.85) | 1.7E-10 | 0.65-0.95 | 0.83 (0.75-0.92) | 0.07 | 53 | 7/5.0 | 0.23 |
| BMI | per 5kg/m$^2$ increase | Breast CA inc, PoMP | 29 | 27,700 / 2,318,992 | 1.18 (1.15-1.22) | 1.13 (1.09-1.17) | 4.1E-10 | 0.97-1.31 | 1.06 (1.03-1.10) | 0.67 | 61 | 12/16.6 | NP |
| BMI iya | per 5kg/m$^2$ increase | Endometrial CA inc | 9 | 4,345 / 631,915 | 1.23 (1.11-1.35) | 1.45 (1.28-1.64) | 1.9E-9 | 0.98-2.15 | 1.33 (1.14-1.55) | 0.41 | 75 | 8/5.2 | 0.09 |
| BMI | per 5kg/m$^2$ increase | Endometrial CA inc | 28 | 22,320 / 6,445,255 | 1.65 (1.60-1.71) | 1.54 (1.47-1.61) | <1.0E-100 | 1.26-1.89 | 1.41 (1.26-1.57) | 0.35 | 81 | 26/25.2 | 1.00 |
| WC | per 10cm increase | Endometrial CA inc | 4 | 1,524 / 315,770 | 1.28 (1.19-1.37) | 1.27 (1.17-1.39) | 7.3E-8 | 0.88-1.85 | 1.19 (1.03-1.38) | 0.59 | 70 | 3/2.9 | 1.00 |
| WG | per 5kg increase | Endometrial CA inc | 7 | 2,806 / 460,901 | 1.17 (1.12-1.22) | 1.16 (1.12-1.20) | 3.7E-18 | 1.06-1.27 | 1.13 (1.05-1.22) | 0.95 | 47 | 6/2.8 | 0.02 |
| Weight | per 5kg increase | Endometrial CA inc | 7 | 1,778 / 342,382 | 1.11 (1.08-1.15) | 1.17 (1.13-1.22) | 7.7E-15 | 1.04-1.31 | 1.15 (1.06-1.25) | 0.29 | 62 | 6/1.0 | <0.01 |
| BMI | per 5kg/m$^2$ increase | Endometrial CA inc, PoMP | 6 | 10,075 / 2,558,935 | 1.51 (1.45-1.58) | 1.60 (1.40-1.83) | 1.4E-11 | 1.01-2.53 | 1.52 (1.16-1.98) | 0.88 | 89 | 6/5.0 | 0.60 |
| BMI | per 5kg/m$^2$ increase | Endometrial CA inc, Type I | 3 | 7,125 / 1,102,927 | 1.58 (1.53-1.62) | 1.75 (1.51-2.03) | 1.8E-13 | 0.30-10.24 | 1.71 (1.06-2.77) | 0.26 | 82 | 3/2.9 | 1.00 |
| BMI | per 5kg/m$^2$ increase | Endometrial CA inc, Type II | 3 | 1,059 / 1,102,927 | 1.35 (1.25-1.46) | 1.59 (1.29-1.78) | 5.7E-7 | 0.24-9.67 | 1.47 (1.03-2.08) | 0.52 | 76 | 3/1.5 | 0.25 |
| BMI | per 5kg/m$^2$ increase | Kidney CA inc | 19 | 17,778 / 8,198,668 | 1.19 (1.13-1.24) | 1.30 (1.23-1.36) | 9.8E-25 | 1.12-1.50 | 1.23 (1.12-1.34) | 0.11 | 49 | 14/7.9 | <0.01 |
| **Associations supported by suggestive evidence** | | | | | | | | | | | | | |
| BMI | per 5kg/m$^2$ increase | Oesophageal SqCa inc, men | 3 | 1,787 / 3,145,452 | 0.77 (0.70-0.85) | 0.71 (0.61-0.84) | 6.1E-5 | 0.14-3.69 | 0.72 (0.52-0.98) | 0.03 | 44 | 3/1.8 | 0.28 |
| BMI | per 5kg/m$^2$ increase | Colon CA inc, women | 20 | 39,945 / 4,221,511 | 1.03 (1.01-1.05) | 1.12 (1.06-1.17) | 6.9E-6 | 0.96-1.30 | 1.05 (1.02-1.09) | <0.01 | 59 | 9/2.1 | <0.01 |
| WC | per 10cm increase | Colon CA inc, men | 5 | 1,869 / 469,320 | 1.15 (1.01-1.31) | 1.33 (1.18-1.50) | 1.6E-6 | 0.95-1.86 | 1.23 (1.04-1.44) | 0.51 | 45 | 4/1.5 | 0.03 |
| WC | per 10cm increase | Colon CA inc, women | 3 | 1,502 / 399,865 | 1.14 (1.05-1.25) | 1.16 (1.08-1.23) | 1.1E-5 | 0.76-1.76 | 1.16 (1.01-1.32) | 0.25 | 0 | 3/1.0 | 0.04 |
| WHR | per 0.1 unit increase | Colon CA inc | 8 | 3,132 / 941,955 | 1.24 (1.10-1.39) | 1.29 (1.17-1.43) | 1.1E-6 | 0.97-1.72 | 1.17 (1.05-1.31) | 0.16 | 53 | 6/4.2 | 0.29 |
| WHR | per 0.1 unit increase | Colon CA inc, men | 4 | 1,563 / 461,754 | 1.24 (1.05-1.46) | 1.43 (1.19-1.71) | 1.0E-6 | 0.71-2.87 | 1.33 (1.05-1.68) | 0.32 | 56 | 4/2.1 | 0.13 |
| WHR | per 0.1 unit increase | Colon CA inc, women | 4 | 1,569 / 480,201 | 1.24 (1.10-1.39) | 1.20 (1.08-1.33) | 5.0E-5 | 0.86-1.69 | 1.12 (0.98-1.28) | 0.90 | 30 | 2/2.1 | NP |
| WG | per 5kg increase | Colon CA inc, men | 4 | 1,718 / 142,085 | 1.10 (1.03-1.17) | 1.09 (1.05-1.14) | 4.1E-5 | 1.00-1.19 | 1.07 (1.00-1.14) | 0.56 | 0 | 2/0.8 | 0.12 |
| WG | per 5kg increase | Colon CA inc | 7 | 2.909 / 298,174 | 1.10 (1.03-1.17) | 1.07 (1.03-1.10) | 8.3E-5 | 1.02-1.11 | 1.04 (1.00-1.09) | 0.88 | 0 | 2/1.3 | 0.50 |
| WG | per 1kg increase / year | Colorectal CA inc | 17 | 27,638 / 1,974,918 | 1.31 (1.18-1.45) | 1.20 (1.10-1.31) | 3.9E-5 | 0.95-1.52 | 1.11 (1.03-1.21) | 0.72 | 37 | 4/15.3 | NP |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BMI | per 5kg/m$^2$ increase | Rectal CA inc | 31 | 43,196 / 7,495,868 | 1.01 (0.98-1.04) | 1.07 (1.03-1.10) | 5.9E-5 | 0.98-1.16 | 1.03 (1.00-1.05) | 0.35 | 27 | 4/1.7 | 0.09 |
| WC | per 10cm increase | Pancreatic CA inc | 5 | 1,365 / 1,154,996 | 1.08 (0.98-1.18) | 1.11 (1.05-1.18) | 2.0E-4 | 1.02-1.22 | 1.11 (1.02-1.20) | 0.11 | 0 | 2/0.5 | 0.09 |
| WHR | per 0.1 unit increase | Pancreatic CA inc | 4 | 1,438 / 1,109,945 | 1.32 (1.12-1.56) | 1.20 (1.09-1.31) | 9.6E-5 | 0.96-1.50 | 1.14 (1.01-1.28) | 0.54 | 7 | 2/3.0 | NP |
| BMI | per 5kg/m$^2$ increase | Lung CA inc, smokers | 4 | 6,185 / 475,940 | 0.82 (0.77-0.87) | 0.77 (0.69-0.86) | 7.8E-6 | 0.48-1.24 | 0.81 (0.68-0.97) | 0.12 | 78 | 4/2.9 | 0.58 |
| BMI | per 5kg/m$^2$ increase | Breast CA inc, PrMP | 20 | 20,820 / 2,200,787 | 0.91 (0.86-0.97) | 0.92 (0.88-0.97) | 4.6E-4 | 0.81-1.05 | 0.95 (0.90-0.99) | 0.28 | 38 | 7/6.3 | 0.81 |
| BMI | per 5kg/m$^2$ increase | Ovarian CA inc | 24 | 17,734 / 16,343,135 | 0.97 (0.93-1.01) | 1.08 (1.04-1.12) | 8.6E-5 | 0.96-1.21 | 1.03 (1.00-1.06) | 0.07 | 48 | 6/1.8 | <0.01 |
| BMI iya | per 5kg/m$^2$ increase | Ovarian CA inc | 6 | 9,452 / 11,085,425 | 1.16 (1.04-1.29) | 1.12 (1.05-1.19) | 3.8E-4 | 1.03-1.23 | 1.10 (1.01-1.19) | 0.60 | 0 | 1/2.5 | NP |
| BMI | per 5kg/m$^2$ increase | Prostate CA inc, loc | 12 | 19,130 / 1,033,009 | 0.96 (0.93-0.98) | 0.94 (0.91-0.97) | 4.6E-4 | 0.88-1.01 | 0.95 (0.91-0.99) | 0.46 | 20 | 3/1.7 | 0.40 |
| BMI | per 5kg/m$^2$ increase | Prostate CA mort | 6 | 6,817 / 1,263,483 | 1.08 (1.04-1.12) | 1.15 (1.06-1.25) | 8.3E-4 | 0.92-1.44 | 1.10 (1.02-1.18) | 0.30 | 59 | 4/1.6 | 0.049 |
| BMI | per 5kg/m$^2$ increase | Thyroid CA inc | 7 | 6,716 / 5,316,380 | 1.12 (1.05-1.19) | 1.23 (1.10-1.39) | 4.3E-4 | 0.89-1.70 | 1.13 (1.03-1.24) | 0.09 | 62 | 4/2.4 | 0.24 |
| BMI | per 5kg/m$^2$ increase | Thyroid CA inc, women | 3 | 3,190 / 2,159,238 | 1.12 (1.05-1.19) | 1.14 (1.06-1.22) | 4.0E-4 | 0.67-1.93 | 1.15 (0.99-1.33) | 0.41 | 3 | 2/1.1 | 0.30 |
| BMI | per 5kg/m$^2$ increase | NHL inc | 23 | 29,064 / 9,056,494 | 1.04 (0.99-1.09) | 1.07 (1.04-1.10) | 1.9E-6 | 1.02-1.12 | 1.05 (1.02-1.09) | 0.26 | 9 | 5/2.7 | 0.18 |
| BMI | per 5kg/m$^2$ increase | Multiple myeloma inc, men | 7 | 7,451 / 3,821,528 | 1.13 (1.07-1.19) | 1.12 (1.06-1.18) | 1.1E-4 | 1.02-1.22 | 1.07 (0.98-1.17) | 0.76 | 5 | 2/2.0 | NP |
| BMI | per 5kg/m$^2$ increase | Leukemia inc | 8 | 15,117 / 6,758,260 | 1.07 (1.02-1.12) | 1.12 (1.05-1.18) | 2.3E-4 | 0.96-1.30 | 1.07 (1.01-1.14) | 0.22 | 51 | 4/2.4 | 0.25 |
| **Associations supported by weak evidence** | | | | | | | | | | | | | |
| BMI | per 5kg/m$^2$ increase | Oesophageal AdCa inc, men | 5 | 996 / 3,196,747 | 1.67 (1.44-1.92) | 1.52 (1.33-1.74) | 1.3E-9 | 1.09-2.11 | 1.31 (1.04-1.64) | 0.37 | 24 | 4/3.6 | 1.00 |
| BMI | per 5kg/m$^2$ increase | Oesophageal AdCa inc, women | 3 | 922 / 3234247 | 1.54 (1.26-1.89) | 1.51 (1.30-1.75) | 2.8E-8 | 0.59-3.86 | 1.49 (1.05-2.12) | 0.44 | 0 | 2/2.7 | NP |
| BMI | per 5kg/m$^2$ increase | Lung CA inc, women | 5 | 5,022 / 1,445,686 | 0.86 (0.82-0.90) | 0.76 (0.61-0.94 | 0.01 | 0.36-1.63 | 0.88 (0.75-1.03) | 0.46 | 86 | 3/3.0 | 1.00 |
| BMI | per 5kg/m$^2$ increase | Melanoma inc, men | 6 | 6,647 / 2,808,095 | 1.16 (1.08-1.26) | 1.17 (1.05-1.30) | 4.9E-3 | 0.89-1.52 | 1.11 (0.96-1.27) | 0.89 | 46 | 3/2.5 | 0.69 |
| BMI | per 5kg/m$^2$ increase | Melanoma inc, women | 5 | 7,148 / 2,886,890 | 0.97 (0.91-1.00) | 0.96 (0.93-1.00) | 0.03 | 0.90-1.02 | 0.97 (0.93-1.01) | 0.28 | 0 | 1/0.5 | 0.40 |
| BMI | per 5kg/m$^2$ increase | Endometrial CA inc: PostMP, HRT- | 3 | 699 / 360,326 | 1.61 (1.41-1.85) | 1.90 (1.56-2.30) | 9.2E-11 | 0.19-18.56 | 1.80 (1.06-3.07) | <0.01 | 77 | 3/2.9 | 1.00 |
| BMI | per 5kg/m$^2$ increase | Endometrial CA inc: PostMP, HRT+ | 6 | 791 / 679,271 | 1.25 (1.05-1.47) | 1.18 (1.07-1.31) | 1.7E-3 | 1.02-1.37 | 1.16 (1.02-1.31) | 0.77 | 0 | 1/1.7 | NP |
| WG | per 5kg increase | Endometrial CA inc: PostMP, HRT- | 2 | 285 / 33,340 | 1.36 (1.25-1.46) | 1.38 (1.28-1.49) | 3.6E-17 | NA | 1.40 (0.97-2.02) | NA | 0 | 2/1.0 | 0.50 |
| WG | per 5kg increase | Endometrial CA inc: PostMP, HRT+ | 2 | 334 / 35,333 | 1.09 (1.00-1.18) | 1.09 (1.02-1.17) | 0.01 | NA | 1.09 (0.99-1.20) | NA | 0 | 1/0.2 | 0.18 |
| HC | per 10 cm increase | Endometrial CA inc | 2 | 831 / 255,650 | 1.32 (1.20-1.45) | 1.29 (1.19-1.41) | 2.9E-09 | NA | 1.23 (0.98-1.54) | NA | 0 | 1/1.7 | NP |
| BMI | per 5kg/m$^2$ increase | Endometrial CA mort | 3 | 962 / 1,781,648 | 1.42 (1.33-1.63) | 1.46 (1.29-1.65) | 1.7E-9 | 0.48-4.48 | 1.35 (0.90-2.05) | 0.64 | 29 | 2/2.0 | 1.00 |
| Weight | per 5kg increase | Ovarian CA inc | 4 | 1,281 / 405,655 | 1.02 (1.00-1.05) | 1.03 (1.01-1.05) | 1.3E-3 | 0.98-1.08 | 1.03 (1.00-1.05) | 0.42 | 7 | 1/0.2 | 0.20 |
| WG | per 5kg increase | Ovarian CA inc: PostMP, HRT- | 2 | 217 / 23,984 | 1.16 (1.03-1.31) | 1.13 (1.03-1.24) | 8.5E-3 | NA | 1.11 (0.99-1.25) | NA | 0 | 1/0.3 | 0.25 |
| BMI | per 5kg/m$^2$ increase | Prostate CA inc, adv | 13 | 7,067 / 1,080,790 | 1.00 (0.94-1.08) | 1.09 (1.02-1.16) | 0.01 | 0.92-1.29 | 1.04 (0.99-1.09) | 0.02 | 40 | 3/0.7 | 0.02 |
| WG | per 5kg increase | Prostate CA inc, high screening rate | 2 | 4,894 / 67,335 | 0.96 (0.92-1.00) | 0.95 (0.92-0.99) | 7.0E-3 | NA | 0.95 (0.90-1.01) | NA | 0 | 1/0.4 | 0.25 |
| BMI | per 5kg/m$^2$ increase | Thyroid CA inc, men | 4 | 3,526 / 3,157,142 | 1.09 (0.98-1.22) | 1.32 (1.04-1.69) | 0.02 | 0.46-3.84 | 1.12 (1.00-1.25) | 0.23 | 77 | 2/1.0 | 0.27 |
| BMI | per 5kg/m$^2$ increase | NHL mort | 7 | 5,920 / 3,511,893 | 1.18 (1.09-1.29) | 1.14 (1.04-1.25) | 5.3E-3 | 0.90-1.45 | 1.10 (1.01-1.20) | 0.57 | 53 | 3/3.4 | NP |
| BMI | per 5kg/m$^2$ increase | Leukemia inc, men | 5 | 7,827 / 3,497,392 | 1.09 (1.02-1.17) | 1.08 (1.02-1.13) | 8.4E-3 | 0.99-1.17 | 1.06 (0.98-1.14) | 0.47 | 0 | 1/1.5 | NP |
| BMI | per 5kg/m$^2$ increase | Leukemia inc, women | 3 | 7,290 / 3,260,868 | 1.07 (1.02-1.12) | 1.17 (1.04-1.33) | 9.8E-3 | 0.28-4.93 | 1.10 (1.00-1.21) | 0.20 | 79 | 3/1.1 | 0.05 |

