Belgian Cancer Registry

Cancer in children and adolescents

in Belgium 2004-2020

BELGIAN CANCER REGISTRY

Stichting Kankerregister – Fondation Registre du Cancer – Stiftung Krebsregister

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CONTENTS

FOREWORD

A close collaboration between the Belgian Cancer Registry and the Belgian Society of Paediatric Haematology Oncology (BSPHO) resulted in 2013 in a first publication. The current study 'Cancer in children and adolescents – Belgium 2004-2020' presents an update with 17 consecutive years of incidence data for Belgium and the description of survival data up to 5, 10 and sometimes even 15 years after diagnosis.

Since 2004, these data have been collected at the national level through all Belgian paediatric haemato-oncology centres. Since 2018, it was also asked to record the Paediatric Cancer Stage (Toronto staging system), which is gaining more and more international traction and which enabled us to report the epidemiologic parameters for the first time by stage. We would therefore like to emphasize our gratitude to all the paediatric haemato-oncologists, physicians, pathologists and data managers in the hospitals for their engagement and sustained efforts in registration.

In Belgium, childhood cancer comprises less than 1% of the total cancer burden. Every year, about 340 children younger than 15 years and 180 adolescents (between 15 and 19 years) face the diagnosis of cancer. Unlike in adults, the start of the COVID-19 pandemic in 2020 did not substantially impact this number of yearly diagnoses. The results on mortality and survival also remain hopeful. Over the last seven decades mortality rates have dramatically declined for most childhood cancers and these rates are still decreasing. This trend also reflects improved cancer survival. Children and adolescents with cancer now have a relatively good prognosis. Fifteen-year survival of children less than 15 years (83%) is very similar to the 15-year survival of adolescents (86%).

Cancer in children and adolescents strongly differs from the adult malignancies, not only in terms of frequency but also with regard to the specific cancer types, their behaviour and their response to treatment. It is, all the more than in adults, an emotionally loaded subject and the cover was chosen for this reason. We hope that the progress made in survival as well as the growing scientific insights in the early and late effects of a paediatric or adolescent cancer treatment, will allow these children to enjoy their childhood for a longer and more qualitative amount of time.

We sincerely hope that this work will be useful in the daily professional practice of paediatric haemato-oncologists and all other experts in the field and that our findings evoke collaborations for future population-based cancer research. Above this, we hope that it will further stimulate the quality of care and life for our children and adolescents who face – together with their parents and family – the diagnosis of cancer in their earliest age.

Brussels, July 2023

Liesbet Van Eycken
Director BCR

An Van Damme
President BSPHO

Belgian Cancer Registry

BSPHO

Methodology

Belgian Cancer Registry

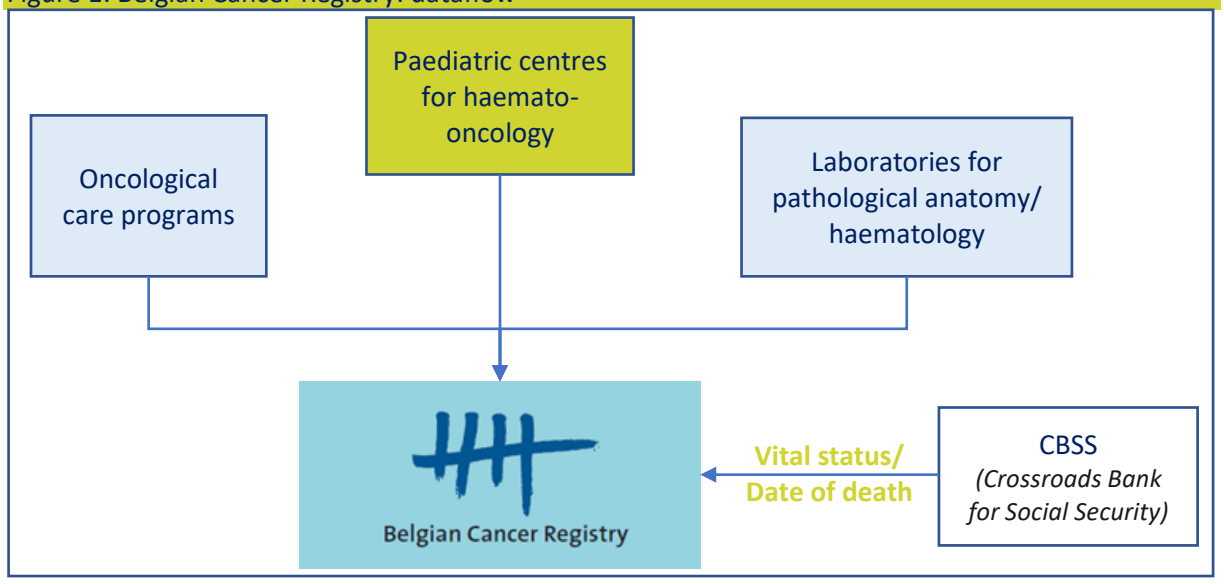
METHODOLOGY

NOTIFICATION AND SUBMISSION TO THE CANCER REGISTRY

New legislation initiatives since 2003 and the foundation of the Belgian Cancer Registry (BCR) in 2005 forced a breakthrough in the Belgian cancer registration. Especially the Royal Decree on the oncological care programs in 2003, with the reimbursement of the multidisciplinary oncological consult (MOC-COM), and the creation of the specific law on the Cancer Registry in 2006 provided a firm legal basis for cancer registration in Belgium (1; 2). This legislation makes **cancer registration compulsory** for the oncological care programs and for the laboratories for anatomical pathology. Furthermore, the law authorizes the use of the national social security number (INSZ-NISS) as the unique identifier of the patient, as well as linkage with other medical and/or administrative databases.

A complete description of this data registration and data collection was reported in several previous publications (3-12). As of the year of incidence 2004, Belgian cancer incidence data are available. The general data flow (Figure 1) relies on all information (notifications) coming from the oncological care programs (clinical network) and the laboratories for pathological anatomy (pathology network).

Figure 1: Belgian Cancer Registry: dataflow



In 2009, a specific collaboration has been setup with all the 8 Belgian paediatric centres for haematology and oncology. Since 2014, a Royal Decree has been operative which sets the standards a paediatric haemato-oncology care program must meet to be approved (13). This legislation states that these care programs are focused on diagnosis, multidisciplinary treatment, rehabilitation, follow-up of late effects and palliative care for all patients under 16 years with haemato-oncological disorders or severe non-oncological haematological disorders, which may require stem cell transplantation. Table 1 gives an overview of all current paediatric centres.
The law also made cancer registration compulsory for the paediatric centres since 2014 (Figure 1), but in practice, data have already been collected from the incidence year 2004 onwards (Table 1).

Therefore, it was already possible to publish reports focusing on Cancer in Children and Adolescents in 2013 (7) and 2019 (12).

Table 1: Overview of paediatric centres for haemato-oncology in Belgium
Clinique CHC MontLégia, Liège
Secteur d'hémato-oncologie pédiatrique, Département de Pédiatrie, Centre Hospitalier Universitaire de Liège
Cliniques Universitaires Saint-Luc, Bruxelles
Hôpital Universitaire des Enfants Reine Fabiola, Bruxelles
Universitair Ziekenhuis Antwerpen
Universitair Ziekenhuis Brussel
Kinderziekenhuis Prinses Elisabeth (Universitair Ziekenhuis Gent)
Universitair Ziekenhuis Leuven

PRIVACY & PROTECTION OF PERSONAL DATA

The core business of BCR includes the collection and processing of sensitive personal data in order to fulfil its legal obligations (as stated in the Coordinated Act of 10 May 2015 on the exercise of health care professions). Consequently, BCR attaches great importance to privacy and the protection of personal data and takes strict measures to comply with the General Data Protection Regulation EU 2016/679. For more information, please read the Privacy Statement available on our website (https://belgiancancerregistry.be/privacy_en).

QUALITY OF DATA

Completeness of the Cancer Registry (degree of coverage)

Completeness is the extent to which all incident cancers in the Belgian population are included in the Cancer Registry. Linkage of data from different sources and source types leads to information that is more complete, precise and reliable.

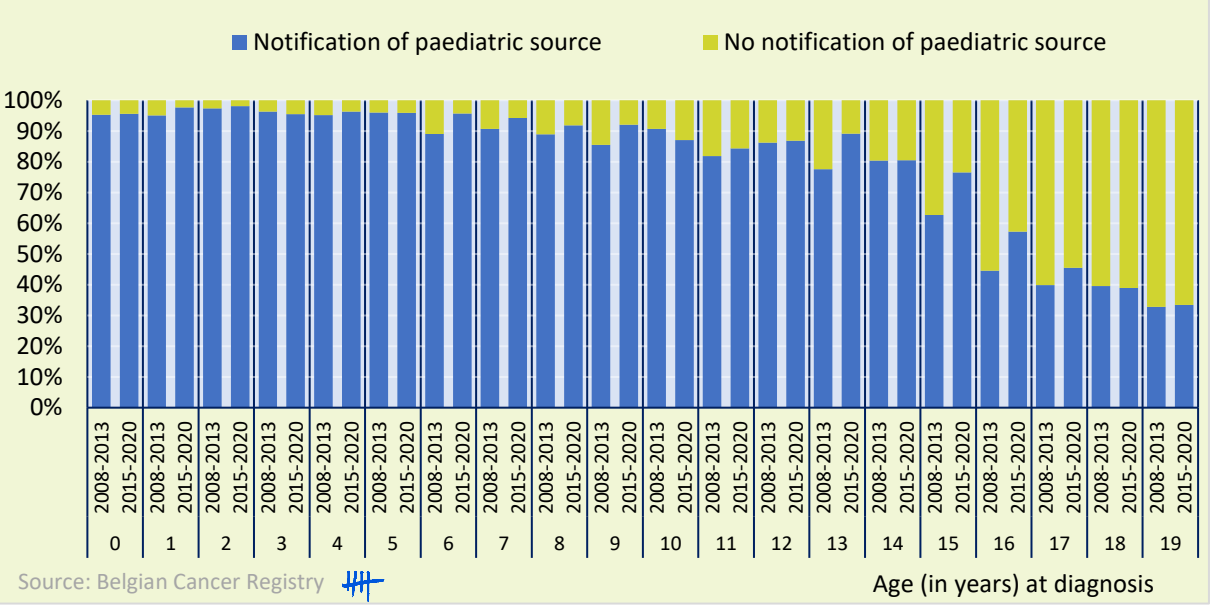
Notifications from hospitals with a paediatric haemato-oncology care program

In Belgium, between 2016 and 2020, a total number of 2,600 cancers were diagnosed in children and adolescents (0-19 years). The registration for these tumours originated from 6,165 notifications[i] (on average 2.4 notifications per tumour [range = 1-7]). In 78% of the cases, a notification was received from a hospital with a paediatric haemato-oncology care program.

Due to the lower number of adolescent cancers (age group 15-19 years) diagnosed by paediatric centres (Table 2; paediatric centres typically treat 0-16 year olds), the notification percentage in this group is lower (49.7%) when compared to children in the age group 0-14 years (92.3%). Since 2014, patients with an age of 11-15 years are much more likely to be registered by a paediatric centre as could have been expected by the new legislation (13) (Figure 2). The remaining 7.7% of childhood cancers (not registered by a paediatric centre) were mostly carcinomas and melanomas (XI) and/or patients between 11 and 14 years of age; however, this does not automatically imply that the paediatric centres for haematology-oncology were not involved in the diagnostic and therapeutic setting of these patients.

[i] Only unique notifications from 1 source were included. If the same source registered the same diagnosis more than once, this is counted as 1 notification.

Figure 2: Notifications of paediatric centres for haemato-oncology by age at diagnosis, Belgium 2008-2013 and 2015-2020



Notifications by tumour type

Between 2016 and 2020, in children under the age of 15 years, 90% or more of all tumours were registered by a paediatric centre (Table 2). The only tumour group that did not reach this 90% registration coverage were the carcinomas and melanomas (XI), where only 50% was reported through a paediatric centre and the remaining 50% through other sources (laboratories for anatomical pathology and hospitals without paediatric centre). The past years, the paediatric centres have already made a great effort to improve registration. However, the diligent clinical registration of all tumours remains an important issue in the future.

Table 2: Notifications from paediatric centres for haemato-oncology by tumour type, Belgium 2016-2020

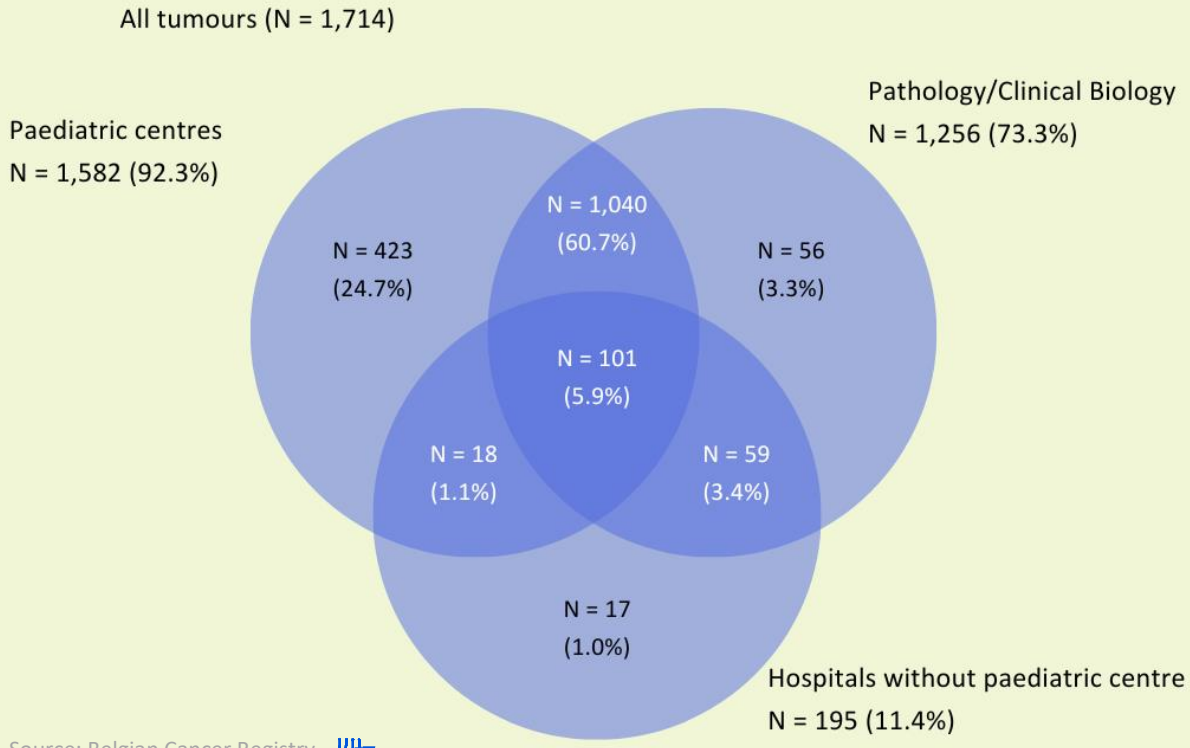
ICCC-3 Classification		0-14 years			15-19 years			**0-19 years**		
		Total	Paediatric notification		Total	Paediatric notification		Total	Paediatric notification	
		N	N	%	N	N	%	N	N	%
I-XII	All tumour	1,714	1,582	92.3	886	439	49.5	**2,600**	**2,021**	**77.7**
I	Leukaemia, myeloproliferative and myelodysplastic disease	454	446	98.2	100	69	69.0	**554**	**515**	**93.0**
II	Lymphoma and reticuloendothelial neoplasm	187	177	94.7	232	122	52.6	**419**	**299**	**71.4**
III	CNS and miscellaneous intracranial and intraspinal neoplasm	457	418	91.5	173	90	52.0	**630**	**508**	**80.6**
IV	Neuroblastoma and other peripheral nervous cell tumour	108	105	97.2	7	2	28.6	**115**	**107**	**93.0**
V	Retinoblastoma	49	49	100.0	0	0	-	**49**	**49**	**100.0**
VI	Renal Tumour	90	90	100.0	4	1	25.0	**94**	**91**	**96.8**
VII	Hepatic tumour	28	28	100.0	1	1	100.0	**29**	**29**	**100.0**
VIII	Malignant bone tumour	60	59	98.3	52	40	76.9	**112**	**99**	**88.4**
IX	Soft tissue and other extraosseous sarcoma	99	96	97.0	44	33	75.0	**143**	**129**	**90.2**
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	57	51	89.5	74	27	36.5	**131**	**78**	**59.5**
XI	Other malignant epithelial neoplasm and melanoma	125	63	50.4	196	52	26.5	**321**	**115**	**35.8**
XII	Other and unspecified malignant neoplasm	0	0	-	3	2	66.7	**3**	**2**	**66.7**

Source: Belgian Cancer Registry

Notifications by data source

Between 2016-2020, 1,200 (70%) of all diagnoses in children (0-14y) are delivered by both a hospital (with or without paediatric centre) and a laboratory for pathological anatomy (Figure 3). The remaining tumours are only registered by one of the two source types. Hospital-only registered tumours mainly concern leukaemia (I), CNS tumours (III), retinoblastomas (V) and lymphomas (II). Laboratory-only registered tumours mostly were carcinomas and melanomas (XI). Clinical registrations made outside of paediatric centres (N=76, 4%) mainly concerned CNS tumours (III) and carcinomas and melanomas (XI). However, this does not automatically imply that the paediatric centres for haematology-oncology were not involved.

Figure 3: Notifications for cancer in children (0-14 years) by source type, Belgium 2016-2020



Source: Belgian Cancer Registry

CLASSIFICATION AND CALCULATION

Classification and description of the dataset

The incidence data presented in this report are based on the cancer records for Belgian residents that were available at the Cancer Registry in July 2022.
Incidence and survival rates always include children and adolescents, unless otherwise specified. Results about **children** only include diagnoses in the age group 0-14 years of age. **Adolescent** diagnoses are tumours registered in patients of 15-19 years of age. Cancer in **infants** represents diagnoses for patients younger than 1 year of age.
For reporting purposes, the tumours are classified according to the International Classification of Childhood Cancer (**ICCC-3**) (14). This classification includes all invasive tumours and all non-invasive tumours located in the central nervous system.
The different chapters included in this document are based on the main tumour types as described in the ICCC-3 classification. The next chapter gives an overview of all cancers and all subsequent chapters expand upon one of the 12 ICCC-3 categories. For every tumour type, general incidence and survival results are presented. When possible, a more detailed analysis by age group, histology (15), primary site (15) or stage (16; 17) is carried out.
Mortality statistics, used in the first chapter, are represented in the ICD-10 classification (18).
Population data was obtained from the Directorate-General Statistics Belgium (19).
As cancer is a rare disease in children and adolescents, analyses are based on small numbers. Therefore, the data collected over 17 years (2004-2020) are grouped for the calculation of Belgian incidence and survival data. The incidence rates for both sexes are presented separately whenever possible.

Incidence and mortality

Incidence is the number of new cases occurring in a given time period in a specific population. It provides a direct estimate of the probability or risk of illness, and can be expressed in different ways:

- The **crude incidence rate** is calculated by dividing the number of new cases observed during a given time period by the corresponding number of people in the population at risk. The crude rate is expressed as the number of new cases per 1,000,000 persons per year.
- The **age-specific incidence rate** is the crude incidence rate in a particular age group (age range of 1, 5 or more years)
- The **age-standardised incidence rate** is a weighted average of the individual age-specific rates using an external standard population. It is the incidence that would be observed if the population had the age structure of the standard population (European or World Standard Population). Since age has a powerful influence on the risk of cancer, this standardization is necessary when comparing several populations that differ with respect to their age structure. In this publication, the World Standard Population is used for standardization and consequently World Standardised incidence Rates (WSR) are reported. These are expressed as the number of new cases per 1,000,000 persons per year.
- The **Cumulative Risk** (Cri) is the probability or risk of individuals getting the disease during a specified period. For childhood cancer, it is expressed as the number of newborn children who would be expected to develop a particular cancer before the age of 15 or 19 if they had the rates of cancer currently observed. The cumulative risk is expressed as a percentage.

- Male/Female (M/F) ratios are calculated by dividing the corresponding age-standardised incidence rates (WSR).

According to international guidelines, incidence rates for children and adolescents are expressed per 1,000,000 person years. In adults, incidence rates are expressed per 100,000 person years.
The same principles are applied to calculate mortality data.

Trends in incidence

Since data have been collected from 2004 onwards, some results could also be compared over time. In total, 17 consecutive years of incidence data are available for Belgium. However, cancer in children is very rare. Analyses of trends and the interpretation of results are complicated by the low number of yearly diagnoses, leading to important annual fluctuations. Therefore, incidence rates were aggregated over five years and are presented as four averages (2004-2008, 2008-2012, 2012-2016 and 2016-2020). When sufficient data are available, incidence trends are also shown in the Appendix for the individual ICCC-3 (sub-)categories.

Survival

BCR performs active follow up on vital status for all patients. Data on vital status are obtained from the Crossroads Bank for Social Security (CBSS) (20), by means of the national social security number (INSZ-NISS).
For this publication, patient are followed up until the 1st of April 2022. Between 2004 and 2020 a total of 197 patients (2.2%) are lost to follow up due to emigration. These patients are included in the survival analysis but censored on the last date the patients were known to be alive.
Observed survival is calculated and presented as Kaplan Meier (21) survival curves. Published tables in the Appendix are also accompanied with 95% confidence intervals, which are calculated using the Rothman method (22). Multiple tumours are used in the calculation of survival. However, if for the same patient more than 1 diagnosis is included in the selection criteria, only the first tumour is used. Consequently, the absolute numbers used in the survival analyses can be slightly lower from those reported within the framework of incidence rates.
Since cancer in children and adolescents is rare, the survival analyses are often based on a very low number of patients. When the numbers of patients at risk (N at risk) dropped to less than 10 cases, the survival data are not presented, and when less than 30 cases, a footnote is added to clarify that the shown survival data are only indicative and that no strong conclusions can be drawn.

Childhood and Adolescent Cancer in Belgium

Belgian Cancer Registry

CHILDHOOD AND ADOLESCENT CANCER IN BELGIUM

I -XII ALL CANCERS

Incidence

Cancer is a rare disease in children. In Belgium, cancer in children and adolescents comprises less than 1% of the total cancer burden (Belgium, 2016-2020). Every year, about 340 children (0-14 years) and 180 adolescents (15-19 years) are diagnosed with a malignancy (Table 3). All malignancies combined, slightly more diagnoses are registered in boys (54%) than in girls (46%), with a male/female ratio of 1.14.

Table 3: Cancer in children and adolescents by sex, Belgium 2004-2020

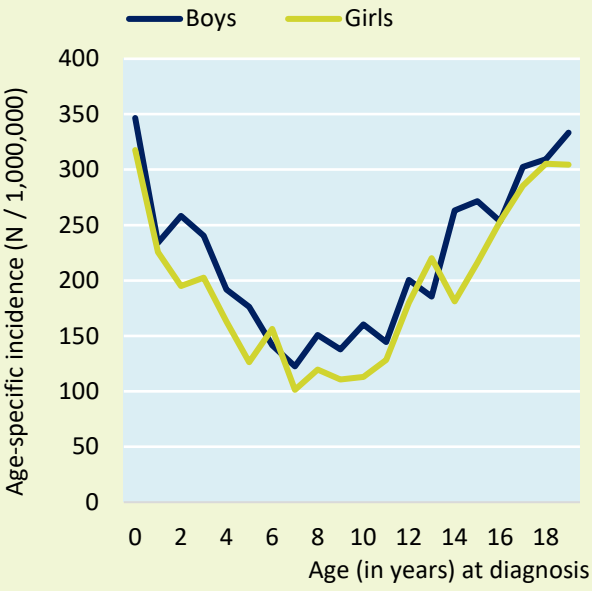
	Age group 0-14				Age group 15-19				**Age group 0-19**			
	Boys		Girls		Boys		Girls		Boys		Girls	
	N	WSR	N	WSR	N	WSR	N	WSR	N	WSR	N	WSR
2004	186	211.2	138	164.1	87	278.9	68	227.4	**273**	**226.5**	**206**	**178.3**
2005	185	208.1	158	185.8	82	259.3	79	260.7	**267**	**219.6**	**237**	**202.7**
2006	172	191.9	149	171.8	99	306.4	81	261.7	**271**	**217.7**	**230**	**192.0**
2007	157	175.8	136	157.3	100	304.6	88	279.3	**257**	**204.8**	**224**	**184.7**
2008	173	191.0	142	163.5	97	291.5	82	256.7	**270**	**213.6**	**224**	**184.5**
2009	205	227.1	144	163.8	101	302.8	79	246.5	**306**	**244.1**	**223**	**182.4**
2010	180	195.2	173	197.7	100	301.0	91	285.8	**280**	**219.0**	**264**	**217.5**
2011	189	200.1	158	176.9	86	261.4	79	250.2	**275**	**213.9**	**237**	**193.4**
2012	187	198.6	156	172.3	91	279.8	87	278.3	**278**	**216.8**	**243**	**196.2**
2013	217	230.1	172	188.2	86	266.8	92	297.5	**303**	**238.4**	**264**	**212.8**
2014	201	211.5	149	163.6	93	290.2	94	306.3	**294**	**229.2**	**243**	**195.7**
2015	189	196.4	150	167.0	109	341.0	92	299.6	**298**	**229.0**	**242**	**196.9**
2016	209	219.3	165	179.5	104	323.9	80	259.4	**313**	**242.8**	**245**	**197.5**
2017	170	178.0	143	157.3	102	317.4	87	282.7	**272**	**209.4**	**230**	**185.5**
2018	195	201.2	165	178.8	87	270.9	80	261.0	**282**	**216.9**	**245**	**197.3**
2019	169	176.3	161	175.3	94	292.1	78	254.1	**263**	**202.4**	**239**	**193.0**
2020	186	193.6	151	165.2	98	302.0	76	245.9	**284**	**218.0**	**227**	**183.4**
Total	**3,170**	**200.2**	**2,610**	**172.3**	**1,616**	**293.6**	**1,413**	**267.9**	**4,786**	**221.2**	**4,023**	**193.8**

WSR: age-standardised rate, using the World Standard Population (N/1,000,000 person years)

Source: Belgian Cancer Registry

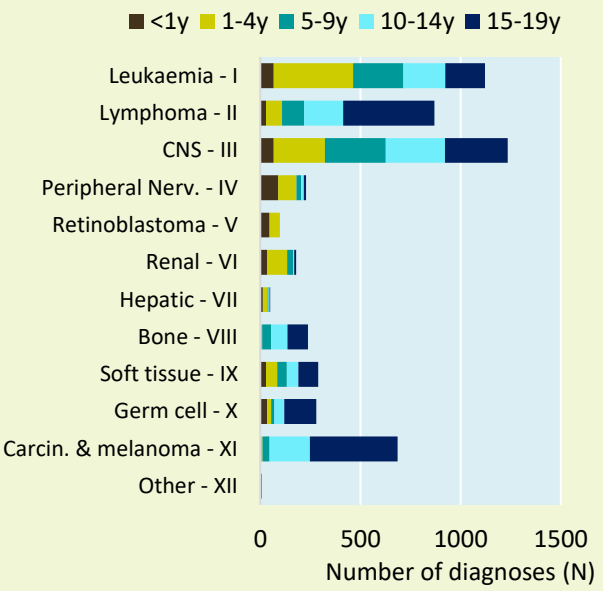
Age-specific incidence rates (Figure 4) are higher for the youngest and oldest age groups when compared to children between 5 and 11 years. Infants (<1 year) have the highest incidence rates (23) and most diagnoses in infants occur in the first month of life (14%). These results are in line with the age-specific rates reported in the previous 'Cancer in Children and Adolescents' reports for the cohort of 2004-2009 and 2010-2016 (7; 12).

Figure 4: Age-specific incidence rate by sex, Belgium 2011-2020



Source: Belgian Cancer Registry

Figure 5: New diagnoses by tumour type and age group, Belgium 2011-2020

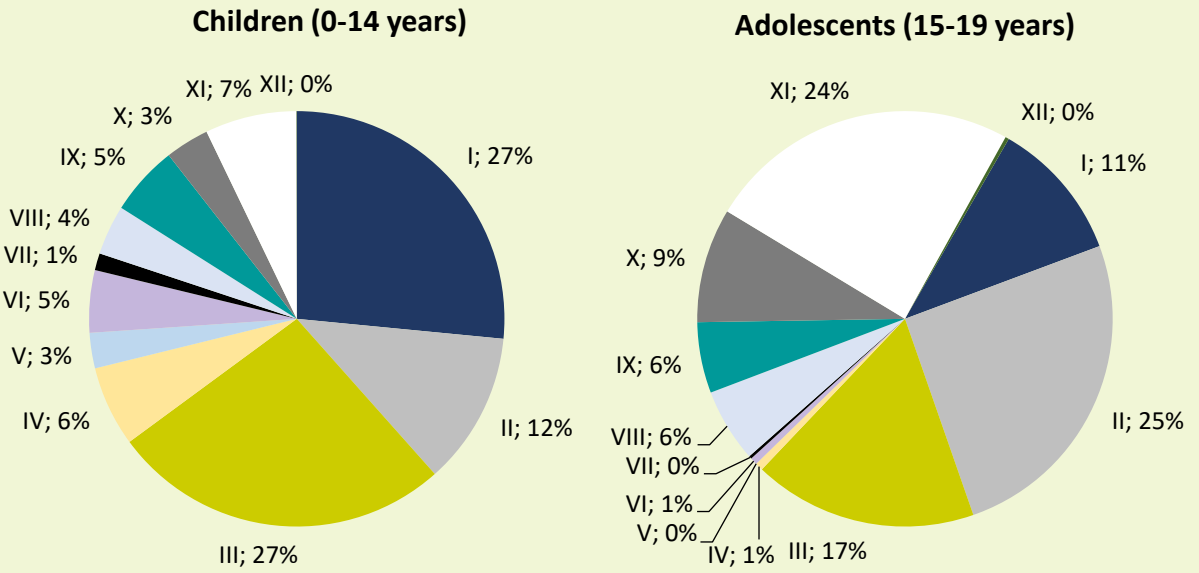


Source: Belgian Cancer Registry

Although incidence rates for young children and adolescents are in the same range, the subtypes of malignancies vary significantly according to the main age categories. Below, the most common tumour types are addressed for each age group (Figure 5):

- In **infants** (<1 year), the most frequent diagnoses are (in order of frequency) peripheral nervous system tumours (IV; 22%), leukaemia (I; 16%), CNS tumours (III; 16%), retinoblastomas (V; 11%), renal tumours (V; 8%) and germ cell tumours (X; 8%). In the category of retinoblastomas most cases are diagnosed in infants (49%).
- In the age group **1-4 years**, the most common tumour types comprise leukaemia (I; 36%) and CNS tumours (III; 23%), which represent together more than 50% of the tumour diagnoses in this age group. The 3rd and 4th most frequent are renal tumours (VI; 9%) and peripheral nervous system tumours (IV; 8%). In the category of renal tumours, this age group represents most of the new diagnoses (56%).
- In the age group **5-9 years**, CNS tumours (III; 35%) and leukaemia (I; 29%) are the most frequent, followed by lymphoma (II; 13%).
- At the age of **10-14 years**, the same three categories, CNS tumours (III), leukaemia (I) and lymphoma (II) are predominant, contributing with 27%, 19% and 18%, respectively. However, at this age incidence rates for carcinomas and melanomas (XI) are also starting to increase (18%).
- **Adolescents** (15-19 years) have a different distribution of tumour types in comparison with children (Figure 6). The most common tumours are lymphomas (25%) and carcinomas and melanoma (XI; 24%), followed by CNS tumours (III; 17%), leukaemia (I; 11%) and germ cell tumours (X; 9%).

Figure 6: Cancer in children and adolescents: incidence by tumour type, Belgium 2011-2020



Source: Belgian Cancer Registry

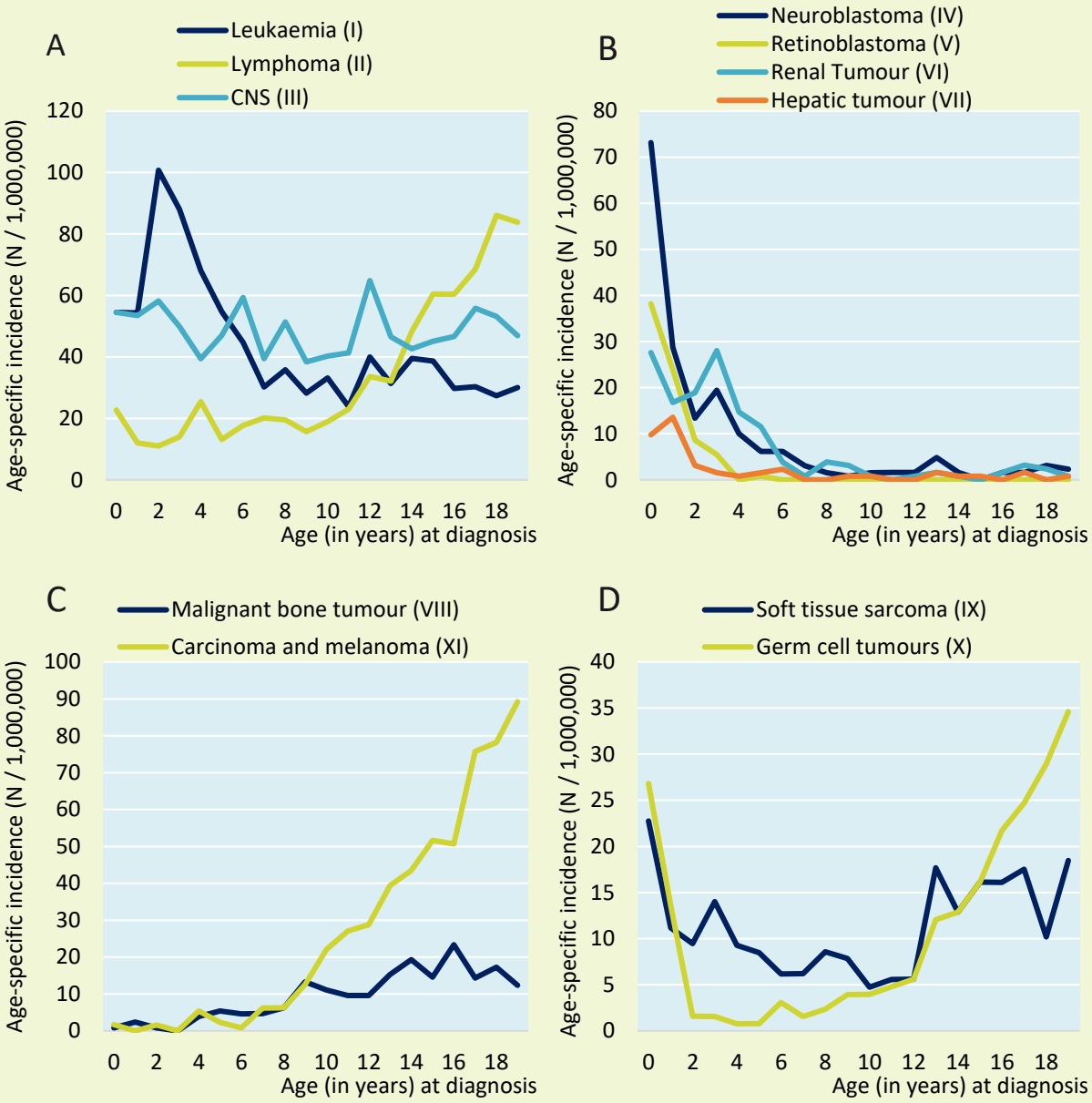
Haematological malignancies (leukaemia, I; lymphoma, II) and CNS tumours (III), are the **most frequent malignancies** in children and adolescents followed by the varied group of carcinomas and melanomas (XI) (Figure 6).

Based on the curves of the age-specific incidence rates (Figure 7), we can distinguish 4 categories:

- High incidence overall: Haematological malignancies (I and II combined) and CNS tumours (III) have high incidence rates across all ages (Figure 7A).
- Cancers with high incidence rates at younger ages: The highest incidence rates for neuroblastomas and other peripheral nerve cell tumours (IV), retinoblastomas (V), renal tumours (VI) and hepatic tumours (VII) are observed in infants and children between 1 and 4 years of age. These tumours are rarely diagnosed in patients older than 9 years of age (Figure 7B).
- Those predominantly diagnosed in the older age groups (5-19 years): Bone tumours (VIII) and carcinomas and melanomas (XI) are less frequent at a younger age and their incidence rates are the highest between the ages of 9 to 19 years (Figure 7C).
- Cancers with two incidence peaks (in infants and in adolescents): Germ cell tumours (X) and soft tissue sarcomas (IX) are frequently diagnosed in very young children and in adolescents, but they are less frequent in children in the age group 4-12 years (Figure 7D).

Further in-depth analyses of numbers of diagnoses, incidence rates and cumulative risks can be found in the tumour specific chapters and in the Appendix.

Figure 7: Age-specific incidence rate by tumour type, Belgium 2011-2020



Source: Belgian Cancer Registry

Multiple tumours

Between 2004 and 2020, a total of 8,809 new neoplasms were diagnosed in children and adolescents, corresponding with 8,643 patients. **About 2.6% of those patients were diagnosed with multiple tumours.** A minority (<0.5%) of the patients was diagnosed with three or more primaries (Table 4). 'Primaries' entail all new separate neoplasms, that are not regarded as a recurrence or progression of a previous neoplasm.
The inclusion criteria of multiple primaries are wider than the criteria used for the other chapters; for every patient with at least one diagnosis between 2004 and 2020, all other tumours before 2004 (N = 39) or after 2020 (N = 2) are also included. Furthermore, any new primary occurring after the age of 19 years (N = 103) is also included.

Table 4: Overview of number of patients with multiple tumours, Belgium 2004-2020

N of multiple tumours	N of patients	%
1	8,421	97.4%
2	189	2.2%
3	20	0.2%
4	7	0.1%
5+	6	0.1%

Source: Belgian Cancer Registry

More than 1 out of 4 multiple primaries are diagnosed on the same day (Table 5). Half of these same-day diagnoses are bilateral retinoblastoma and a quarter were bilateral renal tumours. In the rest of this subchapter, bilateral tumours diagnosed ≤ 1 month apart will be excluded, to focus more on subsequent multiple tumours.
Overall, the average time between the first and second primary is 4.6 years. Excluding simultaneous tumours, this increases to 6.3 years.

Table 5: Overview of time between first and second primary neoplasm, Belgium 2004-2020

Time	N	%
0 days	60	27.0%
]0-1] month	10	4.5%
]1-12] months	13	5.9%
]1-5] years	49	22.1%
]5-10] years	52	23.4%
>10 years	38	17.1%

Source: Belgian Cancer Registry

32% of patients with multiple primaries were adolescents (15-19 years) at time of their first diagnosis (Table 6). Their first tumours mainly (22%) concerned skin carcinomas (XIe), which were mostly followed by another skin carcinoma (XIe).

Table 6: Overview of age at first and second primary neoplasm *(excluding bilateral tumours diagnosed ≤ 1 month apart)*, Belgium 2004-2020

Age at first primary	Age at second primary						
	<1y	1-4y	5-9y	10-14y	15-19y	20+	Total
<1y	1	3	3	2	2	0	**11**
1-4y	0	4	9	12	7	0	**32**
5-9y	0	0	7	8	20	3	**38**
10-14y	0	0	0	12	10	11	**33**
15-19y	0	0	0	0	24	30	**54**
Total	**1**	**7**	**19**	**34**	**63**	**44**	**168**

Source: Belgian Cancer Registry

Almost 1 out of 4 patients (N = 39) with multiple tumours had a CNS tumour (III) as first primary (Table 7). The majority (N = 20; 51%) of them was diagnosed with another primary CNS tumour (III). Leukaemia (I; N = 29), carcinomas and melanomas (XI; N = 29) and lymphomas (II; N = 28) each represented 17% of all first primaries. Patients with leukaemia (I) or lymphoma (II) as first primary, have a rather similar distribution of secondary primaries with mainly carcinomas and melanomas (XI; 31% (N = 9) and 46% (N = 13) respectively) followed by leukaemia (I; 28% (N = 8) and 29% (N = 8)), lymphoma (II; 14% (N = 4) and 11% (N = 3)) and CNS tumours (III; 14% (N = 4) and 11% (N = 3)). Patients with a carcinoma or melanoma (XI) as first primary most often (76%; N = 22) received another carcinoma or melanoma as secondary primary.

Table 7: Overview of the first and second primary in patients with multiple tumours *(excluding bilateral tumours diagnosed ≤ 1 month apart)*, Belgium 2004-2020

First primary	Second primary										
	I	II	III	IV	V	VI	VIII	IX	X	XI	Total
I	8	4	4	0	0	0	2	2	0	9	**29**
II	8	3	3	0	0	0	0	1	0	13	**28**
III	3	0	20	0	0	0	2	2	0	12	**39**
IV	1	0	1	3	0	0	1	1	0	1	**8**
V	0	2	0	0	1	0	1	0	0	0	**4**
VI	0	0	0	0	0	1	0	1	0	0	**2**
VII	1	0	0	1	0	0	0	0	0	0	**2**
VIII	6	0	0	0	0	0	1	1	0	0	**8**
IX	0	0	1	1	0	0	5	0	0	2	**9**
X	1	0	0	0	0	0	0	0	8	1	**10**
XI	1	0	3	2	0	0	0	1	0	22	**29**
Total	**29**	**9**	**32**	**7**	**1**	**1**	**12**	**9**	**8**	**60**	**168**

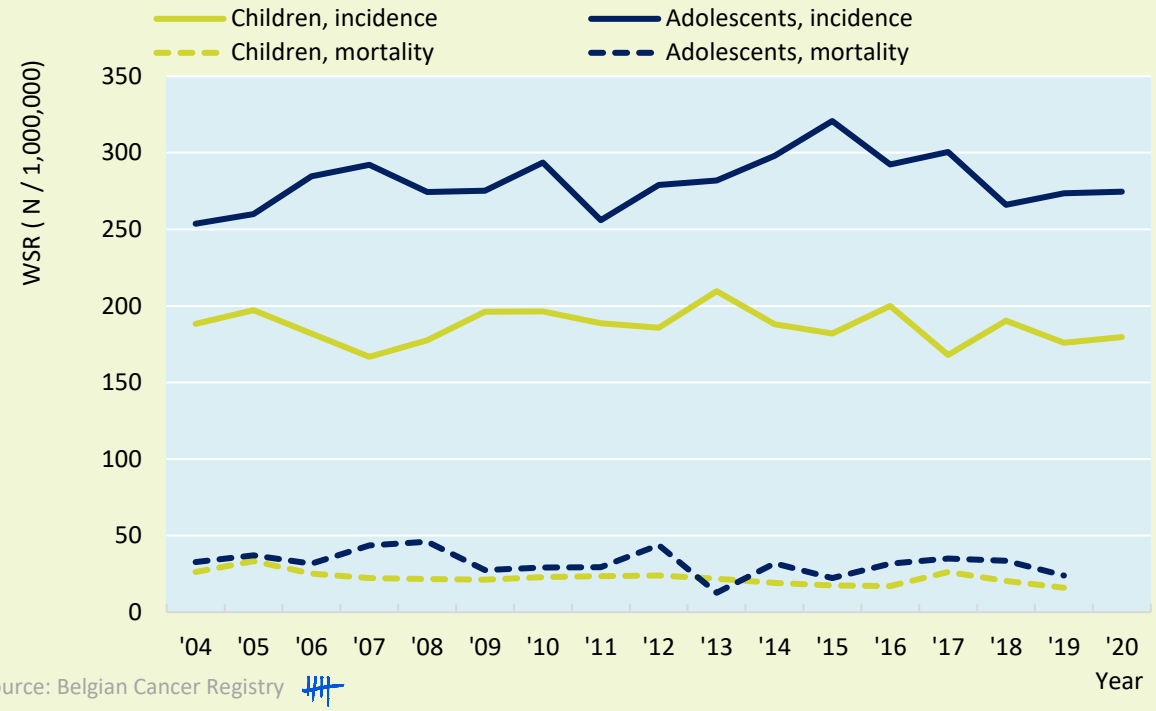
(I: Leukaemia, myeloproliferative and myelodysplastic disease, II: Lymphoma and reticuloendothelial neoplasm, III: CNS and miscellaneous intracranial and intraspinal neoplasm, IV: Neuroblastoma and other peripheral nervous cell tumour, V: Retinoblastoma, VI: Renal Tumour, VII: Hepatic tumour, VIII: Malignant bone tumour, IX: Soft tissue and other extraosseous sarcoma, X: Germ cell tumour, trophoblastic tumour and neoplasm of gonads, XI: Other malignant epithelial neoplasm and melanoma, XII: Other and unspecified malignant neoplasm)

Source: Belgian Cancer Registry

Trends

In 2018, analyses from the ACCIS-project (24) showed an annual increase in childhood cancer incidence in Europe between 1991 and 2010. In children this increase was 0.5% and in adolescents 1.0%. Similarly, increasing trends were found for the Belgian incidence data between 2004 and 2016, with a respective annual increase of 0.5% and 1.1% (Figure 8). However, if we consider the period 2004 until 2020, this trend is not observed anymore (annually -0.1% decrease in children and +0.4% increase in adolescents). The same 'switch' from an inclining to a declining trend is seen in the U.S. around 2015-2016 (25). Trends in incidence data should be carefully interpreted, since there might be many explaining underlying factors, such as changing registration practices and classification codes, 'real' trends of incidence, etc. It also concerns small numbers and therefore small differences in children (Table 3). This will be monitored very closely. More detailed information on trends within the different tumour categories can be found in the next chapters.

