

Cancer is the second highest cause of death

Cancer is the second major cause of death in most OECD countries, after cardiovascular diseases. Incidence rates of cancer can therefore be used as a partial measure of regional disparities in terms of healthcare needs.

The steady rise in the elderly population has brought an increase in the number of new cases of cancer. It will rise even more steeply if exposure to behavioural risk factors – such as smoking, alcohol and an unhealthy diet – persists.

Statistics should be interpreted with caution

The international comparability of data on the incidence of cancer can be affected by differences in medical training and practices. It should also be borne in mind that better screening, and more importantly early diagnosis, may push up the reported incidence of cancer but are efficient means of limiting deaths from the disease.

The lowest cancer incidence rates are found in Asia, southern Europe and Mexico. The United

States and New Zealand report the highest numbers of new cases (Figure 30.1).

Incidence rates are highest in Australia

Among the six countries for which regional data are available, Australia shows the largest regional disparities for both men and women.

In each country, the rate of incidence and its regional variations differ according to gender (Figure 30.2). In the Slovak Republic, for instance, regional disparities in the incidence of cancer are larger for women than for men. In addition, the incidence rate for men is below the average of the six countries for which regional data are available but above the average for women.

In France and Canada, instead, regional disparities are smaller for women. In these countries, the regional rates of incidence are more frequently below the average of the six countries for women than for men.

In Iceland, the incidence of cancer among women is high on average, but far higher in the capital region than in the rest of the country.

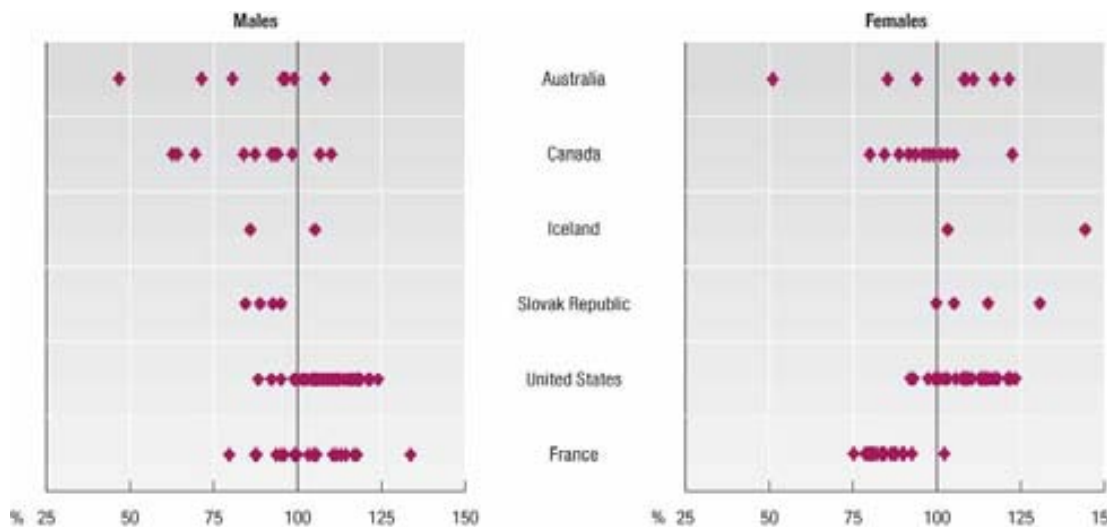
Definition

Annual number of new cases of cancer per 100 000 population. All of the cancers included are classed as Code C00-C97 in the ICD-10 classification of diseases and Code 140-208 in the ICD-9 classification.