Abbreviations: AdCa, adenocarcinoma ;adv, advanced; BMI, Body Mass Index; biliary tract system cancer, includes cancers of gallbladder, extrahepatic bile duct and ampulla of Vateri; BMI iya, Body Mass Index in young adulthood; CA, cancer; CI, confidence interval; HC, hip circumference; HRT, hormone replacement therapy; inc, incidence; mort, mortality; NA: Not available, due to <3 included studies; NHL, Non-Hodgkin lymphoma; NP: Not Pertinent, because the estimated is larger than the observed, and there is no evidence of excess statistical significance based on the assumption made for the plausible effect size; SqCa, squamous cell carcinoma; PrMP, premenopausal; PoMP, postmenopausal; RR, relative risk; WC, waist circumference; WG, weight gain; WHR, waist-to-hip ratio.
* Number of studies
# Relative risk and 95% confidence interval of largest study (smallest SE) in each meta-analysis.
† Random effects refer to summary risk ratio (95% CI) using the random-effects model.
¶ P value of summary random effects estimate.
‡ P-value from the Egger's regression asymmetry test.
§ Expected number of statistically significant studies using the point estimate of the largest study (smallest standard error) as the plausible effect size.
** Observed/Expected number of statistically significant studies
|| P value of the excess statistical significance test.
All statistical tests were two-sided.

**Supplementary Table 6:** Details of evidence grading for meta-analyses associating both continuous and categorical contrasts of obesity and risk of cancer incidence or mortality — only cohort studies included.

