Cancer Incidence and Survival in Flanders 2000-2001

Flemish Cancer Registry Network

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Voorwoord

Resultaten om trots op te zijn

Voor u ligt de nieuwe publicatie 'Kanker: incidentie en overleving in Vlaanderen, 2000-2001'. Ik ben er trots op u, naast de traditionele gegevens over het aantal nieuwe kankergevallen in Vlaanderen, voor het eerst ook overlevingscijfers te kunnen presenteren. Met deze cijfers draagt de kankerregistratie haar steentje bij tot nieuw wetenschappelijk onderzoek en worden de gegevens een uitgangspunt voor de kankerspecialisten bij de beoordeling van de behandeling.

De druk om ervoor te zorgen dat kankerpatiënten de best mogelijke behandeling krijgen, neemt toe. Terecht. Maar het is niet altijd eenvoudig om de kwaliteit van een behandeling te evalueren. Overlevingscijfers worden algemeen beschouwd als belangrijke indicatoren voor de evaluatie van de zorg. Ze laten ook een vergelijking toe met andere landen. Uit de resultaten blijkt alvast dat de behandeling van kinderen met kanker in ons land tot de beste van Europa behoort. De resultaten leren ons ook dat de overleving sterk verschilt naargelang het soort kanker. Het stadium van de ziekte op het ogenblik van de diagnose is eveneens van grote invloed op het ziekteverloop en de prognose. Deze gegevens onderstrepen dan ook het grote belang van vroegtijdige opsporing van kanker, zoals bij het bevolkingsonderzoek naar borstkanker.

De incidentie- en overlevingscijfers geven aan dat de jarenlange inspanningen van de Vlaamse overheid hebben geloond. Zonder haar volgehouden financiële steun zouden we u vandaag deze resultaten niet kunnen voorstellen. In de eerste helft van de jaren negentig was de kankerregistratie in Vlaanderen immers zeer versnipperd. Er was een veelheid aan initiatieven die nieuwe kankergevallen registreerden. Maar geen enkel van deze registratiesystemen kon een nauwkeurig beeld geven van de ziekte in Vlaanderen. De Vlaamse overheid heeft de grote verdienste dat ze in 1994 het initiatief nam voor de uitbouw van een Vlaams Kankerregistratienetwerk. De Vlaamse Liga tegen Kanker (VLK) kreeg de opdracht om de activiteiten van dit netwerk te coördineren. De diensten voor pathologische anatomie, de behandelende artsen via de mutualiteiten, het Antwerps en het Limburgs Kankerregister, en de oncologieafdelingen van enkele ziekenhuizen werden in het netwerk geïntegreerd.

Deze samenwerking wierp haar vruchten af. Vijf jaar geleden was Vlaanderen nog een blinde vlek op de wereldkaart van de kankerincidentie. Vandaag is het Vlaams Kankerregistratienetwerk erkend door de gezaghebbende Internationale Organisatie van Kankerregisters (IACR) en neemt het deel aan verschillende belangrijke Europese projecten, zoals het Geautomatiseerd Kinderkankerinformatiesysteem ACCIS en de Europese vergelijkende studie inzake overleving EUROCARE-4. We mogen er beslist trots op zijn.

Ik draag deze publicatie graag op aan alle partners van de kankerregistratie. Ik wil alle artsen, onderzoekers en registratiemedewerkers die aan de verzameling en de publicatie van deze gegevens hebben meegewerkt, oprecht danken.

In juli 2005 nam een nieuwe federale structuur, de Stichting Kankerregister, de fakkel van de VLK over. Ik hoop dat de resultaten van het Vlaams netwerk een stimulans zullen zijn voor deze nieuwe organisatie om werk te maken van een kwaliteitsvolle kankerregistratie voor heel het land.

Dr. Vic Anciaux
Voorzitter Vlaamse Liga tegen Kanker

Foreword

Results to be proud of

With great pride we present our new publication "Cancer incidence and survival in the Flemish region of Belgium, 2000-2001". This is the first time that we have included survival data in addition to the traditional information on the number of new cases of cancer in Flanders. By presenting these data, cancer registration plays a contributive part in new scientific research and the information will serve as a starting point on which cancer specialists can judge the results of treatment.

Pressure to ensure that cancer patients receive the best possible treatment is increasing – and rightly so. However, it is not always easy to evaluate treatment quality. Survival rates are generally regarded as important indicators in the evaluation of care and they also enable comparisons with other countries. Our results have already shown that in Flanders, the treatment of children with cancer is among the best in Europe. We have also learnt from the results that survival differs strongly depending on the type of cancer. Furthermore, the stage of the disease at diagnosis greatly influences the course of the disease and the prognosis. This information emphasizes the enormous importance of early detection of cancer, such as the mass screening for breast cancer.

The incidence and survival rates showed that the many years of invested effort by the Flemish Government have paid off. Without their consistent financial support we would not have been able to provide you with these results. In the first half of the nineteen nineties, cancer registration in Flanders was very fragmented. There were many initiatives to register new cases of cancer, but none of these registration systems could give an accurate reflection of the disease in the Flemish region of Belgium. The Flemish Government can be credited with taking the initiative to extend the Flemish Cancer Registration Network. Coordination of the activities within this network was assigned to The Flemish League against Cancer (Vlaamse Liga tegen Kanker). They managed to integrate the pathology anatomy services, the treating physicians via the health insurance companies, the Antwerp and Limburg Cancer Registers and the Oncology Departments of several hospitals.

This cooperation within the network has been fruitful. Five years ago, the Flemish region of Belgium was still a blind spot on the world map of cancer incidence. Today the Flemish Cancer Registry Network is recognised by the influential International Association of Cancer Registries (IACR) and is taking part in various important European projects, such as the Automated Childhood Cancer Information System (ACCIS) and the European comparison study on survival EUROCARE-4. We indeed feel very proud.

We are pleased to dedicate this publication to all the partners in the cancer registry. We would like to sincerely thank all the doctors, researchers and registration staff who participated in the collection and publication of these data.

In July 2005, a new federal structure, the Belgian Cancer Registry Foundation (Stichting Kankerregister), took over the torch from the VLK. We hope that the results of the Flemish network will form a stimulus for this new organisation to make work of a high quality cancer registry for the whole country.

Dr. Vic Anciaux
Chairman of the Flemish League against Cancer

1 | Cancer registration in Flanders: methodology

Cancer registration forms the basis of descriptive and analytical epidemiological research. By recording and processing information on new cancer cases, it is possible to describe the nature and extent of this disease. Cancer registration is also an important instrument for the treating specialist to evaluate the treatment applied and the available infrastructure. Registration is indispensable to evaluate the impact of preventive measures, such as breast cancer screening. In addition, good cancer registration can contribute to research into the causes of cancer[1].

1.1 Structure of the Flemish Cancer Registry Network, 1997-2005

Since 1983 the National Cancer Registry (NKR) has been receiving and managing data from the seven Belgian Health Insurance Companies. Evaluation of these data showed considerable underregistration of 20% or more[2]. It is particularly for this reason that the data from the NKR were never included in the international publication 'Cancer Incidence in Five Continents' by the International Agency for Research on Cancer (IARC). With the aim of rectifying this, various cancer registration initiatives started in Flanders at the end of the nineteen eighties, in addition to those of the NKR. However, none of these separate registration systems could give an accurate illustration of cancer in the Flemish region of Belgium.

From 1994 to and including the working year 2005, the Flemish government subsidised extension of a Cancer Registration Network on the basis of integration of the existing registration initiatives via the Flemish League against Cancer (Vlaamse Liga tegen Kanker). Collecting and processing data from the sources in the network and describing the extent of the disease were entrusted to the Flemish League against Cancer. Resources and work forces were combined within a network and the aim was to make qualitative and quantitative improvements[3]. Appendix 1 contains an overview of all the participants in the network and gives a description of the situation up to the incidence year 2001.

- The network includes all seven national health insurance companies. More than 99% of the Belgian population are affiliated with one of the seven health insurance companies. On the basis of hospitalisation forms (including one-day hospital admissions) the physicians from the health insur-

ance companies ask the treating specialists from all over Belgium to provide information on all possible new cases of cancer. The staff at the health insurance companies receive special training and take regular refresher courses in order to code the data for registration at the cancer registry.

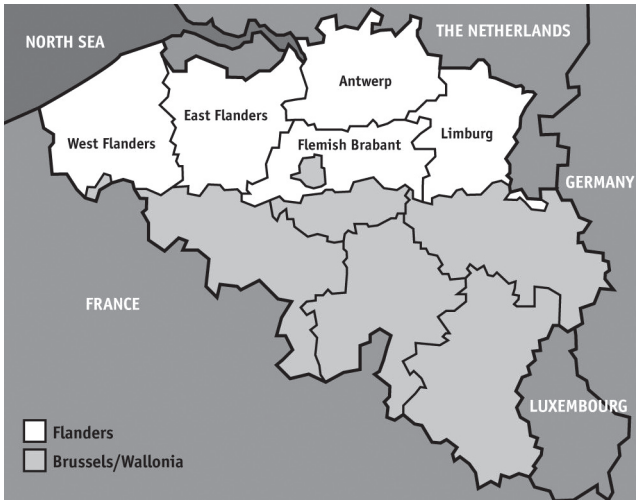
- The provincial cancer registry of Limburg (LIKAR) is part of the network [4,5] and collects data from the pathological anatomy laboratories in Limburg and also a few outside.
- The Antwerp Cancer Registry (AKR) also forms part of the network[6]. The AKR is an example of active registration. Uniformly trained staff record the cancer cases at the hospitals in the province of Antwerp with the aid of medical files.
- The Oncology Department of the University Hospital Leuven and the Radiotherapy Department of the University Hospital Ghent have been involved since the start of the network. They have the medical files at their disposal to record all the cases. The Oncology Department of the Jules Bordet Institute in Brussels has been involved since the incidence year 2000.
- Direct cooperation has started between the pathological anatomy laboratories in the provinces of Flemish-Brabant, East-Flanders, West-Flanders and the cancer registry. The number of participants has increased steadily. In the incidence year 1996 three laboratories were taking part, while in 2001 there were 36. In the incidence year 2001 only two non-university pathological anatomy laboratories in these three provinces did not take part. No direct cooperation was started with the pathological anatomy departments in the provinces of Limburg and Antwerp, because these laboratories were already working with the Limburg and Antwerp Cancer registries (LIKAR and AKR).
- The bronchus carcinoma registry of the Flemish Association for Respiratory Health and Tuberculosis Prevention (VRGT) participated in the network until the end of 1998. Since then this registry has been taken over by the health insurance companies in cooperation with the treating physicians and specialists.

As patients are often treated outside their own region and/or province, it is only possible to obtain an accurate illustration of cancer in Flanders when data from the different registration systems are combined.

1.2 Population and region

Flanders comprises an area of 13,522 square kilometres. It forms the northern part of Belgium and has five provinces (see Figure 1). On 1 January 2001, Flanders had a population of 5,952,552 that comprised 2,934,940 males and 3,017,612 females (see Appendix 2: structure of the population)[7]: 22% were 60 years of age or older and 3.6% of the total population were 80 years of age or older. According to the National Institute of Statistics (NIS), over the coming twenty to thirty years the percentage of over 60-year-olds in the Flemish population will continue to increase. This ageing is expected to rise to 29% in the year 2020 and 34% in the year 2050[8]. A total of 5% of the total population has a foreign nationality. Flanders has one of the highest population densities in Europe, with 442 inhabitants per square kilometre[7].
Life expectancy at birth is 76.0 years in males and 81.9 years in females[7].

Figure 1. The Flemish region of Belgium



1.3 Data collection, quality control and data linkage

Since the registration year 1996, the participants in the Cancer Registry Network have been providing a data set (appendix 3) in electronic form according to a fixed format. To code tumour characteristics, this data set used the International Classification of Diseases for Oncology (ICD-O-2), 2nd edition[9] and the TNM classification[10,11]. Since the incidence year 2002, the ICD-O, 3rd edition has been in use[12].

At the cancer registry every tumour record is subjected to an automated quality control, in which the format and the contents of each field are checked. In addition, the contents of the fields are checked for inconsistencies against the other fields. Relationships are checked between topography and gender, topography and histology, age and tumour characteristics (e.g. women cannot have prostate cancer, lung adenocarcinoma is very unlikely in a child). The checking procedures were based on the IARC guidelines[13].

After quality control, individual tumour records from different sources are linked by means of a unique patient identifier. If these tumour records contain data on the same tumour, the data from the various sources are combined to form one definitive tumour record. At this stage it may be determined whether or not this concerns a second (third, etc.) primary tumour. This is largely an automated process, but in about 20% of the data links, manual intervention is necessary. In the more complex cases, the data source is reconsulted to provide additional information[14].
To protect the privacy of each individual patient as much as possible, identification characteristics of the patient (date of birth, name and gender) are encrypted irreversibly at the source into a unique code before the information is transferred to the cancer registry. Writing errors in the name or date of birth may lead to serious linkage errors (~5%) (false-negatives)[15]. At present such errors can only be detected and corrected by means of a labour-intensive correction procedure. However, such linkage errors could be avoided in the future by means of a more durable and unique patient identifier.

1.4 Exclusion criteria and multiple tumours

All invasive and in situ malignancies were registered, except for basal cell carcinoma of the skin. Also the non-invasive and benign tumours of the bladder, central nervous system, pituitary gland and craniopharyngeal duct were registered.
In this report on cancer incidence, only the invasive malignancies are described, unless explicitly stated otherwise in the tables or figures. Squamous cell carcinoma of the skin was registered, but often omitted from the general analysis of the incidence of cancer in a population.
For the calculation of the incidence rates of multiple tumours in the same patient, this publication used the IACR/IARC rules (see appendix 4)[13]. Registration was broader than reported in this publication, because otherwise too much information would be lost owing to the IACR/IARC rules. For

example, in the case of a bilateral organ or pairs of organs, left and right were registered as two different localisations in contrast with the IACR rule. Moreover, according to the IACR rules, only one tumour per 'localisation' or 3-character ICD-O-2 topography code can be registered. The Flemish Network considered tumours of the colon, skin, bone or soft tissues and the sublocalisation or 4-character ICD-O-2 topography code to be one tumour. These data are not reported as such in this publication.

1.5 Quality

The quality of cancer registry data depends on different aspects[16].

a) the completeness of the cancer registry (degree of coverage) (also see 'b')[17]
Mortality incidence ratios (M/I ratios) reflect the relationship between the number of deaths from a specific type of cancer and the number of cancer cases in the same period. These cancer cases and deaths[18], shown in table 2, do not necessarily refer to the same case, but rather to the same diagnosis. If the figures on the causes of death and the cancer incidence are accurate, the M/I ratio gives an indication of global survival[13]. It is also assumed that incidence and mortality remain stable over time.
M/I ratios of close to 1 are typically found in cancer types that are fatal in the short-term, such as lung, liver, oesophageal and pancreas carcinoma. Other types of cancer such as breast, colon, skin, uterine cervix and testis with a better prognosis, have an M/I ratio of less than 1 (appendix 5). For instance, the M/I ratio of 0.27 for breast cancer can be interpreted as a global survival of 73%. In other words, one in four women with breast cancer will die from the disease.
M/I ratios of greater than 1 reflect under-recording and/or inaccurate mortality statistics (see appendix 5).

The number of different data sources per tumour is a raw indicator of completeness: the higher the average, the more complete the registration process. The reasoning behind this is that very few cases will be missed when multiple sources are used. File linkage leads to information that is more complete, precise and reliable. In the incidence year 1997, information on each individual tumour was made up of data from more than one source in 33% of the tumours. Since the inclusion of pathological anatomy laboratories in the network, linkage rates have increased further to 45% over the incidence years 1998 to the end of 2001. The contributions made to the cancer registry by

the different source types or the roles they played (total number of tumours) in the incidence year 2001 can be summarized as follows: AKR 27%, LIKAR 10%, pathological anatomy laboratories 58%, oncology departments 9%, health insurance companies 48%.

One technique to check the completeness of a cancer registry is the 'independent data set method'. This method assumes the availability of a data source that is not used by the cancer registry itself, but does permit comparison with the (completeness of the) cancer registry data. For example, to detect cases of interval cancer at the Leuven University Centre for Cancer Prevention (LUCK), the data on women who took part in the breast cancer screening programme were linked to data from the cancer registry. The LUCK is mainly active in the province of Flemish Brabant. To check the completeness of the cancer registry, evaluation was made of the extent to which the screen detected breast cancer patients were present in the cancer registry data. The LUCK made 57 diagnoses of breast cancer during the screening year 2000. A total of 56 cases were traced in the cancer registry data, i.e. 98.2%.

b) the validity (the agreement between registered data and the correct information), reproducibility and reliability

The quality of the data in the registry depends strongly on the quality that is offered by the sources[19]. Due to privacy laws it was not possible to simply check the validity of the data at the site that held the original data. Instead, indirect data validation had to be performed: if linkage showed discrepancies between the data, reapplication was made for the information at the original data source by means of direct questions.

c) the completeness of the data per tumour record

Table 1 shows the percentage of completeness of the registry items. Data on the basis for the diagnosis and the subsequent percentage of histologically and cytologically confirmed tumours serve as international quality criteria. This situation remains a consideration point in the Flemish Network, because in 8% of the cases this information was missing (see appendix 6). Data on the basis for the diagnosis should be as complete as possible (~100%). Over the successive incidence years improvement can be seen in the percentage of missing information: from 17% in 1997 to only 6% in 2001.

Broadly speaking, the percentage of microscopically confirmed tumours was artificially low due to the large body of missing data. However, improvements are visible, from 77% microscopically confirmed tumours in 1997 to 89% in

2001. If the tumour records with missing data on the basis for the diagnosis were omitted, the percentage of microscopically confirmed tumours was 97.8%. In the Netherlands, this percentage was about 95%[20]. Data on the stage and treatment of the tumour were missing in about half of the cases, which makes the results less reliable (possible bias).

TABLE 1. COMPLETENESS OF THE REGISTERED DATA, 2000-2001

	Completeness (%)
Sex	100.0
Year of birth	100.0
Date of diagnosis	100.0
Basis for the diagnosis	91.7
Localisation*	95.8
Histology**	90.6
Treatment	52.7
Staging	
Breast	69.6
Lung	56.3
Colon/rectum	60.8
Prostate	43.4
Malignant melanoma	57.4

* % of accurately specified primary localisations (thus different from: unknown primary localisation, ill-defined sites, uterus unspecified, male or female genital organs unspecified, digestive tract unspecified, respiratory tract unspecified)

** % of accurately specified histologies (>M-8011)

d) the time necessary to make the cancer registry data available

1.6 Calculation of incidence rates and risk

Age-specific incidence, standardised incidence and cumulative risk

The absolute numbers of newly diagnosed cancer cases are represented in the appendices at the end of this publication per tumour localisation, gender and 5-year age groups (appendix 7). The incidence data given in this report are based on the data that were available in August 2005. Incidence rates reported previously, such as those published in 'Cancer incidence in Flanders, 1997-1999'[21] may differ slightly from the present data owing to the dynamic nature of the cancer registry (some data were received and registered later).

Incidence data were calculated on the basis of the annual absolute incidence and population data from the National Institute of Statistics (NIS). The crude incidence rate is the number of new cancer cases (numerator) per 100,000 persons per year (denominator: person years). Age-specific incidence rate is the number of new cases per year in a particular 5-year age group per 100,000

inhabitants in the same age group. In childhood cancer the denominator is exceptionally expressed by 1,000,000 inhabitants (see chapter 4 Childhood cancer).
Comparisons of crude incidence rates can lead to inaccurate projections due to differences in the age structure of the populations. This problem can be solved by standardising for age. In the tables (see appendix 7) standardisation for age by the direct method has been applied, using the World or European standard population (WSR-ESR)[22]. The distributions of these standard populations are described in appendix 2. All age-specific and standardised incidence data with the direct method were calculated per 100,000 inhabitants per year. The cumulative risk is an exception as it is expressed on the basis of percentages[23]. The cumulative risk is an individual's risk of developing the disease during a certain phase in life (e.g. between 0 and 75 years of age), provided that he or she does not die of other causes in the meantime.

Indirect standardisation was also used in this publication to present the geographic differences in head and neck cancer (standardised incidence ratio, or SIR). With this method the number of newly diagnosed cancer cases in a certain region (e.g. district, municipality, etc.) are compared to the number that can be expected theoretically if that region has the same age-specific incidence as the reference region (in this case the Flemish region as a whole). These geographic maps are purely descriptive and may show wide differences and contrasts that can be fully attributed to random variation between the ratios observed. In other words, these differences do not necessarily reflect differences in the underlying risk of developing cancer. These maps were made in cooperation with Dr Peter Hooft (†) en Mrs. Heidi Cloots at the Ministry of Flanders, Directorate General of Health, Entity of Health Policy Support (Vlaamse administratie Gezondheidszorg, entiteit Beleidsondersteuning).

1.7 Survival analysis

Crude 5-year survival was calculated according to the actuarial method (life table method). In a few selected malignancies (see Chapter 3) Kaplan Meier survival curves and relative survival (cf. infra) are also shown. Crude observed 1, 3 and 5-year survival data are shown for all other types of cancer in the tables at the end of this publication (appendix 10).
In many cases the cause of death of cancer patients was unknown or inaccurate. Consequently it was not possible to calculate disease-specific survival.

Relative survival is a frequently used parameter in cancer epidemiology and forms a good approach to disease-specific survival[24]. The relative survival rates given in this publication reflect an estimate of the expected survival of cancer patients, in which causes of death other than cancer have been left aside. Relative 5-year survival is calculated by dividing the observed survival by the expected survival in a group of people with the same gender and age structure from the general population[25].

All cancer cases diagnosed between 1/1/1997 and 31/12/2001 were followed-up until 31/12/2003. Patients without the full 5-year follow-up were censored at the moment they were lost to follow-up, but their data were included in the analyses. Only the first tumour known at the registry is taken into account for the survival analysis. All subsequent cancers in the same patient are excluded for the analysis. This explains why the numbers used for the survival analysis can slightly differ from the numbers mentioned in the incidence data. By means of linkage with the coded records of all the registered deaths in the period 1/1/1997 to 31/12/2003 at the seven health insurance companies, the vital status of all the patients was added to the database. In addition, mortality data from the Ministry of Flanders, Directorate General of Health, Entity of Health Policy Support (Vlaamse administratie Gezondheidszorg, entiteit Beleidsondersteuning) were used as an extra verification method.
The above is known as a passive follow-up method, because each cancer case is assumed to be alive (on 31/12/2003) if no links at all can be found with the available death statistics. This method has also been used by a great many foreign cancer registries[26].

2 | Cancer incidence and survival: general results

2.1 Incidence

In the period 1/1/2000 to 31/12/2001 the Flemish Cancer Registry Network has recorded more than 62,500 new cases of cancer (excluding basal cell carcinoma and squamous cell carcinoma of the skin) (see appendix 7.1). In the same period about 30,000 people died of cancer. Table 2 shows an overview of the number of cases of cancer per gender per year compared to the number of deaths from cancer in the period 1997 to the end of 2001[18].

TABLE 2. NEW CASES OF CANCER AND DEATHS FROM CANCER, 1997-2001

	New cancer cases		Deaths from cancer	
	Males	Females	Males	Females
1997	14,390	12,048	9,088	6,429
1998	14,349	12,319	8,939	6,514
1999	15,924	12,853	8,906	6,382
2000	17,027	13,737	8,886	6,227
2001	17,582	14,270	8,755	6,218

The incidence data are equivalent to an average annual crude incidence of 589 new cases per 100,000 person years in men and 464 per 100,000 in women. Age-standardised incidence (World Standard Population) was 338.5 in men and 263.2 in women. This is equivalent to a male predominance of 22% (see appendix 7), whereas in other European countries, this predominance has decreased to 13% (the Netherlands), 17% (Finland), 16% (Norway), owing to an increased incidence of lung cancer in women and a decrease in men.

In comparison with the data from the previous publication 1997-1999[21] this means that after five years (1997 vs 2001) there has been an increase of 18% in the number of male cancer cases and an increase of 16% in women. This increase can largely been ascribed to the improvements in registration over the period 1997-2000. As cancer mainly occurs in older people, part of this increase can also be attributed to the ageing of the Flemish population. The greatest increases occurred in prostate and breast cancer. Comparison between the incidence years 1997 and 2001 showed that for these two types of cancer, respectively 2,068 and 1,223 more cases were registered (see appendix 7.1). Early detection of prostate and breast cancer is partly responsible for the sharp increases.

Besides the registration of invasive tumours, 6,399 non-invasive cancer cases were registered, mainly in situ carcinoma of the breast, bladder and uterine cervix, 'benign' brain tumours and non-invasive papillary bladder tumours.

Frequencies of the different tumour localisations and age distribution

Combining the data from men and women revealed that breast cancer and prostate cancer were the most frequent tumours (10,348 and 10,244 cases, respectively), followed by colorectal cancer (8,513) and lung cancer (7,293) (see appendix 7). These four localisations together covered more than 55% of all the registered tumours.

Figure 2 shows an overview of the ten most frequently occurring tumours per gender. In women, breast cancer (35.3%) was at the top of the list, while in men, prostate cancer (28.4%) was at the top, followed by lung cancer (16.9%) and colorectal cancer (12.7%). In women, colorectal cancer (13.5%) and the gynaecological tumours of the corpus uteri (5.3%) and ovary (4.2%) preceded lung cancer (4.2%). Since the incidence year 2001 lung cancer has taken fourth place in women. Malignancies with unknown primary localisation were also included in the ten most frequently occurring tumours in men and women (men 3.3%, women 3.9%). It is generally accepted that the percentage of patients with a primary tumour of unknown origin is about 3-10% of all new cancer cases[27,28].

Figure 2. The 10 most frequently occurring invasive tumours in the Flemish region of Belgium, 2000-2001

1. Prostate (28.4%)
2. Lung (16.9%)
3. Colon/rectum (12.7%)
4. Head and neck (5.4%)
5. Bladder (5.3%)
6. Skin (non-melanoma) (4.1%)
7. Unknown primary site (3.3%)
8. Lymphoma (3.1%)
9. Stomach (2.8%)
10. Kidney (2.7%)

1. Breast (35.3%)
2. Colon/rectum (13.5%)
3. Corpus uteri (5.3%)
4. Ovary (4.2%)
5. Lung (4.2%)
6. Unknown primary site (3.9%)
7. Lymphoma (3.5%)
8. Skin (non-melanoma) (3.3%)
9. Melanoma (3.0%)
10. Cervix uteri (2.8%)

Tables 3 and 4 show the most frequently occurring tumours per gender in the five Flemish provinces. In all five provinces, prostate, lung and colorectal

cancer took up the first three places in men. In the provinces of Antwerp and Limburg, bladder cancer took fourth place, whereas in the other provinces, malignant head and neck tumours took fourth place. The three most frequently occurring tumours in women were breast, colorectal and uterine cancer. It was only in the province of Antwerp that lung cancer was in the third place.

TABLE 3. THE FIVE MOST FREQUENTLY OCCURRING INVASIVE TUMOURS PER PROVINCE IN MALES, 2000-2001 (%)

	1	2	3	4	5
Antwerp	Prostate (27.5)	Lung (17.6)	Colon/rectum (13.1)	Bladder (5.6)	Head and neck (4.5)
Flemish Brabant	Prostate (27.4)	Lung (16.7)	Colon/rectum (12.8)	Head and neck (5.6)	Bladder (5.0)
West Flanders	Prostate (31.8)	Lung (14.8)	Colon/rectum (12.2)	Head and neck (5.9)	Bladder (4.6)
East Flanders	Prostate (27.1)	Lung (16.6)	Colon/rectum (13.2)	Head and neck (6.6)	Bladder (5.8)
Limburg	Prostate (28.9)	Lung (19.2)	Colon/rectum (11.8)	Bladder (5.8)	Skin (non-melanoma) (4.2)

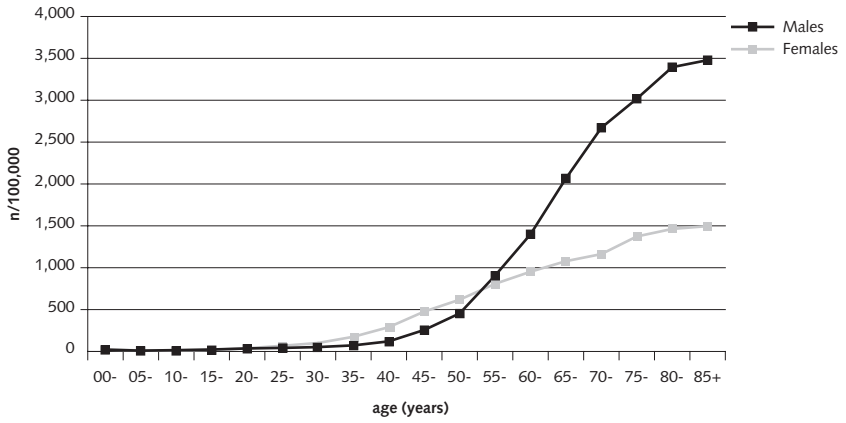
TABLE 4. THE FIVE MOST FREQUENTLY OCCURRING INVASIVE TUMOURS PER PROVINCE IN FEMALES, 2000-2001 (%)

	1	2	3	4	5
Antwerp	Breast (34.6)	Colon/rectum (13.6)	Lung (5.9)	Corpus uteri (5.2)	Ovary (4.7)
Flemish Brabant	Breast (37.1)	Colon/rectum (13.3)	Corpus uteri (4.8)	Unknown primary site (4.2)	Lung (4.1)
West Flanders	Breast (34.0)	Colon/rectum (13.7)	Corpus uteri (5.9)	Ovary (4.5)	Skin (non-melanoma) (4.3)
East Flanders	Breast (36.7)	Colon/rectum (13.6)	Corpus uteri (5.7)	Unknown primary site (5.5)	Ovary (4.0)
Limburg	Breast (34.3)	Colon/rectum (13.2)	Corpus uteri (4.7)	Lung (4.7)	Ovary (4.1)

The incidence of cancer is closely associated with age. Figure 3 shows the age-specific incidence data over the period 2000-2001.

About two thirds of the women and three quarters of the men were 60 years of age or older at the time of diagnosis. In men, the incidence increased mainly from the age of 55 and reached 3,000 per 100,000 person years at the age of over 75 years. In women, the increase in cancer incidence started at a somewhat younger age (from 40 years) and reached 1,350 per 100,000 person years at the age of over 75 years. The higher age-specific incidence in the age group 25 to 55 years in women was mainly caused by breast cancer and gynaecological cancer. From the age of 55 years, the age-specific incidence was higher in men than in women, but from the age of 65 years, the risk of developing cancer in men was more than twice as high as the risk in women. The latter was chiefly caused by lung cancer and prostate cancer.

Figure 3. Invasive tumours (excluding non-melanoma of the skin): age-specific incidence (n/100,000) per gender, 2000-2001



The distribution of cancer localisations also varies as a function of age. Table 5 shows the most frequently occurring tumours per 15-year age groups. Between 1/1/2000 and 31/12/2001 cancer was diagnosed in 313 children under the age of 15; these comprised 0.5% of all the new cancer patients. Leukaemia and tumours of the central nervous system were the most frequently occurring diagnoses in children.

The relatively rare haematological malignancies, brain tumours, malignant melanomas and tumours of the genital organs were more frequent in young to middle age, whereas the more common tumours mainly occurred in the older age groups. For example, in the period 2000-2001, half of the total number of tumours diagnosed in men of 60 years and older comprised lung and prostate cancer.

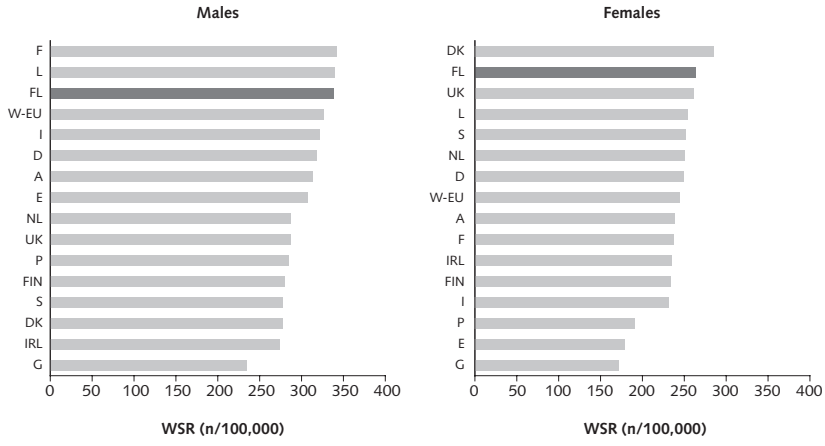
The number of colorectal tumours in women increased sharply from the age of 60 and took the first place in the age group over 75 years.

TABLE 5. THE MOST FREQUENTLY OCCURRING INVASIVE TUMOURS PER AGE GROUP AND GENDER, 2000-2001

Age (years)	Gender	1	2	3	4	5
0-14	M+F	Leukemia	Brain	Lymphoma	Kidney	Soft tissue
15-29	M	Testis	Lymphoma	Brain	Skin, melanoma	Leukemia
	F	Skin, melanoma	Lymphoma	Breast	Cervix uteri	Brain
30-44	M	Lymphoma	Head and neck	Testis	Colon/rectum	Skin, melanoma
	F	Breast	Cervix uteri	Skin, melanoma	Colon/rectum	Ovary
45-59	M	Prostate	Bronchus and lung	Head and neck	Colon/rectum	Lymphoma
	F	Breast	Colon/rectum	Corpus uteri	Bronchus and lung	Ovary
60-74	M	Prostate	Bronchus and lung	Colon/rectum	Bladder	Head and neck
	F	Breast	Colon/rectum	Corpus uteri	Bronchus and lung	Ovary
75+	M	Prostate	Bronchus and lung	Colon/rectum	Bladder	Skin, other
	F	Colon/rectum	Breast	Skin, other	Unknown primary site	Corpus uteri

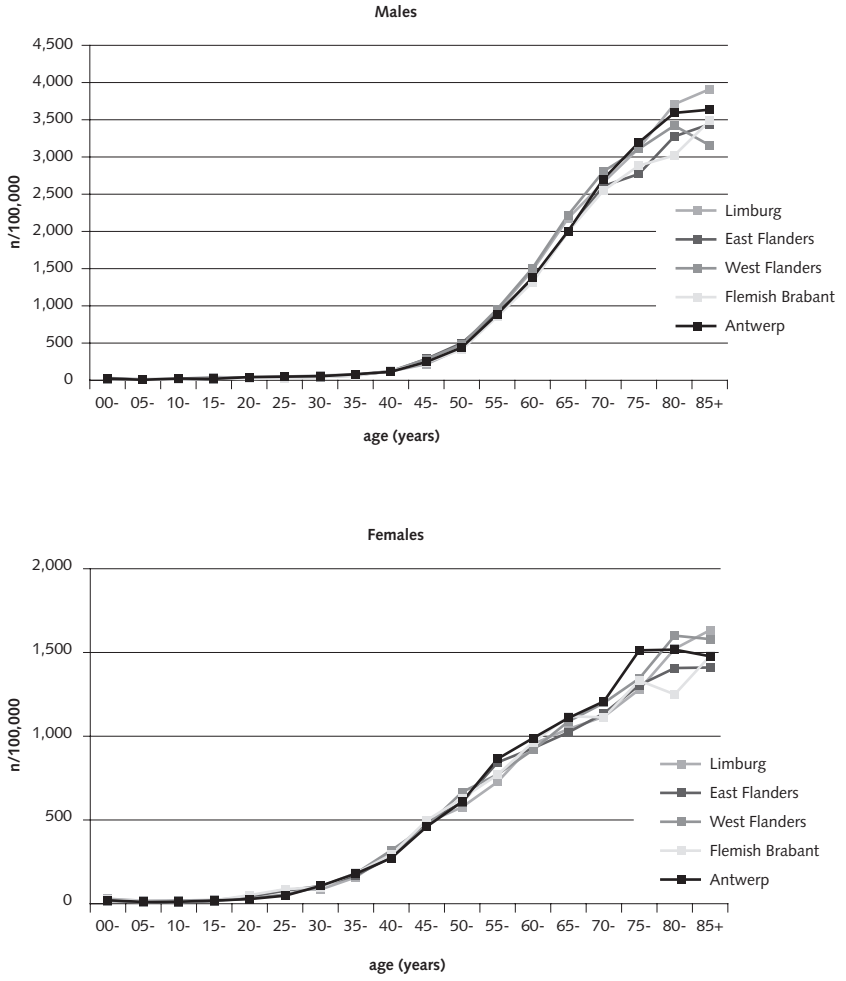
Figure 4 compares standardised incidence rates (World Standard Population) per age group from a number of European cancer registries. The data on 2002 originated from "GLOBOCAN"[29], in which estimates were made by the IARC based on incidence data from the different cancer registries. Besides the data from GLOBOCAN registered data were used from the Flemish Cancer Registry Network (2000-2001), the Netherlands (2001) and Finland (2002). The Flemish data on men indicated one of the highest cancer incidences in Europe. This can be attributed to the still very high incidence of lung cancer. Another reason was the high incidence of prostate cancer. In women, the global cancer incidence was among the highest in Europe. This can mainly be explained by the high incidence of breast cancer.

