Global burden of cancer attributable to high body-mass index in 2012

International Agency for Research on Cancer
Lyon, France

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Melbourne 4 December 2014
Global burden of cancer attributable to high body-mass index in 2012: a population-based study

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Summary
Background High body-mass index (BMI; defined as 25 kg/m² or greater) is associated with increased risk of cancer. To inform public health policy and future research, we estimated the global burden of cancer attributable to high BMI in 2012.

Methods In this population-based study, we derived population attributable fractions (PAFs) using relative risks and BMI estimates in adults by age, sex, and country. Assuming a 10-year lag-period between high BMI and cancer occurrence, we calculated PAFs using BMI estimates from 2002 and used GLOBOCAN2012 data to estimate numbers of new cancer cases attributable to high BMI. We also calculated the proportion of cancers that were potentially avoidable had populations maintained their mean BMIs recorded in 1982. We did secondary analyses to test the model and to estimate the effects of hormone replacement therapy (HRT) use and smoking.
The link between cash, obesity and cancer

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this is not science
an occasional blog on population health

26 NOVEMBER 2014 BY BJ CAIRNS

Comment: Cancer and high body-mass index
CANCER

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Pos Kupang.com - Lembaga penelitian kanker Organisasi Kesehatan Dunia (WHO), Rabu, mengatakan bahwa sekitar setengah juta kasus kanker per tahun disebabkan oleh kelebihan berat badan, terutama di Amerika Utara.

Dalam penelitian disiarkan jurnal "The Lancet Oncology", Badan Internasional Penelitian Kanker WHO (IARC)

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Comment: Cancer and high body-mass index
AIMS

• Global picture
• Obesity $\rightarrow$ Cancer Development or deaths
  Incidence (new cases) or Mortality
• Scope for prevention
• Regional experts $\rightarrow$ regional perspective
ESTIMATION METHOD

Body mass Index

Risk
BMI → Cancer

Attributable Fraction (PAF)
ESTIMATION METHOD

Risk
BMI → Cancer

Body mass Index

Attributable Fraction (PAF)

Incidence
ESTIMATING METHOD

Attributable Fraction (PAF)

Body Mass Index (BMI) → Cancer Incidence

Foto: Boris Simsek
ESTIMATION METHOD

Body mass index
22.3

Body fat
9.1% 21.2%
ESTIMATION METHOD

Attributable Fraction (PAF)

Body mass index (BMI) → Cancer Incidence
RESULTS
GLOBAL REVIEW

Women of Andovoaka, Gaugin,
(Attributable) Cases by region

[Diagram showing cases by region with various percentages and numbers for each region.]
LARGE DISPARITIES

Derby Day, Frith, 1858
Cancer due to high BMI, Men

(a) males

PAF (%)
- 3.1-5.5
- 2.0-3.1
- 1.0-2.0
- 0.3-1.0
- 0.0-0.3
- No Data
Cancer due to high BMI, Women
WOMEN MORE AFFECTED

Picnic, Botero, 1968
Cases due to high BMI, by sex

**MEN**
- Kidney: 34
- Pancreas: 15
- Rectum: 18
- Colon: 56
- OAC: 14

**WOMEN**
- Breast (postmenopausal): 114
- Corpus uteri: 107
- Ovarian: 30
- Colonic: 29
- Rectal: 7
- Pancreatic: 12
- Gallbladder: 32
- Kidney: 9

M: 136,000
F: 345,000
PREVENTABLE

Canasta de frutas,
Botero, 1997
Paint the future, Judd, 2009
The Future

- Getting Global
- The beginning (i.e. cancer) → Cumulative effect
- Commitments of all stakeholders

International Agency for Research on Cancer
A Global Collaboration
ACKNOWLEDGEMENT

- Melina Arnold
- Nirmala Pandeya
- Expert group
- Many who have contributed
- Cancer Registries, health surveys, cohort studies
- WCRF International