30.1. Incidence of cancer at the national level, 2002



30.2. Regional disparities in the incidence of cancer

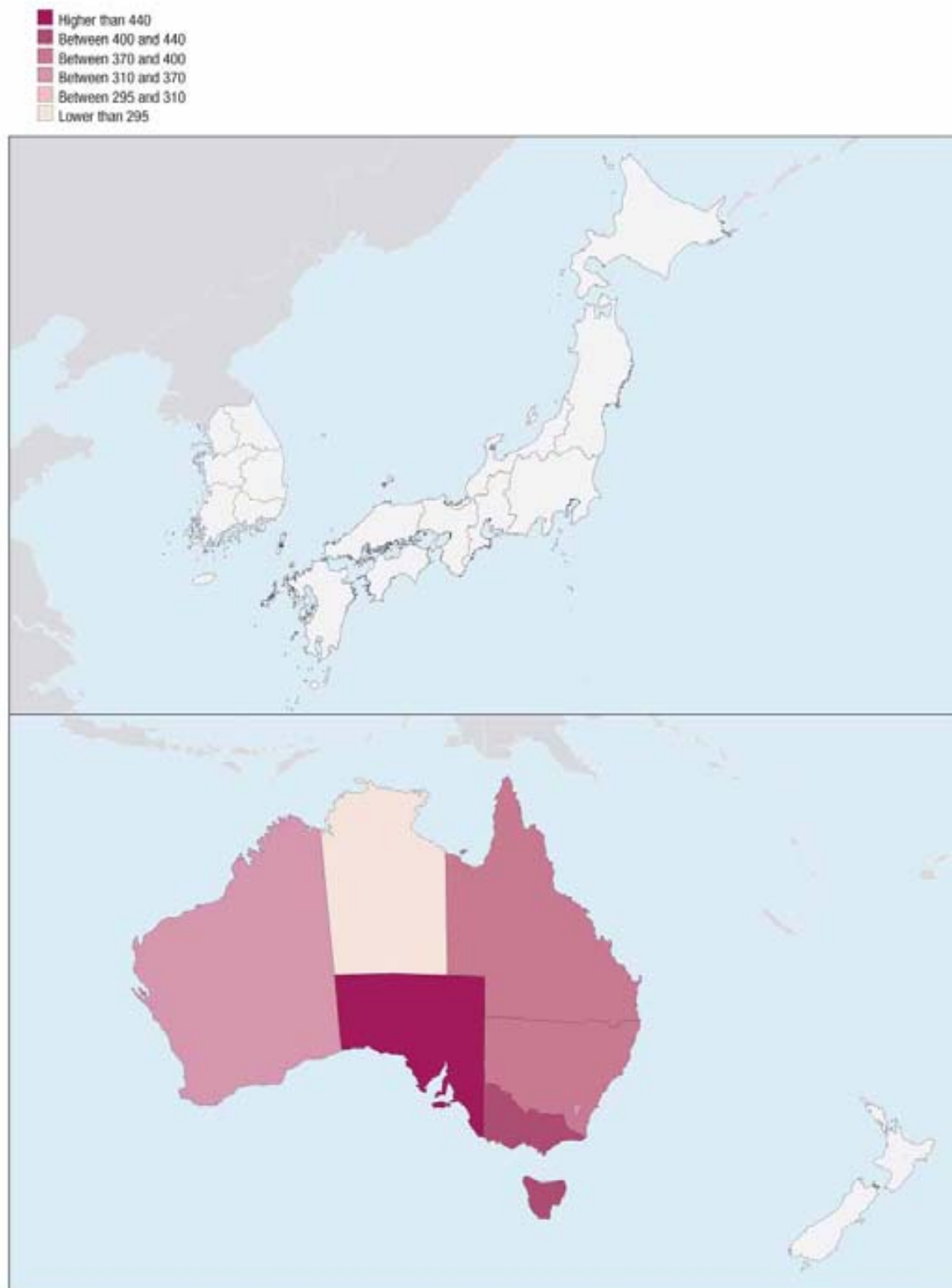



Regional variation (TL2), percentage of OECD average (6), 2003.

