



Health statistics

Atlas on mortality in the European Union

Chapter 5 – Part 1 Mortality by age group

Data 1994–96

3



EUROPEAN
COMMISSION

Inserm

CépiDC — Centre d'épidémiologie
sur les causes médicales de décès



UNIVERSITÉ PARIS X NANTERRE



THEME 3
Population and
social conditions

Europe Direct is a service to help you find answers to your questions about the European Union

**New freephone number:
00 800 6 7 8 9 10 11**

A great deal of additional information on the European Union is available on the Internet.
It can be accessed through the Europa server (<http://europa.eu.int>).

Luxembourg: Office for Official Publications of the European Communities, 2002

ISBN 92-894-3727-8

© European Communities, 2002

ATLAS — Contents

1. Introduction.....	9
2. Methodology.....	11
3. General mortality.....	15
4. 'Premature' mortality.....	23
5. Mortality by age group.....	27
6. Typologies of mortality by age.....	43
7. Typologies of mortality by cause.....	49
8. Cardiovascular diseases.....	53
9. Respiratory diseases.....	59
10. Respiratory cancers.....	65
11. Intestinal cancers (colon, rectum and anus).....	71
12. Stomach cancers.....	75
13. Breast cancers.....	79
14. Cancers of the uterus.....	81
15. Prostate cancer.....	83
16. Cancer of the pancreas.....	85
17. Cancer of the bladder.....	89
18. Malignant melanoma of the skin.....	93
19. Mortality associated with alcoholism.....	97
20. Violent deaths.....	101
21. AIDS.....	111
Annex 1 — Standard European population.....	115
Annex 2 — Causes of death (European shortlist).....	116
Annex 3 — List of NUTS 2 regions.....	118

5. Mortality by age group

Mortality rates vary considerably with age.

The lowest rates are in the 5–14 age group, after which mortality increases regularly with age. There is excess male mortality at all ages, with a peak between 15 and 24 years.

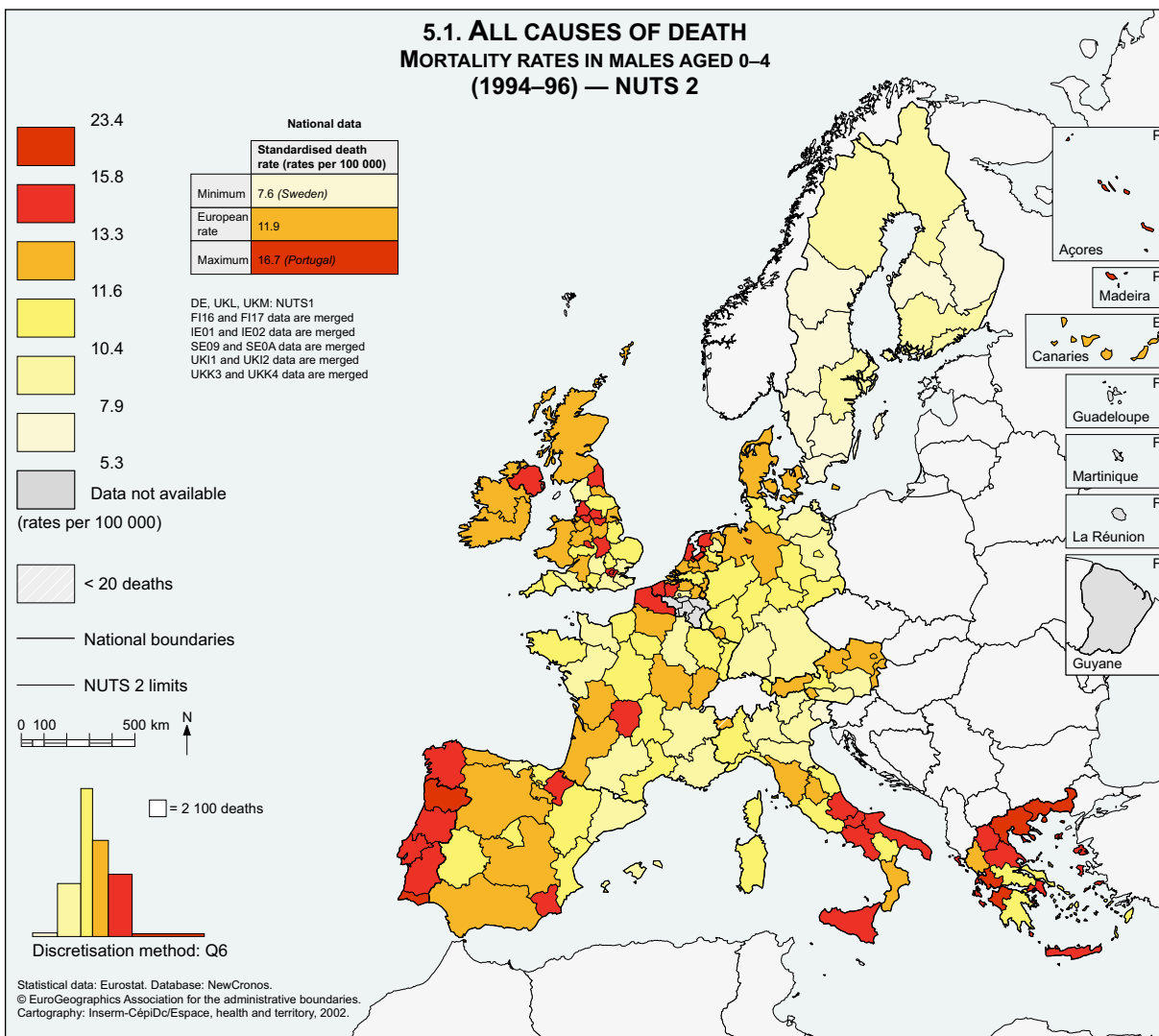
The causes of death also vary with age. Before 15 years, respiratory diseases and accidents (falls, domestic accidents) predominate. Between 15 and 64 years, deaths are mostly due to behavioural risks (tobacco, alcohol, suicide and road accidents). After 65 years, cancer and cardiovascular diseases are the main causes of death.