Figure 4. Invasive tumours (excluding non-melanoma of the skin) per gender: age-standardised incidence rates (WSR), Finland 2002, GLOBOCAN 2002, the Netherlands 2001 and the Flemish region of Belgium 2000-2001



Abbreviations:
WSR: age-standardised incidence based on the World Standard Population, A=Austria, D=Germany, DK=Denmark, E=Spain, F=France, G=Greece, L=Luxembourg, P=Portugal, S=Sweden, I=Italy, IRL=Ireland, W-EU= Western Europe (Austria, Belgium, France, Germany, Luxembourg, the Netherlands, Switzerland) (GLOBOCAN (2002) http://www-dep.iarc.fr/GLOBOCAN/Table2_sel.htm, NL= the Netherlands (2003) http://www.ikcnet.nl, FIN=Finland (2002) http://www.cancerregistry.fi/, FL=Flanders (2000-2001)

Figure 5. Invasive tumours (excluding non-melanoma of the skin): age-specific incidence (n/100,000) per province, 2000-2001



Comparison of age-specific and age-standardised incidence rates between provinces showed that these rates were highest in the provinces of Limburg and West-Flanders for males (see figure 5 and table 6). In the latter province, this could be attributed to a higher incidence of prostate cancer. In the province of Limburg, there was still a very high incidence of lung cancer despite the steadily decreasing trend in Flanders and the majority of countries in the European Community since 1996. In females, these rates were rather comparable.

TABLE 6. INVASIVE TUMOURS (EXCLUDING NON-MELANOMA OF THE SKIN):

AGE-STANDARDISED INCIDENCE RATES (ESR N/100,000) PER PROVINCE AND GENDER, 2000-2001

ESR	Flanders	Antwerp	Flemish Brabant	West Flanders	East Flanders	Limburg
Males	493.9	497.1	466.2	513.6	484.6	512.6
Females	359.7	366.0	360.4	362.1	354.1	351.6

2.2 Survival

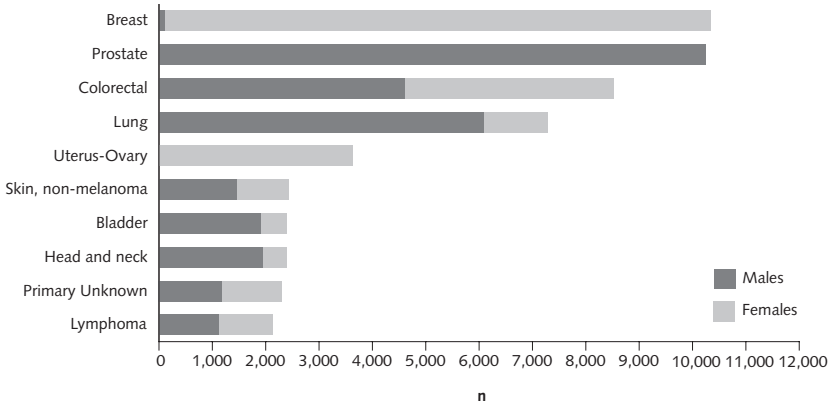
The crude 5-year survival rate calculated on the basis of the actuarial method was 42% in men and 56% in women. Relative 5-year survival was 51% in men and 62% in women. This relative survival rate generally approaches disease-specific survival, because consideration is paid to causes of death other than cancer.

These rates give an overall impression of 5-year survival in all patients with malignancies. As cancer comprises a wide variety of diseases with different prognoses, it is more appropriate to look at these rates tumour-specifically.

3 | Cancer incidence: description of several selected malignancies

Selection was made of the ten most frequently occurring malignancies in Flanders (see Figure 6). Tumours with unknown primary site (9th in Figure 6) and non-melanoma of the skin (6th in Figure 6) are not described below. An additional tumour, malignant melanoma, is described, because it falls within the framework of suitability for primary preventive measures.

Figure 6. The 10 most frequently occurring malignancies in the Flemish region of Belgium, 2000-2001



The malignancies are described in the order of their specific ICD-10 code[30]. For all the tumour localisations, we present the age-specific incidence rates. Comparisons were made between the Flemish incidence rates, the rates in the five Flemish provinces and the rates in a number of European countries (see also Chapter 2).

Staging according to the TNM 5th edition[11] has been placed in a histogram only for breast cancer, colorectal cancer and for malignant melanoma. This has not been done for the other tumour localisations, because of the high percentage of missing data of 50% or more.

Additional information on the histological distribution and/or sublocalisations is given for the head and neck tumours, colorectal tumours, ovarian cancer and lymphomas.

Observed and relative survival rates of the separate tumours are presented.

3.1 Head and neck tumours (ICD-10 C00-C14, C30-C32)

3.1.1 Incidence

Head and neck tumours are localised in the oral cavity, pharynx, nose/nasal sinuses and larynx. They took fourth place on the list of most frequently occurring tumours in men (5.4% or 1,934 cases in the period 2000-2001). In women, the incidence was almost five times lower than in men. Figure 7 shows the age-specific incidence of head and neck tumours per gender.

Figure 7. Head and neck cancer: age-specific incidence per gender, 2000-2001

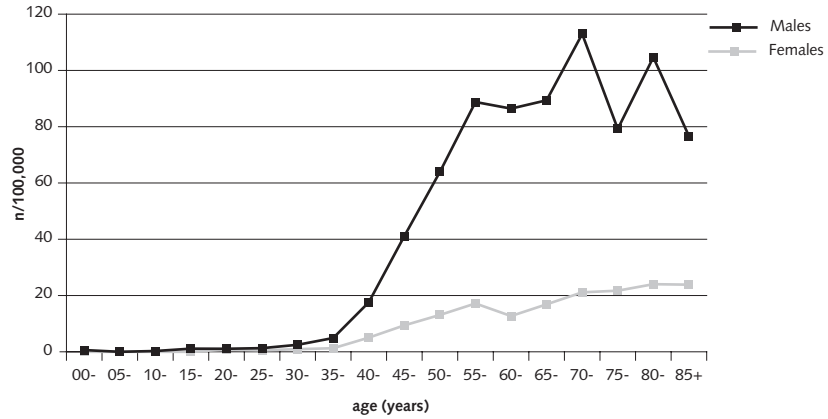
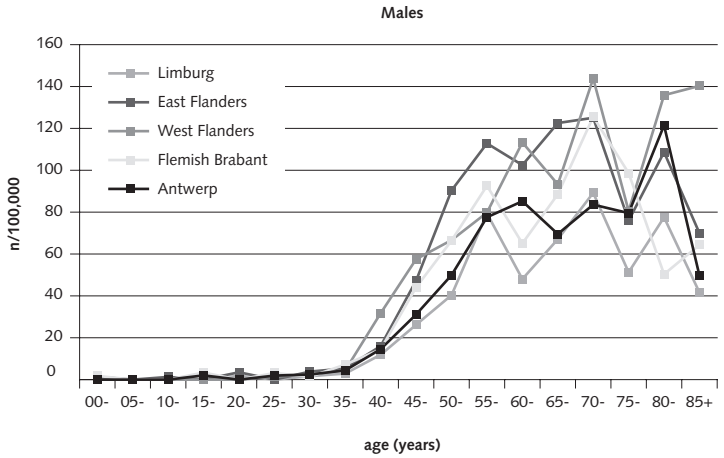


Figure 8. Head and neck cancer: age-specific incidence per province in males, 2000-2001



In comparison with other European countries, the incidence in women in the Flemish region of Belgium was about the same as the European average (see Figure 9). The incidence in men was slightly lower than the Western European average.

Figure 9. Head and neck cancer: age-standardised incidence rates (WSR) per gender: Finland 2002, GLOBOCAN 2002, the Netherlands 2001 and the Flemish region of Belgium 2000-2001

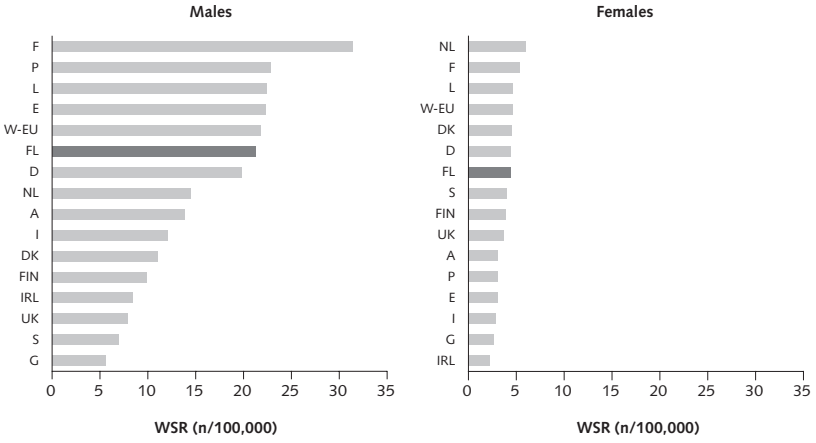


Figure 8 shows that there were clear regional differences in head and neck cancer in men. Incidence rates were highest in the west of Flanders and distinctly lower in the east (see Figure 11). It is well-known that head and neck cancer is chiefly caused by the combination of smoking and high alcohol use. This risk behaviour is a possible explanation for the higher incidence and mortality rates in certain regions. Furthermore, the high mortality rates from chronic liver disease in these regions provide support for this assumption (see Figure 10).

Figure 10. Standardised mortality rates from chronic liver disease in males in the Flemish region of Belgium, 1990-2002

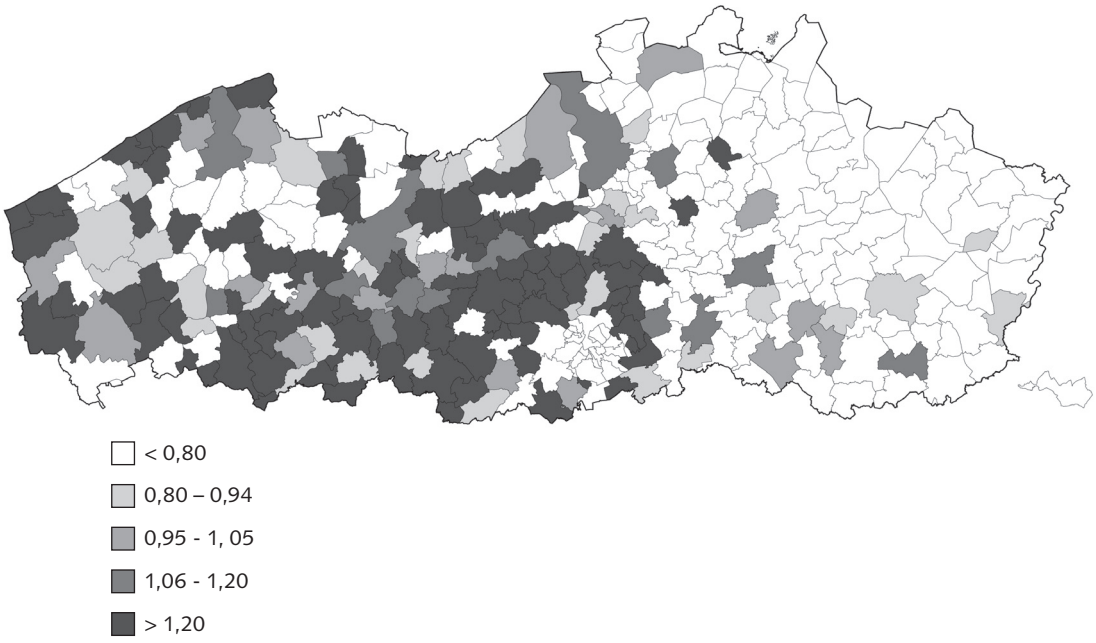


Figure 11. Head and neck cancer: standardised incidence rates (indirect method) in males, 2000-2001

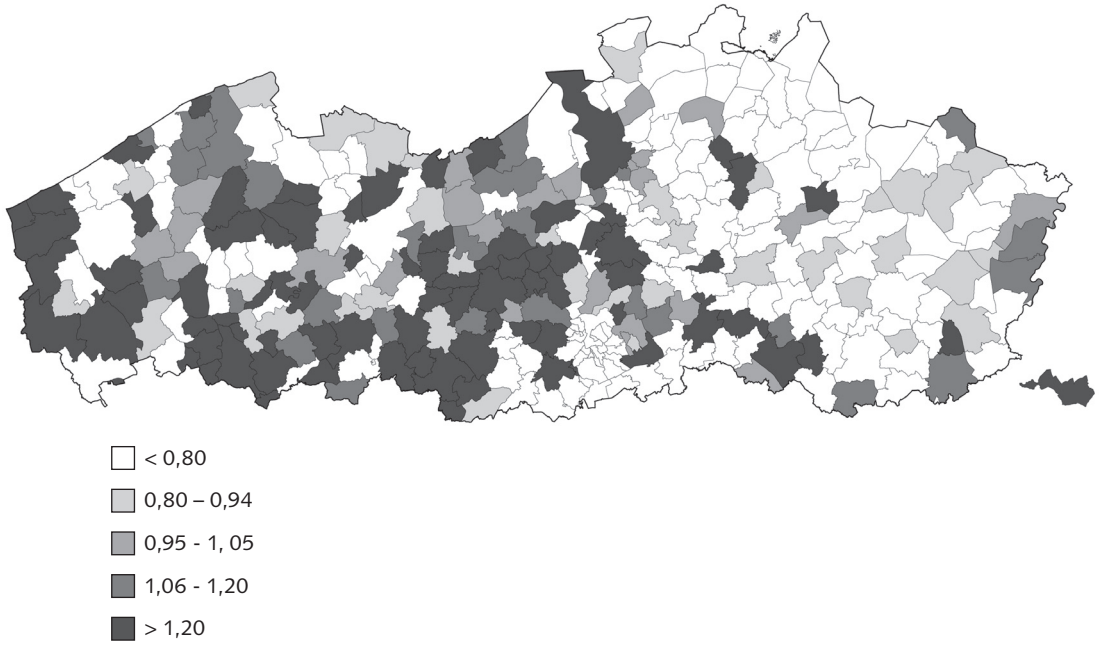


Table 7 gives an overview of the distribution of the different localisations of head and neck tumours. Larynx, tongue and tonsil were the most common localisations of head and neck cancer.

TABLE 7. HEAD AND NECK CANCER: PRIMARY TUMOUR LOCALISATIONS, 2000-2001

		Total		Males		Females	
		n	%	n	%	n	%
C00	Lip	139	5.8	93	4.8	46	9.9
C01	Base of tongue	72	3.0	56	3.0	16	3.4
C02	Tongue	219	9.1	163	8.4	56	12.0
C03	Gum	25	1.0	16	0.8	9	1.9
C04	Floor of mouth	173	7.2	144	7.5	29	6.2
C05	Palate	72	3.0	46	2.4	26	5.6
C06	Mouth, NOS	135	5.6	98	5.1	37	7.9
C07	Parotid gland	88	3.7	50	2.6	38	8.1
C08	Other and unspecified major salivary glands	34	1.4	19	1.0	15	3.2
C09	Tonsil	197	8.2	151	7.8	46	9.9
C10	Oropharynx	90	3.7	74	3.8	16	3.4
C11	Nasopharynx	45	1.9	36	1.9	9	1.9
C12	Pyriform sinus	111	4.6	100	5.2	11	2.4
C13	Hypopharynx	74	3.1	63	3.3	11	2.4
C14	Lip, oral cavity and pharynx, NOS	56	2.3	48	2.5	8	1.7
C30	Nasal cavity and middle ear	26	1.1	23	1.2	3	0.6
C31	Accessory sinuses	93	3.9	74	3.8	19	4.1
C32	Larynx	752	31.3	680	35.2	72	15.4
Total		**2,401**	**100.0**	**1,934**	**100.0**	**467**	**100.0**

3.1.2 Survival

As the head and neck tumours form a heterogeneous group in terms of prognosis, Table 8 gives a summary of the observed and relative 1, 3 and 5 year survival per tumour localisation. The curves (Figure 12 and 13) show the observed and relative survival separately for the group lip – oral cavity – pharynx (C00-C14) and larynx (C32). A separate graph is presented for malignant supraglottic and glottic tumours.

TABLE 8. HEAD AND NECK CANCER: OBSERVED AND RELATIVE SURVIVAL PER TUMOUR LOCALISATION, 1997-2001

		Relative survival			Observed survival			Cancer	Death
		1 year	3 year	5 year	1 year	3 year	5 year	N	N
C00 Lip	M	95.4	88.1	86.0	90.8	76.1	67.2	218	63
	F	98.2	95.3	92.9	93.9	83.3	75.0	98	21
C01 Base of tongue	M	74.1	48.6	41.0	72.7	45.5	36.9	139	81
	F	71.1	52.3	53.3	70.3	50.3	50.3	37	18
C02 Tongue	M	77.8	53.6	45.7	76.2	50.5	41.4	345	186
	F	76.6	59.5	55.3	74.2	54.8	48.9	132	64
C03 Gum	M	72.5	57.3	59.6	70.3	53.2	53.2	37	17
	F	68.8	54.3	62.1	65.2	47.1	47.1	23	12
C04 Floor of mouth	M	75.9	53.0	42.7	74.7	50.7	39.8	363	201
	F	76.6	57.0	47.0	74.7	53.6	42.7	83	44
C05 Palate	M	82.6	63.3	51.4	81.2	60.1	46.7	117	56
	F	73.7	56.1	47.6	72.7	54.0	44.4	55	28
C06 Mouth, NOS	M	75.6	54.7	48.1	74.0	51.4	43.0	196	104
	F	78.2	64.6	53.6	75.6	59.4	47.0	82	38
C07 Parotid gland	M	84.9	69.0	54.8	82.4	63.5	48.3	131	60
	F	85.8	69.6	68.6	83.5	65.2	62.5	79	28
C08 Other and unspecified major salivary glands	M	81.8	70.7	67.1	80.0	65.8	58.5	50	19
	F	86.0	82.4	78.0	84.4	77.8	71.3	32	8
C09 Tonsil	M	71.9	46.5	38.5	70.7	44.4	35.6	338	204
	F	81.8	62.1	56.9	80.4	59.4	52.1	97	43
C10 Oropharynx	M	62.7	33.4	22.0	61.4	31.5	20.1	153	112
	F	60.7	36.5	32.1	60.0	35.2	28.8	25	17
C11 Nasopharynx	M	86.3	66.1	50.3	84.7	62.9	46.9	72	32
	F	83.1	72.2	66.0	81.8	68.2	60.6	22	8
C12 Pyriform sinus	M	69.8	36.7	30.3	68.8	34.9	27.8	221	150
	F	72.6	28.7	25.1	72.0	28.0	24.0	25	19
C13 Hypopharynx	M	59.5	33.4	27.9	58.6	32.0	26.0	128	91
	F	74.4	58.5	40.3	73.7	56.5	37.7	19	9
C14 Other and ill-defined sites in lip, oral cavity and pharynx	M	55.9	30.9	23.0	54.4	28.9	20.7	92	69
	F	70.9	51.5	38.4	69.2	46.2	33.0	13	8
C30 Nasal cavity and middle ear	M	87.2	73.6	79.0	84.0	65.7	65.7	50	17
	F	64.8	63.3	61.0	63.6	59.1	54.2	22	10
C31 Accessory sinuses	M	74.7	58.2	47.4	72.9	54.5	42.4	192	99
	F	80.0	49.4	36.6	77.6	45.7	32.3	49	30
C32 Larynx	M	84.6	67.1	59.4	82.4	62.0	51.7	1,564	680
	F	84.5	70.8	62.3	83.1	67.6	57.3	154	59

Figure 12. Head and neck cancer: observed survival per gender, 1997-2001

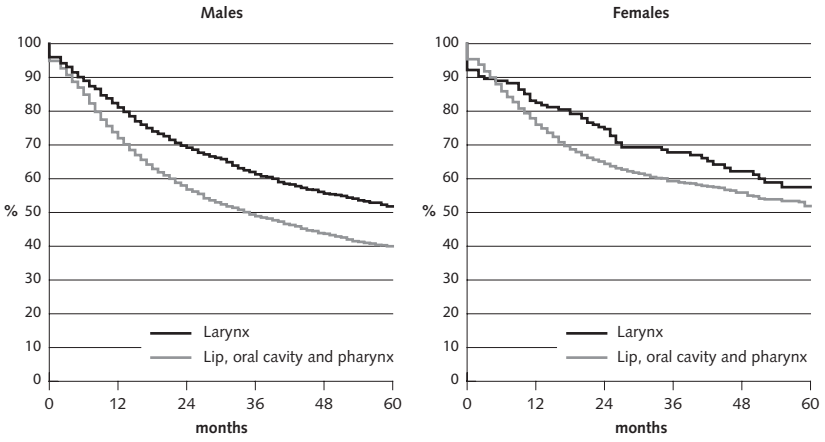
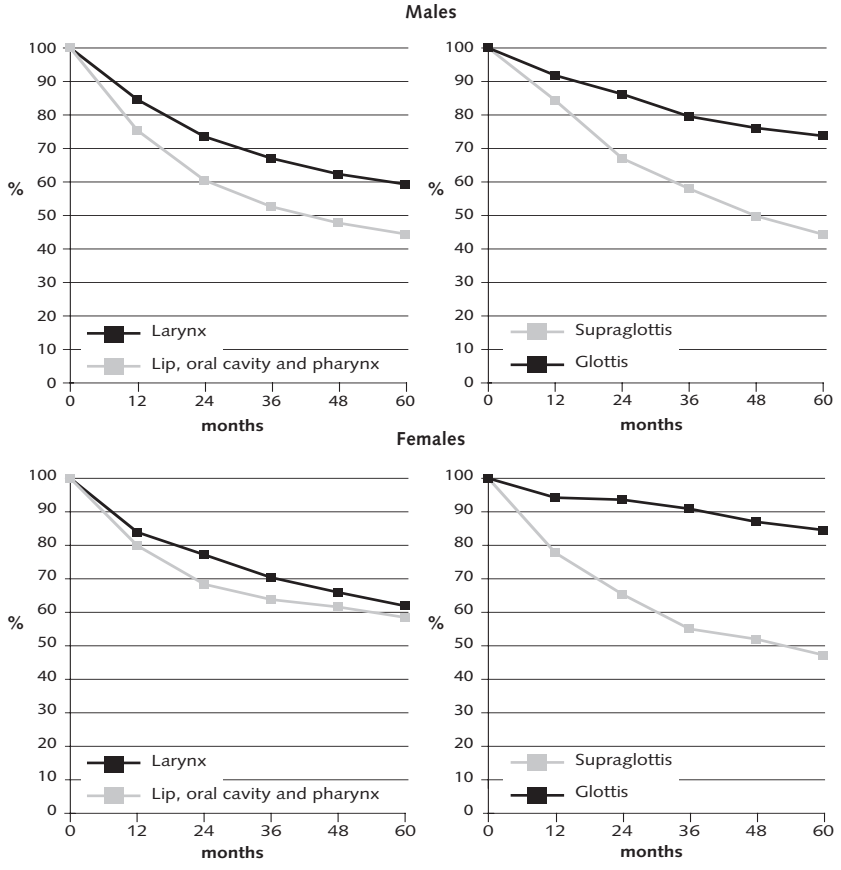


Figure 13. Head and neck cancer: relative survival per gender, 1997-2001

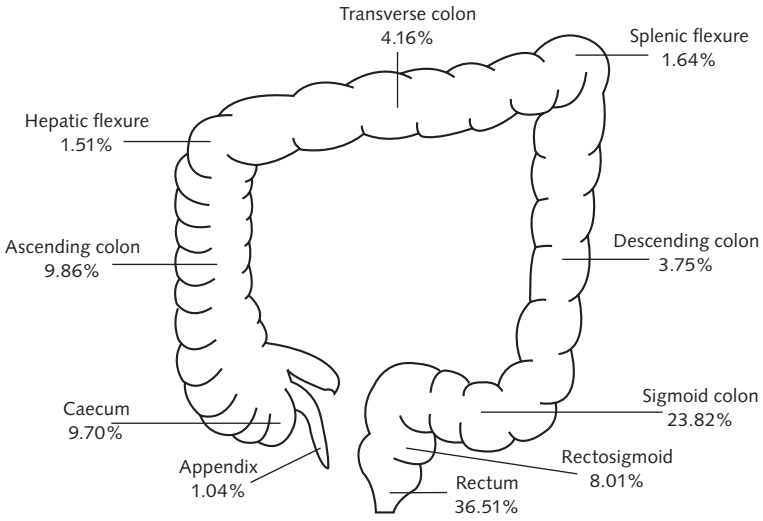


3.2 Colorectal tumours (ICD-10 C18-C20)

3.2.1 Incidence

In Flanders, a total of 8,513 cases of invasive colorectal cancer were diagnosed in the period 2000-2001: 4,595 in men and 3,918 in women. Distribution per localisation is shown in Figure 14. In 17% of the total number of invasive colorectal tumours, the exact primary localisation was unknown (colon, not otherwise specified).

Figure 14. Invasive colorectal primary tumour localisation (n=7,091) (excluding colon not otherwise specified (n=1,422))

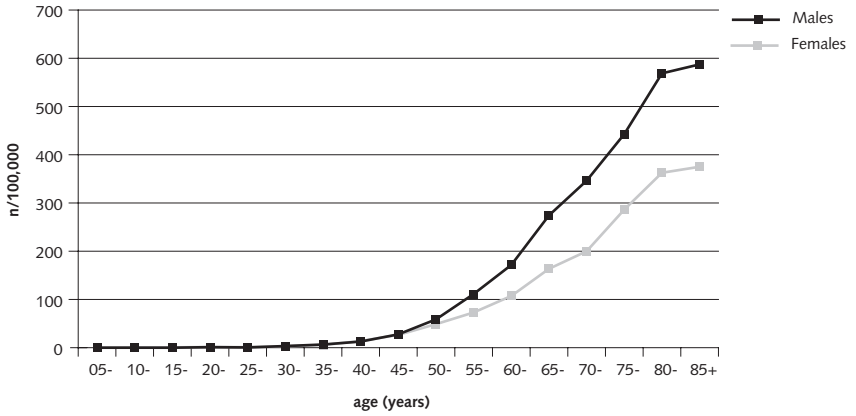


Colorectal cancer took third place in men after prostate and lung cancer, while in women it took second place after breast cancer. In men and women, colorectal tumours represented about 13% of all types of cancer.

Age-standardised incidence rates differed greatly between men and women. The sex ratio was 1.52. Mean age at diagnosis was 69 years in men versus 71 years in women. The risk of developing colorectal cancer between the age of 0 and 74 years was 5.1% in men and 3.2% in women.

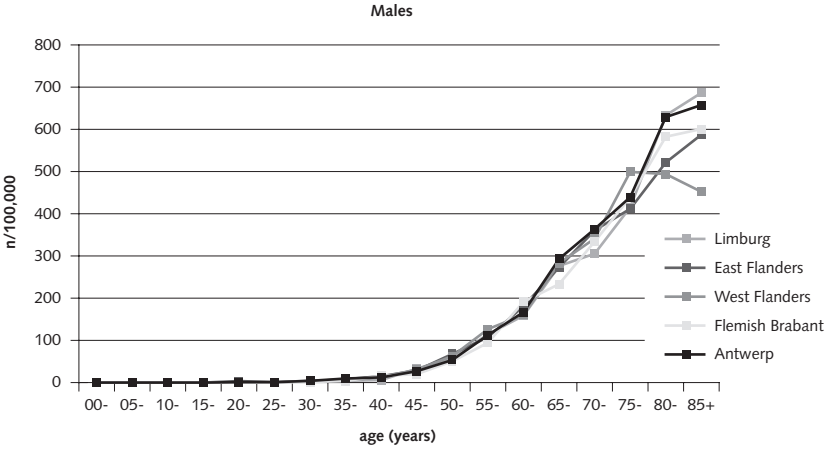
Figure 15 shows that age-specific incidence rates increased sharply with age. Although in absolute numbers more elderly women developed colorectal cancer, the age-specific incidence rate was higher in men. This can be explained by the fact that at more advanced age, there are fewer men "at risk".

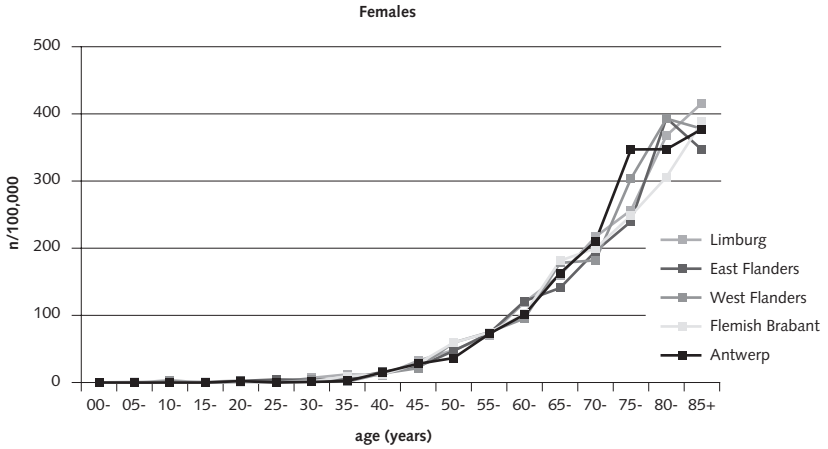
Figure 15. Invasive colorectal tumours: age-specific incidence per gender, 2000-2001



Between the Flemish provinces, no major differences in incidence were observed (Figure 16). One would reasonably not expect such differences: observing rather equal incidence rates for this cancer seems an indicator for a comparable and good coverage of registration in the 5 provinces.

Figure 16. Invasive colorectal tumours: age-specific incidence per gender and province, 2000-2001





Colorectal cancer is one of the most common malignant tumours in the developed countries. The incidence in Flanders was highly comparable with that in the Western and Northern European countries (Figure 17).

Figure 17. Invasive colorectal tumours: age-standardised incidence rates (WSR) per gender: Finland 2002, GLOBOCAN 2002, the Netherlands 2001 and the Flemish region of Belgium 2000-2001

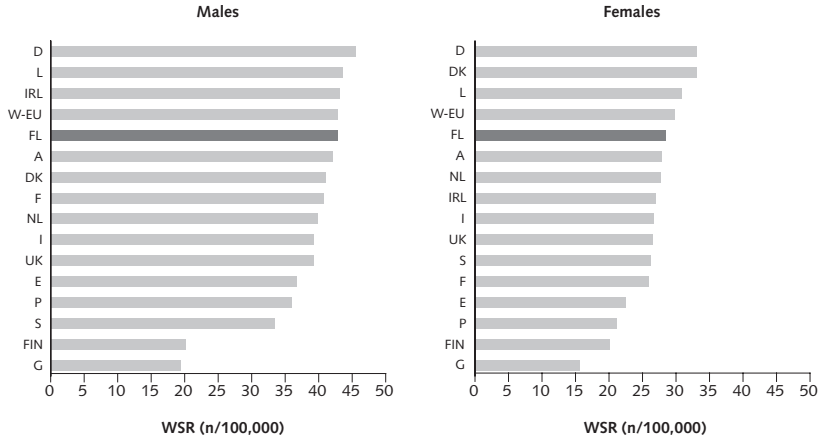
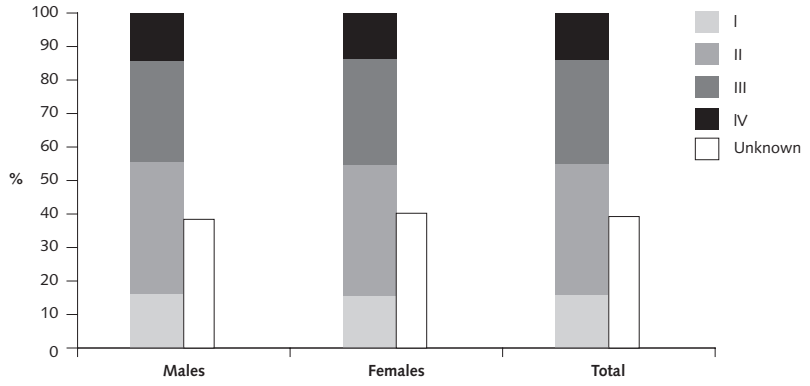


Figure 18 shows the distribution of colorectal cancer stages in males and females. Males and females stage distribution show a very comparable pattern. This staging illustrates the extent of colorectal cancer at the time of diagnosis and enabled the classification of patients into prognostically comparable categories. To convert the T, N and M classification into stages, the reader is referred to Appendix 9. Although the importance of good staging is well-recognised, these data were not always passed on to the cancer registry. In addition, these data may have been incomplete or missing from the medical files. These are possible reasons why the cancer registry encountered an important percentage of missing data. With the introduction of financial reimbursement for multidisciplinary oncological consultations, it is expected that these data will be more complete in the future[31,32] because payment is only made if these data are filled in.

Figure 18. Colorectal cancer stages in 2000-2001, TNM 5th edition 1997



3.2.2 Survival

Global 5-year survival calculated using the actuarial method was 46% in men and 47% in women. Relative 5-year survival was 57% in males and females. In general, relative survival approaches disease-specific survival, because consideration is given to causes of death other than cancer. The curves (Figure 19 and 20) show the observed and relative survival of patients with malignant tumours of the colon and/or rectum per stage as stage is a strong predictor of survival (see also appendix 10.3).

Figure 19. Invasive colorectal tumours: observed survival per stage, 1997-2001

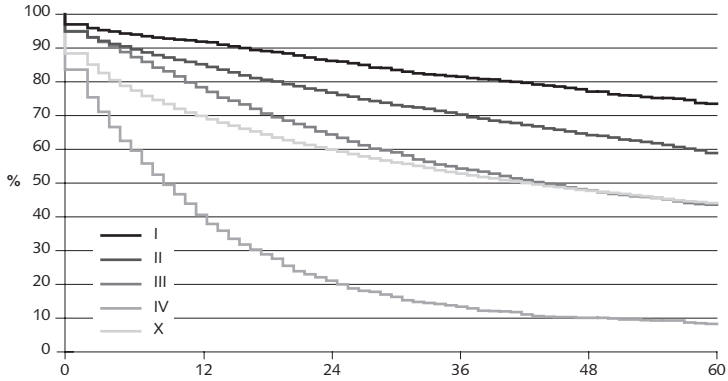
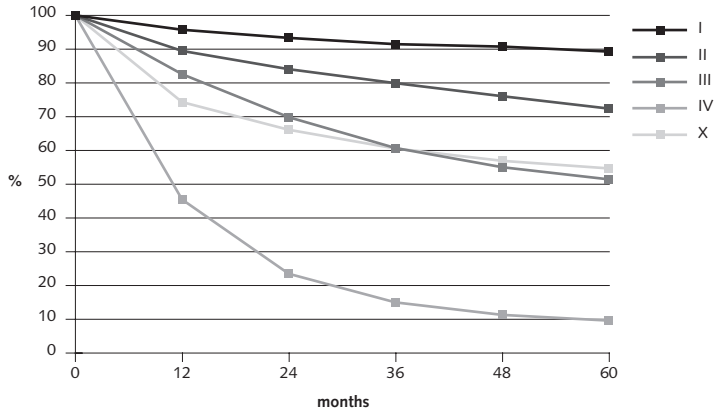


Figure 20. Invasive colorectal tumours: relative survival per stage, 1997-2001



3.3 Lung cancer (ICD-10 C34)

3.3.1 Incidence

In the period 2000-2001, a total of 7,293 malignant lung tumours were registered. The 6,081 registered tumours in men accounted for 17% of all tumours. In women, malignant lung tumours represented 4.2% of the total number of tumours. The ratio of the age-standardised incidence rates or sex ratio was 5.5 and can still be attributed to the differences in smoking behaviour between men and women 20 to 30 years ago. In Flanders, a major shift was visible in the risk of women developing lung cancer. Data from the National Cancer Registry (1987-1995) and from the Flemish Cancer Registry Network (1996-2001) showed that women of younger than 50 years were evolving towards the same risk of developing lung cancer as men. At the end of the nineteen eighties, the risk in women of younger than 50 years was still six times lower than that in men, whereas in 2001, the risk was only twice as low (see Figure 21)[33]. Average age at diagnosis was 68 years in men and 65 years in women (see Figure 22).

