

Europe against cancer

TARGET: 15% FEWER VICTIMS BY THE YEAR 2000



Cancer deaths in Europe (1982)

Country	Total deaths	Cancer deaths		
		Total	Lung (men)	Breast (women)
Belgium	112 428	26 821	5 433	2 024
Denmark	55 114	13 774	2 170	1 145
Germany	715 857	159 958	21 326	13 327
Greece	86 349	17 035	3 278	1 171
Spain ¹	290 672	56 854	7 476	3 351
France ²	554 823	126 632	15 635	8 927
Ireland	32 877	6 220	1 046	500
Italy ²	545 291	123 717	20 779	8 729
Luxembourg	4 171	1 036	178	86
Netherlands	117 264	31 811	7 104	2 897
Portugal	92 551	14 727	1 232	1 148
United Kingdom	662 802	147 659	29 426	13 941
European Community	3 270 173	726 244	115 083	52 246

¹ 1979. ² 1981.

Proportion of European cancer deaths attributable to various factors

These attempted estimates are largely based on the work of Higginson and Muir (1979) for Birmingham in the United Kingdom, of Doll and Peto (1981) for the United States and of Tubiana (1985) for France. They incorporate many uncertain factors and should, in any case, be adapted to differing national situations.

Factors	Best estimate (in %)	Range of estimates (in %)	Estimated annual number of deaths
Tobacco	30	25-35	220 000
Alcohol	4 ¹	2- 5	30 000
Diet	30 ?	10-50	220 000 ?
Occupation	4	2- 8	30 000
Infection	3 ?	1-10	22 000 ?
Geophysics ²	3	2- 4	22 000

Source: Based on World Health Organization data.

¹ Could be higher, certainly extremely variable by country (e.g. 10% in France.)

² Ionizing radiation and solar rays.

Europe is taking up arms against cancer. It is a just war. If the increase observed in recent years were to continue, by the year 2000 one European in three would be stricken by cancer during their lifetime. We no longer have to accept, however, that cancer is a fatal disease. It is now established that the incidence of this scourge could be reduced by the combined effects of prevention and treatment.

Cancer can be avoided and cured

Today about 50% of persons with cancer have a good chance of survival. In addition, due to preventive action, significant reductions have been noted in the occurrence of certain types of cancer. This is particularly striking in the case of stomach cancer, where the decrease may be due to improved eating habits. In certain countries, such as the United States and the United Kingdom, the incidence of lung cancer in young and middle-aged men is now going down, thanks to the beneficial effects of the anti-smoking campaigns which started earlier in those countries than in others.

The risk of dying from cancer in Europe has been mapped for the European Commission by the International Agency for Research on Cancer. There are significant variations in the occurrence of the principal types of cancer in Europe: such considerable differences between countries, even between one region and another, often indicate that differences in lifestyles, working conditions and environment play a role.

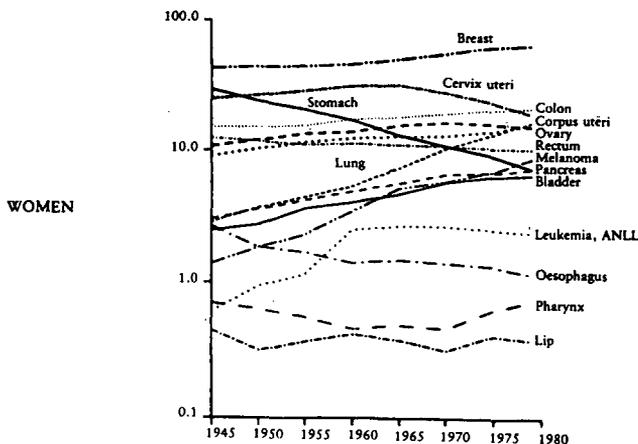
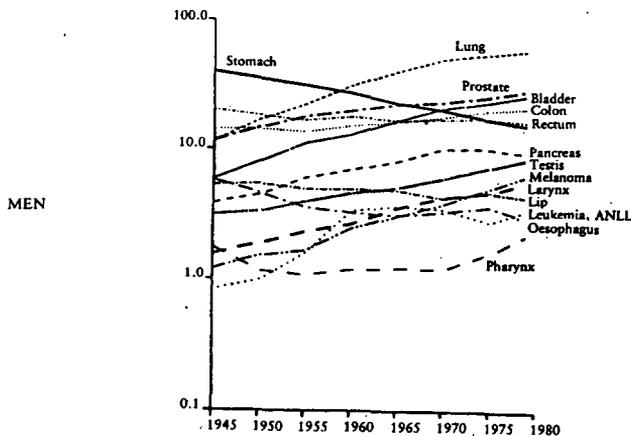
The nature of the factors responsible for differences in cancer risks is not always well understood, but it is now universally accepted that three quarters of cancers are due to external factors. These factors, when fully understood, can be modified. Today, although all cancers cannot be prevented, a certain reduction is within reach.

Europe too provides hope

At their meeting in Milan in June 1985, the Heads of State or Government of the European Community agreed in principle on a European programme against cancer, so that the Community might take more account of the concerns of its citizens in regard to health.