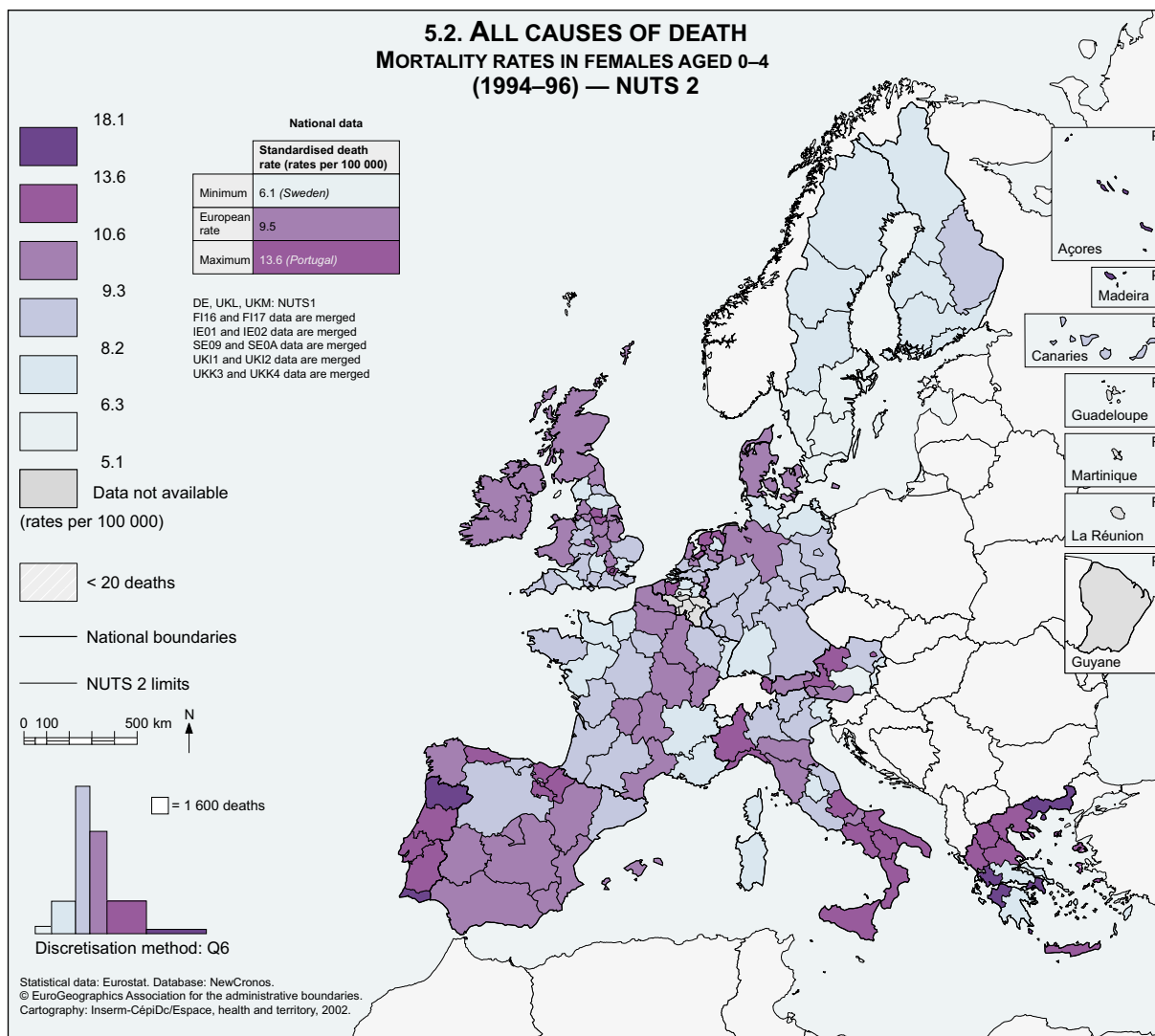
The mortality specific to each age therefore has to do with particular problems of public health.