Figure 8: Incidence and mortality (WSR) of neoplasms in children and adolescents, Belgium 2004-2020



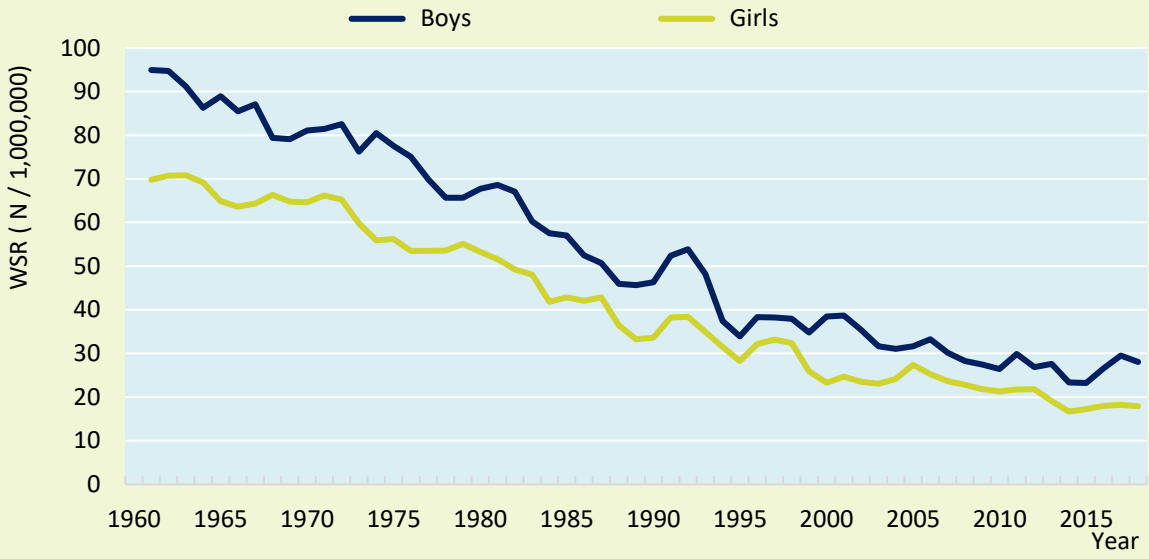
Source: Belgian Cancer Registry

Incidence and mortality are reported in different classification systems. Incidence is reported using the ICCC-3, while mortality is classified according to the ICD10. The ICCC-3 includes some benign and borderline malignancies that are not included in the mortality statistics.

Over the last five decades (Figure 9), **mortality rates have dramatically declined** for most childhood cancers (annual decrease (EAPC) of -2.6% in boys and girls between 1960 and 2019). Although in general, childhood mortality decreased tremendously in the past century, the decrease in these patients legitimately reflects improved cancer survival for children (26; 27). Survival has increased for all childhood cancer types, but by varying degrees and at different points in time.

These improvements are not linked to more effective drugs alone. Most of these improvements are linked to the accurate use of already existing drugs (effective combinations), a better understanding of the natural behaviour of the disease, improved diagnostic methods, better surgery and radiotherapy, a better identification of prognostic factors, potential benefits of applying second-line or salvage therapy, and inclusion in international clinical oncology trials (28). Since cure rates are improving, supportive care (in case of short- or long-term complications) is gaining importance, which in turn also contributes to the decreasing mortality (29).

Figure 9: Mortality of cancer (WSR) in children and adolescents by sex, Belgium 1960-2019



(3-year average of aggregated mortality data from WHO 1960-2002; Belgium 2003-2018)

Survival

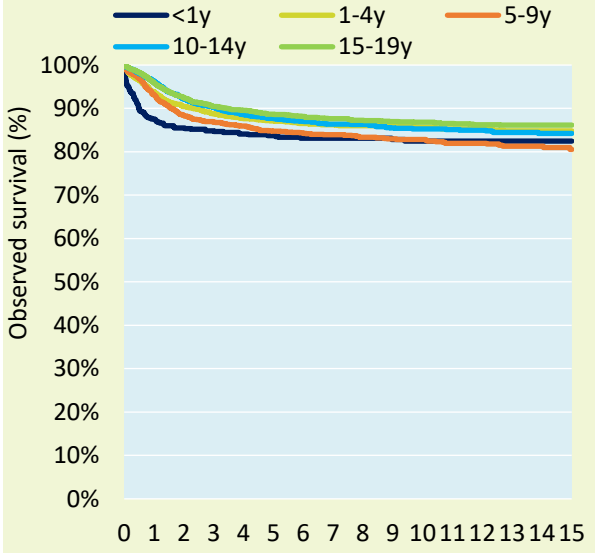
Children (0-14 years) and adolescents (15-19 years) with cancer have a relatively good prognosis. Fifteen-year survival of children (83%) is very similar to adolescents (86%). Decrease in survival for infants (Figure 10) is more pronounced in the first year after diagnosis but remains fairly stable after 5 years.

No major differences are observed in survival between boys and girls. Their fifteen-year survival is respectively 82.4% and 84.7% in children and 84.6% and 87.8% in adolescents.

In Belgium, the observed **survival in children and adolescents is also improving over time**, as can be seen in the comparison between the different time periods (Figure 11) (26; 27).

Further in-depth analyses of survival can be found in the tumour specific chapters and in the Appendix.

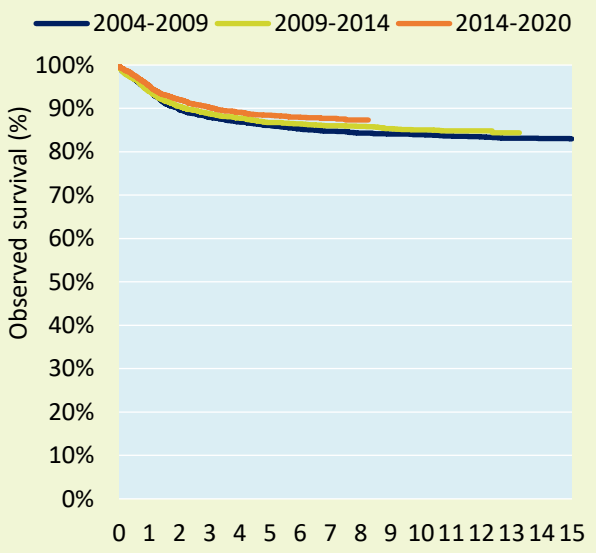
Figure 10: All tumours (I-XII), observed survival by age group, Belgium 2004-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
628	84 [80.6:86.4]	82 [79.2:85.3]	82 [79.2:85.3]
1,813	87 [85.5:88.6]	86 [83.7:87.2]	85 [82.9:86.5]
1,425	85 [82.7:86.5]	83 [80.6:84.8]	81 [78.0:82.9]
1,803	88 [86.0:89.2]	85 [83.4:86.9]	84 [82.2:86.1]
2,989	89 [87.4:89.7]	87 [85.5:88.1]	86 [84.7:87.4]

Source: Belgian Cancer Registry

Figure 11: All tumours (I-XII), observed survival, Belgium 2004-2009, 2009-2014, 2014-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
2,950	86 [84.8:87.3]	84 [82.6:85.2]	83 [81.5:84.3]
3,164	87 [85.5:87.9]	85 [83.7:86.2]	-
3,585	88 [87.2:89.5]	-	-

Source: Belgian Cancer Registry

I LEUKAEMIAS, MYELOPROLIFERATIVE AND MYELODYSPLASTIC DISEASES

Incidence

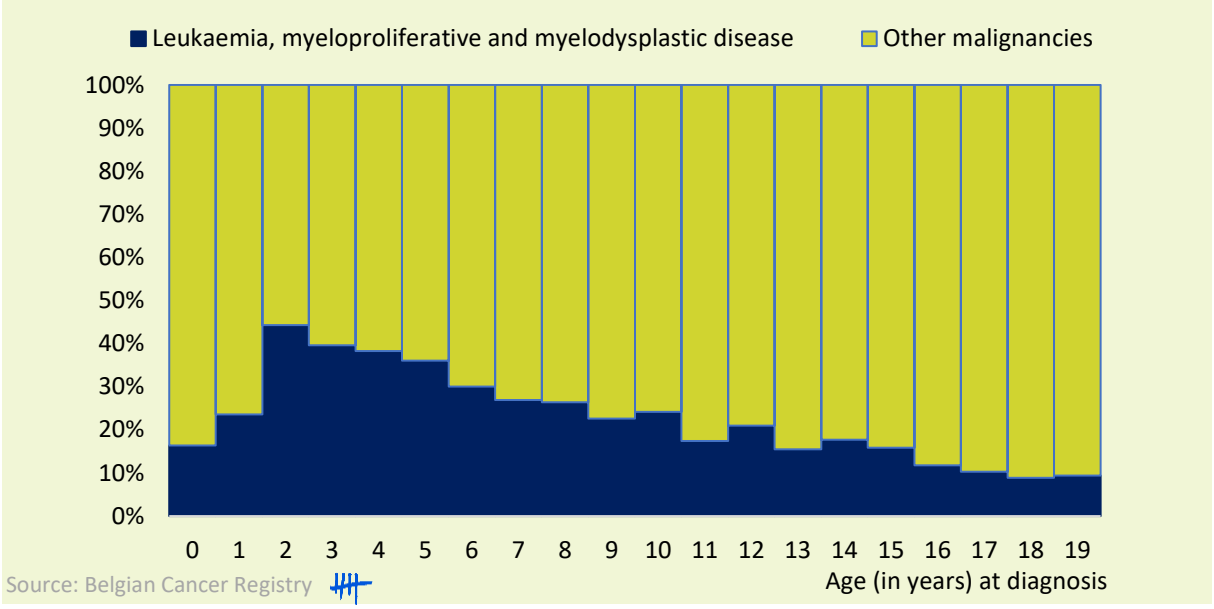
Leukaemia, myeloproliferative and myelodysplastic diseases (ICCC3 category I) are the **second most frequent cancer** in children and adolescents (Figure 5). A total number of 1,121 new diagnoses of leukaemia and other myeloid disorders (myeloproliferative and myelodysplastic diseases) have been registered during the period 2011-2020 (Table 8). The overall crude and age-standardised incidence rates are 44.2 and 46.2/1,000,000. More boys are diagnosed than girls (M/F ratio = 1.2). Incidence rates per age, sex and subtype can be found in the Appendix.

Table 8: New diagnoses of leukaemia, myeloproliferative and myelodysplastic disease, Belgium 2011-2020

Boys		Total	0-14y	15-19y
I	Leukaemia, myeloproliferative and myelodysplastic disease	**632**	507	125
Ia	Lymphoid leukaemia	466	394	72
Ib	Acute myeloid leukaemia	94	62	32
Ic	Chronic myeloproliferative disease	24	11	13
Id	Myelodysplastic syndrome and other myeloproliferative disease	42	36	6
Ie	Unspecified and other specified leukaemia	6	4	2
Girls		Total	0-14y	15-19y
I	Leukaemia, myeloproliferative and myelodysplastic disease	**489**	417	72
Ia	Lymphoid leukaemia	333	307	26
Ib	Acute myeloid leukaemia	86	63	23
Ic	Chronic myeloproliferative disease	32	17	15
Id	Myelodysplastic syndrome and other myeloproliferative disease	30	22	8
Ie	Unspecified and other specified leukaemia	8	8	0

Source: Belgian Cancer Registry

Figure 12: Relative frequency of leukaemia, myeloproliferative and myelodysplastic disease by age at diagnosis, Belgium 2011-2020



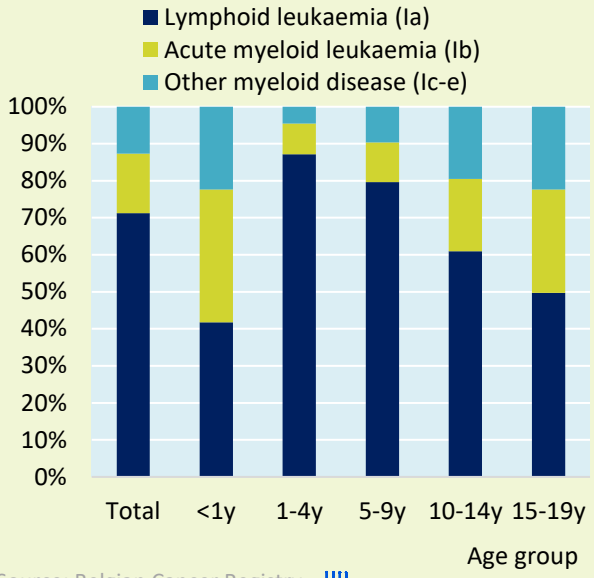
The relative frequency of leukaemia and other myeloid disorders (Figure 12) to the total childhood cancer burden varies with age. It increases from 16% in infants to about 40% around the age of 2-4 year. Afterwards the relative proportion decreases with increasing age to 12% for adolescents.

It is well known that leukaemia in the paediatric population is mostly precursor cell leukaemia rather than mature leukaemia (30). The most frequent subtype (71% of the total number of leukaemia cases) is **lymphoid leukaemia (Ia)**, which is almost entirely (>99%) precursor cell lymphoid leukaemia (Ia1). Higher incidence rates are observed in boys (M/F ratio = 1.3).
In infants, lymphoid leukaemia (Ia) and acute myeloid leukaemia (Ib) are each almost equally represented (Figure 13). However, starting from the age of 1 year, lymphoid leukaemia (Ia) becomes the dominant subtype, especially between 1 and 9 years old (≥80%). The incidence rates (Figure 14) increase dramatically to reach a peak incidence at the age of 2 years, where the rates are about 4 times higher than in infants. Between the ages of 3 to 9 years, incidence rates decrease rapidly and reach the rates observed in infants. From the age of 10 years onwards, the incidence rates of lymphoid leukaemia (Ia) remain more stable. The relative proportion decreases to 61% in the age group 10-14 years of age and 50% in adolescents (Figure 13).

The 2nd most frequent subtype, **acute myeloid leukaemia (AML: Ib)**, accounts for 15% of the leukaemia and other myeloid disorders group. This subtype shows similar incidence rates in boys and girls (M/F ratio = 1.0). The highest proportion of AML (Figure 14) is observed in infants (24%) and in adolescents (29%), while AML accounts for less than 9% in the age group 1-9 years.

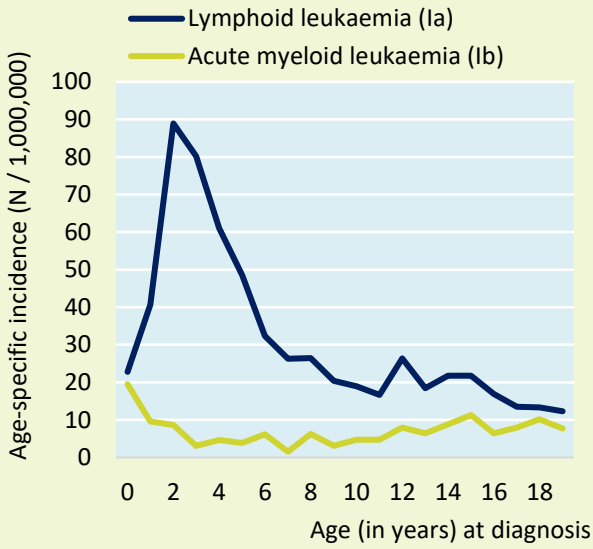
The remaining **other myeloid diseases (Ic-e)** represent together about 14% of all new diagnoses in group I. They consist mainly of chronic myeloproliferative disease (Ic; 5%) and myelodysplastic syndrome and other myeloproliferative disease (Id; 6%).

Figure 13: Leukaemia, myeloproliferative and myelodysplastic disease by age group, Belgium 2011-2020



Source: Belgian Cancer Registry

Figure 14: Leukaemia, myeloproliferative and myelodysplastic disease: age-specific incidence rate, Belgium 2011-2020

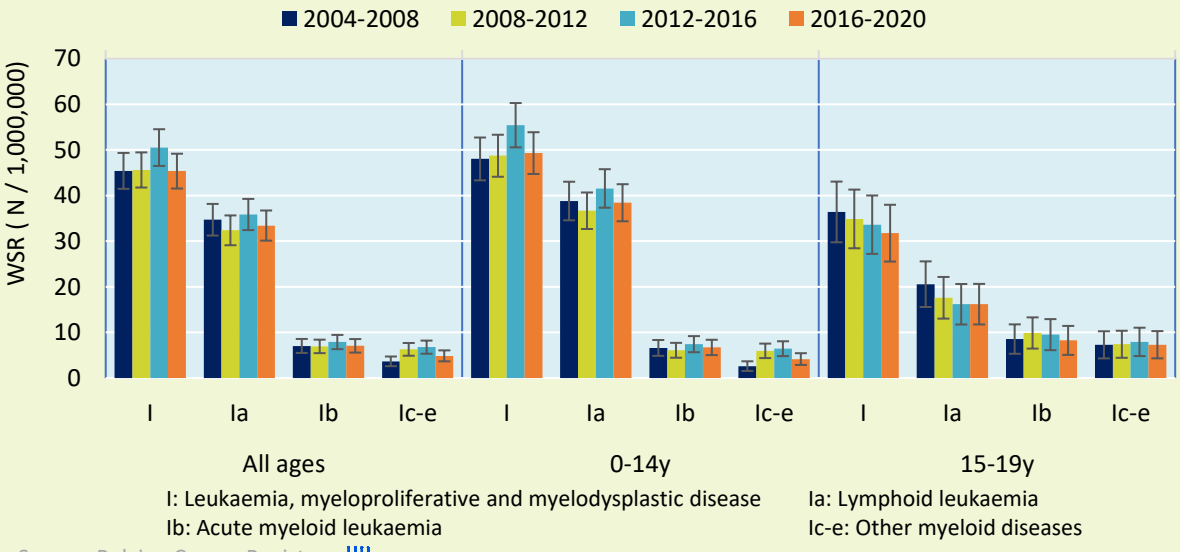


Source: Belgian Cancer Registry

Trends

Figure 15 shows the incidence data of Belgium for four consecutive time periods. In the period 2012-2016 the incidence rate (WSR) of leukaemia and myeloid disorders increased with 6% compared with the previous time periods (2004-2008 and 2008-2012). In 2016-2020, the WSR decreased again and is similar to the rates before 2012. The higher rates in 2012-2016 can be entirely explained by changes in the incidence data of children under the age of 15 years (8%). In adolescents the rates decline every period.

Figure 15: Leukaemia, myeloproliferative and myelodysplastic disease: Age-standardised incidence (WSR), Belgium 2004-2008, 2008-2012, 2012-2016, 2016-2020



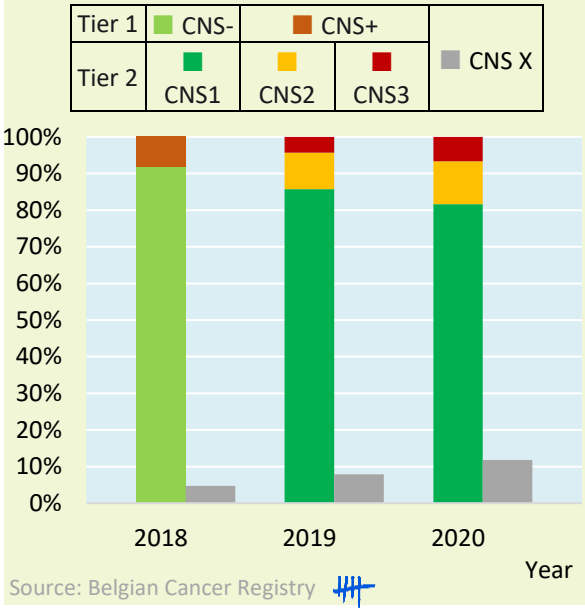
Source: Belgian Cancer Registry

Stage

Acute lymphoblastic leukaemia (ALL, Ia1) in children can be staged according to the Toronto Paediatric Cancer Stage Guidelines (16; 17). Info on tier 1 level (CNS-/CNS+) was available in our register from 2018, and on tier 2 level (CNS1/2/3) since 2019. The BCR encourages the use of the more specific tier 2 (31).
More than 90% of cases were staged (Figure 16). The availability of staging information was higher in young children (0-4 years) (94%) than in young teens (10-14 years) (89%) (Figure 17). Due to the low numbers, information by age group (Figure 17) was combined for all three years (2018-2020) and therefore the tier 2 information was converted into tier 1 to allow easier comparison.

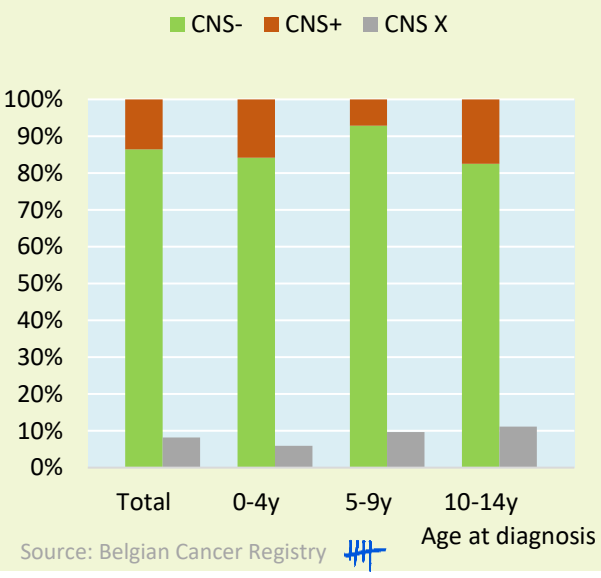
Between 2018 and 2020, the percentage of cases in higher stage (with CNS involvement at diagnosis: CNS+/CNS2/CNS3) increased from 10% to almost 20%. This seems more likely to be a systematic bias (i.e. representing the difference between staging on a tier 1 versus tier 2 level) than a true clinical shift towards more CNS involvement, but the Belgian Cancer Registry will monitor this closely in the following years.
More than 90% of all cases with known stage in children between 5 and 9 year are diagnosed in the lowest stage (CNS-/CNS1). In the other age groups, this was a bit lower around 82%.

Figure 16: Acute lymphoblastic leukaemia (Ia1) by stage and incidence year, 0-14 year, Belgium 2018-2020



Source: Belgian Cancer Registry

Figure 17 Acute lymphoblastic leukaemia (Ia1) by stage and age group, 0-14 year, Belgium 2018-2020

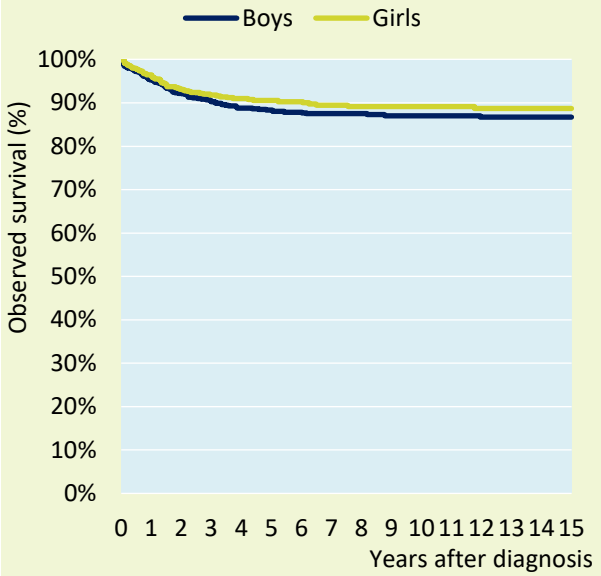


Source: Belgian Cancer Registry

Survival

The prognosis for leukaemia and other myeloid disorders is greatly dependent on the subtype. In Belgium, the 15-years observed survival for lymphoid leukaemia (Ia) is 87% for boys and 89% for girls (Figure 18). The 15-years observed survival for AML (Ib) is considerably lower with 65% for boys and 63% for girls (Figure 19). The main decrease in survival is observed in the first three years after diagnosis for both subtypes. After three years, the survival reaches a plateau.

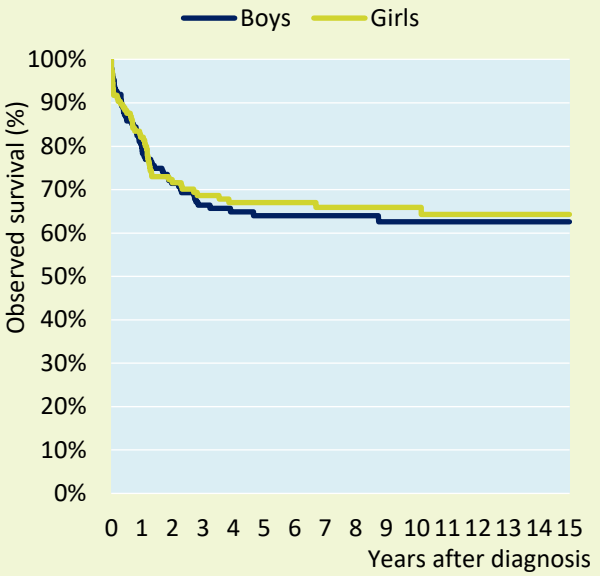
Figure 18: Lymphoid leukaemia (Ia): observed survival by sex, Belgium 2004-2020



	N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
Boys	788	88 [85.8:90.5]	87 [84.4:89.3]	87 [83.9:89.0]
Girls	559	91 [87.7:92.7]	89 [86.2:91.6]	89 [85.5:91.2]

Source: Belgian Cancer Registry

Figure 19: Acute myeloid leukaemia (Ib): observed survival by sex, Belgium 2004-2020

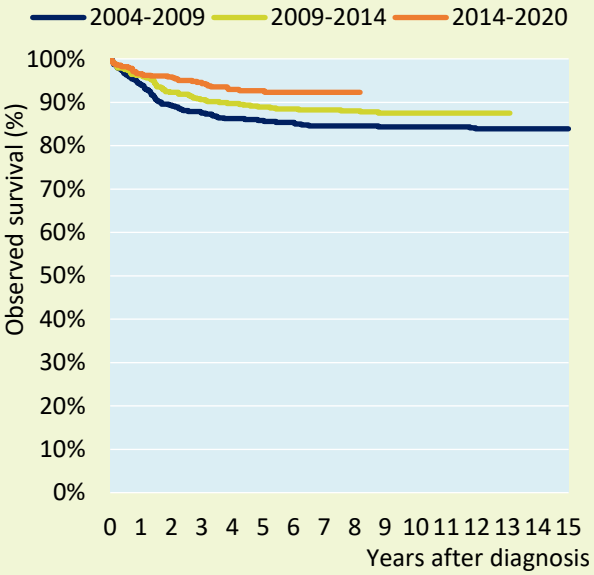


	N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
Boys	149	64 [55.9:71.4]	63 [54.2:70.3]	63 [54.2:70.3]
Girls	145	67 [58.9:74.2]	66 [57.6:73.3]	64 [55.6:72.1]

Source: Belgian Cancer Registry

The 5-year observed survival in Belgium for lymphoid leukaemia (Figure 20) increased from 86% in 2004-2009 to 93% in 2014-2020 and is similar to the survival in other European countries (30; 32; 33). Although survival is lower for AML, the gains are higher with the 5-year observed survival going from 57% in 2004-2009 up to 73% in 2014-2020 (Figure 21). These results correspond with other international studies showing a more pronounced increase of survival for AML (30; 33).

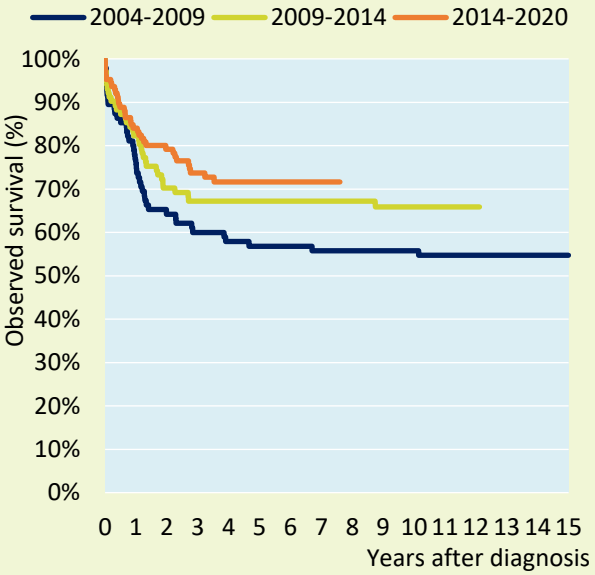
Figure 20: Lymphoid leukaemia (Ia): observed survival, Belgium 2004-2009, 2009-2014, 2014-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
479	86 [82.4:88.6]	84 [80.8:87.3]	84 [80.3:86.9]
479	89 [85.8:91.4]	87 [84.2:90.2]	-
555	93 [89.9:94.7]	-	-

Source: Belgian Cancer Registry

Figure 21: Acute myeloid leukaemia (Ib): observed survival, Belgium 2004-2009, 2009-2014, 2014-2020



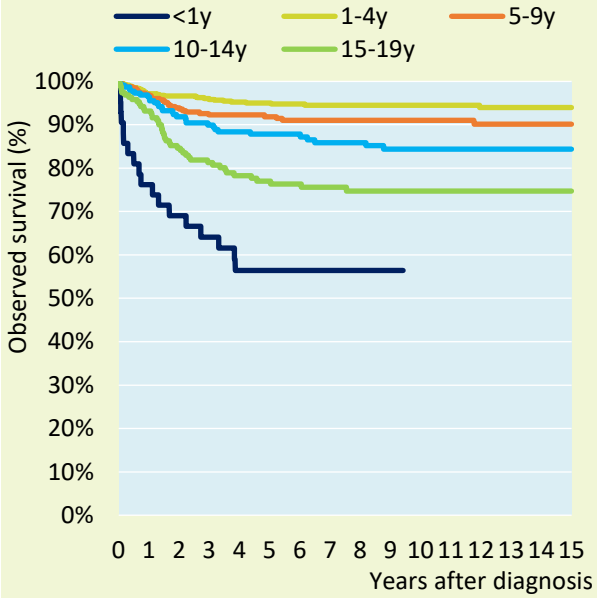
N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
95	57 [46.8:66.3]	56 [45.8:65.4]	55 [44.7:64.4]
102	67 [57.6:75.6]	66 [56.1:74.5]	-
126	72 [62.9:79.0]	-	-

Source: Belgian Cancer Registry

Survival of lymphoid leukaemia (Ia) varies considerably with age (Figure 22). Infants have the worst prognosis. During the first three years after diagnosis, their observed survival gradually decreases till 64% and then reaches a plateau. Prognosis for adolescents (77%) is worse than for children: between 1 and 4 years of age 95%, 5-9 years 92% and 10-14 years 88%. These observations are consistent with international findings (30; 34; 35). A possible explanation for the difference in prognosis between the age groups is a difference in biological subtype (30; 36; 37; 38).

The difference in prognosis between the different age groups for AML (Ib) (Figure 23) is less pronounced, but survival was lowest for infants and higher for children between 5 and 14 years.

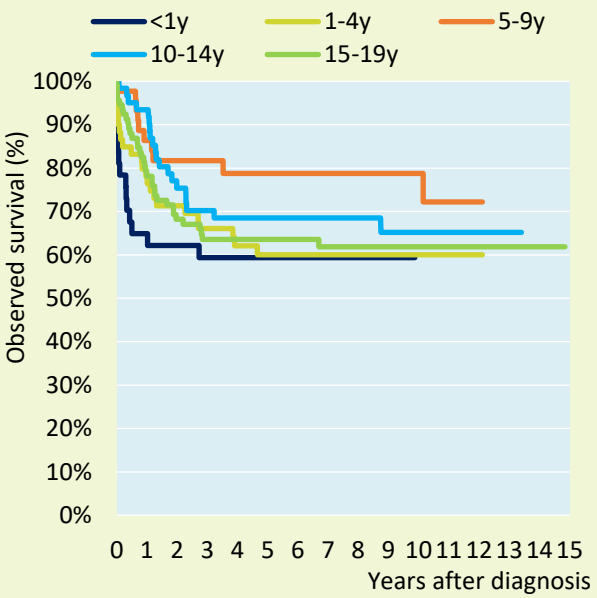
Figure 22: Lymphoid leukaemia (Ia): observed survival by age group, Belgium 2004-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
42	56 [41.3:70.4]	56 [41.3:70.4]	56 [41.3:70.4]
561	95 [92.8:96.5]	95 [92.2:96.2]	94 [91.4:95.8]
331	92 [88.3:94.4]	91 [87.3:93.7]	90 [86.0:93.2]
223	88 [82.7:91.6]	84 [78.5:88.9]	84 [78.5:88.9]
190	77 [70.3:82.5]	75 [67.8:80.6]	75 [67.8:80.6]

Source: Belgian Cancer Registry

Figure 23: Acute myeloid leukaemia (Ib): observed survival by age group, Belgium 2004-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
37	59 [43.3:73.6]	59 [43.3:73.6]	59 [43.3:73.6]
60	60 [47.0:71.8]	60 [47.0:71.8]	60 [47.0:71.8]
44	79 [64.2:88.5]	79 [64.2:88.5]	72 [53.5:85.4]
61	68 [55.9:78.8]	65 [51.8:76.6]	65 [51.8:76.6]
92	64 [53.3:72.8]	62 [51.4:71.4]	62 [51.4:71.4]

Source: Belgian Cancer Registry

II LYMPHOMAS AND RETICULOENDOTHELIAL NEOPLASMS

Incidence

Between 2011 and 2020, a total number of 869 new diagnoses of lymphomas and reticuloendothelial neoplasms (ICCC3 category II) (Table 9) are registered in children (N = 414) and adolescents (N = 455). The overall crude and age-standardised incidence rates are 34.3 and 32.6/1,000,000. More boys are registered than girls (M/F ratio = 1.5). The difference is mainly observed in children (M/F ratio = 1.9) as opposed to adolescents with a ratio of 1.1. Incidence rates per age, sex and subtype can be found in the Appendix.

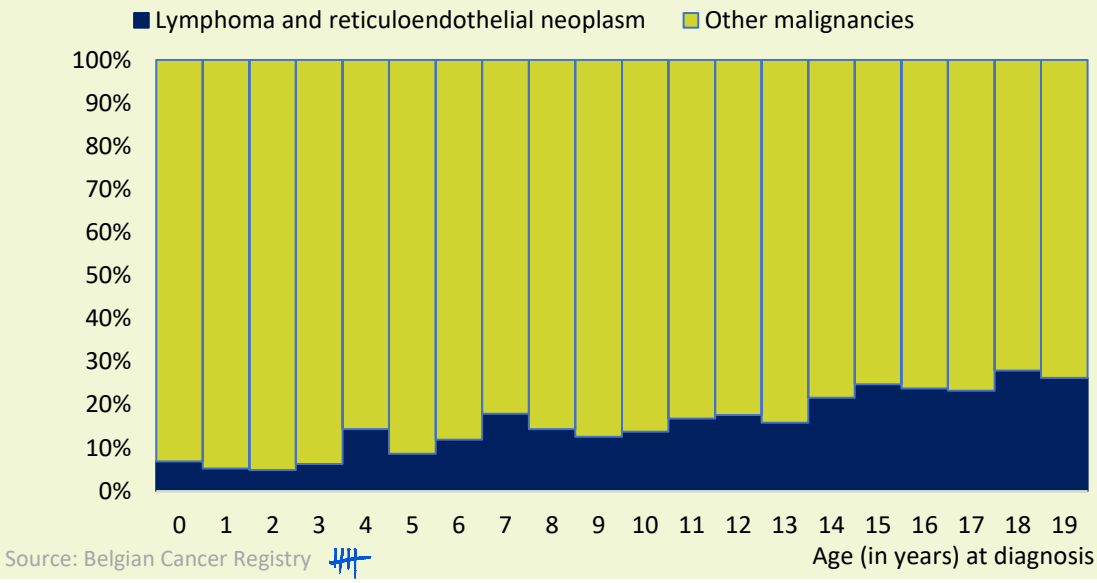
Table 9 New diagnoses of lymphoma and reticuloendothelial neoplasm, Belgium 2011-2020

Boys		Total	0-14y	15-19y
II	Lymphoma and reticuloendothelial neoplasm	**521**	276	245
IIa	Hodgkin lymphoma	247	90	157
IIb	Non-Hodgkin lymphoma	96	42	54
IIc	Burkitt lymphoma	111	87	24
IId	Miscellaneous lymphoreticular neoplasm	62	57	5
IIe	Unspecified lymphoma	5	0	5
Girls		**Total**	**0-14y**	**15-19y**
II	Lymphoma and reticuloendothelial neoplasm	**348**	138	210
IIa	Hodgkin lymphoma	217	61	156
IIb	Non-Hodgkin lymphoma	65	25	40
IIc	Burkitt lymphoma	23	16	7
IId	Miscellaneous lymphoreticular neoplasm	41	35	6
IIe	Unspecified lymphoma	2	1	1

Source: Belgian Cancer Registry

Lymphomas and reticuloendothelial neoplasms (II) are the 3rd most frequent type of childhood cancer (16%). The percentage of diagnoses increases with age (Figure 24). In adolescents they are the 2nd most frequent tumour type, accounting for 25% of all diagnoses.

Figure 24: Relative frequency of lymphoma and reticuloendothelial neoplasm by age at diagnosis, Belgium 2011-2020



Hodgkin lymphoma (IIa) is the most frequent subtype of lymphoma and reticuloendothelial neoplasm with more than half of all new diagnoses. Although rare in children younger than 10 years of age, it represents one of the most common malignancies in adolescents (Figure 25 and Figure 26).

Figure 25: Lymphoma and reticuloendothelial neoplasm incidence by age group, Belgium 2011-2020

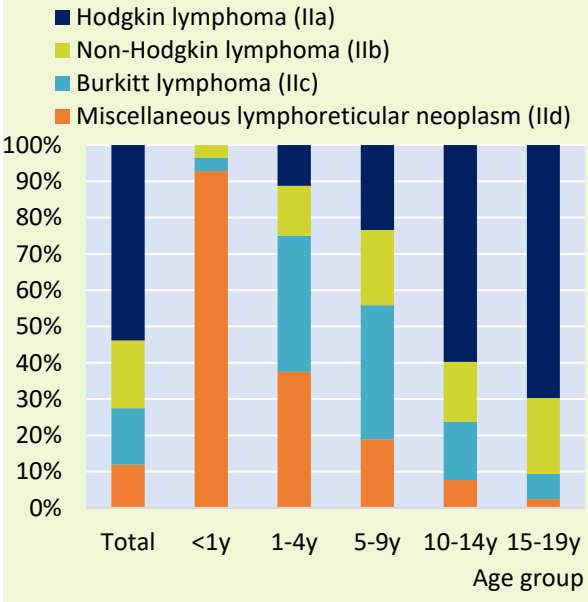
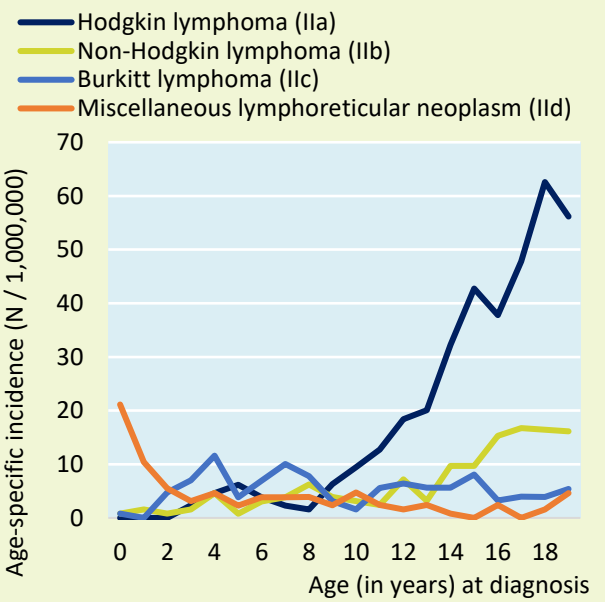
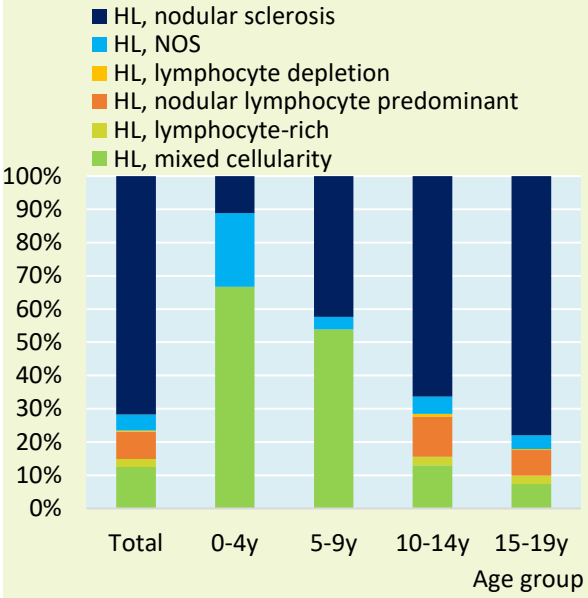


Figure 26: Lymphoma and reticuloendothelial neoplasm: age-specific incidence rate, Belgium 2011-2020



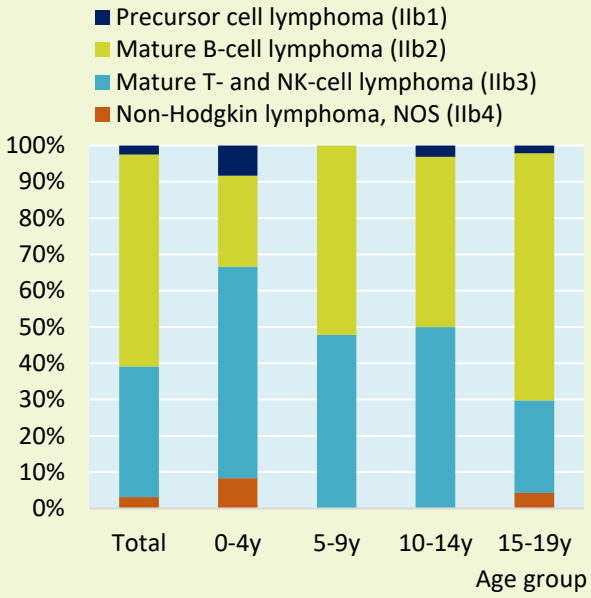
The most common subtype of Hodgkin lymphoma (HL; IIa) is nodular sclerosing HL (Figure 27). This histological subtype represents 34% of all diagnoses of HL under the age of 10, increasing to 78% in adolescents.

Figure 27: Hodgkin lymphoma: incidence by subtype and age group, Belgium 2011-2020



Source: Belgian Cancer Registry

Figure 28: Non-Hodgkin lymphoma: incidence by subtype and age group, Belgium 2011-2020



Source: Belgian Cancer Registry

Non-Hodgkin lymphoma (NHL; IIb) is the 2nd most frequent subtype of all lymphomas and reticuloendothelial neoplasms (19%). The overall incidence rates of NHL (IIb) remain relatively stable until the age of 15 years (Figure 26). After the age of 15, an increase in age specific incidence rate is observed. **Mature B-cell lymphoma (IIb2)** represent the majority (58%) of all NHL. However, between the age groups clear differences can be observed (Figure 28). Mature B-cell lymphomas (IIb2) are more dominant in older children and adolescents. **Mature T/NK-cell lymphomas (IIb3)** are the most frequent subtype in young children (0-4 years). **Precursor cell lymphomas (IIb1)** are very rare (2%).

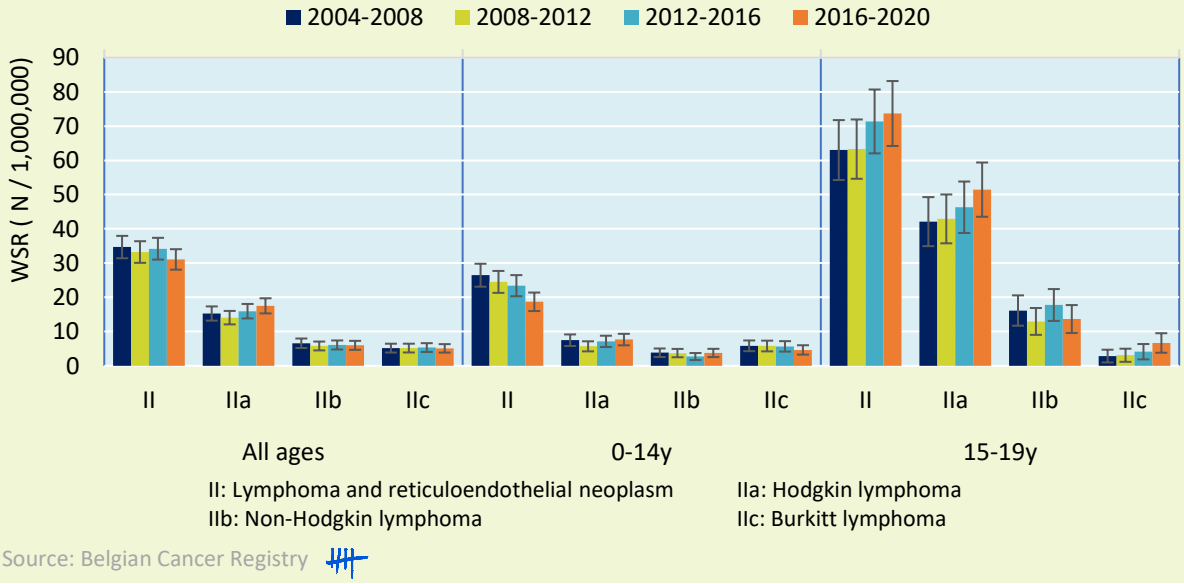
Burkitt lymphomas (IIc) represent 15% of the total incidence of lymphomas and reticuloendothelial neoplasms. They show a marked predominance around the age group of 1-9 years (Figure 25 and Figure 26). The incidence rate in boys is almost five times higher than in girls (M/F ratio = 4.7).

Miscellaneous lymphoreticular neoplasms (IId) represent 12% of all lymphomas and reticuloendothelial neoplasms. In children between 0 and 4 years, this group is the dominant subtype (Figure 25). In other age groups the incidence rates are substantially lower. The most common malignancy (>95%) in group IId is Langerhans cell histiocytosis.

Trends

International trends show that incidence rates for lymphomas and reticuloendothelial neoplasms (all subtypes) increase faster in adolescents than in children (23; 25; 39). These trends are also reflected in the Belgian data. In adolescents, the highest rates were found for the most recent time period (i.e. 2016-2020). In children, on the other hand, the incidence rates decline slightly. However, caution should be taken to view the results in the context of improvements in the detection of haematological malignancies and changes in the classification system (40). More detailed analyses of the trends by specific combinations of histological subtypes, age and sex could potentially clarify these findings (39).