Since January 1986, a committee of high-level cancer experts has been advising the European Commission on the formulation of the Europe Against Cancer programme. This programme has two cornerstones: the knowledge that a substantial number of cancers can be avoided and the fact that early detection of some types can lead to a better chance of cure. The aim is to reduce mortality from cancer in Europe by 15%, between now and the year 2000.

Trend in the number of new cases of cancer in Denmark 1943-80 (at constant age, per 100 000 population)



The trend in numbers of new cancer cases over the years can be studied by means of the data collected by cancer registers. The Danish register is the oldest and one of the best in Europe. It allows us to follow the evolution of cancer cases since 1942.

It is possible to discern a marked reduction in the number of stomach cancers (probably linked to improved dietary conditions), a clear slowing-down of the increase in lung cancer in men (linked to a reduction in smoking) and a very rapid increase in melanomas (doubtlessly linked to the increasingly widespread practice of brutal, intense and prolonged exposure to the sun).

Source: Ole Møller Jensen *et al.*, 'Cancer registration in Denmark' in *National Institute Monograph* No 65, pp. 245-251.

The programme covers four areas: cancer prevention, health information and education, training of health personnel and cancer research.

Where it all begins: cancer prevention

Tobacco and alcohol are without doubt at the origin of almost a third of all cancer in Europe; diet may play a role in the development of another third. Other factors such as occupational exposures to certain chemicals, exposure to ultraviolet rays, certain viral infections and radiation also carry a risk of cancer. European activities to prevent cancer are grouped under five major headings:

- The anti-smoking campaign.* Numerous studies of lung cancer have shown that about 85% of cases are linked with smoking. Furthermore, in smokers the risk of cancer is increased in all tissues that come directly or indirectly into contact with tobacco smoke: lips, tongue and mouth, throat, oesophagus, pancreas and urinary tract. By using the powers available to it, the European Community will strengthen national activities in the fight against smoking. For example, to eliminate barriers to trade which hinder its economy, and to take fuller account of public health concerns, the European Community will, before the end of 1992:
 - Align taxes on tobacco upwards, which will cause cigarette price rises – in some cases substantial ones – in southern European countries.
 - Harmonize the labelling of cigarette packets, by making obligatory health warnings of the kind given in countries such as Ireland ('Smoking causes cancer').
 - Prohibit cigarettes with a high tar content, as is already done in Spain and Portugal.
 - Eliminate tax-free sales of tobacco products for travellers within the Community.
 - Protect children against the sale of tobacco products, as already happens in Ireland and the United Kingdom.
 - Regulate advertising of brand names of tobacco products, including 'clandestine' advertising.
- Improving eating habits.* The conclusions about tobacco smoking are unambiguous; so are the observations about the drinking of alcohol. By contrast there are still uncertainties about the influence of eating habits on the development of

EUROPEAN CODE AGAINST CANCER

CERTAIN CANCERS MAY BE AVOIDED:

1. Do not smoke

Smokers, stop as quickly as possible and do not smoke in the presence of others

2. Moderate your consumption of alcoholic drinks,

beers, wines or spirits

3. Avoid excessive exposure to the sun

4. Follow health and safety instructions,

especially in the working environment concerning production, handling, or use of any substance which may cause cancer.

Your general health will benefit from the following two commandments which may also reduce the risks of some cancers:

5. Frequently eat fresh fruits and vegetables and cereals with a high fibre content

6. Avoid becoming overweight

and limit your intake of fatty foods

MORE CANCERS WILL BE CURED IF DETECTED EARLY

7. See a doctor if you notice a lump or observe a change in a mole or abnormal bleeding

8. See a doctor if you have persistent problems,

such as a persistent cough, a persistent hoarseness, a change in bowel habits or an unexplained weight loss

For women:

9. Have a cervical smear regularly

10. Check your breasts regularly

and, if possible, undergo mammography at regular intervals above the age of 50



EUROPE AGAINST CANCER



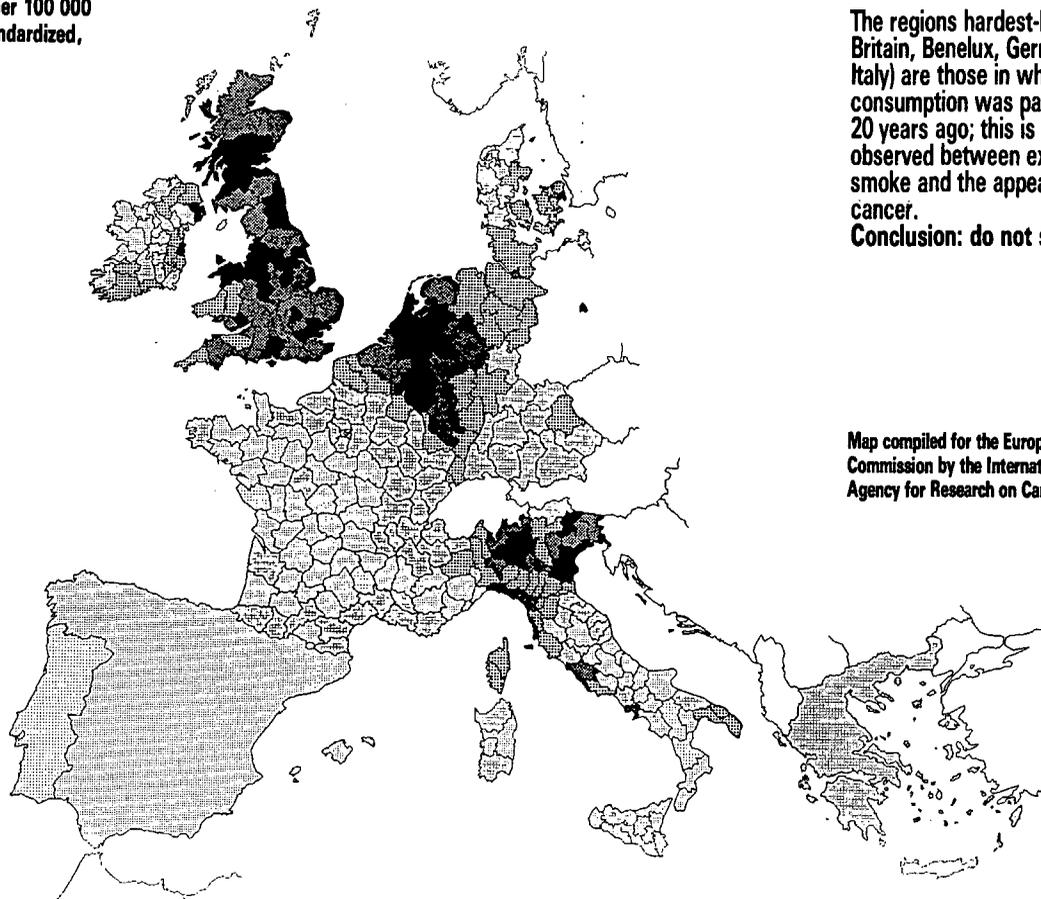
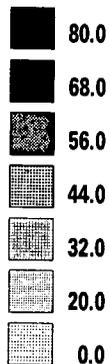
certain types of cancer. However, the research available points to a few important observations: excessive weight and a diet low in fresh fruit and vegetables or in fibre increase the risk of certain cancers.

Accordingly, activities of the Europe Against Cancer programme include:

- Amalgamation of existing data on nutrition and cancer and more detailed epidemiological research in Europe.
 - Consumer protection through better nutritional labelling for foodstuffs, to be implemented before the end of 1992.
 - Formulating nutritional recommendations and supporting health information and education campaigns.
- Protection against carcinogenic agents.* Four major initiatives are envisaged:
- Speeding up the establishment of an inventory of carcinogenic chemical substances.
 - The adoption of new directives on the protection of workers in order to reduce the number of occupational cancers, as has already been done in the case of asbestos.
 - Protection against ionizing radiation with, for example, the adoption of maximal limit values for contamination of foodstuffs.
 - The implementation of new measures to protect consumers against carcinogenic substances.
- Systematic screening and early diagnosis.* In certain organs or tissues, a cancer is often preceded by precancerous lesions. Thus, systematic screening for cervical cancer enables cancer development to be stopped by simple surgical removal of the cancerous lesions detected. The early detection of breast cancer by screening also increases the chance of cure. Cancer of the breast and the uterine cervix, which are the tumours occurring most frequently in women, will therefore be the subject of a specific action to promote exchanges of information on systematic screening and early diagnosis.
- The European Code Against Cancer.* The high-level cancer experts who advise the European Commission have drawn up a few simple rules by which people can help to significantly reduce their own risk of cancer. This European Code Against Cancer has been approved by Health Ministers of the 12 Member States and by all the cancer associations. As emphasized by the European Community

Deaths from lung cancer in men

Number of deaths per 100 000 population (age-standardized, 1970s)



The regions hardest-hit today (Great Britain, Benelux, Germany, northern Italy) are those in which tobacco consumption was particularly high 15 or 20 years ago; this is the delay usually observed between exposure to tobacco smoke and the appearance of lung cancer.

Conclusion: do not smoke.

Map compiled for the European Commission by the International Agency for Research on Cancer.

Committee of Cancer Experts: 'If the European Code were respected, there would be a significant reduction in the number of deaths from cancer in the Community; the decrease could be about 15% by the year 2000'.

Inform and educate in order to save lives

Cancer is not necessarily a fatal disease, yet it is a subject on which obscurantism is the rule. The European Community has therefore decided to reinforce existing national activities in the health information and education field, working through those who have an essential involvement, such as the associations and leagues against cancer and family doctors.

Through these well-placed agents, the Community encourages the widest possible dissemination of the European Code Against Cancer. The Community encourages exchanges of experience between the responsible authorities in all member countries, so they can benefit from each other's successes and failures and avoid unnecessary and costly duplications of effort in the development of basic modules for health information and education.

This European campaign of health information and education is assisted by the results of a survey, 'Europeans and cancer prevention'. It was carried out in the spring of 1987 on 12 000 persons aged 15 years or over; they were questioned at home, in order to assess the extent of smoking in Europe and to test their knowledge of the European Code Against Cancer. The survey shows that there are still approximately 94 million smokers among the 254 million Europeans aged over 15. It indicates that the health consequences of passive smoking are not very well known, particularly in Portugal, Spain, the Netherlands and Germany. One very encouraging fact demonstrated is that the public massively supports measures against smoking envisaged at national and Community level. The survey also shows that not all aspects of the European Code Against Cancer are equally well known; knowledge of the nutritional commandments is weak, except in Denmark. As for the advice aimed at women, regarding screening for cancers of the breast and uterine cervix, there is a considerable disparity between knowledge and action (See tables, p. 18).