| Obesity indices | Exposure contrast | Outcome | N* | Sample size Cases/Cohort± | Largest study# | Random effects Summary RR (95% CI)† | Random P-value¶ | 95% Prediction interval | 10% credibility RR (95% CI) | Egger's P‡ | $I^2$ (%) | Excess significance§ O/E** | Excess significance§ P-value \|\| |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Associations supported by strong evidence** | | | | | | | | | | | | | |
| BMI | per 5kg/m$^2$ increase | Oesophageal AdCa inc | 8 | 1,918 / 6,430,994 | 1.67 (1.44-1.92) | 1.53 (1.41-1.67) | 1.4E-22 | 1.38-1.71 | 1.36 (1.12-1.65) | 0.19 | 0 | 6/6.5 | NP |
| BMI | 30+ vs. < 25 | Gastrc cardia and oesophageal AdCa | 9 | 2,391 / 5,887,984 | 1.93 (1.56-2.39) | 2.19 (1.84-2.58) | 9.4E-20 | 1.46-3.25 | 1.93 (1.35-2.76) | 0.29 | 34 | 8/8.4 | NP |
| BMI | 25-29.99 vs. < 25 | Gastrc cardia and oesophageal AdCa | 10 | 2,832 / 6,265,992 | 1.35 (1.11-1.64) | 1.48 (1.35-1.61) | 3.3E-17 | 1.33-1.64 | 1.41 (1.18-1.68) | 0.50 | 0 | 6/6.7 | NP |
| BMI | per 5kg/m$^2$ increase | Colon CA inc, men | 24 | 42,821 / 5,213,139 | 1.27 (1.23-1.31) | 1.30 (1.25-1.35) | <1E-100 | 1.19-1.42 | 1.24 (1.14-1.34) | 0.30 | 24 | 18/15.4 | 0.39 |
| WG | high gain vs. stable weight | Colorectal CA inc | 19 | 28,530 / 2,110,272 | 1.26 (1.15-1.38) | 1.18 (1.12-1.25) | 3.7E-9 | 1.11-1.26 | 1.11 (1.03-1.20) | 0.83 | 0 | 2/15.8 | NP |
| BMI | per 5kg/m$^2$ increase | Rectal CA inc, men | 17 | 23,167 / 4,293,489 | 1.08 (1.05-1.12) | 1.09 (1.06-1.13) | 1.1E-7 | 1.04-1.15 | 1.08 (1.02-1.13) | 0.66 | 6 | 3/3.2 | NP |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BMI | 30+ vs. < 25 | Rectal CA inc, men | 11 | 12,109 / 2,178,376 | 1.27 (1.16-1.38) | 1.28 (1.19-1.39) | 4.8E-10 | 1.17-1.40 | 1.27 (1.06-1.51) | 0.44 | 0 | 5.3 | NP |
| BMI | 30+ vs. < 25 | Gallbladder CA inc | 13 | 5,516 / 12,517,024 | 1.88 (1.60-2.21) | 1.69 (1.48-1.92) | 3.6E-15 | 1.32-2.15 | 1.43 (1.15-1.79) | 0.11 | 14 | 7/10.4 | NP |
| BMI | per 5kg/m$^2$ increase | Biliary tract system CA inc | 10 | 6,961 / 6,008,270 | 1.88 (1.60-2.21) | 1.56 (1.34-1.81) | 1.3E-8 | 1.13-2.15 | 1.38 (1.13-1.68) | 0.24 | 25 | 4/9.00 | NP |
| BMI | per 5kg/m$^2$ increase | Pancreatic CA inc | 22 | 8,987 / 4,978,230 | 1.09 (1.03-1.16) | 1.10 (1.06-1.14) | 2.2E-7 | 1.01-1.21 | 1.06 (1.02-1.10) | 0.34 | 25 | 4/3.4 | 0.77 |
| WG | per 5kg increase | Breast CA inc, PoMP HRT - | 7 | 10,283 / 342,249 | 1.14 (1.11-1.18) | 1.11 (1.09-1.13) | 5.7E-23 | 1.07-1.15 | 1.08 (1.03-1.14) | 0.66 | 17 | 5/4.5 | 1.00 |
| WG | highest vs. lowest category | Breast CA inc, PoMP HRT - | 7 | 10,283 / 342,249 | 1.98 (1.55-2.53) | 1.75 (1.53-2.00) | 7.8E-17 | 1.47-2.08 | 1.57 (1.19-2.06) | 0.43 | 0 | 5/6.9 | NP |
| WHR | per 0.1 unit increase | Endometrial CA inc | 5 | 2,447 / 394,340 | 1.33 (1.18-1.51) | 1.21 (1.13-1.29) | 1.0E-8 | 1.09-1.34 | 1.16 (1.04-1.32) | 0.54 | 0 | 3/4.4 | NP |
| BMI | per 5kg/m$^2$ increase | Endometrial CA inc: PrMP | 6 | 5,981 / 2,558,935 | 1.53 (1.48-1.58) | 1.49 (1.39-1.61) | 3.1E-27 | 1.27-1.76 | 1.36 (1.11-1.67) | 0.56 | 20 | 5/4.2 | 0.67 |
| BMI | 30+ vs. < 25 | Ovarian CA inc | 13 | 6,947 / 20,560,388 pyrs | 1.27 (1.19-1.36) | 1.27 (1.17-1.38) | 2.6E-8 | 1.09-1.47 | 1.16 (1.02-1.30) | 0.88 | 12 | 3/5.3 | NP |
| BMI | 30+ vs. < 25 | Kidney CA inc | 31 | 29,979 / 15,477,631 | 1.85 (1.66-2.06) | 1.79 (1.64-1.95) | 3.4E-38 | 1.31-2.43 | 1.52 (1.32-1.75) | 0.53 | 44 | 22/30.2 | NP |
| BMI | per 5kg/m$^2$ increase | Kidney CA inc, men | 9 | 8,983 / 3,945,950 | 1.19 (1.13-1.24) | 1.24 (1.17-1.32) | 5.9E-12 | 1.10-1.41 | 1.19 (1.06-1.33) | 0.16 | 22 | 5/4.0 | 0.52 |
| BMI | per 5kg/m$^2$ increase | Kidney CA inc, women | 10 | 8,795 / 4,252,718 | 1.35 (1.28-1.42) | 1.33 (1.25-1.42) | 7.2E-18 | 1.13-1.57 | 1.28 (1.12-1.46) | 0.39 | 45 | 9/6.9 | 0.19 |
| BMI | 25-29.99 vs. < 25 | Multiple myeloma inc | 20 | 15,990 / 8,510,803 | 1.14 (1.06-1.22) | 1.12 (1.07-1.18) | 3.4E-7 | 1.07-1.18 | 1.10 (1.02-1.18) | 0.72 | 0 | 2/5.3 | NP |
| BMI | per 5kg/m$^2$ increase | Multiple myeloma inc | 13 | 14,634 / 7,429,478 | 1.11 (1.07-1.15) | 1.12 (1.09-1.15) | 2.8E-15 | 1.08-1.15 | 1.09 (1.03-1.17) | 0.65 | 0 | 4/3.5 | 0.76 |
| BMI | per 5kg/m$^2$ increase | Multiple myeloma inc, women | 6 | 7,183 / 3,607,950 | 1.11 (1.07-1.15) | 1.11 (1.08-1.15) | 2.8E-10 | 1.06-1.17 | 1.12 (1.02-1.23) | 0.82 | 0 | 2/1.7 | 0.67 |
| BMI | 30+ vs. < 25 | Multiple myeloma mort | 7 | 3,239 / 3,604,489 | 1.46 (1.16-1.84) | 1.54 (1.35-1.76) | 2.1E-10 | 1.29-1.83 | 1.50 (1.12-2.02) | 0.32 | 0 | 4/4.7 | NP |
| **Associations supported by highly suggestive evidence** | | | | | | | | | | | | | |
| BMI | per 5kg/m$^2$ increase | Oesophageal SqCa inc | 5 | 3,545 / 6,369,699 | 0.77 (0.70-0.85) | 0.63 (0.53-0.75) | 1.71E-7 | 0.34-1.15 | 0.68 (0.52-0.91) | 0.26 | 80 | 5/3.5 | 0.33 |
| BMI | per 5kg/m$^2$ increase | Oesophageal SqCa inc, women | 2 | 1,758 / 3,224,247 | 0.61 (0.54-0.70) | 0.57 (0.48-0.67) | 1.2E-10 | NA | 0.57 (0.31-1.05) | NA | 58 | 2/2.0 | 1.00 |
| BMI | per 5kg/m$^2$ increase | Colon CA inc | 44 | 82,766 / 9,434,650 | 1.03 (1.01-1.05) | 1.22 (1.17-1.28) | 3.9E-16 | 0.95-1.57 | 1.08 (1.05-1.11) | <0.01 | 84 | 27/4.4 | <0.01 |
| BMI | BMI 30+ vs. < 25 | Colon CA inc, men | 14 | 17,387 / 2,192,572 | 1.49 (1.39-1.60) | 1.53 (1.44-1.63) | <1E-100 | 1.43-1.64 | 1.60 (1.28-1.98) | 0.02 | 0 | 9/11.1 | NP |
| BMI | BMI 30+ vs. < 25 | Colon CA inc | 28 | 37,136 / 3,946,598 | 1.07 (1.02-1.12) | 1.44 (1.28-1.62) | 1.8E-9 | 0.91-2.28 | 1.15 (1.06-1.24) | 0.01 | 76 | 15/4.4 | <0.01 |
| WC | per 10cm increase | Colon CA inc | 8 | 3,371 / 869,185 | 1.14 (1.05-1.25) | 1.25 (1.15-1.35) | 3.0E-8 | 1.01-1.54 | 1.18 (1.07-1.31) | 0.063 | 50 | 7/2.4 | <0.01 |
| BMI | Obese vs. normal | Colorectal CA inc | 72 | 166,030 / 15,623,976 | 1.06 (1.02-1.10) | 1.33 (1.25-1.42) | 1.7E-19 | 0.94-1.50 | 1.11 (1.06-1.16) | 0.001 | 69 | 31/14.2 | <0.01 |
| WC | highest vs. lowest category | Colorectal CA inc | 19 | 12,566 / 2,041,675 | 1.32 (1.11-1.56) | 1.45 (1.33-1.59) | 9.0E-16 | 1.24-1.70 | 1.35 (1.19-1.55) | 0.015 | 9 | 13/14.5 | NP |
| BMI | 30+ vs. < 25 | Liver CA inc | 19 | 22,378 / 8,574,903 | 1.33 (1.19-1.48) | 1.83 (1.59-2.11) | 6.5E-17 | 1.10-3.04 | 1.51 (1.26-1.81) | 0.03 | 68 | 15/1.1 | 0.07 |
| BMI | per 5kg/m$^2$ increase | Liver CA inc | 19 | 17,281 / 4,977,849 | 1.12 (1.05-1.19) | 1.37 (1.23-1.53) | 2.4E-8 | 0.90-2.07 | 1.12 (1.04-1.20) | 0.05 | 81 | 10/4.7 | 0.01 |
| BMI | per 5kg/m$^2$ increase | Lung CA inc | 15 | 12,591 / 2,833,306 | 0.86 (0.82-0.90) | 0.77 (0.72-0.83) | 8.0E-13 | 0.61-0.97 | 0.84 (0.78-0.92) | 0.05 | 71 | 10/7.1 | 0.19 |
| BMI | per 5kg/m$^2$ increase | Lung CA inc, men | 10 | 7,569 / 1,387,620 | 0.84 (0.79-0.88) | 0.79 (0.73-0.85) | 1.7E-10 | 0.65-0.95 | 0.83 (0.75-0.92) | 0.07 | 53 | 7/5.0 | 0.23 |
| BMI | per 5kg/m$^2$ increase | Breast CA inc, PoMP | 29 | 27,700 / 2,318,992 | 1.18 (1.15-1.22) | 1.13 (1.09-1.17) | 4.1E-10 | 0.97-1.31 | 1.06 (1.03-1.10) | 0.67 | 61 | 12/16.6 | NP |
| BMI | 30+ vs. < 25 | Endometrial CA inc | 6 | 4,327 / 1,485,506 | 2.73 (2.48-2.99) | 3.10 (2.63-3.65) | <1E-100 | 1.92-5.00 | 2.99 (1.49-6.02) | 0.24 | 66 | 6/6.0 | 1.00 |
| BMI iya | per 5kg/m$^2$ increase | Endometrial CA inc | 9 | 4,345 / 631,915 | 1.23 (1.11-1.35) | 1.45 (1.28-1.64) | 1.9E-9 | 0.98-2.15 | 1.33 (1.14-1.55) | 0.41 | 75 | 8/5.2 | 0.09 |
| BMI | per 5kg/m$^2$ increase | Endometrial CA inc | 28 | 22,320 / 6,445,255 | 1.65 (1.60-1.71) | 1.54 (1.47-1.61) | <1E-100 | 1.26-1.89 | 1.41 (1.26-1.57) | 0.35 | 81 | 26/25.2 | 1.00 |
| WC | per 10cm increase | Endometrial CA inc | 4 | 1,524 / 315,770 | 1.28 (1.19-1.37) | 1.27 (1.17-1.39) | 7.3E-8 | 0.88-1.85 | 1.19 (1.03-1.38) | 0.59 | 70 | 3/2.9 | 1.00 |
| WG | per 5kg increase | Endometrial CA inc | 7 | 2,806 / 460,901 | 1.17 (1.12-1.22) | 1.16 (1.12-1.20) | 3.7E-18 | 1.06-1.27 | 1.13 (1.05-1.22) | 0.95 | 47 | 6/2.8 | 0.02 |
| Weight | per 5kg increase | Endometrial CA inc | 7 | 1,778 / 342,382 | 1.11 (1.08-1.15) | 1.17 (1.13-1.22) | 7.7E-15 | 1.04-1.31 | 1.15 (1.06-1.25) | 0.29 | 62 | 6/1.0 | <0.01 |
| BMI | per 5kg/m$^2$ increase | Endometrial CA inc, PoMP | 6 | 10,075 / 2,558,935 | 1.51 (1.45-1.58) | 1.60 (1.40-1.83) | 1.4E-11 | 1.01-2.53 | 1.52 (1.16-1.98) | 0.88 | 89 | 6/5.0 | 0.60 |
| BMI | per 5kg/m$^2$ increase | Endometrial CA inc, Type I | 3 | 7,125 / 1,102,927 | 1.58 (1.53-1.62) | 1.75 (1.51-2.03) | 1.8E-13 | 0.30-10.24 | 1.71 (1.06-2.77) | 0.26 | 82 | 3/2.9 | 1.00 |
| BMI | per 5kg/m$^2$ increase | Endometrial CA inc, Type II | 3 | 1,059 / 1,102,927 | 1.35 (1.25-1.46) | 1.59 (1.29-1.78) | 5.7E-7 | 0.24-9.67 | 1.47 (1.03-2.08) | 0.52 | 76 | 3/1.5 | 0.25 |
| BMI | obese vs. normal weight | Prostate CA mort | 10 | 14,179 / 2,339,669 | 1.20 (1.06-1.36) | 1.24 (1.15-1.33) | 1.8E-8 | 1.13-1.35 | 1.22 (1.09-1.37) | 0.03 | 0 | 4/5.7 | NP |
| BMI | 25-29.99 vs. < 25 | Kidney CA inc | 43 | 30,501 / 18,988,116 | 1.18 (1.11-1.26) | 1.35 (1.27-1.43) | 5.0E-22 | 1.09-1.66 | 1.25 (1.16-1.35) | 0.003 | 36 | 19/19.0 | NP |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BMI | per 5kg/m$^2$ increase | Kidney CA inc | 19 | 17,778 / 8,198,668 | 1.19 (1.13-1.24) | 1.30 (1.23-1.36) | 9.8E-25 | 1.12-1.50 | 1.23 (1.12-1.34) | 0.11 | 49 | 14/7.9 | <0.01 |
| BMI | 30+ vs. < 25 | Thyroid CA inc | 24 | 16,117 / 22,270,022 | 1.17 (1.11-1.23) | 1.29 (1.21-1.37) | 5.6E-14 | 1.10-1.50 | 1.22 (1.12-1.33) | <0.01 | 21 | 9/11.3 | NP |
| BMI | 30+ vs. < 25 | Leukemia inc | 25 | 51,914 / 21,228,740 | 1.42 (1.31-1.54) | 1.26 (1.16-1.37) | 1.6E-8 | 0.98-1.62 | 1.17 (1.07-1.27) | 0.29 | 43 | 7/19.3 | NP |
| **Associations supported by suggestive evidence** | | | | | | | | | | | | | |
| BMI | per 5kg/m$^2$ increase | Oesophageal SqCa, men | 3 | 1,787 / 3,145,452 | 0.77 (0.70-0.85) | 0.71 (0.61-0.84) | 6.1E-5 | 0.14-3.69 | 0.72 (0.52-0.98) | 0.03 | 44 | 3/1.8 | 0.28 |
| BMI | per 5kg/m$^2$ increase | Colon CA inc, women | 20 | 39,945 / 4,221,511 | 1.03 (1.01-1.05) | 1.12 (1.06-1.17) | 6.9E-6 | 0.96-1.30 | 1.05 (1.02-1.09) | <0.01 | 59 | 9/2.1 | <0.01 |
| WC | per 10cm increase | Colon CA inc, men | 5 | 1,869 / 469,320 | 1.15 (1.01-1.31) | 1.33 (1.18-1.50) | 1.6E-6 | 0.95-1.86 | 1.23 (1.04-1.44) | 0.51 | 45 | 4/1.5 | 0.03 |
| WC | per 10cm increase | Colon CA inc, women | 3 | 1,502 / 399,865 | 1.14 (1.05-1.25) | 1.16 (1.08-1.23) | 1.1E-5 | 0.76-1.76 | 1.16 (1.01-1.32) | 0.25 | 0 | 3/1.0 | 0.04 |
| WHR | per 0.1 unit increase | Colon CA inc | 8 | 3,132 / 941,955 | 1.24 (1.10-1.39) | 1.29 (1.17-1.43) | 1.1E-6 | 0.97-1.72 | 1.17 (1.05-1.31) | 0.16 | 53 | 6/4.2 | 0.29 |
| WHR | per 0.1 unit increase | Colon CA inc, men | 4 | 1,563 / 461,754 | 1.24 (1.05-1.46) | 1.43 (1.19-1.71) | 1.0E-5 | 0.71-2.87 | 1.33 (1.05-1.68) | 0.32 | 56 | 4/2.1 | 0.13 |
| WHR | per 0.1 unit increase | Colon CA inc, women | 4 | 1,569 / 480,201 | 1.24 (1.10-1.39) | 1.20 (1.08-1.33) | 5.0E-5 | 0.86-1.69 | 1.12 (0.98-1.28) | 0.90 | 30 | 2/2.1 | NP |
| BMI | Obese vs. normal** | Colon CA inc; distal colon, men | 7 | 1,685 / 643,569 | 1.77 (1.33-2.35) | 1.70 (1.36-2.11) | 2.3E-6 | 1.11-2.60 | 1.53 (1.12-2.09) | 0.64 | 17 | 3/6.5 | NP |
| BMI | Obese vs. normal** | Colon CA inc; distal colon | 20 | 4,359 / 1,320,435 | 0.96 (0.75-1.23) | 1.59 (1.34-1.89) | 1.2E-7 | 0.94-2.69 | 1.25 (1.07-1.46) | 0.49 | 44 | 7/1.3 | <0.01 |
| BMI | Obese vs. normal** | Colon CA inc; proximal colon, men | 7 | 1,720 / 643.569 | 1.18 (0.86-1.62) | 1.44 (1.18-1.77) | 4.4E-4 | 1.10-1.89 | 1.30 (1.03-1.64) | 0.44 | 0 | 1/2.0 | NP |
| BMI | Obese vs. normal** | Colon CA inc; proximal colon | 20 | 4,680 / 1,320,435 | 1.02 (0.84-1.24) | 1.33 (1.12-1.57) | 9.6E-4 | 0.84-2.09 | 1.14 (1.00-1.29) | 0.12 | 33 | 3/1.1 | 0.05 |
| BMI | Obese vs. normal** | Colon CA inc; distal colon, women | 12 | 2,565 / 669,300 | 0.96 (0.75-1.23) | 1.53 (1.19-1.97) | 8.3E-4 | 0.74-3.19 | 1.17 (0.97-1.40) | 0.51 | 56 | 4/0.7 | <0.01 |
| WG | per 5kg increase | Colon CA inc, men | 4 | 1,718 / 142,085 | 1.10 (1.03-1.17) | 1.09 (1.05-1.14) | 4.1E-5 | 1.00-1.19 | 1.07 (1.00-1.14) | 0.56 | 0 | 2/0.8 | 0.12 |
| WG | per 5kg increase | Colon CA inc | 7 | 2.909 / 298,174 | 1.10 (1.03-1.17) | 1.07 (1.03-1.10) | 8.3E-5 | 1.02-1.11 | 1.04 (1.00-1.09) | 0.88 | 0 | 2/1.3 | 0.50 |
| WG | per 1kg increase / year | Colorectal CA inc | 17 | 27,638 / 1,974,918 | 1.31 (1.18-1.45) | 1.20 (1.10-1.31) | 3.9E-5 | 0.95-1.52 | 1.11 (1.03-1.21) | 0.72 | 37 | 4/15.3 | NP |
| BMI | 30+ vs. < 25 | Rectal CA inc | 21 | 39,384 / 6,768,071 | 1.04 (0.97-1.11) | 1.21 (1.10-1.34) | 1.8E-4 | 0.97-1.52 | 1.07 (1.01-1.14) | 0.08 | 31 | 3/2.9 | 1.00 |