Figure 21. Lung cancer: evolution of the male:female risk ratio between 1987-2001, National Cancer Registry data 1987-1995, Flemish Cancer Registry Network data 1996-2001

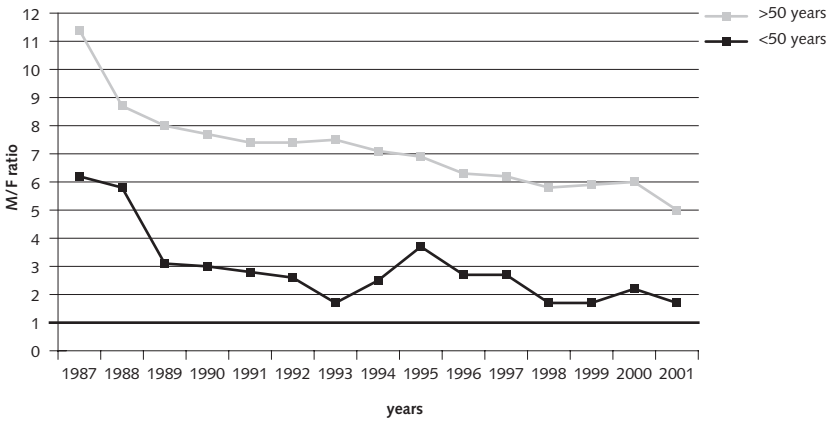
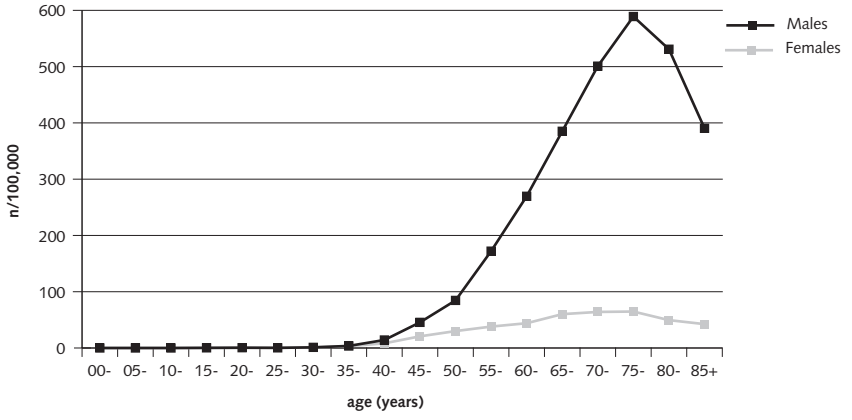
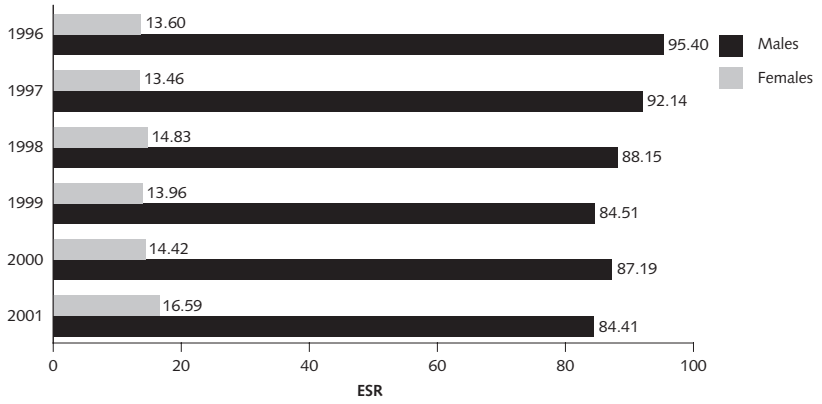


Figure 22. Invasive lung cancer: age-specific incidence per gender, 2000-2001



Evolution of the age-standardised incidence of lung cancer in men and women is shown in Figure 23. A continuing decrease was visible in the lung cancer incidence rates in men over the period 1996-2001.

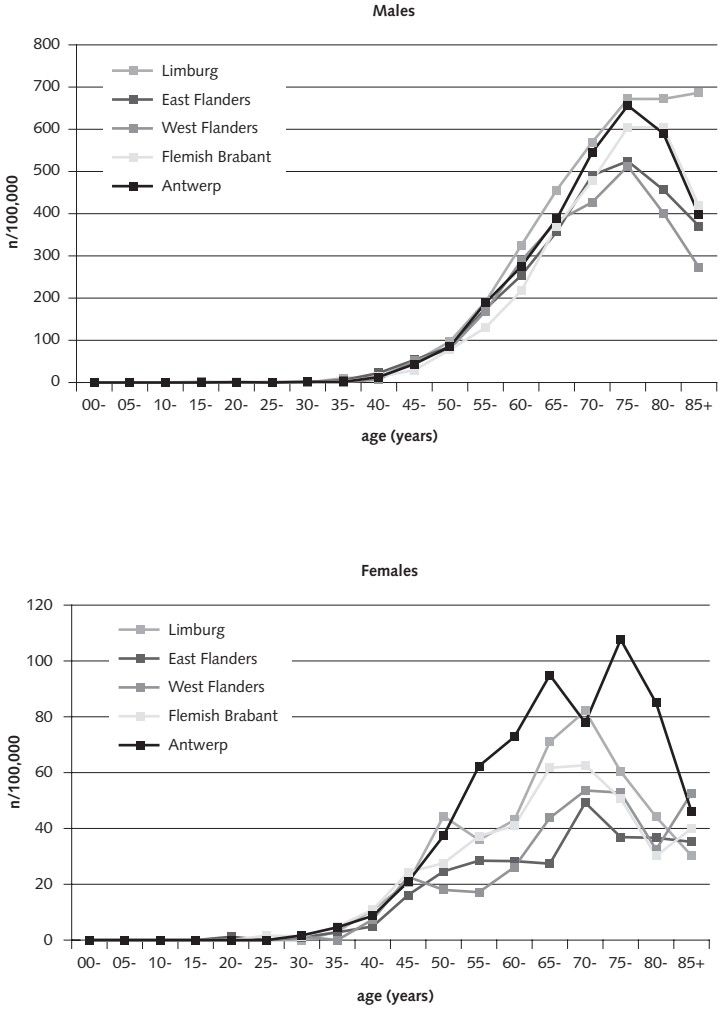
Figure 23. Invasive lung cancer: evolution of age-standardised incidence per gender, 1996-2001



This finding matched the decrease in lung cancer incidence in males in our Northern neighbours and other Western European countries. Despite this decrease, the cancer incidence in men in Flanders was still one of the highest in Europe (see Figure 25). This observation is in line with the results of a European study by Bray et al.[34], that followed the trends in mortality from lung cancer. The study showed that for two decades (1975-1995), Belgian mortality from lung cancer remained the highest in Europe, notwithstanding the onset of a decrease in lung cancer mortality in younger as well as older men in 1985.

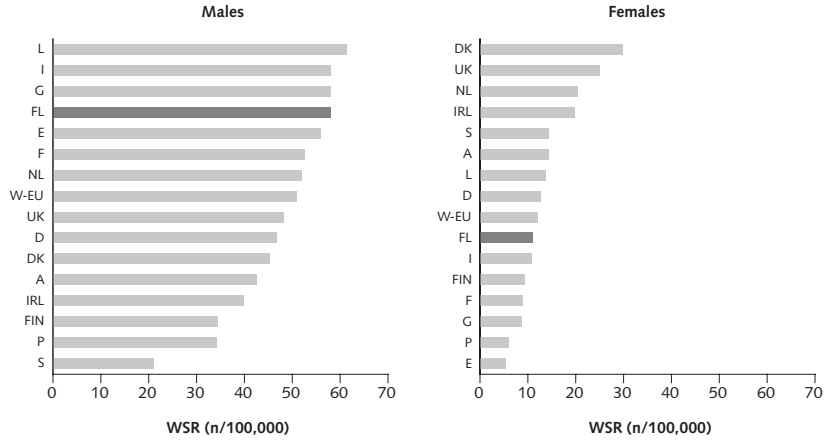
Mortality rates in Belgian women have always been relatively low compared to other European countries. Nevertheless by analogy with other countries, there has been a continuous increase in lung cancer mortality in the younger and older age groups. Age-specific incidence per gender and per province is shown in Figure 24. Especially in older age categories (>54 years), lung cancer incidence in females was higher in the province of Antwerp when comparing to other provinces. The incidence data of Antwerp approached the figures of the Netherlands, where a continuous increase of this malignancy in females was determined for the last 15 years[35]. It is possible that women in the province of Antwerp started smoking earlier in the twentieth century than elsewhere in the Flemish provinces. However, the yearly and gradual increase of lung cancer in women younger than 55 years indicates an epidemic increase in lung cancer incidence in females for all provinces (cohort effect).

Figure 24. Invasive lung cancer: age-specific incidence per gender and province, 2000-2001



Lung tumours can be divided into two main groups: small cell (19%) and the more common non-small cell carcinomas (about 81%). The remaining percentage (<1%) comprises other histological types, such as e.g. pneumoblastoma, sarcoma. In this calculation, no consideration was paid to tumours with unknown or vague histology (carcinoma, malignancy). The percentage of such unspecified tumours and carcinomas was 18% of all lung tumours.

Figure 25. Invasive lung cancer: age-standardised incidence rates (WSR) per gender: Finland 2002, GLOBOCAN 2002, the Netherlands 2001 and the Flemish region of Belgium 2000-2001



3.3.2 Survival

Figure 26 shows that lung cancer is still a disease with a poor prognosis. Global 5-year survival calculated using the actuarial method was 4% for small cell lung tumours in men and 11% in women. For the non-small cell tumours, these rates were 15% in men and 19% in women. Relative 5-year survival was 5% for small cell tumours in men and 12% in women (Figure 24). This relative survival approaches disease-specific survival, because consideration is paid to causes of death other than cancer. For non-small cell tumours, these rates were 17% in men and 20% in women. Kaplan Meier curves (Figure 26) show the observed survival per gender. As there was a prognostic difference between small cell and non-small cell tumours, the two diseases are shown separately.

Figure 26. Invasive lung cancer: observed survival per histological type and per gender 1997-2001: small cell lung cancer (SCLC) and non-small cell lung cancer (NSCLC)

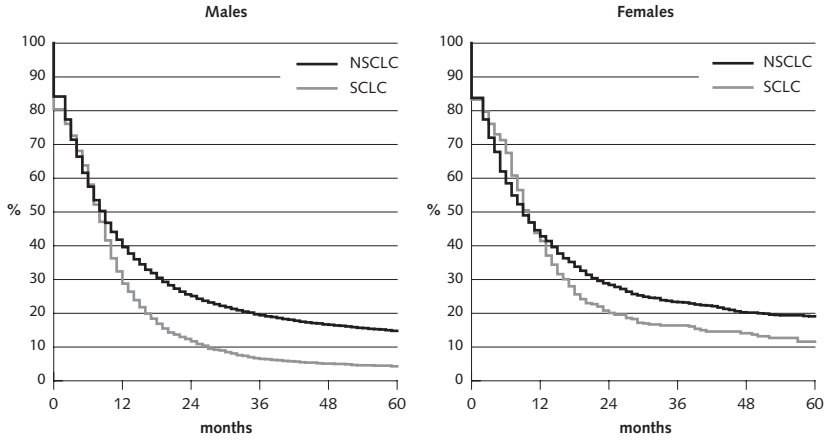
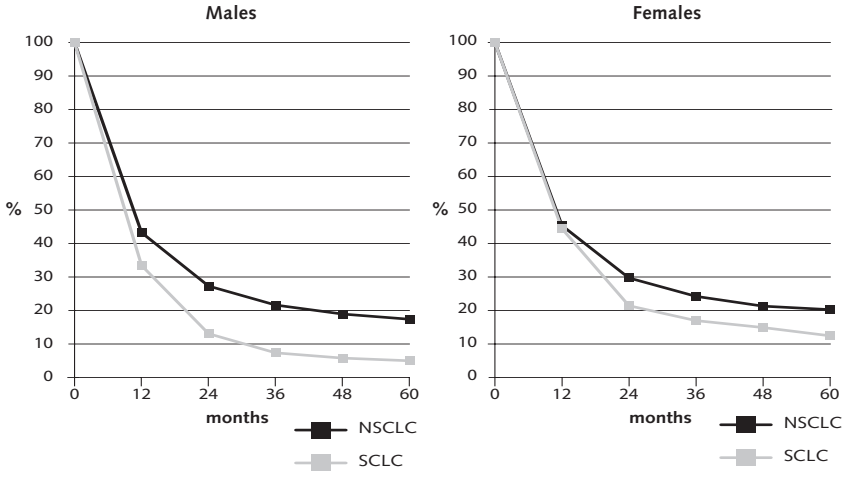


Figure 27. Invasive lung cancer: relative survival per histological type and per gender 1997-2001: small cell lung cancer (SCLC) and non-small cell lung cancer (NSCLC)

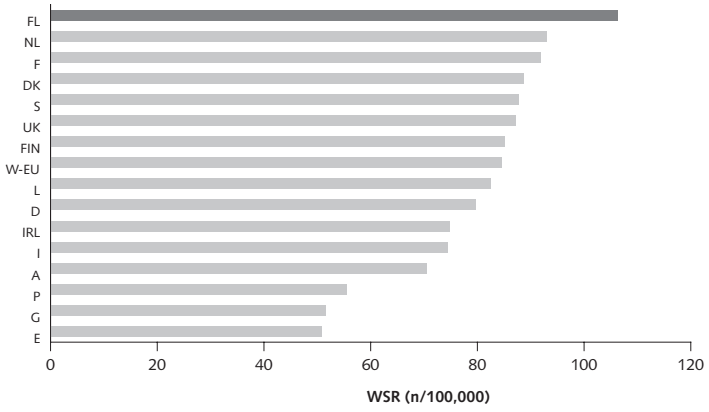


3.4 Breast cancer in women (ICD-10 C50)

3.4.1 Incidence

One of the most important Flemish health goals is to achieve reductions in morbidity and mortality from breast cancer. In the period 2000-2001, a total of 10,240 women with invasive breast cancer were registered in Flanders. This tumour represented more than one third of all the types of cancer in women and amounted to a crude incidence rate of 169.6 per 100,000 and an age-standardised incidence rate (ESR) of 143.5 per 100,000 in the period 2000-2001. Comparison with other regions suggested that Flanders, the Netherlands and France had the highest breast cancer incidence in Europe (Figure 28). Although there was no national breast cancer screening programme in the period 1997 to May 2001, many local screening activities were undertaken. There were also initiatives from general practitioners and gynaecologists in the form of mammography for early detection. These two reasons can partly explain the high incidence. On 1 June 2001, an organised and national mass breast cancer programme was started. This may have led to an extra increase in the incidence rates of breast cancer[36].

Figure 28. Invasive breast cancer: age-standardised incidence rates (WSR) in women: Finland 2002, GLOBOCAN 2002, the Netherlands 2001 and the Flemish region of Belgium 2000-2001



Evolution of the age-specific incidence of breast cancer in Flanders is shown in Figure 29 over the period 1997 to the end of 2001. Although improvements in registration methodology can certainly be held partly responsible for the annual increases in incidence, the influence of the introduction of mass breast cancer screening in the age group 50-69 years is clearly visible. Mean age at diagnosis was 60 years in the incidence years 2000-2001. In this period, one quarter of the women registered with breast cancer were younger than 50 years, while half of the total number were aged between 50 and 69 years. When this age group was extended by five years (50-74 years), the rate increased by 10%.

Figure 29. Invasive breast cancer: age-specific incidence in women, 1997-2001

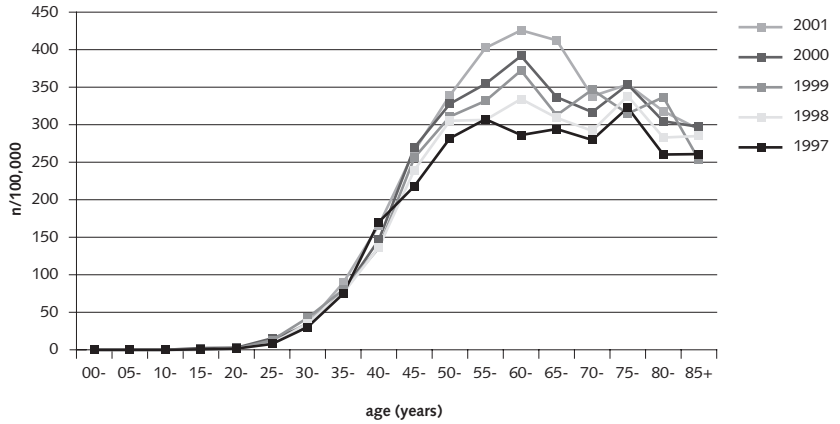
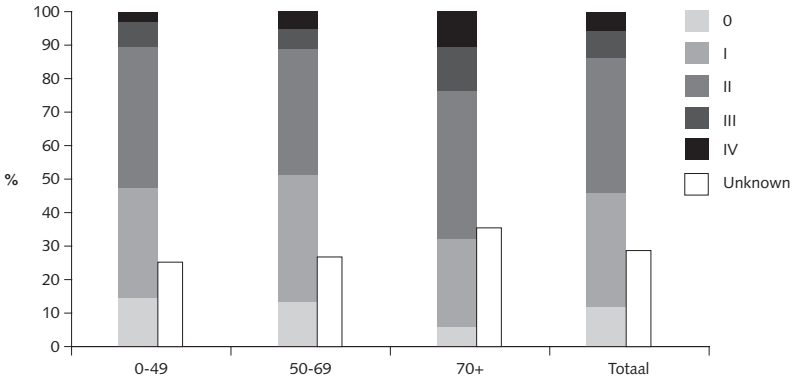


Figure 30 shows the distribution of breast cancer stages in three age groups: 0-49, 50-69 and 70+ years. This staging illustrates the extent of breast cancer at the time of diagnosis and enabled the classification of patients into prognostically comparable categories. To convert the T, N and M classification into stages, the reader is referred to Appendix 9.

Carcinoma in situ (stage 0) has been included in Figure 30, in contrast with Figures 28 and 29. With increasing age, the percentage of 'stage unknown' increased from 25% to 35%. Although the importance of good staging is well-recognised, these data were not always passed on to the cancer registry. In addition, these data may have been incomplete or missing from the medical files. These are possible reasons why the cancer registry encountered an important percentage of missing data. With the introduction of financial

reimbursement for multidisciplinary oncological consultations, it is expected that these data will be more complete in the future[31,32] because payment is only made if these data are filled in. The validity of the data is checked by the pathology reports.
The proportion of more advanced stages and less favourable prognostic situations was higher in the age group of 70 years and older. It is likely that the more favourable distribution in the age group of 50-69 years was a result of the screening activities.

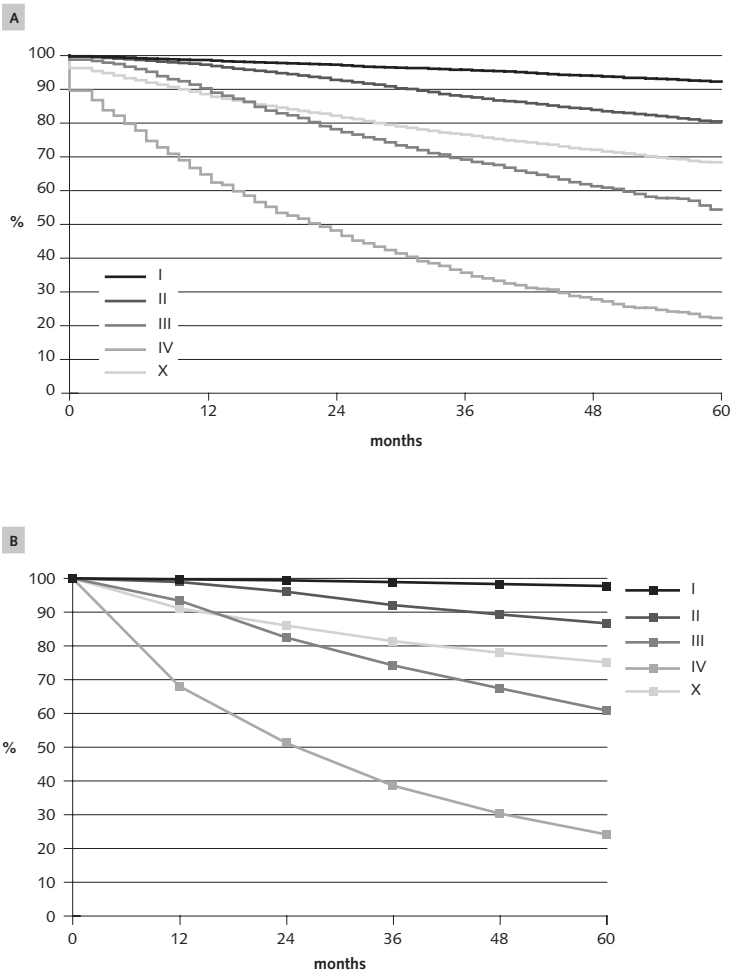
Figure 30.Breast cancer stages in 2000-2001, TNM 5th edition 1997 (invasive breast cancer n=10,240 and carcinoma in situ n=952)



3.4.2 Survival

Global 5-year survival was 75% calculated using the actuarial method. Relative 5-year survival in women was 82%. Generally, this relative survival approaches disease-specific survival, because consideration is paid to causes of death other than cancer. The curves (Figure 31A and 31B) show the observed and relative survival by stage as stage is a strong predictor of survival.

Figure 31. Observed (A) and relative (B) survival of female breast cancer patients per stage, 1997-2001



3.5 Tumours of the uterus and ovary (ICD-10 C53-C56)

3.5.1 Incidence

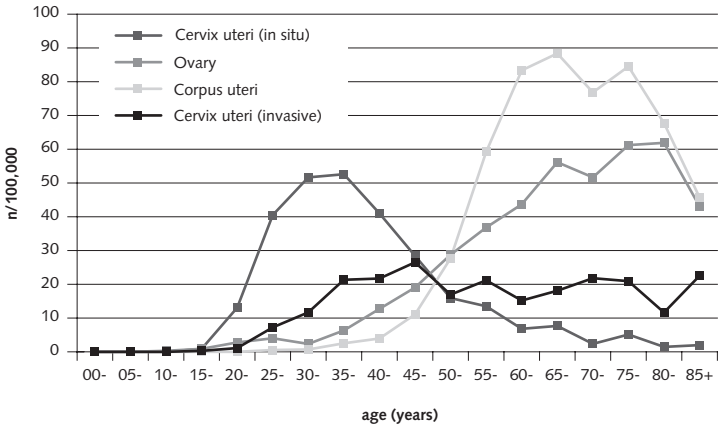
Malignant gynaecological tumours of the uterus and ovary represented 12.5% of all the tumours in females. Tumours of the corpus uteri and the ovaries took third and fourth places on the list of most frequently occurring tumours in females, respectively (see Figure 2). Invasive cervix uteri cancer took second place in the age group 30-44 years.

TABLE 9. NUMBER OF NEW UTERINE (CORPUS AND CERVIX) CANCER AND OVARIAN CANCER CASES, 2000-2001

	n
C53 Cervix uteri	803
C54 Corpus uteri	1,544
C55 Uterus	63
C56 Ovary	1,221
Total	**3,631**

Figure 32 shows clearly that these three tumours had their own age-specific incidence. Invasive cervix uteri cancer reached a peak of 27/100,000 person years in the age group of 45-49 years. Mean age at diagnosis of invasive cervix uteri tumours was 53 years, compared to a mean age of 39 years for in situ tumours. Cancer of the corpus uteri and ovary showed similar age patterns, in which the highest incidence rates were reached between 65 and 80 years. Mean age at diagnosis of cancer of the corpus uteri was 67 years, compared to 64 years for cancer of the ovary.

Figure 32. Cervix uteri (invasive and in situ), corpus uteri and ovary: age-specific incidence in 2000-2001



Within Europe, there were major differences in the incidence rates of these three gynaecological tumours between countries. Incidence rates in the Flemish region of Belgium were very similar to the mean rates in Western Europe. Figures 33, 34 and 35 show the incidence rates in various European countries for cervix uteri, corpus uteri and ovary, respectively.

Figure 33. Cervix uteri: age-standardised incidence rates of invasive tumours (WSR): Finland 2002, GLOBOCAN 2002, the Netherlands 2001 and the Flemish region of Belgium, 2000-2001

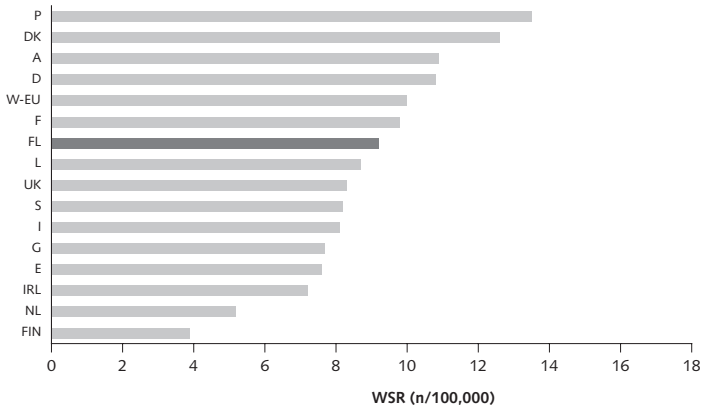


Figure 34. Corpus uteri: age-standardised incidence rates of invasive tumours (WSR): Finland 2002, GLOBOCAN 2002, the Netherlands 2001 and the Flemish region of Belgium, 2000-2001

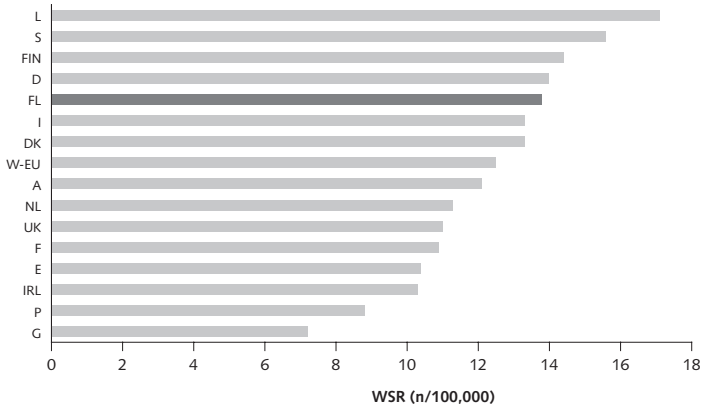
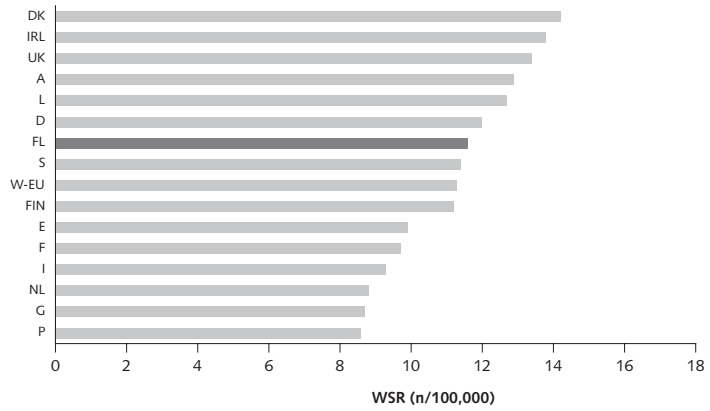


Figure 35. Ovary: age-standardised incidence rates of invasive tumours (WSR): Finland 2002, GLOBOCAN 2002, the Netherlands 2001 and the Flemish region of Belgium, 2000-2001



The histological distribution of ovarian tumours is shown in Table 10. Carcinomas represented 90% of all types of ovarian cancer. This rate was highly comparable with international data[37]. In 5.2% of the cases, details of histology were not made available to the cancer registry.

TABLE 10. HISTOLOGY OF INVASIVE OVARIAN TUMOURS, 2000-2001

	n	%
Carcinoma		
Serous carcinoma	460	37.7
Mucinous carcinoma	134	11.0
Endometrioid carcinoma	86	7.0
Clear cell carcinoma	37	3.0
Adenocarcinoma, NOS	232	19.0
Other specified carcinomas	8	0.7
Unspecified carcinoma	139	11.4
Sex cord-stromal tumours	18	1.5
Germ cell tumours	18	1.5
Other specified cancers*	26	2.1
Unspecified cancer	63	5.2
Total	1,221	100.0

* including Brenner tumours, Mullerian mixed tumours and carcinosarcomas

3.5.2 Survival

Global and relative 1, 3 and 5-year survival rates of patients with cervix uteri, corpus uteri and ovarian cancer are shown in Table 11. The survival curves in Figures 36 and 37 reflect the observed and relative survival per gynaecological localisation.

TABLE 11. OBSERVED AND RELATIVE SURVIVAL PER INVASIVE GYNAECOLOGICAL TUMOUR LOCALISATION, 1997-2001

	Relative survival			Observed survival			Cancer	Death
	1 year	3 year	5 year	1 year	3 year	5 year	N	N
C53 Cervix uteri	87.8	73.9	68.4	86.8	71.7	65.2	1,845	584
C54 Corpus uteri	89.8	81.4	78.0	88.0	76.6	70.2	3,320	876
C56 Ovary	76.5	56.3	45.8	74.9	53.4	42.0	2,851	1,508

Figure 36. Observed survival in patients with cervix uteri, corpus uteri and ovarian cancer, 1997-2001

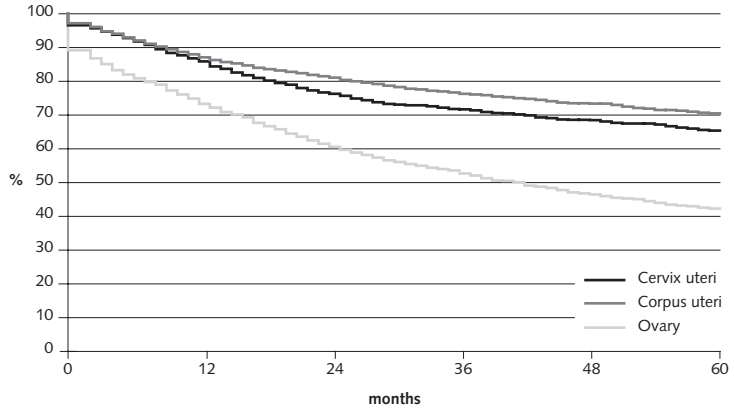
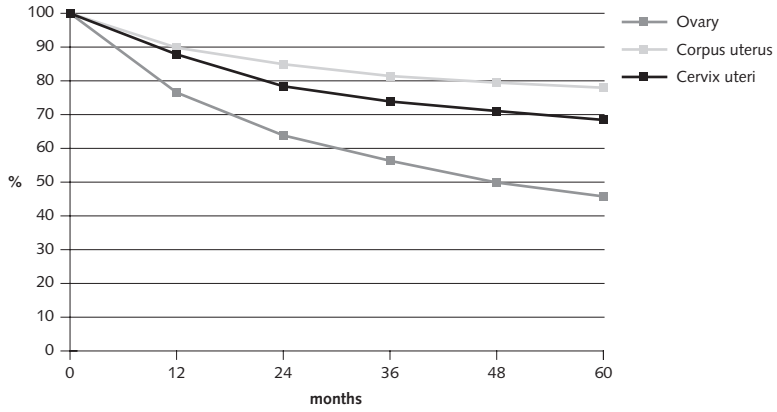


Figure 37. Relative survival in patients with cervix uteri, corpus uteri and ovarian cancer, 1997-2001

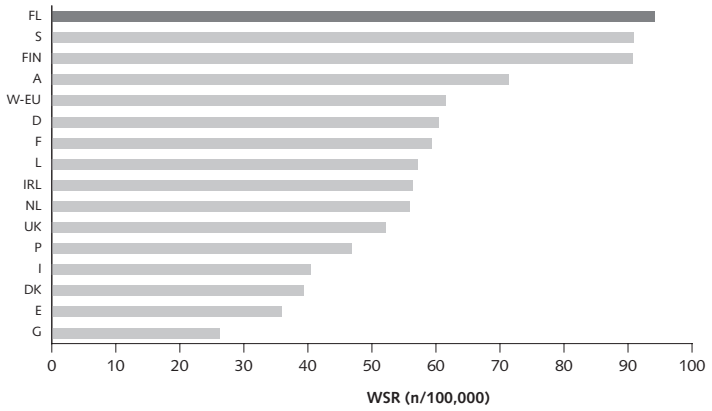


3.6 Prostate cancer (ICD-10 C61)

3.6.1 Incidence

In the period 2000-2001, prostate cancer was the most frequently occurring tumour in males (28.4%). A total of 10,244 new diagnoses of prostate cancer were made. These rates corresponded with a crude incidence rate of 174 per 100,000 and an age-specific incidence rate (ESR) of 143 per 100,000 in the period 2000-2001. Comparisons with other European countries showed that Flanders together with Sweden and Finland had very high incidence rates (Figure 38). These high incidences can probably be explained by the wide application of early detection by means of prostate-specific antigen blood analyses.

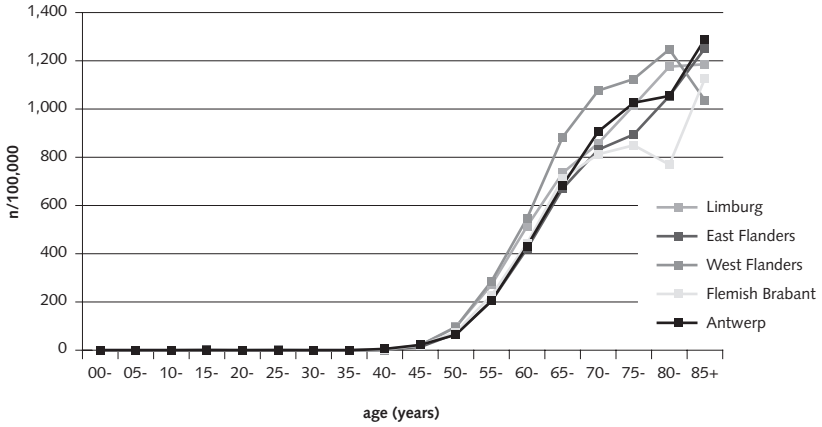
Figure 38. Invasive prostate cancer: age-standardised incidence rates (WSR): Finland 2002, GLOBOCAN 2002, the Netherlands 2001 and the Flemish region of Belgium, 2000-2001



Prostate cancer is a geriatric disease whose incidence increases with increasing age. Mean age at diagnosis was 70 years. In men of younger than 40 years, prostate cancer was extremely rare, but the risk of developing prostate cancer before the age of 75 years was 11.5% (see Appendix 7).

Figure 39 shows that there were differences in incidence rates between the five Flemish provinces. The same explanation as that given above is probably valid: wide (and various) application of early detection by means of prostate-specific antigen (PSA) analyses.

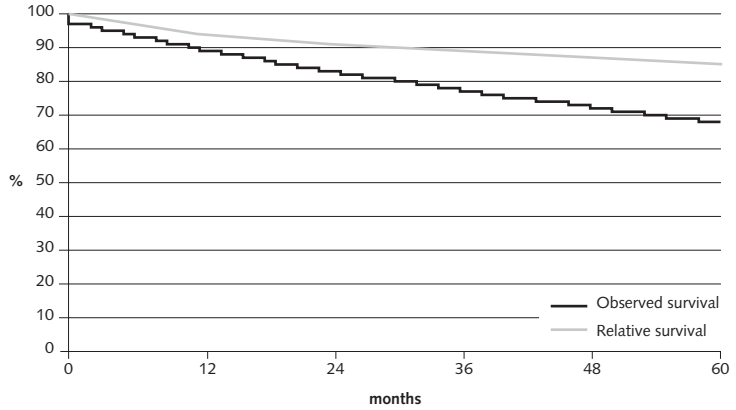
Figure 39. Prostate cancer: age-specific incidence per province in the Flemish region of Belgium, 2000-2001



3.6.2 Survival

Global 5-year survival was 67% calculated using the actuarial method. Relative 5-year survival was 85%. Again, this relative survival approaches disease-specific survival, because consideration is paid to causes of death other than cancer (Figure 40). As invasive prostate cancer mainly affected elderly men, correcting for expected mortality was of major importance. In other words, few males with prostate cancer will die from their malignant disease but rather from other causes. Observed and relative survival are shown in Figure 40.

Figure 40. Prostate cancer: observed and relative survival, 1997-2001



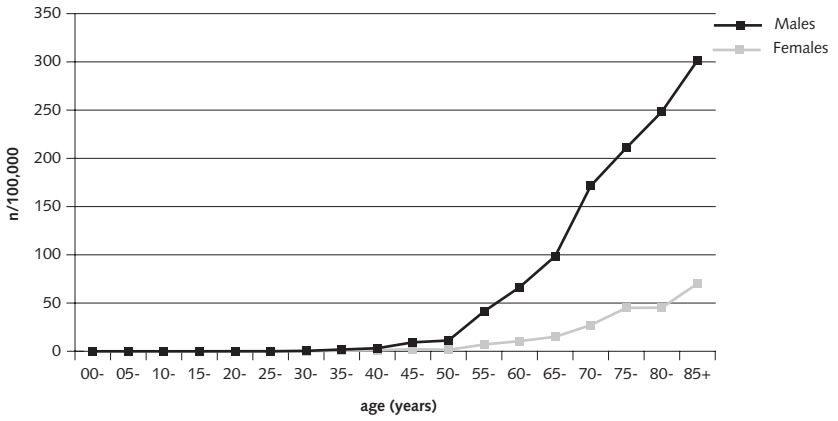
3.7 Bladder cancer (ICD-10 C67)

3.7.1 Incidence

Invasive bladder cancer took seventh place on the list of most frequently occurring tumours (see Figure 6). In the period 2000-2001, a total of 2,401 cases of invasive bladder cancer were diagnosed. The non-invasive papillary urothelial tumours were also registered, but not included among the invasive bladder malignancies. In the incidence years 2000-2001, the registry recorded 1,632 non-invasive bladder tumours. Distinction was made between non-invasive papillary urothelial carcinoma (n=1,535) and (flat) carcinoma in situ (n=97).

Invasive bladder cancer chiefly affects older patients and is extremely rare before the age of 40 years (see Figure 41). Mean age at diagnosis was 72 years. The sex ratio (M/F) or the relationship between age-standardised incidence rates was 5.46.