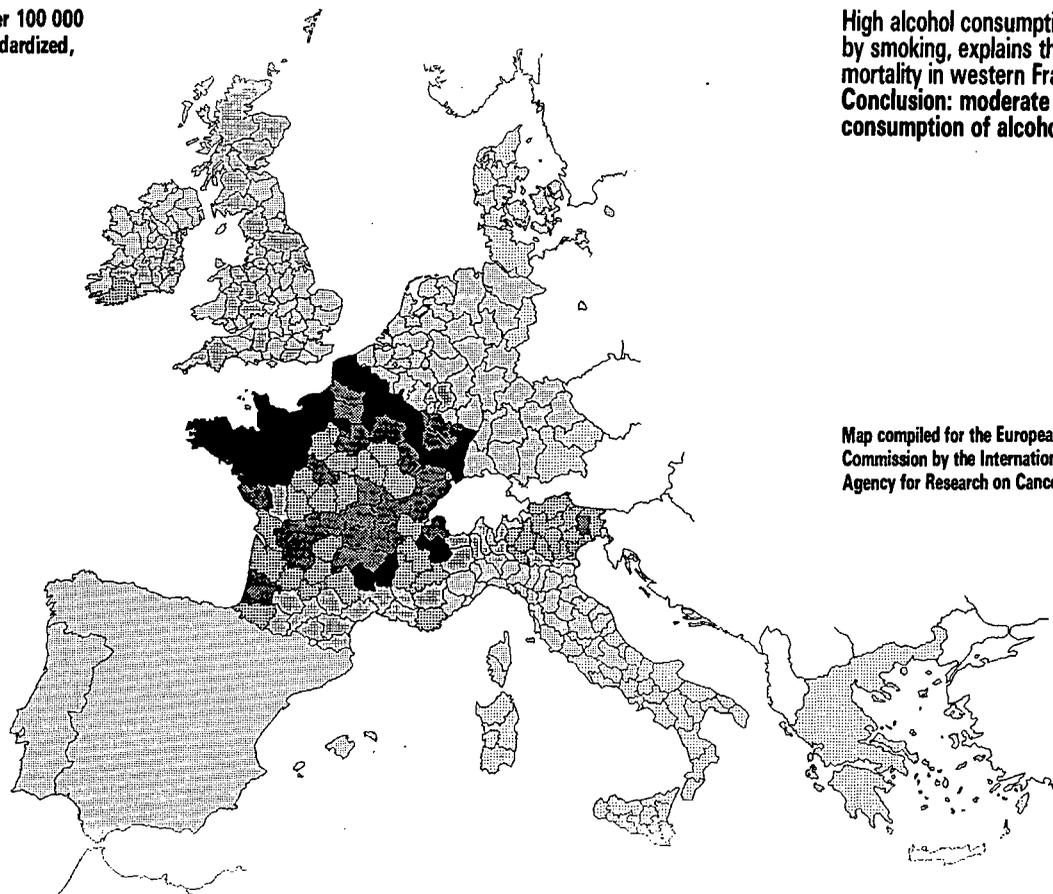
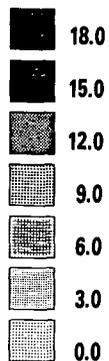
Two essential initiatives form the substance of the European campaign of information and cancer prevention:

- The European Cancer Prevention Week, from 1 to 7 May 1988.
- The European Information on Cancer Year in 1989.

During these two periods, everybody concerned – private organizations involved in the fight against cancer, health personnel, health ministers, the European Community – have undertaken to engage in specific activities particularly aimed at promoting the European Code Against Cancer (publication of brochures or special editions of their magazines by the associations and leagues against cancer; organization of open days in anti-cancer centres; display of the European Code in the waiting-rooms of family doctors, hospitals, etc.).

Deaths from cancer of the oesophagus in men

Number of deaths per 100 000 population (age-standardized, 1970s)



Thus, the European Community has financed television programmes to be broadcast during European Week by at least one television station in each of the 12 member countries:

- A 45-minute film 'Lifestyle and cancer in Europe'.
- A 30-minute studio programme 'Man and cancer'.

These films for the general public are available free for all non-commercial use, in particular for use in health education.

Improved training for the health professions

General practitioners and specialists, nurses, dentists and stomatologists have a decisive role to play in the fight against cancer. According to the European Community Committee of Cancer Experts, training programmes for these professions may be improved to meet the needs of cancer prevention and treatment. The aim of the European Community is to assist exchanges of experience between the Member States and to draw up the minimum content of training programmes. This last point is additionally justified by the need to allow the free movement of members of the health professions and their freedom to settle and practice anywhere in a Europe without frontiers.

The European Community also provides financial encouragement for:

- The mobility of medical students and student nurses among the different countries and between various services, so that they may acquire the multidisciplinary state of mind required for cancer treatment and prevention.
- The preparation and exchange of teaching materials, particularly with regard to mastering techniques for the early detection of certain cancers.
- The development of computer programmes for 'expert systems' to enable doctors to improve the quality of their diagnosis or treatment methods.