| BMI | per 5kg/m$^2$ increase | Rectal CA inc | 31 | 43,196 / 7,495,868 | 1.01 (0.98-1.04) | 1.07 (1.03-1.10) | 5.9E-5 | 0.98-1.16 | 1.03 (1.00-1.05) | 0.35 | 27 | 4/1.7 | 0.09 |
| BMI | 30+ vs. < 25 | Cholangiocarcinoma inc | 6 | 1,478 / 10,201,493 | 1.36 (0.92-2.02) | 1.77 (1.32-2.38) | 1.5E-4 | 1.07-2.93 | 1.61 (1.15-2.25) | 0.09 | 7 | 2/3.2 | NP |
| WC | per 10cm increase | Pancreatic CA inc | 5 | 1,365 / 1,154,996 | 1.08 (0.98-1.18) | 1.11 (1.05-1.18) | 2.0E-4 | 1.02-1.22 | 1.11 (1.02-1.20) | 0.11 | 0 | 2/0.5 | 0.09 |
| WHR | per 0.1 unit increase | Pancreatic CA inc | 4 | 1,438 / 1,109,945 | 1.32 (1.12-1.56) | 1.20 (1.09-1.31) | 9.6E-5 | 0.96-1.50 | 1.14 (1.01-1.28) | 0.54 | 7 | 2/3.0 | NP |
| BMI | per 5kg/m$^2$ increase | Lung CA inc, smokers | 4 | 6,185 / 475,940 | 0.82 (0.77-0.87) | 0.77 (0.69-0.86) | 7.8E-6 | 0.48-1.24 | 0.81 (0.68-0.97) | 0.12 | 78 | 4/2.9 | 0.58 |
| BMI | 25+ vs. <25 | Lung CA inc | 20 | 13,116 / 7,854,110 | 0.97 (0.93-1.01) | 0.79 (0.73-0.85) | 9.9E-10 | 0.59-1.04 | 0.94 (0.90-0.98) | 0.02 | 80 | 10/1.4 | <0.01 |
| Obesity±± | highest vs. lowest category | Breast CA inc, ER+ PR+, PoMP | 4 | 3,220 / 142,655 | 1.38 (1.12-1.71) | 1.74 (1.34-2.25) | 3.1E-5 | 0.60-5.06 | 1.55 (1.09-2.21) | 0.70 | 69 | 3/4.0 | NP |
| BMI | 30+ vs. < 25 | Breast CA inc, PoMP | 8 | 11,882 / 873,142 | 1.19 (1.10-1.27) | 1.16 (1.08-1.25) | 8.1E-5 | 0.93-1.44 | 1.09 (1.02-1.16) | 0.37 | 65 | 4/6.4 | NP |
| BMI | 25-29.99 vs. < 25 | Breast CA inc, PoMP | 8 | 13,878 / 1,008,448 | 1.06 (0.99-1.13) | 1.12 (1.06-1.18) | 5.6E-5 | 0.96-1.30 | 1.08 (1.02-1.13) | 0.16 | 57 | 4/2.1 | 0.12 |
| BMI | per 5kg/m$^2$ increase | Breast CA inc, PrMP | 20 | 20,820 / 2,200,787 | 0.91 (0.86-0.97) | 0.92 (0.88-0.97) | 4.6E-4 | 0.81-1.05 | 0.95 (0.90-0.99) | 0.28 | 38 | 7/6.3 | 0.81 |
| BMI | per 5kg/m$^2$ increase | Ovarian CA inc | 24 | 17,734 / 16,343,135 | 0.97 (0.93-1.01) | 1.08 (1.04-1.12) | 8.6E-5 | 0.96-1.21 | 1.03 (1.00-1.06) | 0.07 | 48 | 6/1.8 | <0.01 |
| BMI iya | per 5kg/m$^2$ increase | Ovarian CA inc | 6 | 9,452 / 11,085,425 | 1.16 (1.04-1.29) | 1.12 (1.05-1.19) | 3.8E-4 | 1.03-1.23 | 1.10 (1.01-1.19) | 0.60 | 0 | 1/2.5 | NP |
| BMI | per 5kg/m$^2$ increase | Prostate CA inc, loc | 12 | 19,130 / 1,033,009 | 0.96 (0.93-0.98) | 0.94 (0.91-0.97) | 4.6E-4 | 0.88-1.01 | 0.95 (0.91-0.99) | 0.46 | 20 | 3/1.7 | 0.40 |
| BMI | per 5kg/m$^2$ increase | Prostate CA mort | 6 | 6,817 / 1,263,483 | 1.08 (1.04-1.12) | 1.15 (1.06-1.25) | 8.3E-4 | 0.92-1.44 | 1.10 (1.02-1.18) | 0.30 | 59 | 4/1.6 | 0.049 |
| BMI | 30+ vs. < 25 | Bladder CA inc | 26 | 73,491 / 26,538,464 | 1.13 (1.06-1.20) | 1.09 (1.04-1.15) | 9.0E-4 | 0.98-1.21 | 1.06 (1.00-1.12) | 0.71 | 15 | 4/13.4 | NP |
| BMI | per 5kg/m$^2$ increase | Thyroid CA inc | 7 | 6,716 / 5,316,380 | 1.12 (1.05-1.19) | 1.23 (1.10-1.39) | 4.3E-4 | 0.89-1.70 | 1.13 (1.03-1.24) | 0.09 | 62 | 4/2.4 | 0.24 |
| BMI | per 5kg/m$^2$ increase | Thyroid CA inc, women | 3 | 3,190 / 2,159,238 | 1.12 (1.05-1.19) | 1.14 (1.06-1.22) | 4.0E-4 | 0.67-1.93 | 1.15 (0.99-1.33) | 0.41 | 3 | 2/1.1 | 0.30 |
| BMI | per 5kg/m$^2$ increase | NHL inc | 23 | 29,064 / 9,056,494 | 1.04 (0.99-1.09) | 1.07 (1.04-1.10) | 1.9E-6 | 1.02-1.12 | 1.05 (1.02-1.09) | 0.26 | 9 | 5/2.7 | 0.18 |
| BMI | per 5kg/m$^2$ increase | Multiple myeloma inc, men | 7 | 7,451 / 3,821,528 | 1.13 (1.07-1.19) | 1.12 (1.06-1.18) | 1.1E-4 | 1.02-1.22 | 1.07 (0.98-1.17) | 0.76 | 5 | 2/2.0 | NP |
| BMI | per 5kg/m$^2$ increase | Leukemia inc | 8 | 15,117 / 6,758,260 | 1.07 (1.02-1.12) | 1.12 (1.05-1.18) | 2.3E-4 | 0.96-1.30 | 1.07 (1.01-1.14) | 0.22 | 51 | 4/2.4 | 0.25 |
| BMI | 30+ vs. < 25 | Leukaemia inc, CLL | 5 | 6,547 / 13,038,983 | 1.30 (1.13-1.49) | 1.25 (1.11-1.41) | 2.3E-4 | 0.92-1.70 | 1.17 (1.02-1.34) | 0.78 | 31 | 2/4.2 | NP |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BMI | 30+ vs. < 25 | Leukaemia inc, AML | 6 | 4,804 / 13,375,364 | 1.17 (1.00-1.36) | 1.52 (1.19-1.95) | 8.9E-4 | 0.69-3.38 | 1.20 (1.03-1.40) | 0.27 | 79 | 4/3.4 | 0.61 |
| BMI | 30+ vs. < 25 | Leukemia mort | 8 | 6,527 / 4,205,316 | 1.37 (1.13-1.67) | 1.28 (1.11-1.49) | 7.5E-4 | 0.93-1.77 | 1.18 (1.02-1.37) | 0.99 | 30 | 4/6.6 | NP |
| **Associations supported by weak evidence** | | | | | | | | | | | | | |
| BS | surgery vs. no surgery | Overall CA inc | 4 | 1,745 / 31,807 | 0.75 (0.64-0.88) | 0.40 (0.22-0.71) | 1.8E-3 | 0.03-6.14 | 0.69 (0.49-0.97) | 0.03 | 94 | 4/3.3 | 1.00 |
| BMI | per 5kg/m$^2$ increase | Oesophageal AdCa inc, men | 5 | 996 / 3,196,747 | 1.67 (1.44-1.92) | 1.52 (1.33-1.74) | 1.3E-9 | 1.09-2.11 | 1.31 (1.04-1.64) | 0.37 | 24 | 4/3.6 | 1.00 |
| BMI | per 5kg/m$^2$ increase | Oesophageal AdCa inc, women | 3 | 922 / 3234247 | 1.54 (1.26-1.89) | 1.51 (1.30-1.75) | 2.8E-8 | 0.59-3.86 | 1.49 (1.05-2.12) | 0.44 | 0 | 2/2.7 | NP |
| CeAd## | high vs. low | Oesophageal AdCa inc | 2 | 341 / 565,067 | 1.81 (1.24-2.64) | 1.78 (1.26-2.52) | 1.0E-3 | NA | 1.73 (0.93-1.21) | 0.66 | 0 | 1/1.9 | NP |
| BMI | 30+ vs. < 25 | Colon CA inc, women | 14 | 19,749 / 1,754,026 | 1.07 (1.02-1.12) | 1.22 (1.07-1.40) | 3.4E-3 | 0.85-1.75 | 1.09 (1.01-1.19) | 0.04 | 51 | 6/2.2 | <0.01 |
| BS | surgery vs. no surgery | Colorectal CA inc | 5 | 1,013 / 182,298 | 0.79 (0.57-1.10) | 0.77 (0.62-0.96) | 0.02 | 0.54-1.10 | 0.78 (0.61-0.99) | 0.06 | 0 | 0/2.00 | NP |
| BMI | 25-29.99 vs. < 25 | Liver CA inc | 14 | 16,382 / 3,976,906 | 1.07 (1.00-1.15) | 1.18 (1.06-1.31) | 1.7E-3 | 0.88-1.58 | 1.07 (1.01-1.14) | 0.08 | 61 | 4/2.6 | 0.31 |
| BMI | 25-29.99 vs. < 25 | Cholangiocarcinoma inc | 7 | 1,753 / 2,332,590 | 1.40 (1.11-1.72) | 1.29 (1.11-1.51) | 1.3E-3 | 1.05-1.58 | 1.22 (1.00-1.48) | 0.22 | 0 | 1/5.4 | NP |
| BMI | per 5kg/m$^2$ increase | Lung CA inc, women | 5 | 5,022 / 1,445,686 | 0.86 (0.82-0.90) | 0.76 (0.61-0.94 | 0.01 | 0.36-1.63 | 0.88 (0.75-1.03) | 0.46 | 86 | 3/3.0 | 1.00 |
| BMI | 25-29.99 vs. < 25 | Melanoma inc, men | 6 | 1,736 / 2,208,423 | 1.27 (1.12-1.45) | 1.41 (1.09-1.83) | 9.6E-3 | 0.75-2.64 | 1.26 (0.99-1.61) | 0.16 | 35 | 2/2.6 | NP |
| BMI | 30+ vs. < 25 | Melanoma inc, men | 7 | 3,839 / 1,399,090 | 1.29 (1.14-1.48) | 1.31 (1.10-1.57) | 3.1E-3 | 0.89-1.93 | 1.24 (0.98-1.57) | 0.89 | 26 | 3/4.5 | NP |
| BMI | 25+ vs. <25, ASE | Melanoma inc, women | 5 | 1,215 / 803,360 | 0.99 (0.65-1.50) | 0.80 (0.65-0.99) | 0.04 | 0.56-1.13 | 0.84 (0.67-1.07) | 0.12 | 0 | 1/0.3 | 0.23 |
| BMI | per 5kg/m$^2$ increase | Melanoma inc, men | 6 | 6,647 / 2,808,095 | 1.16 (1.08-1.26) | 1.17 (1.05-1.30) | 4.9E-3 | 0.89-1.52 | 1.11 (0.96-1.27) | 0.89 | 46 | 3/2.5 | 0.69 |
| BMI | per 5kg/m$^2$ increase | Melanoma inc, women | 5 | 7,148 / 2,886,890 | 0.97 (0.91-1.00) | 0.96 (0.93-1.00) | 0.03 | 0.90-1.02 | 0.97 (0.93-1.01) | 0.28 | 0 | 1/0.5 | 0.40 |
| Obesity±± | highest vs. lowest cat.** | Breast CA inc, ER- PR+, PoMP | 2 | 2,127 / 88,952 | 1.46 (0.58-3.68) | 2.03 (1.04-3.95) | 0.04 | NA | 1.73 (0.77-3.85) | NA | 61 | 1/2.0 | NP |
| Obesity±± | highest vs. lowest cat.** | Breast CA inc, ER+ PR-, PoMP | 2 | 2,127 / 88,952 | 0.76 (0.49-1.17) | 0.64 (0.42-0.95) | 0.04 | NA | 0.72 (0.48-1.07) | NA | 27 | 1/0.1 | 0.10 |
| BMI | 25-29.99 vs. < 25 | Cervical CA inc | 2 | 1453 / 5318484 | 1.10 (1.03-1.17) | 1.10 (1.03-1.17) | 4.3E-3 | NA | 1.08 (0.94-1.25) | NA | 36 | 1/0.6 | 0.49 |
| BS | surgery vs. no surgery | Endometrial CA inc | 3 | 12,288 / 958,988 | 0.48 (0.43-0.55) | 0.39 (0.19-0.79) | 8.6E-3 | 0.0-1314.2 | 0.55 (0.25-1.20) | 0.74 | 80 | 2/2.5 | NP |
| BMI | 25-29.99 vs. < 25 | Endometrial CA inc | 7 | 4,548 / 1,489,424 | 1.79 (1.65-1.95) | 1.60 (1.10-2.33) | 0.01 | 0.42-6.09 | 1.67 (1.13-2.45) | 0.71 | 96 | 7/6.9 | 1.00 |
| HC | per 10 cm increase | Endometrial CA inc | 2 | 831 / 255,650 | 1.32 (1.20-1.45) | 1.29 (1.19-1.41) | 2.9E-09 | NA | 1.23 (0.98-1.54) | NA | 0 | 1/1.7 | NP |
| BMI | per 5kg/m$^2$ increase | Endometrial CA inc: PoMP HRT- | 3 | 699 / 360,326 | 1.61 (1.41-1.85) | 1.90 (1.56-2.30) | 9.2E-11 | 0.19-18.56 | 1.80 (1.06-3.07) | <0.01 | 77 | 3/2.9 | 1.00 |
| BMI | per 5kg/m$^2$ increase | Endometrial CA inc: PoMP HRT+ | 6 | 791 / 679,271 | 1.25 (1.05-1.47) | 1.18 (1.07-1.31) | 1.7E-3 | 1.02-1.37 | 1.16 (1.02-1.31) | 0.77 | 0 | 1/1.7 | NP |
| WG | per 5kg increase | Endometrial CA inc: PoMP, HRT- | 2 | 285 / 33,340 | 1.36 (1.25-1.46) | 1.38 (1.28-1.49) | 3.6E-17 | NA | 1.40 (0.97-2.02) | NA | 0 | 2/1.0 | 0.50 |
| WG | per 5kg increase | Endometrial CA inc: PoMP, HRT+ | 2 | 334 / 35,333 | 1.09 (1.00-1.18) | 1.09 (1.02-1.17) | 0.01 | NA | 1.09 (0.99-1.20) | NA | 0 | 1/0.2 | 0.18 |
| BMI | per 5kg/m$^2$ increase | Endometrial CA mort | 3 | 962 / 1,781,648 | 1.42 (1.33-1.63) | 1.46 (1.29-1.65) | 1.7E-9 | 0.48-4.48 | 1.35 (0.90-2.05) | 0.64 | 29 | 2/2.0 | 1.00 |
| Weight | per 5kg increase | Ovarian CA inc | 4 | 1,281 / 405,655 | 1.02 (1.00-1.05) | 1.03 (1.01-1.05) | 1.3E-3 | 0.98-1.08 | 1.03 (1.00-1.05) | 0.42 | 7 | 1/0.2 | 0.20 |
| WG | per 5kg increase | Ovarian CA inc: PostMP, HRT- | 2 | 217 / 23,984 | 1.16 (1.03-1.31) | 1.13 (1.03-1.24) | 8.5E-3 | NA | 1.11 (0.99-1.25) | NA | 0 | 0.27 | 0.25 |
| BMI | 30+ vs. < 25 | Ovarian CA inc, PoMP | 5 | 1,116 / 1,858,520 pyrs | 1.02 (0.82-1.26) | 1.23 (1.03-1.47) | 0.03 | 0.72-2.09 | 1.12 (0.97-1.29) | 0.52 | 46 | 0.3 | 0.14 |
| BMI | 30+ vs. < 25 | Ovarian CA inc, PrMP | 3 | 284 / 1,758,718 pyrs | 1.56 (1.14-2.16) | 1.57 (1.20-2.06) | 9.7E-4 | 0.27-9.02 | 1.54 (0.95-2.51) | 0.61 | 0 | 1.7 | NP |
| BMI | per 5kg/m$^2$ increase | Prostate CA inc, adv | 13 | 7,067 / 1,080,790 | 1.00 (0.94-1.08) | 1.09 (1.02-1.16) | 0.01 | 0.92-1.29 | 1.04 (0.99-1.09) | 0.02 | 40 | 3/0.7 | 0.02 |
| WG | per 5kg increase | Prostate CA inc, high screening rate | 2 | 4,894 / 67,335 | 0.96 (0.92-1.00) | 0.95 (0.92-0.99) | 7.0E-3 | NA | 0.95 (0.90-1.01) | NA | 0 | 1/0.4 | 0.25 |
| WG | highest vs. lowest category | Kidney CA inc | 3 | 1,780 / 781,293 | 1.20 (0.90-1.70) | 1.42 (1.11-1.81) | 4.7E-3 | 0.23-8.71 | 1.28 (0.97-1.69) | 0.89 | 10 | 1/2.0 | NP |
| BMI | 25-29.99 vs. < 25 | Bladder CA inc | 26 | 28,745 / 12,562,510 | 1.05 (1.00-1.10) | 1.07 (1.01-1.14) | 0.03 | 0.90-1.27 | 1.04 (0.99-1.08) | 0.29 | 38 | 5/3.7 | 0.41 |
| BMI | 30+ vs. < 25 | Meningeoma inc | 4 | 799 / 1,995,708 | 1.40 (1.08-1.87) | 1.55 (1.28-1.86) | 4.4E-6 | 1.03-2.33 | 1.49 (1.09-2.04) | 0.54 | 0 | 2/2.6 | NP |
| BMI | per 5kg/m$^2$ increase | Thyroid CA inc, men | 4 | 3,526 / 3,157,142 | 1.09 (0.98-1.22) | 1.32 (1.04-1.69) | 0.02 | 0.46-3.84 | 1.12 (1.00-1.25) | 0.23 | 77 | 2/1.0 | 0.27 |
| BMI | 30+ vs. < 25 | Hodgkin's lymphoma inc | 4 | 2,716 / 4,828,366 | 1.66 (1.28-2.14) | 1.41 (1.14-1.75) | 1.9E-3 | 0.73-2.72 | 1.24 (0.96-1.59) | 0.74 | 22 | 1/3.5 | NP |
| BMI | 30+ vs. < 25 | NHL inc | 15 | 24,421 / 7,611,421 | 1.09 (1.00-1.19) | 1.19 (1.04-1.37) | 0.01 | 0.78-1.80 | 1.09 (0.99-1.19) | 0.91 | 66 | 5/4.5 | 0.78 |
| BMI | per 5kg/m$^2$ increase | NHL mort | 7 | 5,920 / 3,511,893 | 1.18 (1.09-1.29) | 1.14 (1.04-1.25) | 5.3E-3 | 0.90-1.45 | 1.10 (1.01-1.20) | 0.57 | 53 | 3/3.4 | NP |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BMI | 25-29.99 vs. < 25 | Diff large B-cell lymphoma inc | 10 | 2,445 / 2,348,783 | 1.29 (1.04-1.61) | 1.13 (1.02-1.25) | 0.02 | 1.00-1.27 | 1.10 (0.98-1.23) | 0.37 | 0 | 1/5.7 | NP |
| BMI | 30+ vs. < 25 | Diff large B-cell lymphoma inc | 12 | 3,093 / 2,981,742 | 1.64 (1.25-2.16) | 1.25 (1.08-1.44) | 2.6E-3 | 0.89-1.74 | 1.14 (1.00-1.32) | 0.05 | 27 | 3/11.6 | NP |
| BMI | 30+ vs. < 25 | Multiple myeloma inc | 19 | 15,887 / 7,729,520 | 1.31 (1.16-1.48) | 1.21 (1.08-1.35) | 1.0E-3 | 0.90-1.62 | 1.14 (1.01-1.28) | 0.56 | 34 | 5/11.2 | NP |
| BMI | 25-29.99 vs. < 25 | Multiple myeloma mort | 8 | 3,337 / 3,714,187 | 1.18 (1.01-1.39) | 1.15 (1.04-1.26) | 6.0E-3 | 1.02-1.30 | 1.12 (0.99-1.27) | 0.46 | 0 | 1/2.8 | NP |
| BMI | per 5kg/$m^2$ increase | Leukemia inc, men | 5 | 7,827 / 3,497,392 | 1.09 (1.02-1.17) | 1.08 (1.02-1.13) | 8.4E-3 | 0.99-1.17 | 1.06 (0.98-1.14) | 0.47 | 0 | 1/1.5 | NP |
| BMI | per 5kg/$m^2$ increase | Leukemia inc, women | 3 | 7,290 / 3,260,868 | 1.07 (1.02-1.12) | 1.17 (1.04-1.33) | 9.8E-3 | 0.28-4.93 | 1.10 (1.00-1.21) | 0.20 | 79 | 3/1.1 | 0.05 |
| BMI | 30+ vs. < 25 | Leukemia inc, ALL | 5 | 588 / 13,337,737 | 1.33 (0.82-2.15) | 1.65 (1.16-2.35) | 5.1E-3 | 0.85-3.23 | 1.40 (0.96-2.04) | 0.67 | 7 | 1/1.9 | NP |
| BMI | 30+ vs. < 25 | Leukemia inc, CML | 5 | 2,530 / 13,337,737 | 1.15 (0.92-1.45) | 1.26 (1.09-1.46) | 1.7E-3 | 1.00-1.60 | 1.20 (1.03-1.41) | 0.47 | 0 | 1/1.9 | NP |