Furthermore, the spatial patterns of mortality rates at regional level are different depending on age. A typology of the regions according to their mortality rates by age and sex which portrays mortality profiles will summarise these variations and will reveal cross-border regional proximities.

Children and adolescents: different patterns of mortality before one year and between 1 and 14 years

The geographical pattern of deaths between zero and four years mainly reveals the disparities in the level of infant mortality (zero to one year). After the first year of life, the probability of death diminishes considerably, reaching its lowest point at about the age of 10 years, irrespective of sex.





Two periods must be distinguished in infant mortality: perinatal mortality (foetal deaths and deaths between zero and six days), reflecting the quality of obstetric care and reanimation, and post-neonatal mortality (between 28 days and one year), associated with the quality of the social environment of the new-born child.

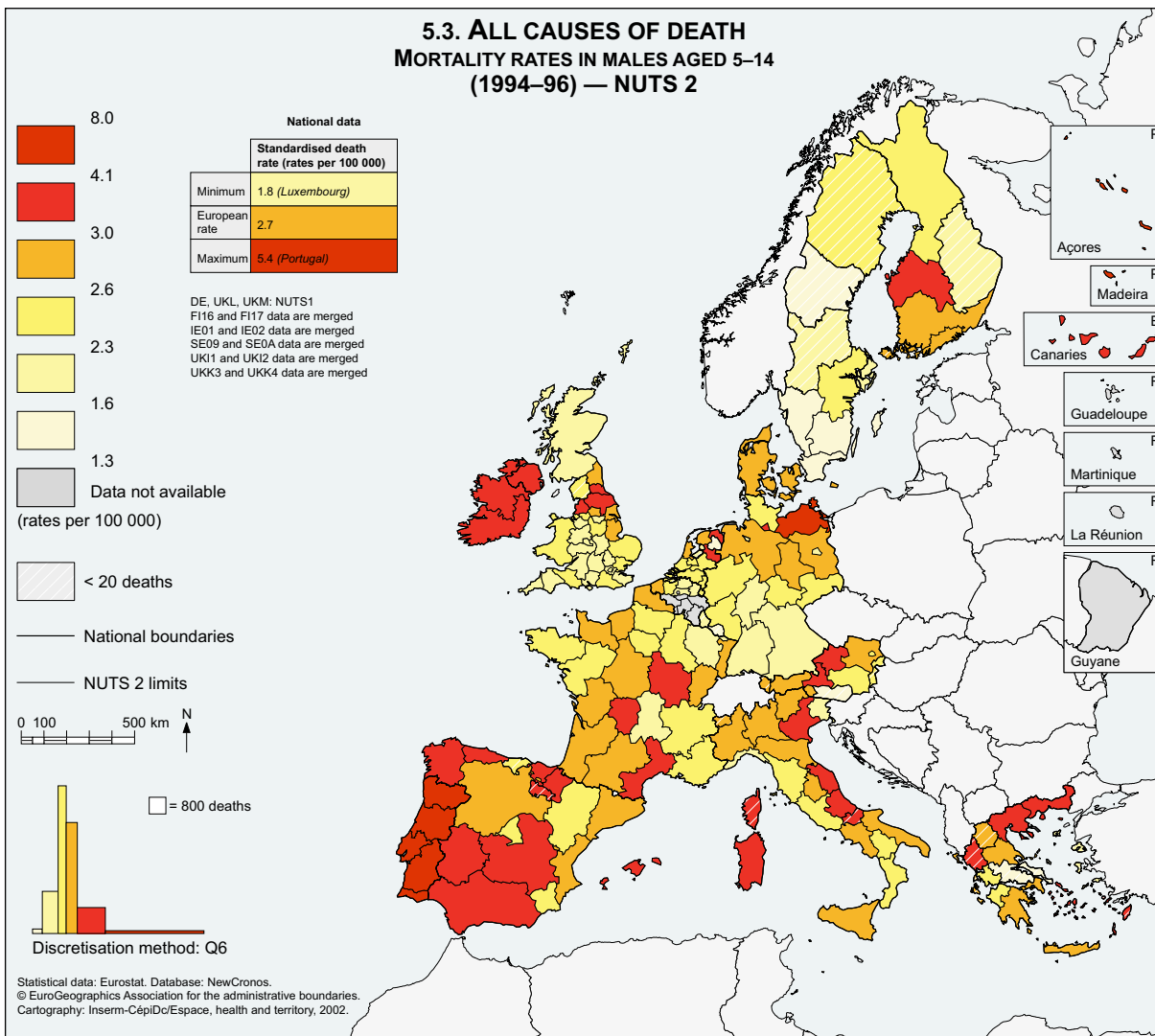
For infant mortality as a whole in the EU, the main causes of death are sudden infant death syndrome, respiratory problems, obstetric trauma, prematurity and congenital anomalies.