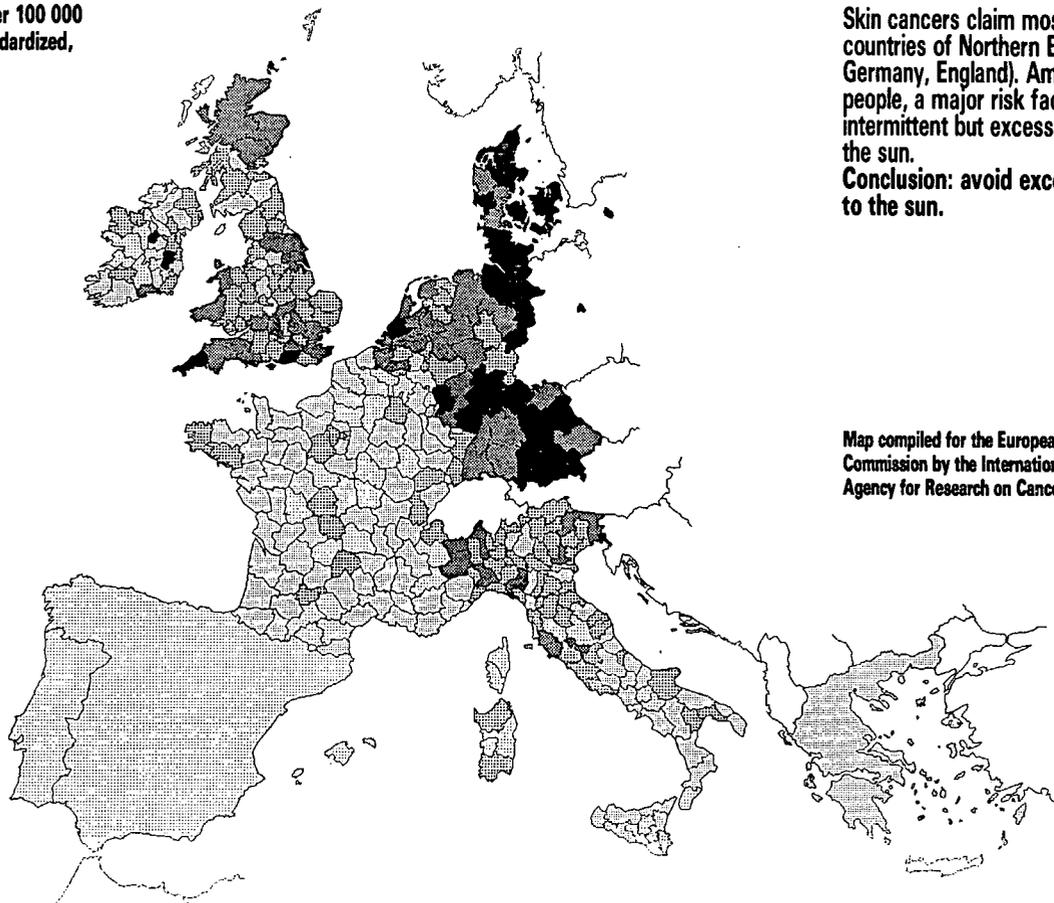
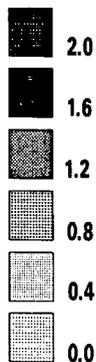
Research: collaboration in order to go further, faster

The progress made in biomedical research has already resulted in regular improvements in the long-term survival chances of patients with certain cancers. However, the practical achievements of research in Europe may still be improved by better collaboration and coordination.

The pooling of European resources in cooperative projects is as necessary as it is appropriate, in order to achieve a truly European cancer research effort without national frontiers.

Deaths from malignant melanomas in men

Number of deaths per 100 000 population (age-standardized, 1970s)



Skin cancers claim most victims in the countries of Northern Europe (Denmark, Germany, England). Among fair-skinned people, a major risk factor is intermittent but excessive exposure to the sun.

Conclusion: avoid excessive exposure to the sun.

Map compiled for the European Commission by the International Agency for Research on Cancer.