Abbreviations: AdCa, adenocarcinoma; adv, advanced; ALL, acute lymphatic leukemia; AML, acutel myeloic leukemia; ASE, adjusted for sunlight exposure; biliary tract system cancer, includes cancers of gallbladder, extrahepatic bile duct and ampulla of Vateri; BMI, Body Mass Index; BMI iya, Body Mass Index in young adulthood; BS, bariatric surgery; CA, cancer; CI, confidence interval; CLL, chronic lymphatic leukemia; CML, chronic myeloic leukemia; ER = estrogen receptor status; HC, hip circumference; HRT, hormone replacement therapy; inc, incidence; loc, localised; mort, mortality; NA: Not available, due to <3 included studies; NHL, Non-Hodgkin lymphoma; NP: Not Pertinent, because the estimated is larger than the observed, and there is no evidence of excess statistical significance based on the assumption made for the plausible effect size; PoMP, postmenopausal; PR = progesterone receptor status; PrMP, premenopausal; pyrs, preson-years; RR, relative risk; SqCa, squamous cell carcinoma; WC, waist circumference; WG, weight gain; WHR, waist-to-hip ratio;

* Number of studies
± Sum of all study cohorts in the meta-analysis. In case the same study appears more than once (e.g. for both men and women, and proportions of men and women in the study cohort was not given), the sum given here may too large.
# Relative risk and 95% confidence interval of largest study (smallest SE) in each meta-analysis.
† Random effects refer to summary risk ratio (95% CI) using the random-effects model.
¶ P value of summary random effects estimate.
‡ P-value from the Egger's regression asymmetry test.
§ Expected number of statistically significant studies using the point estimate of the largest study (smallest standard error) as the plausible effect size.
** Observed/Expected number of statistically significant studies
|| P value of the excess statistical significance test.
** cut-offs in categories varied between included studies
±± BMI, weight gain or weight change, varies between included studies
## Central adiposity: dependent categorical comparison of visceral adipose tissue area. if that was unavailable, WHR (or waist thigh ratio) or last WC was used.

All statistical tests were two-sided.

**Supplementary table 7:** Details of evidence grading for meta-analyses associating both continuous and categorical contrasts of obesity and risk of cancer incidence or mortality — all study types studies included***.

| Obesity indices | Exposure contrast | Outcome | N* | Sample size Cases/Cohort± | Largest study# | Random effects Summary RR (95% CI)† | Random P-value¶ | 95% Predictio n interval | 10% credibility RR (95% CI) | Egger's P‡ | $I^2$ (%) | Excess significance§ O/E** | Excess significance§ P-value \|\| |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Associations supported by strong evidence** | | | | | | | | | | | | | |
| BMI | per 5kg/$m^2$ increase | Oesophageal AdCa inc | 8 | 1,918 / 6,430,994 | 1.67 (1.44-1.92) | 1.53 (1.41-1.67) | 1.4E-22 | 1.38-1.71 | 1.36 (1.12-1.65) | 0.19 | 0 | 6/6.5 | NP |
| BMI | per 5kg/$m^2$ increase | Colon CA inc, men | 24 | 42,821 / 5,213,139 | 1.27 (1.23-1.31) | 1.30 (1.25-1.35) | <1E-100 | 1.19-1.42 | 1.24 (1.14-1.34) | 0.30 | 24 | 18/15.4 | 0.39 |
| WG | high gain vs. stable weight | Colorectal CA inc | 22 | 35,187 / 2,124,596 | 1.26 (1.15-1.38) | 1.22 (1.14-1.30) | 2.5E-8 | 1.03-1.43 | 1.12 (1.04-1.21) | 0.70 | 22 | 4/18.7 | NP |
| BMI | per 5kg/$m^2$ increase | Rectal CA inc, men | 18 | 23,480 / 4,296,566 | 1.08 (1.05-1.12) | 1.09 (1.06-1.12) | 2.2E-8 | 1.04-1.13 | 1.07 (1.02-1.12) | 0.77 | 3 | 3/3.31 | NP |
| BMI | 30+ vs. < 25 | Rectal CA inc, men | 11 | 12,109 / 2,178,376 | 1.27 (1.16-1.38) | 1.28 (1.19-1.39) | 4.8E-10 | 1.17-1.40 | 1.27 (1.06-1.51) | 0.44 | 0 | 5.3 | NP |
| BMI | 30+ vs <25 | Gallbladder CA inc | 17 | 6,073 / 12,520,206 | 1.88 (1.60-2.21) | 1.66 (1.47-1.88) | 9.8E-16 | 1.32-2.09 | 1.39 (1.14-1.70) | 0.05 | 12 | 8/13.7 | NP |
| BMI | per 5kg/$m^2$ increase | Pancreatic CA inc | 23 | 9,439 / 4,981,369 | 1.09 (1.03-1.16) | 1.10 (1.06-1.14) | 2.5E-8 | 1.01-1.19 | 1.06 (1.03-1.10) | 0.33 | 21 | 4/3.59 | 0.77 |
| BMI | 25-29.99 vs. < 25 | Melanoma inc, men | 18 | 4,793 / 2,215,979 | 1.27 (1.12-1.45) | 1.31 (1.18-1.45) | 2.3E-7 | 1.17-1.46 | 1.30 (1.10-1.54) | 0.12 | 0 | 3/6.67 | NP |
| WG | per 5 kg increase | Breast CA inc, PoMP HRT - | 7 | 10,283 / 342,249 | 1.14 (1.11-1.18) | 1.11 (1.09-1.13) | 5.7E-23 | 1.07-1.15 | 1.08 (1.03-1.14) | 0.66 | 17 | 5/4.47 | 1.00 |
| WG | highest vs. lowest cat. | Breast CA inc, PoMP HRT - | 7 | 10,283 / 342,249 | 1.98 (1.55-2.53) | 1.75 (1.53-2.00) | 7.8E-17 | 1.47-2.08 | 1.57 (1.19-2.06) | 0.43 | 0 | 5/6.94 | NP |
| WHR | per 0.1 unit increase | Endometrial CA inc | 5 | 2,447 / 394,340 | 1.33 (1.18-1.51) | 1.21 (1.13-1.29) | 1.0E-8 | 1.09-1.34 | 1.16 (1.04-1.32) | 0.54 | 0 | 3/4.44 | NP |
| BMI | per 5kg/$m^2$ increase | Endometrial CA inc: PrMP | 6 | 5,981 / 2,558,935 | 1.53 (1.48-1.58) | 1.49 (1.39-1.61) | 3.1E-27 | 1.27-1.76 | 1.36 (1.11-1.67) | 0.56 | 20 | 5/4.2 | 0.67 |
| BMI | 30+ vs. < 25 | Ovarian CA inc | 13 | 6,947 / 20,560,388 pyrs | 1.27 (1.19-1.36) | 1.27 (1.17-1.38) | 2.6E-8 | 1.09-1.47 | 1.16 (1.02-1.30) | 0.88 | 12 | 3/5.3 | NP |
| BMI | 30+ vs <25 | Kidney CA inc | 31 | 29,979 / 15,477,631 | 1.85 (1.66-2.06) | 1.79 (1.64-1.95) | 3.4E-38 | 1.31-2.43 | 1.52 (1.32-1.75) | 0.53 | 44 | 22/30.2 | NP |
| BMI | per 5kg/$m^2$ increase | Kidney CA inc, men | 11 | 9,277 / 3,946,646 | 1.19 (1.13-1.24) | 1.24 (1.15-1.34 | 9.0E-9 | 1.05-1.47 | 1.16 (1.05-1.29) | 0.20 | 36 | 6/4.26 | 0.36 |
| BMI | per 5kg/$m^2$ increase | Kidney CA inc, women | 12 | 9,243 / 4,253,611 | 1.35 (1.28-1.42) | 1.34 (1.25-1.43) | 5.8E-19 | 1.14-1.58 | 1.26 (1.11-1.42) | 0.46 | 44 | 10/7.73 | 0.23 |
| BMI | 30+ vs <25 | Meningeoma inc | 6 | 2,069 / 1,998,356 | 1.29 (1.01-1.65) | 1.45 (1.26-1.67) | 2.7E-7 | 1.19-1.78 | 1.42 (1.13-1.78) | 0.20 | 0 | 3/3.09 | NP |
| BMI | per 5kg/$m^2$ increase | Multiple myeloma inc | 13 | 14,634 / 7,429,478 | 1.11 (1.07-1.15) | 1.12 (1.09-1.15) | 2.8E-15 | 1.08-1.15 | 1.09 (1.03-1.17) | 0.65 | 0 | 4/3.49 | 0.76 |
| BMI | per 5kg/$m^2$ increase | Multiple myeloma inc, women | 6 | 7,183 / 3,607,950 | 1.11 (1.07-1.15) | 1.11 (1.08-1.15) | 2.8E-10 | 1.06-1.17 | 1.12 (1.02-1.23) | 0.82 | 0 | 2/1.67 | 0.67 |
| BMI | 25-29.99 vs. < 25 | Multiple myeloma inc | 20 | 15,990 / 8,510,803 | 1.14 (1.06-1.22) | 1.12 (1.07-1.18) | 3.4E-7 | 1.07-1.18 | 1.10 (1.02-1.18) | 0.72 | 0 | 2/5.27 | NP |
| BMI | 30+ vs <25 | Multiple myeloma mort | 7 | 3,239 / 3,604,489 | 1.46 (1.16-1.84) | 1.54 (1.35-1.76) | 2.1E-10 | 1.29-1.83 | 1.50 (1.12-2.02) | 0.32 | 0 | 4/4.69 | NP |