All European countries have seen a marked reduction in infant mortality since the beginning of the 20th century. Since the 1970s, the major disparities between the Member States have decreased considerably, but despite this overall trend there are still marked contrasts, since European regional rates vary at a ratio of 1 to 4.

The geographic pattern suggests that this mortality may be correlated to certain socioeconomic features in the EU.

Most of the European regions with excess mortality are economically disadvantaged: Portugal, southern Italy and Greece. The high rates in Nord-Pas-de-Calais in France and the regions of northern England (Greater Manchester and Lancashire) can also be regarded as stemming from the poor overall mortality situation of these regions, which reflects difficult social and/or environmental conditions.

Scotland, Wales and Ireland, Limousin and the south-west of France, Galicia and Spain's inland provinces also have high rates. These regions are predominantly rural and are affected by a high level of rural exodus. A common feature to all of them is relative isolation, which may, for example, make access to healthcare more difficult.



Between five and 14 years, mortality rates are on average four times higher than those of children under five.

Death rates vary at a ratio of 1 to 6 between European regions, for both girls and boys. These contrasts are due mainly to the differences between the regions in terms of the frequency of domestic accidents and road accidents.

Apart from Portugal, which has uniformly high regional rates for both boys and girls, European countries have situations that vary depending on region and sex.

There are certain similarities with the differences observed for infant mortality, such as excess mor-

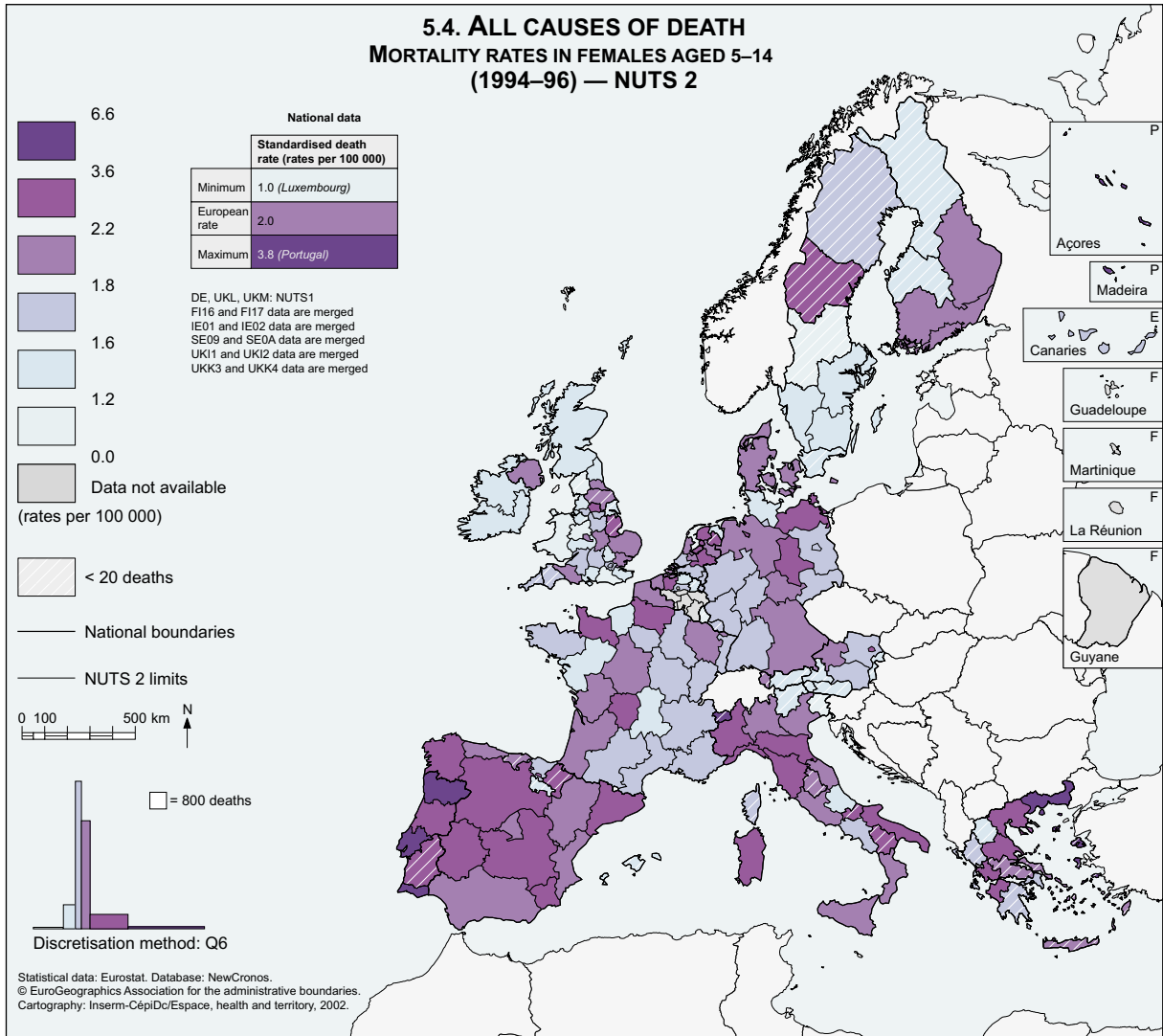
tality in the south-west of France and most of the Spanish and Greek provinces.