Figure 29: Lymphoma and reticuloendothelial neoplasm: Age-standardised incidence (WSR), Belgium 2004-2008, 2008-2012, 2012-2016, 2016-2020



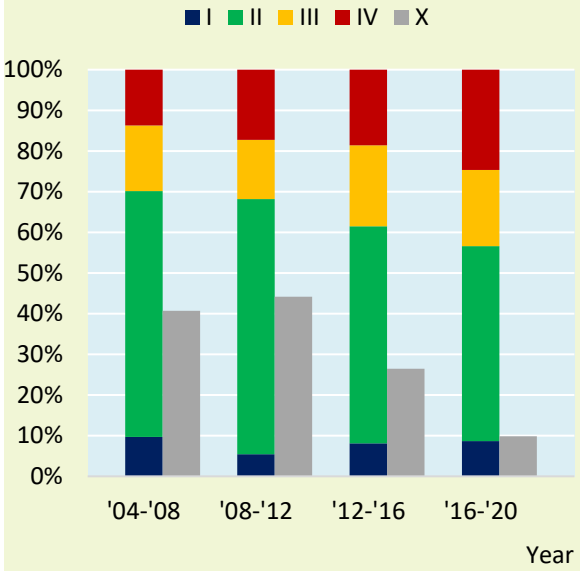
Source: Belgian Cancer Registry

Stage

According to the Toronto Paediatric Cancer Stage Guidelines (16; 17), Hodgkin lymphoma must be staged using the Lugano system. However, since several years, the Ann-Arbor system was in use (which only differs very slightly from Lugano). Between 2018 and 2020, although Lugano was promoted (31), only 52 cases were staged using Lugano and 72 using Ann-Arbor. For that reason, information on both systems was combined in this chapter. In the more recent years, information on stage was available for about 90% of all HL (Figure 30). Over time, there was an increase in the availability of information on stage. The availability of information was high in all age groups (Figure 31).

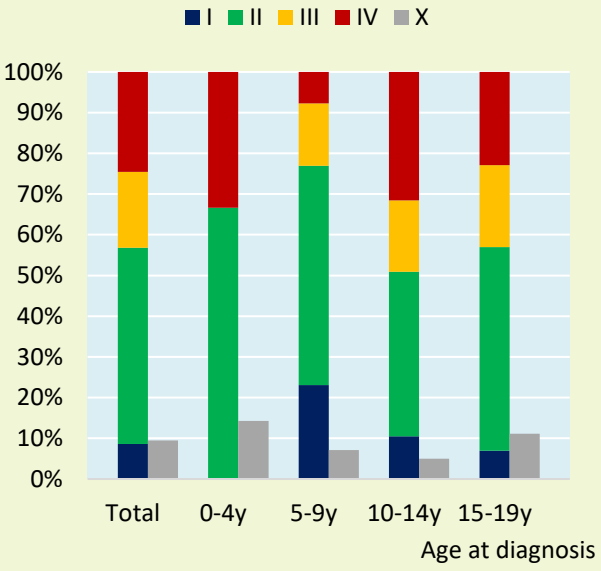
Between 2004-2020, the percentage of stage III and IV tumours increased from 30% to 42% on the total of staged diagnoses. This shift from regional (stage II) to distant disease (stage III and IV) at diagnosis was also observed in the U.S.A. over a similar time period, with an annual increase in distant disease of +0.9% (41). This 'upstaging' might be due to differences in staging methods over time (42), but it will be necessary to follow this closely in the years to come.
In older children and adolescents (10-19y), the incidence for stage III and IV is also higher than in younger children.

Figure 30: Hodgkin lymphoma (IIa) by stage and incidence year, Belgium 2004-2020



Source: Belgian Cancer Registry

Figure 31: Hodgkin lymphoma (IIa) by stage and age group, Belgium 2016-2020



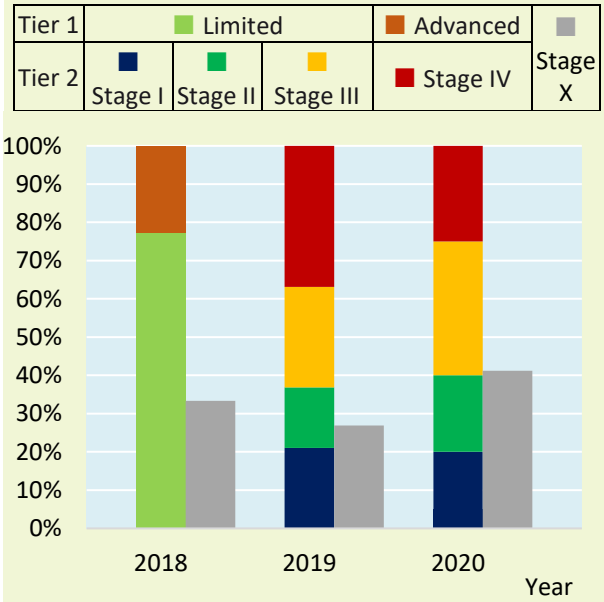
Source: Belgian Cancer Registry

For Non-Hodgkin lymphoma and Burkitt lymphoma, the Toronto guidelines prescribe the St-Jude/Murphy staging. Similar as in Hodgkin lymphoma, the Ann-Arbor system has been used previously, however it appears that the adoption of the new system is faster than in Hodgkin lymphoma. Since 2018 we received 32 St-Jude/Murphy and 27 Ann Arbor results. Especially for Burkitt lymphoma, the majority of cases was staged using St-Jude/Murphy.

The availability of information on stage is approximately 65% between 2018 and 2020 (Figure 32). Info on tier 1 level (limited/advanced) was available in our register from 2018, and on tier 2 level (I-IV) since 2019. The BCR encourages the use of the more specific tier 2 (31). Due to the low numbers, information by age group (Figure 33) was combined for both staging systems and all three years (2018-2020). Therefore, the tier 2 information was converted into tier 1 (I-III: limited, IV: advanced) to allow easier comparison.

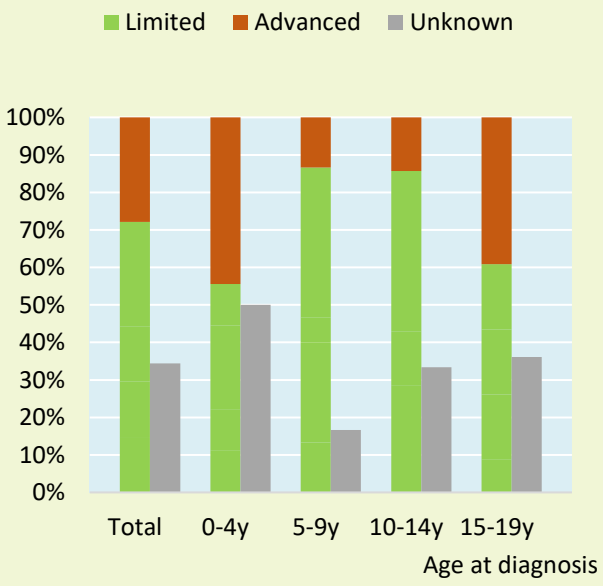
The stage at diagnosis differed importantly between age groups. In children aged 5-14 years the percentage of advanced stage NHL was lowest.

Figure 32: Non-Hodgkin lymphoma (IIb) and Burkitt lymphoma (IIc) by stage and incidence year, Belgium 2018-2020



Source: Belgian Cancer Registry

Figure 33: Non-Hodgkin lymphoma (IIb) and Burkitt lymphoma (IIc) by stage and age group, Belgium 2018-2020

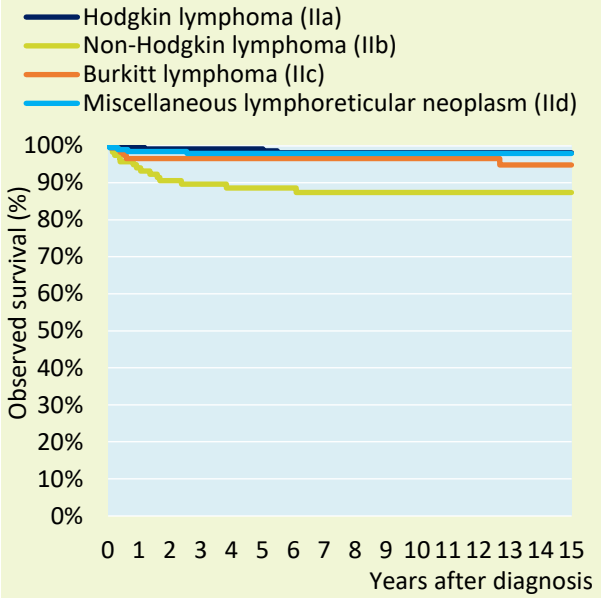


Source: Belgian Cancer Registry

Survival

The 15-year observed survival for the different lymphoma and reticuloendothelial neoplasm subtypes in children (0-14 year) and adolescents (15-19 years) are shown in Figure 34 and Figure 35. The 15-year observed survival for childhood Hodgkin lymphoma, Burkitt lymphoma and miscellaneous lymphoreticular neoplasm are all above 95%. This was also observed for Hodgkin lymphoma in adolescents. The numbers at risk for the other 2 groups were too low to observe a 15-year survival, however the results at 5 and 10 years are lower when compared to children. Non-Hodgkin lymphoma had a comparable survival for children and adolescents just below 90%.

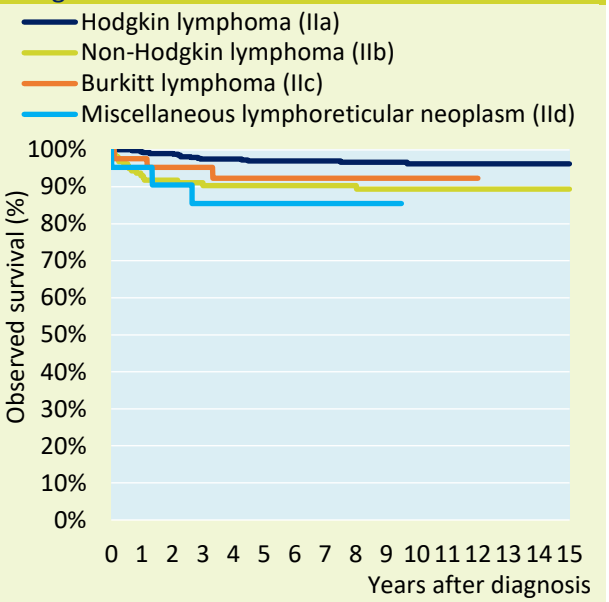
Figure 34: Lymphoma and reticuloendothelial neoplasm (II): Observed survival in children, Belgium 2004-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
247	99 [97.1:99.8]	98 [95.2:99.3]	98 [95.2:99.3]
117	89 [81.5:93.2]	87 [79.9:92.4]	87 [79.9:92.4]
176	97 [92.7:98.4]	97 [92.7:98.4]	95 [88.5:97.7]
197	98 [94.9:99.2]	98 [94.9:99.2]	98 [94.9:99.2]

Source: Belgian Cancer Registry

Figure 35: Lymphoma and reticuloendothelial neoplasm (II): Observed survival in adolescents, Belgium 2004-2020

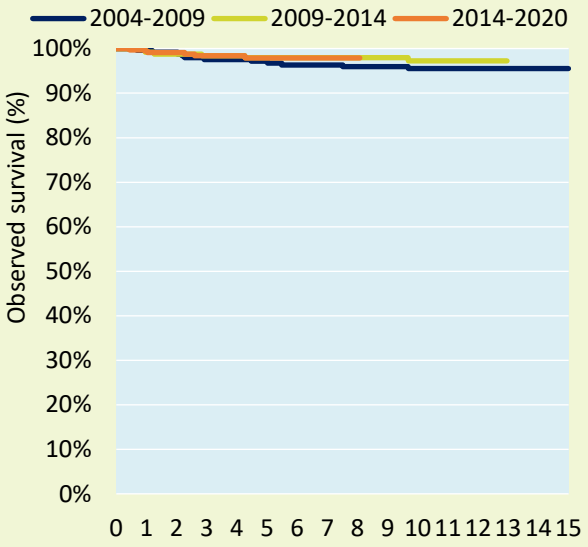


N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
501	97 [95.0:98.2]	96 [93.8:97.7]	96 [93.8:97.7]
158	90 [84.7:94.1]	89 [83.3:93.4]	89 [83.3:93.4]
42	92 [79.7:97.4]	92 [79.7:97.4]	-
21	85 [64.8:94.9]	-	-

Source: Belgian Cancer Registry

Survival over time was consistently high (94% or more) for Hodgkin lymphoma (IIa) (Figure 36), Burkitt lymphoma (IIc) (Figure 38) and Miscellaneous lymphoreticular neoplasms (IId) (Figure 39). For non-Hodgkin lymphoma (Figure 37), the survival was less with the lowest 5-year observed survival in the most recent period (86% in 2014-2020 versus 93% in 2004-2009). There did not seem to have occurred any important shifts in distribution of age, sex, stage or tumour subtypes during these time periods, which could have contributed to this survival decline.

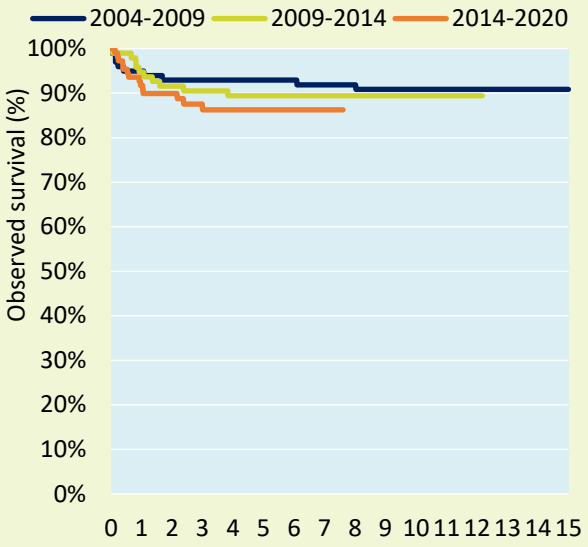
Figure 36: Hodgkin lymphoma (IIa): observed survival, Belgium 2004-2009, 2009-2014, 2014-2020



	N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
2004-2009	248	97 [94.3:98.6]	96 [92.2:97.5]	96 [92.2:97.5]
2009-2014	251	98 [95.4:99.1]	97 [94.0:98.8]	-
2014-2020	337	98 [95.5:99.1]	-	-

Source: Belgian Cancer Registry

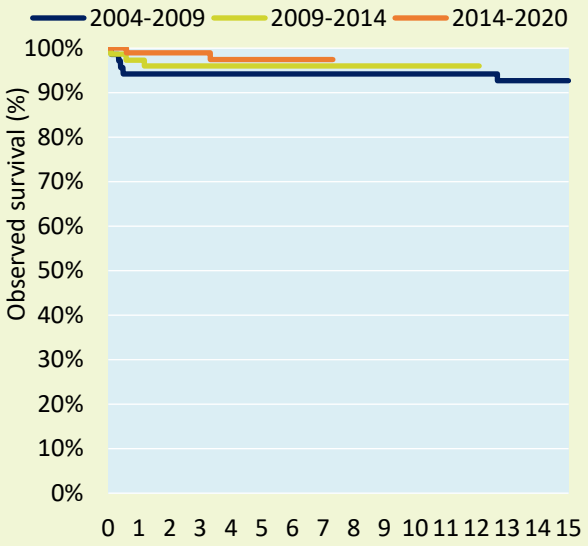
Figure 37: Non-Hodgkin lymphoma (IIb): observed survival, Belgium 2004-2009, 2009-2014, 2014-2020



	N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
2004-2009	99	93 [86.1:96.5]	91 [83.5:95.1]	91 [83.5:95.1]
2009-2014	95	89 [81.7:94.2]	89 [81.7:94.2]	-
2014-2020	109	86 [78.2:91.7]	-	-

Source: Belgian Cancer Registry

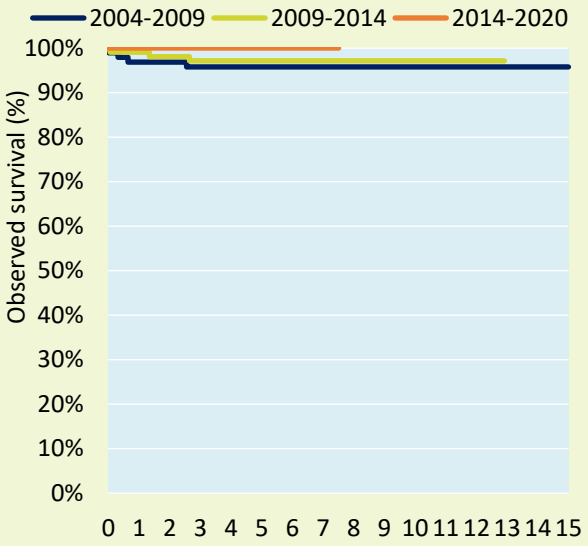
Figure 38: Burkitt lymphoma (IIc): observed survival, Belgium 2004-2009, 2009-2014, 2014-2020



	N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
2004-2009	70	94 [86.0:97.7]	94 [86.0:97.7]	93 [84.0:96.8]
2009-2014	74	96 [88.7:98.6]	96 [88.7:98.6]	-
2014-2020	92	97 [90.8:99.3]	-	-

Source: Belgian Cancer Registry

Figure 39: Miscellaneous lymphoreticular neoplasm (IId): observed survival, Belgium 2004-2009, 2009-2014, 2014-2020



	N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
2004-2009	95	96 [89.7:98.4]	96 [89.7:98.4]	96 [89.7:98.4]
2009-2014	106	97 [91.9:99.0]	97 [91.9:99.0]	-
2014-2020	53	100 [100:100]	-	-

Source: Belgian Cancer Registry

III CENTRAL NERVOUS SYSTEM TUMOURS AND MISCELLANEOUS INTRACRANIAL AND INTRASPINAL NEOPLASMS

Incidence

Central nervous system tumours (CNS) and miscellaneous intracranial and intraspinal (MII) neoplasms (ICCC3 category III) represent the **most frequent tumour** in children and adolescents (23%). In Belgium, 1,235 new diagnoses are registered between 2011 and 2020 (Table 10). The overall crude and age-standardised incidence rates are 48.7 and 48.8/1,000,000. Slightly more boys are diagnosed than girls (M/F ratio = 1.2). Of these tumours, 57% is considered benign or of borderline malignancy and 43% malign cancer.

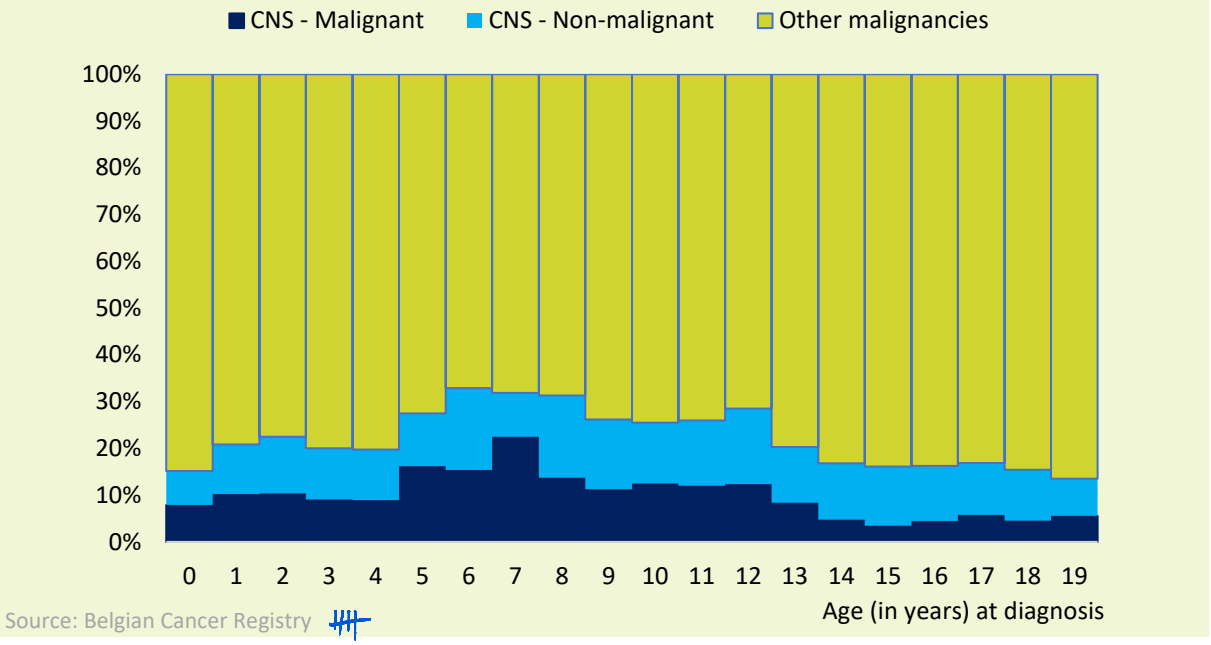
These tumours occur quite frequently in all age groups with the highest proportion of all tumours (30%) in children between 5 and 14 years of age (Figure 40). Incidence rates per age, sex and subtype can be found in the Appendix.

Table 10: New diagnoses of CNS and miscellaneous intracranial and intraspinal neoplasm, Belgium 2011-2020

Boys		Total	0-14y	15-19y
III	CNS and miscellaneous intracranial and intraspinal neoplasm	**683**	516	167
IIIa	Ependymoma and choroid plexus tumour	61	51	10
IIIb	Astrocytoma	232	174	58
IIIc	Intracranial and intraspinal embryonal tumour	91	86	5
IIId-f	Other CNS and MII neoplasm	299	205	94
Girls		**Total**	**0-14y**	**15-19y**
III	CNS and miscellaneous intracranial and intraspinal neoplasm	**552**	406	146
IIIa	Ependymoma and choroid plexus tumour	48	39	9
IIIb	Astrocytoma	194	155	39
IIIc	Intracranial and intraspinal embryonal tumour	51	44	7
IIId-f	Other CNS and MII neoplasm	259	168	91

Source: Belgian Cancer Registry

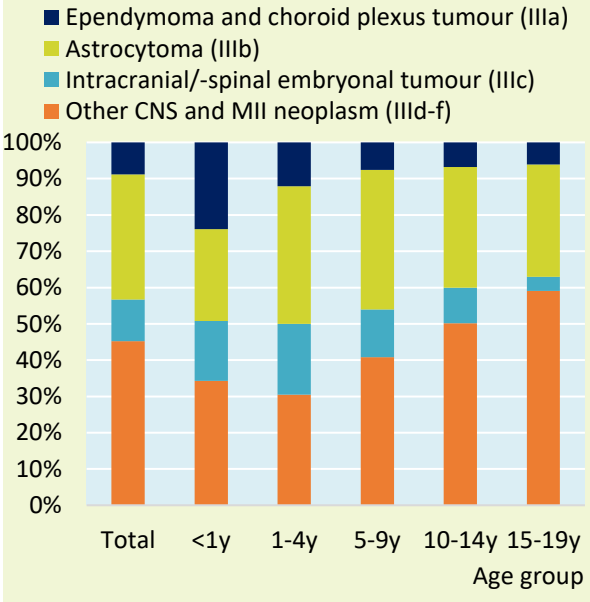
Figure 40: Relative frequency of CNS and miscellaneous intracranial and intraspinal neoplasm by age at diagnosis, Belgium 2011-2020



Source: Belgian Cancer Registry

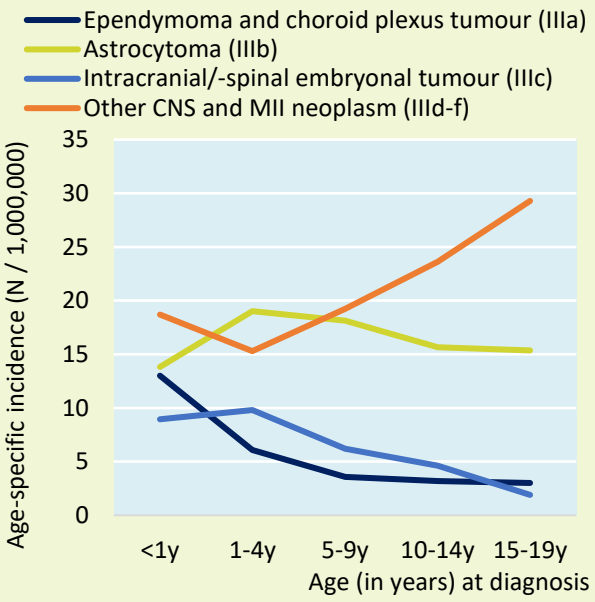
The CNS and MII neoplasms represent a heterogeneous collection of malignancies (Figure 41 and Figure 42) with different histology, behaviour and prognosis. The distribution of the different histological subtypes can be seen in detail in Figure 43 and Table 11.

Figure 41: CNS and miscellaneous intracranial and intraspinal neoplasm by age group, Belgium 2011-2020



Source: Belgian Cancer Registry

Figure 42: CNS and miscellaneous intracranial and intraspinal neoplasm: age-specific incidence rates, Belgium 2011-2020



Source: Belgian Cancer Registry

Ependymoma and choroid plexus tumours (IIIa) are primarily diagnosed in young children (0-4 years). The incidence rates for these tumours rapidly decrease and are low after the age of 4. All ages together, the male/female ratio is 1.2. In very young children (0-4 years) the incidence rates in girls are slightly higher than in boys (M/F ratio = 0.9).

This group (IIIa) contains two types of tumours, ependymomas (IIIa1), which represent three out of four diagnoses when considering all age groups, and choroid plexus tumours (IIIa2). The latter group is mainly diagnosed in the first years of life (0-4 years; 71%), while only about 33% of the ependymoma (IIIa1) group is diagnosed in this age group (Table 11).

Astrocytomas (IIIb) are the most frequent subtype of all CNS and MII neoplasms (34%) (43; 44; 45). Astrocytomas occur quite frequently in all age groups. The incidence rates for boys are somewhat higher than for girls (all ages M/F ratio = 1.1).
Astrocytomas (IIIb) include various tumour types with a wide range of WHO grading from slowly growing pilocytic astrocytoma (grade I) to aggressive glioblastoma (grade IV) (46). Most astrocytomas are diagnosed as grade I (71%; Figure 44, Table 11) and mostly in the age group 0-4 years, where they encompass about 83% of the astrocytoma diagnoses. Most grade I astrocytoma are pilocytic astrocytoma (92%) (44). They encompass 65% of all astrocytoma and are the most frequently diagnosed tumour of all CNS and MII neoplasms in children and adolescents (23%). The number of grade II astrocytoma is similar in all age groups. Grade III astrocytoma are rare in general. Grade IV astrocytoma are mostly diagnosed in the age group 5-9 years (Table 11).

The majority of **intracranial and intraspinal embryonal tumours (IIIc)** is diagnosed in children younger than 9 years of age. More boys are diagnosed with intracranial and intraspinal embryonal tumours (IIIc) than girls (M/F ratio = 1.7).
The IIIc group is also very heterogeneous. Medulloblastomas (IIIc1) are the most common histological subtype (74%). Atypical teratoid/rhabdoid tumours (ATRT) (IIIc4) are the second most diagnosed subtype (17%). This rare tumour typically occurs in infants and young children (< 5 year) (47). PNETs (IIIc2)[ii] are very rare, and no medulloepithelioma (IIIc3) has been diagnosed during the considered period.

Figure 43: CNS and miscellaneous intracranial and intraspinal neoplasm by subtype, Belgium 2011-2020

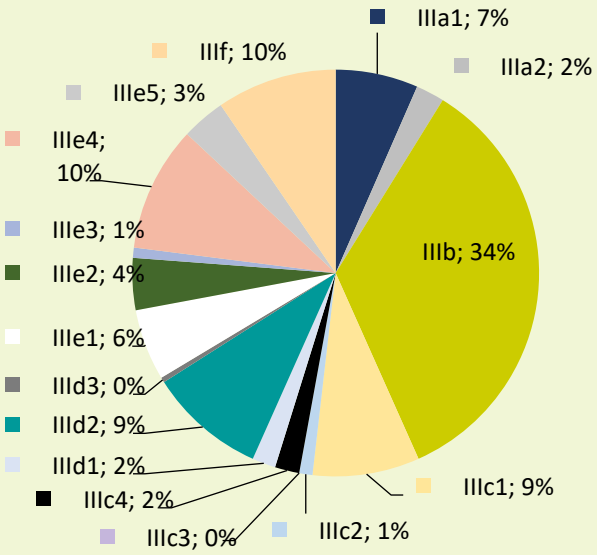
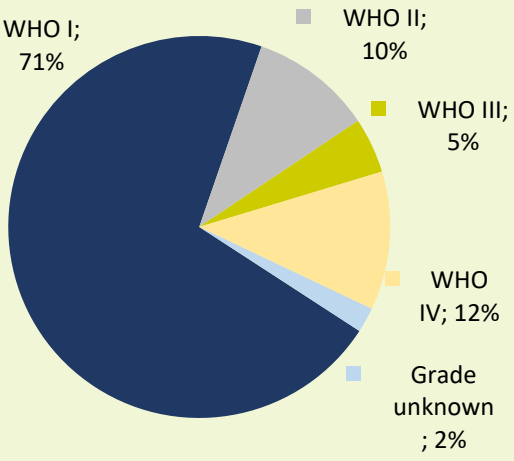


Figure 44: Astrocytoma by WHO-grade, Belgium 2011-2020



Source: Belgian Cancer Registry

The **remaining CNS and MII neoplasms (IIId-f)** represent a very diverse group of tumours.

[ii] Obsolete terminology following the ICCC-3 classification. These entities are now labelled "CNS embryonal tumour, NEC/NOS"

Other gliomas (IIId) are mainly represented by mixed and unspecified gliomas (80%).
Other specified intracranial and intraspinal neoplasms (IIIe) are the second most frequent subgroup of all CNS and MII neoplasms (24%), after astrocytomas. They mostly entail neuronal and mixed neuronal-glial tumours (IIIe4), which are mainly gangliogliomas (41%) and dysembryoplastic neuroepithelial tumours (37%). These tumours are mostly diagnosed at ages older than 12. Group IIIe4 is followed by pituitary adenomas and carcinomas (IIIe1) and meningiomas (IIIe5), mostly diagnosed in adolescents, and craniopharyngiomas (IIIe2), mostly diagnosed after 5 years old. **Unspecified intracranial and intraspinal neoplasms (IIIf)** represent 10% (118 cases), and almost exclusively entail neoplasms where a histological diagnosis was not or could not be obtained.

Table 11: CNS and miscellaneous intracranial and intraspinal neoplasm, number of new diagnoses by age group, Belgium 2011-2020

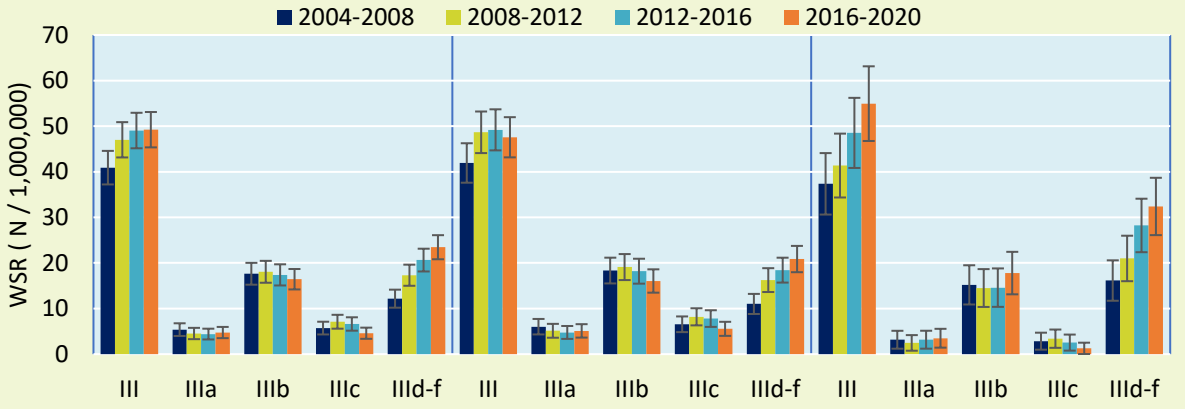
ICCC-3 classification		<1y	1-4y	5-9y	10-14y	15-19y	0-19y
III	**CNS and miscellaneous intracranial and intraspinal neoplasm**	**67**	**256**	**304**	**295**	**313**	**1,235**
IIIa	Ependymoma and choroid plexus tumour	16	31	23	20	19	**109**
IIIa1	Ependymoma	5	22	19	17	18	**81**
IIIa2	Choroid plexus tumour	11	9	4	3	1	**28**
IIIb	Astrocytoma	17	97	117	98	97	**426**
	WHO I	14	81	78	71	59	**303**
	WHO II	0	7	14	9	14	**44**
	WHO III	1	3	5	4	7	**20**
	WHO IV	2	4	18	11	15	**50**
	Grade unknown	0	2	2	3	2	**9**
IIIc	Intracranial and intraspinal embryonal tumour	11	50	40	29	12	**142**
IIIc1	Medulloblastoma	2	30	38	23	12	**105**
IIIc2	Primitive neuroectodermal tumour (PNET)[ii]	2	6	0	5	0	**13**
IIIc3	Medulloepithelioma	0	0	0	0	0	**0**
IIIc4	Atypical teratoid/rhabdoid tumour	7	14	2	1	0	**24**
IIId	Other glioma	9	18	52	40	24	**143**
IIId1	Oligodendroglioma	2	1	3	5	12	**23**
IIId2	Mixed and unspecified glioma	7	17	47	33	11	**115**
IIId3	Neuroepithelial glial tumour of uncertain origin	0	0	2	2	1	**5**
IIIe	Other specified intracranial and intraspinal neoplasm	7	36	46	75	133	**297**
IIIe1	Pituitary adenomas and carcinoma	0	1	2	13	54	**70**
IIIe2	Tumour of the sellar region (craniopharyngioma)	2	6	15	15	13	**51**
IIIe3	Pineal parenchymal tumour	0	2	2	4	2	**10**
IIIe4	Neuronal and mixed neuronal-glial tumour	4	22	23	35	39	**123**
IIIe5	Meningioma	1	5	4	8	25	**43**
IIIf	Unspecified intracranial and intraspinal neoplasm	7	24	26	33	28	**118**

Source: Belgian Cancer Registry

Trends

Between 2004 and 2020, the incidence rates of CNS and miscellaneous intracranial and intraspinal neoplasms (III) increase in Belgium (Figure 45). This increase is mainly observed in the subgroup 'Other specified intracranial and intraspinal neoplasms (IIIe)', in many subgroups but most prominent in the subgroup of pituitary adenomas and carcinomas (IIIe1). International data confirm that incidence rates of CNS and MII neoplasms are annually increasing in children and adolescents (23; 24; 30; 48; 49). These increases can at least partly be explained by higher completeness of the registrations and improved diagnoses. For example, biopsies are taken more often and both radiological and neurosurgical techniques improved (50). However, the presence of potential underlying risk factors of these tumours causing a true increase cannot be excluded (23; 24).

Figure 45: CNS and miscellaneous intracranial and intraspinal neoplasm: Age-standardised incidence (WSR), Belgium 2004-2008, 2008-2012, 2012-2016, 2016-2020



III: CNS and miscellaneous intracranial/-spinal neoplasm
IIIa: Ependymoma and choroid plexus tumour
IIIb Astrocytoma
IIIc: Intracranial/-spinal embryonal tumour
IIId-f: Other CNS and miscellaneous intracranial/-spinal neoplasm

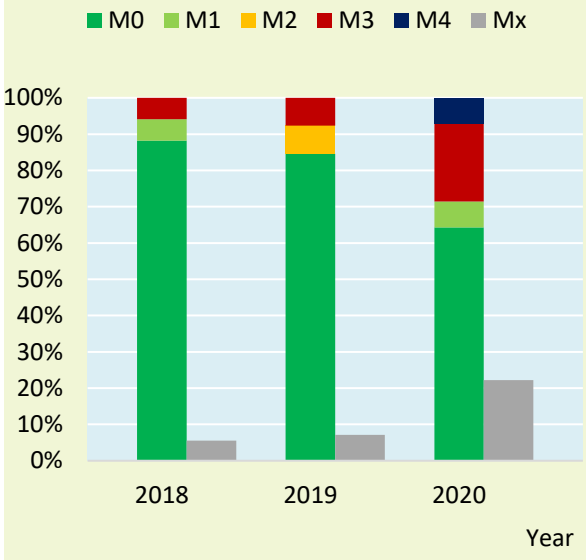
Source: Belgian Cancer Registry

Stage

Ependymoma (IIIa1) and intracranial and intraspinal embryonal tumour (IIIc) in children can be staged according to the Toronto staging guidelines (16; 17; 31). For 2018 and 2019, more than 90% of these CNS tumours were staged. In 2020, this dropped to 75% (Figure 46).

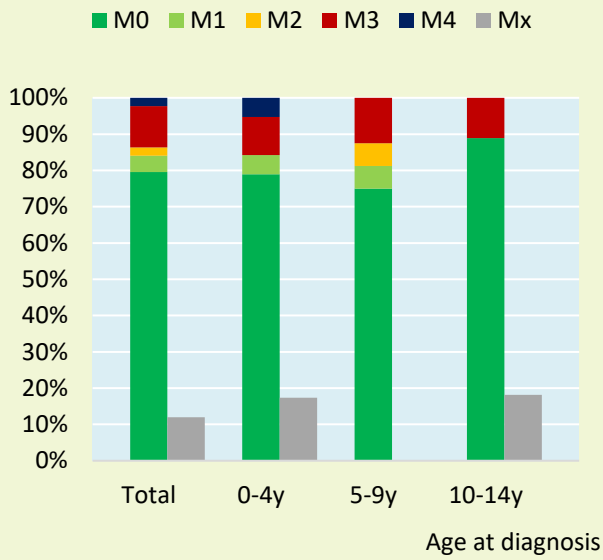
The majority of cases is staged as M0. In 2020 the proportion of higher stages seemed to rise. However, we must be reminded that the yearly number of diagnoses is small and therefore sensitive to random fluctuations, and there also might be an impact of the rise of cases with unknown stage in that year. Diagnoses with metastatic disease (metastasis either contained to the CNS, M1-M3, or outside of the CNS, M4) are slightly more observed in children under the age of 10 years (Figure 47).

Figure 46: Ependymoma (IIIa1) and intracranial and intraspinal embryonal tumour (IIIc) by stage and incidence year, 0-14 year, Belgium 2018-2020



Source: Belgian Cancer Registry

Figure 47: Ependymoma (IIIa1) and intracranial and intraspinal embryonal tumour (IIIc) by stage and age group, 0-14 year, Belgium 2018-2020



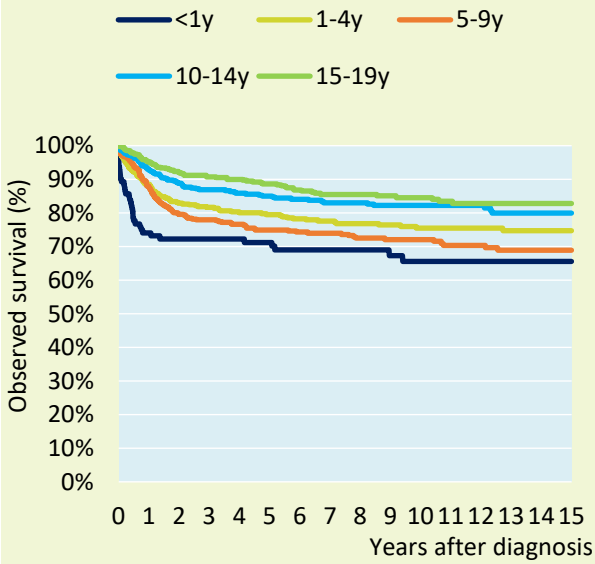
Source: Belgian Cancer Registry

Survival

Prognosis for CNS and MII neoplasms is largely dependent on the histological diagnosis and age (Figure 48 and Figure 49). Infants have the worst 15-year observed survival (66%). The survival curve mainly decreases in the first year after diagnosis (74%). Adolescents have the best prognosis with a 15-year observed survival of 83%. These observed survival curves for children and adolescents are in line with the general findings in other countries (32).

Regarding the ICCC-3 subgroups (Figure 49), intracranial and intraspinal embryonal tumours (IIIc) have the worst prognosis with a 15-year observed survival of 51%. The WHO (46) classifies these tumours as highly malignant (WHO IV). In addition, the “Other gliomas” (IIId) also show low 15-year observed survival (58%) compared with the other groups. The group of other specified intracranial and intraspinal neoplasms (IIIe) consists mainly of tumours with a good prognosis. This category has a very high 15-year observed survival of 93%.

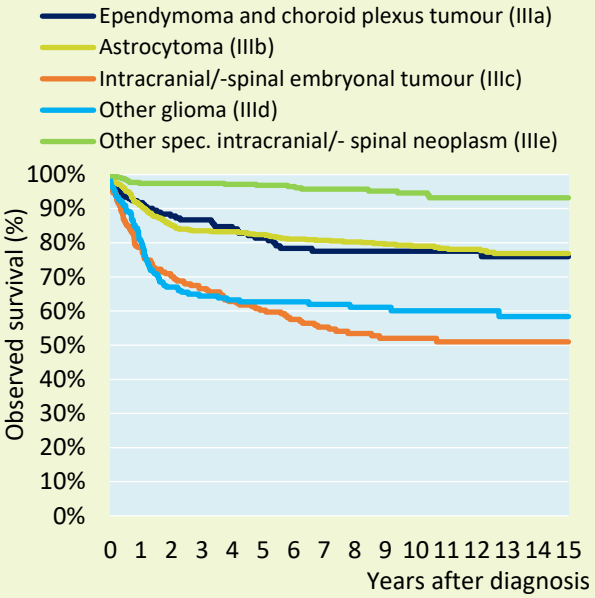
Figure 48: CNS and miscellaneous intracranial and intraspinal neoplasm (III): observed survival by age group, Belgium 2004-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
112	71 [62.2:78.8]	66 [55.6:74.3]	66 [55.6:74.3]
438	79 [75.4:83.1]	76 [70.9:79.6]	75 [69.9:79.0]
463	75 [70.7:78.8]	72 [67.6:76.3]	69 [63.7:73.7]
453	85 [81.3:88.1]	82 [78.1:85.7]	80 [75.2:84.1]
487	89 [85.4:91.3]	85 [80.7:87.9]	83 [78.5:86.5]

Source: Belgian Cancer Registry

Figure 49: CNS and miscellaneous intracranial and intraspinal neoplasm (III): observed survival by histology, Belgium 2004-2020



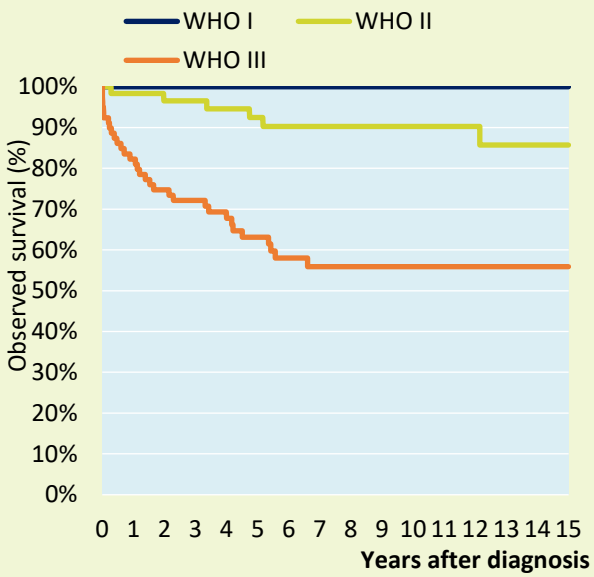
N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
182	81 [74.8:86.5]	77 [70.4:83.3]	76 [68.3:82.2]
734	82 [79.4:85.0]	79 [75.7:82.0]	77 [73.2:80.2]
240	60 [53.8:66.4]	52 [45.2:58.7]	51 [44.1:57.9]
210	63 [55.9:69.0]	60 [52.9:66.8]	58 [50.8:65.7]
428	97 [94.6:98.1]	95 [91.4:96.7]	93 [89.3:95.8]

Source: Belgian Cancer Registry

Ependymomas and choroid plexus tumours (IIIa) and astrocytoma (IIIb) have a 15-year observed survival of 76% and 77%, respectively (26). However, the observed survival of both groups greatly varies according to the WHO grading (Figure 50 and Figure 51) (46). The 15-year survival of patients with tumours from category IIIa varies from 100% and 86% for grade I and grade II, respectively, to 56% in grade III. Considering astrocytoma, the 15-year survival is 92% for grade I and 75% for grade II. The prognosis for grade III-IV astrocytoma is much worse. The observed survival of grade III and IV astrocytoma decreases from 58% and 60% after one year to 30% and 24% after three years.

Over time, no to very little progress in survival is observed (Figure 52). The 5-year observed survival increases from 81% in 2004-2009 to 84% in 2014-2020. For the main CNS subtypes, the survival between the different periods is comparable (Figure 53, Figure 54 and Figure 55).