StatLink <http://dx.doi.org/10.1787/863260604803>

30.3. Incidence of cancer among women: Asia and Oceania

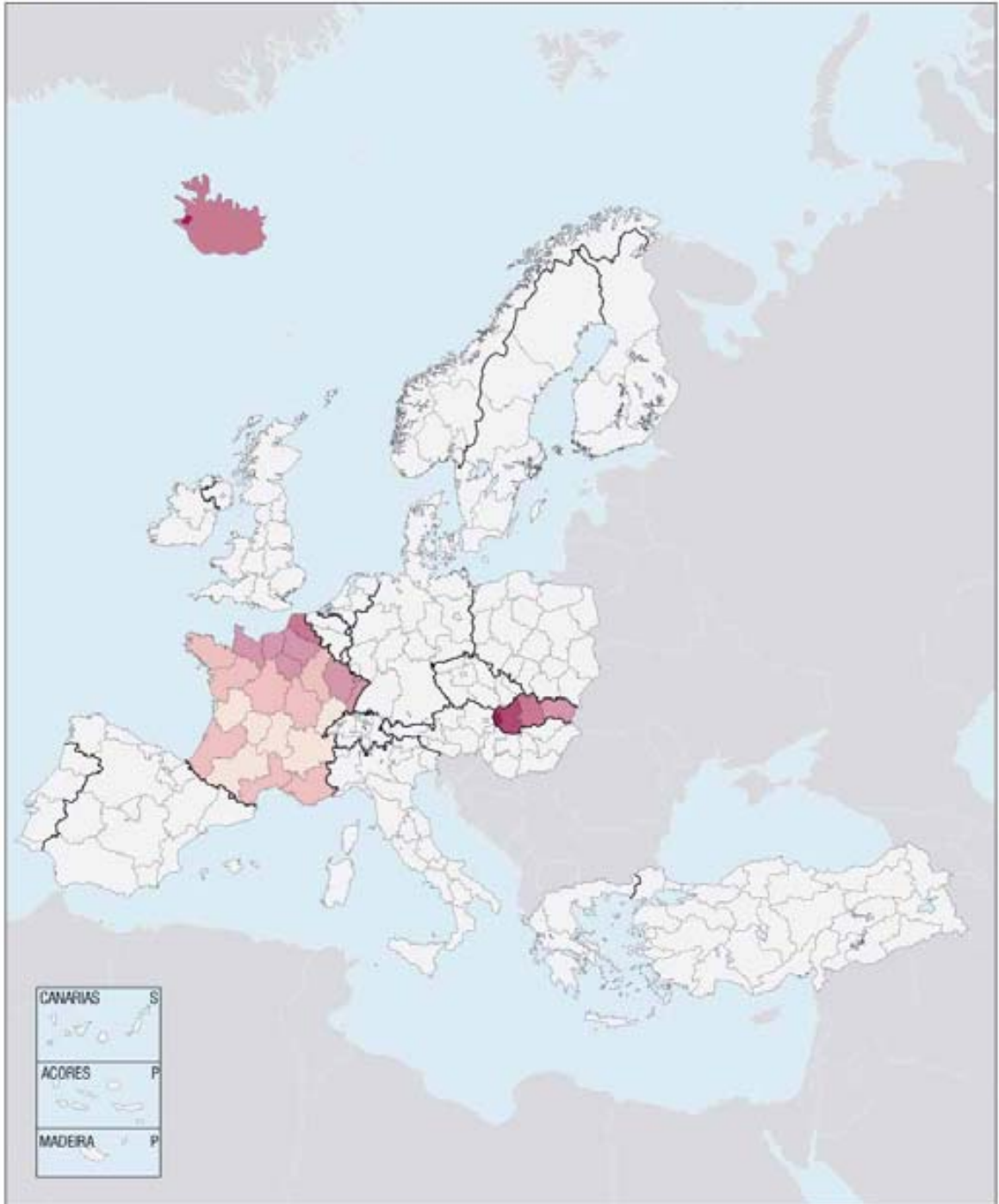
Number of new cases of cancer per 100 000 population, 2003