Overall, the distribution of death rates between five and 14 years is less clear-cut than that observed for the under five age class and is more difficult to interpret.

The maps for boys and girls show considerable differences. On the whole, boys are more exposed than girls are but, in a small number of regions, there is excess female mortality (Greece and Sweden).

These differences must be interpreted with caution, since the number of deaths is small, particularly for girls (which mean that the rates can be very sensitive to variations in numbers).

5. Mortality by age group



Adolescents and young adults: spatial differences are much more marked

Excess male mortality is high in the 15–24 age group: on average, the risks of death are three times higher for boys than for girls. This excess mortality reflects the higher level of behavioural risks in the young male population, since mortality in the 15–24 age group is due mainly to violent causes of death, chiefly road accidents and suicide.

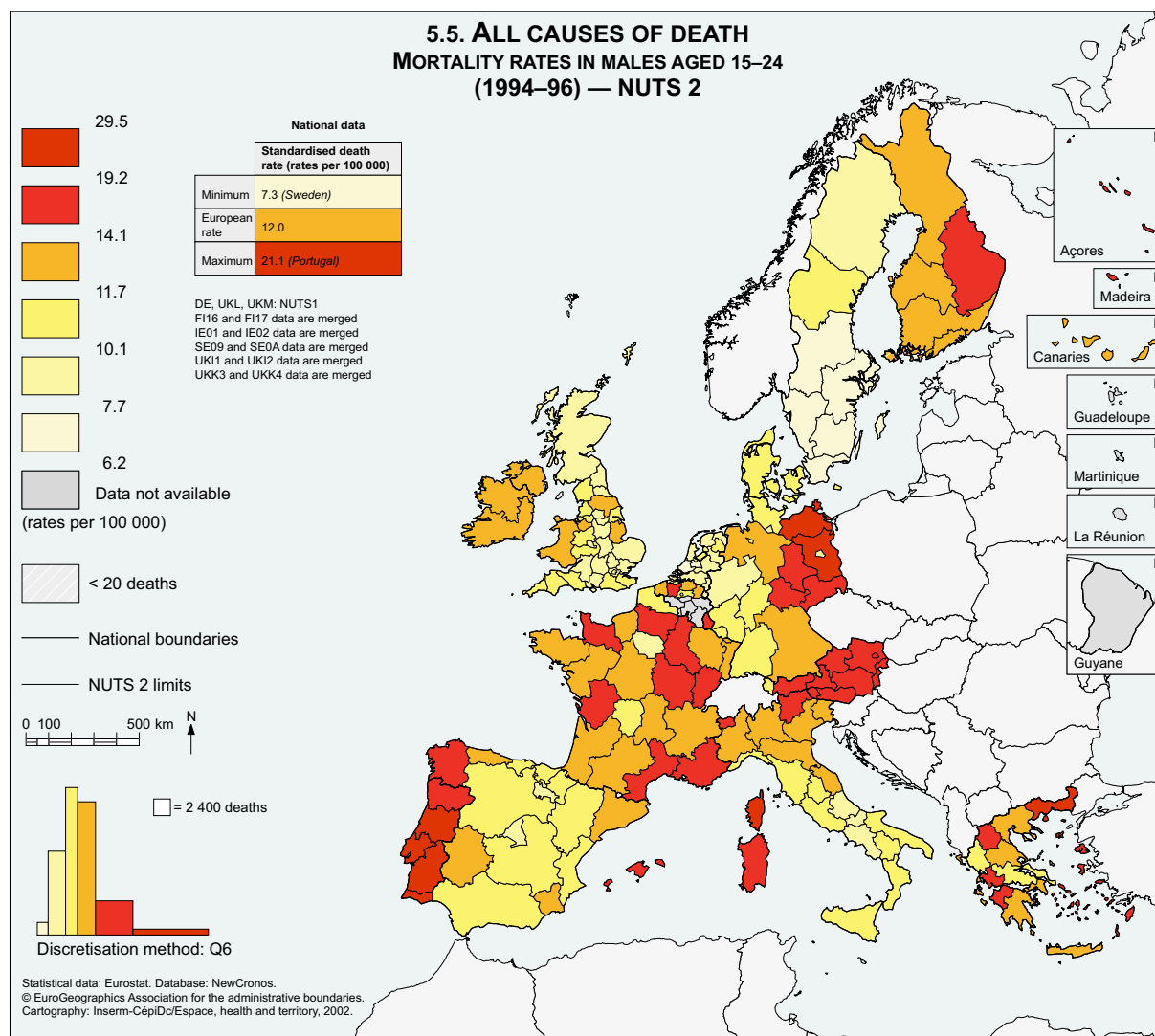
The pattern of this premature mortality is uneven across Europe. There are considerable regional contrasts, with rates varying at a ratio of 1 to 5.