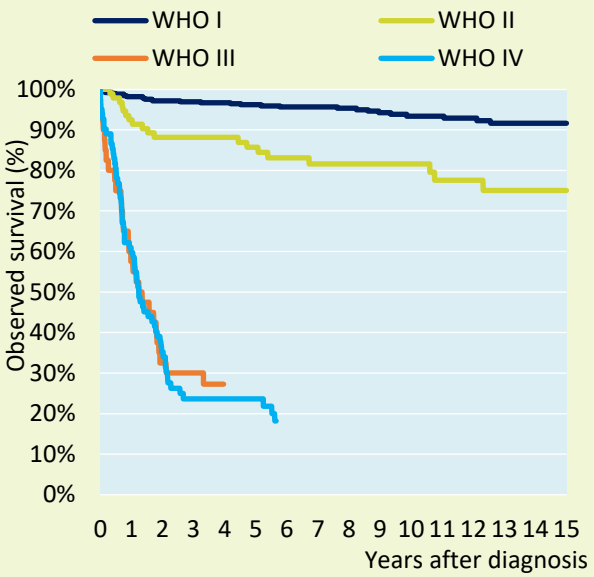
Figure 50: Ependymoma and choroid plexus tumour (IIIa): observed survival by WHO grade, Belgium 2004-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
41	100 [100:100]	100 [100:100]	100 [100:100]
60	92 [82.0:97.0]	90 [79.0:95.8]	86 [70.6:93.8]
79	63 [51.7:73.2]	56 [44.0:67.1]	56 [44.0:67.1]

Source: Belgian Cancer Registry

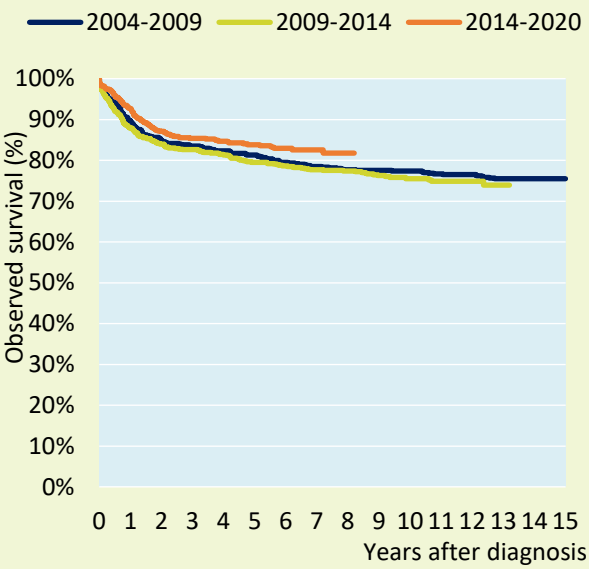
Figure 51: Astrocytoma (IIIb): observed survival by WHO grade, Belgium 2004-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
498	96 [94.1:97.6]	93 [90.3:95.5]	92 [87.8:94.3]
93	86 [77.0:91.4]	82 [72.1:88.4]	75 [63.4:83.9]
40	-	-	-
82	24 [15.7:34.1]	-	-

Source: Belgian Cancer Registry

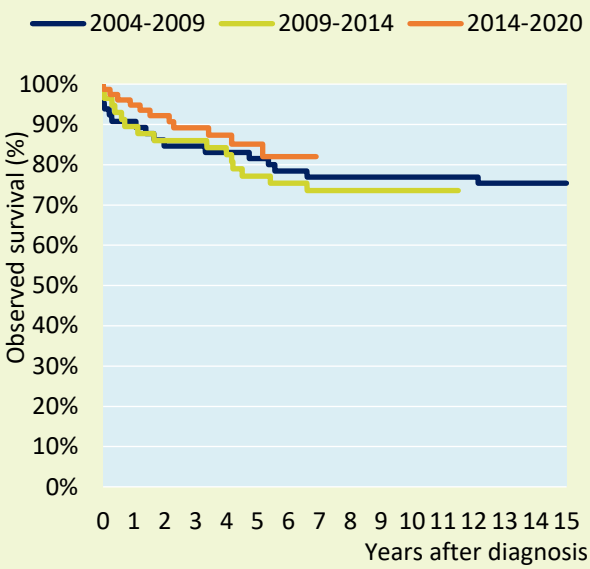
Figure 52: CNS and miscellaneous intracranial and intraspinal neoplasm (III): observed survival, Belgium 2004-2009, 2009-2014, 2014-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
607	81 [78.1:84.3]	77 [73.9:80.5]	75 [71.9:78.8]
715	80 [76.4:82.3]	76 [72.2:78.6]	-
875	84 [81.1:86.3]	-	-

Source: Belgian Cancer Registry

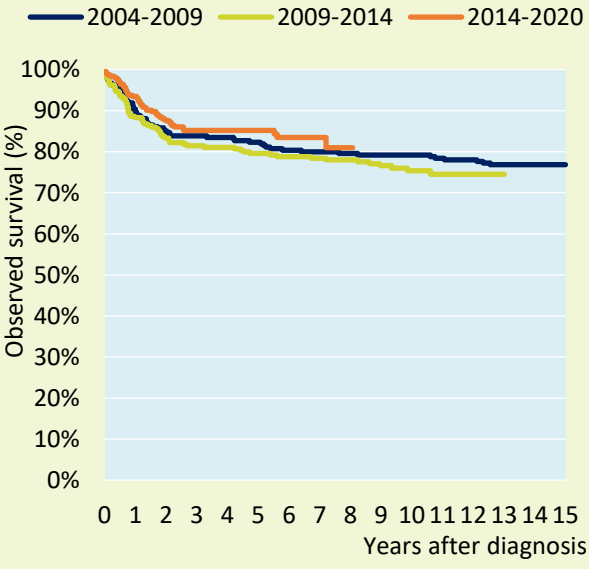
Figure 53: Ependymoma and choroid plexus tumour (IIIa): observed survival, Belgium 2004-2009, 2009-2014, 2014-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
65	82 [70.4:89.1]	77 [65.4:85.5]	75 [63.7:84.2]
57	77 [64.8:86.2]	74 [60.9:83.3]	-
77	85 [74.3:91.8]	-	-

Source: Belgian Cancer Registry

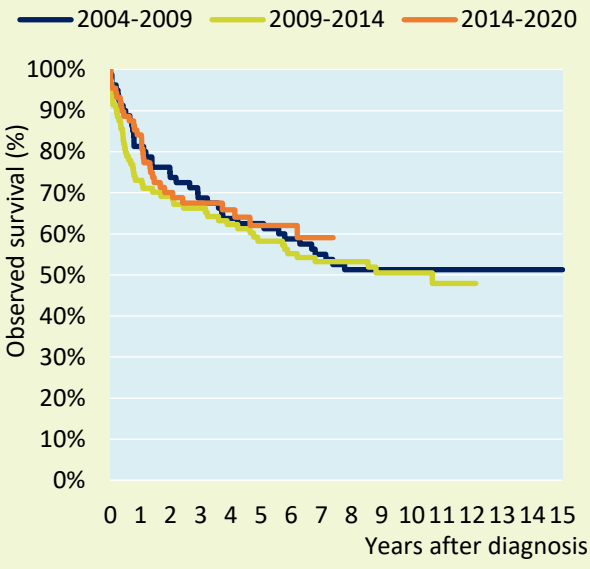
Figure 54: Astrocytoma (IIIb): observed survival, Belgium 2004-2009, 2009-2014, 2014-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
260	82 [77.2:86.5]	79 [73.9:83.7]	77 [71.3:81.6]
265	80 [74.3:84.0]	75 [69.6:80.3]	-
304	85 [80.7:88.9]	-	-

Source: Belgian Cancer Registry

Figure 55: Intracranial and intraspinal embryonal tumour (IIIc): observed survival, Belgium 2004-2009, 2009-2014, 2014-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
80	63 [51.5:72.3]	51 [40.5:61.9]	51 [40.5:61.9]
104	58 [48.5:67.3]	50 [40.7:60.2]	-
89	62 [50.8:72.1]	-	-

Source: Belgian Cancer Registry

IV NEUROBLASTOMA AND OTHER PERIPHERAL NERVOUS CELL TUMOURS

Incidence

In this chapter, all tumours belonging to the ICCC3 category of neuroblastoma and other peripheral nervous cell tumours (IV) are shortly referred to as peripheral nervous system tumours or PNS tumours. In Belgium, 229 new diagnoses of PNS tumours were registered in children and adolescents between 2011 and 2020 (Table 12). The overall crude and age-standardised incidence rates are 9.0 and 10.4/1,000,000. The male/female ratio for PNS tumours is 1.1. Incidence rates per age, sex and subtype can be found in the Appendix.

The majority (90%) are neuroblastomas (IVa) that occur almost exclusively in infants and very young children. In infants, this tumour is the most frequently diagnosed cancer (22%). Its occurrence decreases with age and becomes very rare in older children and adolescents (Figure 56 and Figure 57) (24).

The 'Other peripheral nervous cell tumour' group (IVb) mostly entails pheochromocytoma (60%).

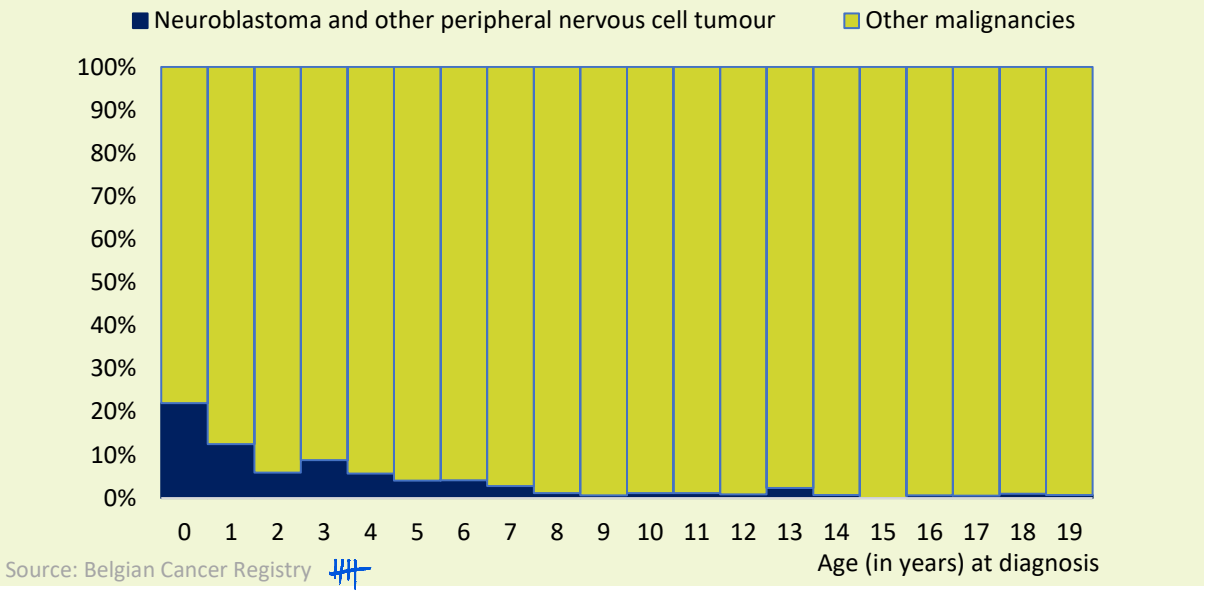
About 90% of the PNS tumours are located in an abdominal/thoracic location and the adrenal gland is the most common primary localisation (50%) (Figure 58) (51). This distribution changes slightly with age. The proportion of cases diagnosed in the adrenal gland is 61% in the age group 5-9 years and 44% in infants.

Table 12: New diagnoses of neuroblastoma and other peripheral nervous cell tumour, Belgium 2011-2020

Boys		Total	0-14y	15-19y
IV	Neuroblastoma and other peripheral nervous cell tumour	**120**	113	7
IVa	Neuroblastoma and ganglioneuroblastoma	106	106	0
IVb	Other peripheral nervous cell tumour	14	7	7
Girls		**Total**	**0-14y**	**15-19y**
IV	Neuroblastoma and other peripheral nervous cell tumour	**109**	105	4
IVa	Neuroblastoma and ganglioneuroblastoma	101	100	1
IVb	Other peripheral nervous cell tumour	8	5	3

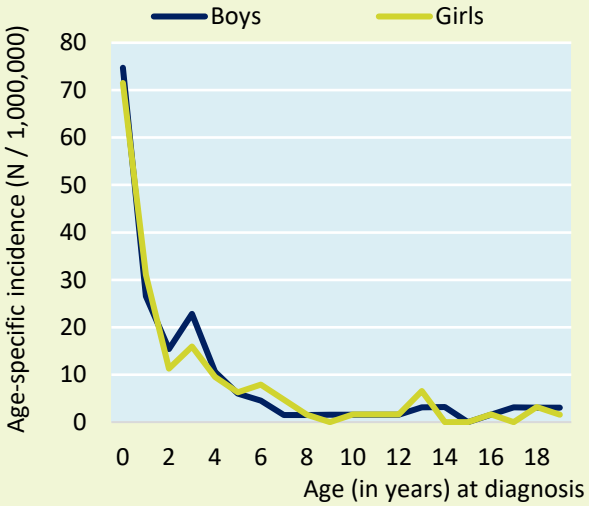
Source: Belgian Cancer Registry

Figure 56: Relative frequency of neuroblastoma and other peripheral nervous cell tumour by age at diagnosis, Belgium 2011-2020



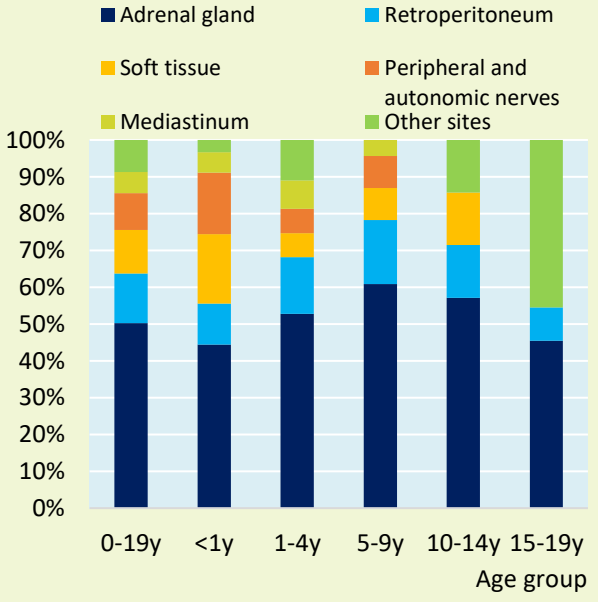
Source: Belgian Cancer Registry

Figure 57: Neuroblastoma and other peripheral nervous cell tumour: age-specific incidence rates by sex, Belgium 2011-2020



Source: Belgian Cancer Registry

Figure 58: Neuroblastoma and other peripheral nervous cell tumour: incidence by primary site and age group, Belgium 2011-2020

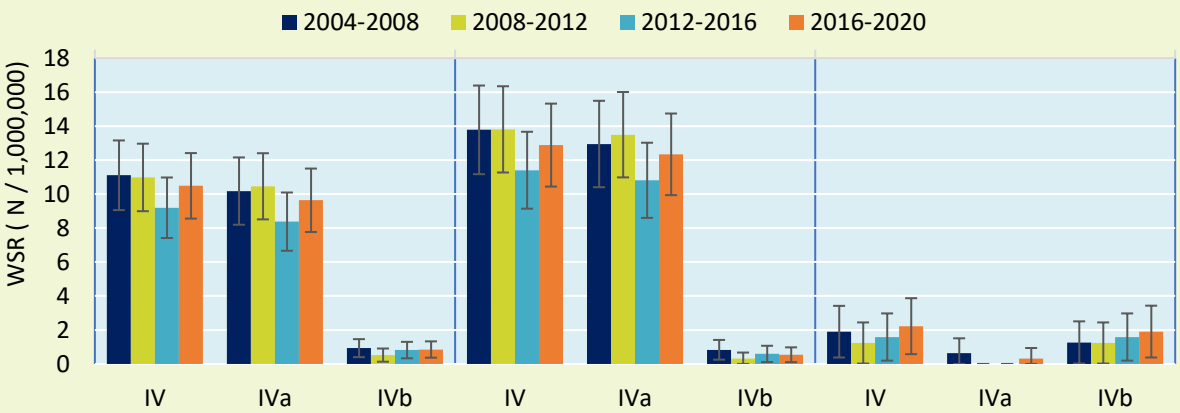


Source: Belgian Cancer Registry

Trends

The incidence of Neuroblastoma and other peripheral nervous cell tumours (IV) remain relatively stable over time (Figure 59).

Figure 59: Neuroblastoma and other peripheral nervous cell tumour: Age-standardised incidence (WSR), Belgium 2004-2008, 2008-2012, 2012-2016, 2016-2020



IV: Neuroblastoma and other peripheral nervous cell tumour
IVa: Neuroblastoma and ganglioneuroblastoma
IVb: Other peripheral nervous cell tumour

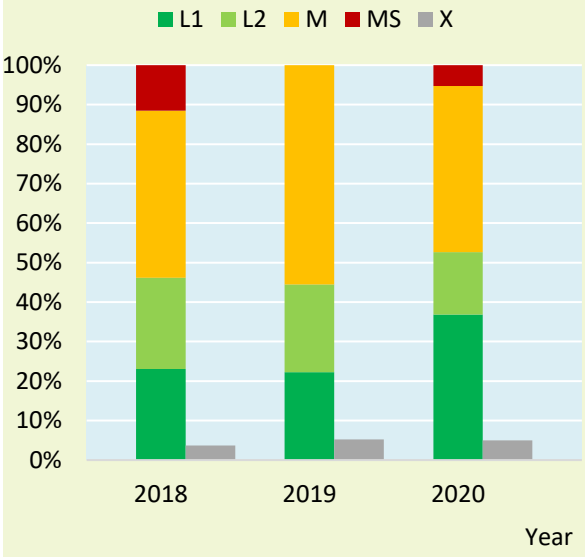
Source: Belgian Cancer Registry

Stage

Neuroblastoma (IVa) can be staged using the International Neuroblastoma Risk Group Staging System (INRGSS), following the Toronto staging guidelines (16; 17; 31). Between 2018 and 2020, information on stage was available for 95% of all cases (Figure 60).

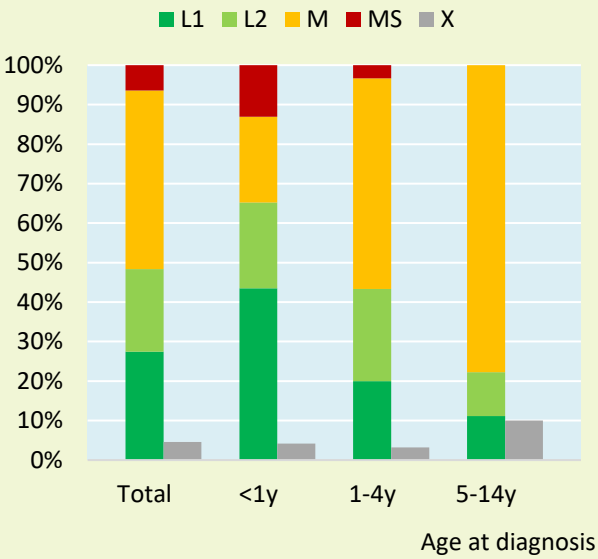
Around half of all cases (52%) are staged with metastatic disease (stage M or MS). In infants (Figure 61) this was only 35%. Afterwards, with age, the incidence of metastatic disease increases and in children older than 5 year, 77% had metastatic disease at diagnosis.

Figure 60: Neuroblastoma (IVa) by stage and incidence year, 0-14 year, Belgium 2018-2020



Source: Belgian Cancer Registry

Figure 61: Neuroblastoma (IVa) by stage and age group, 0-14 year, Belgium 2018-2020



Source: Belgian Cancer Registry

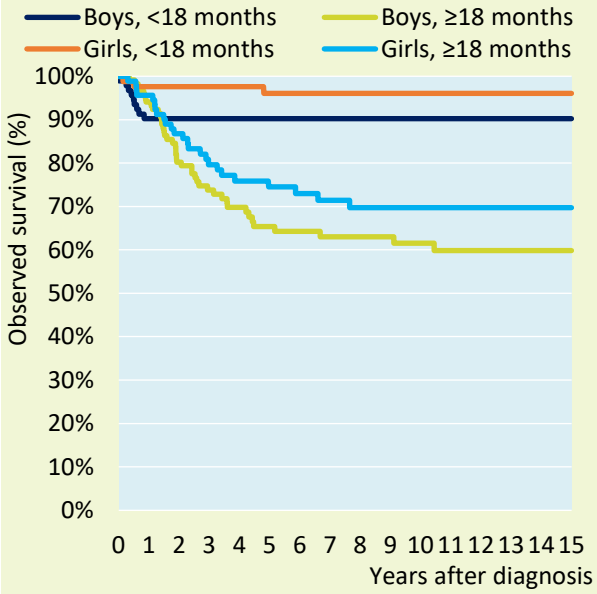
Survival

In neuroblastomas, age, dichotomized at 18 months, is one important parameter in determining prognosis (52). Younger patients (< 18 months) more often tend to have tumours with biologic characteristics that are related with a benign clinical course (51). Prognosis and choice of treatment depend on age, stage, histology and molecular characteristics of the tumour (53; 54; 55; 56; 57). Unfortunately, as seen before (Figure 60 and Figure 61) neuroblastomas present in many cases with metastasis.

In Belgium, 15-year observed survival (Figure 62) is very high for children up to 18 months of age (Boys: 90%, Girls: 96%). For patients of 18 months of age and older, prognosis is much worse. In this age group, 15-year observed survival for boys and girls are 60% and 70%, respectively. These results are comparable with the observed survival in other European countries (26).

Between 2004-2009 and 2009-2014, the 5-year observed survival improved from 76% to 82% (Figure 63). This could be explained by more intensive treatment regimens, including autologous haematopoietic stem cell transplantation, better supportive care and the introduction of immunotherapy for high risk patients (55). The improvement was mainly found for patients older than 18 months of age (7; 12). Similarly, other European countries also showed clear advances in outcome (26; 58; 59).

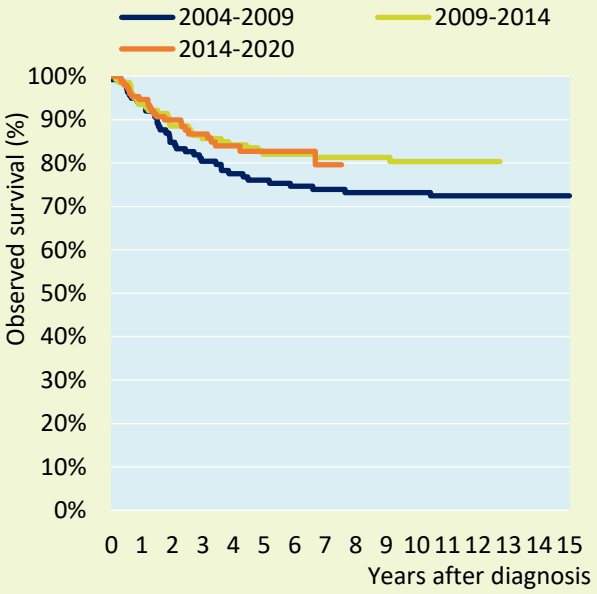
Figure 62: Neuroblastoma and other peripheral nervous cell tumour (IV): Observed survival by sex and age group, Belgium 2004-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
92	90 [82.4:94.8]	90 [82.4:94.8]	90 [82.4:94.8]
119	65 [56.0:73.7]	62 [51.8:70.5]	60 [49.8:69.1]
85	96 [88.9:98.7]	96 [88.9:98.7]	96 [88.9:98.7]
91	75 [64.3:82.6]	70 [58.8:78.7]	70 [58.8:78.7]

Source: Belgian Cancer Registry

Figure 63: Neuroblastoma and other peripheral nervous cell tumour (IV): Observed survival, Belgium 2004-2009, 2009-2014, 2014-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
138	76 [68.3:82.4]	73 [65.2:79.9]	72 [64.5:79.2]
141	82 [74.9:87.5]	80 [72.9:86.1]	-
152	83 [75.1:88.3]	-	-

Source: Belgian Cancer Registry

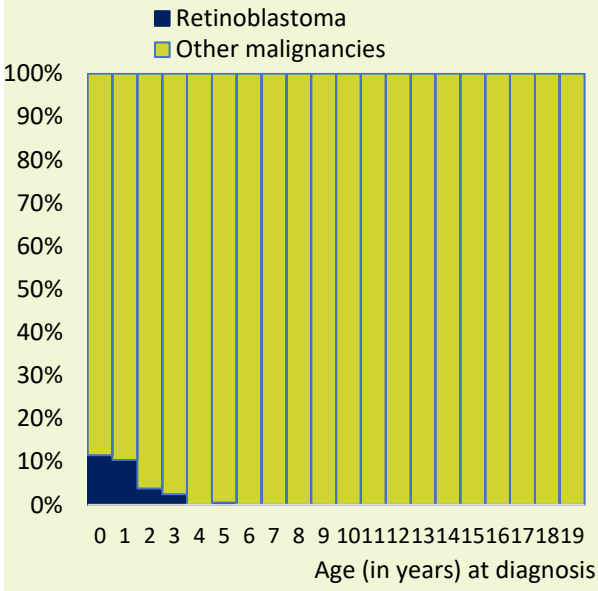
V RETINOBLASTOMAS

Incidence

Retinoblastoma (ICCC3 category V) is a rare disease. In the period 2011-2020 a total of 96 new diagnoses are registered in Belgium, 53 in boys and 43 in girls (M/F ratio = 1.2). The overall crude and age-standardised incidence rates are 3.8 and 4.5/1,000,000. Incidence rates per sex can be found in the Appendix.

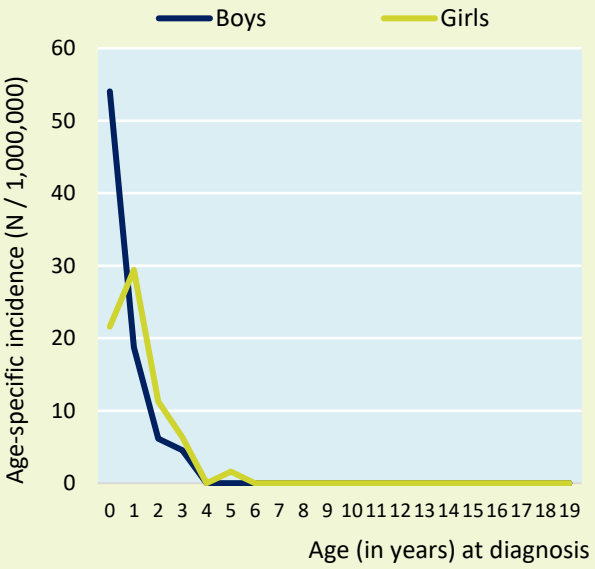
All diagnoses occurred under the age of 5 years (Figure 64 and Figure 65). At infancy, retinoblastomas represent 11% of all tumour diagnoses. About one-third (32%) of children with retinoblastoma presented with bilateral tumours (diagnosed ≤ 1 month apart).

Figure 64: Relative frequency of retinoblastoma by age at diagnosis, Belgium 2011-2020



Source: Belgian Cancer Registry

Figure 65: Retinoblastoma, age-specific incidence rates by sex, Belgium 2011-2020

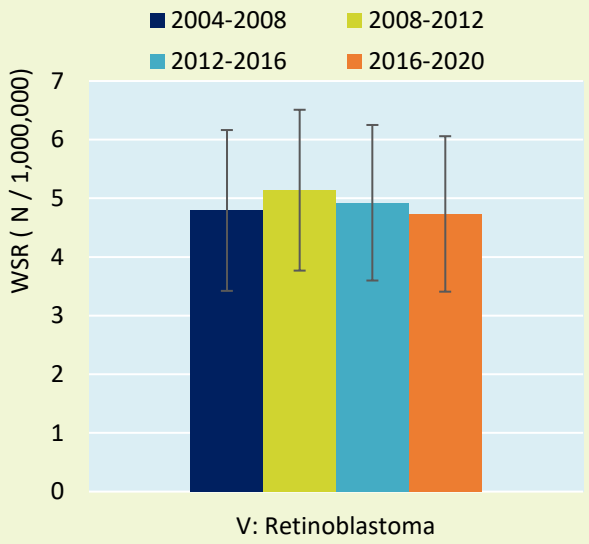


Source: Belgian Cancer Registry

Trends

The incidence of retinoblastoma (V) remains relatively stable over time (Figure 66).

Figure 66: Retinoblastoma (V): Age-standardised incidence (WSR), Belgium 2004-2008, 2008-2012, 2012-2016, 2016-2020

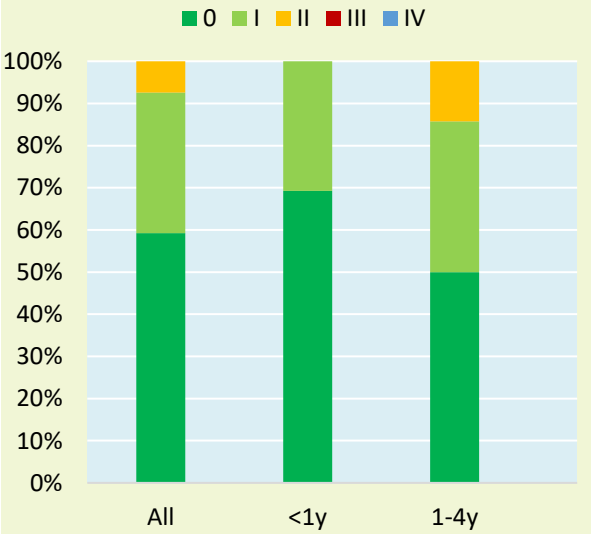


Source: Belgian Cancer Registry

Stage

Retinoblastoma can be staged (16; 17; 31) using the International Retinoblastoma Staging System (IRSS), following the Toronto staging guidelines (16). Between 2018 and 2020, information on stage was available for all cases (Figure 67). No stage III or IV was observed during this period. Infants have a more favourable stage distribution than children between 1 and 4 year.

Figure 67: Retinoblastoma (V) by stage and age group, 0-4 year, Belgium 2018-2020

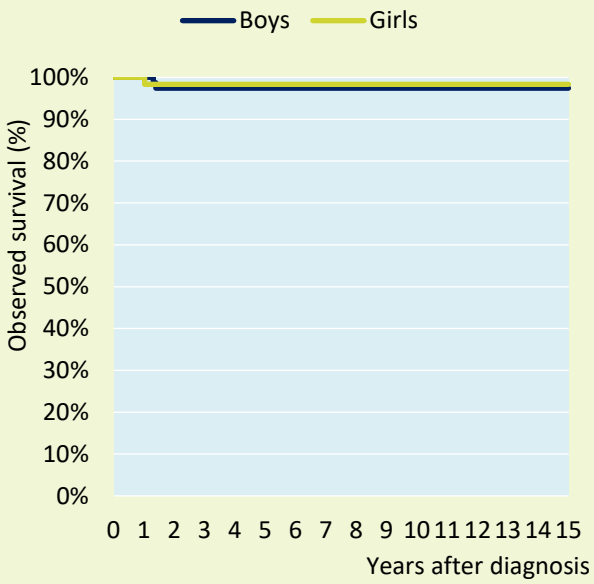


Source: Belgian Cancer Registry

Survival

In Belgium, children with retinoblastoma have a very good prognosis with a 15-year observed survival of 97% and 98% for boys and girls respectively (Figure 68).

Figure 68: Retinoblastoma (V), observed survival by sex, Belgium 2004-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
78	97 [91.1:99.3]	97 [91.1:99.3]	97 [91.1:99.3]
61	98 [91.3:99.7]	98 [91.3:99.7]	98 [91.3:99.7]

Source: Belgian Cancer Registry

VI RENAL TUMOURS

Incidence

Renal tumours (ICCC3 category VI) are rare childhood malignancies. In Belgium, 179 new diagnoses were registered between 2011 and 2020 (Table 13), of which 88 are diagnosed in boys and 91 in girls (M/F ratio = 0.9). The overall crude and age-standardised incidence rates are 7.1 and 8.0/1,000,000. The majority (89%) of the renal tumours are categorised as nephroblastoma (VIa1). Renal carcinoma (VIb), the most frequent renal cancer in adults, seldom occurs in childhood. Incidence rates per age, sex and subtype can be found in the Appendix.

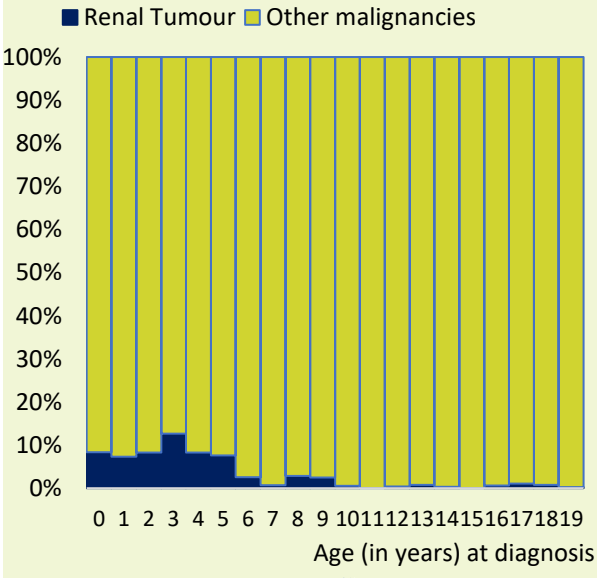
Table 13: New diagnoses of renal tumour, Belgium 2011-2020

Boys		Total	0-14y	15-19y
VI	Renal Tumour	**88**	86	2
VIa	Nephroblastoma and other nonepithelial renal tumour	85	85	0
VIb	Renal carcinoma	3	1	2
VIc	Unspecified malignant renal tumour	0	0	0
Girls		**Total**	**0-14y**	**15-19y**
VI	Renal Tumour	**91**	83	8
VIa	Nephroblastoma and other nonepithelial renal tumour	79	78	1
VIb	Renal carcinoma	12	5	7
VIc	Unspecified malignant renal tumour	0	0	0

Source: Belgian Cancer Registry

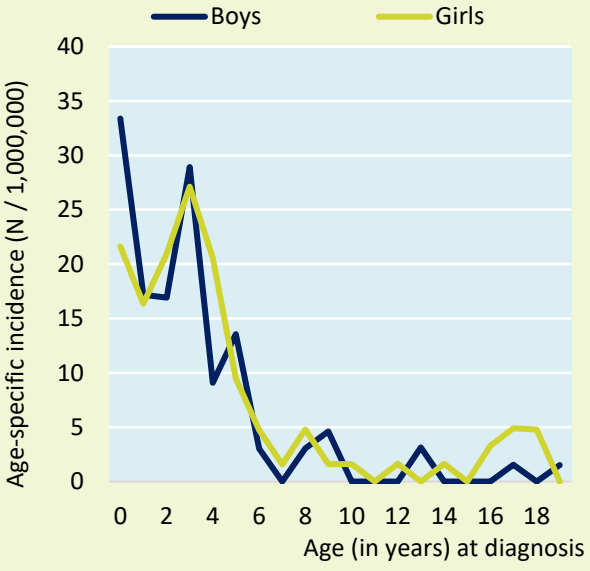
Most diagnoses of renal tumours occur before the age of 6 years (Figure 69 and Figure 70).

Figure 69: Relative frequency of renal tumour by age at diagnosis, Belgium 2011-2020



Source: Belgian Cancer Registry

Figure 70: Renal Tumour: age-specific incidence rates by sex, Belgium 2011-2020

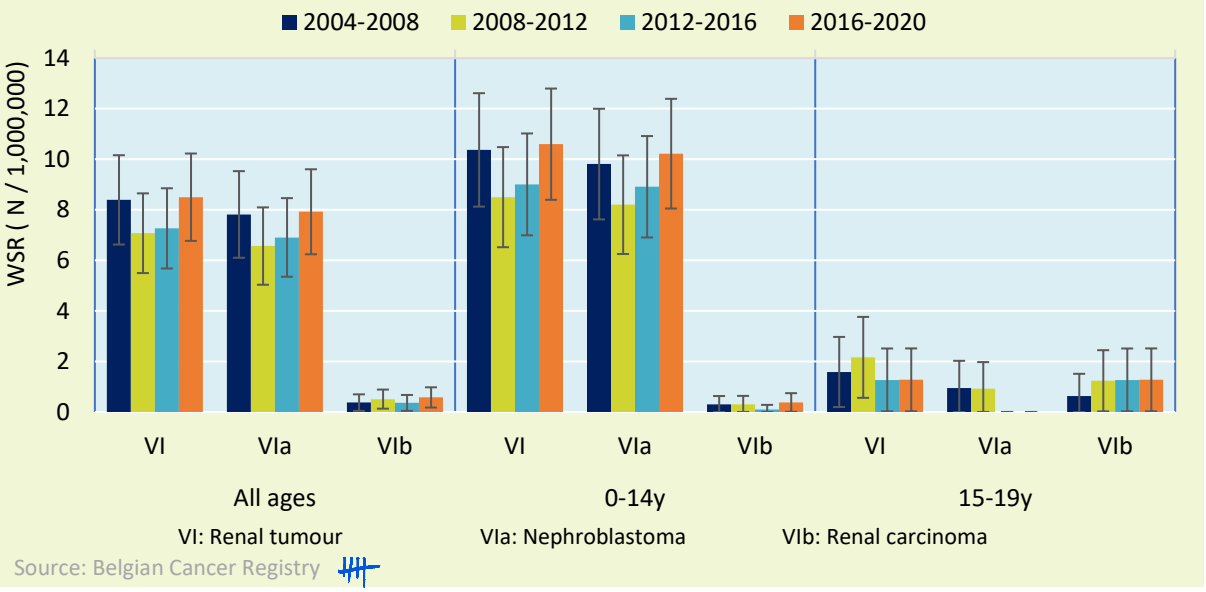


Source: Belgian Cancer Registry

Trends

The incidence of Renal tumours (VI) remain relatively stable over time (Figure 71).

Figure 71: Renal Tumour: Age-standardised incidence (WSR), Belgium 2004-2008, 2008-2012, 2012-2016, 2016-2020



Source: Belgian Cancer Registry

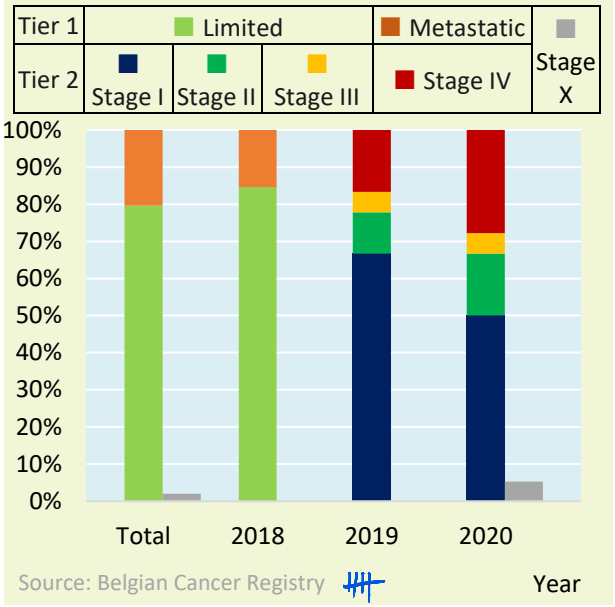
Stage

Nephroblastoma and other nonepithelial renal tumours (VIa) in children can be staged (16; 17; 31) using either the Children's Oncology Group (COG)/National Wilms Tumour Study Group (NWTSG) system or the International Society of Paediatric Oncology (SIOP) system (the latter if neoadjuvant chemotherapy was used). Info on tier 1 level (localized/metastatic) was available in our register from 2018, and on tier 2 level (I-IV) since 2019. Over the three years, information on stage was almost complete (Figure 72).

20% of these children are diagnosed with metastatic (stage IV) disease. Although it may seem that metastatic disease is increasing in 2020, changes over time are hard to interpret, since the yearly number of diagnoses is small and therefore very sensitive to random fluctuations.

Renal carcinoma can be staged using the TNM classification (60) (data not shown).

Figure 72: Nephroblastoma and other nonepithelial renal tumours (VIa) by stage and incidence year, 0-14 year, Belgium 2018-2020

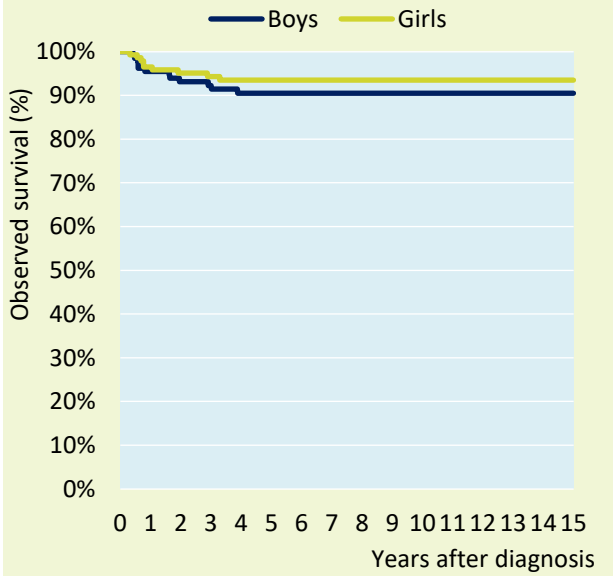


Source: Belgian Cancer Registry

Survival

Renal tumours have a good prognosis (Figure 73). The observed survival at 15 years after diagnosis is 91% for boys and 93% for girls.

Figure 73: Renal Tumour (VI), observed survival by sex, Belgium 2004-2020



	N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
	136	91 [84.1:94.5]	91 [84.1:94.5]	91 [84.1:94.5]
	144	93 [88.1:96.5]	93 [88.1:96.5]	93 [88.1:96.5]

Source: Belgian Cancer Registry

VII HEPATIC TUMOURS

Incidence

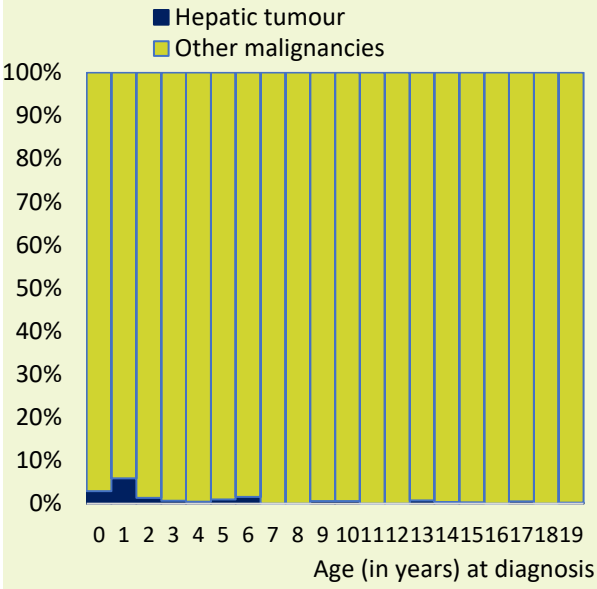
Hepatic tumours (ICCC3 category VII) are extremely rare. In children and adolescents, they represent 0.9% of all malignancies. In Belgium, there are only 50 new diagnoses registered between 2011 and 2020, 25 boys and 25 girls. The male/female ratio is thus 1.0. The overall crude and age-standardised incidence rates are 2.0 and 2.2/1,000,000. The 2 main hepatic tumours are hepatoblastoma (N=37), mostly observed before the age of five years, and hepatocellular carcinomas (N=13), occurring in older children and in adolescents (Table 14). Most of the tumours are diagnosed in the first years of life (Figure 74 and Figure 75). Incidence rates per age, sex and subtype can be found in the Appendix.

Table 14: New diagnoses of hepatic tumour, Belgium 2011-2020

Boys		Total	0-14y	15-19y
VII	Hepatic tumour	**25**	22	3
VIIa	Hepatoblastoma	17	17	0
VIIb	Hepatic carcinoma	8	5	3
Girls		**Total**	**0-14y**	**15-19y**
VII	Hepatic tumour	**25**	24	1
VIIa	Hepatoblastoma	20	20	0
VIIb	Hepatic carcinoma	5	4	1

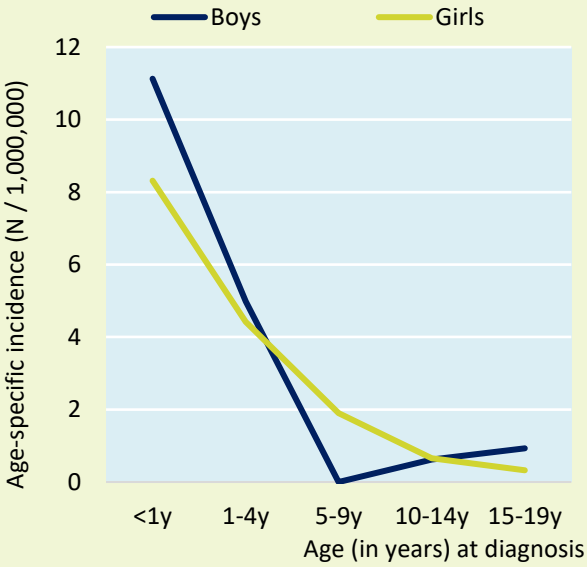
Source: Belgian Cancer Registry

Figure 74: Relative frequency of hepatic tumour by age at diagnosis, Belgium 2011-2020



Source: Belgian Cancer Registry

Figure 75: Hepatic tumour: age-specific incidence rates by sex, Belgium 2011-2020

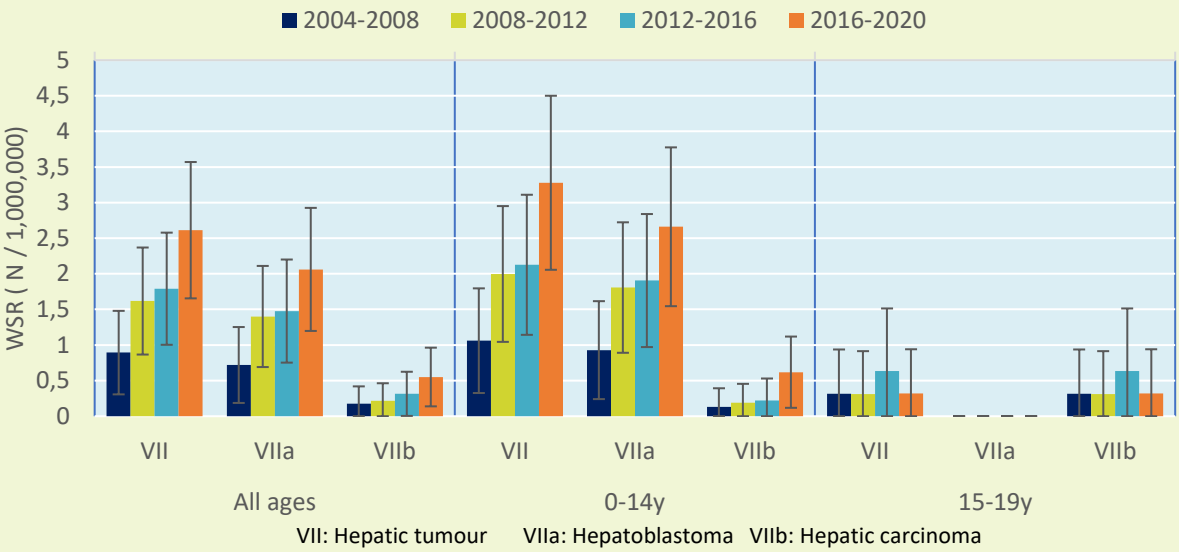


Source: Belgian Cancer Registry

Trends

During the last 17 years, the incidence rates for hepatic tumours more than doubled (Figure 76). This increase can be observed for both hepatoblastomas (VIIa) and hepatic carcinomas (VIIb). (Inter)national studies also showed evidence for increased incidence rates of hepatoblastoma (23; 61; 62; 63) or hepatic carcinoma (48). The reason for this increase is not yet clarified.