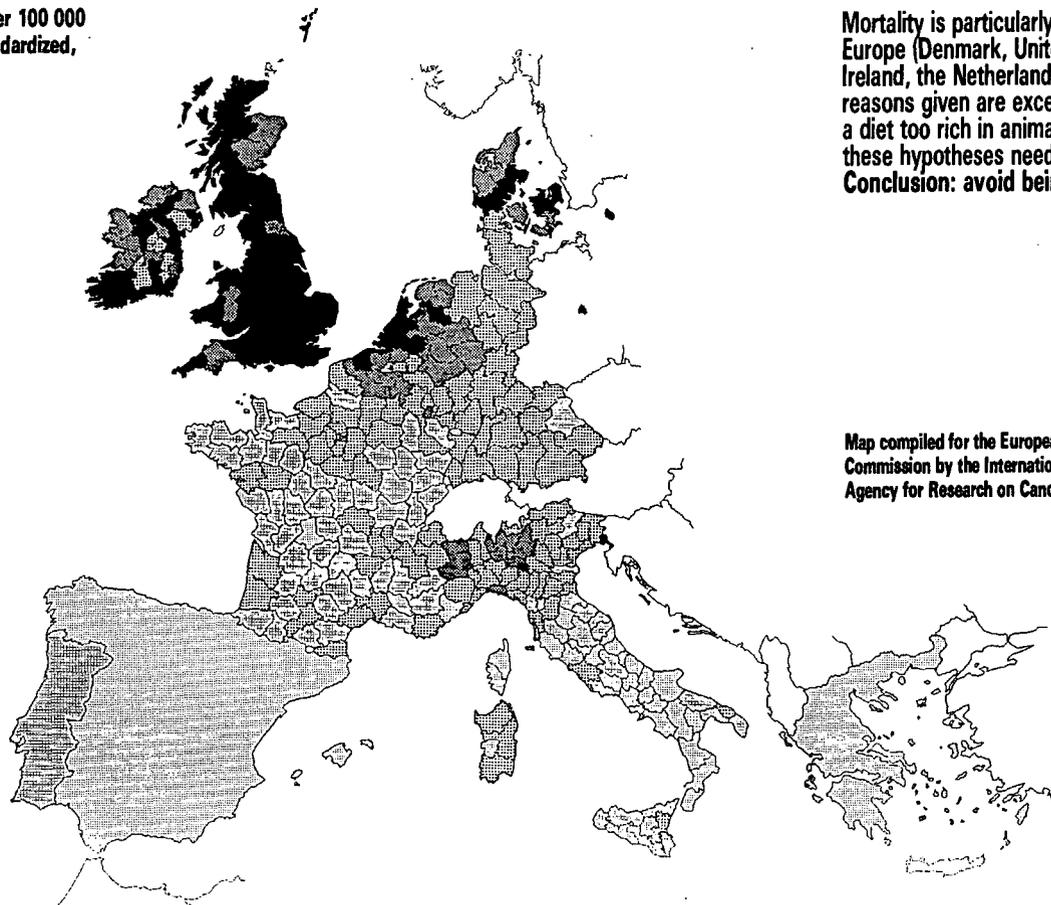
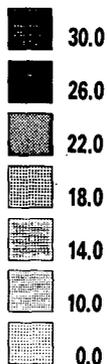
- The European Community encourages the movement of ideas and people by annually granting 50 European fellowships to research workers eager to continue their training in the laboratories of another Community country.
- In addition, the European Community fosters the coordination of research work in order to improve cancer prevention:
 - Epidemiological research is being developed on five principal themes: European coordination of medical research on food and cancer; a stepping-up of research on occupational cancers; continued cofinancing of studies dealing with the prevention of radiation-induced cancers; the implementation of a European programme to investigate passive smoking.
 - With regard to screening and diagnosis, two research areas in particular are being explored in depth: automated tissue analysis and medical scanning, especially nuclear magnetic resonance (NMR).
- The Europe Against Cancer programme also involves Community research on anti-cancer therapies, and in particular:
 - A European network of data banks on cell cultures that produce monoclonal antibodies.
 - Research into genetic engineering and protein engineering for the production of anti-cancer medicines.
 - Studies aimed at reducing the general toxicity of cancer-killing drugs ('targeting').
 - Research to improve the administration of anti-tumour substances.
 - Clinical research, particularly within the EORTC (European Organization for Research and Treatment of Cancer).
- Finally, the European Community is aiming for a better coordination of fundamental research. Research in the area of carcinogenic viruses has, in effect, revealed the role of certain oncogenes – genes which could be involved in the origin of a cancer. Today more than 20 oncogenes have been recognized and their genetic code identified. In the future, the European Community should participate in exploratory research work on the genetic aspects of cancer.

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The Europe Against Cancer programme is now operating in the four key areas: cancer prevention, health information and education, training for the health professions and cancer research.

Deaths from breast cancer in women

Number of deaths per 100 000
population (age-standardized,
1970s)



Mortality is particularly high in Northern Europe (Denmark, United Kingdom, Ireland, the Netherlands). Among the reasons given are excessive weight and a diet too rich in animal fats. However, these hypotheses need to be confirmed. Conclusion: avoid being overweight.

Map compiled for the European
Commission by the International
Agency for Research on Cancer.