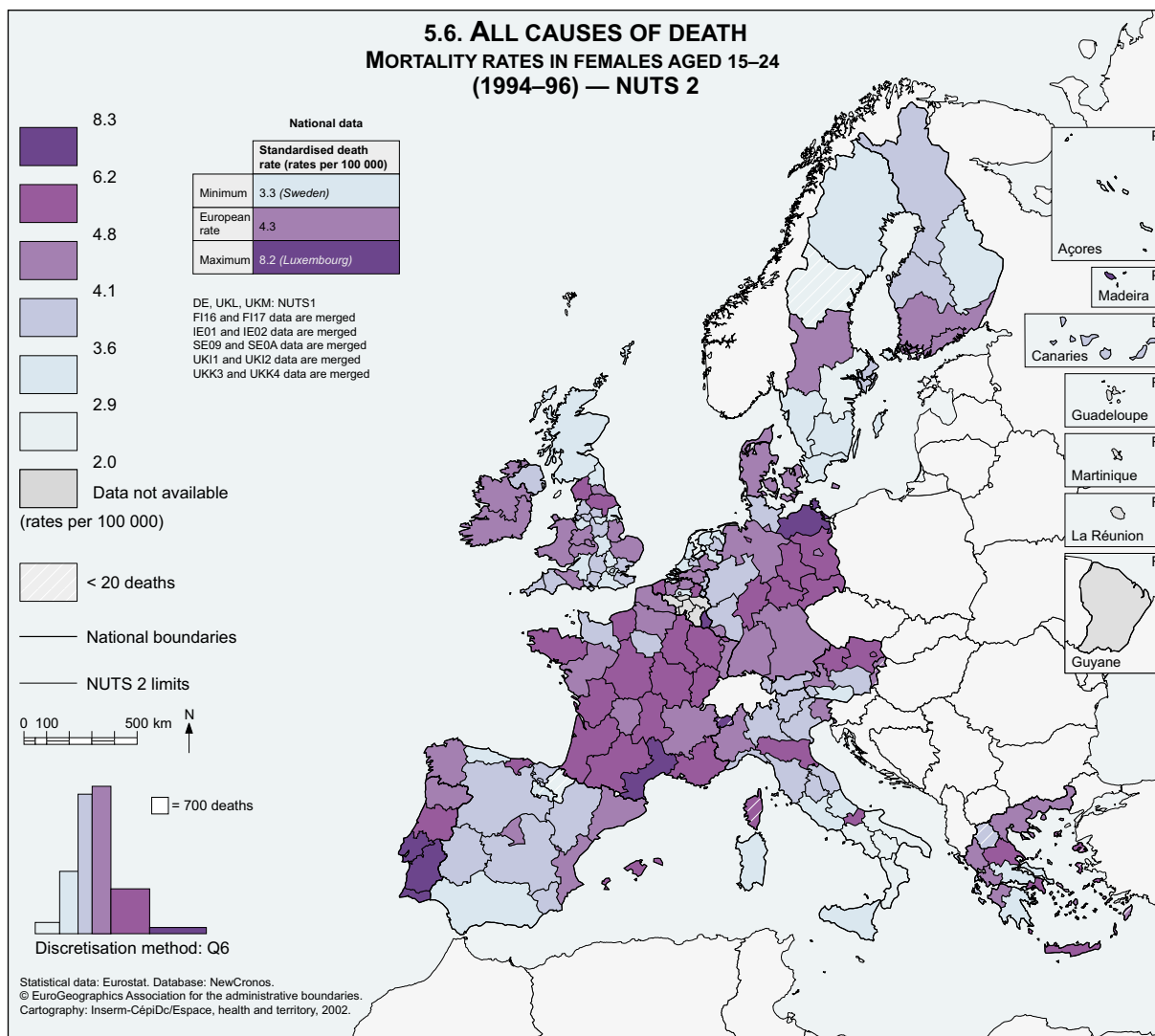
The maps relating to young men and young women are, however, similar in terms of their spatial patterns. Thus, in the badly affected regions, although there is little difference in the behaviour of both