StatLink  <http://dx.doi.org/10.1787/172153836678>

30.4. Incidence of cancer among women: Europe

Number of new cases of cancer per 100 000 population, 2003

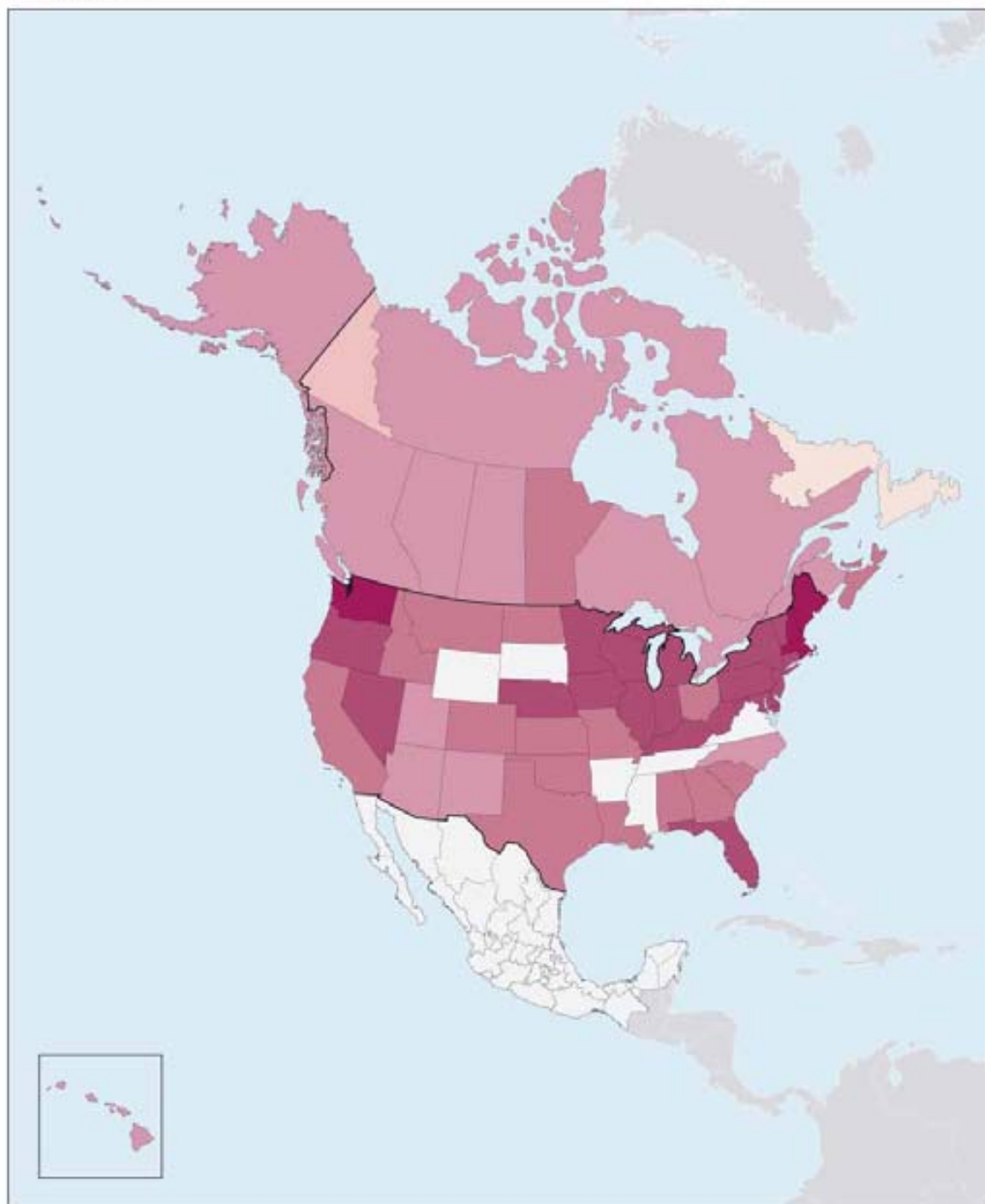



StatLink  <http://dx.doi.org/10.1787/172153836678>

30.5. Incidence of cancer among women: North America

Number of new cases of cancer per 100 000 population, 2003

- Higher than 440
- Between 400 and 440
- Between 370 and 400
- Between 310 and 370
- Between 295 and 310
- Lower than 295



StatLink  <http://dx.doi.org/10.1787/172153836678>

When controlling for age, the incidence of cancer tends to be lower in rural regions

Population ageing, individual risk-taking behaviour and environmental risk factors have often been cited as determinants of the increase in cancer. Individual risk factors are tobacco consumption, alcohol consumption and an unhealthy diet. Environmental risk factors include air and water pollution as well as exposure to chemicals and radiation. The link between these risk factors and the incidence of cancer has been established in a number of studies based on individual data.

Although regional data on risk factors are not available, it is commonly believed that rural regions provide a healthier environment so that the incidence of cancer tends to be lower among the rural population. To test this idea, the incidence of cancer in regions is regressed on three explanatory variables: the percentage of the regional population living in rural areas; the proportion of the regional population aged 65 years and above (to control for the effect of ageing); and country-specific dummy variables (to control for differences in risk factors among countries). Figure 30.6 compares the observed and the estimated incidence of cancer among men across the regions of the six countries for which regional data are available (Australia, Canada, Iceland, Slovak Republic, United States and France). Figure 30.7 compares the observed and the estimated incidence of cancer among women.