Figure 76: Hepatic tumour: Age-standardised incidence (WSR), Belgium 2004-2008, 2008-2012, 2012-2016, 2016-2020



Source: Belgian Cancer Registry

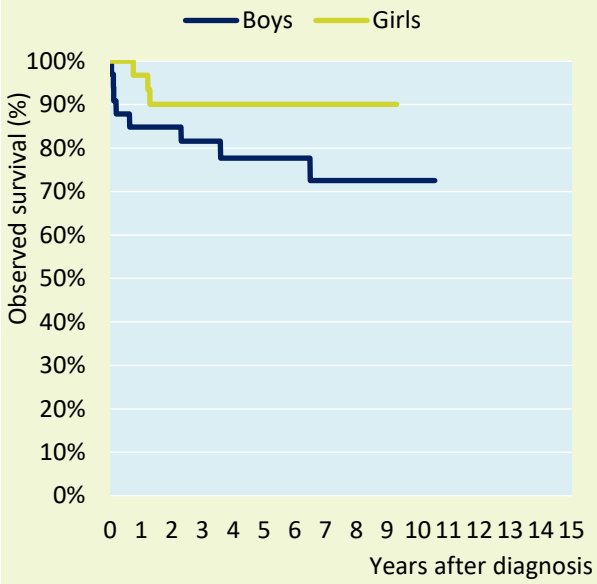
Stage

Hepatoblastoma (VIIa) in children can be staged using the PRETEXT classification (16; 17; 31). Info on tier 1 level (localised/metastatic) was available in our register from 2018, and on tier 2 level (I-IV) since 2019. Of the 14 cases diagnosed between 2018 and 2020, 12 were staged as localised and 2 as metastatic (data not shown).

Survival

In Belgium, the 5-year observed survival for hepatic tumours is 78% and 90% for boys and girls respectively (Figure 77). Prognosis for hepatoblastoma was better than for hepatic carcinoma (Figure 78).

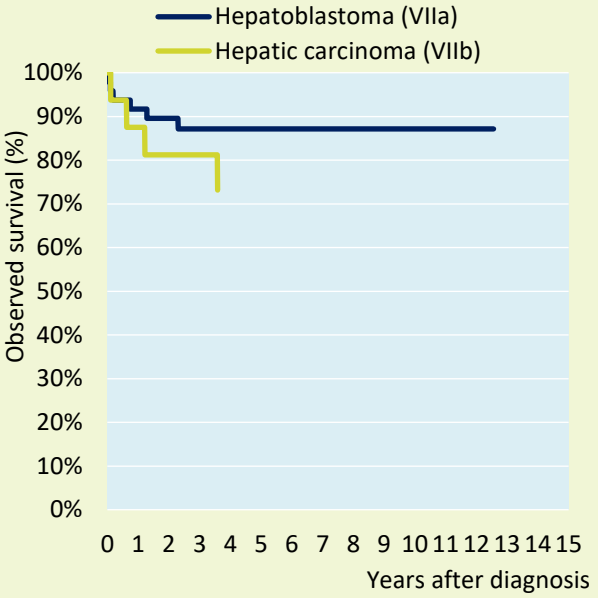
Figure 77: Hepatic tumour (VII), observed survival by sex, Belgium 2004-2020



	N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
Boys	33	78 [60.4:88.8]	73 [53.7:85.7]	-
Girls	31	90 [74.6:96.6]	-	-

Source: Belgian Cancer Registry

Figure 78: Hepatic tumour (VII), observed survival by subtype, Belgium 2004-2020



	N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
Hepatoblastoma (VIIa)	48	87 [74.6:94.0]	87 [74.6:94.0]	-
Hepatic carcinoma (VIIb)	16	-	-	-

Source: Belgian Cancer Registry

VIII MALIGNANT BONE TUMOURS

Incidence

In Belgium, between 2011 and 2020, 238 new diagnoses of bone tumours (ICCC3 category VIII) are registered (Table 15), which represent 5% of all cancer diagnoses in children and adolescents. The overall crude and age-standardised incidence rates are 9.4 and 8.8/1,000,000. Incidence rates per age, sex and subtype can be found in the Appendix.

More boys are diagnosed than girls (M/F ratio = 1.3). The excess of boys is predominant in adolescents (M/F ratio = 2.1), while absent in children (M/F ratio = 0.9). The higher incidence rate in adolescent boys is observed in both main subtypes, osteosarcoma (M/F ratio = 2.2) and Ewing sarcoma (M/F ratio = 2.5).

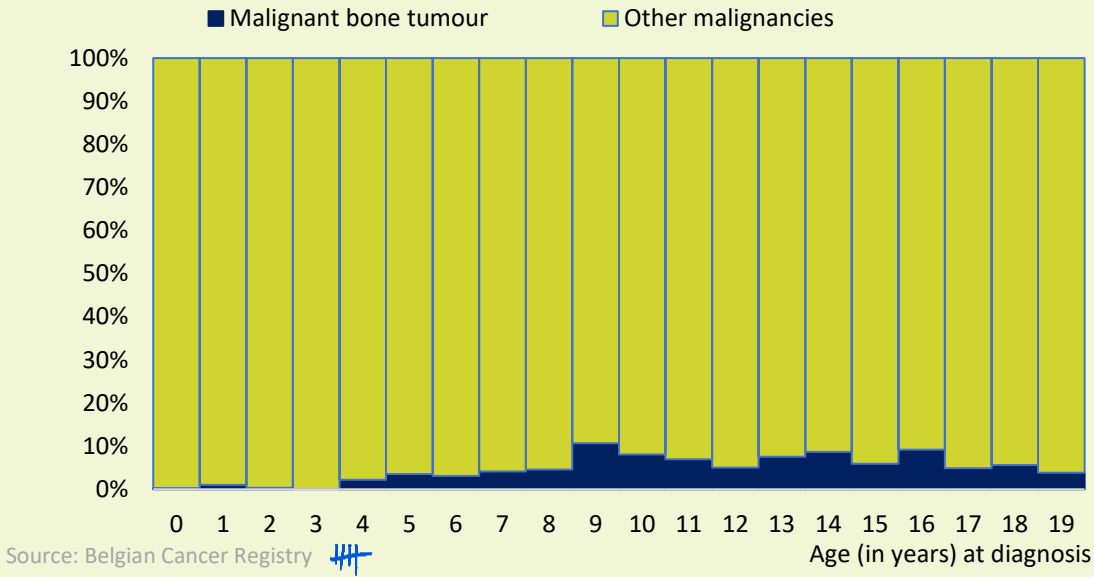
Bone tumours are rare in children younger than 5 years of age (Figure 79). After the age of 5, the incidence rates (see Appendix) increase to reach a peak in adolescence (around 16 years of age). This trend was also already observed in international studies (64; 65).

Table 15: New diagnoses of malignant bone tumour, Belgium 2011-2020

Boys		Total	0-14y	15-19y
VIII	Malignant bone tumour	**138**	67	71
VIIIa	Osteosarcoma	75	32	43
VIIIb	Chondrosarcoma	5	1	4
VIIIc	Ewing tumour and related sarcoma of bone	54	33	21
VIIId	Other specified malignant bone tumour	3	1	2
VIIIe	Unspecified malignant bone tumour	1	0	1
Girls		Total	0-14y	15-19y
VIII	Malignant bone tumour	**100**	68	32
VIIIa	Osteosarcoma	49	30	19
VIIIb	Chondrosarcoma	4	2	2
VIIIc	Ewing tumour and related sarcoma of bone	36	28	8
VIIId	Other specified malignant bone tumour	10	7	3
VIIIe	Unspecified malignant bone tumour	1	1	0

Source: Belgian Cancer Registry

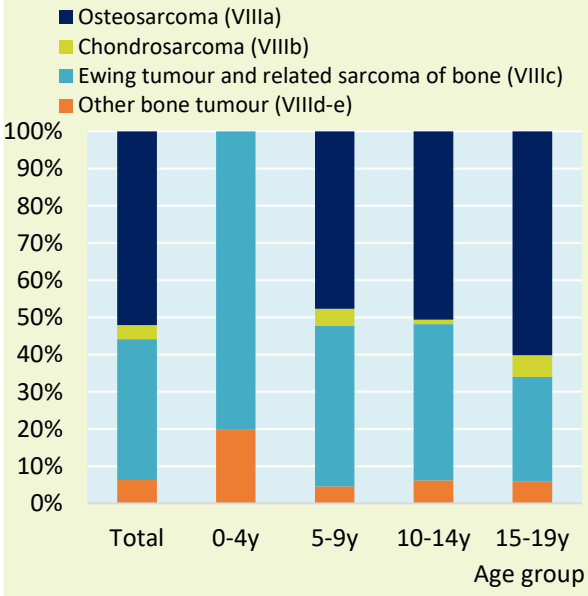
Figure 79: Relative frequency of malignant bone tumour by age at diagnosis, Belgium 2011-2020



Source: Belgian Cancer Registry

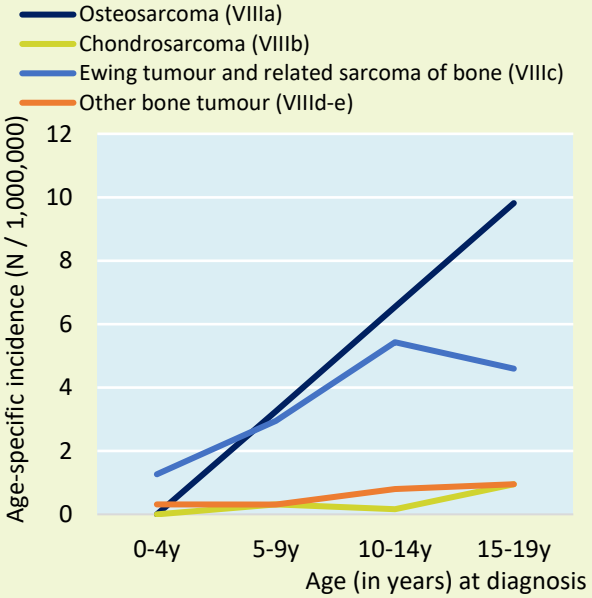
Osteosarcomas (VIIIa) and **Ewing tumours and related bone sarcomas** (VIIIc; in this chapter also shortly referred to as Ewing tumours) are the predominant histological subtypes (52% and 38%, respectively). The incidence rates for both tumours increase with age, but with a somewhat different age-pattern (Figure 80 and Figure 81). Under the age of 5 years, bone tumours are very rare; there were no diagnoses of osteosarcoma (VIIIa) and most cases were Ewing tumours (VIIIc; 80%). The highest incidence rate of Ewing tumours (VIIIc) is observed in the age group 10-14 years. Incidence rates of osteosarcomas increase with age and between the age of 5 and 9, they become the dominant bone tumour diagnosis.

Figure 80: Malignant bone tumour by histology and age group, Belgium 2011-2020



Source: Belgian Cancer Registry

Figure 81: Malignant bone tumour: age-specific incidence rates by histology, Belgium 2011-2020

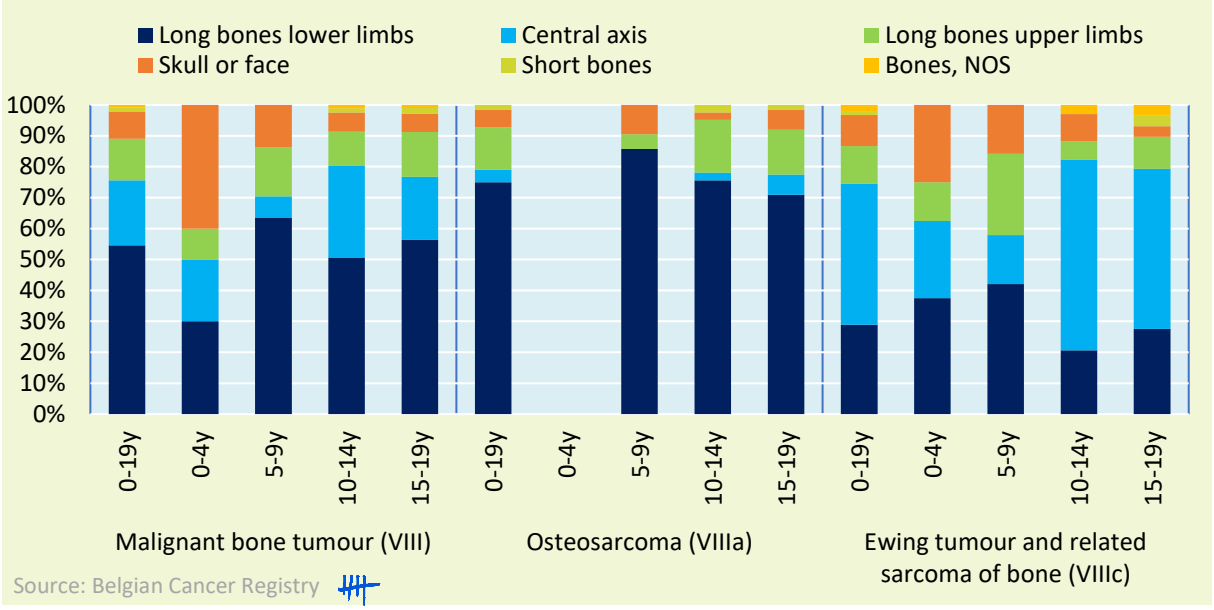


Source: Belgian Cancer Registry

Osteosarcomas (VIIIa) and Ewing tumours (VIIIc) also differ in site distribution (Figure 82). The long bones of the lower limbs are the predominant primary site for osteosarcoma (VIIIa). The most frequent primary site for Ewing tumours (VIIIc) is the central axis (spinal column-ribs-sternum-pelvic bones-sacrum-coccyx), followed by the long bones of the lower limbs. There are also differences with age. For osteosarcoma (VIIIa), the proportion of cases diagnosed at the long bones of lower limbs is slightly lower in adolescents. For Ewing tumours (VIIIc), the central axis is mainly dominant in children older than 10 years of age.

In the **'Other bone tumours'** group (VIIId-e) adamantinoma of long bones is the most diagnosed tumour type.

Figure 82: Malignant bone tumour: incidence by primary site and age group, Belgium 2011-2020

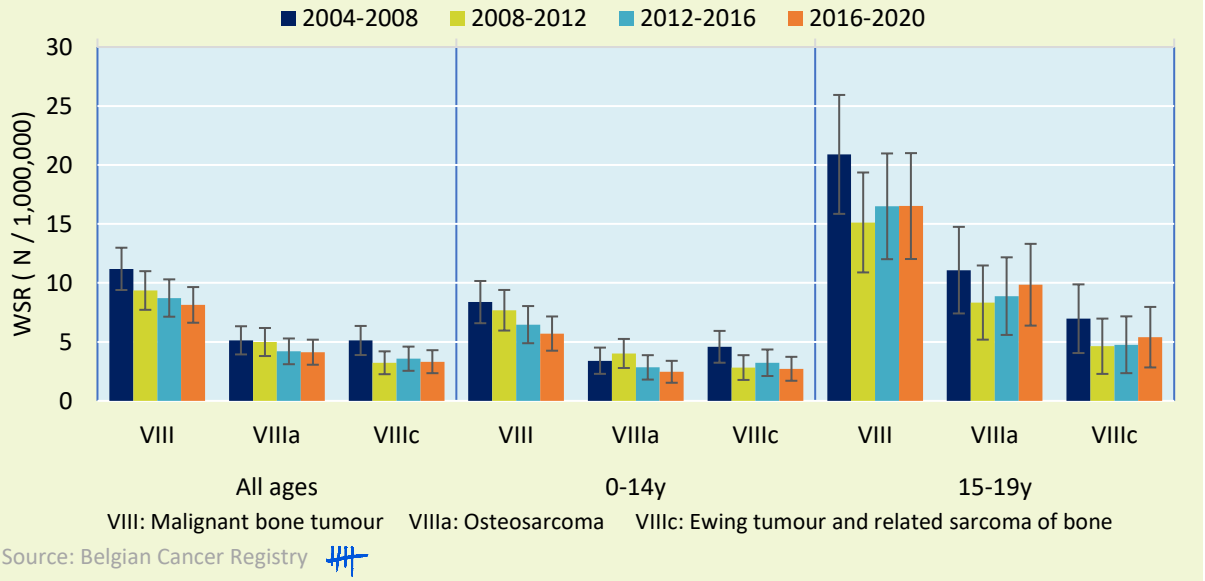


Source: Belgian Cancer Registry

Trends

In Belgium, incidence rates for bone tumours seem to decrease in the last 17 years (Figure 83). This trend is only observed for children (0-14 years). In adolescents, there even seems to be a small rise in osteosarcomas (VIIIa) and Ewing tumours (VIIIc), with the overall number of bone tumours (VIII) remaining stable. International studies show little evidence of consistent changes in bone tumour incidence in children and adolescents (32).

Figure 83: Malignant bone tumour: Age-standardised incidence (WSR), Belgium 2004-2008, 2008-2012, 2012-2016, 2016-2020



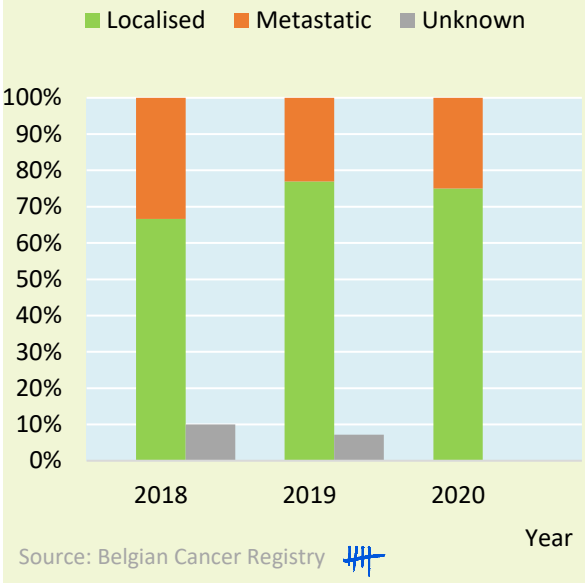
Source: Belgian Cancer Registry

Stage

Osteosarcoma (VIIIa) and Ewing tumours (VIIIc) can be staged as 'localised' or 'metastatic' (16; 17; 31). Between 2018 and 2020 (Figure 84), information on stage increased from 90% to 100% (Figure 84).

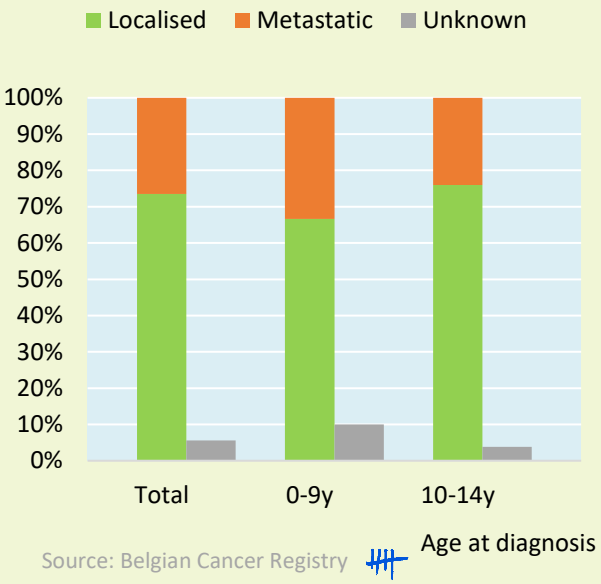
In younger children, a higher proportion of metastatic disease was observed among the staged cases (Figure 85). This was mainly related to the fact that in younger patients osteosarcoma is diagnosed less frequently than Ewing tumour. Overall Ewing tumours were more often staged as 'metastatic' (33%) compared to osteosarcoma (19%).

Figure 84: Osteosarcoma (VIIIa) and Ewing tumour and related sarcoma of bone (VIIIc) by stage and incidence year, 0-14 year, Belgium 2018-2020



Source: Belgian Cancer Registry

Figure 85: Osteosarcoma (VIIIa) and Ewing tumour and related sarcoma of bone (VIIIc) by stage and age group, 0-14 year, Belgium 2018-2020

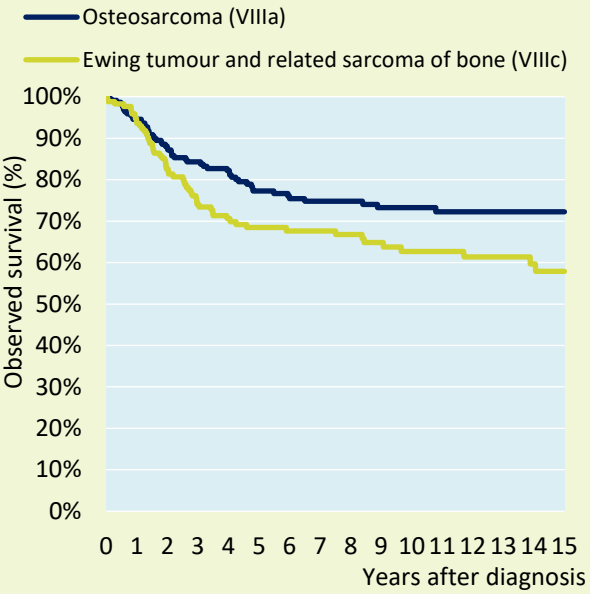


Source: Belgian Cancer Registry

Survival

In Belgium, the 15-year observed survival for children and adolescents by histology shows a better prognosis for osteosarcoma (VIIIa; 72%) than for Ewing tumours (VIIIc; 58%) (Figure 86) (26).
The prognosis of bone tumours also depends on the primary site (Figure 87). Primary tumours of the central axis have the worst prognosis (10-year survival of 53%), while those occurring on the other sites all have a 10-year survival between 70 and 80%.

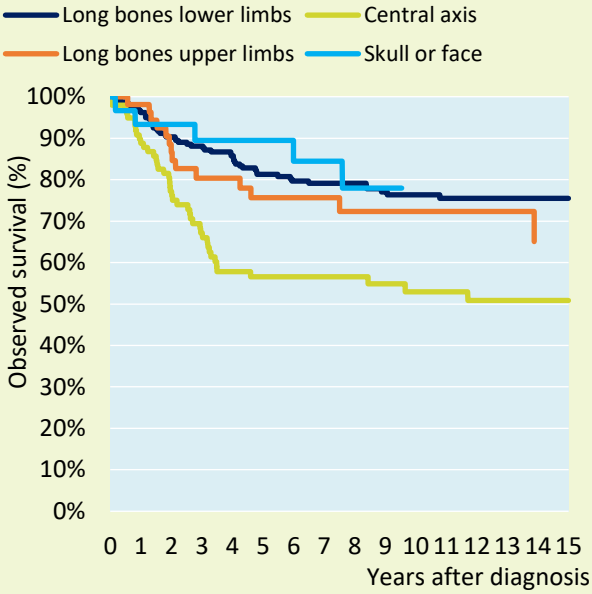
Figure 86: Malignant bone tumour (VIII), observed survival by histology, Belgium 2004-2020



	N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
	220	77 [70.9:82.4]	73 [66.4:79.0]	72 [65.2:78.2]
	171	68 [60.8:75.2]	63 [54.4:70.3]	58 [48.7:66.6]

Source: Belgian Cancer Registry

Figure 87: Malignant bone tumour (VIII), observed survival by primary site, Belgium 2004-2020

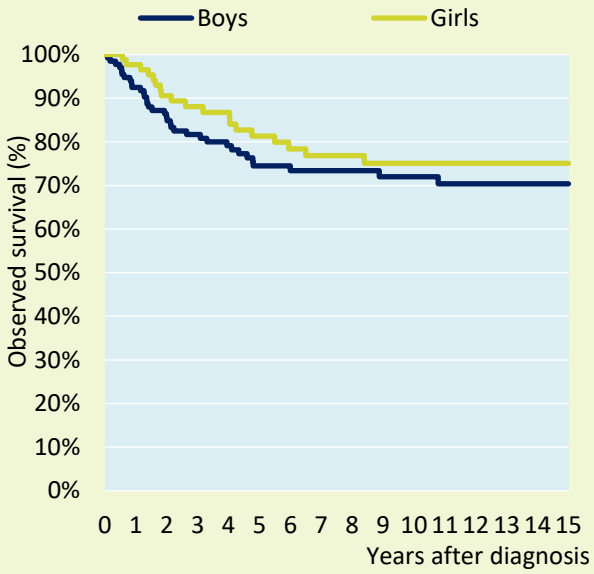


	N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
	239	81 [75.7:85.9]	76 [70.0:81.7]	76 [69.0:81.0]
	98	57 [46.3:66.3]	53 [42.3:63.3]	51 [40.0:61.6]
	55	76 [61.9:85.6]	72 [57.8:83.3]	-
	30	89 [73.1:96.4]	-	-

Source: Belgian Cancer Registry

For osteosarcoma (VIIIa), the observed survival for boys and girls is about the same (Figure 88). For Ewing tumours (VIIIc), there seems to be an impact of the sex on the outcome with a worse 10-year observed survival for boys compared to girls (56% versus 72%, respectively), however the difference almost completely disappears 5 years later (56% versus 61% 15-year survival) (Figure 89). There is limited evidence for a similar prognostic impact of sex on survival in other international studies and most studies suggest that sex has no significant prognostic influence (66).

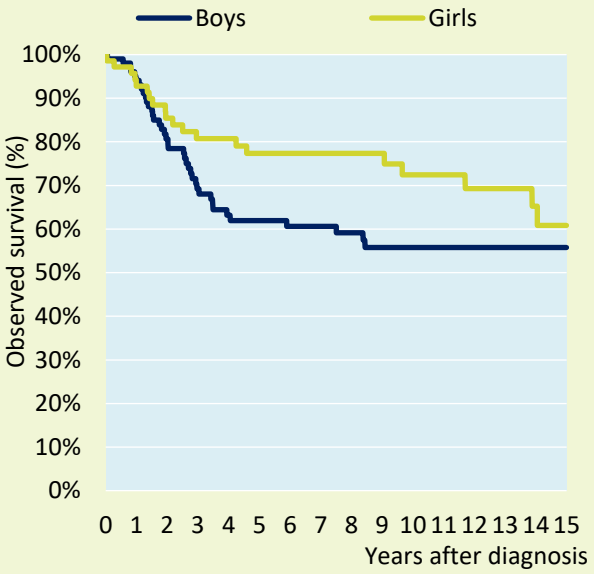
Figure 88: Osteosarcoma (VIIIa): Observed survival by sex, Belgium 2004-2020



	N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
	134	74 [66.1:81.4]	72 [63.2:79.4]	70 [61.2:78.2]
	86	81 [71.4:88.4]	75 [64.1:83.5]	75 [64.1:83.5]

Source: Belgian Cancer Registry

Figure 89: Ewing tumour (VIIIc): Observed survival by sex, Belgium 2004-2020

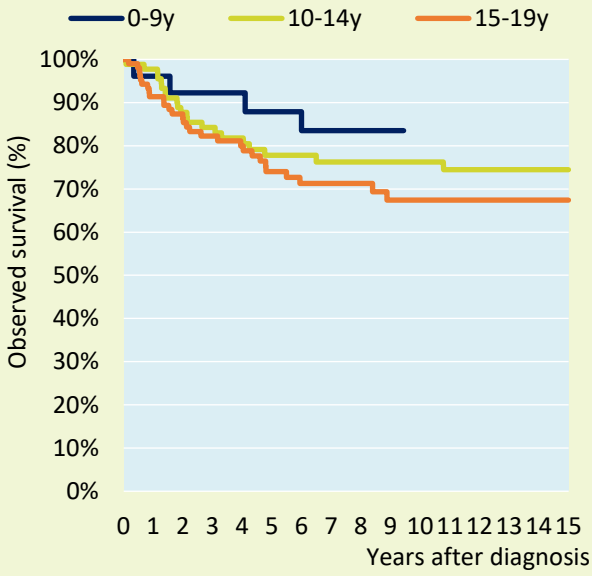


	N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
	101	62 [51.6:71.3]	56 [45.0:66.0]	56 [45.0:66.0]
	70	77 [65.9:85.8]	72 [59.8:82.3]	61 [45.0:74.7]

Source: Belgian Cancer Registry

The observed survival also decreases with age for osteosarcoma (VIIIa) (Figure 90) and Ewing tumours (VIIIc) (Figure 91). In adolescents, osteosarcomas show a much better prognosis than Ewing tumours, whereas in younger children, the difference between osteosarcoma and Ewing tumours is less pronounced.

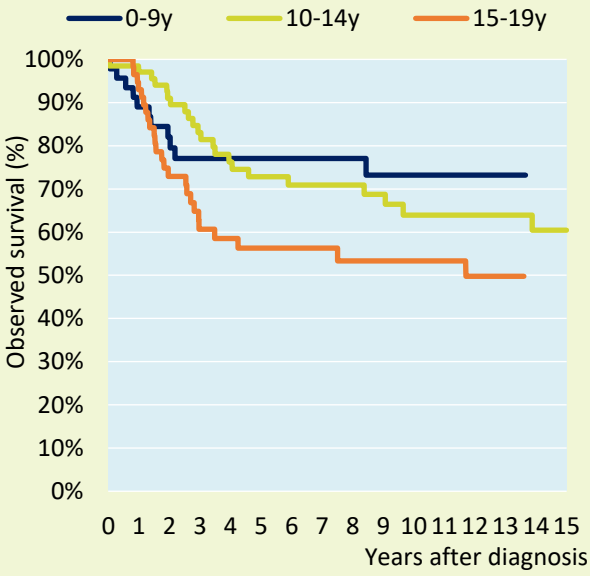
Figure 90: Osteosarcoma (VIIIa): Observed survival by age group, Belgium 2004-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
26	88 [69.8:95.8]	-	-
90	78 [67.8:85.4]	76 [66.0:84.1]	74 [63.8:82.8]
105	74 [64.4:81.8]	67 [56.6:76.7]	67 [56.6:76.7]

Source: Belgian Cancer Registry

Figure 91: Ewing tumour (VIIIc): Observed survival by age group, Belgium 2004-2020

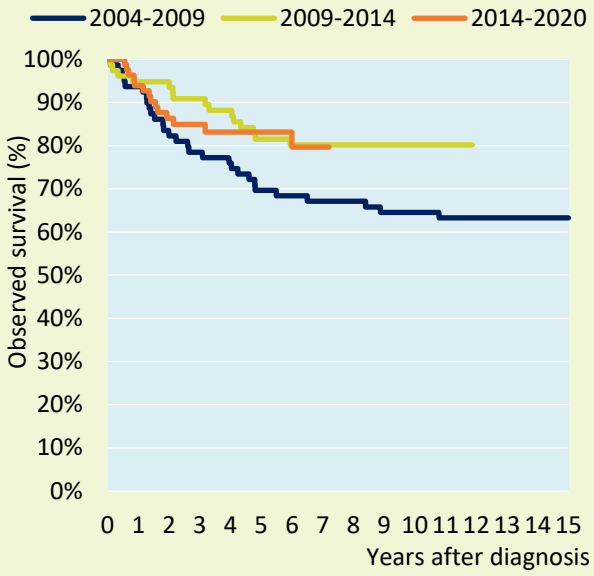


N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
46	77 [62.6:87.1]	73 [57.6:84.6]	-
68	73 [60.6:82.3]	64 [50.7:75.4]	60 [46.4:73.0]
57	56 [42.7:69.0]	53 [39.5:66.6]	-

Source: Belgian Cancer Registry

Since 2004-2009, an improvement can be observed for osteosarcoma (VIIIa) (Figure 92). The 10-year observed survival increased from 65% in 2004-2009 to 80% in 2009-2014. In the most recent period, there seems no further improvement. For Ewing tumours (VIIIc), no improvements over time are observed (Figure 93).

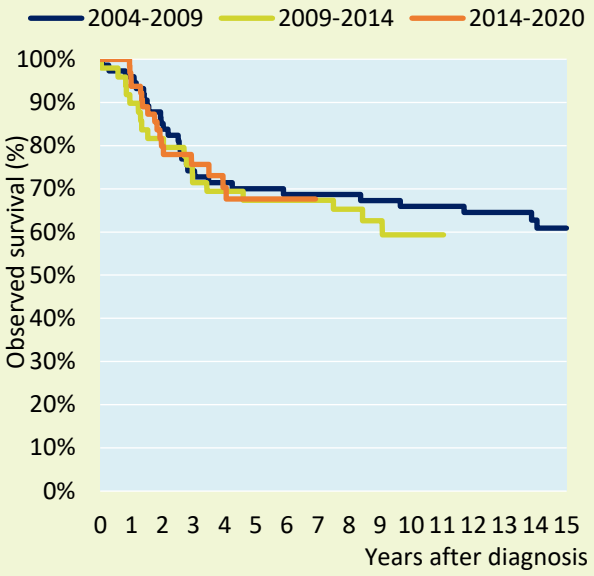
Figure 92: Osteosarcoma (VIIIa): Observed survival Belgium 2004-2009, 2009-2014, 2014-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
79	70 [58.8:78.7]	65 [53.6:74.2]	63 [52.3:73.1]
77	81 [71.3:88.6]	80 [69.8:87.6]	-
82	83 [73.1:89.9]	-	-

Source: Belgian Cancer Registry

Figure 93: Ewing tumour (VIIIc): Observed survival Belgium 2004-2009, 2009-2014, 2014-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
74	70 [58.8:79.3]	66 [54.5:75.7]	61 [49.2:71.5]
49	67 [53.4:78.8]	59 [44.7:72.5]	-
65	68 [53.5:79.1]	-	-

Source: Belgian Cancer Registry

IX SOFT TISSUE AND OTHER EXTRAOSSEOUS SARCOMAS

Incidence

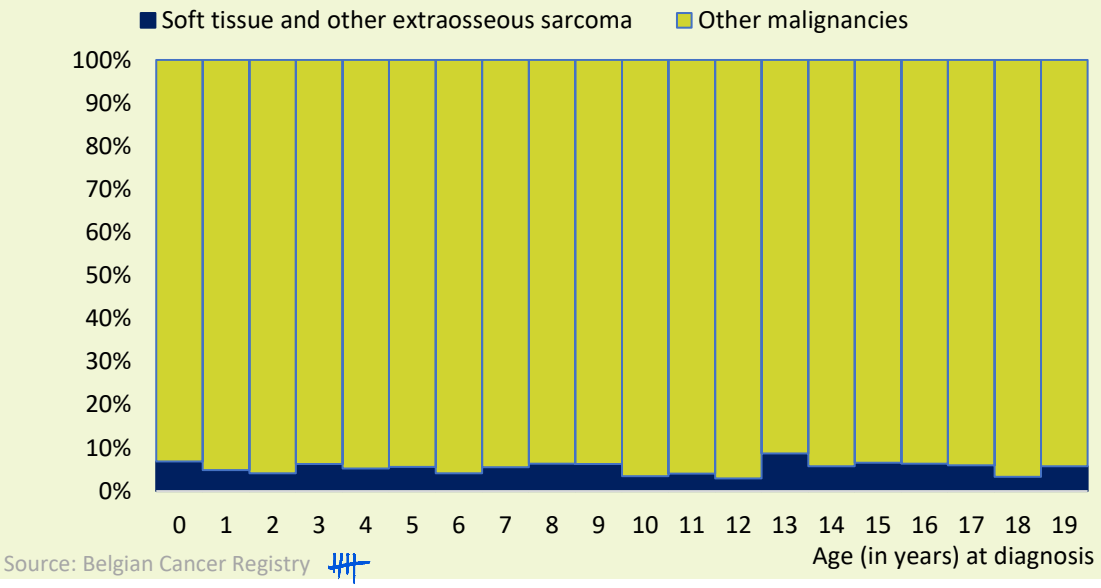
The soft tissue sarcomas and other extraosseous sarcomas (in this chapter shortly referred to as "STS"; ICCC3 category IX) represent 5% of all childhood and adolescent cancer diagnoses. Between 2011 and 2020, 289 cases were diagnosed (Table 16). The overall crude and age-standardised incidence rates are 11.4 and 11.5/1,000,000. The relative frequency of STS by age at diagnosis is evenly distributed for all age groups [min 4%, max 9%] (Figure 94). The incidence rates for all STS combined are practically equal in both sexes (M/F ratio = 1.1). Incidence rates per age, sex and subtype can be found in the Appendix.

Table 16: New diagnoses of soft tissue and other extraosseous sarcoma, Belgium 2011-2020

Boys		Total	0-14y	15-19y
IX	Soft tissue and other extraosseous sarcoma	**157**	106	51
IXa	Rhabdomyosarcoma	73	57	16
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	11	7	4
IXc	Kaposi sarcoma	2	0	2
IXd	Other specified soft tissue sarcoma	58	36	22
IXe	Unspecified soft tissue sarcoma	13	6	7
Girls		Total	0-14y	15-19y
IX	Soft tissue and other extraosseous sarcoma	**132**	84	48
IXa	Rhabdomyosarcoma	38	28	10
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	18	11	7
IXc	Kaposi sarcoma	1	0	1
IXd	Other specified soft tissue sarcoma	66	39	27
IXe	Unspecified soft tissue sarcoma	9	6	3

Source: Belgian Cancer Registry

Figure 94: Relative frequency of soft tissue and other extraosseous sarcoma by age at diagnosis, Belgium 2011-2020

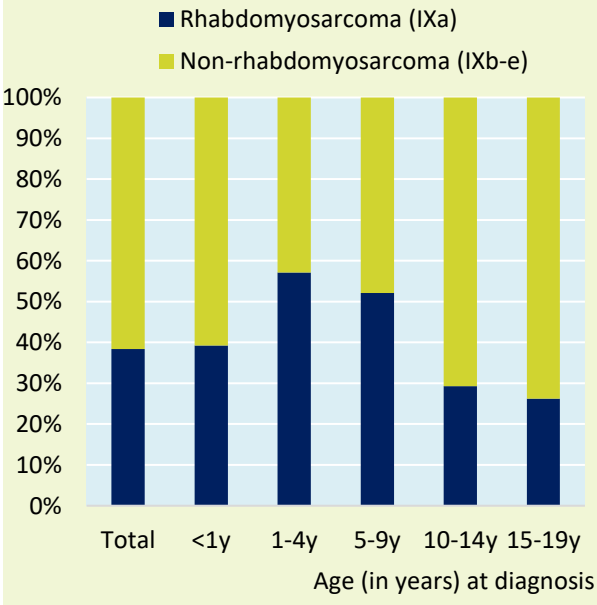


Source: Belgian Cancer Registry

STS are a heterogeneous group of neoplasms which are classified in 2 broad categories: rhabdomyosarcomas (RMS; IXa) and non-rhabdomyosarcomas (Non-RMS; IXb-e).

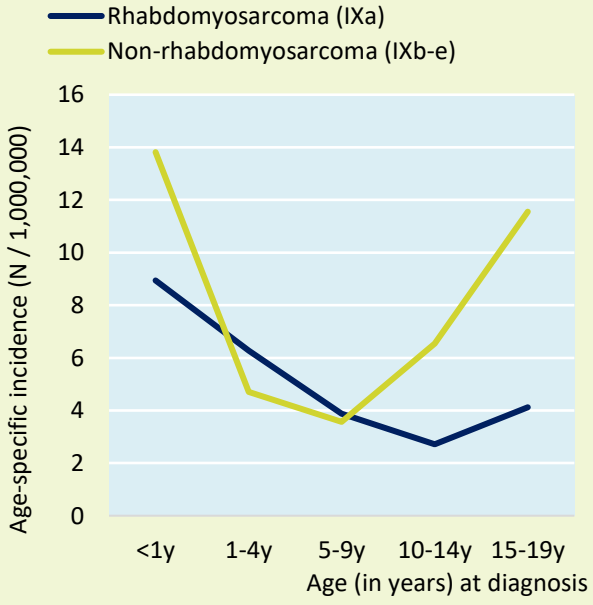
The incidence of **rhabdomyosarcomas (IXa)** is the highest in infants and young children, and rapidly decreases until the age of 10 years (Figure 95 and Figure 96). Almost twice as many boys are registered with RMS than girls (M/F ratio = 1.8).

Figure 95: Soft tissue and other extraosseous sarcoma by age group, Belgium 2011-2020



Source: Belgian Cancer Registry

Figure 96: Soft tissue and other extraosseous sarcoma: age-specific incidence rates, Belgium 2011-2020

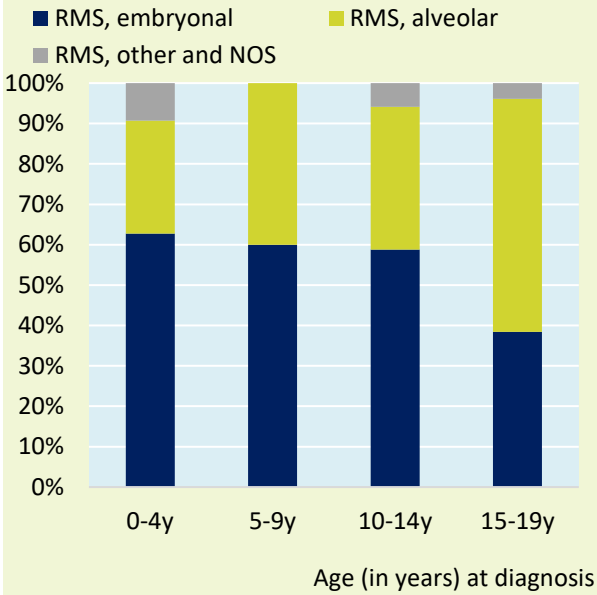


Source: Belgian Cancer Registry

There are two main histological types of rhabdomyosarcoma: embryonal RMS (56% of RMS), which is the dominant subtype in children aged 0-14 years, and alveolar RMS (39% of RMS) which is predominant in adolescents (Figure 97).

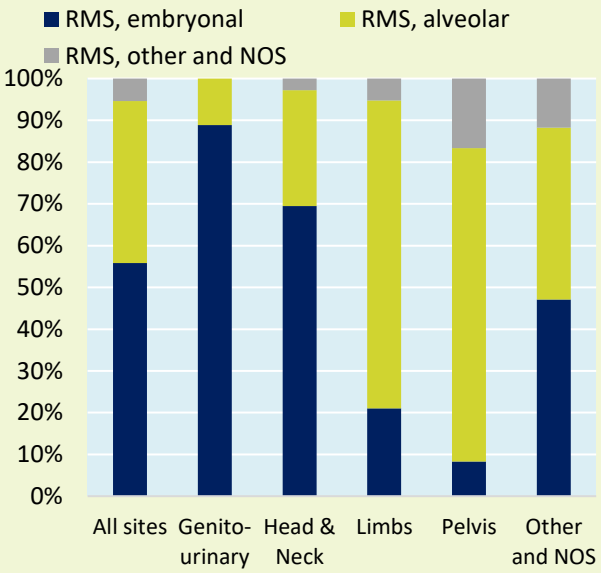
RMS occur at various sites in the body. The most common sites in our dataset are head and neck (N=36 or 32%) and the genito-urinary tract (N=27 or 24%). At these 2 sites, embryonal RMS account for the majority of the cases (Figure 98). Alveolar RMS is more frequently diagnosed at the limbs and pelvis.

Figure 97: Rhabdomyosarcoma by histology and age group, Belgium 2011-2020



Source: Belgian Cancer Registry

Figure 98: Rhabdomyosarcoma by histology and primary site, Belgium 2011-2020



Source: Belgian Cancer Registry

Non-rhabdomyosarcomas (IXb-e) have two incidence peaks: one in infants and one in adolescents (Figure 96). The non-RMS group contains a wide variety of different histological subtypes and each age group is characterized by different dominant subtypes (Table 17).

In young children (0-4 years), most non-RMS belong to extrarenal rhabdoid tumours (IXd3). Rhabdoid tumours are rare and typically occur in infants. They are aggressive and have a very poor prognosis. It is expected that these tumours were under- or mis-registered in the past because this type of tumour is poorly differentiated, and the diagnostic biomarker only started to be used in the last decade.