sexes, the phenomenon is still more pronounced for the male population.

Four Member States can be singled out as having particularly high male mortality between 15 and 24 years: France, Austria, Portugal and Finland, in all of which the regional rates are relatively homogeneous. In contrast, Denmark, Sweden and the United Kingdom have overall, below-average mortality.

In the other Member States, the level of mortality is less homogeneous, and specific regional features play a more prominent part. In Italy and Germany, there are the same contrasts as those noted with regard to general mortality: the regions of northern Italy and the *Länder* on the territory of the former East Germany have high mortality. In Spain, Galicia stands out very clearly from the rest of the country. Greece is like a patchwork without any noticeable gradient, but with high overall mortality.





The spatial disparities often correspond to those associated with transport accidents. They persist despite the introduction several years ago of a common European road-safety policy, involving in particular traffic regulation and safety equipment.

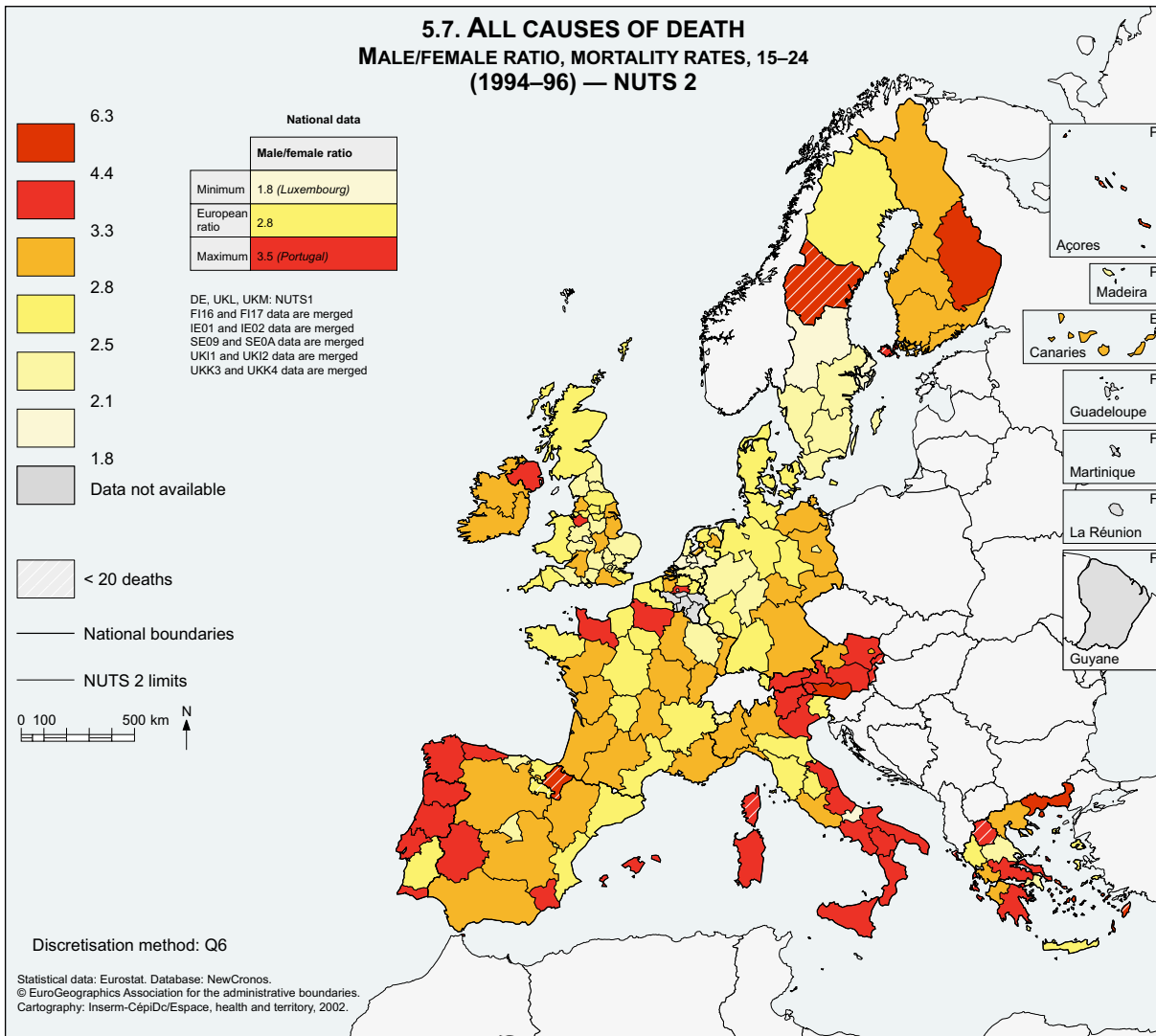
There is also a correlation between regions with high alcohol consumption and regions with excess mortality among young people. Alcohol consumption among young people is on the increase, and the link between road accidents and excessive alcohol consumption is well known.