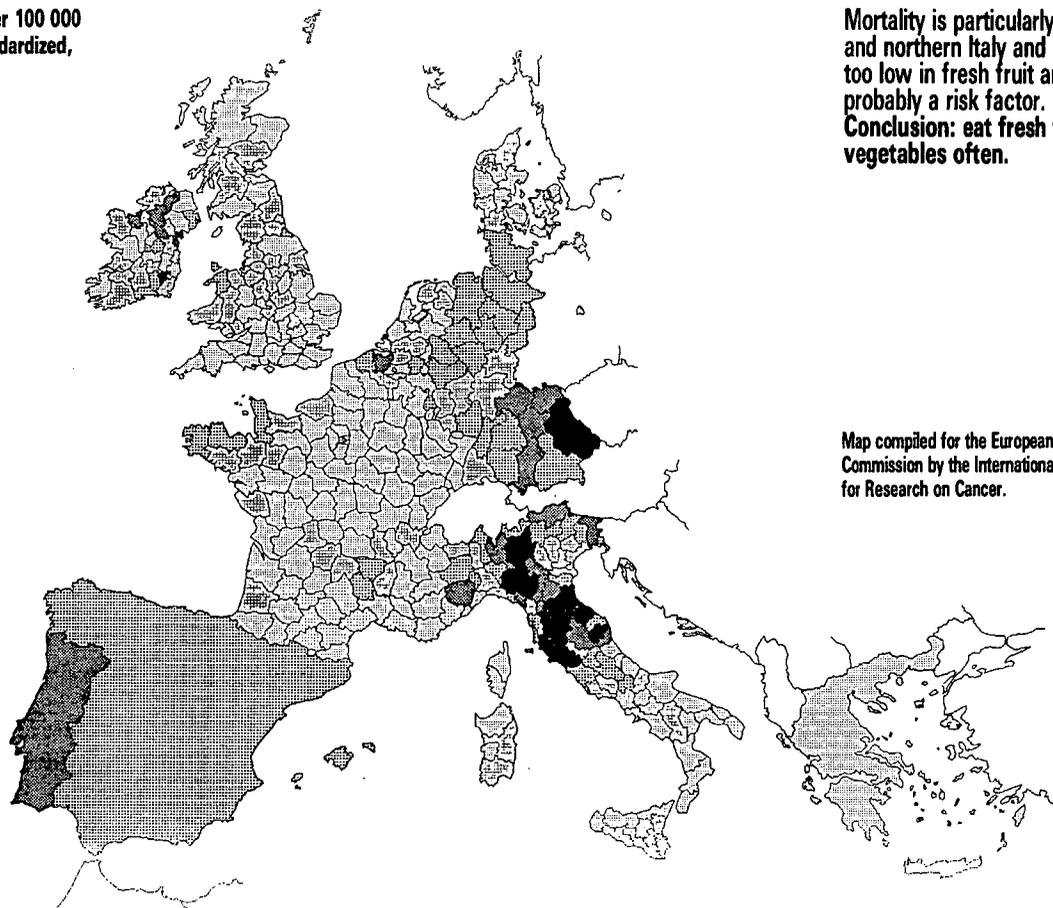
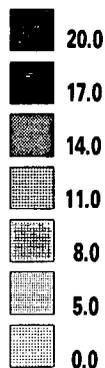
In this fight against illness, suffering and death, the European Community plays a specific role by using its prerogatives in areas such as the establishment of a market without frontiers, the common agricultural policy or the policy on the environment, and by providing 'added value' through synergy, partnership and exchange which are the only means of realizing the full value of national activities.

The success of this European programme requires the mobilization of numerous bodies, in particular the associations and leagues against cancer, the health professions and the media, which are all essential for spreading information among 320 million Europeans and motivating and mobilizing them.

Fifteen percent lower mortality from cancer by the year 2000. That target brings a hope of life to 150 000 Europeans. Thus, in the area of health, as in others, the European Community can demonstrate the unique value of its 'multiplier effect' ■

Deaths from stomach cancer in women

Number of deaths per 100 000 population (age-standardized, 1970s)



Mortality is particularly high in central and northern Italy and Portugal. A diet too low in fresh fruit and vegetables is probably a risk factor.
Conclusion: eat fresh fruit and vegetables often.

Map compiled for the European Commission by the International Agency for Research on Cancer.

ANNEXES

European Community Committee of Cancer Experts

This Committee is composed of the following individuals:

Professor Maurice Tubiana, President of the Committee, Director of the Institut Gustave Roussy, France.

Professor Norman Bleehen, Vice-President of the Committee, Director of the Medical Research Council, Clinical Oncology and Radiotherapeutics Unit, Cambridge, United Kingdom.

Professor Dr. E. Grundmann, Vice-President of the Committee, Director of the Pathologisches Institut der Universität Münster, Germany.

Professor Umberto Veronesi, Vice-President of the Committee, Director-General of the Istituto Nazionale per lo Studio e la Cura dei Tumori, Italy.

Professor Christian de Duve, Nobel Prize, and Professor Thierry Boon, International Institute of Cellular and Molecular Pathology, Belgium.

Professor Carl Schmidt, Director of the Westdeutsches Tumorzentrum, Innere Klinik und Poliklinik der Ruhr Universität, Germany.

Doctor Ole Møller Jensen, Director of the Kræftens Bekæmpelse Cancerregisteret, Denmark.

Professor J. Estapé Rodríguez, Catedra de Oncologia, Hospital Clinic Barcelona, Spain.

Doctor Stomatis Vassilaros, Adviser to the Minister for Health and Social Welfare, Greece.

Doctor Michael Moriarty, Consultant in radiotherapy clinical oncology, St Luke's Hospital, Ireland.

Professor Mario Dicato, Head of the Département hématologie-cancérologie, Luxembourg.

Doctor R. Kroes, Director of the Rijksinstituut voor Volksgezondheid en Milieuhygiëne, the Netherlands.

Professor José Conde, Gabinete de Ensino Oncologia, Director of the Instituto Portugues de Oncologia, Universidade Nova de Lisboa, Portugal.

Doctor P. Bourdillon, Adviser, Office Chief Scientist, United Kingdom.

Observers

Professor Jerzy Einhorn, Director of the Stockholm Cancer Centre, Sweden.

Doctor L. Tomatis, Director of the International Agency for Research on Cancer (CIRC/IARC), France.

Doctor Alberto Costa, Secretary-General of the European School of Oncology, Italy.