Figure 41. Invasive bladder cancer: age-specific incidence per gender, 2000-2001

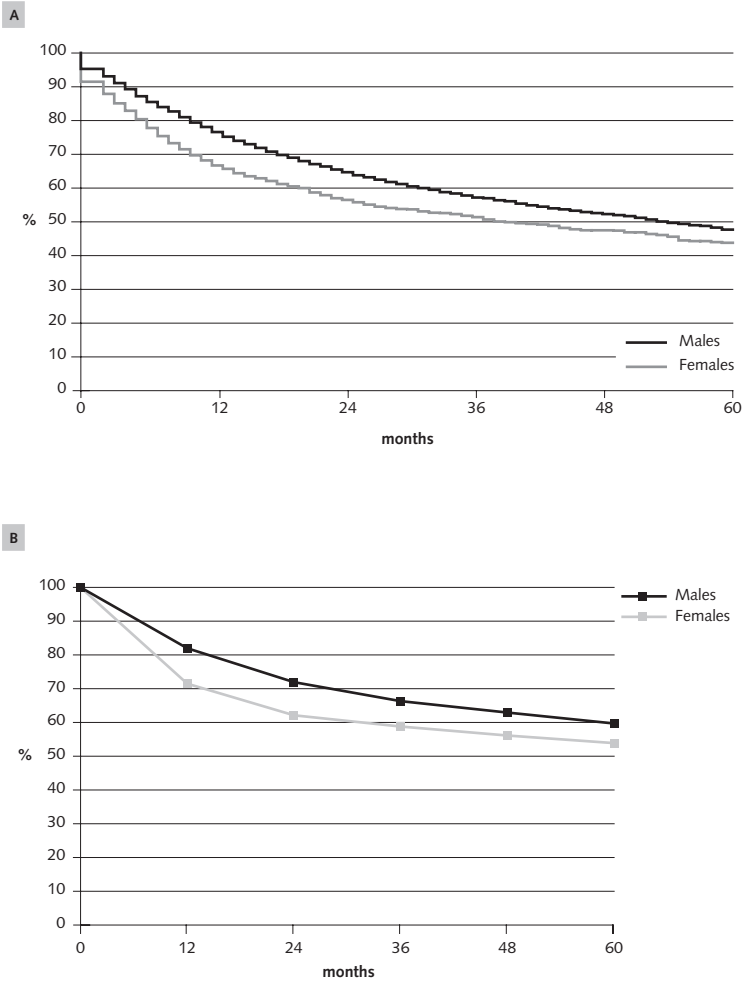


It is well-known that international (and regional) differences in registration and coding practices can lead to bias when age-standardised incidence rates are compared. For this reason, no overview is given of European data.

3.7.2 Survival

Global 5-year survival was 47% in men and 44% in women calculated using the actuarial method. Relative 5-year survival was 60% in men and 54% in women. This generally approaches disease-specific survival, because consideration is paid to causes of death other than cancer (Figure 42B). The Kaplan Meier curve (Figure 42A) shows the observed survival per gender.

Figure 42. Invasive bladder cancer: observed (A) and relative (B) survival per gender, 1997-2001



3.8 Malignant lymphomas (ICD-10 C81-C85)

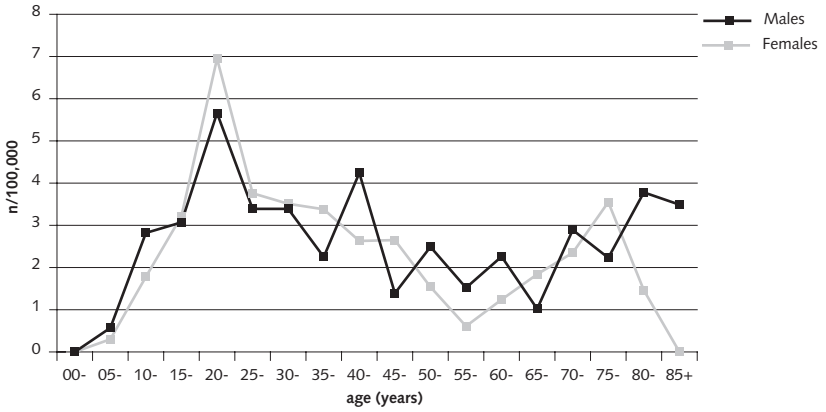
The malignant lymphomas (Hodgkin's lymphoma and non-Hodgkin's lymphoma) took tenth place on the list of most frequently occurring tumours in the Flemish region of Belgium, 2000-2001 (see Figure 6).

3.8.1 Incidence

3.8.1.1 Hodgkin's lymphoma (ICD-10 C81)

Hodgkin's lymphoma is a fairly rare malignant lympho-proliferative disease that mainly occurs in young adults (see Figure 43). Age-specific incidence showed a bimodal age pattern with the first peak at around the age of 15-25 years and a second peak at about the age of 60 years. These age-specific incidence rates were in close agreement with the results in the southern part of the Netherlands[38].

Figure 43. Hodgkin's lymphoma: age-specific incidence per gender, 2000-2001



In comparison with other European countries, the incidence in women in the Flemish region of Belgium was among the highest in Europe (see Figure 44). In men, the incidence was close to the Western European average.

Figure 44. Hodgkin's lymphoma: age-standardised incidence rates (WSR) per gender: Finland 2002, GLOBOCAN 2002, the Netherlands 2001 and the Flemish region of Belgium, 2000-2001

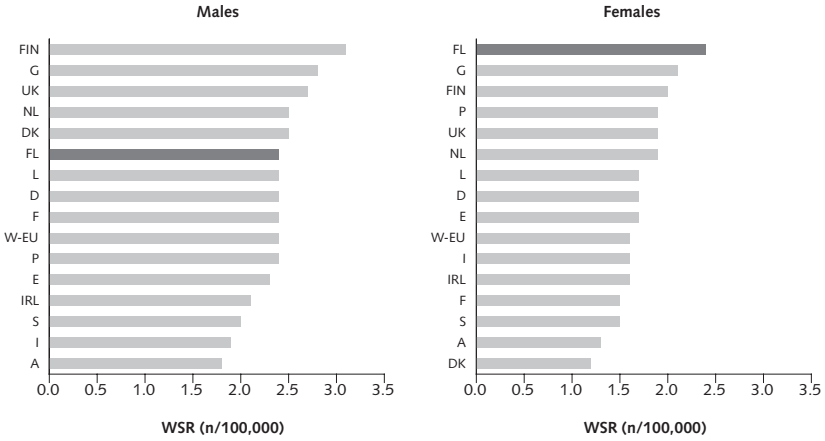


Table 12 shows an overview of the histological distribution of Hodgkin's lymphomas. Distinction was made between classic Hodgkin's lymphomas and nodular lymphocyte predominant Hodgkin's lymphomas, because of differences in e.g. clinical characteristics, behaviour, morphology and immunofenotype. Classic Hodgkin's lymphomas are further classified into four subtypes: nodular sclerosing, mixed cellularity, lymphocyte depleted and lymphocyte rich lymphomas (REAL classification) [37,39]. As there was no code available for "lymphocyte rich classic Hodgkin's lymphoma" in the ICD-O second edition, it was not included in the subgroups.

TABLE 12. HISTOLOGY OF HODGKIN'S LYMPHOMA, 2000-2001

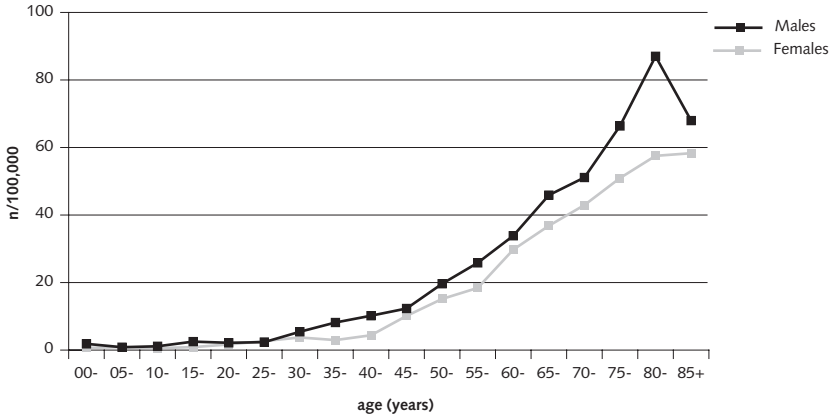
	Total	%
Nodular lympocyte predominant Hodgkin's lymphoma	24	8.1
Classic Hodgkin's lymphoma		
Nodular sclerosing	175	58.9
Mixed cellularity	35	11.8
Lymphocyte depleted	5	1.7
Unspecified Hodgkin's lymphoma	58	19.5
Total	**297**	**100.0**

3.8.1.2 Non-Hodgkin's lymphoma (ICD-10 C82-C85)

Non-Hodgkin's lymphomas had a different age-specific pattern from Hodgkin's lymphomas (see Figure 45). They were very rare in the younger age

groups and the incidence increased sharply after the age of 45 years.
It is important to note that chronic lymphatic leukaemia was registered under the heading leukaemia, not under non-Hodgkin's lymphoma.

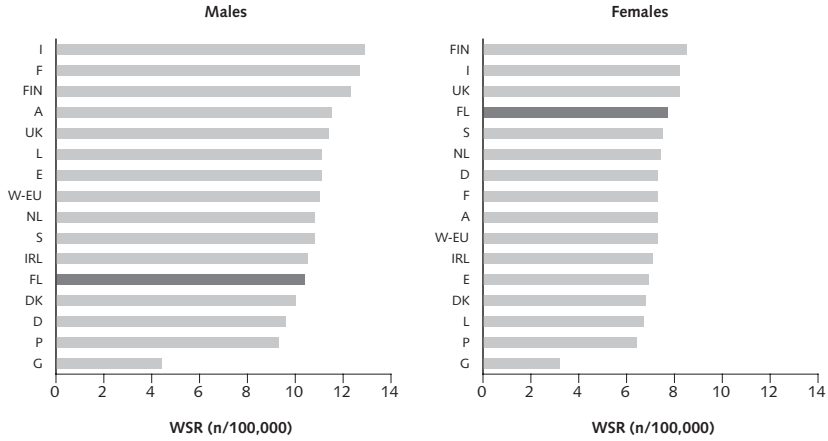
Figure 45. Non-Hodgkin's lymphoma: age-specific incidence per gender, 2000-2001



In the literature, the proportion of T cell lymphomas was estimated to be about 12%[39]. In the present Flemish series over the period 2000-2001 (N=1,836) the proportion of T cell lymphomas was 13%. Lymphomas with unknown T or B cell annotation were not taken into consideration.

Comparisons with incidence rates from other European countries showed that in the Flemish region of Belgium, the incidence of non-Hodgkin's lymphomas in women was about the same as that in Sweden and the Netherlands. In men, the incidence of non-Hodgkin's lymphomas was among the lowest in Europe (see Figure 46).

Figure 46. Non-Hodgkin's lymphoma: age-standardised incidence rates (WSR) per gender: Finland 2002, GLOBOCAN 2002, the Netherlands 2001 and the Flemish region of Belgium, 2000-2001



Non-Hodgkin's lymphomas represent a heterogeneous group of malignant diseases. In 58.8% they originated in lymph nodes (nodal), while in 38.6% they originated in lymphoid cells or tissues of various organs (extranodal). It was impossible to determine whether the disease had a nodal or extranodal origin in almost 3%. Table 13 gives an overview of the primary localisations of non-Hodgkin's lymphomas.

TABLE 13. NON-HODGKIN'S LYMPHOMA: PRIMARY TUMOUR LOCALISATIONS, 2000-2001

		N	%
Nodal		**1,080**	**58.8**
Extranodal		**708**	**38.6**
	Tonsil	25	1.4
	Head and neck	61	3.3
	Stomach	115	6.3
	Gastro-intestinal	54	2.9
	Skin	102	5.6
	Eye and central nervous system	62	3.4
	Other extranodal	289	15.7
Unknown		**48**	**2.6**
Total		**1,836**	**100.0**

3.8.2 Survival

3.8.2.1 Hodgkin's lymphoma

Global 5-year survival calculated using the actuarial method was 83% in men and 84% in women. Relative 5-year survival was 86% in men and women. This rate generally approaches disease-specific survival, because consideration is paid to causes of death other than cancer (Figure 47B). The Kaplan Meier curve (Figure 47A) shows the observed survival per gender. As the age-specific incidence of Hodgkin's lymphoma had a very typical pattern, Table 14 shows the relative 5-year survival in different age groups.

Figure 47. Hodgkin's lymphoma: observed (A) and relative (B) survival per gender, 1997-2001

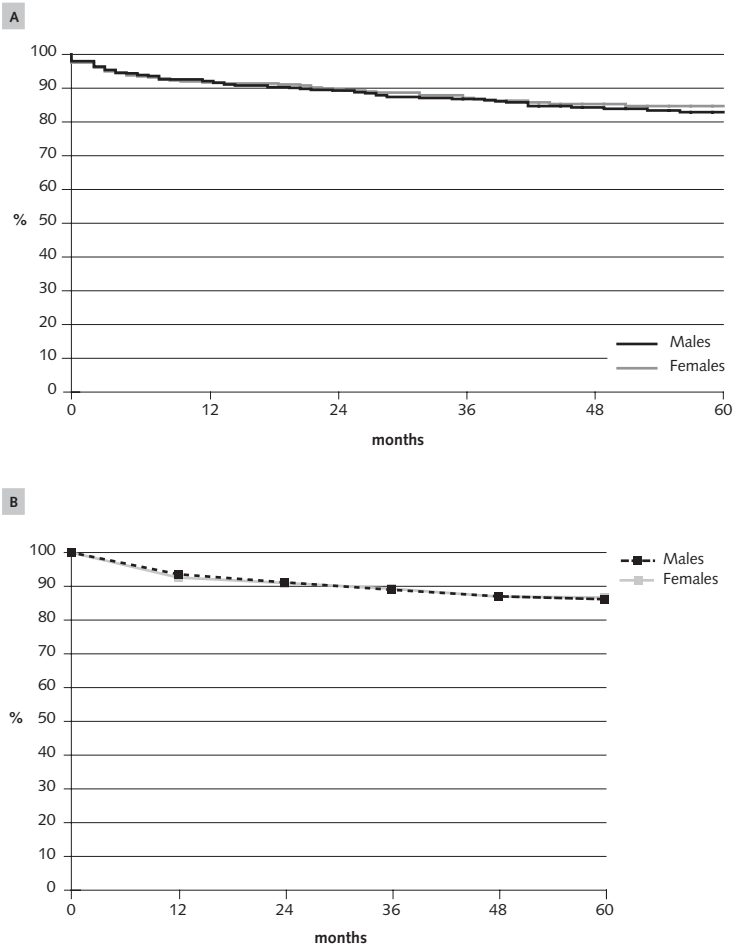


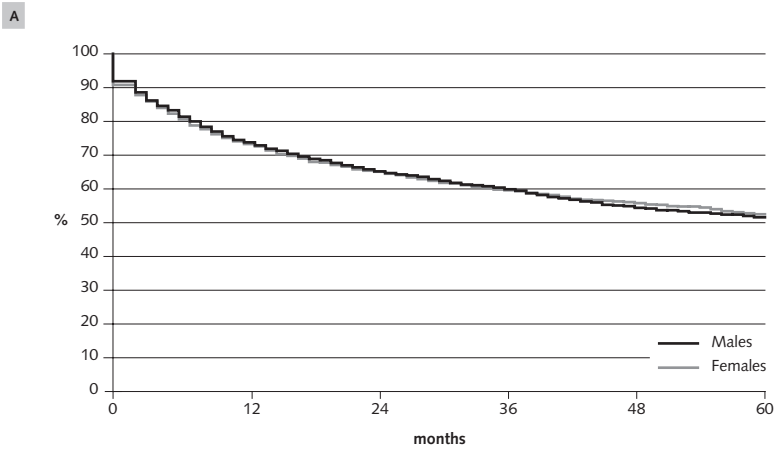
TABLE 14. HODGKIN'S LYMPHOMA: RELATIVE 5-YEAR SURVIVAL PER AGE GROUP, 1997-2001

Age group (years)		Relative survival			Observed survival			Cancer	Death
		1 year	3 year	5 year	1 year	3 year	5 year	N	N
0-14	**M**	100.0	96.8	96.8	100.0	96.7	96.2	33	1
	F	100.0	100.1	100.1	100.0	100.0	100.0	13	0
15-34	**M**	100.1	98.0	96.5	100.0	97.7	96.0	134	4
	F	98.7	97.2	95.1	98.6	97.1	94.9	145	6
35-64	**M**	95.5	89.3	84.8	95.1	88.0	82.7	162	25
	F	98.4	95.8	93.6	98.2	95.2	92.6	113	7
65+	**M**	70.2	63.7	61.2	66.7	55.0	48.3	63	31
	F	67.1	57.6	52.7	65.2	52.7	45.2	66	34
Totaal	**M**	93.6	89.0	86.2	92.6	86.7	82.7	392	61
	F	92.6	89.3	86.7	92.0	87.9	84.5	337	47

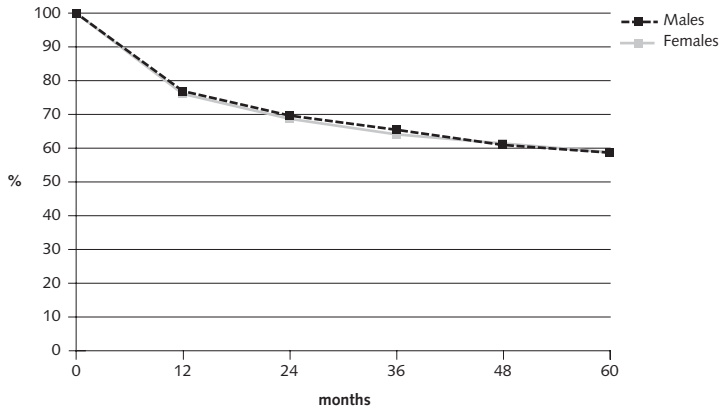
3.8.2.2 Non-Hodgkin's lymphoma

Global 5-year survival calculated using the actuarial method was 51% in men and 52% in women. Relative 5-year survival was 59% in males and females. Again, this approaches disease-specific survival, because consideration is paid to causes of death other than cancer (Figure 48B). The Kaplan Meier curve (Figure 48A) shows the observed survival per gender.

Figure 48. Non-Hodgkin's lymphoma: observed (A) and relative (B) survival per gender, 1997-2001



B



3.9 Malignant melanoma

3.9.1 Incidence

Malignant melanoma is the most aggressive form of skin cancer. As it is one of the suitable tumours for primary preventive measures, it is described in this section. In women, malignant melanoma was the 9th most frequently occurring tumour; in men, the 13th. In the age group 15-29 years, malignant melanoma was the most important malignancy in women. Figure 49 shows that the tumour was more common in women than men up to the age of 79 years.

Comparisons with European countries revealed a low incidence of malignant melanoma in Flemish men, similar to that in France. In women, the incidence was equivalent to the mean rate in Western Europe (Figure 50).

The primary tumour localisation of malignant melanoma depended on gender. In men, the most common site was the trunk, while in women it was the lower extremities (Table 15).

A European study on malignant melanoma by De Vries et al.[40] detected differences in stage distribution between men and women. Men tended to present with more advanced stage disease than women (see Figure 51). This trend was also apparent in the Flemish data.
Rates of melanoma in situ were the same in men and women (25%). The proportions of stage I and stage II tumours in men were 32% and 21%, respec-

tively. In women, these rates were 43% and 19%, respectively. There were fairly high percentages of stage unknown (42% in men and 47% in women). To convert the T, N and M classification into stages, the reader is referred to Appendix 9.

Figure 49. Melanoma of the skin: age-specific incidence per gender, 2000-2001

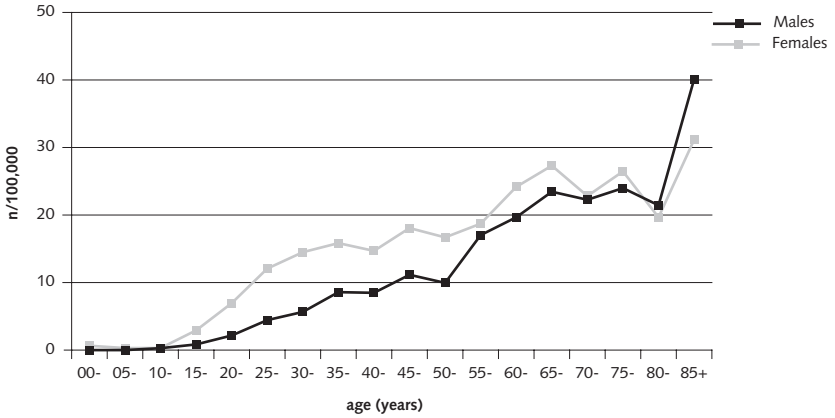


Figure 50. Melanoma of the skin: age-standardised incidence rates (WSR) per gender: Finland 2002, GLOBOCAN 2002, the Netherlands 2001 and the Flemish region of Belgium, 2000-2001

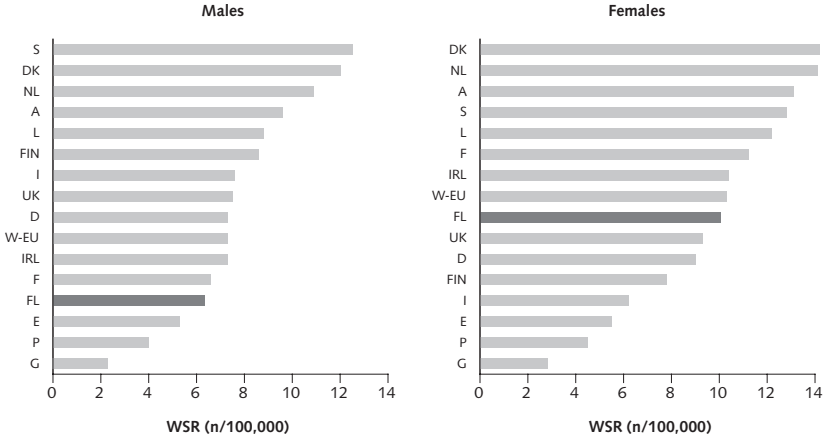
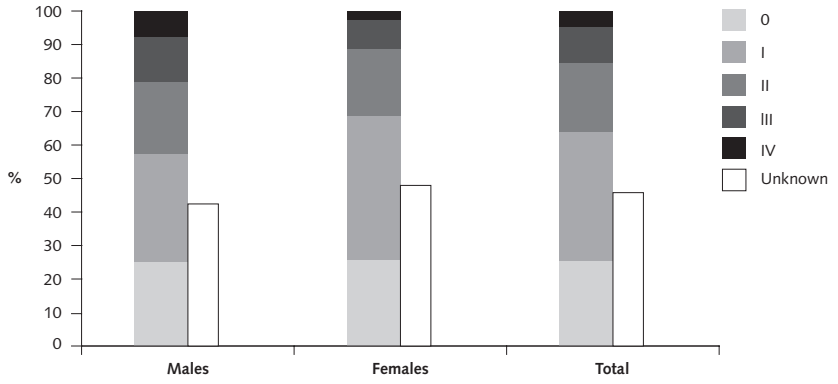


TABLE 15. MELANOMA OF THE SKIN: PRIMARY TUMOUR LOCALISATIONS, 2000-2001

	Total		Males		Females	
	n	%	n	%	n	%
C440 Skin of lip	5	0.4	4	0.7	1	0.1
C441 Skin of eyelid	7	0.5	2	0.4	5	0.6
C442 Skin of external ear	25	1.8	14	2.6	11	1.3
C443 Skin of other and unspecified parts of face	83	5.9	40	7.3	43	5.0
C444 Skin of scalp and neck	34	2.4	20	3.7	14	1.6
C445 Skin of trunk	248	17.6	123	22.5	125	14.5
C446 Skin of upper limb and shoulder	134	9.5	55	10.1	79	9.1
C447 Skin of lower limb and hip	344	24.4	70	12.8	274	31.7
C449 Skin, NOS	428	30.3	171	31.3	257	29.7
C809 Unknown primary site	104	7.4	48	8.8	56	6.5
Total	**1,412**	**100.0**	**547**	**100.0**	**865**	**100.0**

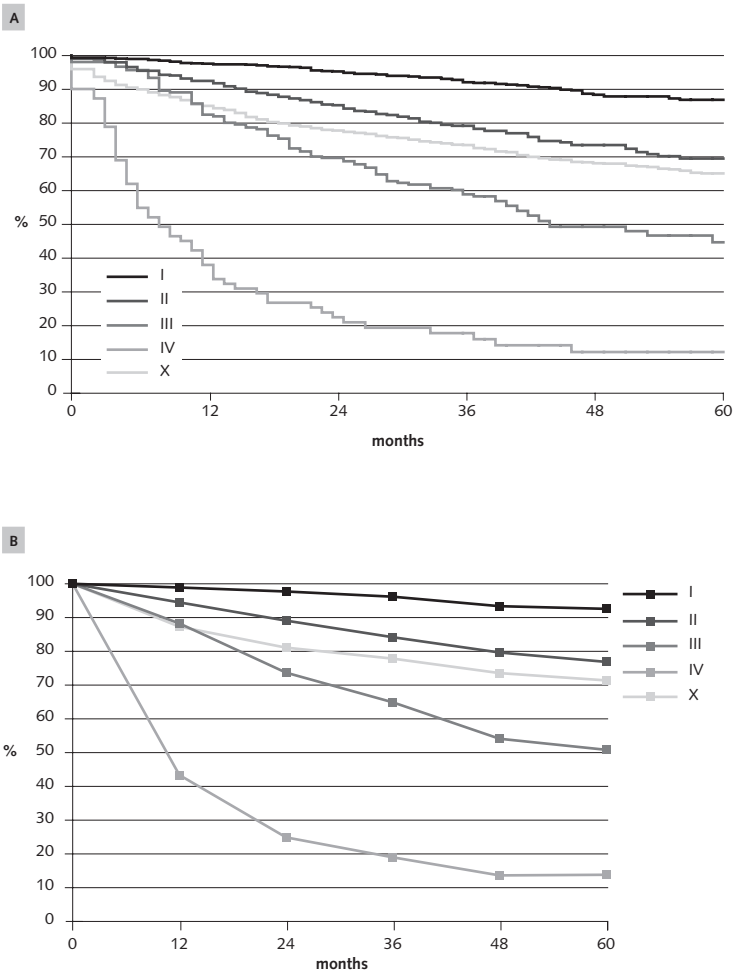
Figure 51. Melanoma of the skin per gender and stage, 2000-2001, (TNM 5th edition 1997) (invasive melanoma of the skin n=1,412 and melanoma in situ n=224)



3.9.2 Survival

Global 5-year survival calculated using the actuarial method was 62% in men and 74% in women. Relative 5-year survival was 69% in men and 80% in women. The relative survival generally approaches disease-specific survival, because consideration is paid to causes of death other than cancer (Figure 52B). This difference in 5-year survival rates between the sexes is explained by the differences in stage distribution (see Figure 51) which tends to be less favourable in males. The curves (Figure 52) show the observed and relative survival per stage as stage is a strong predictor of survival (see also appendix 10.3).

Figure 52. Melanoma of the skin: observed (A) and relative (B) survival per stage, 1997-2001



4 | Cancer incidence and survival of children with cancer

Childhood cancer forms a separate chapter. Cancer incidence and survival are discussed in children aged up to and including 14 years.
Cancer is an extremely rare disease in children. In European populations, childhood cancer forms less than 1% of all the malignant tumours. In children, cancer belongs to the life-threatening diseases: mortality rates show that cancer is the second cause of death in children, after unintentional injuries (accidents). For example, a total of 174 children aged between 1 and 14 years died in Flanders in 2001: 29 from cancer, 45 as a result of a traffic accident and 27 as a result of an accident in the private domain[41].

Specification of the various malignant tumours in children is completely different from that in adults. In adults, tumours are mainly classified according to the organ affected, whereas in children, a specific international classification has been formulated that is mainly based on the morphology of the tumour[42].

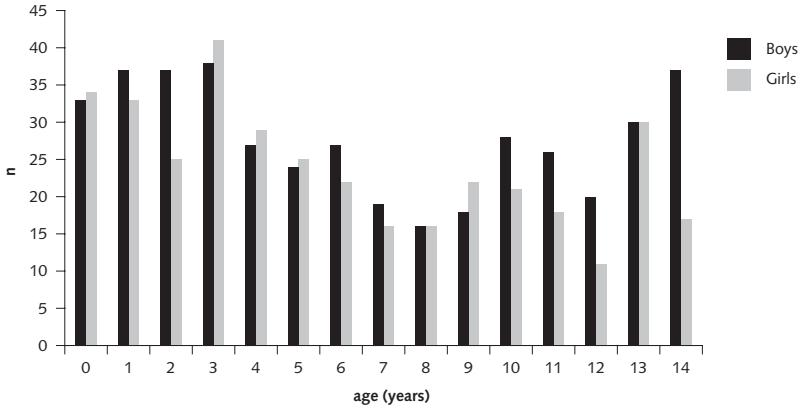
As cancer is a rare disease in children, analyses on the separate diagnostic groups would be based on small numbers. Therefore, the data collected over 5 incidence years were combined.
Age-specific incidence in children is expressed according to international guidelines per 1,000,000 children per year, instead of per 100,000 as it is in adults. In the survival analyses, consideration was only paid to the primary tumour. Consequently, the absolute numbers used in the survival analyses will be slightly different from those reported within the framework of incidence rates. For a more thorough description of the methodology, the reader is referred to section 1.1 of this publication.

4.1 General results

4.1.1 Cancer incidence

Over the period 1997-2001, a total of 777 cases of childhood cancer were registered: 417 boys and 360 girls. This corresponded with a sex ratio of 1.16. Figure 53 shows the absolute numbers of all the childhood tumours per gender and per age.

Figure 53. Absolute numbers of childhood cancer per gender and age, 1997-2001



In 8.6% of the 777 children, cancer was diagnosed before the age of 1 year. In 43%, it was diagnosed before the age of 5 years.
Figure 54 shows the age-specific incidence of cancer in patients aged up to and including 19 years. The curve follows a specific pattern that can also be recognised in the international literature on global results in Western European countries[43]. Appendix 2 contains the population data that were used to calculate the age-specific incidence rates in children.

Figure 54. Age-specific incidence of childhood cancer in Flanders per gender and age group (n/1,000,000) 1997-2001

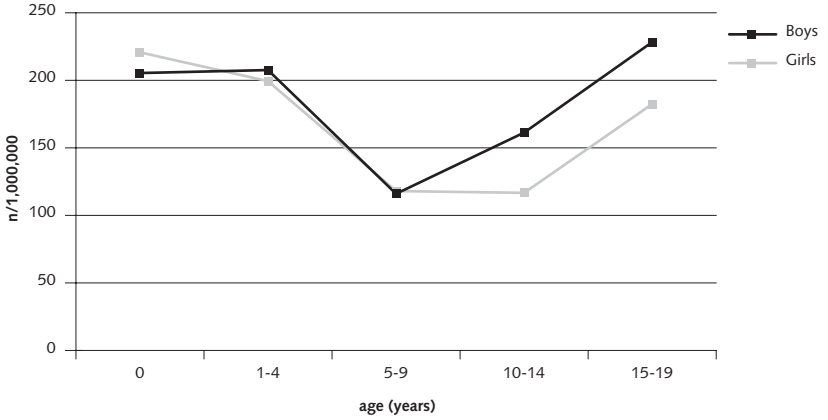


Table 16 shows the evolution of absolute numbers of newly diagnosed tumours in children per gender and age group. Cancer mortality in children is described in Table 17.

TABLE 16. CHILDHOOD CANCER INCIDENCE: ABSOLUTE NUMBERS PER GENDER AND AGE GROUP, 1997-2001

	Boys					Girls				
	TOTAL	<1	1-4	5-9	10-14	**TOTAL**	<1	1-4	5-9	10-14
1997	**82**	6	28	20	28	**60**	2	29	10	19
1998	**83**	7	30	23	23	**78**	7	27	28	16
1999	**88**	9	21	25	33	**70**	6	22	21	21
2000	**76**	4	25	17	30	**73**	8	18	26	21
2001	**88**	7	35	19	27	**79**	11	32	16	20
Total		**33**	**139**	**104**	**141**		**34**	**128**	**101**	**97**

TABLE 17. CHILDHOOD CANCER MORTALITY: ABSOLUTE NUMBERS PER GENDER AND AGE GROUP, 1997-2001

	Boys					Girls				
	TOTAL	<1	1-4	5-9	10-14	**TOTAL**	<1	1-4	5-9	10-14
1997	**20**	-	9	7	4	**19**	3	6	5	5
1998	**8**	-	4	-	4	**17**	2	3	5	7
1999	**18**	-	11	3	4	**13**	-	3	4	6
2000	**14**	-	3	3	8	**12**	-	3	2	7
2001	**19**	1	6	5	7	**11**	-	2	4	5
Total		**1**	**33**	**18**	**27**		**5**	**17**	**20**	**30**

The incidence rates corresponded with an average crude incidence rate of 160 new cases per 1,000,000 boys and 145 new cases per 1,000,000 girls.

Age-standardised incidence (World Standard Population) was 165/1,000,000 boys and 151/1,000,000 girls (see Appendix 8).

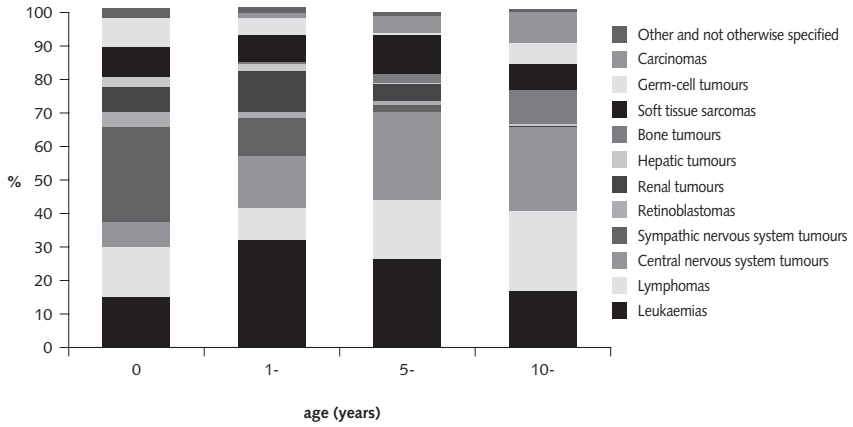
Calculation of age-standardised incidence rates (WSR) enabled comparison of the Flemish rates with those from other European cancer registries (see Table 18) reported in the ACCIS study[44]. Cancer incidence rates of all childhood tumours in children in the Flemish region of Belgium were closest to those in Denmark and Norway. In the various European countries, the WSR for lymphoid leukaemia varied from 27.9 to 46.5 per 1,000,000 children. Flanders was among the countries with a lower incidence of lymphoid leukaemia and among those with an average incidence of central nervous system tumours.

TABLE 18. CHILDHOOD CANCER: AGE-STANDARDISED INCIDENCE RATES (WSR) IN BOYS AND GIRLS

		N/1,000,000	
	TOTAL	Lymph. Leukaemia	CNS
Denmark (1993-1997)	**159.5**	36.8	50.5
Finland (1993-1997)	**177.3**	46.5	41.6
Flemish region (1997-2001)	**157.8**	29.8	30.9
France Lorraine (1993-1997)	**136.0**	27.9	30.7
Germany (1993-1997)	**138.2**	40.0	26.0
The Netherlands (1993-1995)	**141.6**	33.2	28.1
Norway (1993-1997)	**154.1**	34.4	40.6
Switzerland Geneva (1993-1997)	**175.4**	32.5	46.9
Switzerland St Gallen Appenzell (1993-1997)	**140.3**	31.5	25.8
UK England-Wales (1993-1995)	**134.0**	34.9	33.0
UK Scotland (1993-1997)	**134.5**	40.7	25.2

Figure 55 shows the distribution of different tumour types according to the main diagnostic groups of the International Classification of Childhood Cancer[42] per age group.

Figure 55: Proportion of the 12 main tumour groups by gender, 1997-2001



Before the data were recorded in the global database of the cancer registry, extensive quality control was conducted based on the guidelines from the International Agency for Research into Cancer. One of the quality control measures comprised an evaluation of the percentage of tumours with an unspecified histological diagnosis (see Table 19). Data on slightly more than half of the tumours (53%) had originated from at least two sources in the registry network.

The percentage of tumours with unspecified morphology ('not otherwise specified', NOS) in the different tumour categories was found to be limited. Malignant renal tumours NOS, malignant hepatic tumours NOS and bone tumours NOS were not included in Table 19, because in these categories, it was possible to make a specific microscopic diagnosis in 100% of the cases.

TABLE 19. DATA QUALITY INDICATORS: % OF MICROSCOPIC CONFIRMATIONS, % OF TUMOURS NOT OTHERWISE SPECIFIED (NOS) 1997-2001

	Total	Microscopic confirmation		Leukaemias, NOS*		Lymphomas, NOS*		Intracranial and intraspinal neoplasms, NOS*		Soft tissue sarcomas, NOS*		Malignant gonadal tumours, NOS*	
	n	n	%	n	%	Tot	%	Tot	%	Tot	%	Tot	%
0-14	777	724	93.2	6	3.2	5	3.9	1	0.6	6	8.6	3	10.7
00-	334	306	91.6	6	6.3	3	8.6	-	-	4	14.3	1	7.1
05-	205	190	92.7	-	-	1	2.8	1	1.9	1	4.2	-	-
10-	238	228	95.8	-	-	1	1.8	-	-	1	5.6	2	15.4
Boys	417	393	94.2	5	4.9	3	3.3	1	1.3	3	7.7	2	12.5
Girls	360	331	91.9	1	1.1	2	5.3	-	-	3	9.7	1	8.3

* NOS: Not Otherwise Specified

4.1.2 Survival

The crude observed 1, 3 and 5 year-survival rates in the 12 main diagnostic categories of childhood cancer (ICCC) (see Appendix 10.4) were calculated using the actuarial method (life-table method).

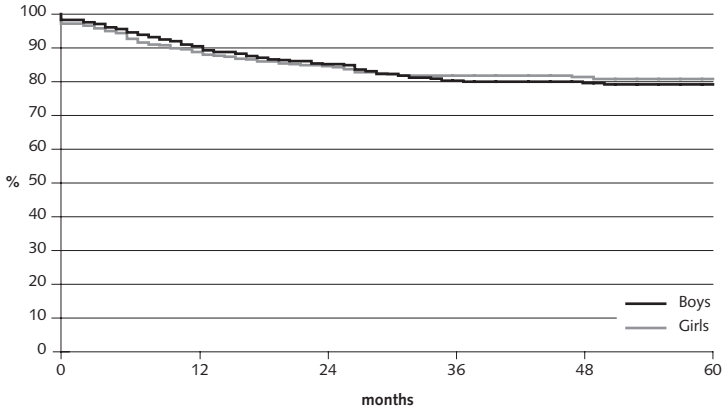
Kaplan Meier survival curves are shown for all the types of childhood cancer together and for two selected malignancies, namely acute lymphoid leukaemia and central nervous system tumours. The results were compared to the observed survival rates in the ACCIS study. It is important to take into consideration that there were differences in the period of diagnosis. In the ACCIS study, diagnoses were mainly made in the period 1993-1997, whereas the data on the Flemish region of Belgium were related to the period 1997-2001.