**Associations supported by highly suggestive evidence**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BMI | per 5kg/m$^2$ increase | Oesophageal SqCa inc | 5 | 3,545 / 6,369,699 | 0.77 (0.70-0.85) | 0.63 (0.53-0.75) | 1.7E-7 | 0.34-1.15 | 0.68 (0.52-0.91) | 0.26 | 80 | 5/3.46 | 0.33 |
| BMI | per 5kg/m$^2$ increase | Oesophageal SqCa inc, women | 2 | 1,758 / 3,224,247 | 0.61 (0.54-0.70) | 0.57 (0.48-0.67) | 1.2E-10 | N/A | 0.57 (0.31-1.05) | N/A | 58 | 2/1.99 | 1.00 |
| BMI | 30+ vs. < 25 | Gastrc cardia and oesophageal AdCa | 13 | 3.029 / 5,890,512 | 1.93 (1.56-2.39) | 2.34 (1.95-2.81) | 7.3E-20 | 1.36-4.02 | 2.01 (1.46-2.77) | 0.07 | 54 | 11/11.4 | NP |
| BMI | 25-29.99 vs. < 25 | Gastrc cardia and oesophageal AdCa | 23 | 5,385 / 6,276,175 | 1.35 (1.11-1.64) | 1.71 (1.50-1.96) | 2.9E-15 | 1.03-2.85 | 1.37 (1.20-1.55) | <0.01 | 64 | 14/12.4 | 0.51 |
| BMI | per 5kg/m$^2$ increase | Colon CA inc | 45 | 82,839 / 9,434,867 | 1.03 (1.01-1.05) | 1.23 (1.17-1.29) | 1.1E-16 | 0.95-1.58 | 1.08 (1.05-1.11) | <0.01 | 84 | 28/4.44 | <0.01 |
| WC | per 10cm increase | Colon CA inc | 8 | 3,371 / 869,185 | 1.14 (1.05-1.25) | 1.25 (1.15-1.35) | 3.0E-8 | 1.01-1.54 | 1.18 (1.07-1.31) | 0.06 | 50 | 7/2.41 | <0.01 |
| BMI | BMI 30+ vs. < 25 | Colon CA inc, men | 14 | 17,387 / 2,192,572 | 1.49 (1.39-1.60) | 1.53 (1.44-1.63) | <1E-100 | 1.43-1.64 | 1.60 (1.28-1.98) | 0.02 | 0 | 9/11.1 | NP |
| BMI | BMI 30+ vs. < 25 | Colon CA inc | 28 | 37,136 / 3,946,598 | 1.07 (1.02-1.12) | 1.44 (1.28-1.62) | 1.8E-9 | 0.91-2.28 | 1.15 (1.06-1.24) | 0.01 | 76 | 15/4.4 | <0.01 |
| BMI | Obese vs. normal weight | Colorectal CA inc | 72 | 166,030 / 15,623,976 | 1.06 (1.02-1.10) | 1.33 (1.25-1.42) | 1.7E-19 | 0.94-1.50 | 1.11 (1.06-1.16) | <0.01 | 69 | 31/14.2 | <0.01 |
| WC | highest vs. lowest category | Colorectal CA inc | 19 | 12,566 / 2,041,675 | 1.32 (1.11-1.56) | 1.45 (1.33-1.59) | 9.0EE-16 | 1.24-1.70 | 1.35 (1.19-1.55) | 0.02 | 9 | 13/14.5 | NP |
| WG | per 1kg increase / year | Colorectal CA inc | 20 | 34,295 / 1,989,242 | 1.31 (1.18-1.45) | 1.24 (1.14-1.36) | 7.8E-07 | 0.95-1.63 | 1.12 (1.04-1.21) | 0.56 | 47 | 6/18.3 | NP |
| BMI | 30+ vs. < 25 | Liver CA inc | 19 | 22,378 / 8,574,903 | 1.33 (1.19-1.48) | 1.83 (1.59-2.11) | 6.5E-17 | 1.10-3.04 | 1.51 (1.26-1.81) | 0.03 | 68 | 15/10.9 | 0.07 |
| BMI | per 5kg/m$^2$ increase | Liver CA inc | 21 | 17,642 / 5,003,033 | 1.12 (1.05-1.19) | 1.39 (1.25-1.55) | 1.8E-9 | 0.92-2.10 | 1.12 (1.05-1.21) | 0.02 | 80 | 12/4.91 | <0.01 |
| BMI | per 5kg/m$^2$ increase | Lung CA inc | 17 | 13,323 / 2,836,216 | 0.86 (0.82-0.90) | 0.77 (0.72-0.83) | 9.9E-13 | 0.60-0.98 | 0.86 (0.79-0.93) | 0.07 | 73 | 11/7.62 | 0.14 |
| BMI | per 5kg/m$^2$ increase | Lung CA inc, men | 11 | 7,935 / 1,389,075 | 0.84 (0.79-0.88) | 0.76 (0.70-0.83) | 7.5E-11 | 0.61-0.96 | 0.83 (0.75-0.91) | 0.03 | 62 | 8/5.36 | 0.14 |
| BMI | per 5kg/m$^2$ increase | Breast CA inc, PoMP | 31 | 28,599 / 2,321,914 | 1.18 (1.15-1.22) | 1.12 (1.08-1.16) | 3.4E-09 | 0.96-1.31 | 1.06 (1.03-1.09) | 0.44 | 62 | 12/17.3 | NP |
| Obe±± | highest vs. lowest cat.** | Breast CA inc, PoMP, ER+PR+ | 10 | 12,460 / 163,259 | 1.38 (1.12-1.71) | 1.82 (1.55-2.14) | 2.8E-13 | 1.12-2.96 | 1.54 (1.23-1.94) | 0.43 | 61 | 7/9.85 | NP |
| BMI | 25-29.99 vs. < 25 | Endometrial CA inc | 18 | 8,606 / 1,502,322 | 1.79 (1.65-1.95) | 1.61 (1.38-1.87) | 1.2E-9 | 0.84-3.08 | 1.25 (1.11-1.42) | 0.59 | 92 | 16/16.5 | NP |
| BMI | 30+ vs. < 25 | Endometrial CA inc | 14 | 7,176 / 1,494,091 | 2.73 (2.48-2.99) | 2.52 (2.12-3.00) | 8.5E-26 | 1.30-4.88 | 1.64 (1.27-2.11) | 0.44 | 90 | 14/13.9 | 1.00 |
| BMI iya | per 5kg/m$^2$ increase | Endometrial CA inc | 9 | 4,345 / 631,915 | 1.23 (1.11-1.35) | 1.45 (1.28-1.64) | 1.9E-09 | 0.98-2.15 | 1.33 (1.14-1.55) | 0.41 | 75 | 8/5.20 | 0.09 |
| BMI | per 5kg/m$^2$ increase | Endometrial CA inc | 28 | 22,320 / 6,445,255 | 1.65 (1.60-1.71) | 1.54 (1.47-1.61) | <1E-100 | 1.26-1.89 | 1.41 (1.26-1.57) | 0.35 | 81 | 26/25.2 | 1.00 |
| WC | per 10cm increase | Endometrial CA inc | 4 | 1,524 / 315,770 | 1.28 (1.19-1.37) | 1.27 (1.17-1.39) | 7.3E-08 | 0.88-1.85 | 1.19 (1.03-1.38) | 0.59 | 70 | 3/2.92 | 1.00 |
| WG | per 5kg increase | Endometrial CA inc | 7 | 2,806 / 460,901 | 1.17 (1.12-1.22) | 1.16 (1.12-1.20) | 3.7E-18 | 1.06-1.27 | 1.13 (1.05-1.22) | 0.95 | 47 | 6/2.75 | 0.02 |
| Weight | per 5kg increase | Endometrial CA inc | 8 | 1,841 / 343,719 | 1.11 (1.08-1.15) | 1.18 (1.14-1.23) | 1.9E-15 | 1.05-1.34 | 1.16 (1.07-1.26) | 0.14 | 66 | 7/1.11 | <0.01 |
| BMI | per 5kg/m$^2$ increase | Endometrial CA inc, PoMP | 6 | 10,075 / 2,558,935 | 1.51 (1.45-1.58) | 1.60 (1.40-1.83) | 1.4E-11 | 1.01-2.53 | 1.52 (1.16-1.98) | 0.88 | 89 | 6/5.0 | 0.60 |
| BMI | per 5kg/m$^2$ increase | Endometrial CA inc, Type I | 3 | 7,125 / 1,102,927 | 1.58 (1.53-1.62) | 1.75 (1.51-2.03) | 1.8E-13 | 0.30-10.2 | 1.71 (1.06-2.77) | 0.26 | 82 | 3/2.9 | 1.00 |
| BMI | per 5kg/m$^2$ increase | Endometrial CA inc, Type II | 3 | 1,059 / 1,102,927 | 1.35 (1.25-1.46) | 1.59 (1.29-1.78) | 5.7E-7 | 0.24-9.67 | 1.47 (1.03-2.08) | 0.52 | 76 | 3/1.5 | 0.25 |
| BMI | obese vs. normal weight | Prostate cancer mort | 10 | 14,179 / 2,339,669 | 1.20 (1.06-1.36) | 1.24 (1.15-1.33) | 1.8E-8 | 1.13-1.35 | 1.22 (1.09-1.37) | 0.03 | 0 | 4/5.73 | NP |
| BMI | 25-29.99 vs. < 25 | Kidney CA inc | 43 | 30,501 / 18,988,116 | 1.18 (1.11-1.26) | 1.35 (1.27-1.43) | 5.0E-22 | 1.09-1.66 | 1.25 (1.16-1.35) | <0.01 | 36 | 19/19.0 | 1.00 |
| BMI | per 5kg/m$^2$ increase | Kidney CA inc | 23 | 18,520 / 8,200,257 | 1.19 (1.13-1.24) | 1.30 (1.23-1.37) | 8.1E-24 | 1.11-1.52 | 1.20 (1.11-1.30) | 0.14 | 51 | 16/8.53 | <0.01 |
| BMI | 30+ vs. < 25 | Thyroid CA inc | 32 | 18,152 / 22,274,032 | 1.17 (1.11-1.23) | 1.32 (1.24-1.42) | 2.1E-15 | 1.10-1.59 | 1.24 (1.14-1.35) | <0.01 | 25 | 12/12.9 | NP |
| BMI | 30+ vs. < 25 | Leukemia inc | 25 | 51,914 / 21,228,740 | 1.42 (1.31-1.54) | 1.26 (1.16-1.37) | 1.6E-8 | 0.98-1.62 | 1.17 (1.07-1.27) | 0.29 | 43 | 7/19.3 | NP |
| **Associations supported by suggestive evidence** | | | | | | | | | | | | | |
| BMI | per 5kg/m$^2$ increase | Oesophageal SqCa, men | 3 | 1,787 / 3,145,452 | 0.77 (0.70-0.85) | 0.71 (0.61-0.84) | 6.1E-5 | 0.14-3.69 | 0.72 (0.52-0.98) | 0.03 | 44 | 3/1.81 | 0.28 |
| BMI | per 5kg/m$^2$ increase | Colon CA inc, women | 21 | 40,018 / 4,221,728 | 1.03 (1.01-1.05) | 1.12 (1.07-1.18) | 3.3E-6 | 0.96-1.31 | 1.05 (1.02-1.09) | <0.01 | 61 | 10/2.10 | <0.01 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WC | per 10cm increase | Colon CA inc, men | 5 | 1,869 / 469,320 | 1.15 (1.01-1.31) | 1.33 (1.18-1.50) | 1.6E-6 | 0.95-1.86 | 1.23 (1.04-1.44) | 0.51 | 45 | 4/1.50 | 0.03 |
| WC | per 10cm increase | Colon CA inc, women | 3 | 1,502 / 399,865 | 1.14 (1.05-1.25) | 1.16 (1.08-1.23) | 1.1E-5 | 0.76-1.76 | 1.16 (1.01-1.32) | 0.25 | 0 | 3/1.04 | 0.04 |
| WHR | per 0.1 unit increase | Colon CA inc | 8 | 3,132 / 941,955 | 1.24 (1.10-1.39) | 1.29 (1.17-1.43) | 1.1E-6 | 0.97-1.72 | 1.17 (1.05-1.31) | 0.16 | 53 | 6/4.17 | 0.29 |
| WHR | per 0.1 unit increase | Colon CA inc, men | 4 | 1,563 / 461,754 | 1.24 (1.05-1.46) | 1.43 (1.19-1.71) | 9.98E-5 | 0.71-2.87 | 1.33 (1.05-1.68) | 0.32 | 56 | 4/2.07 | 0.13 |
| WHR | per 0.1 unit increase | Colon CA inc, women | 4 | 1,569 / 480,201 | 1.24 (1.10-1.39) | 1.20 (1.08-1.33) | 5.0E-4 | 0.86-1.69 | 1.12 (0.98-1.28) | 0.90 | 30 | 2/2.10 | NP |
| BMI | Obese vs. normal** | Colon CA inc; distal colon, men | 7 | 1,685 / 643,569 | 1.77 (1.33-2.35) | 1.70 (1.36-2.11) | 2.3E-6 | 1.11-2.60 | 1.53 (1.12-2.09) | 0.64 | 17 | 3/6.5 | NP |
| BMI | Obese vs. normal** | Colon CA inc; distal colon | 20 | 4,359 / 1,320,435 | 0.96 (0.75-1.23) | 1.59 (1.34-1.89) | 1.2E-7 | 0.94-2.69 | 1.25 (1.07-1.46) | 0.49 | 44 | 7/1.3 | <0.01 |
| BMI | Obese vs. normal** | Colon CA inc; proximal colon, men | 7 | 1,720 / 643.569 | 1.18 (0.86-1.62) | 1.44 (1.18-1.77) | 4.4E-4 | 1.10-1.89 | 1.30 (1.03-1.64) | 0.44 | 0 | 1/2.0 | NP |
| BMI | Obese vs. normal** | Colon CA inc; proximal colon | 20 | 4,680 / 1,320,435 | 1.02 (0.84-1.24) | 1.33 (1.12-1.57) | 9.6E-4 | 0.84-2.09 | 1.14 (1.00-1.29) | 0.12 | 33 | 3/1.1 | 0.05 |
| BMI | Obese vs. normal** | Colon CA inc; distal colon, women | 12 | 2,565 / 669,300 | 0.96 (0.75-1.23) | 1.53 (1.19-1.97) | 8.3E-4 | 0.74-3.19 | 1.17 (0.97-1.40) | 0.51 | 56 | 4/0.7 | <0.01 |
| WG | per 5kg increase | Colon CA inc, men | 4 | 1,718 / 142,085 | 1.10 (1.03-1.17) | 1.09 (1.05-1.14) | 4.1E-5 | 1.00-1.19 | 1.07 (1.00-1.14) | 0.56 | 0 | 2/0.8 | 0.12 |
| WG | per 5kg increase | Colon CA inc | 7 | 2.909 / 298,174 | 1.10 (1.03-1.17) | 1.07 (1.03-1.10) | 8.3E-5 | 1.02-1.11 | 1.04 (1.00-1.09) | 0.88 | 0 | 2/1.3 | 0.50 |
| BMI | 30+ vs. < 25 | Rectal CA inc | 21 | 39,384 / 6,768,071 | 1.04 (0.97-1.11) | 1.21 (1.10-1.34) | 1.8E-4 | 0.97-1.52 | 1.07 (1.01-1.14) | 0.08 | 31 | 3/2.87 | 1.00 |
| BMI | per 5kg/$m^2$ increase | Rectal CA inc | 32 | 43,509 / 7,498,945 | 1.01 (0.98-1.04) | 1.07 (1.03-1.10) | 5.4E-5 | 0.99-1.15 | 1.03 (1.00-1.05) | 0.38 | 24 | 4/1.75 | 0.09 |
| BMI | 25-29.99 vs. < 25 | Cholangiocarcinoma inc | 8 | 2,125 / 2,338,722 | 1.40 (1.11-1.78) | 1.30 (1.13-1.49) | 2.4E-4 | 1.09-1.54 | 1.23 (1.04-1.48) | 0.17 | 0 | 1/6.31 | NP |
| BMI | 30+ vs. < 25 | Cholangiocarcinoma inc | 12 | 6,137 / 10,612,420 | 0.90 (0.70-1.20) | 1.52 (1.23-1.89) | 1.1E-4 | 0.83-2.79 | 1.28 (1.05-1.55) | 0.06 | 51 | 5/2.88 | 0.18 |
| BMI | per 5kg/$m^2$ increase | Biliary tract system CA inc | 12 | 7,147 / 6,083,814 | 1.88 (1.60-2.21) | 1.48 (1.24-1.75) | 7.9E-6 | 0.98-2.24 | 1.31 (1.09-1.59) | 0.09 | 36 | 4/10.8 | NP |
| WC | per 10cm increase | Pancreatic CA inc | 5 | 1,365 / 1,154,996 | 1.08 (0.98-1.18) | 1.11 (1.05-1.18) | 2E-4 | 1.02-1.22 | 1.11 (1.02-1.20) | 0.11 | 0 | 2/0.54 | 0.09 |
| WHR | per 0.1 unit increase | Pancreatic CA inc | 4 | 1,438 / 1,109,945 | 1.32 (1.12-1.56) | 1.20 (1.09-1.31) | 9.6E-5 | 0.96-1.50 | 1.14 (1.01-1.28) | 0.54 | 7 | 2/3.04 | NP |
| BMI | per 5kg/$m^2$ increase | Lung CA inc, smokers | 5 | 6,392 / 476,678 | 0.82 (0.77-0.87) | 0.76 (0.67-0.85) | 5.5E-6 | 0.51-1.11 | 0.80 (0.68-0.95) | 0.05 | 77 | 5/3.1 | 0.16 |
| BMI | 25+ vs. <25 | Lung CA inc, overall | 31 | 26,066 / 7,928,345 | 0.97 (0.93-1.01) | 0.74 (0.68-0.80) | 2.6E-14 | 0.52-1.05 | 0.93 (0.89-0.97) | <0.01 | 83 | 17/2.27 | <0.01 |
| BMI | 25+ vs. <25, ASE | Melanoma inc, men | 7 | 2,656 / 142,675 | 1.60 (0.89-2.89) | 1.68 (1.29-2.17) | 9E-5 | 1.19-2.35 | 1.59 (1.17-2.17) | 0.81 | 0 | 2/6.86 | NP |
| BMI | 30+ vs. < 25 | Melanoma inc, men | 15 | 5,899 / 1,404,137 | 1.29 (1.14-1.48) | 1.33 (1.14-1.55) | 4.0E-4 | 0.95-1.85 | 1.23 (1.02-1.49) | 0.81 | 23 | 5/7.51 | NP |
| BMI | 30+ vs. < 25 | Breast CA inc, PoMP | 8 | 11,882 / 873,142 | 1.19 (1.10-1.27) | 1.16 (1.08-1.25) | 8.1E-5 | 0.93-1.44 | 1.09 (1.02-1.16) | 0.37 | 65 | 4/6.4 | NP |
| BMI | 25-29.99 vs. < 25 | Breast CA inc, PoMP | 8 | 13,878 / 1,008,448 | 1.06 (0.99-1.13) | 1.12 (1.06-1.18) | 5.6E-5 | 0.96-1.30 | 1.08 (1.02-1.13) | 0.16 | 57 | 4/2.1 | 0.12 |
| BMI | per 5kg/$m^2$ increase | Breast CA inc, PrMP | 20 | 20,820 / 2,200,787 | 0.91 (0.86-0.97) | 0.92 (0.88-0.96) | 4.6E-4 | 0.81-1.05 | 0.95 (0.90-0.99) | 0.28 | 38 | 7/6.3 | 0.81 |