Whom to contact in the different countries

There are numerous associations and leagues against cancer. Among those which are members of the European Commission's Committee are the following:

United Kingdom:

Cancer Education Coordination Group, Greater Glasgow Health Board, Ruchill Hospital, Glasgow G20 9NB.

ASH, 5-11 Mortimer Street, London W1N 7RH.

Women's National Cancer Control Campaign, 1 South Audley Street, London W1Y 5DQ.

Imperial Cancer Research Fund, PO Box 123, Lincoln's Inn Fields, London WC2A 3PX.

Cancer Research Campaign, 2 Carlton House Terrace, London SW17 5AR.

Ireland:

Irish Cancer Society, 5 Northumberland Road, Dublin 4.

[continued on page 20]

European Commandments for cancer prevention

Knowledge and (bold type) application (per 100 persons questioned) ¹

	EC	B	DK	D	GR	E	F	IRL	I	L	NL	P	UK
Do not smoke	88 63	76 68	90 54	76 64	98 57	92 59	91 62	97 67	98 67	86 65	84 56	85 67	88 63
Moderate consumption of alcoholic drinks	49 53	41 55	61 25	39 37	57 67	52 68	71 74	46 42	62 66	55 66	35 41	53 43	26 34
Avoid excessive exposure to the sun	52 33	49 37	67 22	47 28	55 33	37 27	59 49	65 17	53 36	63 43	56 28	32 22	61 29
Eat sufficient fresh fruit and vegetables ²	34 73	33 73	69 66	33 68	54 76	27 72	23 80	47 56	48 80	44 83	38 73	21 35	30 71
Eat sufficient cereals high in fibre	30 35	32 44	64 57	33 38	31 30	18 16	19 29	56 53	36 21	36 44	36 58	13 13	33 58
Avoid becoming overweight	35 34	33 26	59 36	36 40	39 39	30 26	25 41	39 19	51 32	44 44	31 38	30 17	27 31
Eat low-fat foods	35 38	37 35	69 36	31 35	45 45	27 34	29 39	36 29	56 45	45 41	38 43	24 21	27 39
See a doctor if a beauty spot bleeds or changes size or colour	58	41	85	58	74	46	64	79	69	59	63	34	46
See a doctor for any unusual weight gain, abnormal bleeding, persistent cough or change in voice	58	44	88	52	73	56	64	83	65	63	69	32	54

¹ Source: 'European and cancer prevention', survey carried out by the European Omnibus Survey for the Commission of the European Communities, from 17 March to 8 May 1987 (11 651 persons aged 15 years or over questioned in the 12 Community countries). The totals given for the Community (EC) are weighted averages.

² The figures in bold type are the percentages for persons who 'often' pay attention to the consumption of fresh fruits.

European cancer prevention commandments which specifically concern women

Knowledge and (bold type) application (per 100 persons questioned) ¹

	EC	B	DK	D	GR	E	F	IRL	I	L	NL	P	UK
Have a regular cervical smear	75 43	61 36	87 45	73 46	86 27	41 12	88 60	86 30	77 40	80 61	84 49	19 9	89 55
Check their breasts regularly	84 50	69 45	86 48	86 64	75 26	65 26	89 58	93 44	90 45	89 57	87 56	55 29	91 55
Have mammographies done after the age of 50	58 13	45 18	62 6	57 18	53 4	46 8	67 16	35 2	70 11	64 23	43 6	25 3	60 13

The opinions of Europeans on the measures to fight tobacco recommended by the European Commission

(per 100 persons questioned) ¹

2	Increase in taxes on tobacco			Prohibition of tobacco advertising			Prohibition of tobacco sales to under-16s			Prohibition of tax-free sales of tobacco in airports, etc.			Prohibition of smoking in public places		
	+	-	?	+	-	?	+	-	?	+	-	?	+	-	?
EC	71	24	5	73	21	6	84	12	4	54	35	11	77	19	4
B	68	28	4	69	28	3	79	16	5	52	38	10	74	20	6
DK	54	35	11	53	38	9	42	50	8	25	64	11	67	26	7
D	59	34	7	67	24	9	80	14	6	44	46	10	56	36	8
GR	71	25	4	79	16	5	79	17	4	64	28	8	78	18	4
E	69	24	7	69	21	10	86	10	4	54	26	20	78	16	6
F	82	16	2	75	21	4	78	19	3	58	32	10	91	8	1
IRL	66	28	6	78	17	5	93	5	2	46	45	9	69	26	5
I	82	15	3	84	12	4	86	10	4	71	19	10	93	5	2
L	67	27	6	75	13	12	86	9	5	62	19	19	65	28	7
NL	67	28	5	58	34	8	70	24	6	52	39	9	69	24	7
P	75	16	9	77	12	11	89	5	6	67	19	14	82	10	8
UK	68	28	4	74	21	5	97	2	1	44	49	7	72	26	2

¹ Source: Survey 'Europeans and cancer prevention', 1987.

² The signs +/ -/ ?/ correspond respectively to the percentages of persons questioned who 'approved', 'did not approve' or did not answer.

Summary bibliography

The Europe Against Cancer programme, proposals by the European Commission, *Official Journal of the European Communities* No C 50 of 26 February 1987.

'Europeans and cancer prevention', survey carried out in spring 1987 by the European Omnibus Survey for the Commission of the European Communities.

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