In contrast with Chapters 2 and 3, no calculations were made of relative survival rates (that give good estimations of disease-specific survival), because in these young age groups, the results corresponded closely with the crude observed survival[45]. Competitive causes of death or causes other than cancer

are rare in this age group. Furthermore, it is important to realise that death from cancer in children is not always the direct result of the malignancy, but can also be connected to the treatment (treatment-related mortality).

The results of 5-year survival for all the malignant tumours together in children of younger than 15 years (diagnosed between 1997 and the end of 2001) are shown in Figure 56. Global 5-year survival was 78.9% (CI 95%: 74.5% - 82.7%) in boys and 80.7% (CI 95%: 76.0% - 84.6%) in girls.

Figure 56. All childhood malignancies: observed survival per gender, 1997-2001



O	N	number of patients at risk:					
82	411	374	351	261	201	128	Boys
66	357	320	303	226	161	104	Girls

O = deaths

In Table 20, the percentages in Flanders are compared to the findings in a number of other Northern and Western European countries. Survival rates in Flanders were among the best in Northern and Western Europe for all tumours together, as well as for lymphoid leukaemia and the central nervous system tumours.

TABLE 20. ALL CHILDHOOD MALIGNANCIES, LYMPHOID LEUKAEMIA AND CNS: 5-YEAR OBSERVED SURVIVAL IN BOYS AND GIRLS IN FLANDERS COMPARED TO THE RATES IN THE ACCIS STUDY

	ALL		Lymphoid leukaemia		CNS	
	n	5 year*	n	5 year*	n	5 year*
Denmark (1993-1997)	716	72	163	88	228	62
Finland (1993-1997)	826	80	212	85	196	73
Flemish region (1997-2001)	768	80	141	87	158	75
France Lorraine (1993-1997)	304	73	61	83	71	62
Germany (1993-1997)	8,715	78	2,474	85	1,689	68
The Netherlands Eindhoven (1993-1997)	138	75	35	85	30	56
Norway (1993-1997)	640	75	141	86	169	68
Switzerland Geneva (1993-1997)	55	86	10	-	15	-
Switzerland St Gallen Appenzell (1993-1997)	70	67	15	-	13	-
UK England-Wales (1993-1995)	3,919	73	1,006	80	980	68
UK Scotland (1993-1997)	629	77	184	84	120	65

* 5 year observed survival

4.2 Lymphoid leukaemia

Acute lymphoid leukaemia is the most common malignancy in childhood. It represented 18% of all tumours between the age of 0 to 14 years. This percentage was low compared to the 20-25% reported in other countries. The distribution of the different types of leukaemia is shown in Table 21. In 75% of all the registered cases of leukaemia, the diagnosis was acute lymphoid leukaemia. At the majority of European cancer registries, this percentage varied between 75% and 80%[46].

Age-specific incidence rates of acute lymphoid leukaemia are shown in Figure 57. The typical peak in this curve occurred at the same position as that in the majority of Western European countries at around the age of 2-3 years[43].

Figure 57. Childhood lymphoid leukaemia: age-specific incidence rates, 1997-2001

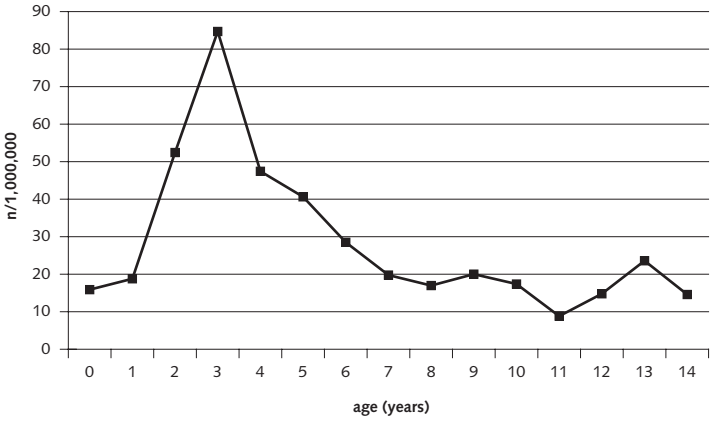


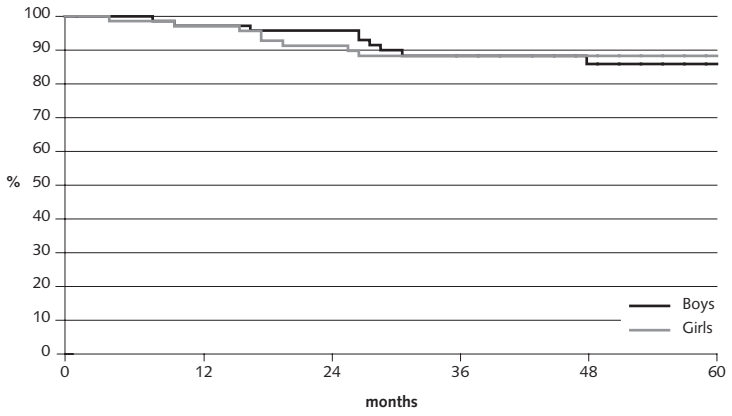
TABLE 21. CHILDHOOD LEUKAEMIA: ABSOLUTE NUMBERS PER HISTOLOGICAL TYPE, 1997-2001

	Tot		Age (years)			
	n	%	0	1-4	5-9	10-14
Ia Lymphoid leukaemia	143	75.3	5	67	44	27
Ib Acute non-lymphoid leukaemia	30	15.8	3	11	6	10
Ic Chronic myeloid leukaemia	10	5.3	1	3	4	2
Id Other specified leukaemias	1	0.5	-	-	-	1
Ie Unspecified leukaemia	6	3.2	1	5	-	-
Total	**190**	**100.0**	**10**	**86**	**54**	**40**

The crude 1 and 3 year survival rates for lymphoid leukaemia in children of younger than 15 years who were diagnosed between 1997 and 2001 are respectively 97.2% and 87.7% in boys and 97.1% and 88.1% in girls (also see Figure 58, Kaplan Meier curve). Global 5-year survival in the case of lymphoid leukaemia was 84.8% (CI 95%: 72.1% - 92.0%) in boys and 88.1% (CI 95%: 77.6% - 93.9%) in girls.

Survival rates in Flanders were compared to the results in a number of Northern and Western European countries reported in the ACCIS study (Table 20).

Figure 58. Acute lymphoid leukaemia: observed survival per gender, 1997-2001



O	N	number of patients at risk:					
9	72	70	69	44	36	23	Boys
8	69	67	63	49	38	25	Girls

O = deaths

4.3 Tumours of the central nervous system (CNS)

Tumours of the central nervous system form a heterogeneous group in terms of prognosis, risk factors and tumour behaviour. The group of central nervous system tumours includes the astrocytomas, the primitive neuroectodermal tumours, the ependymomas and other gliomas. Table 22 shows the distribution of the different tumour types in the total group of CNS tumours in Flanders, which corresponded well with the distributions reported in the international literature[47].

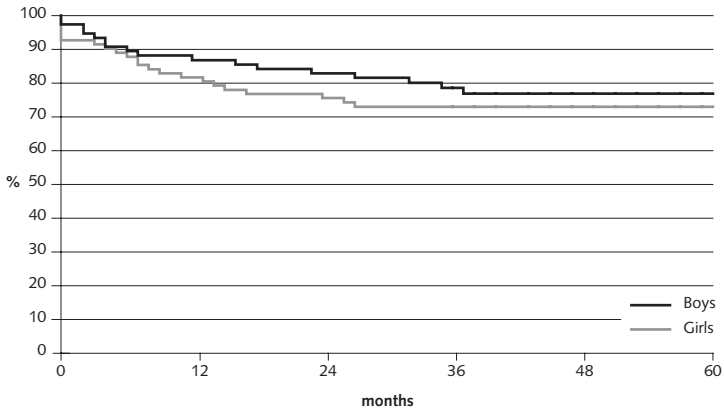
TABLE 22. CENTRAL NERVOUS SYSTEM TUMOURS: ABSOLUTE NUMBERS PER HISTOLOGICAL TYPE, 1997-2001

	Tot		Age (years)			
	n	%	0	1-4	5-9	10-14
IIIa Ependymoma	18	11.3	1	5	7	5
IIIb Astrocytoma	93	58.5	2	24	25	42
IIIc Primitive neuroectodermal tumours	35	22.0	2	8	17	8
IIId Other gliomas	10	6.3	-	3	3	4
IIIe Other specified intracranial and intraspinal neoplasms	2	1.3	-	1	1	-
IIIf Unspecified intracranial and intraspinal neoplasms	1	0.6	-	-	1	-
Total	**159**	**100.0**	**5**	**41**	**54**	**59**

The results of the crude 1, 3 and 5-year survival for all malignant tumours of the CNS in children of younger than 15 years who were diagnosed between 1997 and the end of 2001 are shown in Appendix 10.4. Global 5-year survival in the case of CNS tumours was 76.7% (CI 95%: 64.9% - 84.8%) in boys and 72.8% (CI 95%: 61.6% - 81.2%) in girls. Survival rates in Flanders were compared to the results in a number of Northern and Western European countries reported in the ACCIS study (Table 20).

Owing to the small numbers per tumour type, only the survival curves for low grade and high grade astrocytomas are presented (see Figures 59A and 59B). The difference in prognosis between the low grade and high grade astrocytomas is clearly visible in the figures: 5-year survival rates were 87.0% and 43.8%, respectively.

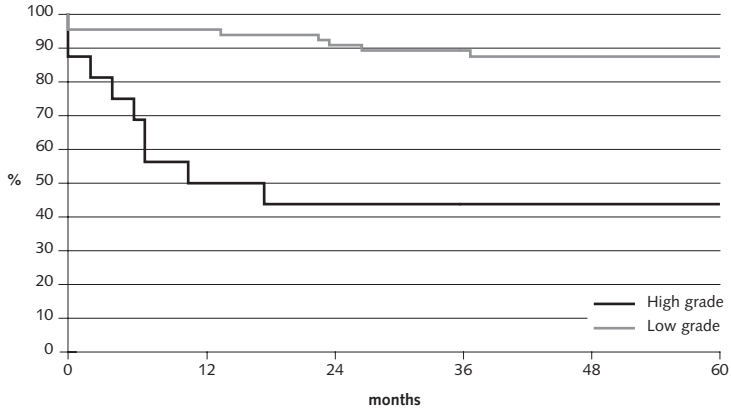
Figure 59A. All childhood tumours of the central nervous system: observed survival per gender, 1997-2001



O	N	number of patients at risk:					
17	76	67	63	48	31	20	Boys
22	82	67	63	47	33	22	Girls

O = deaths

Figure 59B. Low grade astrocytomas versus high grade astrocytomas: observed survival, 1997-2001



O	N	number of patients at risk:					
9	16	8	7	5	5	3	High gr.
8	66	63	61	49	32	18	Low gr.
1	10	9	9	4	2	2	Unknown

O = deaths

5 | Samenvatting

In de periode 2000-2001 werden in Vlaanderen 62.616 nieuwe kankergevallen (exclusief non-melanoma huidkanker) vastgesteld, waarvan 34.609 bij mannen en 28.007 bij vrouwen. In die periode stierven er 30.086 mensen aan de ziekte.
Bij mannen komt kanker nog steeds frequenter voor dan bij vrouwen. Ongeveer één man op drie en één vrouw op vier lopen het risico om kanker te ontwikkelen voor hun 75ste verjaardag. De ziekte treft voornamelijk oudere personen: ongeveer twee derden van alle vrouwen en drie kwart van alle mannen, is 60 jaar of ouder op het ogenblik van de diagnose.
De meest voorkomende tumor bij mannen is prostaatkanker (28% van de nieuwe gevallen); onmiddellijk gevolgd door longkanker (17%) en colorectale tumoren (13%). Longkanker komt nog steeds vijf keer meer voor bij mannen dan bij vrouwen.
Bij vrouwen is borstkanker de meest voorkomende kanker. Ongeveer een derde van alle kankers bij de vrouwen is borstkanker. Colorectale kanker komt bij vrouwen op de tweede plaats (13%) en kwaadaardige aandoeningen van het baarmoederlichaam (corpus uteri, 5%) op de derde.
De vergelijking met registratiecijfers van andere Europese landen suggereert dat Vlaanderen een van de hoogste kankerincidenties heeft in Europa van prostaatkanker, en borstkanker. Voor de andere tumoren benaderen de Vlaamse cijfers meer het Europese gemiddelde.

Kanker per provincie

Door de verbeterde registratie is het voor de jaren 2000-2001 ook mogelijk gegevens per provincie voor te stellen. Dit levert enkele opmerkelijke resultaten op. Zo komt bijvoorbeeld prostaatkanker meer voor in West-Vlaanderen en Limburg; mogelijk doordat in bepaalde regio's in die provincies prostaatkanker actiever opgespoord zou worden dan elders. Nog in West-Vlaanderen maar ook in Oost-Vlaanderen en Vlaams-Brabant wordt er meer kanker in het hoofd-halsgebied bij mannen vastgesteld dan in de andere provincies. Kanker in het hoofd-halsgebied wordt meestal veroorzaakt door de combinatie van roken en hoog alcoholverbruik. Dit risicogedrag is een mogelijke verklaring voor de hogere incidentie van deze kanker in bepaalde regio's.
Longkanker komt bij vrouwen uit Antwerpen en Limburg meer voor dan bij andere vrouwen. Voor heel Vlaanderen is er trouwens een belangrijke verschuiving in de longkankercijfers bij vrouwen merkbaar: vrouwen jonger dan 50 evolueren namelijk naar eenzelfde risico om longkanker te krijgen

als mannen. Eind jaren 1980 lag het risico voor vrouwen onder de 50 nog zes keer lager dan voor mannen, terwijl dit in 2000-2001 nog slechts twee keer lager ligt.
Verder is het opvallend dat maligne melanomen frequenter voorkomen in West-Vlaanderen. Bij vrouwen tussen 15 en 29 jaar is het in Vlaanderen de meest voorkomende tumor.

Overleving

In deze publicatie worden voor het eerst ook overlevingscijfers gepresenteerd. Die cijfers kunnen voor kankerspecialisten een uitgangspunt betekenen voor het beoordelen van de behandeling. De relatieve 5-jaarsoverleving, die een goede maat is voor de ziektespecifieke overleving, verschilt sterk naargelang het type kanker. De laagste cijfers worden gevonden bij kanker van de pancreas, het mesothelioma, lever, long- en slokdarmkanker. De hoogste relatieve 5-jaarsoverleving zien we bij teelbalkanker, Hodgkinlymfoom, lip-, prostaat- en borstkanker, en maligne melanoom bij vrouwen.
Ter vergelijking: de relatieve 5-jaarsoverleving voor teelbalkanker bedraagt 95%, die bij pancreaskanker amper 7 à 8%.
Bovendien blijkt het ziektestadium bij de diagnose een belangrijke rol te spelen voor de prognose van de patiënt. In deze publicatie wordt dit geïllustreerd aan de hand van borst- en dikkedarmkanker en maligne melanomen.
Ook aan de overleving van kinderen met kanker werd een hoofdstuk gewijd. Uit deze resultaten blijkt dat de behandeling van kinderen met kanker in Vlaanderen tot de beste van Europa behoort.

We hopen dat de toegenomen vraag naar gegevens en de belangstelling van clinici, onderzoekers en overheid een aanmoediging mag betekenen om de cijfers over kanker optimaal in te zetten in het onderzoek naar de ziekte en de behandeling.

5 | Summary

In the period 2000-2001, a total of 62,616 new cases of cancer were diagnosed in Flanders (excluding non-melanoma of the skin): 34,609 in males and 28,007 in females. There were 30,086 deaths from the disease in the same period.

Generally speaking, cancer occurs more frequently in males than in females. About one in three men and one in four women run the risk of developing cancer before their 75th birthday. The disease chiefly affects older persons: approximately two thirds of the women and three quarters of the men are 60 years or older at the time of diagnosis.

The most frequently occurring tumour in men was prostate cancer (28% of the new cases), immediately followed by lung cancer (17%) and colorectal cancer (13%). Lung cancer is still diagnosed five times more frequently in men than in women.
Breast cancer was the most frequently occurring malignancy in women. About one third of all the tumours in women comprised breast cancer. Colorectal cancer took second place (13%) on the list of 10 most frequently occurring tumours, while cancer of the corpus uteri (5%) took third place.
Comparison with registration data from other European countries suggested that the incidence rates of prostate cancer and breast cancer in Flanders were among the highest in Europe. Incidence rates of the other tumours in Flanders were about equal to the European average.

Cancer incidence per province

Owing to improved registration techniques, it was also possible to perform separate analyses on the data from each province. This produced a number of striking results. For example, higher incidences of prostate cancer were found in West-Flanders and Limburg, which may have been because prostate cancer was detected more actively in certain regions of these provinces than elsewhere. Not only in West-Flanders, but also in East-Flanders and Flemish-Brabant, more cases of head and neck cancer were diagnosed in men than in the other provinces. Research has shown that cancer in the head and neck region is chiefly caused by a combination of smoking and high alcohol intake. This risk behaviour is a possible explanation for the higher incidence of cancer in certain regions.

Lung cancer was more common in women from Antwerp and Limburg than in other women. Over the years, there has been a shift in lung cancer incidence in women in the whole of Flanders: women of younger than 50 years are evolving towards the same risk of developing lung cancer as that in men. At the end of the nineteen eighties, the risk in women of younger than 50 years was six times lower than in men, whereas in 2000-2001, the risk was only twice as low. Furthermore, it was striking that malignant melanomas were more common in West-Flanders. In Flemish women aged between 15 and 29 years, malignant melanoma was the most frequently occurring tumour.

Survival

For the first time, survival rates are also presented in this publication. Cancer specialists can use these rates as a basis on which to evaluate treatment regimens. Relative 5-year survival, which gives a good indication of disease-specific survival, differed strongly depending on the type of cancer. The lowest rates were found in patients with mesothelioma, cancer of the pancreas, liver, lung and oesophagus. Contrastingly, the highest 5-year survival rates were found in the case of testicular tumours, Hodgkin's lymphoma, lip, prostate and breast cancer and malignant melanomas in women.

To make a comparison: the relative 5-year survival of patients with testicular tumours was 95%, versus barely 7-8% in patients with pancreas cancer. Moreover, the stage of the disease at diagnosis appeared to play an important role in the prognosis of the patient. In the present publication, this is illustrated in the light of breast cancer, colorectal cancer and malignant melanomas.

A separate chapter is devoted to the survival of children with cancer. These results showed that the treatment of cancer in Flemish children is among the best in Europe.

We hope that the increasing demand for information and the interest being shown by clinicians, researchers and the Government represents encouragement to make optimal use of cancer incidence data in research into the disease and its treatment.

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7 | Appendix

Appendix 1: List of data sources

Appendix 2: Population of the Flemish region of Belgium

2.1 Age distribution of the population per gender on 1-1-1997, 1-1-1998, 1-1-1999, 1-1-2000, 1-1-2001 and 1-1-2002

2.2 Age distribution of the standard populations: Europe and World

Appendix 3: Data set

Appendix 4: IACR/IARC guidelines to determine the presence of multiple tumours

Appendix 5: Mortality incidence ratios 2000-2001

Appendix 6: Quality criteria: Basis for diagnosis

Appendix 7: Cancer incidence in Flanders

7.1 Males, number of invasive tumours per localisation, crude incidence rate and age-standardised incidence, 1997-1998-1999-2000-2001

7.2 Females, number of invasive tumours per localisation, crude incidence rate and age-standardised incidence, 1997-1998-1999-2000-2001

7.3 Males, number of invasive tumours per localisation and age group in 2000-2001

7.4 Females, number of invasive tumours per localisation and age group in 2000-2001

7.5 Males, age-specific and age-standardised incidence rates per localisation and age group in 2000-2001

7.6 Females, age-specific and age-standardised incidence rates per localisation and age group in 2000-2001

Appendix 8: Cancer incidence in children per gender, age group and histological type, 1997-2001

Appendix 9: TNM staging of breast cancer and malignant melanoma

Appendix 10: Survival in Flanders

Appendix 1: List of data sources

National health insurance companies

– Hulpkas voor Ziekte- en Invaliditeitsverzekering
– Landsbond der Christelijke Mutualiteiten
– Landsbond van Liberale Mutualiteiten
– Landsbond van de Onafhankelijke Ziekenfondsen
– Landsbond van de Neutrale Ziekenfondsen
– Nationaal Verbond van Socialistische Mutualiteiten
– N.M.B.S. – S.N.C.B.

Pathological anatomy laboratories

– Academisch Ziekenhuis - V.U.B., Jette
– Algemeen Stedelijk Ziekenhuis, Aalst
– Algemeen Ziekenhuis H. Hart, Tienen
– Algemeen Ziekenhuis Maria Middelares – Sint Jozef, Gent
– Algemeen Ziekenhuis Maria Middelares, Sint-Niklaas
– Algemeen Ziekenhuis Groeninge, Kortrijk
– Algemeen Ziekenhuis Sint-Blasius, Dendermonde
– Algemeen Ziekenhuis Sint-Jozef, Vilvoorde (sinds 1/1/2002: AZ Jan Portaels)
– Algemeen Ziekenhuis Sint-Lucas, Gent
– AZ Damiaan Ziekenhuis, Oostende
– AZ Sint-Lucas, Assebroek
– AZ Sint-Jan, Brugge
– AZ Zusters van Barmhartigheid, Ronse
– Centre Hospitalier Universitaire Sart Tilman, Liège
– Cliniques Universitaires Saint-Luc, Bruxelles
– H. Hart Ziekenhuis, Roeselare
– Henri Serruys Ziekenhuis AV, Oostende
– Institut de Pathologie et de Génétique, Loverval
– Institut J. Bordet, Bruxelles
– Kliniek O.L.Vrouw van Lourdes, Waregem
– Laboratoire CMP, Brussel
– O.L.Vrouwziekenhuis, Asse
– O.L.Vrouwziekenhuis-Campus Aalst
– Regionaal ziekenhuis H. Hart, Leuven
– Regionaal ziekenhuis Heilig Hartkliniek, Eeklo
– Regionaal Ziekenhuis St.-Maria, Halle
– Regionaal Ziekenhuis Jan Yperman, Ieper
– Sint-Andries Ziekenhuis, Tielt

– Sint-Augustinuskliniek, Veurne
– Sint-Elisabethziekenhuis, Zottegem
– Sint-Rembertziekenhuis, Torhout
– Sint Vicentiusziekenhuis, Deinze
– Stedelijk Ziekenhuis, Roeselare
– Universitair Ziekenhuis Gent, Goormagtigh Instituut
– Universitaire Ziekenhuizen, Leuven
– Van Helmont-ziekenhuis, Vilvoorde (sinds 1/1/2002: AZ Jan Portaels)

Hospital registries
– UZ Gent, dienst radiotherapie
– UZ Leuven, dienst oncologie
– UZ Leuven, dienst klinische biologie
– Jules Bordet Instituut, data center

Provincial registries

AKR (Antwerps Kankerregister)

LIKAR (Limburgs Kankerregister)

Appendix 2: Population of the Flemish region of Belgium

2.1 AGE DISTRIBUTION OF THE POPULATION PER GENDER ON 1-1-1997, 1-1-1998, 1-1-1999, 1-1-2000, 1-1-2001 AND 1-1-2002

(source: NIS)

MALES

Age (years)	1/1/97	1/1/98	1/1/99	1/1/00	1/1/01	1/1/02
0-4	170,933	167,926	165,662	163,704	162,064	160,305
5-9	178,532	180,478	180,919	179,748	176,747	173,615
10-14	175,311	173,532	173,325	174,507	177,501	180,274
15-19	186,351	186,705	185,446	182,433	178,968	176,579
20-24	184,772	181,514	181,022	182,651	185,439	188,188
25-29	214,864	209,692	204,483	198,521	190,911	186,014
30-34	243,058	238,764	232,860	225,894	220,924	216,698
35-39	240,016	241,733	243,547	245,044	245,141	243,607
40-44	221,698	224,999	229,192	233,137	235,663	238,838
45-49	204,829	206,727	208,467	211,168	215,063	219,320
50-54	181,037	190,156	195,178	198,821	201,980	201,156
55-59	158,488	154,962	154,708	157,125	162,555	175,557
60-64	158,352	157,436	158,234	158,124	155,714	150,596
65-69	143,481	146,325	147,697	148,454	147,119	145,723
70-74	115,456	116,685	117,326	118,467	121,071	124,572
75-79	66,283	74,487	83,232	88,003	89,762	91,025
80-84	41,058	37,399	34,206	34,867	39,378	44,970
85+	26,196	27,120	28,047	28,842	28,940	28,029
Total	**2,910,715**	**2,916,640**	**2,923,551**	**2,929,510**	**2,934,940**	**2,945,066**

FEMALES

Age (years)	1/1/97	1/1/98	1/1/99	1/1/00	1/1/01	1/1/02
0-4	164,074	161,134	158,152	156,978	155,684	153,756
5-9	169,799	172,152	173,134	171,997	169,140	166,606
10-14	166,558	165,087	164,698	165,833	168,684	171,670
15-19	178,046	177,600	176,534	174,064	170,759	168,481
20-24	178,530	175,828	175,682	176,903	180,106	182,294
25-29	206,956	203,237	198,480	193,031	185,825	180,679
30-34	233,260	229,288	223,908	217,563	213,689	210,458
35-39	230,668	232,891	235,247	237,020	237,129	235,483
40-44	213,153	216,810	221,144	225,439	227,794	231,143
45-49	196,914	198,392	199,861	203,094	207,305	212,271
50-54	175,414	184,241	189,188	192,327	195,645	195,232
55-59	160,173	156,141	155,223	156,482	161,208	172,896
60-64	166,627	164,616	165,091	164,827	162,030	156,412
65-69	161,619	164,640	165,227	165,449	162,950	160,487
70-74	144,502	145,122	145,487	146,400	149,076	151,518
75-79	96,191	107,088	118,812	125,159	126,631	127,956
80-84	75,882	69,356	62,851	61,896	68,100	76,546
85+	69,743	72,119	74,568	76,279	75,857	73,827
Total	**2,988,109**	**2,995,742**	**3,003,287**	**3,010,741**	**3,017,612**	**3,027,715**

BOYS

Age (years)	1/1/97	1/1/98	1/1/99	1/1/00	1/1/01	1/1/02
0	32,754	32,803	32,256	31,382	31,459	30,779
1	33,112	32,992	33,012	32,410	31,546	31,737
2	33,673	33,285	33,167	33,113	32,537	31,720
3	35,044	33,739	33,386	33,280	33,203	32,670
4	36,350	35,107	33,841	33,519	33,319	33,399
5	36,969	36,423	35,193	33,937	33,566	33,481
6	36,497	37,021	36,504	35,301	34,015	33,711
7	35,396	36,544	37,088	36,611	35,321	34,204
8	35,009	35,452	36,606	37,174	36,648	35,431
9	34,661	35,038	35,528	36,725	37,197	36,788
10	34,801	34,685	35,139	35,624	36,775	37,358
11	33,809	34,823	34,725	35,210	35,639	36,894
12	34,605	33,825	34,883	34,816	35,242	35,723
13	35,555	34,646	33,876	34,931	34,861	35,343
14	36,541	35,553	34,702	33,926	34,984	34,956
Total	**524,776**	**521,936**	**519,906**	**517,959**	**516,312**	**514,194**

GIRLS

Age (years)	1/1/97	1/1/98	1/1/99	1/1/00	1/1/01	1/1/02
0	31,543	31,506	30,503	30,303	30,213	29,381
1	31,654	31,699	31,680	30,780	30,571	30,410
2	32,044	31,814	31,842	31,837	30,900	30,728
3	33,970	32,097	31,915	32,015	31,926	31,094
4	34,863	34,018	32,212	32,043	32,074	32,143
5	35,045	34,939	34,102	32,299	32,094	32,238
6	34,813	35,105	35,051	34,216	32,312	32,196
7	33,659	34,914	35,182	35,134	34,260	32,453
8	33,428	33,700	34,996	35,265	35,170	34,460
9	32,854	33,494	33,803	35,083	35,304	35,259
10	32,737	32,878	33,552	33,869	35,112	35,432
11	32,280	32,803	32,956	33,631	33,927	35,235
12	32,954	32,316	32,844	33,009	33,661	34,046
13	34,092	32,967	32,355	32,896	33,037	33,793
14	34,495	34,123	32,991	32,428	32,947	33,164
Total	**500,431**	**498,373**	**495,984**	**494,808**	**493,508**	**492,032**

2.2 AGE DISTRIBUTION OF THE STANDARD POPULATIONS: EUROPE AND WORLD

Age (years)	Europe	World
	n	n
0-4	8,000	12,000
5-9	7,000	10,000
10-14	7,000	9,000
15-19	7,000	9,000
20-24	7,000	8,000
25-29	7,000	8,000
30-34	7,000	6,000
35-39	7,000	6,000
40-44	7,000	6,000
45-49	7,000	6,000
50-54	7,000	5,000
55-59	6,000	4,000
60-64	5,000	4,000
65-69	4,000	3,000
70-74	3,000	2,000
75-79	2,000	1,000
80-84	1,000	500
85+	1,000	500
Total	**100,000**	**100,000**

Appendix 3: Data set

Patient data

– Unique patient identification code
– Phonetic routine in the christian name
– Gender
– Postcode of home address

Tumour data

– Incidence date
– Basis for the diagnosis
– Topography
– Laterality
– Histology
– Differentiation grade
– Clinical stage
  • TNM
  • Extent of the disease for small cell lung cancer
  • Ann Arbour (lymphomas)
  • Multiple myelomas
  • Dukes
  • FIGO
– Pathological stage
– Treatment
– WHO score at the time of diagnosis (performance grade)

Follow-up data

– Date of death
– Date of last contact

Appendix 4: IACR/IARC guidelines to determine the presence of multiple tumours

1) The recognition and existence of two or more primary tumours is independent of age
2) A primary malignancy is a tumour that develops at a well-defined localisation and is not an extension, recurrence or metastasis
3) Only one tumour is recognised per organ or pair of organs or tissue sort, except in the case of:
   a. systemic/multicentric tumour (lymphoma, leukaemia, Kaposi sarcoma)
   b. tumours with different morphologies as given below (modified from Berg, 1994)
   Non-specified histological types were not counted separately if a tumour was already present with a more specific histology, e.g. 801 versus 814 is regarded as only one tumour, namely 814.

GROUP	HISTOLOGY CODE ICD-O
Squamous cell carcinomas	805-813
Adenocarcinomas	814,816,818-822,825-850,852-855,857,894
Other specific carcinomas	803-804, 817, 823, 824, 851, 856, 858-867
Non-specified carcinomas	801-802
Sarcomas and other soft-tissue tumours	868-871, 880-892, 899, 904, 912-913, 915-934, 937, 954-958
Other specified tumours	872-879, 893, 895-898, 900-903, 905-911, 935-936, 938-953, 972-974, 976
Lymphomas	959-971, 975
Leukaemia	980-994
Kaposi-sarcoma	914
Non-specified tumour	800

Appendix 5: Mortality incidence ratios 2000-2001

MALES				
ICD-10	**Description of localisation**	**M**	**I**	**M/I**
		n	**n**	**ratio**
C00-C14	Lip, oral cavity and pharynx	435	1,157	0.38
C15	Oesophagus	494	713	0.69
C16	Stomach	712	1,015	0.70
C18-C20	Colon-Rectosigmoid junction-rectum	1,910	4,595	0.42
C21	Anus and anal canal	6	39	0.15
C22	Liver and intrahepatic bile ducts	348	244	1.43
C25	Pancreas	707	519	1.36
C30-C31	Nasal cavity, middle ear and accessory sinuses	23	97	0.24
C32	Larynx	250	680	0.37
C33-C34	Trachea-bronchus-lung	6,018	6,089	0.99
C43	Malignant melanoma of skin	161	547	0.29
C44	Malignant neoplasms of skin	39	1,461	0.03
C50	Breast	25	108	0.23
C51	Vulva	-	-	-
C52	Vagina	-	-	-
C53	Cervix uteri	-	-	-
C54	Corpus uteri	-	-	-
C56	Ovary	-	-	-
C60	Penis	10	68	0.15
C61	Prostate	1,867	10,244	0.18
C62	Testis	11	260	0.04
C64	Kidney	389	957	0.41
C67	Bladder	661	1,907	0.35
C69	Eye and adnexa	12	57	0.21
C70-C72	Brain and other parts of central nervous system	408	482	0.85
C73	Thyroid gland	38	104	0.37
C81	Hodgkin's disease	44	150	0.29
C82-85	Non-Hodgkin-lymfoma	412	959	0.43
C91-C96	Leukaemia	505	892	0.57
C76, C80	Unknown and other ill-defined sites	692	1,210	0.57
Total (C00-C97)		**17,680**	**36,070**	**0.49**

FEMALES				
ICD-10	**Description of localisation**	**M**	**I**	**M/I**
		n	**n**	**ratio**
C00-C14	Lip, oral cavity and pharynx	118	373	0.32
C15	Oesophagus	144	204	0.71
C16	Stomach	497	663	0.75
C18-C20	Colon-Rectosigmoid junction-rectum	1,622	3,918	0.41
C21	Anus and anal canal	4	58	0.07
C22	Liver and intrahepatic bile ducts	282	189	1.49
C25	Pancreas	733	497	1.47
C30-C31	Nasal cavity, middle ear and accessory sinuses	9	22	0.41
C32	Larynx	32	72	0.44
C33-C34 T	rachea-bronchus-lung	1,120	1,215	0.92
C43	Malignant melanoma of skin	160	865	0.18
C44	Malignant neoplasms of skin	35	964	0.04
C50	Breast	2,763	10,240	0.27
C51	Vulva	57	165	0.35
C52	Vagina	17	55	0.31
C53	Cervix uteri	207	803	0.26
C54	Corpus uteri	255	1,544	0.17
C56	Ovary	832	1,221	0.68
C60	Penis	-	-	-
C61	Prostate	-	-	-
C62	Testis	-	-	-
C64	Kidney	283	560	0.51
C67	Bladder	242	494	0.49
C69	Eye and adnexa	6	51	0.12
C70-C72	Brain and other parts of central nervous system	333	404	0.82
C73	Thyroid gland	56	270	0.21
C81	Hodgkin's disease	21	147	0.14
C82-85	Non-Hodgkin-lymfoma	342	877	0.39
C91-C96	Leukaemia	438	672	0.65
C76, C80	Unknown and other ill-defined sites	540	1,166	0.46
Total (C00-C97)		**12,480**	**28,971**	**0.43**

Appendix 6: Quality criteria: Basis for diagnosis

LOCALISATION		CLINICAL	CYTO-LOGICAL	HISTO-LOGICAL	UN-KNOWN	TOTAL	
		%	%	%	%	N	%
C00	Lip	0.7	-	94.2	5.0	139	0.2
C01	Base of tongue	1.4	-	95.8	2.8	72	0.1
C02	Tongue	0.5	-	95.0	4.6	219	0.3
C03	Gum	-	-	96.0	4.0	25	0.0
C04	Floor of mouth	-	-	98.3	1.7	173	0.3
C05	Palate	-	-	98.6	1.4	72	0.1
C06	Mouth, NOS	0.7	-	96.3	3.0	135	0.2
C07	Parotid gland	-	-	93.2	6.8	88	0.1
C08	Salivary glands, NOS	-	5.9	88.2	5.9	34	0.1
C09	Tonsil	0.5	-	97.5	2.0	197	0.3
C10	Oropharynx	-	-	100.0	-	90	0.1
C11	Nasopharynx	2.2	-	97.8	-	45	0.1
C12	Pyriform sinus	-	-	100.0	-	111	0.2
C13	Hypopharynx	1.4	-	96.0	2.7	74	0.1
C14	Lip, oral cavity and pharynx, NOS	-	-	96.4	3.6	56	0.1
C15	Oesophagus	0.9	-	95.0	4.1	917	1.4
C16	Stomach	1.0	0.2	91.2	7.6	1,678	2.6
C17	Small intestine	0.6	-	93.2	6.3	176	0.3
C18	Colon	1.4	0.2	91.2	7.3	5,356	8.2
C19	Rectosigmoid junction	1.4	-	95.1	3.5	568	0.9
C20	Rectum	0.8	0.0	93.8	5.4	2,589	4.0
C21	Anus and anal canal	-	-	96.9	3.1	97	0.1
C22	Liver and intrahepatic bile ducts	18.7	1.9	63.1	16.4	433	0.7
C23	Gallbladder	6.9	0.9	83.6	8.6	116	0.2
C24	Other and unspecified parts of biliary tract	10.7	2.7	83.9	2.7	149	0.2
C25	Pancreas	19.7	4.4	57.5	18.4	1,016	1.6
C26	Other ill-defined digestive organs	4.0	4.0	72.0	20.0	25	0.0
C30	Nasal cavity and middle ear	-	-	96.2	3.9	26	0.0
C31	Accessory sinuses	-	-	96.8	3.2	93	0.1
C32	Larynx	0.3	0.3	96.3	3.2	752	1.2
C33	Trachea	-	-	81.8	18.2	11	0.0
C34	Bronchus and lung	4.7	3.9	81.6	9.9	7,293	11.2
C37	Thymus	-	-	100.0	-	28	0.0
C38	Heart, mediastinum and pleura	5.7	6.6	59.4	28.3	106	0.2
C39	Respiratory system and intrathoracic organs, NOS	50.0	50.0	0.0	-	2	0.0
C40	Bone and articular cartilage of limbs	-	-	100.0	-	83	0.1
C41	Bone and articular cartilage, NOS	4.4	-	92.8	2.9	69	0.1
C43	Malignant melanoma of skin	-	0.3	95.3	4.4	1,412	2.2
C44	Malignant neoplasms of skin	0.3	0.0	92.7	7.0	2,425	3.7
C45	Mesothelioma	-	2.6	91.0	6.4	267	0.4