| WHR | per 0.1 unit increase | Breast CA inc, PrMP | 13 | 8,344 / 149,996 | 1.23 (1.17-1.29) | 1.10 (1.04-1.16) | 4.6E-4 | 0.91-1.32 | 1.04 (1.01-1.07) | 0.99 | 76 | 5/6.68 | NP |
| BMI | per 5kg/$m^2$ increase | Ovarian CA inc | 25 | 17,856 / 16,343,368 | 0.97 (0.93-1.01) | 1.07 (1.03-1.12) | 4.6E-4 | 0.94-1.22 | 1.03 (1.00-1.07) | 0.22 | 53 | 7/1.85 | <0.01 |
| BMI iya | per 5kg/$m^2$ increase | Ovarian Ca inc | 6 | 9,452 / 11,085,425 | 1.16 (1.04-1.29) | 1.12 (1.05-1.19) | 3.8E-4 | 1.03-1.23 | 1.10 (1.01-1.19) | 0.60 | 0 | 1/2.48 | NP |
| BMI | per 5kg/$m^2$ increase | Prostate CA inc, localised | 12 | 19,130 / 1,033,009 | 0.96 (0.93-0.98) | 0.94 (0.91-0.97) | 4.6E-4 | 0.88-1.01 | 0.95 (0.91-0.99) | 0.46 | 20 | 3/1.71 | 0.40 |
| BMI | per 5kg/$m^2$ increase | Prostate cancer mort | 6 | 6,817 / 1,263,483 | 1.08 (1.04-1.12) | 1.15 (1.06-1.25) | 8.3E-4 | 0.92-1.44 | 1.10 (1.02-1.18) | 0.30 | 59 | 4/1.62 | 0.049 |
| BMI | 30+ vs. < 25 | Bladder CA inc | 26 | 73,491 / 26,538,464 | 1.13 (1.06-1.20) | 1.09 (1.04-1.15) | 9.0E-4 | 0.98-1.21 | 1.06 (1.00-1.12) | 0.71 | 15 | 4/13.4 | NP |
| BMI | per 5kg/$m^2$ increase | Thyroid CA inc | 7 | 6,716 / 5,316,380 | 1.12 (1.05-1.19) | 1.23 (1.10-1.39) | 4.3E-4 | 0.89-1.70 | 1.13 (1.03-1.24) | 0.09 | 62 | 4/2.40 | 0.24 |
| BMI | per 5kg/$m^2$ increase | Thyroid CA inc, women | 3 | 3,190 / 2,159,238 | 1.12 (1.05-1.19) | 1.14 (1.06-1.22) | 4.0E-4 | 0.67-1.93 | 1.15 (0.99-1.33) | 0.41 | 3 | 2/1.10 | 0.30 |
| BMI | per 5kg/$m^2$ increase | NHL inc | 23 | 29,064 / 9,056,494 | 1.04 (0.99-1.09) | 1.07 (1.04-1.10) | 1.9E-6 | 1.02-1.12 | 1.05 (1.02-1.09) | 0.26 | 9 | 5/2.74 | 0.18 |
| BMI | 30+ vs. < 25 | Diff large B-cell lymphoma inc | 24 | 26,831 / 3,129,606 | 1.45 (1.17-1.80) | 1.29 (1.16-1.43) | 1.8E-6 | 0.94-1.77 | 1.17 (1.06-1.31) | 0.13 | 32 | 6/21.8 | NP |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BMI | per 5kg/m$^2$ increase | Multiple myeloma inc, men | 7 | 7,451 / 3,821,528 | 1.13 (1.07-1.19) | 1.12 (1.06-1.18) | 1.1E-4 | 1.02-1.22 | 1.07 (0.98-1.17) | 0.76 | 5 | 2/2.03 | NP |
| BMI | per 5kg/m$^2$ increase | Leukemia inc | 8 | 15,117 / 6,758,260 | 1.07 (1.02-1.12) | 1.12 (1.05-1.18) | 2.3E-4 | 0.96-1.30 | 1.07 (1.01-1.14) | 0.22 | 51 | 4/2.37 | 0.25 |
| BMI | 30+ vs. < 25 | Leukaemia inc, CLL | 5 | 6,547 / 13,038,983 | 1.30 (1.13-1.49) | 1.25 (1.11-1.41) | 2.3E-4 | 0.92-1.70 | 1.17 (1.02-1.34) | 0.78 | 31 | 2/4.2 | NP |
| BMI | 30+ vs. < 25 | Leukaemia inc, AML | 6 | 4,804 / 13,375,364 | 1.17 (1.00-1.36) | 1.52 (1.19-1.95) | 8.9E-4 | 0.69-3.38 | 1.20 (1.03-1.40) | 0.27 | 79 | 4/3.4 | 0.61 |
| BMI | 30+ vs. < 25 | Leukemia mort | 8 | 6,527 / 4,205,316 | 1.37 (1.13-1.67) | 1.28 (1.11-1.49) | 7.5E-4 | 0.93-1.77 | 1.18 (1.02-1.37) | 0.99 | 30 | 4/6.61 | NP |
| **Associations supported by weak evidence** | | | | | | | | | | | | | |
| BS | surgery vs. no surgery | Overall CA inc | 4 | 1,745 / 31,807 | 0.75 (0.64-0.88) | 0.40 (0.22-0.71) | 1.9E-3 | 0.03-6.14 | 0.69 (0.49-0.97) | 0.03 | 94 | 4/3.29 | 1.00 |
| BMI | per 5kg/m$^2$ increase | Oesophageal AdCa inc, men | 5 | 996 / 3,196,747 | 1.67 (1.44-1.92) | 1.52 (1.33-1.74) | 1.3E-9 | 1.09-2.11 | 1.31 (1.04-1.64) | 0.37 | 24 | 4/3.6 | 1.00 |
| BMI | per 5kg/m$^2$ increase | Oesophageal AdCa inc, women | 3 | 922 / 3234247 | 1.54 (1.26-1.89) | 1.51 (1.30-1.75) | 2.8E-8 | 0.59-3.86 | 1.49 (1.05-2.12) | 0.44 | 0 | 2/2.7 | NP |
| CeAd## | high vs. low | Oesophageal AdCa inc | 5 | 614 / 568285 | 1.81 (1.24-2.64) | 2.51 (1.56-4.04) | 1.5E-4 | 0.55-11.4 | 1.96 (1.18-3.26) | 0.66 | 62 | 4/3.8 | 1.00 |
| BMI | 30+ vs. < 25 | Gastric CA inc | 14 | 56,508 / 5,158,082 | 1.23 (1.02-1.49) | 1.13 (1.03-1.24) | 8.8E-3 | 0.98-1.31 | 1.10 (0.99-1.22) | 0.52 | 8 | 2/9.50 | NP |
| BMI | 30+ vs. < 25 | Colon CA inc, women | 14 | 19,749 / 1,754,026 | 1.07 (1.02-1.12) | 1.22 (1.07-1.40) | 3.4E-3 | 0.85-1.75 | 1.09 (1.01-1.19) | 0.04 | 51 | 6/2.2 | <0.01 |
| BS | surgery vs. no surgery | Colorectal CA inc | 5 | 1,013 / 182,298 | 0.79 (0.57-1.10) | 0.77 (0.62-0.96) | 0.022 | 0.54-1.10 | 0.78 (0.61-0.99) | 0.06 | 0 | 0/1.97 | NP |
| BMI | 25-29.99 vs. < 25 | Liver CA inc | 14 | 16,382 / 3,976,906 | 1.07 (1.00-1.15) | 1.18 (1.06-1.31) | 1.7E-3 | 0.88-1.58 | 1.07 (1.01-1.14) | 0.08 | 61 | 4/2.57 | 0.31 |
| BMI | per 5kg/m$^2$ increase | Lung CA inc, women | 6 | 5,388 / 1,447,141 | 0.86 (0.82-0.90) | 0.80 (0.66-0.98) | 0.027 | 0.42-1.53 | 0.92 (0.80-1.06) | 0.66 | 85 | 3/2.96 | 1.00 |
| BMI | 25-29.99 vs. < 25 | Melanoma inc | 31 | 12,109 / 5,319,318 | 1.05 (0.95-1.16) | 1.13 (1.02-1.26) | 0.022 | 0.82-1.55 | 1.03 (0.97-1.10) | 0.02 | 41 | 4/2.37 | 0.29 |
| BMI | 25+ vs. <25, ASE | Melanoma inc | 18 | 5,308 / 950,355 | 0.99 (0.65-1.50) | 1.24 (1.01-1.52) | 0.045 | 0.63-2.45 | 1.12 (0.94-1.32) | 0.03 | 49 | 4/0.91 | 0.01 |
| BMI | per 5kg/m$^2$ increase | Melanoma inc, men | 6 | 6,647 / 2,808,095 | 1.16 (1.08-1.26) | 1.17 (1.05-1.30) | 5.0E-3 | 0.89-1.52 | 1.11 (0.96-1.27) | 0.89 | 46 | 3/2.46 | 0.69 |
| BMI | per 5kg/m$^2$ increase | Melanoma inc, women | 5 | 7,148 / 2,886,890 | 0.97 (0.91-1.00) | 0.96 (0.93-1.00) | 0.03 | 0.90-1.02 | 0.97 (0.93-1.01) | 0.28 | 0 | 1/0.49 | 0.40 |
| Obe±± | highest vs. lowest cat.** | Breast CA inc, PoMP, ER- PR+ | 4 | 5,760 / 96,656 | 2.20 (0.88-5.49) | 2.01 (1.22-3.31) | 6.5E-3 | 0.67-6.04 | 1.80 (0.98-3.28) | 0.69 | 0 | 1/4.00 | NP |
| Obe±± | highest vs. lowest cat.** | Breast CA inc, PrMP, ER+ PR+ | 6 | 8,678 / 17,365 | 0.77 (0.62-0.96) | 0.80 (0.70-0.92) | 1.4E-3 | 0.66-0.97 | 0.84 (0.70-1.00) | 0.78 | 0 | 1/5.29 | 5.29 |
| WHR | highest vs lowest cat. | Breast CA inc, PoMP | 12 | 6,350 / 97,498 | 1.22 (0.96-1.55) | 1.46 (1.15-1.85) | 2.1E-3 | 0.69-3.07 | 1.15 (1.00-1.33) | 0.05 | 65 | 4/5.11 | NP |
| WHR | highest vs lowest cat. | Breast CA inc, PrMP | 11 | 3,522 / 62,839 | 1.70 (1.30-2.30) | 1.76 (1.25-1.47) | 1.5E-3 | 0.55-5.60 | 1.27 (0.99-1.64) | 0.03 | 78 | 8/9.23 | NP |
| BMI | Obese vs. normal** | Breast CA inc, triple negative | 5 | 933 / 158,657 | 1.24 (0.98-1.57) | 1.24 (1.06-1.46) | 8.2E-3 | 0.96-1.61 | 1.24 (1.03-1.49) | 0.89 | 0 | 0/1.7 | NP |
| BMI | 30+ vs. < 25 | Cervical CA inc | 9 | 2,557 / 5,369,546 | 1.21 (1.06-1.37) | 1.45 (1.15-1.83) | 1.1E-3 | 0.78-2.72 | 1.23 (1.04-1.46) | 0.17 | 57 | 4/2.66 | 0.46 |
| BS | surgery vs. no surgery | Endometrial CA inc | 3 | 12,288 / 958,988 | 0.48 (0.43-0.55) | 0.39 (0.19-0.79) | 8.6E-3 | 0.0-1314 | 0.55 (0.25-1.20) | 0.74 | 80 | 2/2.48 | NP |
| HC | per 10 cm increase | Endometrial CA inc | 2 | 831 / 255650 | 1.32 (1.20-1.45) | 1.29 (1.19-1.41) | 2.9E-9 | NA | 1.23 (0.98-1.54) | NA | 0 | 1/1.7 | NP |
| BMI | per 5kg/m$^2$ increase | Endometrial CA inc: HRT- | 3 | 699 / 360,326 | 1.61 (1.41-1.85) | 1.90 (1.56-2.30) | 9.2E-11 | 0.19-18.6 | 1.80 (1.06-3.07) | 0.005 | 77 | 3/2.9 | 1.00 |
| BMI | per 5kg/m$^2$ increase | Endometrial CA inc: HRT+ | 6 | 791 / 679,271 | 1.25 (1.05-1.47) | 1.18 (1.07-1.31) | 1.7E-3 | 1.02-1.37 | 1.16 (1.02-1.31) | 0.77 | 0 | 1/1.7 | NP |
| WG | per 5kg increase | Endometrial CA inc: PoMP, HRT- | 2 | 285 / 33,340 | 1.36 (1.25-1.46) | 1.38 (1.28-1.49) | 3.6E-17 | NA | 1.40 (0.97-2.02) | NA | 0 | 2/1.0 | 0.50 |
| WG | per 5kg increase | Endometrial CA inc: PoMP, HRT+ | 2 | 334 / 35,333 | 1.09 (1.00-1.18) | 1.09 (1.02-1.17) | 0.01 | NA | 1.09 (0.99-1.20) | NA | 0 | 1/0.2 | 0.18 |
| BMI | per 5kg/m$^2$ increase | Endometrial CA mort | 3 | 962 / 1781648 | 1.42 (1.33-1.63) | 1.46 (1.29-1.65) | 1.7E-9 | 0.48-4.48 | 1.35 (0.90-2.05) | 0.64 | 29 | 2/2 | 1.00 |
| WG | per 5kg increase | Ovarian CA inc: PostMP, HRT- | 2 | 217 / 23,984 | 1.16 (1.03-1.31) | 1.13 (1.03-1.24) | 8.5E-3 | NA | 1.11 (0.99-1.25) | NA | 0 | 0.27 | 0.25 |
| BMI | 30+ vs. < 25 | Ovarian CA inc, PoMP | 5 | 1,116 / 1,858,520 pyrs | 1.02 (0.82-1.26) | 1.23 (1.03-1.47) | 0.03 | 0.72-2.09 | 1.12 (0.97-1.29) | 0.52 | 46 | 0.3 | 0.14 |
| BMI | 30+ vs. < 25 | Ovarian CA inc, PrMP | 3 | 284 / 1,758,718 pyrs | 1.56 (1.14-2.16) | 1.57 (1.20-2.06) | 9.7E-4 | 0.27-9.02 | 1.54 (0.95-2.51) | 0.61 | 0 | 1.7 | NP |
| Weight | per 5kg increase | Ovarian CA inc | 4 | 1,281 / 405,655 | 1.02 (1.00-1.05) | 1.03 (1.01-1.05) | 1.4E-3 | 0.98-1.08 | 1.03 (1.00-1.05) | 0.42 | 7 | 1/0.22 | 0.20 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BMI | per 5kg/$m^2$ increase | Prostate CA inc, advanced | 13 | 7,067 / 1,080,790 | 1.00 (0.94-1.08) | 1.09 (1.02-1.16) | 0.01 | 0.92-1.29 | 1.04 (0.99-1.09) | 0.02 | 40 | 3/0.65 | 0.02 |
| WG | per 5kg increase | Prostate CA inc, high screening rate | 2 | 4,894 / 67,335 | 0.96 (0.92-1.00) | 0.95 (0.92-0.99) | 7.0E-3 | NA | 0.95 (0.90-1.01) | NA | 0 | 1/0.4 | 0.25 |
| WG | highest vs. lowest cat. | Kidney CA inc | 3 | 1,780 / 781,293 | 1.20 (0.90-1.70) | 1.42 (1.11-1.81) | 4.7E-3 | 0.23-8.71 | 1.28 (0.97-1.69) | 0.89 | 10 | 1/2.02 | NP |
| BMI | BMI 25-29.99 vs. < 25 | Bladder CA inc | 26 | 28,745 / 12,562,510 | 1.05 (1.00-1.10) | 1.07 (1.01-1.14) | 0.03 | 0.90-1.27 | 1.04 (0.99-1.08) | 0.29 | 38 | 5/3.72 | 0.41 |
| BMI | per 5kg/$m^2$ increase | Thyroid CA inc, men | 4 | 3,526 / 3,157,142 | 1.09 (0.98-1.22) | 1.32 (1.04-1.69) | 0.025 | 0.46-3.84 | 1.12 (1.00-1.25) | 0.23 | 77 | 2/1.02 | 0.27 |
| BMI | 30+ vs. < 25 | Hodgkin's lymphoma inc | 4 | 2,716 / 4,828,366 | 1.66 (1.28-2.14) | 1.41 (1.14-1.75) | 1.9E-3 | 0.73-2.72 | 1.24 (0.96-1.59) | 0.74 | 22 | 1/3.54 | NP |
| BMI | 25-29.99 vs. < 25 | NHL inc | 23 | 35,955 / 7,644,651 | 1.03 (0.97-1.10) | 1.07 (1.01-1.14) | 0.024 | 0.87-1.33 | 1.03 (1.00-1.07) | 0.40 | 57 | 4/2.15 | 0.27 |
| BMI | 30+ vs. < 25 | NHL inc | 23 | 35,955 / 7,644,651 | 1.09 (1.00-1.19) | 1.20 (1.07-1.34) | 1.4E-3 | 0.78-1.84 | 1.05 (0.97-1.15) | 0.50 | 72 | 9/6.87 | 0.36 |
| BMI | per 5kg/$m^2$ increase | NHL mort | 7 | 5,920 / 3,511,893 | 1.18 (1.09-1.29) | 1.14 (1.04-1.25) | 5.3E-3 | 0.90-1.45 | 1.10 (1.01-1.20) | 0.57 | 53 | 3/3.37 | NP |
| BMI | 25-29.99 vs. < 25 | Diff large B-cell lymphoma inc | 19 | 16,766 / 2,437,709 | 1.26 (1.08-1.47) | 1.14 (1.04-1.24) | 3.6E-3 | 0.89-1.45 | 1.10 (1.01-1.20) | 0.08 | 33 | 6/11.8 | NP |
| BMI | 30+ vs. < 25 | Multiple myeloma inc | 19 | 15,887 / 7,729,520 | 1.31 (1.16-1.48) | 1.21 (1.08-1.35) | 1.0E-3 | 0.90-1.62 | 1.14 (1.01-1.28) | 0.56 | 34 | 5/11.2 | NP |
| BMI | 25-29.99 vs. < 25 | Multiple myeloma mort | 8 | 3,337 / 3,714,187 | 1.18 (1.01-1.39) | 1.15 (1.04-1.26) | 6.0E-3 | 1.02-1.30 | 1.12 (0.99-1.27) | 0.46 | 0 | 1/2.81 | NP |
| BMI | per 5kg/$m^2$ increase | Leukemia inc, men | 5 | 7,827 / 3,497,392 | 1.09 (1.02-1.17) | 1.08 (1.02-1.13) | 8.4E-3 | 0.99-1.17 | 1.06 (0.98-1.14) | 0.47 | 0 | 1/1.54 | NP |
| BMI | per 5kg/$m^2$ increase | Leukemia inc, women | 3 | 7,290 / 3,260,868 | 1.07 (1.02-1.12) | 1.17 (1.04-1.33) | 9.8E-3 | 0.28-4.93 | 1.10 (1.00-1.21) | 0.20 | 79 | 3/1.09 | 0.05 |
| BMI | 30+ vs. < 25 | Leukemia inc, ALL | 5 | 588 / 13,337,737 | 1.33 (0.82-2.15) | 1.65 (1.16-2.35) | 5.1E-3 | 0.85-3.23 | 1.40 (0.96-2.04) | 0.67 | 7 | 1/1.9 | NP |
| BMI | 30+ vs. < 25 | Leukemia inc, CML | 5 | 2,530 / 13,337,737 | 1.15 (0.92-1.45) | 1.26 (1.09-1.46) | 1.7E-3 | 1.00-1.60 | 1.20 (1.03-1.41) | 0.47 | 0 | 1/1.9 | NP |