Table 17: Non-rhabdomyosarcoma by histology, Belgium 2011-2020

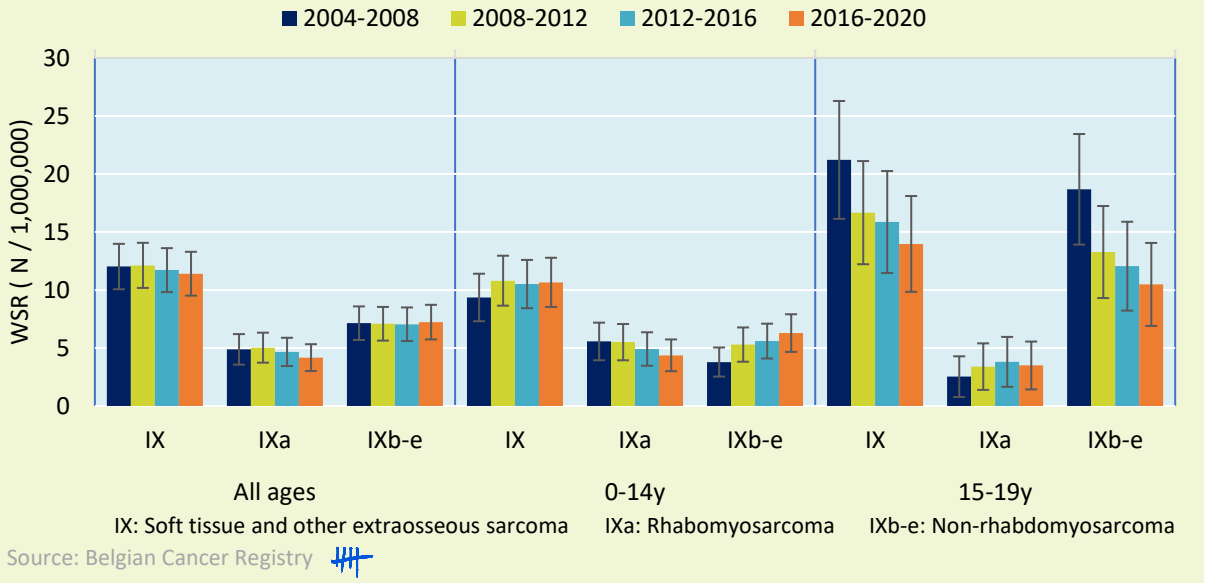
ICCC-3 classification		New diagnoses (N)					
		Total	%	0-4y	5-9y	10-14y	15-19y
IXb-e	**Non-rhabdomyosarcoma**	**178**	**100.0**	**41**	**23**	**41**	**73**
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	29	16.3	7	5	6	11
IXb1	Fibroblastic and myofibroblastic tumour	17	9.6	6	2	3	6
IXb2	Nerve sheath tumour	12	6.7	1	3	3	5
IXb3	Other fibromatous neoplasm	0	0.0	0	0	0	0
IXc	Kaposi sarcoma	3	1.7	0	0	0	3
IXd	Other specified soft tissue sarcoma	124	69.7	26	16	33	49
IXd1	Ewing tumour and Askin tumour of soft tissue	0	0.0	0	0	0	0
IXd2	PNET of soft tissue	24	13.5	4	5	5	10
IXd3	Extrarenal rhabdoid tumour	12	6.7	12	0	0	0
IXd4	Liposarcoma	9	5.1	2	0	3	4
IXd5	Fibrohistiocytic tumour	22	12.4	3	0	7	12
IXd6	Leiomyosarcoma	8	4.5	2	2	0	4
IXd7	Synovial sarcoma	23	12.9	0	2	11	10
IXd8	Blood vessel tumour	9	5.1	3	3	2	1
IXd9	Osseous and chondromatous neoplasm of soft tissue	3	1.7	0	1	0	2
IXd10	Alveolar soft parts sarcoma	5	2.8	0	1	3	1
IXd11	Miscellaneous soft tissue sarcoma	9	5.1	0	2	2	5
IXe	Unspecified soft tissue sarcoma	22	12.4	8	2	2	10

Source: Belgian Cancer Registry

Trends

Figure 99 shows that the observed incidence trends in Belgium are different for children and adolescents. A clear decrease is found for adolescents (caused by a decrease in non-RMS), while this is not seen in children. In children the observed incidence rates rather seem to increase slightly for non-RMS (and decrease for RMS). European data show an annual increase in the incidence of soft tissue sarcomas in children (0-14 years) (67; 68).

Figure 99: Soft tissue and other extraosseous sarcoma: Age-standardised incidence (WSR), Belgium 2004-2008, 2008-2012, 2012-2016, 2016-2020



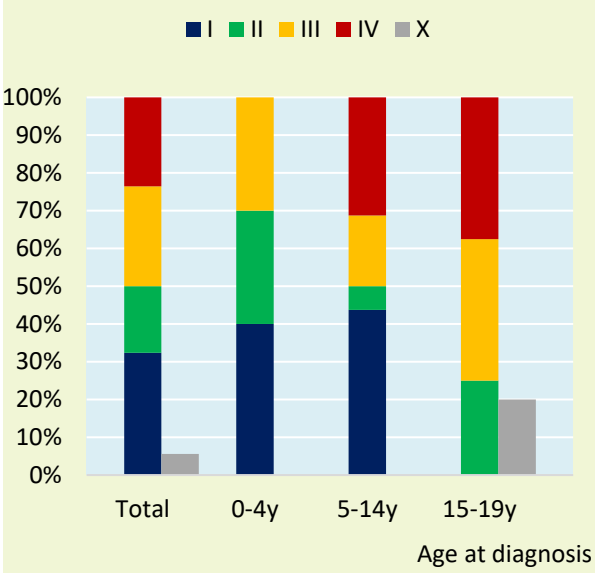
Source: Belgian Cancer Registry

Stage

Rhabdomyosarcoma (IXa) and non-rhabdomyosarcoma (IXb-e) can be staged by the TNM classification, with an adapted version for RMS in children, which also incorporates if the tumour location is prognostically favourable or not (16; 17; 31; 60; 69) (Figure 100 and Figure 101). Between 2018 and 2020, 94% of the RMS and 86% of the non-RMS was staged.

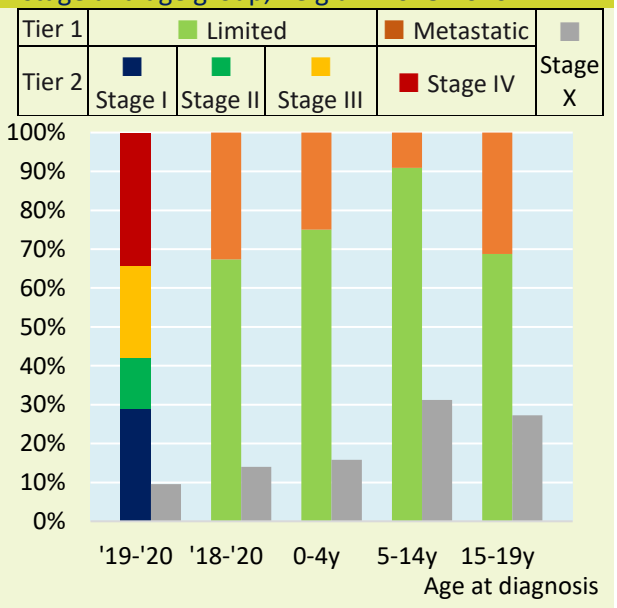
Non-RMS was more frequently staged as metastatic (or stage IV) than RMS. For RMS, no metastatic cases were registered in very young children, while in non-RMS, it was the age group of 5-14 year that was least frequently diagnosed with distant metastases. Adolescents had the highest proportion of metastatic diseases for both subtypes.

Figure 100: Rhabdomyosarcoma (IXa) by stage and age group, Belgium 2018-2020



Source: Belgian Cancer Registry

Figure 101: Non-rhabdomyosarcoma (IXb-e), tier 2 by stage for Belgium 2019-2020 and tier 1 by stage and age group, Belgium 2018-2020

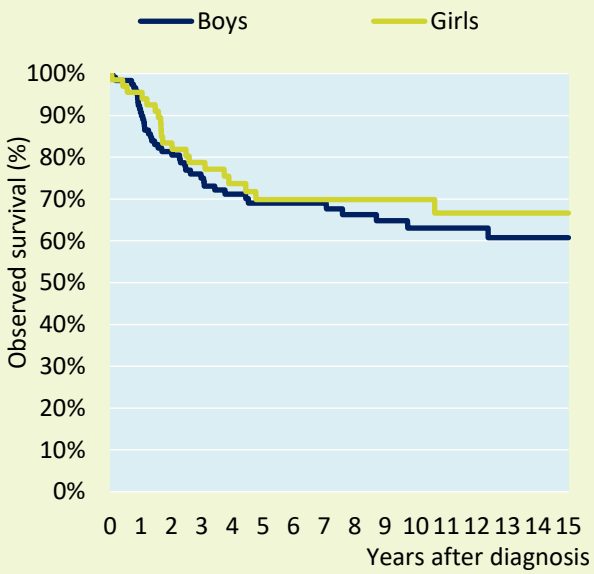


Source: Belgian Cancer Registry

Survival

Prognosis for RMS is worse than for non-RMS (Figure 102 and Figure 103). This difference between the subtypes is mainly noticeable in girls (69% RMS vs 79% non-RMS 15-year survival; boys 61% RMS vs 67% non-RMS).

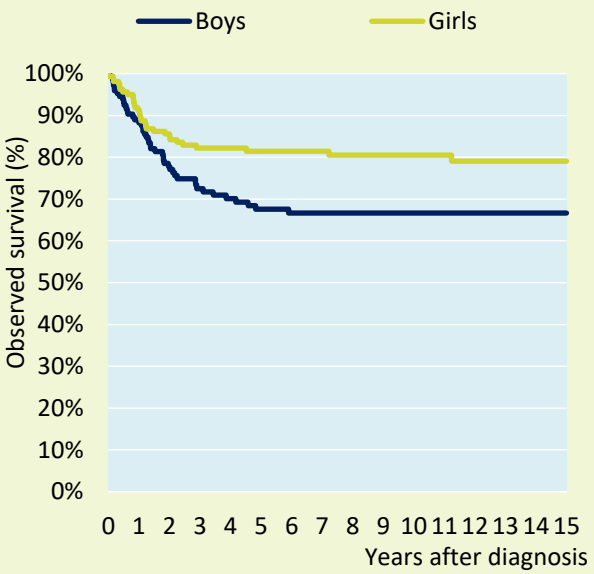
Figure 102: Rhabdomyosarcoma (IXa), observed survival by sex, Belgium 2004-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
119	69 [59.9:76.9]	63 [53.0:72.0]	61 [50.2:70.4]
67	70 [57.5:79.9]	70 [57.5:79.9]	67 [53.4:77.7]

Source: Belgian Cancer Registry

Figure 103: Non-rhabdomyosarcoma (IXb-e), observed survival by sex, Belgium 2004-2020

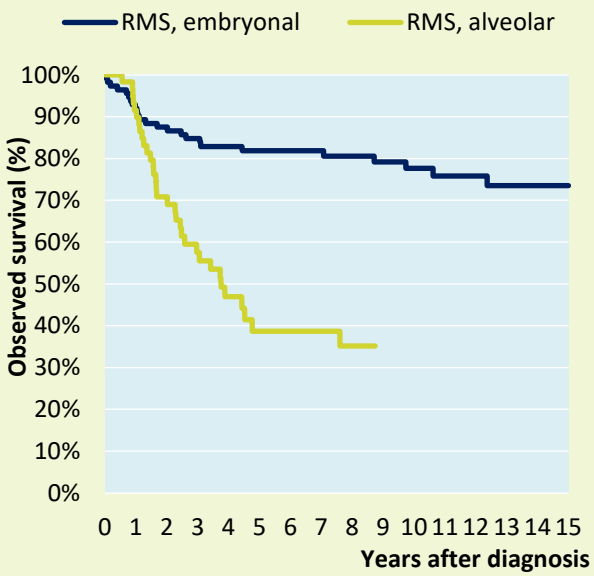


N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
146	68 [59.3:74.9]	67 [58.3:74.1]	67 [58.3:74.1]
160	81 [74.6:86.8]	80 [73.5:86.0]	79 [71.5:85.0]

Source: Belgian Cancer Registry

When analysing the data of the different underlying RMS subtypes, a clearly higher 5-year survival is seen for embryonal RMS (82%) than for alveolar RMS (39%) (Figure 104). Figure 105 also shows differences based on the primary site of RMS tumours:genito-urinary tract localisations (with embryonal RMS as the dominant subtype, see earlier) are associated with the best prognosis (5-year observed survival of 89%).

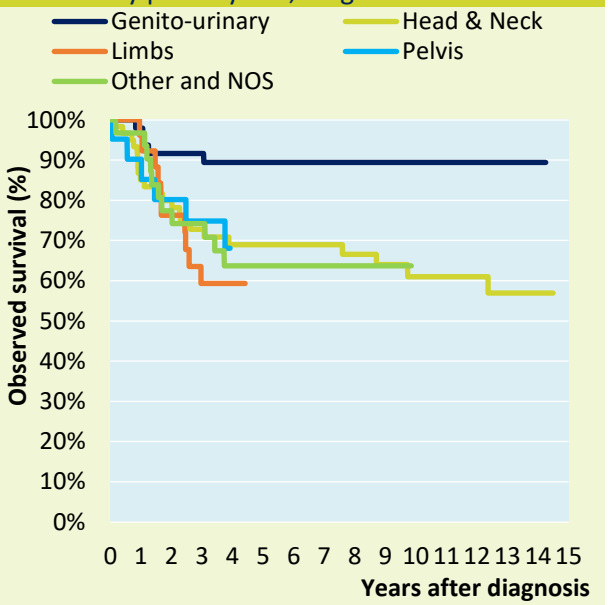
Figure 104: Rhabdomyosarcoma (IXa), observed survival by histology, Belgium 2004-2020



	N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
	112	82 [73.6:87.9]	78 [68.4:84.8]	73 [62.9:81.9]
	60	39 [26.0:53.0]	-	-

Source: Belgian Cancer Registry

Figure 105: Rhabdomyosarcoma (IXa), observed survival by primary site, Belgium 2004-2020



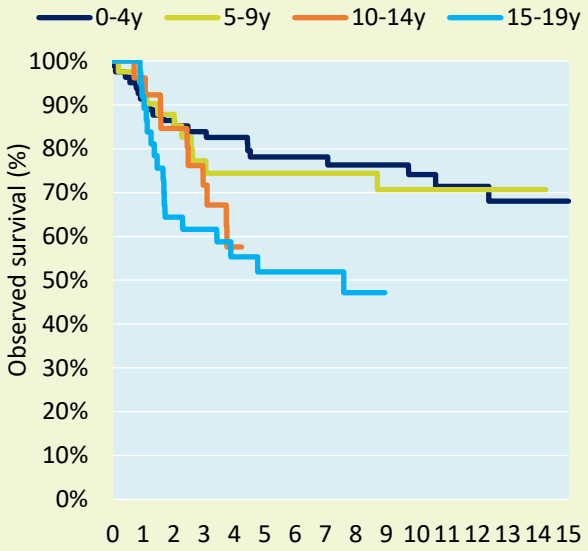
	N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
	48	89 [77.5:95.4]	89 [77.5:95.4]	-
	60	69 [56.1:79.4]	61 [47.0:73.3]	-
	26	46 [26.5:67.0]	-	-
	21	-	-	-
	31	64 [45.9:78.4]	-	-

Source: Belgian Cancer Registry

Differences in survival were also observed with age (Figure 106 and Figure 107). The lowest survival (5-year around 50%) for RMS is seen in older children (10-14y) and adolescents (15-19y). In children younger than 10 years, the 5-year observed survival was 78% (0-4y) and 74% (5-9y).

In non-RMS, the lowest survival was observed for young children (0-4y) and adolescents with respectively 71% and 72% 5-year survival. The 5-year observed survival was 80% and 84% for the age groups 10-14y and 5-9y.

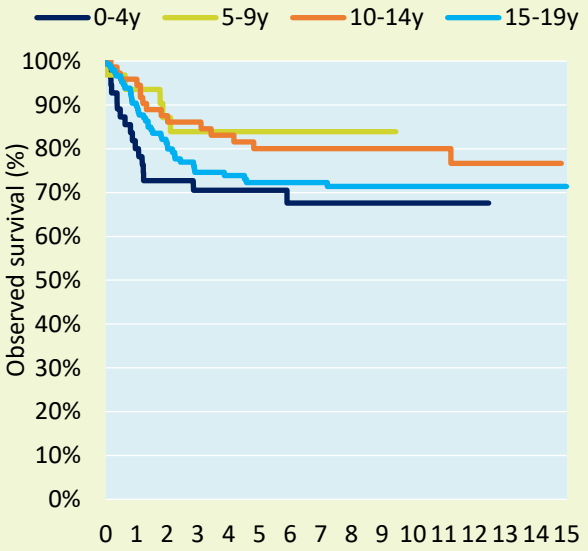
Figure 106: Rhabdomyosarcoma (IXa), observed survival by age group, Belgium 2004-2020



	N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
0-4y	81	78 [67.7:85.9]	74 [62.6:83.0]	68 [54.7:78.9]
5-9y	41	74 [58.8:85.5]	71 [54.3:82.9]	-
10-14y	27	-	-	-
15-19y	37	52 [35.8:67.6]	-	-

Source: Belgian Cancer Registry

Figure 107: Non-rhabdomyosarcoma (IXb-e), observed survival by age group, Belgium 2004-2020

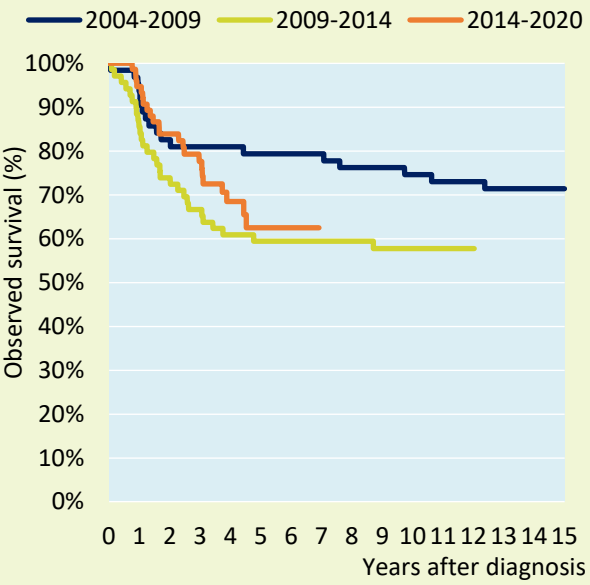


	N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
0-4y	55	71 [57.3:81.0]	68 [53.8:78.9]	-
5-9y	31	84 [67.4:92.9]	-	-
10-14y	74	80 [69.1:87.7]	80 [69.1:87.7]	-
15-19y	146	72 [64.3:79.0]	71 [63.3:78.3]	71 [63.3:78.3]

Source: Belgian Cancer Registry

Over time no improvement in survival could be observed (Figure 108 and Figure 109). The survival for RMS even seemed higher in 2004-2009 when compared to the later periods. This might be explained by a higher proportion of alveolar RMS diagnosed in the later periods (20% in 2004-2009 versus 41% in 2014-2020). For non-RMS, short term survival for the most recent period (2014-2020) also seemed less than the previous years. This might also be related to changing proportions of non-RMS subtypes.

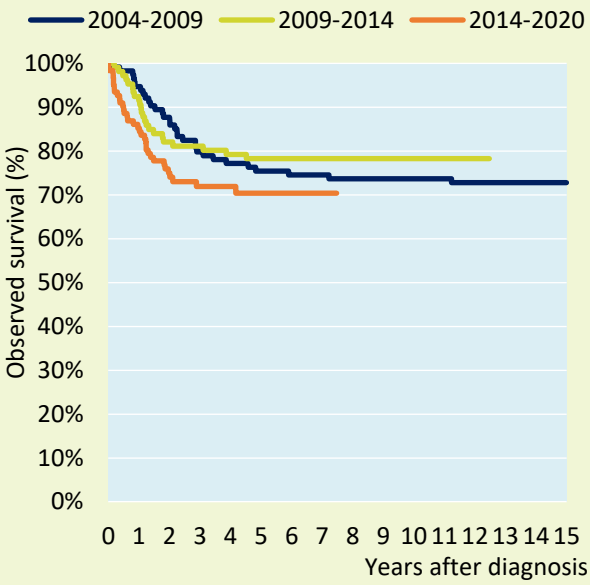
Figure 108: Rhabdomyosarcoma (IXa), observed survival, Belgium 2004-2009, 2009-2014, 2014-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
64	79 [67.9:87.5]	75 [62.7:83.7]	71 [59.3:81.1]
69	59 [47.6:70.2]	58 [45.9:68.7]	-
75	63 [49.0:74.4]	-	-

Source: Belgian Cancer Registry

Figure 109: Non-rhabdomyosarcoma (IXb-e), observed survival, Belgium 2004-2009, 2009-2014, 2014-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
114	75 [66.8:82.4]	74 [64.9:80.9]	73 [64.0:80.1]
106	78 [69.5:85.1]	78 [69.5:85.1]	-
123	70 [61.2:78.1]	-	-

Source: Belgian Cancer Registry

X GERM CELL TUMOURS, TROPHOBLASTIC TUMOURS AND NEOPLASMS OF GONADS

Incidence

Germ cell tumours, trophoblastic tumours and neoplasms of gonads (GCTOG; ICCC3 category X) represent 5% of all tumours in children and adolescents. GCTOG are subdivided into 3 main groups, according to the cells of origin: germ cells (Xa-c), trophoblastic cells (Xd) or other cells (Xe). The germ cell tumours (GCT) are further separated by site of origin: central nervous system (Xa), gonads (Xc), or elsewhere (Xb).

In Belgium, 279 new diagnoses were registered between 2011 and 2020 (Table 18). The overall crude and age-standardised incidence rates are 11.0 and 10.6/1,000,000. More boys are diagnosed than girls (M/F ratio = 1.5). This higher incidence in boys mostly occurs in adolescents (male/female ratio of 3.0) and is mainly caused by the rise in male gonadal GCT (Xc). Incidence rates per age, sex and subtype can be found in the Appendix.

Table 18: New diagnoses of germ cell tumour, trophoblastic tumour and neoplasm of gonads, Belgium 2011-2020

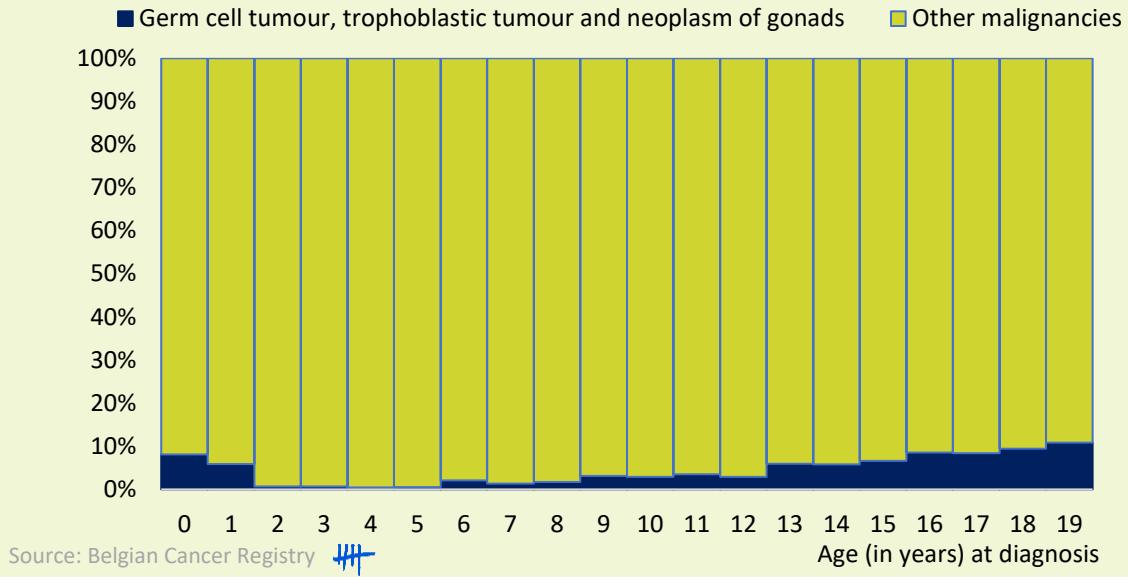
Boys		Total	0-14y	15-19y
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	**173**	52	121
Xa	Intracranial and intraspinal germ cell tumour	32	25	7
Xb	Malignant extracranial and extragonadal germ cell tumour	15	8	7
Xc	Malignant gonadal germ cell tumour	124	18	106
Xd	Gonadal carcinoma	0	0	0
Xe	Other and unspecified malignant gonadal tumour	2	1	1
Girls		Total	0-14y	15-19y
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	**106**	67	39
Xa	Intracranial and intraspinal germ cell tumour	19	15	4
Xb	Malignant extracranial and extragonadal germ cell tumour	24	22	2
Xc	Malignant gonadal germ cell tumour	54	29	25
Xd	Gonadal carcinoma	8	1	7
Xe	Other and unspecified malignant gonadal tumour	1	0	1

Source: Belgian Cancer Registry

The majority (64%) of GCTOG tumours are gonadal germ cell tumours (Xc) (Table 18). When only children (0-14 years) are considered, non-gonadal germ cell tumours (Xa + Xb; 59%) are more common than gonadal (Xc; 39%) GCT.

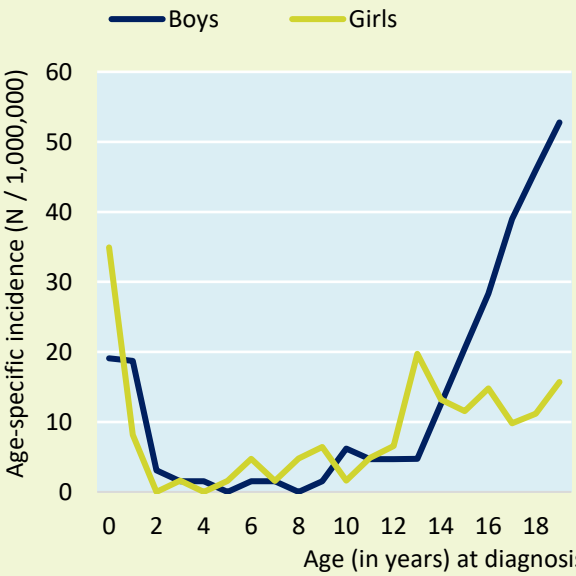
In infants, GCTOG represent 8% of all cancer diagnoses (Figure 110). In infants, almost twice as many girls are diagnosed than boys (M/F ratio = 0.6). In children between the age of 1 and 12 years, the incidence rates are very low. Around the age of 13-15 years incidence rates increase rapidly with age, especially in boys (Figure 111). At the age of 18-19 years, GCTOG encompass about 10% of all cancer diagnoses.

Figure 110: Relative frequency of germ cell tumour, trophoblastic tumour and neoplasm of gonads by age at diagnosis, Belgium 2011-2020



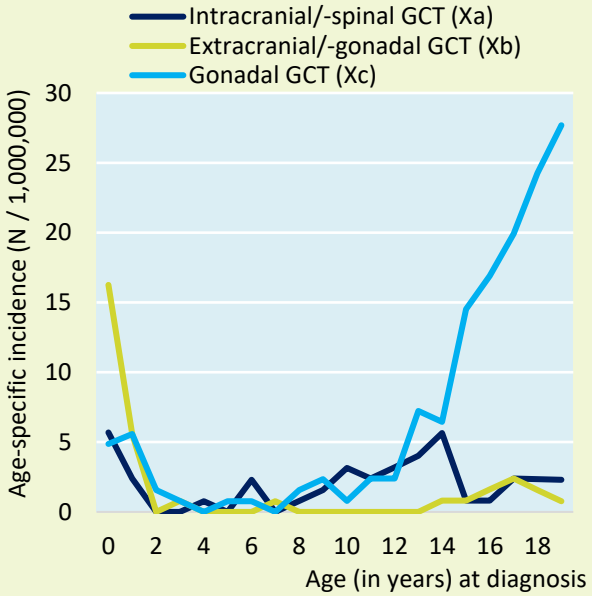
Source: Belgian Cancer Registry

Figure 111: Germ cell tumour, trophoblastic tumour and neoplasm of gonads: age-specific incidence rates by sex, Belgium 2011-2020



Source: Belgian Cancer Registry

Figure 112: Germ cell tumour: age-specific incidence rates by primary site, Belgium 2011-2020

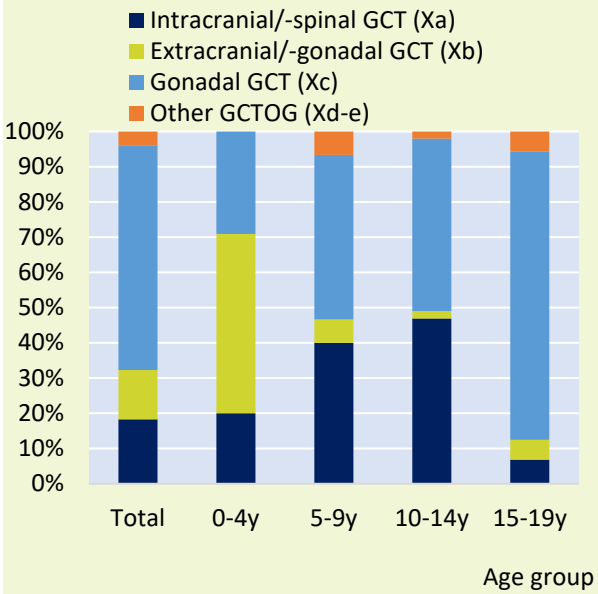


Source: Belgian Cancer Registry

The incidence rate of **intracranial and intraspinal GCT (Xa)** is low for all ages (Figure 112). Intracranial/-spinal GCT (Xa) is more frequently diagnosed in boys than girls (M/F ratio is 1.5). In the age group of 5-14 years, GCTOG are rare in general, but intracranial and intraspinal GCT (Xa) represent 45% of all diagnoses in this age group (Figure 113).

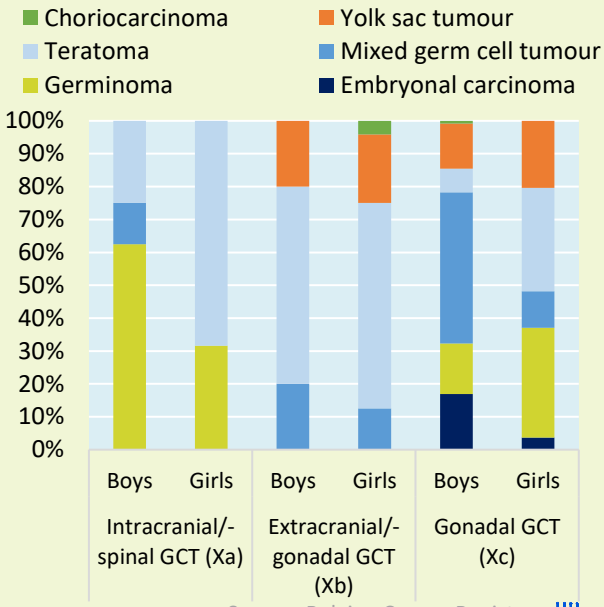
The most frequently diagnosed histological subtype (Figure 114) are CNS germinomas (Xa1; predominant in boys by 63%) and teratomas (Xa2; predominant in girls by 68%). Both subtypes together account for 92% of all intracranial and intraspinal GCT.

Figure 113: Germ cell tumour, trophoblastic tumour and neoplasm of gonads by age group, Belgium 2011-2020



Source: Belgian Cancer Registry

Figure 114: Germ cell tumour, trophoblastic tumour and neoplasm of gonads by histology and sex, Belgium 2011-2020



Source: Belgian Cancer Registry

Extracranial and extragonadal GCT (Xb) are most frequently diagnosed in children younger than 2 years of age (Figure 112) and more often in girls (M/F ratio = 0.5). The most frequent histological subtypes (Figure 114) are teratomas (Xb2) and yolk sac tumours (Xb4), respectively 62% and 21%.

Gonadal GCT (Xc) are by far the most frequent diagnosed GCTOG (64%). 74% of gonadal GCT are diagnosed in adolescents. In adolescence, more boys (testicular GCT) are diagnosed than girls (ovarian GCT), while in childhood the reverse is observed. The respective M/F ratios are 4.1 in adolescents versus 0.7 in children.
In boys, the majority of gonadal GCT (Figure 114) are of mixed origin (Xc6; 46%), followed by embryonal carcinoma (Xc3; 17%), germinoma (Xc1; 15%) and yolk sac tumour (Xc2; 14%). The first 3 of these subtypes (Xc6, Xc3 and Xc1) are almost exclusively diagnosed in adolescents (95-100%), while most (82%) of the yolk sac tumours (Xc2) are diagnosed in children under five years old.
In girls, diagnoses of ovarian GCT (Figure 114) are mostly germinomas (33%), teratomas (31%) and yolk sac tumours (20%). Most ovarian yolk sac tumours (72%) are diagnosed in adolescents, while most ovarian teratoma diagnoses occurred in children (71%).

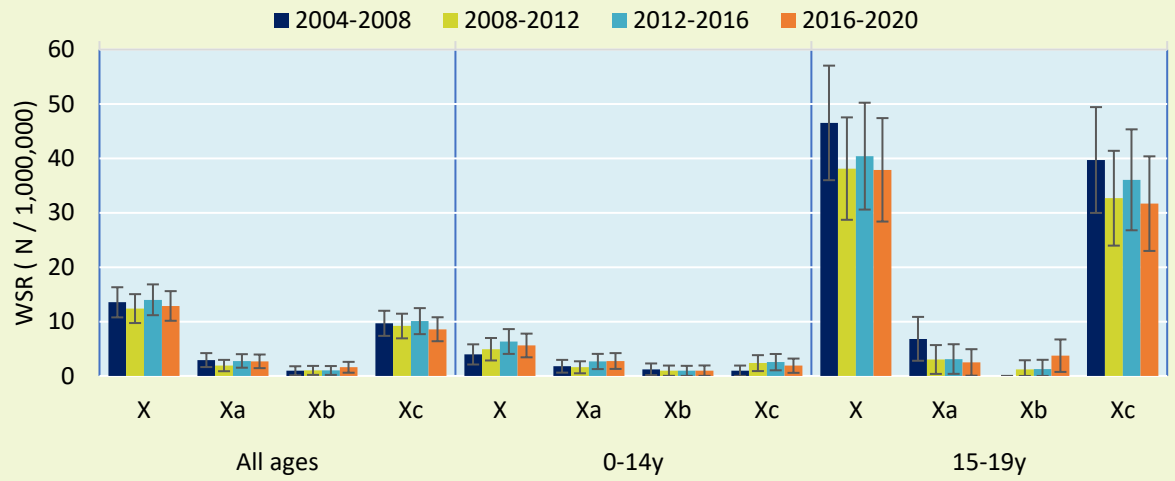
Gonadal carcinomas (Xd) are a rare malignancy in children and adolescents. In Belgium, between 2011 and 2020, only 8 girls were diagnosed with an ovarian gonadal carcinoma (Table 18).

The remaining GCTOG diagnoses, **other and unspecified malignant gonadal tumours (Xe)**, are very rare (N = 3).

Trends

When comparing the incidence data over time in Belgium, no substantial change in age-standardised incidence (WSR) can be observed in boys (Figure 115) nor in girls (Figure 116).

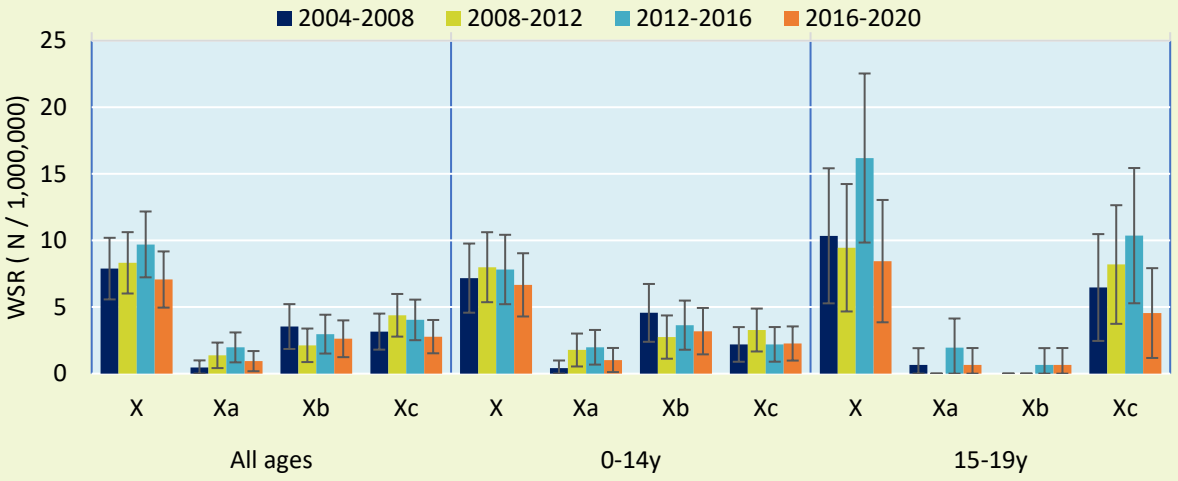
Figure 115: Germ cell tumour, trophoblastic tumour and neoplasm of gonads: Age-standardised incidence (WSR) for boys, Belgium 2004-2008, 2008-2012, 2012-2016, 2016-2020



X: Germ cell tumour, trophoblastic tumour and neoplasm of gonads
Xa: Intracranial and intraspinal germ cell tumour
Xb: Malignant extracranial and extragonadal germ cell tumour
Xc: Malignant gonadal germ cell tumour

Source: Belgian Cancer Registry

Figure 116: Germ cell tumour, trophoblastic tumour and neoplasm of gonads: Age-standardised incidence (WSR) for girls, Belgium 2004-2008, 2008-2012, 2012-2016, 2016-2020



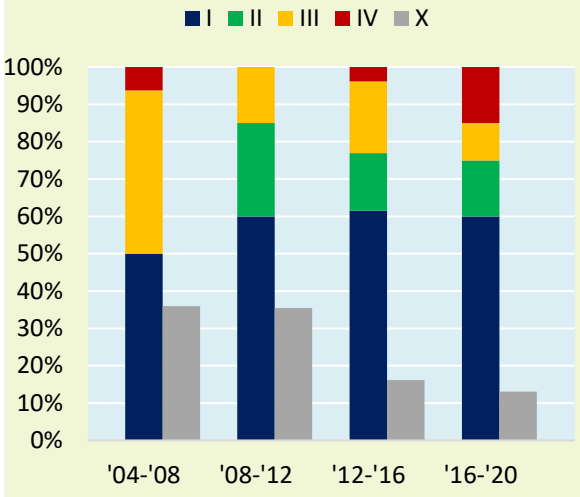
X: Germ cell tumour, trophoblastic tumour and neoplasm of gonads
Xa: Intracranial and intraspinal germ cell tumour
Xb: Malignant extracranial and extragonadal germ cell tumour
Xc: Malignant gonadal germ cell tumour

Source: Belgian Cancer Registry

Stage

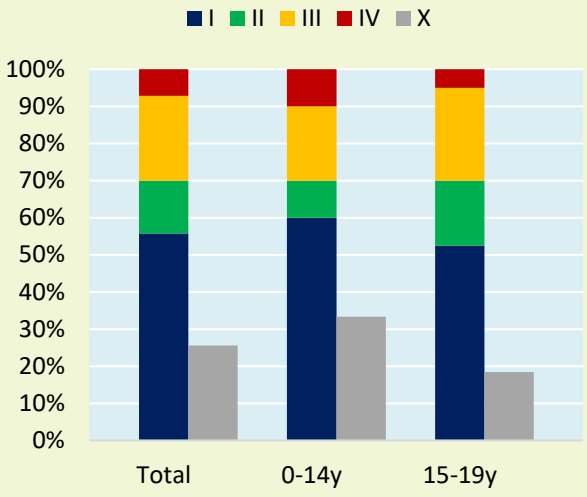
Ovarian GCT and carcinomas (Xc-d) are staged following the FIGO/TNM guidelines (16; 17; 31; 60). When combining information from both classification systems, stage was known in 75% of all diagnoses between 2004 and 2020. In the more recent period 2016-2020, information increased to 87% (Figure 117). Availability was higher in adolescents than in children (Figure 118).

Figure 117: Ovarian germ cell tumour and carcinomas (Xc-d) by stage and incidence year, Belgium 2004-2020



Source: Belgian Cancer Registry

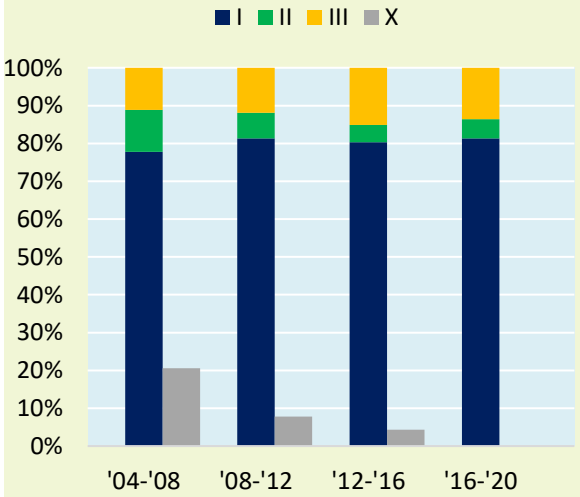
Figure 118: Ovarian germ cell tumour and carcinomas (Xc-d) by stage and age group, Belgium 2004-2020



Source: Belgian Cancer Registry

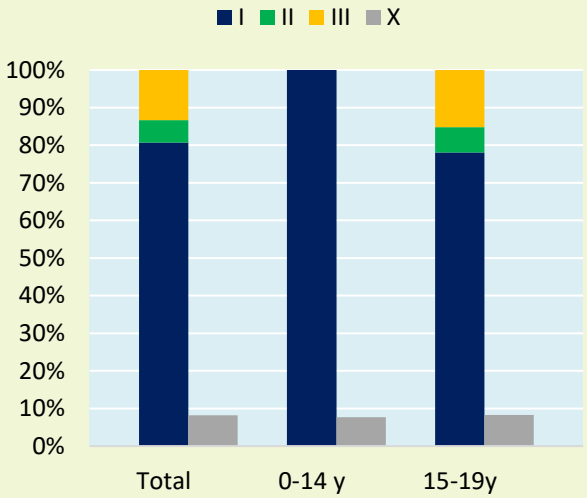
Testicular GCT are staged according to the TNM guidelines (16; 17; 31; 60). Availability over the entire period is 92% (Figure 119) and progressively increased with time. Information regarding serum tumour markers is not known in our registry. About 80% of all cases were diagnosed in stage I (i.e. without nodal or distant metastases). In children, all cases were stage I (Figure 120). The stage distribution also remained stable over time.

Figure 119: Testicular germ cell tumour (Xc) by stage and incidence year, Belgium 2004-2020



Source: Belgian Cancer Registry

Figure 120: Testicular germ cell tumour (Xc) by stage and age group, Belgium 2004-2020

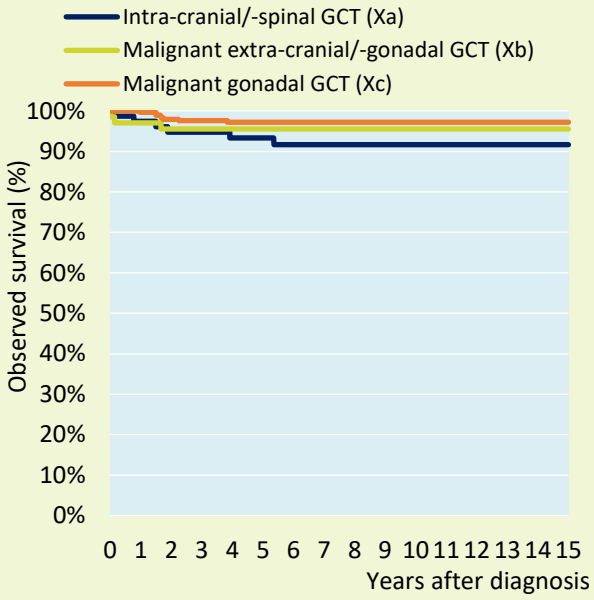


Source: Belgian Cancer Registry

Survival

In general, patients with GCTOG have a very good prognosis (23). The 15-year observed survival for all primary sites (Figure 121) and histological subtypes (Figure 122) is above 90%.
Between age groups, a lower survival is observed for the age group 5-9 year (88% 10-year observed survival). The 10-year observed survival was 94% or higher for the other age groups.
The 5-year observed survival for the most recent period (2014-2020) was 98%, a small improvement of the already high survival of the previous years (94% for 2004-2009).