LOCALISATION		CLINICAL	CYTO-LOGICAL	HISTO-LOGICAL	UN-KNOWN	TOTAL	
		%	%	%	%	N	%
C46	Kaposi's sarcoma	-	-	100.0	-	12	0.0
C48	Retroperitoneum and peritoneum	1.0	3.1	85.7	10.2	98	0.2
C47, C49	Soft Tissue	-	-	96.5	3.5	397	0.6
C50	Breast	0.7	0.8	92.8	5.7	10,348	15.9
C51	Vulva	-	-	95.2	4.9	165	0.3
C52	Vagina	-	7.3	87.3	5.5	55	0.1
C53	Cervix uteri	0.6	1.4	91.0	7.0	803	1.2
C54	Corpus uteri	0.2	0.5	94.6	4.8	1,544	2.4
C55	Uterus	3.2	-	71.4	25.4	63	0.1
C56	Ovary	2.1	2.9	85.0	10.1	1,221	1.9
C57	Female genital organs, NOS	3.6	3.6	82.1	10.7	28	0.0
C58	Placenta	-	-	100.0	-	1	0.0
C60	Penis	-	-	92.7	7.4	68	0.1
C61	Prostate	0.7	0.1	90.3	9.0	10,244	15.8
C62	Testis	-	0.4	94.6	5.0	260	0.4
C63	Male genital organs, NOS	-	-	90.0	10.0	10	0.0
C64	Kidney	4.6	0.3	86.9	8.2	1,517	2.3
C65	Renal pelvis	0.8	-	99.2	-	121	0.2
C66	Ureter	3.2	-	90.5	6.4	126	0.2
C67	Bladder	0.8	0.4	90.5	8.4	2,401	3.7
C68	Urinary organs, NOS	-	6.7	86.7	6.7	45	0.1
C69	Eye and adnexa	16.7	0.9	76.9	5.6	108	0.2
C70	Meninges	-	-	92.3	7.7	26	0.0
C71	Brain	9.0	-	86.8	4.2	833	1.3
C72	Spinal cord, cranial nerves and CNS, NOS	18.5	-	81.5	-	27	0.0
C73	Thyroid gland	0.5	2.9	88.8	7.8	374	0.6
C74	Adrenal gland	4.4	-	87.0	8.7	46	0.1
C75	Endocrine glands, NOS	20.0	-	73.3	6.7	15	0.0
C81	Hodgkin's disease	-	0.7	94.3	5.1	297	0.5
C82-85	Non-Hodgkin-lymphoma	0.4	4.9	87.2	7.5	1,836	2.8
C88	Malignant immunoproliferative diseases	8.8	41.2	29.4	20.6	34	0.1
C90	Multiple myeloma	0.3	44.9	38.0	16.8	761	1.2
C91	Lymphoid leukaemia	-	50.5	33.1	16.4	758	1.2
C92	Myeloid leukaemia	-	56.0	32.4	11.6	645	1.0
C93	Monocytic leukaemia	-	47.8	43.5	8.7	23	0.0
C94-C95	Leukaemia other	2.0	35.6	40.6	21.8	101	0.2
C96	Lymphoid, haematopoietic and related tissue, NOS	-	8.1	89.2	2.7	37	0.1
C76	Other and ill-defined sites	2.7	2.7	76.7	17.8	73	0.1
C80	Unknown primary site	7.6	8.2	60.9	23.4	2,303	3.5
C00-C96 Total		**2.1**	**3.1**	**86.6**	**8.3**	**65,041**	**100.0**

Appendix 7: Cancer incidence in Flanders

7.1 Males, number of invasive tumours per localisation, crude incidence rate and age-standardised incidence, 1997-1998-1999-2000-2001

MALES		N					ESR					WSR				
		1997	1998	1999	2000	2001	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
C00	Lip	48	39	49	48	45	1.4	1.1	1.4	1.3	1.3	1.0	0.7	1.0	0.8	0.9
C01	Base of tongue	27	30	36	20	36	0.9	1.0	1.1	0.6	1.1	0.6	0.7	0.8	0.4	0.8
C02	Tongue	63	72	76	87	76	2.0	2.4	2.4	2.7	2.3	1.5	1.7	1.7	2.0	1.6
C03	Gum	9	7	9	10	6	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1
C04	Floor of mouth	82	77	75	75	69	2.7	2.5	2.4	2.4	2.2	2.0	1.8	1.8	1.8	1.6
C05	Palate	28	22	30	25	21	0.9	0.7	0.9	0.8	0.7	0.7	0.5	0.7	0.6	0.5
C06	Mouth, NOS	30	35	43	51	47	0.9	1.1	1.3	1.6	1.5	0.7	0.8	1.0	1.2	1.1
C07	Parotid gland	24	37	26	28	22	0.7	1.2	0.8	0.8	0.7	0.6	0.8	0.6	0.5	0.5
C08	Salivary glands, NOS	9	11	14	11	8	0.3	0.3	0.4	0.3	0.2	0.2	0.3	0.3	0.2	0.2
C09	Tonsil	69	63	75	76	75	2.3	2.0	2.4	2.4	2.3	1.7	1.5	1.8	1.8	1.7
C10	Oropharynx	30	26	33	35	39	1.0	0.8	1.1	1.1	1.2	0.7	0.6	0.8	0.8	0.9
C11	Nasopharynx	14	12	12	16	20	0.4	0.4	0.4	0.5	0.6	0.4	0.3	0.3	0.4	0.6
C12	Pyriform sinus	49	40	48	52	48	1.6	1.3	1.6	1.6	1.5	1.2	1.0	1.2	1.2	1.1
C13	Hypopharynx	26	23	23	38	25	0.8	0.8	0.7	1.3	0.8	0.6	0.6	0.5	0.9	0.6
C14	Lip, oral cavity and pharynx, NOS	16	12	22	26	22	0.5	0.4	0.7	0.8	0.7	0.3	0.3	0.5	0.6	0.5
C15	Oesophagus	296	290	271	327	386	9.3	8.9	8.1	9.7	11.4	6.5	6.2	5.7	6.8	8.0
C16	Stomach	480	440	483	493	522	14.3	13.0	13.9	14.0	14.7	9.2	8.3	9.0	9.0	9.6
C17	Small intestine	51	34	42	42	48	1.6	1.0	1.2	1.2	1.3	1.1	0.7	0.9	0.8	0.9
C18	Colon	997	1,051	1,164	1,320	1,413	29.9	30.7	33.8	37.1	39.5	19.5	19.9	22.1	24.2	25.8
C19	Rectosigmoid junction	139	134	166	169	167	4.2	3.9	4.7	4.8	4.6	2.7	2.5	3.0	3.2	3.1
C20	Rectum	665	673	752	822	704	20.1	20.1	22.1	23.7	20.0	13.5	13.5	14.7	15.8	13.5
C21	Anus and anal canal	22	23	25	16	23	0.7	0.8	0.8	0.5	0.7	0.5	0.6	0.5	0.3	0.5
C22	Liver and intrahepatic bile ducts	102	117	126	123	121	3.1	3.5	3.8	3.6	3.4	2.2	2.4	2.7	2.4	2.4
C23	Gallbladder	11	11	17	17	12	0.3	0.3	0.4	0.5	0.3	0.2	0.2	0.3	0.3	0.2
C24	Biliary tract, NOS	28	39	40	33	48	0.8	1.1	1.2	0.9	1.4	0.6	0.8	0.8	0.6	0.9
C25	Pancreas	231	250	255	260	259	7.0	7.4	7.4	7.5	7.3	4.6	5.1	5.0	5.0	5.0
C26	Other ill-defined digestive organs	10	5	5	15	2	0.3	0.2	0.1	0.4	0.0	0.2	0.1	0.1	0.3	0.0
C30	Nasal cavity and middle ear	12	10	9	15	8	0.4	0.3	0.3	0.4	0.2	0.3	0.2	0.2	0.3	0.2
C31	Accessory sinuses	39	46	42	31	43	1.2	1.4	1.3	1.0	1.3	0.9	1.0	0.9	0.7	1.0
C32	Larynx	321	330	313	332	348	10.1	10.1	9.6	9.8	10.3	7.1	7.1	6.8	7.0	7.1
C33	Trachea	5	5	8	5	3	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1
C34	Bronchus and lung	3,082	2,990	2,914	3,056	3,025	92.1	88.2	84.5	87.2	84.4	61.9	58.9	57.0	59.0	56.9
C37	Thymus	7	6	5	7	5	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1
C38	Heart, mediastinum and pleura	30	33	35	22	32	1.0	1.0	1.0	0.6	0.9	0.7	0.7	0.7	0.4	0.7
C39	Respiratory system and intrathoracic organs, NOS	-	-	-	1	-	-	-	-	0.0	-	-	-	-	0.0	-
C40	Bone and articular cartilage of limbs	23	22	17	24	21	0.7	0.7	0.6	0.8	0.7	0.7	0.6	0.6	0.9	0.7
C41	Bone and articular cartilage, NOS	13	18	19	21	22	0.5	0.6	0.6	0.7	0.7	0.4	0.5	0.5	0.5	0.6

MALES		N					ESR					WSR				
		1997	1998	1999	2000	2001	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
C43	Malignant melanoma of skin	167	179	233	301	246	5.3	5.5	7.2	9.3	7.4	4.0	3.9	5.5	7.0	5.7
C44	Malignant neoplasms of skin	341	469	503	698	763	10.3	13.7	14.4	19.8	21.0	6.6	8.6	9.0	12.2	13.1
C45	Mesothelioma	96	71	99	109	123	2.9	2.2	2.9	3.1	3.5	2.1	1.5	2.0	2.1	2.4
C46	Kaposi's sarcoma	8	2	7	-	7	0.3	0.1	0.2	-	0.2	0.2	0.1	0.2	-	0.1
C48	Retroperitoneum and peritoneum	12	19	18	17	19	0.4	0.6	0.5	0.5	0.5	0.3	0.4	0.4	0.4	0.4
C47,C49	Soft tissue	117	93	97	115	99	3.7	3.0	3.1	3.5	3.0	3.0	2.4	2.4	2.8	2.4
C50	Breast	44	43	51	54	54	1.3	1.3	1.5	1.6	1.5	0.9	0.9	1.0	1.1	1.0
C60	Penis	35	35	27	38	30	1.1	1.0	0.8	1.1	0.9	0.7	0.7	0.5	0.8	0.5
C61	Prostate	3,286	3,557	4,452	4,890	5,354	96.8	102.8	127.3	137.5	147.7	62.2	66.6	83.5	91.0	97.4
C62	Testis	96	102	97	129	131	3.2	3.3	3.2	4.3	4.4	3.1	3.2	3.1	4.3	4.4
C63	Male genital organs, NOS	7	5	6	4	6	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1
C64	Kidney	356	362	385	484	473	10.8	11.0	11.5	14.4	13.5	7.5	7.8	8.1	10.4	9.6
C65	Renal pelvis	13	15	30	39	48	0.4	0.5	0.9	1.1	1.4	0.3	0.3	0.6	0.7	0.9
C66	Ureter	20	31	24	40	46	0.6	0.9	0.7	1.1	1.2	0.4	0.6	0.5	0.7	0.8
C67	Bladder	881	789	767	929	978	26.2	23.1	21.9	26.1	26.7	17.1	15.0	14.4	16.9	17.0
C68	Urinary organs, NOS	28	11	7	19	15	0.9	0.3	0.2	0.6	0.4	0.6	0.2	0.1	0.4	0.3
C69	Eye and adnexa	27	21	22	31	26	0.8	0.7	0.7	1.0	0.8	0.6	0.6	0.5	0.8	0.6
C70	Meninges	9	6	1	4	7	0.3	0.2	0.0	0.1	0.2	0.2	0.1	0.0	0.1	0.2
C71	Brain	219	207	235	238	219	7.1	6.6	7.4	7.6	6.8	5.9	5.5	6.2	6.5	5.8
C72	Spinal cord, cranial nerves and CNS, NOS	8	4	10	7	7	0.3	0.1	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.2
C73	Thyroid gland	43	44	57	56	48	1.4	1.4	1.7	1.7	1.4	1.1	1.3	1.3	1.3	1.1
C74	Adrenal gland	9	18	13	9	9	0.3	0.7	0.5	0.3	0.3	0.4	0.7	0.5	0.3	0.3
C75	Endocrine glands, NOS	7	10	4	6	3	0.2	0.3	0.1	0.2	0.1	0.1	0.3	0.1	0.2	0.1
C81	Hodgkin's disease	77	84	89	74	76	2.5	2.7	2.9	2.5	2.5	2.3	2.5	2.7	2.4	2.4
C82-85	Non-Hodgkin-lymphoma	531	462	527	469	490	16.6	14.2	15.9	14.0	14.4	12.3	10.4	11.4	10.1	10.6
C88	Malignant immunoproliferative diseases	19	8	11	11	11	0.6	0.2	0.4	0.3	0.3	0.4	0.1	0.2	0.2	0.2
C90	Multiple myeloma	188	182	222	196	193	5.7	5.4	6.6	5.7	5.4	3.9	3.5	4.4	3.8	3.5
C91	Lymphoid leukaemia	216	179	260	226	244	6.9	5.6	7.9	6.7	7.4	5.4	4.4	6.1	4.9	6.0
C92	Myeloid leukaemia	156	127	166	157	186	4.8	3.8	4.9	4.6	5.5	3.7	2.7	3.5	3.3	4.2
C93	Monocytic leukaemia	13	12	9	4	9	0.4	0.4	0.3	0.1	0.3	0.3	0.3	0.3	0.1	0.2
C94-C95	Leukaemia other	33	33	34	28	19	1.0	1.0	1.0	0.8	0.6	0.7	0.7	0.8	0.6	0.4
C96	Lymphoid, haematopoietic and related tissue, NOS	6	4	14	8	11	0.2	0.1	0.6	0.3	0.4	0.3	0.1	0.8	0.3	0.5
C76	Other and ill-defined sites	22	20	25	9	20	0.7	0.6	0.8	0.3	0.6	0.5	0.5	0.7	0.3	0.5
C80	Unknown primary site	553	581	646	577	604	16.9	17.4	19.1	16.5	17.0	11.4	11.8	13.1	11.0	11.5
Total		**14,731**	**14,818**	**16,427**	**17,725**	**18,345**	**445.6**	**440.2**	**481.1**	**510.4**	**518.2**	**303.8**	**298.9**	**328.9**	**348.4**	**353.8**
Total excl. non-melanoma		**14,390**	**14,349**	**15,924**	**17,027**	**17,582**	**435.3**	**426.5**	**466.7**	**490.6**	**497.2**	**297.2**	**290.3**	**319.9**	**336.2**	**340.7**

ESR and WSR: age standardised incidence rate, using the European or World Standard Population (n/100,000 person years)

7.2 Females, number of invasive tumours per localisation, crude incidence rate and age-standardised incidence, 1997-1998-1999-2000-2001

FEMALES		N					ESR					WSR				
		1997	1998	1999	2000	2001	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
C00	Lip	24	18	15	25	21	0.5	0.4	0.4	0.5	0.4	0.4	0.3	0.3	0.3	0.3
C01	Base of tongue	7	12	5	8	8	0.2	0.4	0.2	0.3	0.2	0.1	0.3	0.1	0.2	0.2
C02	Tongue	31	21	31	32	24	0.8	0.6	0.9	0.8	0.6	0.6	0.4	0.7	0.5	0.4
C03	Gum	2	3	9	4	5	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.2	0.1	0.1
C04	Floor of mouth	25	23	11	14	15	0.6	0.7	0.3	0.4	0.4	0.4	0.5	0.2	0.3	0.3
C05	Palate	14	10	7	10	16	0.5	0.3	0.2	0.3	0.5	0.3	0.2	0.1	0.2	0.4
C06	Mouth, NOS	19	14	18	23	14	0.5	0.3	0.5	0.6	0.3	0.4	0.2	0.4	0.4	0.2
C07	Parotid gland	16	13	13	16	22	0.5	0.3	0.3	0.4	0.5	0.4	0.2	0.3	0.3	0.4
C08	Salivary glands, NOS	5	8	5	7	8	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.2
C09	Tonsil	20	20	14	26	20	0.6	0.5	0.4	0.7	0.6	0.4	0.4	0.3	0.5	0.5
C10	Oropharynx	5	5	2	10	6	0.2	0.2	0.1	0.3	0.2	0.1	0.1	0.0	0.2	0.1
C11	Nasopharynx	5	5	4	3	6	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1
C12	Pyriform sinus	2	7	7	5	6	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1
C13	Hypopharynx	3	3	2	6	5	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.1
C14	Lip, oral cavity and pharynx, NOS	4	3	1	3	5	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1
C15	Oesophagus	73	75	94	109	95	1.8	1.8	2.2	2.5	2.2	1.2	1.2	1.5	1.7	1.5
C16	Stomach	335	334	325	337	326	6.7	6.7	6.7	6.9	6.4	4.2	4.2	4.4	4.6	4.2
C17	Small intestine	31	27	35	47	39	0.8	0.7	0.9	1.1	0.9	0.5	0.5	0.6	0.7	0.6
C18	Colon	1,083	1,074	1,124	1,236	1,387	23.9	23.3	24.2	26.0	29.2	15.7	15.3	16.0	17.2	19.4
C19	Rectosigmoid junction	116	106	109	117	115	2.8	2.5	2.4	2.8	2.7	2.0	1.7	1.6	1.9	1.9
C20	Rectum	445	462	453	549	514	10.0	10.6	10.5	12.5	11.9	6.6	7.1	7.2	8.4	8.1
C21	Anus and anal canal	24	18	22	38	20	0.5	0.4	0.5	0.9	0.5	0.3	0.3	0.4	0.6	0.4
C22	Liver and intrahepatic bile ducts	83	83	92	98	91	1.9	1.8	1.9	2.1	2.0	1.3	1.2	1.3	1.5	1.5
C23	Gallbladder	39	39	53	39	48	0.8	0.8	1.1	0.9	1.0	0.5	0.5	0.7	0.6	0.7
C24	Biliary tract, NOS	40	42	26	35	33	0.9	1.0	0.6	0.7	0.7	0.5	0.6	0.4	0.5	0.4
C25	Pancreas	256	273	278	249	248	5.8	6.2	6.0	5.5	5.4	3.8	4.1	3.9	3.7	3.6
C26	Other ill-defined digestive organs	3	6	5	6	2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0
C30	Nasal cavity and middle ear	8	12	1	1	2	0.2	0.3	0.0	0.0	0.0	0.2	0.3	0.0	0.0	0.0
C31	Accessory sinuses	10	11	12	8	11	0.2	0.3	0.4	0.2	0.3	0.1	0.2	0.3	0.1	0.3
C32	Larynx	31	26	36	35	37	0.9	0.8	0.9	1.0	1.0	0.6	0.6	0.6	0.8	0.7
C33	Trachea	-	1	3	1	2	-	0.0	0.1	0.0	0.0	-	0.0	0.1	0.0	0.0
C34	Bronchus and lung	522	572	546	558	654	13.5	14.8	14.0	14.4	16.6	9.4	10.7	9.9	10.3	11.8
C37	Thymus	8	6	6	7	9	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.2	0.2
C38	Heart, mediastinum and pleura	17	22	11	22	30	0.4	0.5	0.2	0.5	0.7	0.3	0.4	0.2	0.3	0.6
C39	Respiratory system and intrathoracic organs, NOS	-	-	-	1	-	-	-	-	0.0	-	-	-	-	0.0	-
C40	Bone and articular cartilage of limbs	19	18	16	20	18	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.5	0.6
C41	Bone and articular cartilage, NOS	22	15	16	13	13	0.7	0.4	0.5	0.4	0.4	0.6	0.4	0.5	0.4	0.3

FEMALES		N					ESR					WSR				
		1997	1998	1999	2000	2001	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001
C43	Malignant melanoma of skin	277	297	386	428	437	7.9	8.2	11.3	12.3	12.4	6.2	6.3	9.2	10.1	10.1
C44	Malignant neoplasms of skin	278	295	338	453	511	5.8	5.9	6.4	8.9	10.0	3.7	3.7	3.9	5.7	6.5
C45	Mesothelioma	23	28	25	15	20	0.7	0.7	0.7	0.4	0.5	0.5	0.5	0.5	0.3	0.4
C46	Kaposi's sarcoma	3	3	1	4	1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.0
C48	Retroperitoneum and peritoneum	30	24	19	27	35	0.7	0.6	0.4	0.6	0.9	0.5	0.5	0.3	0.5	0.7
C47,C49	Soft tissue	126	80	83	91	92	3.7	2.3	2.3	2.6	2.5	3.0	1.9	1.8	2.2	2.1
C50	Breast	4,114	4,362	4,662	4,903	5,337	119.5	124.8	132.4	138.0	148.9	88.5	92.2	98.1	102.4	110.3
C51	Vulva	75	61	77	88	77	1.6	1.4	1.8	1.9	1.7	1.1	0.9	1.3	1.2	1.2
C52	Vagina	23	19	29	30	25	0.6	0.5	0.7	0.7	0.6	0.4	0.4	0.6	0.5	0.4
C53	Cervix uteri	376	352	348	412	391	11.1	10.5	10.3	12.1	11.2	8.7	8.3	8.1	9.6	8.9
C54	Corpus uteri	549	682	667	752	792	14.3	17.4	16.9	19.2	20.1	10.1	12.2	11.9	13.5	14.2
C55	Uterus	55	57	56	35	28	1.4	1.4	1.4	0.9	0.8	1.0	1.0	1.0	0.7	0.5
C56	Ovary	581	560	576	635	586	15.9	14.9	15.4	16.5	15.3	11.7	10.9	11.3	12.1	11.1
C57	Female genital organs, NOS	17	16	11	17	11	0.5	0.4	0.3	0.5	0.3	0.4	0.3	0.2	0.4	0.2
C58	Placenta	2	-	2	1	-	0.1	-	0.1	0.0	-	0.1	-	0.1	0.1	-
C64	Kidney	284	273	264	289	271	7.0	6.8	6.7	7.2	6.8	5.0	4.9	4.9	5.3	5.0
C65	Renal pelvis	14	11	13	17	17	0.4	0.3	0.3	0.4	0.3	0.3	0.2	0.2	0.3	0.2
C66	Ureter	17	12	18	19	21	0.4	0.3	0.4	0.4	0.4	0.3	0.2	0.3	0.3	0.3
C67	Bladder	234	231	224	248	246	5.1	5.0	4.8	5.0	4.7	3.4	3.4	3.1	3.3	2.9
C68	Urinary organs, NOS	12	4	1	8	3	0.3	0.1	0.0	0.2	0.1	0.2	0.1	0.0	0.1	0.1
C69	Eye and adnexa	28	44	23	25	26	0.8	1.1	0.6	0.6	0.7	0.6	0.9	0.5	0.5	0.5
C70	Meninges	12	2	6	9	6	0.4	0.1	0.1	0.3	0.2	0.3	0.0	0.1	0.3	0.2
C71	Brain	157	174	193	198	178	4.6	5.3	5.6	5.9	5.1	3.9	4.7	4.9	5.2	4.4
C72	Spinal cord, cranial nerves and CNS, NOS	4	6	4	7	6	0.1	0.2	0.1	0.2	0.2	0.1	0.3	0.1	0.3	0.2
C73	Thyroid gland	79	128	112	133	137	2.2	3.6	3.3	3.9	3.9	1.9	2.9	2.7	3.1	3.1
C74	Adrenal gland	14	19	14	13	15	0.5	0.6	0.5	0.4	0.6	0.4	0.6	0.5	0.3	0.7
C75	Endocrine glands, NOS	5	4	4	1	5	0.1	0.1	0.1	0.0	0.2	0.1	0.1	0.1	0.0	0.1
C81	Hodgkin's disease	60	68	65	57	90	1.8	2.2	2.1	1.9	3.0	1.7	2.2	1.9	1.8	3.0
C82-85	Non-Hodgkin-lymphoma	441	399	425	447	430	11.6	9.7	10.9	10.8	10.4	8.5	6.9	8.0	7.9	7.4
C88	Malignant immunoproliferative diseases	8	13	3	5	7	0.2	0.3	0.1	0.1	0.1	0.2	0.2	0.0	0.1	0.1
C90	Multiple myeloma	176	169	194	185	187	4.3	4.0	4.3	4.2	4.2	2.9	2.7	2.9	2.8	2.9
C91	Lymphoid leukaemia	139	119	155	135	153	3.6	3.1	4.0	3.5	3.9	3.0	2.7	3.4	2.9	3.3
C92	Myeloid leukaemia	143	91	109	165	137	3.7	2.4	2.9	4.2	3.2	2.8	1.9	2.2	3.2	2.4
C93	Monocytic leukaemia	4	6	7	6	4	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2
C94-C95	Leukaemia other	35	41	23	26	28	0.8	1.1	0.5	0.6	0.6	0.6	0.8	0.4	0.4	0.5
C96	Lymphoid, haematopoietic and related tissue, NOS	5	10	5	5	13	0.2	0.3	0.2	0.2	0.5	0.2	0.2	0.2	0.2	0.6
C76	Other and ill-defined sites	31	15	30	21	23	0.8	0.4	0.8	0.6	0.6	0.6	0.4	0.7	0.5	0.5
C80	Unknown primary site	548	552	612	562	560	13.0	13.0	14.6	13.0	13.2	9.1	9.2	10.4	9.0	9.5
Total		**12,326**	**12,614**	**13,191**	**14,190**	**14,781**	**322.9**	**327.3**	**341.2**	**362.8**	**375.4**	**233.8**	**237.7**	**248.9**	**264.3**	**274.2**
Total excl. non-melanoma		**12,048**	**12,319**	**12,853**	**13,737**	**14,270**	**317.1**	**321.4**	**334.8**	**353.9**	**365.5**	**230.1**	**234.0**	**245.0**	**258.6**	**267.7**

ESR and WSR: age standardised incidence rate, using the European or World Standard Population (n/100,000 person years)

7.3 Males, number of invasive tumours per localisation and age group in 2000-2001

MALES		Tot	00-	05-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80-	85+
C00	Lip	**93**	-	-	-	-	-	-	1	-	1	3	3	5	8	21	14	12	11	14
C01	Base of tongue	**56**	-	-	-	-	-	-	-	-	2	5	5	14	5	10	11	3	1	-
C02	Tongue	**163**	-	-	-	1	1	1	-	1	11	17	24	29	20	15	24	13	5	1
C03	Gum	**16**	-	-	-	-	-	-	1	-	1	1	2	1	4	1	3	-	1	1
C04	Floor of mouth	**144**	-	-	-	-	-	-	-	3	9	21	35	25	17	15	7	6	4	2
C05	Palate	**46**	-	-	-	-	-	-	1	-	1	8	9	7	11	4	2	2	1	-
C06	Mouth, NOS	**98**	-	-	-	1	1	-	2	1	6	13	11	19	12	10	14	3	4	1
C07	Parotid gland	**50**	-	-	-	-	-	2	-	1	1	4	4	6	4	7	9	6	4	2
C08	Salivary glands, NOS	**19**	-	-	-	-	-	-	-	1	2	-	2	3	3	4	2	2	-	-
C09	Tonsil	**151**	-	-	-	-	-	-	1	1	13	19	23	21	28	16	15	6	7	1
C10	Oropharynx	**74**	-	-	-	-	-	-	-	2	3	11	18	13	5	9	5	4	3	1
C11	Nasopharynx	**36**	2	-	-	1	2	1	3	3	1	2	3	4	2	4	4	1	3	-
C12	Pyriform sinus	**100**	-	-	-	-	-	-	-	1	6	12	15	23	13	12	13	3	2	-
C13	Hypopharynx	**63**	-	-	-	-	-	-	-	-	3	12	9	17	10	5	4	2	-	1
C14	Lip, oral cavity and pharynx, NOS	**48**	-	-	-	-	-	-	-	-	3	1	7	6	10	7	5	5	1	3
C15	Oesophagus	**713**	-	-	-	-	-	-	1	5	29	48	64	104	100	112	104	76	42	28
C16	Stomach	**1,015**	-	-	-	-	-	1	2	15	19	31	41	78	83	163	179	177	110	116
C17	Small intestine	**90**	-	-	-	-	-	-	-	2	5	3	5	8	8	14	13	15	9	8
C18	Colon	**2,733**	-	-	-	-	4	1	10	19	33	64	116	196	293	468	506	504	292	227
C19	Rectosigmoid junction	**336**	-	-	-	-	-	-	2	1	4	10	20	29	36	69	63	57	29	16
C20	Rectum	**1,526**	-	-	-	-	-	1	3	12	23	45	100	141	203	270	271	233	130	94
C21	Anus and anal canal	**39**	-	-	-	-	-	1	-	1	-	3	5	3	2	4	4	7	4	5
C22	Liver and intrahepatic bile ducts	**244**	1	-	1	-	1	-	3	2	4	9	12	21	31	38	47	38	24	12
C23	Gallbladder	**29**	-	-	-	-	-	-	-	-	-	1	-	-	3	3	5	9	5	3
C24	Biliary tract, NOS	**81**	-	-	-	-	-	-	-	-	1	3	5	7	5	22	11	13	7	7
C25	Pancreas	**519**	-	-	-	-	-	-	1	3	11	21	34	50	65	88	102	72	45	27
C26	Other ill-defined digestive organs	**17**	-	-	-	-	-	-	-	-	1	-	-	-	2	1	2	5	3	3
C30	Nasal cavity and middle ear	**23**	-	-	-	-	-	-	1	-	-	2	-	3	4	6	2	3	-	2
C31	Accessory sinuses	**74**	-	-	1	1	-	1	-	3	4	9	7	6	13	13	6	5	3	2
C32	Larynx	**680**	-	-	-	-	-	-	1	7	16	37	80	90	99	104	134	66	33	13
C33	Trachea	**8**	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	3	-	1
C34	Bronchus and lung	**6,081**	-	-	-	1	2	1	5	18	67	196	340	566	836	1,133	1,215	1,056	421	224
C37	Thymus	**12**	-	-	-	-	1	-	-	-	1	-	-	1	1	2	4	2	-	-
C38	Heart, mediastinum and pleura	**54**	-	-	-	-	1	1	1	3	2	3	4	1	4	7	10	9	4	4
C39	Respiratory system and intrathoracic organs, NOS	**1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
C40	Bone and articular cartilage of limbs	**45**	-	-	3	12	4	3	1	1	1	2	5	3	1	2	3	4	-	-
C41	Bone and articular cartilage, NOS	**43**	-	-	1	2	2	-	6	2	5	2	3	6	3	2	3	6	-	-

MALES		Tot	00-	05-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80-	85+
C43	Malignant melanoma of skin	**547**	-	-	1	3	8	17	25	42	40	48	40	56	61	69	54	43	17	23
C44	Malignant neoplasms of skin	**1,461**	-	1	1	1	1	3	-	4	18	24	46	60	129	172	254	300	217	230
C45	Mesothelioma	**232**	-	-	-	-	-	-	-	-	2	6	20	21	32	42	49	32	20	8
C46	Kaposi's sarcoma	**7**	-	-	-	-	-	-	-	-	-	2	-	-	-	-	3	1	-	1
C48	Retroperitoneum and peritoneum	**36**	-	-	-	-	-	-	-	1	2	1	2	5	4	7	5	4	4	1
C47,C49	Soft tissue	**214**	2	2	3	5	5	8	8	17	12	22	10	12	16	20	34	18	9	11
C50	Breast	**108**	-	-	-	-	-	-	-	1	2	5	9	13	13	16	21	17	5	6
C60	Penis	**68**	-	-	-	-	-	-	-	2	1	6	3	6	7	3	12	9	9	10
C61	Prostate	**10,244**	-	-	-	1	-	1	-	-	13	83	312	766	1,443	2,154	2,187	1,765	837	682
C62	Testis	**260**	2	1	3	9	42	52	50	44	17	14	10	4	6	1	3	2	-	-
C63	Male genital organs, NOS	**10**	-	-	-	-	-	1	-	-	-	-	-	-	1	2	2	2	-	2
C64	Kidney	**957**	10	2	-	-	2	2	6	11	21	59	75	100	123	174	177	131	41	23
C65	Renal pelvis	**87**	-	-	-	-	-	-	-	-	-	1	1	5	16	15	16	21	6	6
C66	Ureter	**86**	-	-	-	-	-	-	-	-	1	1	2	4	8	14	17	23	9	7
C67	Bladder	**1,907**	-	-	-	-	-	-	2	9	15	40	45	136	206	290	416	378	197	173
C68	Urinary organs, NOS	**34**	-	-	-	-	-	-	-	-	1	-	2	1	7	5	8	6	1	3
C69	Eye and adnexa	**57**	2	1	1	1	-	2	-	3	1	4	3	4	4	8	3	6	7	7
C70	Meninges	**11**	1	-	-	1	-	-	-	-	-	-	-	1	2	-	3	-	2	1
C71	Brain	**457**	12	11	12	7	15	20	25	24	22	30	31	38	57	52	42	39	11	9
C72	Spinal cord, cranial nerves and CNS, NOS	**14**	1	3	1	1	-	-	1	1	1	-	3	-	-	1	-	1	-	-
C73	Thyroid gland	**104**	-	-	1	-	1	3	9	6	10	5	11	13	9	10	11	8	5	2
C74	Adrenal gland	**18**	4	1	-	-	-	1	-	1	2	1	1	1	2	-	3	-	1	-
C75	Endocrine glands, NOS	**9**	-	-	-	-	2	1	-	1	1	1	-	-	1	1	-	1	-	-
C81	Hodgkin's disease	**150**	-	2	10	11	21	13	15	11	20	6	10	5	7	3	7	4	3	2
C82-85	Non-Hodgkin-lymphoma	**959**	6	3	4	9	8	9	24	40	48	53	79	85	105	135	124	119	69	39
C88	Malignant immunoproliferative diseases	**22**	-	-	-	-	-	-	-	-	-	-	2	2	3	4	2	4	3	2
C90	Multiple myeloma	**389**	-	-	-	-	-	-	1	4	6	15	27	37	38	62	67	63	39	30
C91	Lymphoid leukaemia	**470**	16	7	8	8	4	3	5	10	9	18	31	34	43	72	84	51	41	26
C92	Myeloid leukaemia	**343**	6	2	4	2	1	7	7	11	17	14	17	24	37	51	57	42	25	19
C93	Monocytic leukaemia	**13**	-	-	-	-	1	1	1	1	-	1	1	-	1	1	3	1	1	-
C94-C95	Leukaemia other	**47**	2	-	-	-	-	1	-	-	1	-	2	5	3	11	7	8	4	3
C96	Lymphoid, haematopoietic and related tissue, NOS	**19**	3	-	1	3	2	2	1	-	-	2	-	-	-	1	1	2	1	-
C76	Other and ill-defined sites	**29**	1	-	-	2	1	-	-	-	1	1	4	5	2	5	4	3	-	-
C80	Unknown primary site	**1,181**	-	-	1	1	2	5	6	8	14	48	64	90	138	188	241	178	117	80
Total		**36,070**	**71**	**36**	**57**	**84**	**135**	**166**	**232**	**360**	**587**	**1,129**	**1,874**	**3,039**	**4,469**	**6,252**	**6,734**	**5,710**	**2,909**	**2,226**
Total excl. non-melanoma		**34,609**	**71**	**35**	**56**	**83**	**134**	**163**	**232**	**356**	**569**	**1,105**	**1,828**	**2,979**	**4,340**	**6,080**	**6,480**	**5,410**	**2,692**	**1,996**