In a number of European countries, intensive prevention campaigns aimed at young people have been conducted with a view to reducing accidents.

The density of road networks is also a factor, since there is an inverse relationship between the mortality rates of adolescents and young people and

the levels of urbanisation (for the male population in particular). Highly urbanised regions have lower rates irrespective of the wider regional or national trend. In towns and cities, where traffic is more tightly controlled and moves more slowly, accidents are less frequent or involve fewer deaths. This explains, for example, why Nord-Pas-de-Calais, which is a highly urbanised area, has relatively low death rates despite France's overall unfavourable situation.

Suicide is the second cause of death among young people, and the suicide rates also explain to some extent the European disparities in this premature mortality. The pattern of suicide is uneven throughout the EU. The high rates of general mortality among young Finns are explained mainly by the suicide rates (the highest in the EU). In France, suicide accounts for a large proportion of the total mortality recorded among young adults.



In contrast, suicide accounts for a very small proportion of mortality among young Greeks, Spaniards and Italians. As demonstrated by Durkheim, in Catholic Member States suicide is less frequent and/or probably less fully reported.

The population aged between 15 and 24 years has the highest excess male mortality ratios of any age group (higher than 6 in some European regions).

Excess male mortality in the 15–24 age group varies from one region to another. It can happen that, in a single country, two neighbouring regions have ratios at either end of the range (this is the case, for example, in Sweden). The distribution of mortality ratios between men and women does

not conform to a very regular pattern. However, the differences in mortality between the sexes are, overall, less marked in the northern countries (except Ireland and Finland) than in the countries of southern Europe.

The regions where excess male mortality is highest tend to be rural and economically disadvantaged: Portugal, certain Spanish provinces, southern Italy, the Mediterranean Islands, Northern Ireland, certain regions of Greece and Austria, etc. In contrast, the most heavily urbanised and on the whole richest regions have low excess mortality (London, Attiki, Comunidad de Madrid and Île-de-France).

Adults: marked national trends between 25 and 44 years

For the 25–44 age group, although there are regional contrasts within the Member States, most of them display the same trend, with excess or below-average mortality characterising the entire country.

For men, the risk of death is highest in Spain, France, Portugal and Finland, in all of which certain regions are particularly affected: the Spanish islands and coastal provinces and the Comunidad de Madrid, Vale do Tejo and Algarve in Portugal, the Provence-Alpes-Côte d’Azur region in France, and Itä-Suomi and Etela-Suomi in Finland. The eastern German *Länder*, particularly Brandenburg and Mecklenburg-Vorpommern, also have high rates, in stark contrast to those of the southern German *Länder*.

On the other hand, Sweden, the UK, the Netherlands and Belgium have homogeneous rates which can be as much as four times lower than those recorded in the worst affected regions.

Excess male mortality is constant between 25 and 44 years but less pronounced than for adolescents (mortality rates for men twice as high as for women). The causes of death linked to behavioural risks (road accidents, suicide, AIDS) are responsible for this excess male mortality and for the disparities between Member States.

The distribution of causes of death varies from one Member State to another. In Finland and France, suicide is the main cause of death for adults, while in Spain and Portugal road accidents head the list.