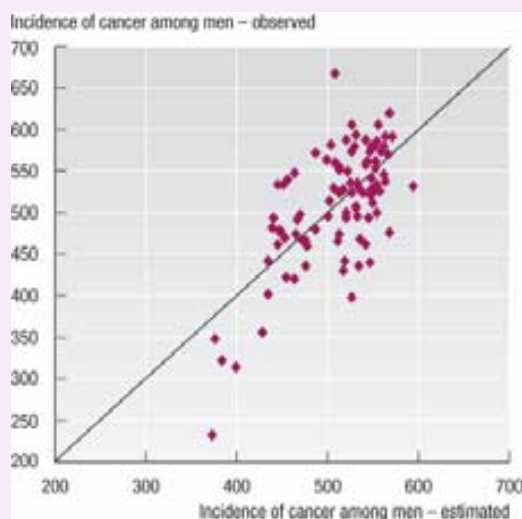
Overall, the three explanatory variables explain a significant proportion of the regional difference in the incidence of cancer: 56% of the variance for women and 41% for men (based on the adjusted R^2). The country-specific dummy variables are significant at the 5% level for both men and women.

The regression coefficient on the proportion of people aged 65 years and above is positive and significant at the 5% level for both sexes. As expected, regions with an ageing population tend to have a higher incidence of cancer.

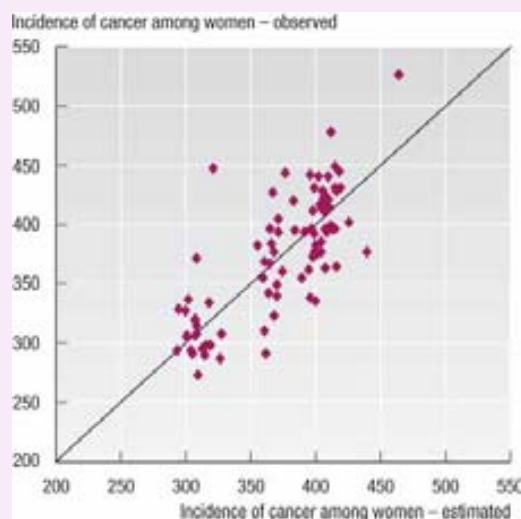
The regression coefficient on the proportion of population living in rural regions is negative and significant at the 5% level for men and 10% level for women. Therefore, the incidence of cancer appears to be lower among population in rural regions.

Lack of data prevent testing the effects of risk-taking behaviour on the incidence of cancer in regions. However, to the extent that risk-taking behaviour is not systematically higher in rural regions, this should not change the above results.

30.6. Estimates of the incidence of cancer among men, 2003 (TL2)



30.7. Estimates of the incidence of cancer among women, 2003 (TL2)



StatLink  <http://dx.doi.org/10.1787/863260604803>

Symbols and Abbreviations

OECD (25) average	Unweighted average of 25 OECD countries.
OECD (25) total	Sum over all regions of 25 OECD countries.
OECD (25)	Range of variation over all regions of 25 OECD countries.
TL2	Territorial Level 2.
TL3	Territorial Level 3
NOG	Non Official Grid
*	Differences in the definition of data or regions. Please check the “Sources and Methodology” section.
PU	Predominantly Urban
IN	Intermediate
PR	Predominantly Rural
PPP	Purchasing Power Parity
USD	United States Dollar





I. REGIONS AS ACTORS OF NATIONAL GROWTH

1. GEOGRAPHIC CONCENTRATION OF POPULATION
2. GEOGRAPHIC CONCENTRATION OF THE ELDERLY POPULATION
3. GEOGRAPHIC CONCENTRATION OF GDP
4. REGIONAL CONTRIBUTIONS TO GROWTH IN NATIONAL GDP
5. GEOGRAPHIC CONCENTRATION OF INDUSTRIES
6. REGIONAL CONTRIBUTIONS TO CHANGES IN EMPLOYMENT
7. GEOGRAPHIC CONCENTRATION OF PATENTS