7.4 Females, number of invasive tumours per localisation and age group in 2000-2001

FEMALES		Tot.	00-	05-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80-	85+
C00	Lip	**46**	-	-	-	-	-	-	-	-	2	1	1	-	2	8	9	8	4	11
C01	Base of tongue	**16**	-	-	-	-	-	-	-	-	2	2	3	5	2	-	1	-	1	-
C02	Tongue	**56**	-	-	-	-	-	1	-	-	2	7	5	4	3	3	6	9	9	7
C03	Gum	**9**	-	-	-	-	-	-	-	-	-	-	-	2	-	2	3	1	-	1
C04	Floor of mouth	**29**	-	-	-	-	-	-	-	1	1	4	5	4	4	3	2	2	3	-
C05	Palate	**26**	-	-	-	-	-	-	1	-	-	2	6	7	-	3	4	2	1	-
C06	Mouth, NOS	**37**	-	-	-	-	-	-	-	1	-	-	5	4	3	4	11	3	2	4
C07	Parotid gland	**38**	-	-	-	-	-	-	-	-	3	2	2	2	4	7	5	4	3	6
C08	Salivary glands, NOS	**15**	-	-	-	-	-	-	1	1	1	1	1	1	2	1	2	2	-	2
C09	Tonsil	**46**	-	-	-	-	-	-	-	2	2	9	8	4	7	3	6	3	2	-
C10	Oropharynx	**16**	-	-	-	-	-	-	-	1	3	1	2	2	2	1	1	2	1	-
C11	Nasopharynx	**9**	-	-	-	-	1	-	1	-	1	1	-	1	-	2	-	1	-	1
C12	Pyriform sinus	**11**	-	-	-	-	-	-	-	-	-	1	2	3	-	1	2	1	-	1
C13	Hypopharynx	**11**	-	-	-	-	-	-	-	-	-	-	-	4	2	2	2	1	-	-
C14	Lip, oral cavity and pharynx, NOS	**8**	-	-	-	-	-	-	-	-	-	-	3	1	1	1	-	1	-	1
C15	Oesophagus	**204**	-	-	-	1	-	-	-	3	4	6	10	20	19	31	32	32	27	19
C16	Stomach	**663**	-	-	-	1	1	3	7	9	8	17	17	27	46	71	87	117	97	155
C17	Small intestine	**86**	-	-	-	-	-	-	5	1	3	4	4	7	6	7	12	14	11	12
C18	Colon	**2,623**	-	1	2	2	3	4	5	19	37	72	111	119	214	343	415	505	354	417
C19	Rectosigmoid junction	**232**	-	-	-	-	-	-	2	-	8	4	15	21	28	40	31	42	21	20
C20	Rectum	**1,063**	-	-	-	-	2	-	6	7	18	34	64	98	104	150	150	178	123	129
C21	Anus and anal canal	**58**	-	-	-	-	-	-	-	-	5	3	6	6	4	8	3	10	6	7
C22	Liver and intrahepatic bile ducts	**189**	3	-	1	-	-	1	-	-	-	7	7	8	25	13	36	29	29	30
C23	Gallbladder	**87**	-	-	-	-	-	-	-	-	1	2	4	2	14	9	15	23	8	9
C24	Biliary tract, NOS	**68**	-	-	-	-	-	-	-	-	-	5	-	3	4	12	13	15	8	8
C25	Pancreas	**497**	-	-	-	-	-	-	2	2	11	13	31	31	47	64	83	82	56	75
C26	Other ill-defined digestive organs	**8**	-	-	-	-	-	-	-	-	-	-	-	1	-	1	2	2	1	1
C30	Nasal cavity and middle ear	**3**	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-
C31	Accessory sinuses	**19**	-	-	-	-	2	-	1	-	1	1	1	1	-	1	5	4	1	1
C32	Larynx	**72**	-	-	-	-	-	1	-	-	5	7	7	11	9	12	4	11	4	1
C33	Trachea	**3**	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	1	-
C34	Bronchus and lung	**1,212**	-	-	-	-	1	1	5	15	38	86	117	124	142	196	191	164	68	64
C37	Thymus	**16**	-	1	-	-	-	-	1	-	-	-	2	4	3	1	1	2	1	-
C38	Heart, mediastinum and pleura	**52**	2	-	-	-	-	1	1	3	1	2	1	2	3	5	6	4	7	14
C39	Respiratory system and intrathoracic organs, NOS	**1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
C40	Bone and articular cartilage of limbs	**38**	-	-	3	2	2	1	6	-	2	7	3	-	4	2	1	1	4	-
C41	Bone and articular cartilage, NOS	**26**	-	-	2	-	2	-	2	3	5	1	4	2	-	1	1	3	-	-
C43	Malignant melanoma of skin	**865**	2	1	1	10	25	45	62	75	67	75	65	61	78	89	68	67	27	47

FEMALES		Tot.	00-	05-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80-	85+
C44	Malignant neoplasms of skin	**964**	-	1	-	2	3	2	7	8	14	18	22	33	69	92	125	150	125	293
C45	Mesothelioma	**35**	-	-	-	-	-	1	1	2	-	1	5	2	1	8	4	5	-	5
C46	Kaposi's sarcoma	**5**	-	-	-	-	-	1	-	-	-	1	-	-	1	1	1	-	-	-
C48	Retroperitoneum and peritoneum	**62**	-	-	-	-	-	2	-	2	1	6	4	3	6	14	8	6	5	5
C47,C49	Soft tissue	**183**	4	3	3	2	9	6	7	12	10	11	11	15	11	11	23	16	12	17
C50	Breast	**10,240**	-	-	-	5	8	52	142	394	713	1,109	1,299	1,235	1,318	1,220	976	895	428	446
C51	Vulva	**165**	-	-	-	-	1	-	2	2	2	6	10	8	18	12	23	32	22	27
C52	Vagina	**55**	-	-	-	-	1	-	-	-	5	4	1	5	5	5	10	6	5	8
C53	Cervix uteri	**803**	-	-	-	1	4	27	50	101	99	110	66	69	49	59	65	53	16	34
C54	Corpus uteri	**1,544**	-	-	-	-	-	2	3	12	18	46	108	193	269	288	229	214	93	69
C55	Uterus	**63**	-	-	-	-	-	1	2	2	5	3	5	10	6	10	3	6	5	5
C56	Ovary	**1,221**	-	-	1	3	10	15	10	30	58	79	112	120	141	183	154	155	85	65
C57	Female genital organs, NOS	**28**	-	-	-	-	-	1	2	-	1	3	2	3	1	2	7	2	3	1
C58	Placenta	**1**	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C64	Kidney	**560**	9	2	1	2	2	4	6	11	14	20	23	64	61	86	90	82	54	29
C65	Renal pelvis	**34**	-	-	-	-	-	-	-	-	-	-	-	1	2	6	11	7	3	4
C66	Ureter	**40**	-	-	-	-	-	-	-	-	1	1	-	3	2	6	9	9	4	5
C67	Bladder	**494**	-	-	-	-	1	1	-	3	5	9	6	23	34	49	81	114	62	106
C68	Urinary organs, NOS	**11**	-	-	-	-	-	-	-	1	-	-	1	4	-	1	-	2	1	1
C69	Eye and adnexa	**51**	1	-	-	-	-	-	-	1	2	5	5	4	2	8	9	6	3	5
C70	Meninges	**15**	1	1	-	-	-	2	-	-	1	3	1	1	1	2	1	-	1	-
C71	Brain	**376**	9	12	8	7	7	16	16	16	28	20	24	28	45	45	39	32	20	4
C72	Spinal cord, cranial nerves and CNS, NOS	**13**	3	-	2	-	-	-	-	1	2	-	-	1	-	-	3	1	-	-
C73	Thyroid gland	**270**	-	-	1	-	7	12	15	20	27	23	23	32	24	24	28	17	10	7
C74	Adrenal gland	**28**	7	-	-	-	1	-	1	1	3	2	2	1	1	2	5	1	-	1
C75	Endocrine glands, NOS	**6**	-	-	-	-	1	-	1	-	1	-	1	-	1	-	-	1	-	-
C81	Hodgkin's disease	**147**	-	1	6	11	25	14	15	16	12	11	6	2	4	6	7	9	2	-
C82-85	Non-Hodgkin-lymphoma	**877**	2	3	2	3	6	10	16	14	20	42	59	60	96	120	128	129	79	88
C88	Malignant immunoproliferative diseases	**12**	-	-	-	-	-	-	-	-	-	1	-	1	-	1	3	2	-	4
C90	Multiple myeloma	**372**	-	-	-	-	-	-	2	2	5	18	23	25	32	54	66	73	39	33
C91	Lymphoid leukaemia	**288**	13	9	6	4	3	1	5	3	3	9	17	22	24	26	45	38	26	34
C92	Myeloid leukaemia	**302**	3	2	1	4	2	9	6	7	20	8	15	22	25	28	45	46	21	38
C93	Monocytic leukaemia	**10**	2	-	-	1	-	1	-	1	1	-	-	1	-	1	-	2	-	-
C94-C95	Leukaemia other	**54**	1	-	-	-	2	-	1	1	1	1	2	4	3	3	8	8	8	11
C96	Lymphoid, haematopoietic and related tissue, NOS	**18**	3	3	1	2	1	-	1	-	1	1	1	-	1	2	-	-	-	1
C76	Other and ill-defined sites	**44**	2	1	-	-	-	1	-	1	2	3	3	3	5	6	1	4	2	10
C80	Unknown primary site	**1,122**	2	1	-	1	6	16	21	32	31	45	61	76	101	128	172	158	118	153
Total		**28,971**	**69**	**42**	**41**	**65**	**139**	**255**	**440**	**839**	**1,338**	**1,996**	**2,430**	**2,666**	**3,141**	**3,607**	**3,590**	**3,627**	**2,134**	**2,552**
Total excl. non-melanoma		**28,007**	**69**	**41**	**41**	**63**	**136**	**253**	**433**	**831**	**1,324**	**1,978**	**2,408**	**2,633**	**3,072**	**3,515**	**3,465**	**3,477**	**2,009**	**2,259**

7.5 Males, age-specific and age-standardised incidence rates per localisation and age group in 2000-2001

MALES		Tot.	00-	05-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80-	85+	CR	ESR	WSR	CRi (0-74)
C00	Lip	**93**	-	-	-	-	-	-	0.2	-	0.2	0.7	0.8	1.5	2.6	7.1	5.8	6.7	13.9	24.4	1.6	1.3	0.9	0.1
C01	Base of tongue	**56**	-	-	-	-	-	-	-	-	0.4	1.2	1.2	4.3	1.6	3.4	4.5	1.7	1.3	-	1.0	0.9	0.6	0.1
C02	Tongue	**163**	-	-	-	0.3	0.3	0.3	-	0.2	2.3	4.0	6.0	8.8	6.5	5.1	9.9	7.3	6.3	1.7	2.8	2.5	1.8	0.2
C03	Gum	**16**	-	-	-	-	-	-	0.2	-	0.2	0.2	0.5	0.3	1.3	0.3	1.2	-	1.3	1.7	0.3	0.3	0.2	0.0
C04	Floor of mouth	**144**	-	-	-	-	-	-	-	0.6	1.9	4.9	8.7	7.6	5.5	5.1	2.9	3.4	5.0	3.5	2.5	2.3	1.7	0.2
C05	Palate	**46**	-	-	-	-	-	-	0.2	-	0.2	1.9	2.2	2.1	3.6	1.4	0.8	1.1	1.3	-	0.8	0.7	0.6	0.1
C06	Mouth, NOS	**98**	-	-	-	0.3	0.3	-	0.5	0.2	1.3	3.0	2.7	5.8	3.9	3.4	5.8	1.7	5.0	1.7	1.7	1.5	1.1	0.1
C07	Parotid gland	**50**	-	-	-	-	-	0.5	-	0.2	0.2	0.9	1.0	1.8	1.3	2.4	3.7	3.4	5.0	3.5	0.9	0.7	0.5	0.1
C08	Salivary glands, NOS	**19**	-	-	-	-	-	-	-	0.2	0.4	-	0.5	0.9	1.0	1.4	0.8	1.1	-	-	0.3	0.3	0.2	0.0
C09	Tonsil	**151**	-	-	-	-	-	-	0.2	0.2	2.8	4.4	5.7	6.4	9.0	5.4	6.2	3.4	8.8	1.7	2.6	2.3	1.7	0.2
C10	Oropharynx	**74**	-	-	-	-	-	-	-	0.4	0.6	2.6	4.5	4.0	1.6	3.1	2.1	2.2	3.8	1.7	1.3	1.2	0.9	0.1
C11	Nasopharynx	**36**	0.6	-	-	0.3	0.5	0.3	0.7	0.6	0.2	0.5	0.8	1.2	0.7	1.4	1.7	0.6	3.8	-	0.6	0.6	0.5	0.1
C12	Pyriform sinus	**100**	-	-	-	-	-	-	-	0.2	1.3	2.8	3.7	7.0	4.2	4.1	5.4	1.7	2.5	-	1.7	1.6	1.2	0.1
C13	Hypopharynx	**63**	-	-	-	-	-	-	-	-	0.6	2.8	2.2	5.2	3.2	1.7	1.7	1.1	-	1.7	1.1	1.0	0.8	0.1
C14	Lip, oral cavity and pharynx, NOS	**48**	-	-	-	-	-	-	-	-	0.6	0.2	1.7	1.8	3.2	2.4	2.1	2.8	1.3	5.2	0.8	0.7	0.5	0.1
C15	Oesophagus	**713**	-	-	-	-	-	-	0.2	1.0	6.2	11.2	15.9	31.6	32.3	38.1	42.9	42.4	53.0	48.8	12.1	10.6	7.4	0.9
C16	Stomach	**1,015**	-	-	-	-	-	0.3	0.5	3.1	4.0	7.2	10.2	23.7	26.8	55.4	73.8	98.7	138.7	202.2	17.3	14.3	9.3	1.0
C17	Small intestine	**90**	-	-	-	-	-	-	-	0.4	1.1	0.7	1.2	2.4	2.6	4.8	5.4	8.4	11.4	13.9	1.5	1.3	0.9	0.1
C18	Colon	**2,733**	-	-	-	-	1.1	0.3	2.3	3.9	7.0	14.9	28.9	59.6	94.5	159.1	208.6	281.1	368.2	395.6	46.5	38.3	25.0	2.9
C19	Rectosigmoid junction	**336**	-	-	-	-	-	-	0.5	0.2	0.9	2.3	5.0	8.8	11.6	23.5	26.0	31.8	36.6	27.9	5.7	4.7	3.2	0.4
C20	Rectum	**1,526**	-	-	-	-	-	0.3	0.7	2.5	4.9	10.5	24.9	42.9	65.5	91.8	111.7	130.0	163.9	163.8	26.0	21.8	14.6	1.8
C21	Anus and anal canal	**39**	-	-	-	-	-	0.3	-	0.2	-	0.7	1.2	0.9	0.7	1.4	1.7	3.9	5.0	8.7	0.7	0.6	0.4	0.0
C22	Liver and intrahepatic bile ducts	**244**	0.3	-	0.3	-	0.3	-	0.7	0.4	0.9	2.1	3.0	6.4	10.0	12.9	19.4	21.2	30.3	20.9	4.2	3.5	2.4	0.3
C23	Gallbladder	**29**	-	-	-	-	-	-	-	-	-	0.2	-	-	1.0	1.0	2.1	5.0	6.3	5.2	0.5	0.4	0.2	0.0
C24	Biliary tract, NOS	**81**	-	-	-	-	-	-	-	-	0.2	0.7	1.2	2.1	1.6	7.5	4.5	7.3	8.8	12.2	1.4	1.2	0.8	0.1
C25	Pancreas	**519**	-	-	-	-	-	-	0.2	0.6	2.3	4.9	8.5	15.2	21.0	29.9	42.1	40.2	56.8	47.1	8.8	7.4	5.0	0.6
C26	Other ill-defined digestive organs	**17**	-	-	-	-	-	-	-	-	0.2	-	-	-	0.7	0.3	0.8	2.8	3.8	5.2	0.3	0.2	0.1	0.0
C30	Nasal cavity and middle ear	**23**	-	-	-	-	-	-	0.2	-	-	0.5	-	0.9	1.3	2.0	0.8	1.7	-	3.5	0.4	0.3	0.2	0.0
C31	Accessory sinuses	**74**	-	-	0.3	0.3	-	0.3	-	0.6	0.9	2.1	1.7	1.8	4.2	4.4	2.5	2.8	3.8	3.5	1.3	1.1	0.9	0.1
C32	Larynx	**680**	-	-	-	-	-	-	0.2	1.4	3.4	8.6	19.9	27.4	31.9	35.4	55.2	36.8	41.6	22.7	11.6	10.0	7.0	0.9
C33	Trachea	**8**	-	-	-	-	-	-	-	-	-	-	-	-	0.3	0.7	0.4	1.7	-	1.7	0.1	0.1	0.1	0.0
C34	Bronchus and lung	**6,081**	-	-	-	0.3	0.5	0.3	1.1	3.7	14.2	45.6	84.6	172.1	269.6	385.1	500.8	589.0	530.9	390.4	103.6	85.7	57.9	7.1
C37	Thymus	**12**	-	-	-	-	0.3	-	-	-	0.2	-	-	0.3	0.3	0.7	1.7	1.1	-	-	0.2	0.2	0.1	0.0
C38	Heart, mediastinum and pleura	**54**	-	-	-	-	0.3	0.3	0.2	0.6	0.4	0.7	1.0	0.3	1.3	2.4	4.1	5.0	5.0	7.0	0.9	0.8	0.5	0.1
C39	Respiratory system and intrathoracic organs, NOS	**1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	0.0	0.0	0.0	-
C40	Bone and articular cartilage of limbs	**45**	-	-	0.9	3.4	1.1	0.8	0.2	0.2	0.2	0.5	1.2	0.9	0.3	0.7	1.2	2.2	-	-	0.8	0.8	0.8	0.1
C41	Bone and articular cartilage, NOS	**43**	-	-	0.3	0.6	0.5	-	1.4	0.4	1.1	0.5	0.8	1.8	1.0	0.7	1.2	3.4	-	-	0.7	0.7	0.5	0.1
C43	Malignant melanoma of skin	**547**	-	-	0.3	0.8	2.2	4.4	5.7	8.6	8.5	11.2	10.0	17.0	19.7	23.5	22.3	24.0	21.4	40.1	9.3	8.3	6.3	0.7

MALES		Tot.	00-	05-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80-	85+	CR	ESR	WSR	CRi (0-74)
C44	Malignant neoplasms of skin	**1,461**	-	0.3	0.3	0.3	0.3	0.8	-	0.8	3.8	5.6	11.4	18.2	41.6	58.5	104.7	167.3	273.7	400.9	24.9	20.4	12.6	1.2
C45	Mesothelioma	**232**	-	-	-	-	-	-	-	-	0.4	1.4	5.0	6.4	10.3	14.3	20.2	17.9	25.2	13.9	4.0	3.3	2.2	0.3
C46	Kaposi's sarcoma	**7**	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	1.2	0.6	-	1.7	0.1	0.1	0.1	0.0
C48	Retroperitoneum and peritoneum	**36**	-	-	-	-	-	-	-	0.2	0.4	0.2	0.5	1.5	1.3	2.4	2.1	2.2	5.0	1.7	0.6	0.5	0.4	0.0
C47,C49	Soft tissue	**214**	0.6	0.6	0.9	1.4	1.4	2.1	1.8	3.5	2.5	5.1	2.5	3.7	5.2	6.8	14.0	10.0	11.4	19.2	3.6	3.2	2.6	0.3
C50	Breast	**108**	-	-	-	-	-	-	-	0.2	0.4	1.2	2.2	4.0	4.2	5.4	8.7	9.5	6.3	10.5	1.8	1.6	1.1	0.1
C60	Penis	**68**	-	-	-	-	-	-	-	0.4	0.2	1.4	0.8	1.8	2.3	1.0	5.0	5.0	11.4	17.4	1.2	1.0	0.7	0.1
C61	Prostate	**10,244**	-	-	-	0.3	-	0.3	-	-	2.8	19.3	77.6	232.9	465.4	732.1	901.5	984.5	1,055.5	1,188.6	174.5	142.7	94.2	11.5
C62	Testis	**260**	0.6	0.3	0.9	2.5	11.3	13.6	11.3	9.0	3.6	3.3	2.5	1.2	1.9	0.3	1.2	1.1	-	-	4.4	4.4	4.3	0.3
C63	Male genital organs, NOS	**10**	-	-	-	-	-	0.3	-	-	-	-	-	-	0.3	0.7	0.8	1.1	-	3.5	0.2	0.1	0.1	0.0
C64	Kidney	**957**	3.1	0.6	-	-	0.5	0.5	1.4	2.3	4.5	13.7	18.7	30.4	39.7	59.1	73.0	73.1	51.7	40.1	16.3	13.9	10.0	1.2
C65	Renal pelvis	**87**	-	-	-	-	-	-	-	-	-	0.2	0.3	1.5	5.2	5.1	6.6	11.7	7.6	10.5	1.5	1.2	0.8	0.1
C66	Ureter	**86**	-	-	-	-	-	-	-	-	0.2	0.2	0.5	1.2	2.6	4.8	7.0	12.8	11.4	12.2	1.5	1.2	0.7	0.1
C67	Bladder	**1,907**	-	-	-	-	-	-	0.5	1.8	3.2	9.3	11.2	41.4	66.4	98.6	171.5	210.9	248.4	301.5	32.5	26.4	17.0	2.0
C68	Urinary organs, NOS	**34**	-	-	-	-	-	-	-	-	0.2	-	0.5	0.3	2.3	1.7	3.3	3.4	1.3	5.2	0.6	0.5	0.3	0.0
C69	Eye and adnexa	**57**	0.6	0.3	0.3	0.3	-	0.5	-	0.6	0.2	0.9	0.8	1.2	1.3	2.7	1.2	3.4	8.8	12.2	1.0	0.9	0.7	0.1
C70	Meninges	**11**	0.3	-	-	0.3	-	-	-	-	-	-	-	0.3	0.7	-	1.2	-	2.5	1.7	0.2	0.2	0.2	0.0
C71	Brain	**457**	3.7	3.1	3.4	2.0	4.0	5.2	5.7	4.9	4.7	7.0	7.7	11.6	18.4	17.7	17.3	21.8	13.9	15.7	7.8	7.2	6.1	0.6
C72	Spinal cord, cranial nerves and CNS, NOS	**14**	0.3	0.9	0.3	0.3	-	-	0.2	0.2	0.2	-	0.8	-	-	0.3	-	0.6	-	-	0.2	0.3	0.3	0.0
C73	Thyroid gland	**104**	-	-	0.3	-	0.3	0.8	2.0	1.2	2.1	1.2	2.7	4.0	2.9	3.4	4.5	4.5	6.3	3.5	1.8	1.6	1.2	0.1
C74	Adrenal gland	**18**	1.2	0.3	-	-	-	0.3	-	0.2	0.4	0.2	0.3	0.3	0.7	-	1.2	-	1.3	-	0.3	0.3	0.3	0.0
C75	Endocrine glands, NOS	**9**	-	-	-	-	0.5	0.3	-	0.2	0.2	0.2	-	-	0.3	0.3	-	0.6	-	-	0.2	0.1	0.1	0.0
C81	Hodgkin's disease	**150**	-	0.6	2.8	3.1	5.7	3.4	3.4	2.3	4.2	1.4	2.5	1.5	2.3	1.0	2.9	2.2	3.8	3.5	2.6	2.5	2.4	0.2
C82-85	Non-Hodgkin-lymphoma	**959**	1.9	0.9	1.1	2.5	2.2	2.4	5.4	8.2	10.2	12.3	19.7	25.8	33.9	45.9	51.1	66.4	87.0	68.0	16.3	14.2	10.4	1.1
C88	Malignant immunoproliferative diseases	**22**	-	-	-	-	-	-	-	-	-	-	0.5	0.6	1.0	1.4	0.8	2.2	3.8	3.5	0.4	0.3	0.2	0.0
C90	Multiple myeloma	**389**	-	-	-	-	-	-	0.2	0.8	1.3	3.5	6.7	11.3	12.3	21.1	27.6	35.1	49.2	52.3	6.6	5.6	3.7	0.4
C91	Lymphoid leukaemia	**470**	4.9	2.0	2.3	2.2	1.1	0.8	1.1	2.0	1.9	4.2	7.7	10.3	13.9	24.5	34.6	28.5	51.7	45.3	8.0	7.0	5.5	0.6
C92	Myeloid leukaemia	**343**	1.9	0.6	1.1	0.6	0.3	1.8	1.6	2.3	3.6	3.3	4.2	7.3	11.9	17.3	23.5	23.4	31.5	33.1	5.8	5.0	3.8	0.4
C93	Monocytic leukaemia	**13**	-	-	-	-	0.3	0.3	0.2	0.2	-	0.2	0.3	-	0.3	0.3	1.2	0.6	1.3	-	0.2	0.2	0.2	0.0
C94-C95	Leukaemia other	**47**	0.6	-	-	-	-	0.3	-	-	0.2	-	0.5	1.5	1.0	3.7	2.9	4.5	5.0	5.2	0.8	0.7	0.5	0.1
C96	Lymphoid, haematopoietic and related tissue, NOS	**19**	0.9	-	0.3	0.8	0.5	0.5	0.2	-	-	0.5	-	-	-	0.3	0.4	1.1	1.3	-	0.3	0.3	0.4	0.0
C76	Other and ill-defined sites	**29**	0.3	-	-	0.6	0.3	-	-	-	0.2	0.2	1.0	1.5	0.7	1.7	1.7	1.7	-	-	0.5	0.5	0.4	0.0
C80	Unknown primary site	**1,181**	-	-	0.3	0.3	0.5	1.3	1.4	1.6	3.0	11.2	15.9	27.4	44.5	63.9	99.3	99.3	147.6	139.4	20.1	16.7	11.2	1.3
Total		**36,070**	**21.9**	**10.2**	**16.1**	**23.4**	**36.4**	**43.3**	**52.5**	**73.6**	**124.5**	**262.4**	**466.2**	**924.0**	**1,441.3**	**2,125.0**	**2,775.9**	**3,185.1**	**3,668.5**	**3,879.5**	**614.2**	**514.3**	**351.1**	**34.3**
Total excl. non-melanoma		**34,609**	**21.9**	**9.9**	**15.8**	**23.2**	**36.1**	**42.5**	**52.5**	**72.7**	**120.6**	**256.8**	**454.8**	**905.8**	**1,399.7**	**2,066.6**	**2,671.2**	**3,017.7**	**3,394.8**	**3,478.7**	**589.4**	**493.9**	**338.5**	**33.5**

CR: crude (all ages) incidence rate (n/100,000 person years)

ESR and WSR: age standardised incidence rate, using the European or World Standard Population (n/100,000 person years)

CRi: cumulative risk (0-74 years)

7.6 Females, age-specific and age-standardised incidence rates per localisation and age group in 2000-2001

FEMALES		Tot.	00-	05-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80-	85+	CR	ESR	WSR	CRi (0-74)
C00	Lip	**46**	-	-	-	-	-	-	-	-	0.4	0.2	0.3	-	0.6	2.5	3.0	3.2	2.9	7.3	0.8	0.5	0.3	-
C01	Base of tongue	**16**	-	-	-	-	-	-	-	-	0.4	0.5	0.8	1.5	0.6	-	0.3	-	0.7	-	0.3	0.3	0.2	-
C02	Tongue	**56**	-	-	-	-	-	0.3	-	-	0.4	1.7	1.3	1.2	0.9	0.9	2.0	3.6	6.6	4.6	0.9	0.7	0.5	-
C03	Gum	**9**	-	-	-	-	-	-	-	-	-	-	-	0.6	-	0.6	1.0	0.4	-	0.7	0.2	0.1	0.1	-
C04	Floor of mouth	**29**	-	-	-	-	-	-	-	0.2	0.2	1.0	1.3	1.2	1.2	0.9	0.7	0.8	2.2	-	0.5	0.4	0.3	-
C05	Palate	**26**	-	-	-	-	-	-	0.2	-	-	0.5	1.5	2.2	-	0.9	1.3	0.8	0.7	-	0.4	0.4	0.3	-
C06	Mouth, NOS	**37**	-	-	-	-	-	-	-	0.2	-	-	1.3	1.2	0.9	1.2	3.7	1.2	1.5	2.7	0.6	0.5	0.3	-
C07	Parotid gland	**38**	-	-	-	-	-	-	-	-	0.7	0.5	0.5	0.6	1.2	2.2	1.7	1.6	2.2	4.0	0.6	0.4	0.3	-
C08	Salivary glands, NOS	**15**	-	-	-	-	-	-	0.2	0.2	0.2	0.2	0.3	0.3	0.6	0.3	0.7	0.8	-	1.3	0.3	0.2	0.1	-
C09	Tonsil	**46**	-	-	-	-	-	-	-	0.4	0.4	2.2	2.1	1.2	2.2	0.9	2.0	1.2	1.5	-	0.8	0.7	0.5	0.1
C10	Oropharynx	**16**	-	-	-	-	-	-	-	0.2	0.7	0.2	0.5	0.6	0.6	0.3	0.3	0.8	0.7	-	0.3	0.2	0.2	-
C11	Nasopharynx	**9**	-	-	-	-	0.3	-	0.2	-	0.2	0.2	-	0.3	-	0.6	-	0.4	-	0.7	0.2	0.1	0.1	-
C12	Pyriform sinus	**11**	-	-	-	-	-	-	-	-	-	0.2	0.5	0.9	-	0.3	0.7	0.4	-	0.7	0.2	0.2	0.1	-
C13	Hypopharynx	**11**	-	-	-	-	-	-	-	-	-	-	-	1.2	0.6	0.6	0.7	0.4	-	-	0.2	0.2	0.1	-
C14	Lip, oral cavity and pharynx, NOS	**8**	-	-	-	-	-	-	-	-	-	-	0.8	0.3	0.3	0.3	-	0.4	-	0.7	0.1	0.1	0.1	-
C15	Oesophagus	**204**	-	-	-	0.3	-	-	-	0.6	0.9	1.5	2.6	6.1	5.9	9.5	10.7	12.6	19.7	12.6	3.4	2.4	1.6	0.2
C16	Stomach	**663**	-	-	-	0.3	0.3	0.8	1.6	1.9	1.8	4.1	4.4	8.3	14.3	21.8	29.2	46.2	70.6	102.7	11.0	6.7	4.4	0.4
C17	Small intestine	**86**	-	-	-	-	-	-	1.2	0.2	0.7	1.0	1.0	2.2	1.9	2.2	4.0	5.5	8.0	8.0	1.4	1.0	0.7	0.1
C18	Colon	**2,623**	-	0.3	0.6	0.6	0.8	1.1	1.2	4.0	8.1	17.4	28.5	36.5	66.3	105.2	139.2	199.5	257.8	276.3	43.5	27.6	18.3	2.0
C19	Rectosigmoid junction	**232**	-	-	-	-	-	-	0.5	-	1.8	1.0	3.9	6.4	8.7	12.3	10.4	16.6	15.3	13.3	3.8	2.7	1.9	0.2
C20	Rectum	**1,063**	-	-	-	-	0.6	-	1.4	1.5	4.0	8.2	16.4	30.1	32.2	46.0	50.3	70.3	89.6	85.5	17.6	12.2	8.2	1.0
C21	Anus and anal canal	**58**	-	-	-	-	-	-	-	-	1.1	0.7	1.5	1.8	1.2	2.5	1.0	4.0	4.4	4.6	1.0	0.7	0.5	0.1
C22	Liver and intrahepatic bile ducts	**189**	1.0	-	0.3	-	-	0.3	-	-	-	1.7	1.8	2.5	7.8	4.0	12.1	11.5	21.1	19.9	3.1	2.1	1.4	0.2
C23	Gallbladder	**87**	-	-	-	-	-	-	-	-	0.2	0.5	1.0	0.6	4.3	2.8	5.0	9.1	5.8	6.0	1.4	0.9	0.6	0.1
C24	Biliary tract, NOS	**68**	-	-	-	-	-	-	-	-	-	1.2	-	0.9	1.2	3.7	4.4	5.9	5.8	5.3	1.1	0.7	0.5	0.1
C25	Pancreas	**497**	-	-	-	-	-	-	0.5	0.4	2.4	3.1	8.0	9.5	14.6	19.6	27.9	32.4	40.8	49.7	8.2	5.5	3.7	0.4
C26	Other ill-defined digestive organs	**8**	-	-	-	-	-	-	-	-	-	-	-	0.3	-	0.3	0.7	0.8	0.7	0.7	0.1	0.1	0.1	-
C30	Nasal cavity and middle ear	**3**	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	1.5	-	0.1	-	-	-
C31	Accessory sinuses	**19**	-	-	-	-	0.6	-	0.2	-	0.2	0.2	0.3	0.3	-	0.3	1.7	1.6	0.7	0.7	0.3	0.2	0.2	-
C32	Larynx	**72**	-	-	-	-	-	0.3	-	-	1.1	1.7	1.8	3.4	2.8	3.7	1.3	4.3	2.9	0.7	1.2	1.0	0.7	0.1
C33	Trachea	**3**	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	0.3	-	0.7	-	0.1	-	-	-
C34	Bronchus and lung	**1,212**	-	-	-	-	0.3	0.3	1.2	3.2	8.3	20.7	30.0	38.1	44.0	60.1	64.1	64.8	49.5	42.4	20.1	15.5	11.0	1.3
C37	Thymus	**16**	-	0.3	-	-	-	-	0.2	-	-	-	0.5	1.2	0.9	0.3	0.3	0.8	0.7	-	0.3	0.2	0.2	-
C38	Heart, mediastinum and pleura	**52**	0.6	-	-	-	-	0.3	0.2	0.6	0.2	0.5	0.3	0.6	0.9	1.5	2.0	1.6	5.1	9.3	0.9	0.6	0.4	-
C39	Respiratory system and intrathoracic organs, NOS	**1**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	-	-	-	-	-	-
C40	Bone and articular cartilage of limbs	**38**	-	-	0.9	0.6	0.6	0.3	1.4	-	0.4	1.7	0.8	-	1.2	0.6	0.3	0.4	2.9	-	0.6	0.6	0.5	-
C41	Bone and articular cartilage, NOS	**26**	-	-	0.6	-	0.6	-	0.5	0.6	1.1	0.2	1.0	0.6	-	0.3	0.3	1.2	-	-	0.4	0.4	0.4	-
C43	Malignant melanoma of skin	**865**	0.6	0.3	0.3	2.9	7.0	12.1	14.5	15.8	14.7	18.1	16.7	18.7	24.2	27.3	22.8	26.5	19.7	31.1	14.3	12.4	10.1	1.0
C44	Malignant neoplasms of skin	**964**	-	0.3	-	0.6	0.8	0.5	1.6	1.7	3.1	4.3	5.7	10.1	21.4	28.2	41.9	59.2	91.0	194.2	16.0	9.4	6.1	0.6