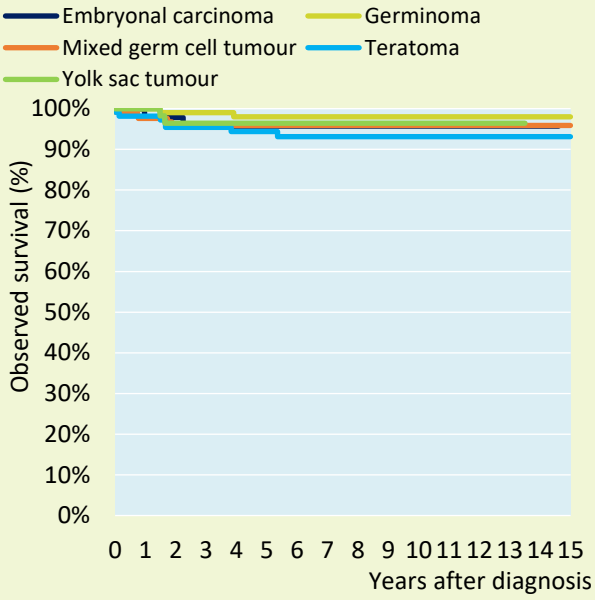
Figure 121: Germ cell tumour, trophoblastic tumour and neoplasm of gonads (X), observed survival by primary site, Belgium 2004-2020



	N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
	78	93 [85.4:97.1]	92 [82.8:96.1]	92 [82.8:96.1]
	68	96 [87.8:98.5]	96 [87.8:98.5]	96 [87.8:98.5]
	299	97 [94.6:98.6]	97 [94.6:98.6]	97 [94.6:98.6]

Source: Belgian Cancer Registry

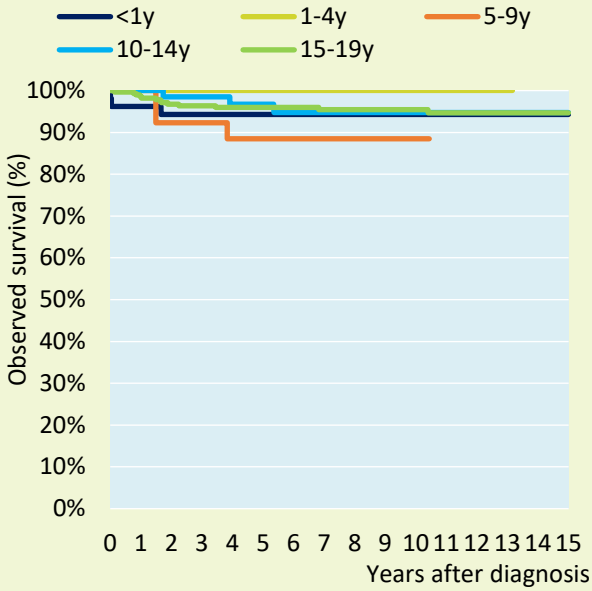
Figure 122: Germ cell tumour, trophoblastic tumour and neoplasm of gonads (X), observed survival by histology, Belgium 2004-2020



	N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
	47	96 [85.8:98.8]	96 [85.8:98.8]	-
	107	98 [93.0:99.4]	98 [93.0:99.4]	98 [93.0:99.4]
	124	96 [90.8:98.2]	96 [90.8:98.2]	96 [90.8:98.2]
	110	94 [88.3:97.4]	93 [86.5:96.7]	93 [86.5:96.7]
	56	96 [87.9:99.0]	96 [87.9:99.0]	-

Source: Belgian Cancer Registry

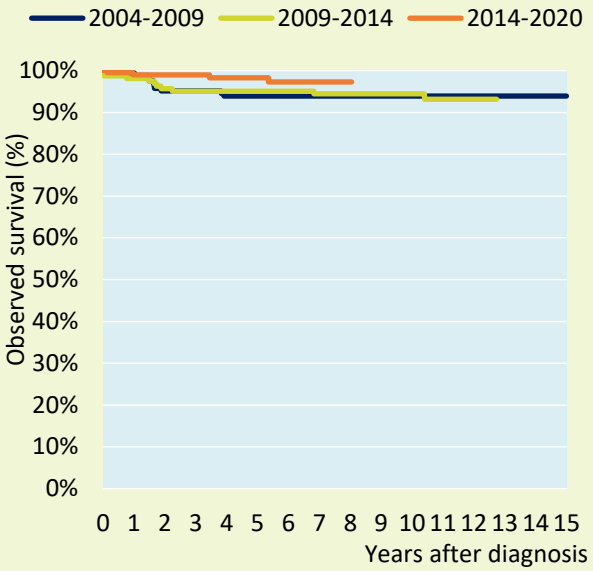
Figure 123: Germ cell tumour, trophoblastic tumour and neoplasm of gonads (X), observed survival by age group, Belgium 2004-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
53	94 [84.5:98.0]	94 [84.5:98.0]	94 [84.5:98.0]
36	100 [100:100]	100 [100:100]	-
26	88 [71.0:96.0]	88 [71.0:96.0]	-
69	97 [88.8:99.1]	95 [85.5:98.2]	95 [85.5:98.2]
280	96 [93.0:97.7]	95 [92.2:97.4]	95 [90.9:96.9]

Source: Belgian Cancer Registry

Figure 124: Germ cell tumour, trophoblastic tumour and neoplasm of gonads (X), observed survival, Belgium 2004-2009, 2009-2014, 2014-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
164	94 [89.1:96.7]	94 [89.1:96.7]	94 [89.1:96.7]
162	95 [90.6:97.5]	94 [89.8:97.0]	-
192	98 [95.0:99.4]	-	-

Source: Belgian Cancer Registry

XI OTHER MALIGNANT EPITHELIAL NEOPLASMS AND MALIGNANT MELANOMAS

Incidence

Carcinomas and melanomas (ICCC3 category XI) are the most common histological cancer type in adults. Nevertheless, a variety of malignant epithelial neoplasms also occurs in children and adolescents. Incidence rates per age, sex and subtype can be found in the Appendix.

Table 19: New diagnoses of other malignant epithelial neoplasm and melanoma, Belgium 2011-2020

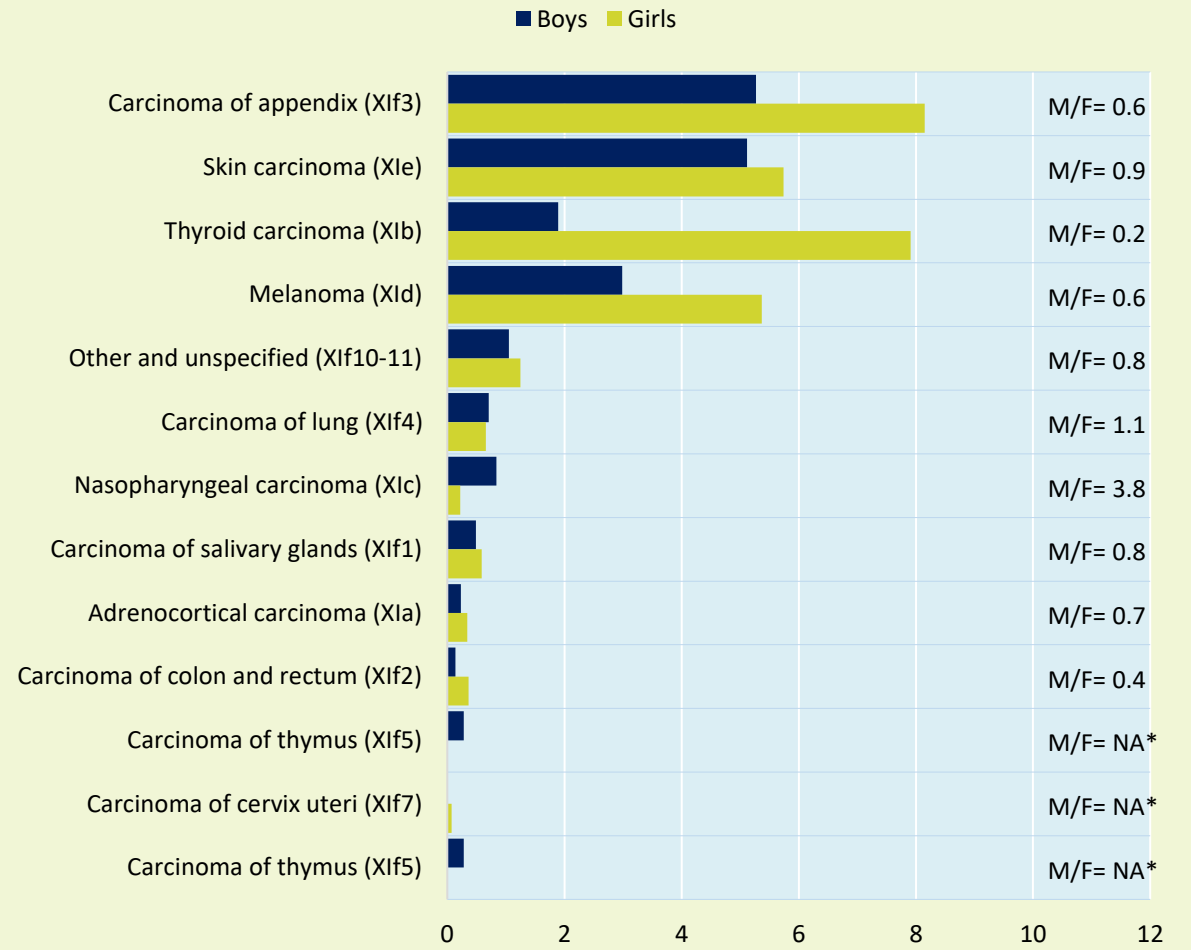
Boys		Total	0-14y	15-19y
XI	Other malignant epithelial neoplasm and melanoma	**268**	113	155
XIa	Adrenocortical carcinoma	3	1	2
XIb	Thyroid carcinoma	27	8	19
XIc	Nasopharyngeal carcinoma	12	7	5
XId	Melanoma	42	8	34
XIe	Skin carcinoma	71	40	31
XIf1	Carcinoma of salivary glands	7	4	3
XIf2	Carcinoma of colon and rectum	2	1	1
XIf3	Carcinoma of appendix	75	35	40
XIf4	Carcinoma of lung	10	4	6
XIf5	Carcinoma of thymus	4	1	3
XIf6	Carcinoma of breast	0	0	0
XIf7	Carcinoma of cervix uteri	0	0	0
XIf8	Carcinoma of bladder	0	0	0
XIf9	Carcinoma of eye	0	0	0
XIf10-11	Other and unspecified	15	4	11
Girls		Total	0-14y	15-19y
XI	Other malignant epithelial neoplasm and melanoma	**418**	135	283
XIa	Adrenocortical carcinoma	4	3	1
XIb	Thyroid carcinoma	108	32	76
XIc	Nasopharyngeal carcinoma	3	0	3
XId	Melanoma	73	18	55
XIe	Skin carcinoma	78	24	54
XIf1	Carcinoma of salivary glands	8	6	2
XIf2	Carcinoma of colon and rectum	5	0	5
XIf3	Carcinoma of appendix	111	45	66
XIf4	Carcinoma of lung	9	3	6
XIf5	Carcinoma of thymus	0	0	0
XIf6	Carcinoma of breast	1	0	1
XIf7	Carcinoma of cervix uteri	1	0	1
XIf8	Carcinoma of bladder	0	0	0
XIf9	Carcinoma of eye	0	0	0
XIf10-11	Other and unspecified	17	4	13

Source: Belgian Cancer Registry

In Belgium, between 2011 and 2020, 248 children and 438 adolescents were diagnosed with a malignant epithelial neoplasm (carcinoma) or melanoma (Table 19). The overall crude and age-standardised incidence rates are 27.1 and 24.7/1,000,000.
Almost two out of three carcinomas are diagnosed in girls. The incidence rates of the most frequent tumour sites (appendix, thyroid and skin) are much higher for girls than for boys (Figure 125).

This diverse group (XI) is the 4th most frequent tumour group in children and the 2nd most frequent in adolescents. In young children, carcinomas are very rare. The incidence rates increase sharply with age from 7 years old. In adolescents, they account for 24% of all malignancies (Figure 126 and Figure 127).

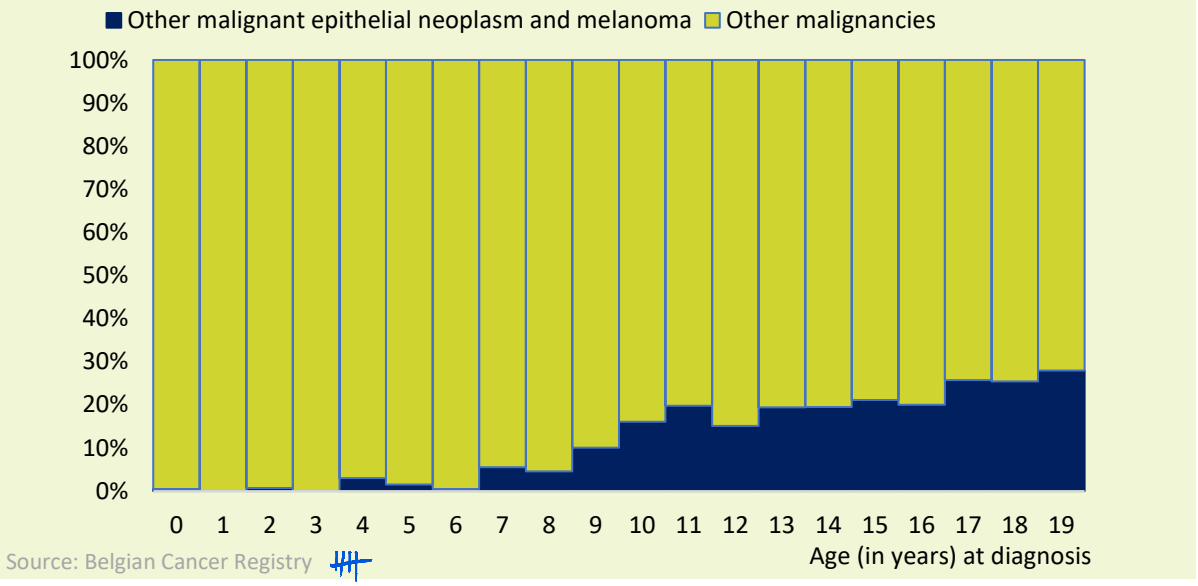
Figure 125: Other malignant epithelial neoplasm and melanoma (XI) Age-standardised incidence (WSR) by primary localisation and sex, Belgium 2011-2020



*NA = M/F ratio not applicable due to zero cases in either sex

Source: Belgian Cancer Registry

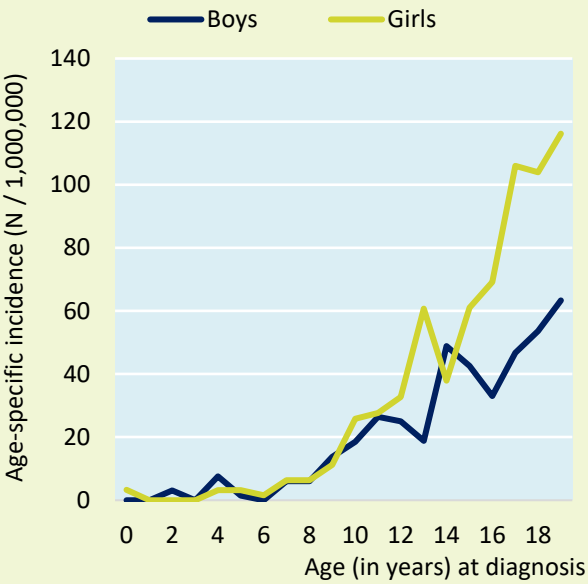
Figure 126: Relative frequency of other malignant epithelial neoplasm and melanoma by age at diagnosis, Belgium 2011-2020



The most frequent malignant epithelial neoplasms are neuroendocrine tumours (carcinoids) of the **appendix (XIf3).** Although in theory, other appendageal tumour types are also included in group XIf3, only neuroendocrine tumours (NEN) and carcinomas (NEC) were seen. This tumour is most commonly discovered by coincidence during an appendectomy, where they are found in 0.3-0.9% of patients (70; 71). Between 2011 and 2020, a total of 186 diagnoses are registered in Belgium (Table 19; M/F ratio = 0.6). Carcinoids of the appendix (XIf3) are very rare in children younger the 10 years of age and absent below 5 years. The incidence rates rapidly increase with age (Figure 128).

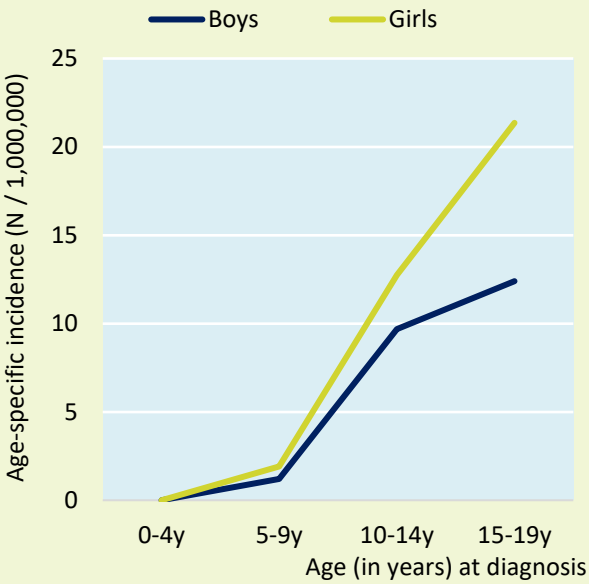
Worldwide, registration practices for tumours of the appendix vary between registries. This variation is considered a potential source of artefact when comparing data between regions (71). The Belgian Cancer Registry includes all carcinoids of the appendix, regardless of size. Updates in the ICD-O3 classification in 2011 published by the WHO (72), also include any carcinoid of the appendix in the list of malignant neoplasms.

Figure 127: Other malignant epithelial neoplasm and melanoma (XI): age-specific incidence rates by sex, Belgium 2011-2020



Source: Belgian Cancer Registry

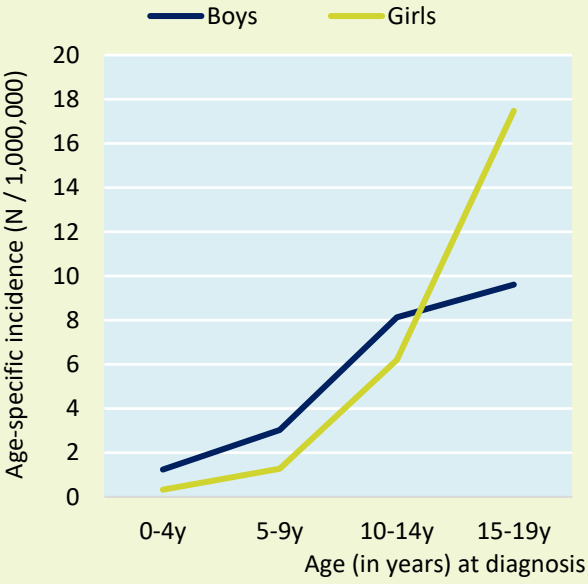
Figure 128: Carcinoma of appendix (XIf3): age-specific incidence rates by primary site, Belgium 2011-2020



Source: Belgian Cancer Registry

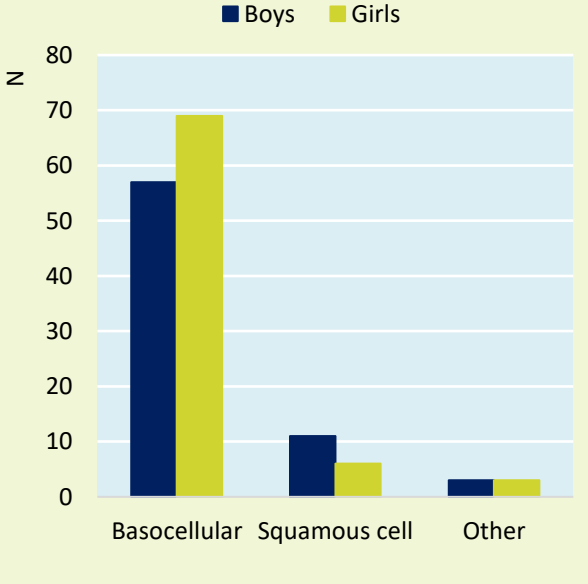
Non-melanoma skin cancers (XIe) are the 2nd most frequent malignant epithelial neoplasm. Between 2011 and 2020, 149 new cases are registered (Table 19). Under the age of 10, non-melanoma skin cancers (XIe) are rare: only 19 new diagnoses (14 boys and 5 girls, M/F ratio = 2.7) are observed in children younger than 10 year. In older children, higher incidence rates are observed (Figure 129), and the M/F ratio gradually reverses (1.3 in age 10-14 years, 0.6 in adolescents).
The majority of the non-melanoma skin tumours (XIe) are basocellular carcinomas (85%) in both boys and girls (Figure 130). Squamous cell carcinomas only account for 11%. These tumours were subjected to a profound quality assessment.

Figure 129: Skin carcinoma (XIe) age-specific incidence rates by sex, Belgium 2011-2020



Source: Belgian Cancer Registry

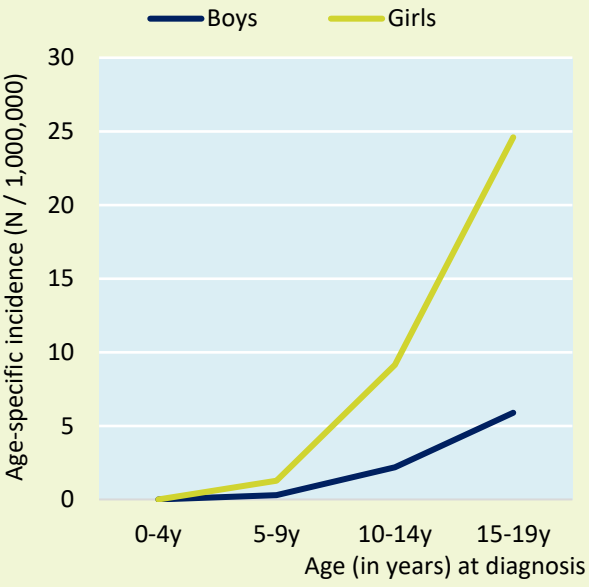
Figure 130: Skin carcinoma (XIe) by histology and sex, Belgium 2011-2020



Source: Belgian Cancer Registry

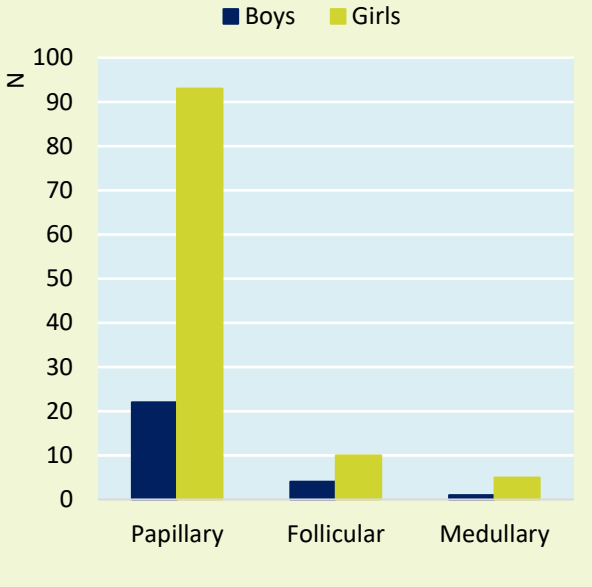
The 3rd most frequent malignant epithelial neoplasms are **thyroid carcinomas (XIb).** In Belgium, 135 new cases are diagnosed between 2011 and 2020 (Table 19). Four times more girls are diagnosed with thyroid cancer than boys (Figure 124). In children under the age of 10 years, thyroid cancers are rare and absent below 5 years old. The increase in incidence rates after 10 years old mainly occurs in girls (Figure 131).
Histologically, three main types of thyroid carcinoma are distinguished (Figure 132). Papillary carcinoma is the most frequent subtype in both girls and boys (85%). Follicular carcinoma and medullary carcinoma account for respectively 10% and 4% of the thyroid cancers. In Belgium, anaplastic carcinoma, the fourth main thyroid carcinoma type, was not observed in children and adolescents between 2011 and 2020.

Figure 131: Thyroid carcinoma (XIb) age-specific incidence rates by sex, Belgium 2011-2020



Source: Belgian Cancer Registry

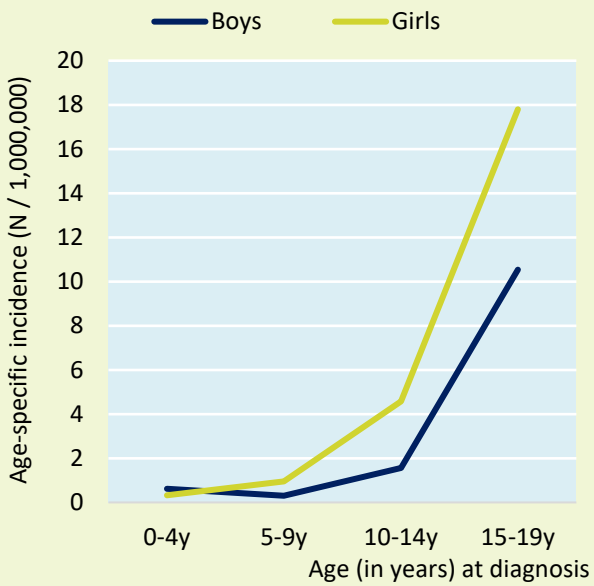
Figure 132: Thyroid carcinoma (XIb) by histology and sex, Belgium 2011-2020



Source: Belgian Cancer Registry

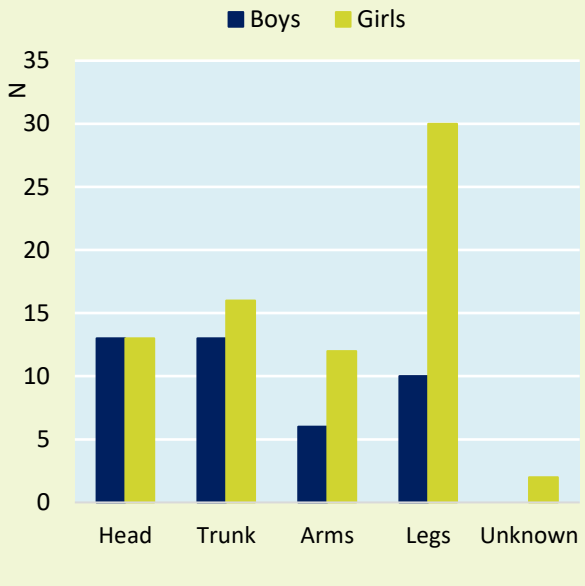
The 4th most frequent neoplasm of category XI is **malignant melanoma (XId).** For the period 2011-2020, a total of 115 cases of melanoma are diagnosed in Belgium (Table 19; M/F ratio = 0.6). In children under the age of 10 years, malignant melanomas are rare and only 3 cases are registered below 5 years old. The increased incidence rates observed after 10 years old mainly occur in girls (Figure 133).
In boys, melanoma most often occur on the head (31%) and trunk (31%), while in girls most melanoma are diagnosed on the legs (41%) (Figure 134). This preferential tumour localisation is comparable with the site distribution in adults (9).

Figure 133: Melanoma (XId) age-specific incidence rates by sex, Belgium 2011-2020



Source: Belgian Cancer Registry

Figure 134: Melanoma (XId) by primary site and sex, Belgium 2011-2020



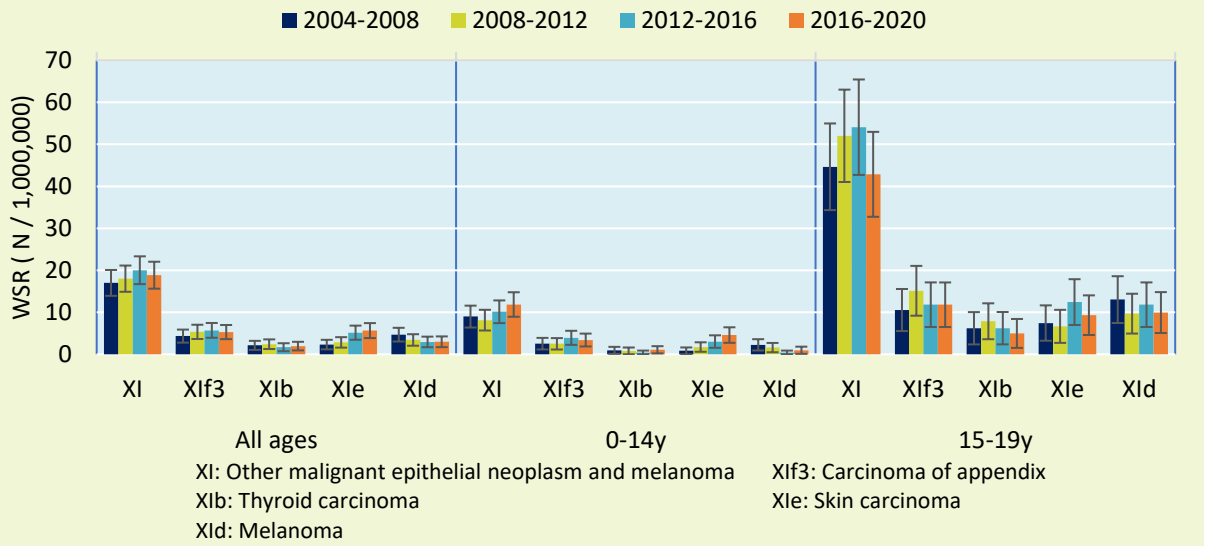
Source: Belgian Cancer Registry

The **remaining epithelial neoplasms** are individually very rare (Table 19). These neoplasms are (in order of frequency) the invasive carcinomas of lung (XIf4; N = 19), nasopharynx (XIc; N = 15), salivary glands (XIf1; N = 15), colon and rectum (XIf2; N = 7), adrenal cortex (XIa; N = 7), thymus (XIf5; N = 4), cervix uteri (XIf7; N = 1) and breast (XIf6; N = 1). Only one neoplasm is a carcinoma of an unspecified site (XIf11), whereas all other remaining carcinomas belong to the group carcinomas of other specified sites (XIf10; N = 31).

Trends

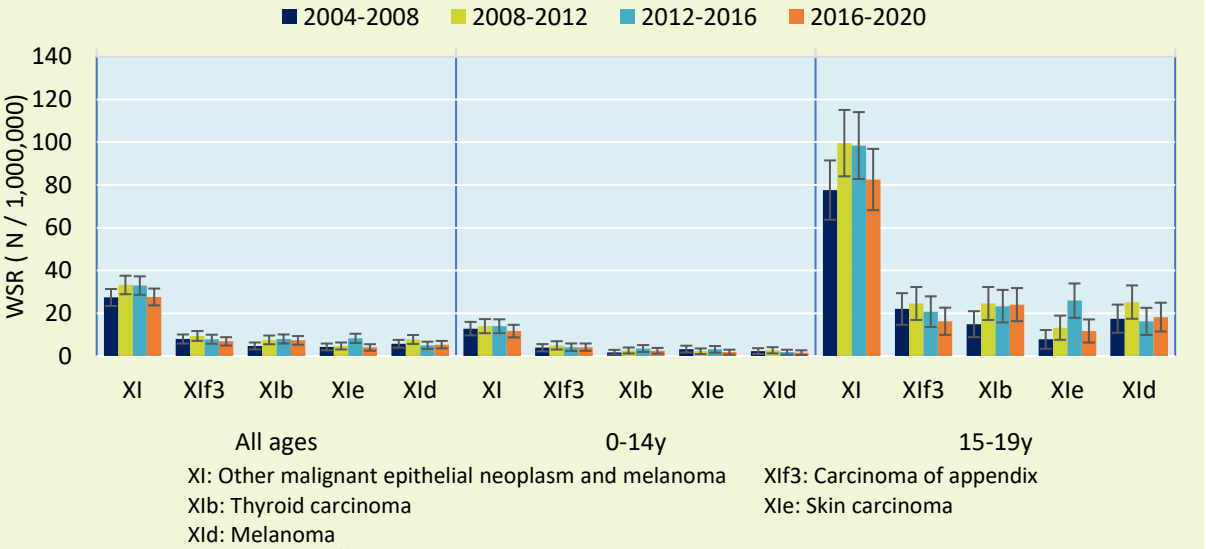
There is no clear trend in the incidence rates for malignant epithelial neoplasms and malignant melanomas (XI) in Belgium (Figure 135 and Figure 136). Non-melanoma skin cancer (XIe) in boys (0-14y) is the only subtype where the incidence rates increase in every period.

Figure 135: Other malignant epithelial neoplasm and melanoma: Age-standardised incidence (WSR) for boys, Belgium 2004-2008, 2008-2012, 2012-2016, 2016-2020



Source: Belgian Cancer Registry

Figure 136: Other malignant epithelial neoplasm and melanoma: Age-standardised incidence (WSR) for girls, Belgium 2004-2008, 2008-2012, 2012-2016, 2016-2020



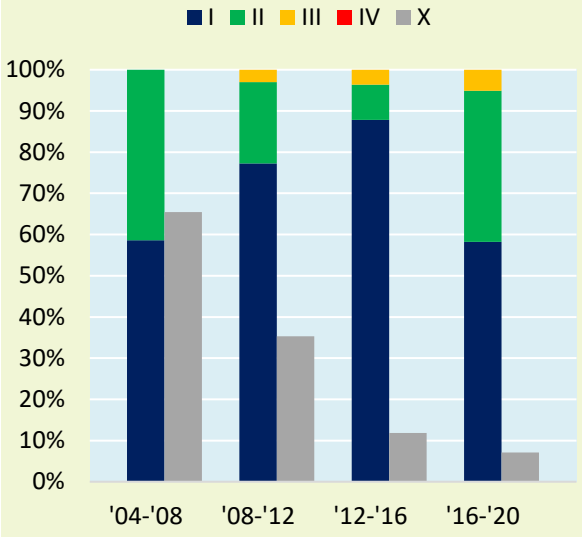
Source: Belgian Cancer Registry

Stage

The group of other malignant epithelial neoplasms and melanoma (XI) are not included in the Toronto staging guidelines (16; 17), however the majority of cases can be staged using the TNM (60).

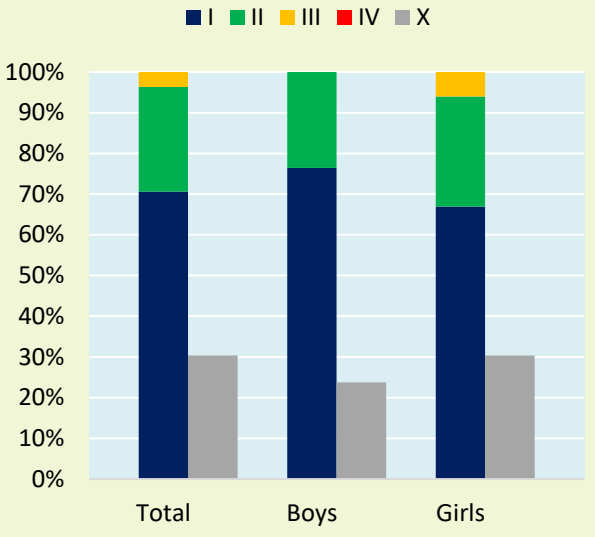
Staging information for carcinomas of the appendix (XIf3) is available for 69% of all cases. Availability of stage increase over time from 35% in 2004-2008 to 93% in 2016-2020 (Figure 137).
The majority of cases are diagnosed in stage I. In the most recent period, an increase in stage II can be observed due to a stage migration of cases between the 7th (69) and 8th (60) edition of TNM (in the staging guidelines, tumours between 1 and 2 cm migrated from stage I to stage II). The percentage of stage I tumours in boys (76%) is higher than in girls (67%) (Figure 138).

Figure 137: Carcinoma of appendix (XIf3) by stage and incidence year, Belgium 2004-2020



Source: Belgian Cancer Registry

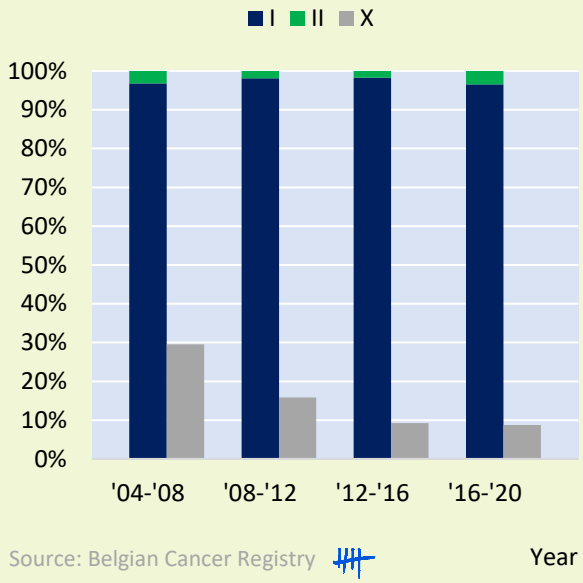
Figure 138: Carcinoma of appendix (XIf3) by stage and sex, Belgium 2004-2020



Source: Belgian Cancer Registry

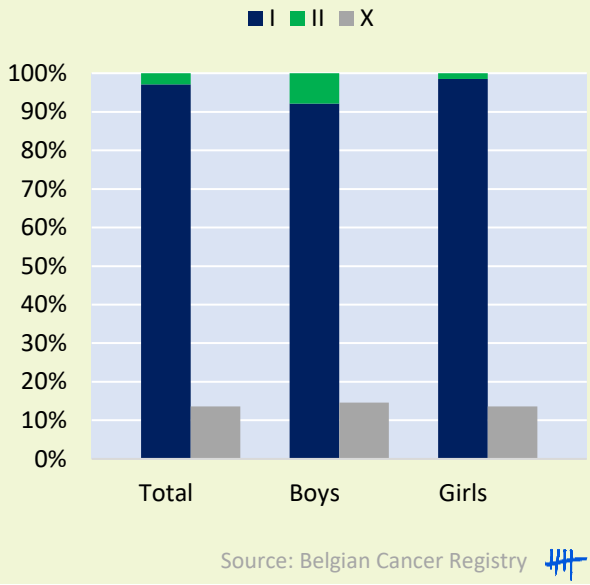
Thyroid carcinoma (XIb) was staged in 85% of all cases. Availability of stage increased over time, from 66% in 2004-2008 to 90% in 2016-2020. Since staging depends on histology, only results for the two main subtypes (papillary and follicular carcinoma) are included in the figures. For these two subtypes, availability increased from 70% to 91% (Figure 139).
The grand majority of papillary and follicular thyroid carcinoma are diagnosed in stage I. There is a small difference between boys and girls in the stage distribution (Figure 140).

Figure 139: Thyroid carcinoma (XIb) by stage and incidence year, Belgium 2004-2020 *(only papillary and follicular carcinoma included)*



Source: Belgian Cancer Registry

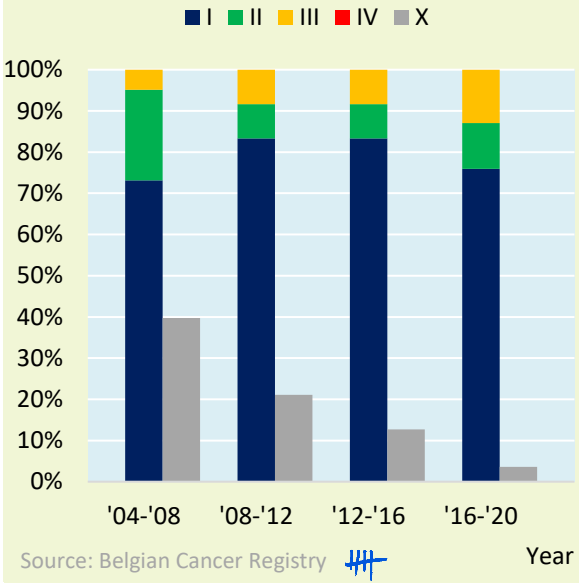
Figure 140: Thyroid carcinoma (XIb) by stage and sex, Belgium 2004-2020 *(only papillary and follicular carcinoma included)*



Source: Belgian Cancer Registry

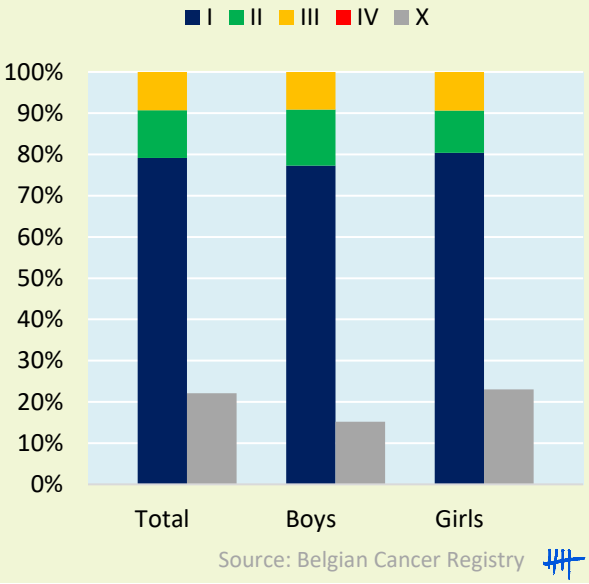
Information on stage is available in 78% of melanoma diagnoses. Over time, the availability increased from 60% in 2004-2009 to 96% in 2016-2020 (Figure 141).
Stage distribution between boys and girls is almost equal (Figure 142). The extent of melanoma is, after excision, classified by a pathological assessment of the primary tumour (pT-category). Staging of the primary tumour (pT) in melanoma relies on information on the tumour thickness and ulceration (60). Figure 143 shows an overview of the distribution of cancers based on this pT-category. As with stage, the distribution by pT-category was comparable between boys and girls. The majority of the cases with known pathological T-value is pT1 in both sexes (63% in boys and 67% in girls).

Figure 141: Melanoma (XId) by stage and incidence year, Belgium 2004-2020



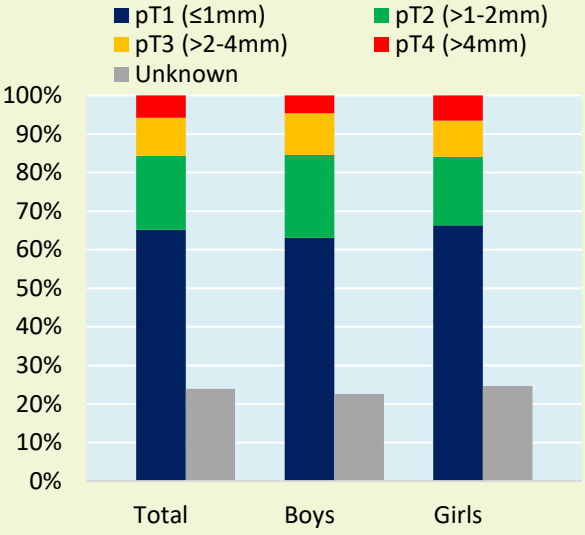
Source: Belgian Cancer Registry

Figure 142: Melanoma (XId) by stage and sex, Belgium 2004-2020



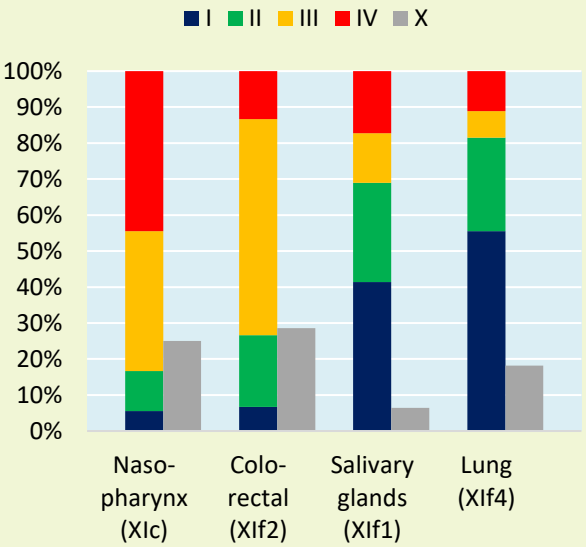
Source: Belgian Cancer Registry

Figure 143: Melanoma (XId) by pT-category and sex, Belgium 2004-2020



Source: Belgian Cancer Registry

Figure 144: Other malignant epithelial neoplasm by stage, Belgium 2004-2020



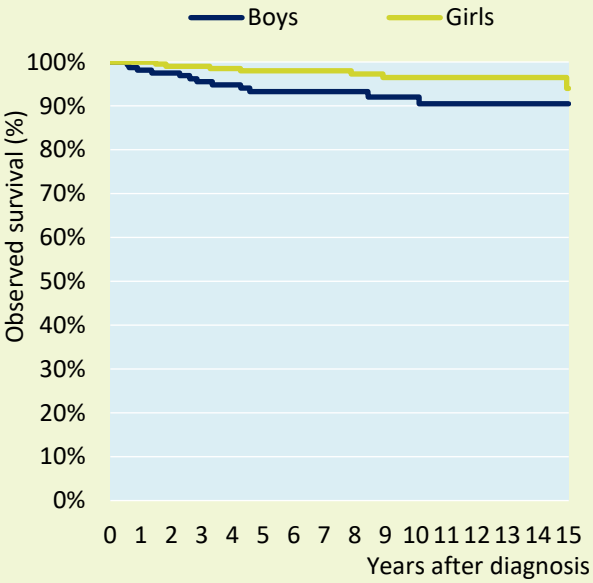
Source: Belgian Cancer Registry

Information for the other subtypes is based on low numbers (Figure 144). For nasopharyngeal (XIc) and colorectal carcinomas (XIf2), the majority of cases (83% and 73% respectively) was diagnosed in an advanced stage (III or IV). For salivary glands (XIf1) and lung (XIf4), most cases (respectively 69% and 81%) were diagnosed in a lower stage (I or II).

Survival

Malignant epithelial neoplasms and melanomas (XI) have a very good prognosis for boys and girls. For boys, the 15-year observed survival is 91% and 92% in children and adolescents respectively. For girls, this was 94% in both age groups (Figure 145 and Figure 146).

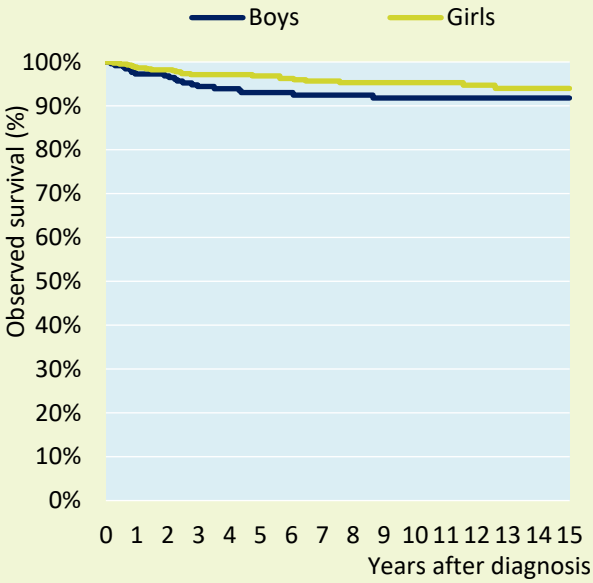
Figure 145: Other malignant epithelial neoplasm and melanoma (XI) in children: observed survival by sex, Belgium 2004-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
163	93 [88.0:96.3]	92 [86.1:95.6]	91 [83.6:94.7]
223	98 [95.0:99.2]	96 [92.4:98.4]	94 [85.9:97.6]

Source: Belgian Cancer Registry

Figure 146: Other malignant epithelial neoplasm and melanoma (XI) in adolescents: observed survival by sex, Belgium 2004-2020

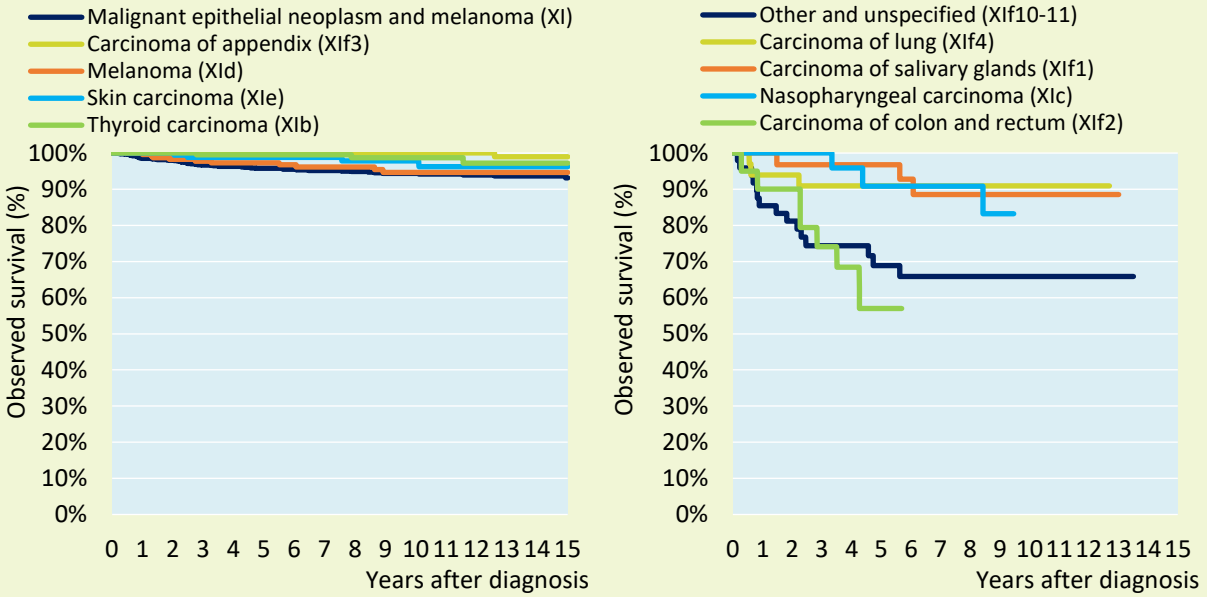


N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
257	93 [89.1:95.6]	92 [87.5:94.7]	92 [87.5:94.7]
463	97 [94.8:98.1]	95 [92.8:97.0]	94 [90.7:96.2]

Source: Belgian Cancer Registry

Only very small differences are seen in the 15-year observed survival for the most frequent tumour sites (appendix (XIf3; 99%), melanoma (XId; 95%), skin carcinoma (XIe; 96%) and thyroid carcinoma (XIb; 97%)). The observed survival of all malignant epithelial neoplasms (XI) combined is lower (93%), since some tumours at less frequent primary sites have a worse prognosis (Figure 147). However, it has to be noticed that for these localisations the incidence rates are smaller and the observed survival curves are only indicative. The data of the remaining epithelial neoplasms (XIa, XIf5-9) are too scarce to generate meaningful survival curves.