Table of Contents

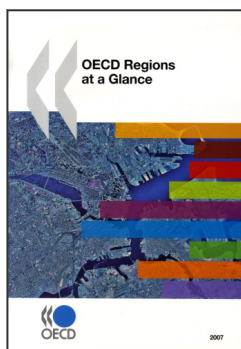
Executive Summary	7
Symbols and abbreviations	11
I. Regions as Actors of National Growth	
1. Geographic concentration of population	14
2. Geographic concentration of the elderly population	20
3. Geographic concentration of GDP	26
4. Regional contributions to growth in national GDP	32
5. Geographic concentration of industries	38
6. Regional contributions to changes in employment	44
7. Geographic concentration of patents	50
II. Making the Best of Local Assets	
8. Regional disparities in GDP per capita	58
9. Regional disparities in labour productivity	64
10. Regional disparities in specialisation	70
11. Regional disparities in tertiary education attainment	76
12. Regional disparities in unemployment rates	82
13. Regional disparities in participation rates	88
The Key Drivers of Regional Growth	
14. The factors behind regional performance	96
15. Regional growth in the OECD	98
16. National factors and regional performances	102
17. Regional factors: GDP per capita and population	106
18. Regional factors: productivity and specialisation	110
19. Regional factors: employment, participation and ageing	114
III. Competing on the Basis of Regional Well-being	
20. Accessibility: distance from the closest urban centre	120
21. Education: student enrolments in tertiary education	124
22. Voter turnout in national elections	128
23. Safety: reported crimes against property	132
24. Safety: reported murders	136
25. Home ownership	140
26. Environment: private vehicle ownership	144
27. Environment: municipal waste	148

IV. Regional Focus on Health

28. Health: age-adjusted mortality rate	154
29. Health status: premature mortality	160
30. Health status: incidence of cancer	166
31. Health resources: number of physicians	172
32. Health resources: density of practising nurses	178
33. Health resources: hospital beds	182
34. Health resources: medical technology	188
35. Non-medical determinants of health: prevalence of smoking	194
36. Non-medical determinants of health: prevalence of obesity	198

Source and Methodology

Territorial Grids and Regional Typology	205
Regional grids	205
Regional typology	205
Population – Chapters: 1, 8, 17, 21, 23, 24, 26, 27, 30, 31, 32, 33, 34, 35, 36	214
Population by age and sex – Chapters: 2, 11, 13, 19, 28	215
Gross domestic product – Chapters: 3, 4, 8, 9, 15, 16, 17, 18, 19	217
Employment by industry – Chapters: 5, 10, 18	219
Labour force, employment, unemployment and long-term unemployment – Chapters: 6, 9, 12, 13, 18, 19	220
Employment at place of work – Chapter 9	222
Patent applications – Chapter 7	223
Educational attainments – Chapter 11	224
Time distance from the closest urban centre – Chapter 20	226
Student enrolment in tertiary education – Chapter 21	228
Voter turnout in national elections – Chapter 22	229
Crimes against property – Chapter 23	230
Number of murders – Chapter 24	232
Number of dwellings inhabited by the owner; total number of occupied dwellings – Chapter 25	234
Number of private vehicles – Chapter 26	235
Volume of produced waste – Chapter 27	236
Death by age and sex: Chapters 28, 29	237
Number of new cases of cancer – Chapter 30	239
Number of physicians – Chapter 31	240
Number of nurses – Chapter 32	242
Number of hospital beds – Chapter 33	244
Number of CT scanners and MRI units – Chapter 34	246
Number of smokers aged 15 and over – Chapter 35	247
Number of people suffering from obesity – Chapter 36	248
Indexes and Formulas	249
The drivers of regional growth	251



From:
OECD Regions at a Glance 2007

Access the complete publication at:
https://doi.org/10.1787/reg_glance-2007-en

Please cite this chapter as:

OECD (2008), "Health status: incidence of cancer", in *OECD Regions at a Glance 2007*, OECD Publishing, Paris.

DOI: https://doi.org/10.1787/reg_glance-2007-32-en

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to rights@oecd.org. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at info@copyright.com or the Centre français d'exploitation du droit de copie (CFC) at contact@cfcopies.com.