FEMALES		Tot.	00-	05-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80-	85+	CR	ESR	WSR	CRi (0-74)
C45	Mesothelioma	**35**	-	-	-	-	-	0.3	0.2	0.4	-	0.2	1.3	0.6	0.3	2.5	1.3	2.0	-	3.3	0.6	0.4	0.3	-
C46	Kaposi's sarcoma	**5**	-	-	-	-	-	0.3	-	-	-	0.2	-	-	0.3	0.3	0.3	-	-	-	0.1	0.1	0.1	-
C48	Retroperitoneum and peritoneum	**62**	-	-	-	-	-	0.5	-	0.4	0.2	1.5	1.0	0.9	1.9	4.3	2.7	2.4	3.6	3.3	1.0	0.8	0.6	0.1
C47,C49	Soft tissue	**183**	1.3	0.9	0.9	0.6	2.5	1.6	1.6	2.5	2.2	2.7	2.8	4.6	3.4	3.4	7.7	6.3	8.7	11.3	3.0	2.5	2.1	0.2
C50	Breast	**10,240**	-	-	-	1.5	2.2	14.0	33.2	83.2	156.3	267.2	333.6	379.0	408.5	374.3	327.5	353.5	311.7	295.5	169.6	143.5	106.4	11.2
C51	Vulva	**165**	-	-	-	-	0.3	-	0.5	0.4	0.4	1.5	2.6	2.5	5.6	3.7	7.7	12.6	16.0	17.9	2.7	1.8	1.2	0.1
C52	Vagina	**55**	-	-	-	-	0.3	-	-	-	1.1	1.0	0.3	1.5	1.6	1.5	3.4	2.4	3.6	5.3	0.9	0.7	0.5	0.1
C53	Cervix uteri	**803**	-	-	-	0.3	1.1	7.2	11.7	21.3	21.7	26.5	17.0	21.2	15.2	18.1	21.8	20.9	11.7	22.5	13.3	11.7	9.2	0.9
C54	Corpus uteri	**1,544**	-	-	-	-	-	0.5	0.7	2.5	4.0	11.1	27.7	59.2	83.4	88.4	76.8	84.5	67.7	45.7	25.6	19.6	13.8	1.8
C55	Uterus	**63**	-	-	-	-	-	0.3	0.5	0.4	1.1	0.7	1.3	3.1	1.9	3.1	1.0	2.4	3.6	3.3	1.0	0.9	0.6	0.1
C56	Ovary	**1,221**	-	-	0.3	0.9	2.8	4.0	2.3	6.3	12.7	19.0	28.8	36.8	43.7	56.2	51.7	61.2	61.9	43.1	20.2	15.9	11.6	1.3
C57	Female genital organs, NOS	**28**	-	-	-	-	-	0.3	0.5	-	0.2	0.7	0.5	0.9	0.3	0.6	2.4	0.8	2.2	0.7	0.5	0.4	0.3	-
C58	Placenta	**1**	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C64	Kidney	**560**	2.9	0.6	0.3	0.6	0.6	1.1	1.4	2.3	3.1	4.8	5.9	19.6	18.9	26.4	30.2	32.4	39.3	19.2	9.3	7.0	5.2	0.6
C65	Renal pelvis	**34**	-	-	-	-	-	-	-	-	-	-	-	0.3	0.6	1.8	3.7	2.8	2.2	2.7	0.6	0.3	0.2	-
C66	Ureter	**40**	-	-	-	-	-	-	-	-	0.2	0.2	-	0.9	0.6	1.8	3.0	3.6	2.9	3.3	0.7	0.4	0.3	-
C67	Bladder	**494**	-	-	-	-	0.3	0.3	-	0.6	1.1	2.2	1.5	7.1	10.5	15.0	27.2	45.0	45.2	70.2	8.2	4.8	3.1	0.3
C68	Urinary organs, NOS	**11**	-	-	-	-	-	-	-	0.2	-	-	0.3	1.2	-	0.3	-	0.8	0.7	0.7	0.2	0.2	0.1	-
C69	Eye and adnexa	**51**	0.3	-	-	-	-	-	-	0.2	0.4	1.2	1.3	1.2	0.6	2.5	3.0	2.4	2.2	3.3	0.8	0.6	0.5	0.1
C70	Meninges	**15**	0.3	0.3	-	-	-	0.5	-	-	0.2	0.7	0.3	0.3	0.3	0.6	0.3	-	0.7	-	0.3	0.2	0.2	-
C71	Brain	**376**	2.9	3.6	2.4	2.1	2.0	4.3	3.7	3.4	6.1	4.8	6.2	8.6	14.0	13.8	13.1	12.6	14.6	2.7	6.2	5.5	4.8	0.5
C72	Spinal cord, cranial nerves and CNS, NOS	**13**	1.0	-	0.6	-	-	-	-	0.2	0.4	-	-	0.3	-	-	1.0	0.4	-	-	0.2	0.2	0.2	-
C73	Thyroid gland	**270**	-	-	0.3	-	2.0	3.2	3.5	4.2	5.9	5.5	5.9	9.8	7.4	7.4	9.4	6.7	7.3	4.6	4.5	3.9	3.1	0.3
C74	Adrenal gland	**28**	2.3	-	-	-	0.3	-	0.2	0.2	0.7	0.5	0.5	0.3	0.3	0.6	1.7	0.4	-	0.7	0.5	0.5	0.5	-
C75	Endocrine glands, NOS	**6**	-	-	-	-	0.3	-	0.2	-	0.2	-	0.3	-	0.3	-	-	0.4	-	-	0.1	0.1	0.1	-
C81	Hodgkin's disease	**147**	-	0.3	1.8	3.2	7.0	3.8	3.5	3.4	2.6	2.7	1.5	0.6	1.2	1.8	2.4	3.6	1.5	-	2.4	2.4	2.4	0.2
C82-85	Non-Hodgkin-lymphoma	**877**	0.6	0.9	0.6	0.9	1.7	2.7	3.7	3.0	4.4	10.1	15.2	18.4	29.8	36.8	43.0	51.0	57.5	58.3	14.5	10.6	7.7	0.9
C88	Malignant immunoproliferative diseases	**12**	-	-	-	-	-	-	-	-	-	0.2	-	0.3	-	0.3	1.0	0.8	-	2.7	0.2	0.1	0.1	-
C90	Multiple myeloma	**372**	-	-	-	-	-	-	0.5	0.4	1.1	4.3	5.9	7.7	9.9	16.6	22.1	28.8	28.4	21.9	6.2	4.2	2.9	0.3
C91	Lymphoid leukaemia	**288**	4.2	2.7	1.8	1.2	0.8	0.3	1.2	0.6	0.7	2.2	4.4	6.8	7.4	8.0	15.1	15.0	18.9	22.5	4.8	3.7	3.1	0.3
C92	Myeloid leukaemia	**302**	1.0	0.6	0.3	1.2	0.6	2.4	1.4	1.5	4.4	1.9	3.9	6.8	7.8	8.6	15.1	18.2	15.3	25.2	5.0	3.7	2.8	0.3
C93	Monocytic leukaemia	**10**	0.6	-	-	0.3	-	0.3	-	0.2	0.2	-	-	0.3	-	0.3	-	0.8	-	-	0.2	0.2	0.2	-
C94-C95	Leukaemia other	**54**	0.3	-	-	-	0.6	-	0.2	0.2	0.2	0.2	0.5	1.2	0.9	0.9	2.7	3.2	5.8	7.3	0.9	0.6	0.4	-
C96	Lymphoid, haematopoietic and related tissue, NOS	**18**	1.0	0.9	0.3	0.6	0.3	-	0.2	-	0.2	0.2	0.3	-	0.3	0.6	-	-	-	0.7	0.3	0.3	0.4	-
C76	Other and ill-defined sites	**44**	0.6	0.3	-	-	-	0.3	-	0.2	0.4	0.7	0.8	0.9	1.6	1.8	0.3	1.6	1.5	6.6	0.7	0.6	0.5	-
C80	Unknown primary site	**1,122**	0.6	0.3	0.0	0.3	1.7	4.3	4.9	6.8	6.8	10.8	15.7	23.3	31.3	39.3	57.7	62.4	85.9	101.4	18.6	13.1	9.2	1.0
Total		**28,971**	**22.2**	**12.4**	**12.2**	**19.0**	**38.6**	**68.4**	**102.9**	**177.2**	**293.4**	**481.0**	**624.0**	**818.0**	**973.5**	**1,106.7**	**1,204.5**	**1,432.5**	**1,554.0**	**1,691.1**	**479.9**	**369.1**	**269.2**	**25.8**
Total excl. non-melanoma		**28,007**	**22.2**	**12.1**	**12.2**	**18.4**	**37.8**	**67.9**	**101.2**	**175.5**	**290.3**	**476.6**	**618.4**	**807.9**	**952.1**	**1,078.5**	**1,162.6**	**1,373.3**	**1,463.0**	**1,496.9**	**463.9**	**359.7**	**263.2**	**25.3**

CR: crude (all ages) incidence rate (n/100,000 person years)

ESR and WSR: age standardised incidence rate, using the European or World Standard Population (n/100,000 person years)

CRi: cumulative risk (0-74 years)

Appendix 8: Cancer incidence in children per gender, age group and histological type, 1997-2001

		Boys												Girls										
			n				n/1,000,000						CRi		n				n/1,000,000						CRi
		Tot.	0-	1-	5-	10-	00-	05-	10-	CR	ESR	WSR	0-14	Tot.	0-	1-	5-	10-	00-	05-	10-	CR	ESR	WSR	0-14
Ia	Lymphoid leukaemia	73	2	34	19	18	43.6	21.3	20.5	28.1	29.2	29.7	0.043	70	3	33	25	9	45.5	29.3	10.8	28.2	29.3	30.2	0.043
Ib	Acute non-lymphocytic leukaemia	16	-	5	3	8	6.1	3.4	9.1	6.2	6.2	6.1	0.009	14	3	6	3	2	11.4	3.5	2.4	5.7	6.0	6.2	0.009
Ic	Chronic myeloid leukaemia	7	1	3	2	1	4.9	2.2	1.1	2.7	2.8	2.9	0.004	3	-	-	2	1	-	2.3	1.2	1.2	1.1	1.1	0.002
Id	Other specified leukaemias	1	-	-	-	1	-	-	1.1	0.4	0.4	0.3	0.001	-	-	-	-	-	-	-	-	-	-	-	-
Ie	Unspecified leukaemias	5	1	4	-	-	6.1	-	-	1.9	2.2	2.4	0.003	1	-	1	-	-	1.3	-	-	0.4	0.5	0.5	0.001
IIa	Hodgkin's disease	33	-	1	11	21	1.2	12.3	24.0	12.7	12.0	11.4	0.019	13	-	-	1	12	-	1.2	14.4	5.2	5.0	4.6	0.008
IIb	Non-Hodgkin lymphomas	26	-	4	8	14	4.9	9.0	16.0	10.0	9.7	9.4	0.015	10	1	1	6	2	2.5	7.0	2.4	4.0	3.9	3.9	0.006
IIc	Burkitt's lymphoma	11	-	4	3	4	4.9	3.4	4.6	4.2	4.3	4.3	0.006	3	-	1	1	1	1.3	1.2	1.2	1.2	1.2	1.2	0.002
IId	Miscellaneous lymphoreticular neoplasms	17	6	8	2	1	17.0	2.2	1.1	6.6	7.3	7.6	0.01	10	3	3	3	1	7.6	3.5	1.2	4.0	4.3	4.4	0.006
IIe	Unspecified lymphomas	3	-	2	-	1	2.4	-	1.1	1.2	1.2	1.3	0.002	2	-	1	1	-	1.3	1.2	-	0.8	0.8	0.9	0.001
IIIa	Ependymoma	9	1	3	1	4	4.9	1.1	4.6	3.5	3.6	3.6	0.005	9	-	2	6	1	2.5	7.0	1.2	3.6	3.5	3.6	0.005
IIIb	Astrocytoma	43	1	9	10	23	12.1	11.2	26.2	16.6	16.3	15.9	0.025	50	1	15	15	19	20.2	17.6	22.8	20.2	20.2	20.1	0.030
IIIc	Primitive neuroectodermal tumours	19	1	4	9	5	6.1	10.1	5.7	7.3	7.2	7.3	0.011	16	1	4	8	3	6.3	9.4	3.6	6.5	6.4	6.5	0.01
IIId	Other gliomas	3	-	2	1	-	2.4	1.1	-	1.2	1.2	1.3	0.002	7	-	1	2	4	1.3	2.3	4.8	2.8	2.7	2.6	0.004
IIIe	Other specified intracranial and intraspinal neoplasms	2	-	1	1	-	1.2	1.1	-	0.8	0.8	0.8	0.001	-	-	-	-	-	-	-	-	-	-	-	-
IIIf	Unspecified intracranial and intraspinal neoplasms	1	-	-	1	-	-	1.1	-	0.4	0.4	0.4	0.001	-	-	-	-	-	-	-	-	-	-	-	-
IVa	Neuroblastoma and ganglioneuroblastoma	26	10	14	2	-	29.1	2.2	-	10.0	11.3	12.0	0.016	28	9	17	2	-	32.9	2.3	-	11.3	12.7	13.5	0.018
V	Retinoblastoma	5	1	3	1	-	4.9	1.1	-	1.9	2.1	2.2	0.003	5	2	1	2	-	3.8	2.3	-	2.0	2.1	2.2	0.003
VIa	Wilms' tumour, rhabdoid and clear cell sarcoma of kidney	21	2	15	4	-	20.6	4.5	-	8.1	8.9	9.4	0.013	24	2	17	4	1	24.0	4.7	1.2	9.7	10.6	11.2	0.015
VIb	Renal carcinoma	1	-	-	1	-	-	1.1	-	0.4	0.4	0.4	0.001	3	1	1	1	-	2.5	1.2	-	1.2	1.3	1.4	0.002
VIIa	Hepatoblastoma	4	1	3	-	-	4.9	-	-	1.5	1.8	1.9	0.002	5	1	3	-	1	5.1	-	1.2	2.0	2.2	2.3	0.003
VIIb	Hepatic carcinoma	1	-	-	-	1	-	-	1.1	0.4	0.4	0.3	0.001	1	-	-	1	-	-	1.2	-	0.4	0.4	0.4	0.001
VIIIa	Osteosarcoma	6	-	-	-	6	-	-	6.8	2.3	2.2	2.0	0.003	6	-	-	-	6	-	-	7.2	2.4	2.3	2.1	0.004
VIIIb	Chondrosarcoma	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2	-	-	2.4	0.8	0.8	0.7	0.001
VIIIc	Ewing's sarcoma	8	-	1	3	4	1.2	3.4	4.6	3.1	3.0	2.9	0.005	7	-	-	2	5	-	2.3	6.0	2.8	2.7	2.5	0.004
VIIId	Other specified malignant bone tumours	1	-	-	-	1	-	-	1.1	0.4	0.4	0.3	0.001	-	-	-	-	-	-	-	-	-	-	-	-
IXa	Rhabdomyosarcoma and embryonal sarcoma	22	-	9	11	2	10.9	12.3	2.3	8.5	8.6	8.9	0.013	11	-	5	3	3	6.3	3.5	3.6	4.4	4.6	4.6	0.007
IXb	Fibrosarcoma, neurofibrosarcoma and other fibromatous neoplasms	7	1	2	2	2	3.6	2.2	2.3	2.7	2.8	2.8	0.004	7	1	1	3	2	2.5	3.5	2.4	2.8	2.8	2.8	0.004
IXd	Other specified soft tissue sarcomas	7	-	1	2	4	1.2	2.2	4.6	2.7	2.6	2.5	0.004	10	2	2	2	4	5.1	2.3	4.8	4.0	4.1	4.1	0.006
IXe	Unspecified soft tissue sarcomas	3	1	-	1	1	1.2	1.1	1.1	1.2	1.2	1.2	0.002	3	1	2	-	-	3.8	-	-	1.2	1.4	1.5	0.002
Xa	Intracranial and intraspinal germ cell tumours	4	-	1	-	3	1.2	-	3.4	1.5	1.5	1.5	0.002	1	-	-	-	1	-	-	1.2	0.4	0.4	0.4	0.001
Xb	Other and unspecified non gonadal germ cell tumours	3	1	1	-	1	2.4	-	1.1	1.2	1.2	1.3	0.002	6	2	4	-	-	7.6	-	-	2.4	2.8	2.9	0.004
Xc	Gonadal germ cell tumours	7	2	1	-	4	3.6	-	4.6	2.7	2.8	2.7	0.004	4	-	1	1	2	1.3	1.2	2.4	1.6	1.6	1.6	0.002
Xe	Other and unspecified gonadal tumours	2	-	1	-	1	1.2	-	1.1	0.8	0.8	0.8	0.001	1	-	-	-	1	-	-	1.2	0.4	0.4	0.4	0.001
XIa	Adrenocortical carcinoma	1	-	-	1	-	-	1.1	-	0.4	0.4	0.4	0.001	-	-	-	-	-	-	-	-	-	-	-	-
XIb	Thyroid carcinoma	2	-	-	1	1	-	1.1	1.1	0.8	0.7	0.7	0.001	4	-	-	-	4	-	-	4.8	1.6	1.5	1.4	0.002
XId	Malignant melanoma	3	-	1	-	2	1.2	-	2.3	1.2	1.2	1.1	0.002	6	-	3	1	2	3.8	1.2	2.4	2.4	2.5	2.5	0.004
XIe	Skin carcinoma	1	-	-	-	1	-	-	1.1	0.4	0.4	0.3	0.001	2	-	-	1	1	-	1.2	1.2	0.8	0.8	0.7	0.001
XIf	Other and unspecified carcinomas	6	-	-	2	4	-	2.2	4.6	2.3	2.2	2.1	0.003	11	-	-	4	7	-	4.7	8.4	4.4	4.2	4.0	0.007
XIIa	Other specified malignant tumours	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	1.3	-	-	0.4	0.5	0.5	0.001
XIIb	Other unspecified malignant tumours	7	1	2	2	2	3.6	2.2	2.3	2.7	2.8	2.8	0.004	4	1	2	1	-	3.8	1.2	-	1.6	1.8	1.9	0.002
I-XII	**Total**	**417**	**33**	**139**	**104**	**141**	**208.5**	**116.3**	**160.8**	**160.7**	**164.0**	**164.9**	**0.243**	**360**	**34**	**128**	**101**	**97**	**204.8**	**118.2**	**116.4**	**145.2**	**149.1**	**151.2**	**0.219**

CR: crude (all ages) incidence rate (n/1,000,000 person years)
ESR and WSR: age standardised incidence rate, using the European or World Standard Population (n/1,000,000 person years)
CRi: cumulative risk (0-14 years)

Appendix 9: TNM staging of breast cancer and malignant melanoma

1. **General rules to determine the TNM stage**
   1. If cTNM and pTNM have both been filled in, pTNM is adopted to determine the stage, unless cM is equal to 1. In this case, stage 4 is applicable.
   2. If only pTNM has been filled in, the stage is based on this.
   3. If only cTNM has only been filled in, the stage is based on this.
   4. If cTNM and pTNM are both missing, then no stage can be determined.

2. **Conversion rules of T, N and M categories into stage**
   The rules are as follows:

COLORECTAL CANCER

Stage	T	N	M
0	is	0,X	0,X
I	1,2	0,X	0,X
II	3,4	0,X	0,X
III	any	1,2	0,X
IV	any	any	1

BREAST CANCER

Stage	T	N	M
0	is	0, X	0, X
I	1	0, X	0, X
IIA	0, 1	1	0, X
	2	0, X	0, X
IIB	2	1	0, X
	3	0, X	0, X
IIIA	0,1,2	2	0, X
	3	1, 2	0, X
IIIB	4	any	0, X
	any	3	0, X
IV	any	any	1

MALIGNANT MELANOMAS

Stage	T	N	M
0	is	0, X	0, X
I	1, 2	0, X	0, X
II	3	0, X	0, X
III	4	0, X	0, X
	any	1, 2	0, X
IV	any	any	1

Appendix 10: Survival in Flanders

10.1 Males, invasive tumours: absolute numbers per localisation, 1, 3 and 5-year observed survival, 5-year relative survival, 1997-2001

MALES	Cancer		Observed survival			Relative survival	Death
	N	%	1 year	3 year	5 year	5 year	N
C00 Lip	218	0.29	90.8	76.1	67.2	86.0	63
C01 Base of tongue	139	0.18	72.7	45.5	36.9	41.0	81
C02 Tongue	345	0.45	76.2	50.5	41.4	45.7	186
C03 Gum	37	0.05	70.3	53.2	53.2	59.6	17
C04 Floor of mouth	363	0.48	74.7	50.7	39.8	42.7	201
C05 Palate	117	0.15	81.2	60.1	46.7	51.4	56
C06 Mouth, NOS	196	0.26	74.0	51.4	43.0	48.1	104
C07 Parotid gland	131	0.17	82.4	63.5	48.3	54.8	60
C08 Salivary glands, NOS	50	0.07	80.0	65.8	58.5	67.1	19
C09 Tonsil	338	0.44	70.7	44.4	35.6	38.5	204
C10 Oropharynx	153	0.20	61.4	31.5	20.1	22.0	112
C11 Nasopharynx	72	0.09	84.7	62.9	46.9	50.3	32
C12 Pyriform sinus	221	0.29	68.8	34.9	27.8	30.3	150
C13 Hypopharynx	128	0.17	58.6	32.0	26.0	27.9	91
C14 Lip, oral cavity and pharynx, NOS	92	0.12	54.4	28.9	20.7	23.0	69
C15 Oesophagus	1,474	1.94	47.3	23.8	17.2	19.4	1,170
C16 Stomach	2,316	3.05	46.9	26.8	21.1	26.6	1,762
C17 Small intestine	199	0.26	69.4	54.2	49.4	57.3	96
C18 Colon	5,623	7.40	71.7	53.3	44.6	56.4	2,848
C19 Rectosigmoid junction	745	0.98	80.1	59.2	46.1	57.9	354
C20 Rectum	3,472	4.57	79.7	58.6	47.0	57.0	1,652
C21 Anus and anal canal	104	0.14	78.9	62.0	54.9	63.9	44
C22 Liver and intrahepatic bile ducts	569	0.75	33.6	15.3	10.8	12.6	491
C23 Gallbladder	66	0.09	37.9	25.4	15.4	21.5	53
C24 Biliary tract, NOS	179	0.24	51.4	28.5	22.8	28.2	133
C25 Pancreas	1,213	1.60	25.1	8.6	6.6	7.8	1,119
C26 Other ill-defined digestive organs	36	0.05	33.3	19.0	15.6	18.0	30
C30 Nasal cavity and middle ear	50	0.07	84.0	65.7	65.7	79.0	17
C31 Accessory sinuses	192	0.25	72.9	54.5	42.4	47.4	99
C32 Larynx	1,564	2.06	82.4	62.0	51.7	59.4	680
C33 Trachea	24	0.03	20.8	16.7	16.7	19.4	20
C34 Bronchus and lung	14,357	18.88	37.5	16.4	12.2	14.5	12,326
C37 Thymus	28	0.04	85.7	74.1	64.3	72.0	9
C38 Heart, mediastinum and pleura	148	0.19	38.5	14.3	11.2	12.6	129
C39 Respiratory system and intrathoracic organs, NOS	1	0.00	-	-	-	-	1
C40 Bone and articular cartilage of limbs	106	0.14	84.0	61.2	57.9	61.8	42
C41 Bone and articular cartilage, NOS	90	0.12	76.7	61.2	53.7	57.0	37
C43 Malignant melanoma of skin	1,092	1.44	85.6	70.6	61.6	68.8	370

MALES	Cancer		Observed survival			Relative survival	Death
	N	%	1 year	3 year	5 year	5 year	N
C45 Mesothelioma	478	0.63	36.4	8.8	7.5	8.5	438
C46 Kaposi's sarcoma	23	0.03	82.6	82.6	75.4	88.1	5
C47 Peripheral nerves and autonomic nervous system	30	0.04	73.3	66.7	54.1	56.9	13
C48 Retroperitoneum and peritoneum	81	0.11	49.4	35.3	26.9	31.7	56
C49 Other connective and soft tissue	470	0.62	82.3	68.6	62.6	70.5	161
C50 Breast	237	0.31	86.9	71.4	60.7	73.7	79
C60 Penis	152	0.20	87.5	69.7	64.2	82.4	50
C61 Prostate	20,925	27.52	90.1	77.6	67.5	84.9	5,639
C62 Testis	550	0.72	95.5	93.7	93.2	95.2	36
C63 Male genital organs, NOS	27	0.04	88.9	57.6	49.9	60.1	12
C64 Kidney	1,888	2.48	76.0	61.2	52.3	60.7	816
C65 Renal pelvis	125	0.16	70.4	48.0	41.1	50.6	68
C66 Ureter	132	0.17	78.0	56.6	46.7	57.7	64
C67 Bladder	4,096	5.39	78.1	57.7	47.5	59.7	1,947
C68 Urinary organs, NOS	65	0.09	73.9	54.9	48.7	59.6	32
C69 Eye and adnexa	124	0.16	89.5	66.9	61.3	70.8	44
C70 Meninges	26	0.03	69.2	57.7	41.2	47.6	14
C71 Brain	1,100	1.45	48.6	28.1	25.0	26.1	809
C72 Spinal cord, cranial nerves and CNS, NOS	34	0.04	97.1	84.4	80.4	84.3	6
C73 Thyroid gland	240	0.32	85.8	79.3	71.1	76.6	60
C74 Adrenal gland	58	0.08	62.1	42.9	40.2	42.7	34
C75 Endocrine glands, NOS	30	0.04	80.0	66.4	62.1	68.9	11
C76 Other and ill-defined sites	90	0.12	60.0	45.9	39.3	43.2	52
C80 Unknown primary site	2,917	3.84	31.9	19.0	15.7	18.4	2,413
C81 Hodgkin's disease	392	0.52	92.6	86.7	82.7	86.2	61
C82 Follicular non-Hodgkin-lymphoma	340	0.45	91.2	77.4	69.1	75.6	90
C83 Diffuse non-Hodgkin-'s lymphoma	942	1.24	76.5	61.6	51.0	57.7	418
C84 Peripheral and cutaneous T-cell lymphomas	137	0.18	75.9	62.0	57.3	66.1	55
C85 Non-Hogkin's lymphoma, NOS	989	1.30	66.6	52.9	44.9	52.7	516
C88 Malignant immunoproliferative diseases	58	0.08	77.6	52.4	38.0	49.2	32
C90 Multiple myeloma	942	1.24	72.9	51.4	35.1	41.8	546
C91 Lymphoid leukaemia	1,080	1.42	82.7	66.6	52.8	61.8	441
C92 Myeloid leukaemia	767	1.01	51.9	31.2	25.0	28.2	550
C93 Monocytic leukaemia	47	0.06	44.7	22.7	19.9	21.7	37
C94 Other leukaemia of specified cell type	62	0.08	75.8	47.5	35.9	41.2	37
C95 Leukaemia of unspecified cell type	83	0.11	42.2	37.2	33.5	40.4	54
C96 Lymphoid, haematopoietic and related tissue, NOS	43	0.06	100.0	95.4	84.5	87.2	4
Total excl. non-melanoma	**76,028**	**100.00**	**67.7**	**50.4**	**42.4**	**51.4**	**40,627**

10.2 Females, invasive tumours: absolute numbers per localisation, 1, 3 and 5-year observed survival, 5-year relative survival, 1997-2001

FEMALES	Cancer		Observed survival			Relative survival	Death
	N	%	1 year	3 year	5 year	5 year	N
C00 Lip	98	0.15	93.9	83.3	75.0	92.9	21
C01 Base of tongue	37	0.06	70.3	50.3	50.3	53.3	18
C02 Tongue	132	0.21	74.2	54.8	48.9	55.3	64
C03 Gum	23	0.04	65.2	47.1	47.1	62.1	12
C04 Floor of mouth	83	0.13	74.7	53.6	42.7	47.0	44
C05 Palate	55	0.09	72.7	54.0	44.4	47.6	28
C06 Mouth, NOS	82	0.13	75.6	59.4	47.0	53.6	38
C07 Parotid gland	79	0.12	83.5	65.2	62.5	68.6	28
C08 Salivary glands, NOS	32	0.05	84.4	77.8	71.3	78.0	8
C09 Tonsil	97	0.15	80.4	59.4	52.1	56.9	43
C10 Oropharynx	25	0.04	60.0	35.2	28.8	32.1	17
C11 Nasopharynx	22	0.03	81.8	68.2	60.6	66.0	8
C12 Pyriform sinus	25	0.04	72.0	28.0	24.0	25.1	19
C13 Hypopharynx	19	0.03	73.7	56.5	37.7	40.3	9
C14 Lip, oral cavity and pharynx, NOS	13	0.02	69.2	46.2	33.0	38.4	8
C15 Oesophagus	426	0.67	45.8	27.5	19.0	22.0	327
C16 Stomach	1,620	2.54	50.1	32.3	25.4	31.8	1,157
C17 Small intestine	167	0.26	69.5	50.8	47.8	55.0	84
C18 Colon	5,697	8.94	72.5	55.1	46.2	56.8	2,802
C19 Rectosigmoid junction	550	0.86	82.0	61.9	49.2	56.8	246
C20 Rectum	2,355	3.69	78.9	60.4	49.9	58.9	1,057
C21 Anus and anal canal	116	0.18	75.0	53.5	52.2	60.7	54
C22 Liver and intrahepatic bile ducts	442	0.69	29.2	13.7	9.6	11.2	390
C23 Gallbladder	215	0.34	30.2	15.7	12.2	15.0	185
C24 Biliary tract, NOS	171	0.27	52.6	28.4	16.0	18.8	133
C25 Pancreas	1,283	2.01	24.6	9.1	7.2	8.4	1,180
C26 Other ill-defined digestive organs	19	0.03	63.2	47.1	40.8	45.8	11
C30 Nasal cavity and middle ear	22	0.03	63.6	59.1	54.2	61.0	10
C31 Accessory sinuses	49	0.08	77.6	45.7	32.3	36.6	30
C32 Larynx	154	0.24	83.1	67.6	57.3	62.3	59
C33 Trachea	6	0.01	66.7	50.0	50.0	53.5	3
C34 Bronchus and lung	2,758	4.33	44.1	23.1	18.2	19.8	2,193
C37 Thymus	35	0.05	77.1	57.8	47.3	49.9	16
C38 Heart, mediastinum and pleura	101	0.16	37.6	17.4	10.2	11.5	85
C39 Respiratory system and intrathoracic organs, NOS	1	0.00	-	-	-	-	1
C40 Bone and articular cartilage of limbs	88	0.14	85.2	74.7	70.4	73.7	24
C41 Bone and articular cartilage, NOS	79	0.12	73.4	52.5	47.6	50.0	40
C43 Malignant melanoma of skin	1,775	2.78	91.2	81.8	73.6	79.5	396
C45 Mesothelioma	108	0.17	45.4	23.0	14.4	16.0	91
C46 Kaposi's sarcoma	12	0.02	91.7	74.6	62.1	70.9	4
C47 Peripheral nerves and autonomic nervous system	27	0.04	85.2	66.1	61.4	65.8	10

FEMALES	Cancer		Observed survival			Relative survival	Death
	N	%	1 year	3 year	5 year	5 year	N
C48 Retroperitoneum and peritoneum	127	0.20	55.9	40.0	32.2	35.4	81
C49 Other connective and soft tissue	432	0.68	88.2	77.3	71.5	78.4	112
C50 Breast	23,120	36.27	93.6	83.2	75.4	81.6	4,782
C51 Vulva	364	0.57	81.0	60.9	52.2	63.4	158
C52 Vagina	110	0.17	75.5	57.5	53.5	60.9	49
C53 Cervix uteri	1,845	2.89	86.8	71.7	65.2	68.4	584
C54 Corpus uteri	3,320	5.21	88.0	76.6	70.2	78.0	876
C55 Uterus	228	0.36	78.5	61.9	54.3	60.3	98
C56 Ovary	2,851	4.47	74.9	53.4	42.0	45.8	1,508
C57 Female genital organs, NOS	70	0.11	80.0	62.6	41.0	44.4	35
C58 Placenta	5	0.01	100.0	100.0	100.0	100.2	0
C64 Kidney	1,328	2.08	75.1	61.8	53.3	60.4	567
C65 Renal pelvis	63	0.10	68.3	39.7	28.3	32.7	41
C66 Ureter	80	0.13	63.8	49.6	42.2	48.6	44
C67 Bladder	1,127	1.77	68.2	51.7	43.6	53.9	597
C68 Urinary organs, NOS	26	0.04	73.1	65.4	65.4	72.9	9
C69 Eye and adnexa	142	0.22	89.4	79.2	65.3	73.1	43
C70 Meninges	34	0.05	85.3	73.1	63.1	68.9	11
C71 Brain	894	1.40	48.0	30.9	27.6	28.6	633
C72 Spinal cord, cranial nerves and CNS, NOS	26	0.04	92.3	88.0	82.2	88.4	4
C73 Thyroid gland	574	0.90	84.5	77.9	73.9	77.3	138
C74 Adrenal gland	74	0.12	75.7	57.6	48.2	49.6	36
C75 Endocrine glands, NOS	19	0.03	89.5	83.3	67.4	70.5	5
C76 Other and ill-defined sites	116	0.18	62.9	49.5	42.8	50.1	63
C80 Unknown primary site	2,815	4.42	43.7	30.6	26.0	29.6	2,020
C81 Hodgkin's disease	337	0.53	92.0	87.9	84.5	86.7	47
C82 Follicular non-Hodgkin-lymphoma	326	0.51	86.8	73.9	66.6	72.3	98
C83 Diffuse non-Hodgkin-'s lymphoma	777	1.22	72.3	54.8	48.0	54.1	374
C84 Peripheral and cutaneous T-cell lymphomas	89	0.14	85.4	71.4	63.7	70.3	29
C85 Non-Hogkin's lymphoma, NOS	889	1.39	69.7	57.8	50.1	56.8	418
C88 Malignant immunoproliferative diseases	35	0.05	80.0	59.3	48.8	57.8	17
C90 Multiple myeloma	883	1.39	74.9	52.3	38.3	44.8	490
C91 Lymphoid leukaemia	680	1.07	81.6	68.9	58.5	65.9	248
C92 Myeloid leukaemia	628	0.99	50.0	31.2	23.8	26.0	458
C93 Monocytic leukaemia	27	0.04	37.0	25.9	21.2	22.3	21
C94 Other leukaemia of specified cell type	64	0.10	82.8	61.5	48.2	53.4	29
C95 Leukaemia of unspecified cell type	86	0.13	30.2	18.3	11.9	13.7	74
C96 Lymphoid, haematopoietic and related tissue, NOS	37	0.06	94.6	88.6	83.8	86.8	5
Total excl. non-melanoma	**63,746**	**100.00**	**77.6**	**63.5**	**55.8**	**62.0**	**25,755**

10.3 Males and females, absolute numbers per localisation per stage, 1, 3 and 5-year observed survival, 5-year relative survival, 1997-2001

MALES	Stage	Cancer		Observed survival			Relative survival	Death
		N	%	1 year	3 year	5 year	5 year	N
Colon-Rectosigmoid-rectum	I	842	8.6	91.2	79.3	70.7	88.3	205
	II	2,071	21.0	85.7	70.8	58.5	73.1	724
	III	1,598	16.2	80.7	54.7	44.3	53.0	790
	IV	807	8.2	45.1	12.8	8.4	9.9	719
	X	4,522	46.0	70.7	52.3	42.3	53.2	2,416
	Tot	**9,840**	**100.0**	**75.1**	**55.6**	**45.6**	**56.6**	**4,854**
Malignant melanoma of skin	I	277	25.4	97.1	89.4	87.0	94.2	32
	II	182	16.7	88.5	71.9	61.2	69.6	60
	III	114	10.4	89.5	56.8	46.5	53.9	55
	IV	45	4.1	40.0	17.5	8.8	9.7	40
	X	474	43.4	81.2	67.5	56.1	63.1	183
	Tot	**1,092**	**100.0**	**85.6**	**70.6**	**61.6**	**68.8**	**370**

FEMALES	Stage	Cancer		Observed survival			Relative survival	Death
		N	%	1 year	3 year	5 year	5 year	N
Colon-Rectosigmoid-rectum	I	646	7.5	93.7	84.7	76.6	90.6	120
	II	1,677	19.5	86.1	70.8	58.8	71.6	569
	III	1,407	16.4	78.7	55.2	42.5	49.8	711
	IV	630	7.3	42.4	15.1	8.3	9.3	555
	X	4,242	49.3	71.1	54.3	45.8	56.2	2,150
	Tot	**8,602**	**100.0**	**74.9**	**57.0**	**47.4**	**57.3**	**4,105**
Malignant melanoma of skin	I	546	30.8	98.0	94.4	86.9	91.8	51
	II	259	14.6	95.4	84.3	75.0	81.9	52
	III	97	5.5	81.4	62.9	41.6	48.2	46
	IV	26	1.5	46.2	18.6	18.6	20.2	21
	X	847	47.7	88.0	76.9	70.0	75.9	226
	Tot	**1,775**	**100.0**	**91.2**	**81.8**	**73.6**	**79.5**	**396**
Breast	I	5,868	25.4	98.7	95.8	92.3	97.7	348
	II	7,448	32.2	97.6	88.1	80.3	86.7	1,171
	III	1,581	6.8	91.4	69.7	54.5	60.9	603
	IV	906	3.9	66.7	36.5	22.1	24.2	645
	X	7317	31.6	89.3	76.8	68.2	75.2	2,015
	Tot	**23,120**	**100.0**	**93.6**	**83.2**	**75.4**	**81.6**	**4,782**

MALES AND FEMALES	Stage	Cancer		Observed survival			Relative survival	Death
		N	%	1 year	3 year	5 year	5 year	N
Colon-Rectosigmoid-rectum	I	1,488	8.1	92.3	81.6	73.2	89.3	325
	II	3,748	20.3	85.9	70.8	58.6	72.4	1,293
	III	3,005	16.3	79.8	54.9	43.4	51.4	1,501
	IV	1,437	7.8	43.9	13.8	8.4	9.6	1,274
	X	8,764	47.5	70.9	53.2	44.0	54.7	4,566
	Tot	**18,442**	**100.0**	**75.0**	**56.3**	**46.4**	**56.9**	**8,959**
Malignant melanoma of skin	I	823	28.7	97.7	92.7	86.9	92.6	83
	II	441	15.4	92.5	79.1	69.3	76.9	112
	III	211	7.4	85.8	59.6	43.8	50.8	101
	IV	71	2.5	42.3	18.0	12.6	13.8	61
	X	1,321	46.1	85.5	73.6	65.0	71.4	409
	Tot	**2,867**	**100.0**	**89.1**	**77.5**	**69.0**	**75.5**	**766**

10.4 Childhood cancer: 1-, 3- and 5-year observed survival for the 12 main diagnostic categories, Flemish region, boys and girls

		Observed survival			Cancer	Death
		1 year	3 year	5 year	N	N
I	Leukaemias	93.1	81.8	79.5	187	35
II	Lymphomas	98.4	96.8	96.8	128	4
III	Tumours of the central nervous system	84.8	75.5	74.6	158	39
IV	Tumours of the peripheral nervous system	74.1	64.2	64.2	54	19
V	Retinoblastoma	100.0	90.0	90.0	10	1
VI	Renal tumours	98.0	91.5	88.4	49	5
VII	Hepatic tumours	90.9	81.8	61.4	11	3
VIII	Malignant bone tumours	86.7	61.8	61.8	30	11
IX	Soft tissue and other extraosseous sarcomas	92.9	75.2	75.2	70	17
X	Germ cell tumours, trophoblastic tumours and neoplasms of gonads	89.3	81.6	81.6	28	5
XI	Carcinoma and other epithelial neoplasms	93.9	90.9	90.9	33	3
XII	Other and unspecified malignant neoplasms	50.0	40.0	40.0	10	6
Total		**90.4**	**80.9**	**79.7**	**768**	**148**

Abbreviations and glossary of terms

A	Austria	**I**	Italy
D	Germany	**IRL**	Ireland
DK	Denmark	**L**	Luxembourg
E	Spain	**NL**	The Netherlands
F	France	**P**	Portugal
FIN	Finland	**S**	Sweden
FL	Flanders	**UK**	United Kingdom
G	Greece	**W-EU**	Western Europe

ACCIS study: Automated Childhood Cancer Information System (http://www-dep.iarc.fr/accis.htm)
CNS: Central Nervous System
IACR: International Association of Cancer Registries
IARC: International Agency for Research on Cancer
ICCC: International Classification of Childhood Cancer
ICD-O: International Classification of Diseases for Oncology
SIR: Standardised Incidence Ratio

Age-specific incidence rate: number of new cases per year in a particular 5-year age group per 100,000 inhabitants in the same age group
CR: Crude (all ages) incidence rate: number of new cancer cases (numerator) per 100,000 persons per year (denominator: person-years at risk)
CRi (cumulative risk): an individual's risk of developing the disease during a certain phase in life (e.g. between 0 and 75 years of age), provided that no other causes of death interfere
ESR: European Standardised Incidence Rate: age-standardised incidence rate, using the European Standard Population
Incidence: number of new cancer cases within a specified period of time and for a well defined population (e.g. the Flemish region of Belgium)
Observed survival is the proportion of cases surviving a certain number of years after diagnosis, irrespective of cause of death
Relative survival is the ratio of the observed survival in a group of cancer patients to the survival that would be expected for a group in the general population with the same age as the patients at diagnosis. Relative survival approaches the tumour specific survival. The expected survival rate is based upon age-specific mortality rates for all other causes of death (life tables).
WSR: World Standardised Incidence Rate: age-standardised incidence rate, using the World Standard Population