Abbreviations: AdCa, adenocarcinoma; ALL, acute lymphatic leukemia; AML, acutel myeloic leukemia; ASE, adjusted for sunlight exposure; biliary tract system cancer, includes cancers of gallbladder, extrahepatic bile duct and ampulla of Vateri; BMI, Body Mass Index; BMI iya, Body Mass Index in young adulthood; BS, bariatric surgery; CA, cancer; CI, confidence interval; CLL, chronic lymphatic leukemia; CML, chronic myeloic leukemia; ER = estrogen receptor status; HC, hip circumference; HRT, hormone replacement therapy; inc, incidence; mort, mortality; NA: Not available, due to <3 included studies; NHL, Non-Hodgkin lymphoma; NP: Not Pertinent, because the estimated is larger than the observed, and there is no evidence of excess statistical significance based on the assumption made for the plausible effect size; PoMP, postmenopausal; PR = progesterone receptor status; PrMP, premenopausal; pyrs, person-years; RR, relative risk; SqCa, squamous cell carcinoma; WC, waist circumference; WG, weight gain; WHR, waist-to-hip ratio;

* Number of studies
± Sum of all study cohorts in the meta-analysis. In case the same study appears more than once (e.g. for both men and wom, and proportions of men and wom in the study cohort was not given), the sum given here may too large.
# Relative risk and 95% confidence interval of largest study (smallest SE) in each meta-analysis.
† Random effects refer to summary risk ratio (95% CI) using the random-effects model.
¶ P value of summary random effects estimate.
‡ P-value from the Egger's regression asymmetry test.
§ Expected number of statistically significant studies using the point estimate of the largest study (smallest standard error) as the plausible effect size.
** Observed/Expected number of statistically significant studies
±± BMI, weight gain or weight change, varies between included studies
|| P value of the excess statistical significance test.
## Central adiposity: dependent categorical comparison of visceral adipose tissue area. if that was unavailable, WHR (or waist thigh ratio) or last WC was used.
*** Only associations meeting at least weak evidence are included in the table

All statistical tests were two-sided.

## Search Algorithms used

### 1) Pubmed:

1: obesity OR obese OR BMI OR “body mass index” OR bariatric surgery OR hip circumference OR waist circumference OR “weight gain” OR “waist to hip ratio” OR weight OR height OR body fat*
2: cancer OR carcinoma OR neoplasia OR tumor OR neoplasm OR maligna*
3: meta-analysis OR systematic review
4: 1 AND 2 AND 3

### 2) EMBASE:

1: obesity/ OR obese/ OR BMI/ OR body mass index/ OR bariatric surgery/ OR hip circumference/ OR waist circumference/ OR weight gain/ OR waist to hip ratio/ OR weight/ OR height/ OR body fat/
2: cancer/ OR carcinoma/ OR neoplasia/ OR tumor/ OR neoplasm/ OR maligna/
3: meta-analysis OR systematic review
4: 1 AND 2 AND 3

### 3) Cochrane database of systematic reviews:

1: obesity or obese or BMI or “body mass index” or bariatric surgery or hip circumference or waist circumference or “weight gain” or "waist to hip ratio" or weight or height or body fat:ti,ab,kw
2: cancer or carcinoma or neoplasia or tumor or neoplasm or maligna:ti,ab,kw
3: #1 and #2; in Cochrane Reviews (Reviews only) and Other Reviews