Figure 147: Other malignant epithelial neoplasm and melanoma (XI): observed survival by primary site, Belgium 2004-2020



N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
1,105	96 [94.4:96.8]	94 [92.7:95.7]	93 [90.8:94.8]
312	100 [100:100]	100 [100:100]	99 [94.4:99.8]
226	97 [94.2:98.7]	95 [90.3:97.1]	95 [90.3:97.1]
179	99 [95.8:99.7]	98 [93.7:99.3]	96 [90.0:98.6]
212	99 [97.1:99.9]	99 [95.2:99.6]	97 [91.4:99.1]

Source: Belgian Cancer Registry

N at risk	5 yr OS (%)	10 yr OS (%)	15 yr OS (%)
49	69 [54.1:80.6]	66 [50.7:78.3]	-
33	91 [76.4:96.9]	91 [76.4:96.9]	-
31	97 [83.8:99.4]	89 [71.0:96.1]	-
24	91 [71.7:97.5]	-	-
20	57 [35.1:76.5]	-	-

Source: Belgian Cancer Registry

XII OTHER AND UNSPECIFIED MALIGNANT NEOPLASMS

Incidence

Other and unspecified malignant neoplasms (ICCC3 category XII) are uncommon and form a very diverse group of tumours (Table 20). A total of 6 new diagnoses are registered in Belgium between 2011-2020, 4 in boys and 2 in girls. Most cases are gastrointestinal stromal tumours (XIIa1; N = 3).

Table 20: New diagnoses of other and unspecified malignant neoplasm, Belgium 2011-2020

Boys		Total	0-14y	15-19y
XII	Other and unspecified malignant neoplasm	**4**	1	3
XIIa1	Gastrointestinal stromal tumour (GIST)	2	1	1
XIIa2	Pancreatoblastoma	0	0	0
XIIa3	Pulmonary blastoma and pleuropulmonary blastoma	1	0	1
XIIa4	Other complex mixed and stromal neoplasm	0	0	0
XIIa5	Mesothelioma	0	0	0
XIIb	Other unspecified malignant tumour	1	0	1
Girls		Total	0-14y	15-19y
XII	Other and unspecified malignant neoplasm	**2**	0	2
XIIa1	Gastrointestinal stromal tumour (GIST)	1	0	1
XIIa2	Pancreatoblastoma	0	0	0
XIIa3	Pulmonary blastoma and pleuropulmonary blastoma	0	0	0
XIIa4	Other complex mixed and stromal neoplasm	0	0	0
XIIa5	Mesothelioma	0	0	0
XIIb	Other unspecified malignant tumour	1	0	1

Source: Belgian Cancer Registry

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APPENDIX

Appendix 1: Incidence (N, CR, ESR, WSR, CRi) by sex, children and adolescents (0-19y), Belgium 2011-2020

		Children and adolescents (0-19 years)					Boys (0-19 years)					Girls (0-19 years)				
Belgium: 2011-2020		**N**	**CR**	**ESR**	**WSR**	**CRi**	**N**	**CR**	**ESR**	**WSR**	**CRi**	**N**	**CR**	**ESR**	**WSR**	**CRi**
I	Leukaemia, myeloproliferative and myelodysplastic disease	1,121	44.2	45.2	46.2	0.088	632	48.7	49.7	50.7	0.097	489	39.5	40.5	41.6	0.079
Ia	Lymphoid leukaemia	799	31.5	32.4	33.5	0.063	466	35.9	36.8	37.8	0.072	333	26.9	27.9	29.0	0.054
Ib	Acute myeloid leukaemia	180	7.1	7.2	7.2	0.014	94	7.3	7.4	7.4	0.015	86	6.9	7.0	7.0	0.014
Ic	Chronic myeloproliferative disease	56	2.2	2.2	2.1	0.004	24	1.9	1.8	1.7	0.004	32	2.6	2.5	2.5	0.005
Id	Myelodysplastic syndrome and other myeloproliferative disease	72	2.8	2.9	2.9	0.006	42	3.2	3.3	3.3	0.006	30	2.4	2.4	2.4	0.005
Ie	Unspecified and other specified leukaemia	14	0.6	0.6	0.6	0.001	6	0.5	0.4	0.4	0.001	8	0.6	0.7	0.7	0.001
II	Lymphoma and reticuloendothelial neoplasm	869	34.3	33.8	32.6	0.069	521	40.2	39.7	38.6	0.081	348	28.1	27.6	26.4	0.056
IIa	Hodgkin lymphoma	464	18.3	17.8	16.8	0.037	247	19.1	18.6	17.6	0.038	217	17.5	17.0	15.9	0.035
IIb	Non-Hodgkin lymphoma	161	6.3	6.2	6.0	0.013	96	7.4	7.2	6.9	0.015	65	5.2	5.1	5.0	0.011
IIc	Burkitt lymphoma	134	5.3	5.3	5.3	0.011	111	8.6	8.5	8.6	0.017	23	1.9	1.8	1.8	0.004
IId	Miscellaneous lymphoreticular neoplasm	103	4.1	4.2	4.4	0.008	62	4.8	5.0	5.2	0.010	41	3.3	3.4	3.6	0.007
IIe	Unspecified lymphoma	7	0.3	0.3	0.2	0.001	5	0.4	0.4	0.3	0.001	2	0.2	0.2	0.1	0.000
III	CNS and miscellaneous intracranial and intraspinal neoplasm	1,235	48.7	48.8	48.8	0.097	683	52.7	52.8	52.8	0.105	552	44.5	44.6	44.6	0.089
IIIa	Ependymoma and choroid plexus tumour	109	4.3	4.4	4.5	0.009	61	4.7	4.8	4.9	0.009	48	3.9	4.0	4.1	0.008
IIIb	Astrocytoma	426	16.8	16.8	16.9	0.034	232	17.9	17.9	18.0	0.036	194	15.7	15.7	15.8	0.031
IIIc	Intracranial and intraspinal embryonal tumour	142	5.6	5.7	5.9	0.011	91	7.0	7.2	7.5	0.014	51	4.1	4.2	4.3	0.008
IIId	Other glioma	143	5.6	5.6	5.6	0.011	83	6.4	6.4	6.4	0.013	60	4.8	4.8	4.7	0.010
IIIe	Other specified intracranial and intraspinal neoplasm	297	11.7	11.6	11.3	0.023	156	12.0	11.9	11.5	0.024	141	11.4	11.2	11.0	0.023
IIIf	Unspecified intracranial and intraspinal neoplasm	118	4.7	4.7	4.7	0.009	60	4.6	4.6	4.6	0.009	58	4.7	4.7	4.7	0.009
IV	Neuroblastoma and other peripheral nervous cell tumour	229	9.0	9.7	10.4	0.018	120	9.3	10.0	10.6	0.019	109	8.8	9.4	10.1	0.018
IVa	Neuroblastoma and ganglioneuroblastoma	207	8.2	8.9	9.6	0.016	106	8.2	8.9	9.6	0.016	101	8.1	8.8	9.5	0.016
IVb	Other peripheral nervous cell tumour	22	0.9	0.8	0.8	0.002	14	1.1	1.1	1.0	0.002	8	0.6	0.6	0.6	0.001
V	Retinoblastoma	96	3.8	4.2	4.5	0.008	53	4.1	4.5	4.9	0.008	43	3.5	3.8	4.2	0.007
VI	Renal tumour	179	7.1	7.5	8.0	0.014	88	6.8	7.3	7.8	0.014	91	7.3	7.8	8.3	0.015
VIa	Nephroblastoma and other nonepithelial renal tumour	164	6.5	7.0	7.5	0.013	85	6.6	7.0	7.6	0.013	79	6.4	6.9	7.4	0.013
VIb	Renal carcinoma	15	0.6	0.6	0.5	0.001	3	0.2	0.2	0.2	0.000	12	1.0	0.9	0.9	0.002
VIc	Unspecified malignant renal tumour	0	0.0	0.0	0.0	0.000	0	0.0	0.0	0.0	0.000	0	0.0	0.0	0.0	0.000
VII	Hepatic tumour	50	2.0	2.1	2.2	0.004	25	1.9	2.1	2.2	0.004	25	2.0	2.1	2.2	0.004
VIIa	Hepatoblastoma	37	1.5	1.6	1.7	0.003	17	1.3	1.4	1.6	0.003	20	1.6	1.7	1.9	0.003
VIIb	Hepatic carcinoma	13	0.5	0.5	0.5	0.001	8	0.6	0.6	0.6	0.001	5	0.4	0.4	0.4	0.001
VIIc	Unspecified malignant hepatic tumour	0	0.0	0.0	0.0	0.000	0	0.0	0.0	0.0	0.000	0	0.0	0.0	0.0	0.000

Source: Belgian Cancer Registry

Appendix 1: Incidence (N, CR, ESR, WSR, CRi) by sex, children and adolescents (0-19y), Belgium 2011-2020

		Children and adolescents (0-19 years)					Boys (0-19 years)					Girls (0-19 years)				
Belgium: 2011-2020		**N**	**CR**	**ESR**	**WSR**	**CRi**	**N**	**CR**	**ESR**	**WSR**	**CRi**	**N**	**CR**	**ESR**	**WSR**	**CRi**
VIII	Malignant bone tumour	238	9.4	9.1	8.8	0.019	138	10.6	10.4	9.9	0.021	100	8.1	7.9	7.6	0.016
VIIIa	Osteosarcoma	124	4.9	4.7	4.5	0.010	75	5.8	5.6	5.3	0.012	49	4.0	3.8	3.7	0.008
VIIIb	Chondrosarcoma	9	0.4	0.3	0.3	0.001	5	0.4	0.4	0.4	0.001	4	0.3	0.3	0.3	0.001
VIIIc	Ewing tumour and related sarcoma of bone	90	3.5	3.5	3.4	0.007	54	4.2	4.1	3.9	0.008	36	2.9	2.9	2.8	0.006
VIIId	Other specified malignant bone tumour	13	0.5	0.5	0.5	0.001	3	0.2	0.2	0.2	0.000	10	0.8	0.8	0.8	0.002
VIIIe	Unspecified malignant bone tumour	2	0.1	0.1	0.1	0.000	1	0.1	0.1	0.1	0.000	1	0.1	0.1	0.1	0.000
IX	Soft tissue and other extraosseous sarcoma	289	11.4	11.5	11.5	0.023	157	12.1	12.1	12.1	0.024	132	10.7	10.8	10.8	0.021
IXa	Rhabdomyosarcoma	111	4.4	4.5	4.5	0.009	73	5.6	5.7	5.8	0.011	38	3.1	3.2	3.2	0.006
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	29	1.1	1.1	1.1	0.002	11	0.8	0.8	0.8	0.002	18	1.5	1.5	1.5	0.003
IXc	Kaposi sarcoma	3	0.1	0.1	0.1	0.000	2	0.2	0.1	0.1	0.000	1	0.1	0.1	0.1	0.000
IXd	Other specified soft tissue sarcoma	124	4.9	4.9	4.8	0.010	58	4.5	4.4	4.3	0.009	66	5.3	5.3	5.3	0.011
IXe	Unspecified soft tissue sarcoma	22	0.9	0.9	0.9	0.002	13	1.0	1.0	1.0	0.002	9	0.7	0.7	0.8	0.001
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	279	11.0	11.0	10.6	0.022	173	13.3	13.2	12.7	0.027	106	8.6	8.6	8.5	0.017
Xa	Intracranial and intraspinal germ cell tumour	51	2.0	2.0	2.0	0.004	32	2.5	2.4	2.3	0.005	19	1.5	1.6	1.6	0.003
Xb	Malignant extracranial and extragonadal germ cell tumour	39	1.5	1.6	1.7	0.003	15	1.2	1.2	1.2	0.002	24	1.9	2.1	2.2	0.004
Xc	Malignant gonadal germ cell tumour	178	7.0	6.9	6.6	0.014	124	9.6	9.4	9.0	0.019	54	4.4	4.2	4.0	0.009
Xd	Gonadal carcinoma	8	0.3	0.3	0.3	0.001	0	0.0	0.0	0.0	0.000	8	0.6	0.6	0.6	0.001
Xe	Other and unspecified malignant gonadal tumour	3	0.1	0.1	0.1	0.000	2	0.2	0.1	0.1	0.000	1	0.1	0.1	0.1	0.000
XI	Other malignant epithelial neoplasm and melanoma	686	27.1	26.3	24.7	0.054	268	20.7	20.1	19.0	0.042	418	33.7	32.8	30.7	0.068
XIa	Adrenocortical carcinoma	7	0.3	0.3	0.3	0.001	3	0.2	0.2	0.2	0.000	4	0.3	0.3	0.3	0.001
XIb	Thyroid carcinoma	135	5.3	5.2	4.8	0.011	27	2.1	2.0	1.9	0.004	108	8.7	8.5	7.9	0.018
XIc	Nasopharyngeal carcinoma	15	0.6	0.6	0.5	0.001	12	0.9	0.9	0.8	0.002	3	0.2	0.2	0.2	0.000
XId	Melanoma	115	4.5	4.4	4.1	0.009	42	3.2	3.2	3.0	0.007	73	5.9	5.7	5.4	0.012
XIe	Skin carcinoma	149	5.9	5.7	5.4	0.012	71	5.5	5.4	5.1	0.011	78	6.3	6.1	5.7	0.013
XIf	Other and unspecified carcinoma	265	10.4	10.1	9.5	0.021	113	8.7	8.5	7.9	0.018	152	12.3	11.9	11.1	0.025
XII	Other and unspecified malignant neoplasm	6	0.2	0.2	0.2	0.000	4	0.3	0.3	0.3	0.001	2	0.2	0.2	0.1	0.000
XIIa	Other specified malignant tumour	4	0.2	0.2	0.1	0.000	3	0.2	0.2	0.2	0.000	1	0.1	0.1	0.1	0.000
XIIb	Other unspecified malignant tumour	2	0.1	0.1	0.1	0.000	1	0.1	0.1	0.1	0.000	1	0.1	0.1	0.1	0.000
I-XII	**All tumours**	**5,277**	**208.1**	**209.4**	**208.7**	**0.416**	**2,862**	**220.7**	**222.2**	**221.6**	**0.441**	**2,415**	**194.9**	**196.0**	**195.2**	**0.389**

Source: Belgian Cancer Registry

CR: Crude incidence rate (N/1,000,000 person years)
ESR and WSR: Age-standardised incidence using the European or World standard population (N/1,000,000 person years)
CRi: Cumulative Risk (%)
(See 'Methodology' subsection 'Classification and calculation methods' for more detailed explanation on these measures)

Appendix 2: Incidence (N, CR, ESR, WSR, CRi) by sex, children (0-14y), Belgium 2011-2020

		Children (0-14 years)					Boys (0-14 years)					Girls (0-14 years)				
Belgium: 2011-2020		**N**	**CR**	**ESR**	**WSR**	**CRi**	**N**	**CR**	**ESR**	**WSR**	**CRi**	**N**	**CR**	**ESR**	**WSR**	**CRi**
I	Leukaemia, myeloproliferative and myelodysplastic disease	924	48.5	49.7	50.6	0.073	507	52.1	53.2	54.1	0.078	417	44.8	45.9	46.9	0.067
Ia	Lymphoid leukaemia	701	36.8	37.8	38.8	0.055	394	40.5	41.4	42.3	0.061	307	33.0	34.0	35.0	0.049
Ib	Acute myeloid leukaemia	125	6.6	6.7	6.7	0.010	62	6.4	6.6	6.7	0.010	63	6.8	6.8	6.8	0.010
Ic	Chronic myeloproliferative disease	28	1.5	1.4	1.4	0.002	11	1.1	1.1	1.0	0.002	17	1.8	1.8	1.8	0.003
Id	Myelodysplastic syndrome and other myeloproliferative disease	58	3.0	3.1	3.1	0.005	36	3.7	3.7	3.7	0.006	22	2.4	2.4	2.4	0.004
Ie	Unspecified and other specified leukaemia	12	0.6	0.6	0.7	0.001	4	0.4	0.4	0.4	0.001	8	0.9	0.9	0.9	0.001
II	Lymphoma and reticuloendothelial neoplasm	414	21.7	21.6	21.2	0.033	276	28.3	28.2	27.8	0.043	138	14.8	14.7	14.3	0.022
IIa	Hodgkin lymphoma	151	7.9	7.7	7.2	0.012	90	9.2	9.0	8.5	0.014	61	6.6	6.3	5.9	0.010
IIb	Non-Hodgkin lymphoma	67	3.5	3.4	3.4	0.005	42	4.3	4.2	4.1	0.006	25	2.7	2.7	2.7	0.004
IIc	Burkitt lymphoma	103	5.4	5.4	5.4	0.008	87	8.9	8.9	8.9	0.013	16	1.7	1.7	1.7	0.003
IId	Miscellaneous lymphoreticular neoplasm	92	4.8	5.0	5.2	0.007	57	5.9	6.1	6.3	0.009	35	3.8	3.9	4.0	0.006
IIe	Unspecified lymphoma	1	0.1	0.1	0.0	0.000	0	0.0	0.0	0.0	0.000	1	0.1	0.1	0.1	0.000
III	CNS and miscellaneous intracranial and intraspinal neoplasm	922	48.4	48.5	48.6	0.073	516	53.0	53.1	53.2	0.079	406	43.6	43.7	43.9	0.065
IIIa	Ependymoma and choroid plexus tumour	90	4.7	4.9	5.0	0.007	51	5.2	5.3	5.4	0.008	39	4.2	4.4	4.5	0.006
IIIb	Astrocytoma	329	17.3	17.3	17.4	0.026	174	17.9	17.9	18.0	0.027	155	16.7	16.7	16.7	0.025
IIIc	Intracranial and intraspinal embryonal tumour	130	6.8	7.0	7.1	0.010	86	8.8	9.0	9.2	0.013	44	4.7	4.8	4.9	0.007
IIId	Other glioma	119	6.2	6.1	6.1	0.009	72	7.4	7.3	7.3	0.011	47	5.1	4.9	4.9	0.008
IIIe	Other specified intracranial and intraspinal neoplasm	164	8.6	8.6	8.4	0.013	92	9.4	9.4	9.1	0.014	72	7.7	7.7	7.7	0.012
IIIf	Unspecified intracranial and intraspinal neoplasm	90	4.7	4.7	4.7	0.007	41	4.2	4.2	4.2	0.006	49	5.3	5.3	5.2	0.008
IV	Neuroblastoma and other peripheral nervous cell tumour	218	11.4	12.2	12.9	0.017	113	11.6	12.4	13.1	0.017	105	11.3	12.0	12.6	0.017
IVa	Neuroblastoma and ganglioneuroblastoma	206	10.8	11.6	12.3	0.016	106	10.9	11.7	12.4	0.016	100	10.7	11.5	12.2	0.016
IVb	Other peripheral nervous cell tumour	12	0.6	0.6	0.6	0.001	7	0.7	0.7	0.7	0.001	5	0.5	0.5	0.5	0.001
V	Retinoblastoma	96	5.0	5.5	5.9	0.008	53	5.4	6.0	6.3	0.008	43	4.6	5.0	5.4	0.007
VI	Renal tumour	169	8.9	9.4	9.9	0.013	86	8.8	9.4	9.9	0.013	83	8.9	9.5	10.0	0.013
VIa	Nephroblastoma and other nonepithelial renal tumour	163	8.6	9.1	9.6	0.013	85	8.7	9.3	9.8	0.013	78	8.4	9.0	9.5	0.013
VIb	Renal carcinoma	6	0.3	0.3	0.3	0.000	1	0.1	0.1	0.1	0.000	5	0.5	0.5	0.5	0.001
VIc	Unspecified malignant renal tumour	0	0.0	0.0	0.0	0.000	0	0.0	0.0	0.0	0.000	0	0.0	0.0	0.0	0.000
VII	Hepatic tumour	46	2.4	2.6	2.7	0.004	22	2.3	2.4	2.6	0.003	24	2.6	2.7	2.8	0.004
VIIa	Hepatoblastoma	37	1.9	2.1	2.2	0.003	17	1.7	1.9	2.0	0.003	20	2.1	2.3	2.4	0.003
VIIb	Hepatic carcinoma	9	0.5	0.5	0.5	0.001	5	0.5	0.5	0.5	0.001	4	0.4	0.4	0.4	0.001
VIIc	Unspecified malignant hepatic tumour	0	0.0	0.0	0.0	0.000	0	0.0	0.0	0.0	0.000	0	0.0	0.0	0.0	0.000

Source: Belgian Cancer Registry

Appendix 2: Incidence (N, CR, ESR, WSR, CRi) by sex, children (0-14y), Belgium 2011-2020

		Children (0-14 years)					Boys (0-14 years)					Girls (0-14 years)				
Belgium: 2011-2020		**N**	**CR**	**ESR**	**WSR**	**CRi**	**N**	**CR**	**ESR**	**WSR**	**CRi**	**N**	**CR**	**ESR**	**WSR**	**CRi**
VIII	Malignant bone tumour	135	7.1	6.9	6.6	0.011	67	6.9	6.6	6.4	0.010	68	7.3	7.1	6.8	0.011
VIIIa	Osteosarcoma	62	3.3	3.1	3.0	0.005	32	3.3	3.2	3.0	0.005	30	3.2	3.1	2.9	0.005
VIIIb	Chondrosarcoma	3	0.2	0.1	0.1	0.000	1	0.1	0.1	0.1	0.000	2	0.2	0.2	0.2	0.000
VIIIc	Ewing tumour and related sarcoma of bone	61	3.2	3.1	3.0	0.005	33	3.4	3.3	3.2	0.005	28	3.0	2.9	2.8	0.005
VIIId	Other specified malignant bone tumour	8	0.4	0.4	0.4	0.001	1	0.1	0.1	0.1	0.000	7	0.8	0.7	0.7	0.001
VIIIe	Unspecified malignant bone tumour	1	0.1	0.1	0.1	0.000	0	0.0	0.0	0.0	0.000	1	0.1	0.1	0.1	0.000
IX	Soft tissue and other extraosseous sarcoma	190	10.0	10.1	10.2	0.015	106	10.9	11.0	11.0	0.016	84	9.0	9.3	9.4	0.014
IXa	Rhabdomyosarcoma	85	4.5	4.6	4.7	0.007	57	5.9	5.9	6.1	0.009	28	3.0	3.1	3.2	0.005
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	18	0.9	1.0	1.0	0.001	7	0.7	0.7	0.7	0.001	11	1.2	1.2	1.2	0.002
IXc	Kaposi sarcoma	0	0.0	0.0	0.0	0.000	0	0.0	0.0	0.0	0.000	0	0.0	0.0	0.0	0.000
IXd	Other specified soft tissue sarcoma	75	3.9	4.0	3.9	0.006	36	3.7	3.7	3.6	0.006	39	4.2	4.3	4.3	0.006
IXe	Unspecified soft tissue sarcoma	12	0.6	0.7	0.7	0.001	6	0.6	0.6	0.7	0.001	6	0.6	0.7	0.7	0.001
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	119	6.2	6.4	6.4	0.009	52	5.3	5.5	5.5	0.008	67	7.2	7.3	7.3	0.011
Xa	Intracranial and intraspinal germ cell tumour	40	2.1	2.1	2.0	0.003	25	2.6	2.5	2.4	0.004	15	1.6	1.6	1.7	0.002
Xb	Malignant extracranial and extragonadal germ cell tumour	30	1.6	1.7	1.8	0.002	8	0.8	0.9	1.0	0.001	22	2.4	2.6	2.7	0.004
Xc	Malignant gonadal germ cell tumour	47	2.5	2.5	2.4	0.004	18	1.8	2.0	2.1	0.003	29	3.1	3.0	2.8	0.005
Xd	Gonadal carcinoma	1	0.1	0.1	0.0	0.000	0	0.0	0.0	0.0	0.000	1	0.1	0.1	0.1	0.000
Xe	Other and unspecified malignant gonadal tumour	1	0.1	0.0	0.1	0.000	1	0.1	0.1	0.1	0.000	0	0.0	0.0	0.0	0.000
XI	Other malignant epithelial neoplasm and melanoma	248	13.0	12.6	11.8	0.020	113	11.6	11.3	10.6	0.018	135	14.5	14.0	13.1	0.022
XIa	Adrenocortical carcinoma	4	0.2	0.2	0.2	0.000	1	0.1	0.1	0.1	0.000	3	0.3	0.3	0.3	0.000
XIb	Thyroid carcinoma	40	2.1	2.0	1.9	0.003	8	0.8	0.8	0.7	0.001	32	3.4	3.3	3.1	0.005
XIc	Nasopharyngeal carcinoma	7	0.4	0.4	0.3	0.001	7	0.7	0.7	0.6	0.001	0	0.0	0.0	0.0	0.000
XId	Melanoma	26	1.4	1.3	1.3	0.002	8	0.8	0.8	0.8	0.001	18	1.9	1.9	1.8	0.003
XIe	Skin carcinoma	64	3.4	3.3	3.1	0.005	40	4.1	4.0	3.8	0.006	24	2.6	2.5	2.3	0.004
XIf	Other and unspecified carcinoma	107	5.6	5.4	5.0	0.009	49	5.0	4.9	4.5	0.008	58	6.2	6.0	5.6	0.009
XII	Other and unspecified malignant neoplasm	1	0.1	0.1	0.0	0.000	1	0.1	0.1	0.1	0.000	0	0.0	0.0	0.0	0.000
XIIa	Other specified malignant tumour	1	0.1	0.1	0.0	0.000	1	0.1	0.1	0.1	0.000	0	0.0	0.0	0.0	0.000
XIIb	Other unspecified malignant tumour	0	0.0	0.0	0.0	0.000	0	0.0	0.0	0.0	0.000	0	0.0	0.0	0.0	0.000
I-XII	**All tumours**	**3,482**	**182.9**	**185.6**	**186.8**	**0.274**	**1,912**	**196.3**	**199.2**	**200.5**	**0.295**	**1,570**	**168.7**	**171.3**	**172.5**	**0.253**

Source: Belgian Cancer Registry

CR: Crude incidence rate (N/1,000,000 person years)
ESR and WSR: Age-standardised incidence using the European or World standard population (N/1,000,000 person years)
CRi: Cumulative Risk (%)
(See 'Methodology' subsection 'Classification and calculation methods' for more detailed explanation on these measures)

Appendix 3: Incidence (N, CR, ESR, WSR, CRi) by sex, adolescents (15-19y), Belgium 2011-2020

		Adolescents (15-19 years)					Boys (15-19 years)					Girls (15-19 years)				
Belgium: 2011-2020		**N**	**CR**	**ESR**	**WSR**	**CRi**	**N**	**CR**	**ESR**	**WSR**	**CRi**	**N**	**CR**	**ESR**	**WSR**	**CRi**
I	Leukaemia, myeloproliferative and myelodysplastic disease	197	31.2	31.2	31.2	0.016	125	38.7	38.7	38.7	0.019	72	23.3	23.3	23.3	0.012
Ia	Lymphoid leukaemia	98	15.5	15.5	15.5	0.008	72	22.3	22.3	22.3	0.011	26	8.4	8.4	8.4	0.004
Ib	Acute myeloid leukaemia	55	8.7	8.7	8.7	0.004	32	9.9	9.9	9.9	0.005	23	7.4	7.4	7.4	0.004
Ic	Chronic myeloproliferative disease	28	4.4	4.4	4.4	0.002	13	4.0	4.0	4.0	0.002	15	4.9	4.9	4.9	0.002
Id	Myelodysplastic syndrome and other myeloproliferative disease	14	2.2	2.2	2.2	0.001	6	1.9	1.9	1.9	0.001	8	2.6	2.6	2.6	0.001
Ie	Unspecified and other specified leukaemia	2	0.3	0.3	0.3	0.000	2	0.6	0.6	0.6	0.000	0	0.0	0.0	0.0	0.000
II	Lymphoma and reticuloendothelial neoplasm	455	72.0	72.0	72.0	0.036	245	75.9	75.9	75.9	0.038	210	68.0	68.0	68.0	0.034
IIa	Hodgkin lymphoma	313	49.6	49.6	49.6	0.025	157	48.7	48.7	48.7	0.024	156	50.5	50.5	50.5	0.025
IIb	Non-Hodgkin lymphoma	94	14.9	14.9	14.9	0.007	54	16.7	16.7	16.7	0.008	40	12.9	12.9	12.9	0.006
IIc	Burkitt lymphoma	31	4.9	4.9	4.9	0.002	24	7.4	7.4	7.4	0.004	7	2.3	2.3	2.3	0.001
IId	Miscellaneous lymphoreticular neoplasm	11	1.7	1.7	1.7	0.001	5	1.5	1.5	1.5	0.001	6	1.9	1.9	1.9	0.001
IIe	Unspecified lymphoma	6	0.9	0.9	0.9	0.000	5	1.5	1.5	1.5	0.001	1	0.3	0.3	0.3	0.000
III	CNS and miscellaneous intracranial and intraspinal neoplasm	313	49.6	49.6	49.6	0.025	167	51.8	51.8	51.8	0.026	146	47.2	47.2	47.2	0.024
IIIa	Ependymoma and choroid plexus tumour	19	3.0	3.0	3.0	0.002	10	3.1	3.1	3.1	0.002	9	2.9	2.9	2.9	0.001
IIIb	Astrocytoma	97	15.4	15.4	15.4	0.008	58	18.0	18.0	18.0	0.009	39	12.6	12.6	12.6	0.006
IIIc	Intracranial and intraspinal embryonal tumour	12	1.9	1.9	1.9	0.001	5	1.5	1.5	1.5	0.001	7	2.3	2.3	2.3	0.001
IIId	Other glioma	24	3.8	3.8	3.8	0.002	11	3.4	3.4	3.4	0.002	13	4.2	4.2	4.2	0.002
IIIe	Other specified intracranial and intraspinal neoplasm	133	21.1	21.1	21.1	0.011	64	19.8	19.8	19.8	0.010	69	22.3	22.3	22.3	0.011
IIIf	Unspecified intracranial and intraspinal neoplasm	28	4.4	4.4	4.4	0.002	19	5.9	5.9	5.9	0.003	9	2.9	2.9	2.9	0.001
IV	Neuroblastoma and other peripheral nervous cell tumour	11	1.7	1.7	1.7	0.001	7	2.2	2.2	2.2	0.001	4	1.3	1.3	1.3	0.001
IVa	Neuroblastoma and ganglioneuroblastoma	1	0.2	0.2	0.2	0.000	0	0.0	0.0	0.0	0.000	1	0.3	0.3	0.3	0.000
IVb	Other peripheral nervous cell tumour	10	1.6	1.6	1.6	0.001	7	2.2	2.2	2.2	0.001	3	1.0	1.0	1.0	0.000
V	Retinoblastoma	0	0.0	0.0	0.0	0.000	0	0.0	0.0	0.0	0.000	0	0.0	0.0	0.0	0.000
VI	Renal tumour	10	1.6	1.6	1.6	0.001	2	0.6	0.6	0.6	0.000	8	2.6	2.6	2.6	0.001
VIa	Nephroblastoma and other nonepithelial renal tumour	1	0.2	0.2	0.2	0.000	0	0.0	0.0	0.0	0.000	1	0.3	0.3	0.3	0.000
VIb	Renal carcinoma	9	1.4	1.4	1.4	0.001	2	0.6	0.6	0.6	0.000	7	2.3	2.3	2.3	0.001
VIc	Unspecified malignant renal tumour	0	0.0	0.0	0.0	0.000	0	0.0	0.0	0.0	0.000	0	0.0	0.0	0.0	0.000
VII	Hepatic tumour	4	0.6	0.6	0.6	0.000	3	0.9	0.9	0.9	0.000	1	0.3	0.3	0.3	0.000
VIIa	Hepatoblastoma	0	0.0	0.0	0.0	0.000	0	0.0	0.0	0.0	0.000	0	0.0	0.0	0.0	0.000
VIIb	Hepatic carcinoma	4	0.6	0.6	0.6	0.000	3	0.9	0.9	0.9	0.000	1	0.3	0.3	0.3	0.000
VIIc	Unspecified malignant hepatic tumour	0	0.0	0.0	0.0	0.000	0	0.0	0.0	0.0	0.000	0	0.0	0.0	0.0	0.000

Source: Belgian Cancer Registry

Appendix 3: Incidence (N, CR, ESR, WSR, CRi) by sex, adolescents (15-19y), Belgium 2011-2020

		Children and adolescents (0-19 years)					Boys (0-19 years)					Girls (0-19 years)				
Belgium: 2011-2020		**N**	**CR**	**ESR**	**WSR**	**CRi**	**N**	**CR**	**ESR**	**WSR**	**CRi**	**N**	**CR**	**ESR**	**WSR**	**CRi**
VIII	Malignant bone tumour	103	16.3	16.3	16.3	0.008	71	22.0	22.0	22.0	0.011	32	10.4	10.4	10.4	0.005
VIIIa	Osteosarcoma	62	9.8	9.8	9.8	0.005	43	13.3	13.3	13.3	0.007	19	6.1	6.1	6.1	0.003
VIIIb	Chondrosarcoma	6	0.9	0.9	0.9	0.000	4	1.2	1.2	1.2	0.001	2	0.6	0.6	0.6	0.000
VIIIc	Ewing tumour and related sarcoma of bone	29	4.6	4.6	4.6	0.002	21	6.5	6.5	6.5	0.003	8	2.6	2.6	2.6	0.001
VIIId	Other specified malignant bone tumour	5	0.8	0.8	0.8	0.000	2	0.6	0.6	0.6	0.000	3	1.0	1.0	1.0	0.000
VIIIe	Unspecified malignant bone tumour	1	0.2	0.2	0.2	0.000	1	0.3	0.3	0.3	0.000	0	0.0	0.0	0.0	0.000
IX	Soft tissue and other extraosseous sarcoma	99	15.7	15.7	15.7	0.008	51	15.8	15.8	15.8	0.008	48	15.5	15.5	15.5	0.008
IXa	Rhabdomyosarcoma	26	4.1	4.1	4.1	0.002	16	5.0	5.0	5.0	0.002	10	3.2	3.2	3.2	0.002
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	11	1.7	1.7	1.7	0.001	4	1.2	1.2	1.2	0.001	7	2.3	2.3	2.3	0.001
IXc	Kaposi sarcoma	3	0.5	0.5	0.5	0.000	2	0.6	0.6	0.6	0.000	1	0.3	0.3	0.3	0.000
IXd	Other specified soft tissue sarcoma	49	7.8	7.8	7.8	0.004	22	6.8	6.8	6.8	0.003	27	8.7	8.7	8.7	0.004
IXe	Unspecified soft tissue sarcoma	10	1.6	1.6	1.6	0.001	7	2.2	2.2	2.2	0.001	3	1.0	1.0	1.0	0.000
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	160	25.3	25.3	25.3	0.013	121	37.5	37.5	37.5	0.019	39	12.6	12.6	12.6	0.006
Xa	Intracranial and intraspinal germ cell tumour	11	1.7	1.7	1.7	0.001	7	2.2	2.2	2.2	0.001	4	1.3	1.3	1.3	0.001
Xb	Malignant extracranial and extragonadal germ cell tumour	9	1.4	1.4	1.4	0.001	7	2.2	2.2	2.2	0.001	2	0.6	0.6	0.6	0.000
Xc	Malignant gonadal germ cell tumour	131	20.7	20.7	20.7	0.010	106	32.9	32.9	32.9	0.016	25	8.1	8.1	8.1	0.004
Xd	Gonadal carcinoma	7	1.1	1.1	1.1	0.001	0	0.0	0.0	0.0	0.000	7	2.3	2.3	2.3	0.001
Xe	Other and unspecified malignant gonadal tumour	2	0.3	0.3	0.3	0.000	1	0.3	0.3	0.3	0.000	1	0.3	0.3	0.3	0.000
XI	Other malignant epithelial neoplasm and melanoma	438	69.3	69.3	69.3	0.035	155	48.0	48.0	48.0	0.024	283	91.6	91.6	91.6	0.046
XIa	Adrenocortical carcinoma	3	0.5	0.5	0.5	0.000	2	0.6	0.6	0.6	0.000	1	0.3	0.3	0.3	0.000
XIb	Thyroid carcinoma	95	15.0	15.0	15.0	0.008	19	5.9	5.9	5.9	0.003	76	24.6	24.6	24.6	0.012
XIc	Nasopharyngeal carcinoma	8	1.3	1.3	1.3	0.001	5	1.5	1.5	1.5	0.001	3	1.0	1.0	1.0	0.000
XId	Melanoma	89	14.1	14.1	14.1	0.007	34	10.5	10.5	10.5	0.005	55	17.8	17.8	17.8	0.009
XIe	Skin carcinoma	85	13.5	13.5	13.5	0.007	31	9.6	9.6	9.6	0.005	54	17.5	17.5	17.5	0.009
XIf	Other and unspecified carcinoma	158	25.0	25.0	25.0	0.013	64	19.8	19.8	19.8	0.010	94	30.4	30.4	30.4	0.015
XII	Other and unspecified malignant neoplasm	5	0.8	0.8	0.8	0.000	3	0.9	0.9	0.9	0.000	2	0.6	0.6	0.6	0.000
XIIa	Other specified malignant tumour	3	0.5	0.5	0.5	0.000	2	0.6	0.6	0.6	0.000	1	0.3	0.3	0.3	0.000
XIIb	Other unspecified malignant tumour	2	0.3	0.3	0.3	0.000	1	0.3	0.3	0.3	0.000	1	0.3	0.3	0.3	0.000
I-XII	**All tumours**	**1,795**	**284.2**	**284.2**	**284.2**	**0.142**	**950**	**294.4**	**294.4**	**294.4**	**0.147**	**845**	**273.4**	**273.4**	**273.4**	**0.137**

Source: Belgian Cancer Registry

CR: Crude incidence rate (N/1,000,000 person years)
ESR and WSR: Age-standardised incidence using the European or World standard population (N/1,000,000 person years)
CRi: Cumulative Risk (%)
(See 'Methodology' subsection 'Classification and calculation methods' for more detailed explanation on these measures)

Appendix 4: Incidence (WSR) for both sexes, children and adolescents (0-19y), Belgium 2004-2008, 2008-2012, 2012-2016, 2016-2020

Belgium: 2004-2020		Children and adolescents (0-19 years)				Boys (0-19 years)				Girls (0-19 years)			
		WSR				WSR				WSR			
		'04-'08	'08-'12	'12-'16	'16-'20	'04-'08	'08-'12	'12-'16	'16-'20	'04-'08	'08-'12	'12-'16	'16-'20
I	Leukaemia, myeloproliferative and myelodysplastic disease	45.4	45.6	50.5	45.4	51.2	51.5	55.4	50.2	39.4	39.5	45.4	40.3
Ia	Lymphoid leukaemia	34.7	32.4	35.8	33.4	39.6	38.0	41.5	37.4	29.6	26.5	29.9	29.3
Ib	Acute myeloid leukaemia	7.0	6.9	7.9	7.1	6.9	6.3	7.8	7.7	7.2	7.6	8.0	6.4
Ic	Chronic myeloproliferative disease	1.5	2.4	2.7	1.8	1.9	2.3	2.2	1.3	1.2	2.4	3.2	2.4
Id	Myelodysplastic syndrome and other myeloproliferative disease	2.0	3.6	3.2	2.6	2.6	4.6	3.3	3.2	1.4	2.6	3.1	1.9
Ie	Unspecified and other specified leukaemia	0.1	0.3	0.9	0.5	0.3	0.2	0.6	0.6	0.0	0.4	1.3	0.3
II	Lymphoma and reticuloendothelial neoplasm	34.7	33.2	34.2	31.1	40.8	38.4	41.1	36.2	28.3	27.9	27.0	25.7
IIa	Hodgkin lymphoma	15.3	14.1	16.0	17.5	16.3	14.8	16.8	18.5	14.2	13.3	15.1	16.5
IIb	Non-Hodgkin lymphoma	6.6	5.8	6.1	6.0	7.4	7.7	7.2	6.9	5.8	3.8	4.9	5.1
IIc	Burkitt lymphoma	5.2	5.2	5.3	5.1	7.6	7.8	9.0	7.8	2.7	2.5	1.5	2.3
IId	Miscellaneous lymphoreticular neoplasm	7.1	7.9	6.6	2.3	8.8	7.8	7.7	2.8	5.3	8.0	5.4	1.7
IIe	Unspecified lymphoma	0.5	0.3	0.2	0.2	0.7	0.3	0.3	0.3	0.3	0.3	0.1	0.1
III	CNS and miscellaneous intracranial and intraspinal neoplasm	40.9	47.0	49.0	49.2	41.8	50.5	53.3	51.3	39.9	43.3	44.6	47.1
IIIa	Ependymoma and choroid plexus tumour	5.4	4.5	4.4	4.7	5.2	4.2	4.5	4.8	5.6	4.9	4.3	4.7
IIIb	Astrocytoma	17.6	18.1	17.4	16.4	16.1	19.0	20.3	15.5	19.3	17.1	14.3	17.4
IIIc	Intracranial and intraspinal embryonal tumour	5.7	7.1	6.6	4.6	6.5	7.5	8.0	6.1	4.9	6.7	5.2	3.0
IIId	Other glioma	3.7	4.6	5.4	6.3	3.5	5.6	6.0	7.5	3.8	3.6	4.8	5.0
IIIe	Other specified intracranial and intraspinal neoplasm	7.2	9.0	11.1	11.9	9.1	10.5	10.6	12.1	5.2	7.5	11.6	11.7
IIIf	Unspecified intracranial and intraspinal neoplasm	1.3	3.7	4.1	5.3	1.5	3.8	3.9	5.3	1.1	3.6	4.4	5.3
IV	Neuroblastoma and other peripheral nervous cell tumour	11.1	11.0	9.2	10.5	12.0	13.2	9.3	10.2	10.2	8.6	9.1	10.7
IVa	Neuroblastoma and ganglioneuroblastoma	10.2	10.5	8.4	9.6	10.8	12.5	8.2	9.4	9.6	8.3	8.5	9.9
IVb	Other peripheral nervous cell tumour	0.9	0.5	0.8	0.8	1.3	0.7	1.0	0.8	0.6	0.3	0.6	0.9
V	Retinoblastoma	4.8	5.1	4.9	4.7	5.4	5.4	6.0	5.3	4.2	4.9	3.8	4.2
VI	Renal tumour	8.4	7.1	7.3	8.5	8.3	6.8	7.2	8.2	8.5	7.4	7.3	8.8
VIa	Nephroblastoma and other nonepithelial renal tumour	7.8	6.6	6.9	7.9	7.7	6.3	7.2	8.0	8.0	6.8	6.6	7.8
VIb	Renal carcinoma	0.4	0.5	0.4	0.6	0.4	0.4	0.0	0.1	0.3	0.6	0.7	1.0
VIc	Unspecified malignant renal tumour	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0
VII	Hepatic tumour	0.9	1.6	1.8	2.6	0.7	1.9	1.9	2.6	1.1	1.3	1.7	2.6
VIIa	Hepatoblastoma	0.7	1.4	1.5	2.1	0.6	1.5	1.5	2.1	0.8	1.3	1.5	2.0
VIIb	Hepatic carcinoma	0.2	0.2	0.3	0.6	0.1	0.4	0.5	0.5	0.2	0.0	0.2	0.6
VIIc	Unspecified malignant hepatic tumour	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Belgian Cancer Registry

Appendix 4: Incidence (WSR) for both sexes, children and adolescents (0-19y), Belgium 2004-2008, 2008-2012, 2012-2016, 2016-2020

Belgium: 2004-2020		Children and adolescents (0-19 years)				Boys (0-19 years)				Girls (0-19 years)			
		WSR				WSR				WSR			
		04-'08	08-'12	12-'16	16-'20	04-'08	08-'12	12-'16	16-'20	04-'08	08-'12	12-'16	16-'20
VIII	Malignant bone tumour	11.2	9.4	8.7	8.1	12.2	10.3	9.7	9.4	10.1	8.3	7.7	6.8
VIIIa	Osteosarcoma	5.1	5.0	4.2	4.1	5.7	6.3	4.7	5.1	4.6	3.6	3.6	3.1
VIIIb	Chondrosarcoma	0.6	0.3	0.5	0.1	0.6	0.4	0.6	0.1	0.6	0.1	0.5	0.1
VIIIc	Ewing tumour and related sarcoma of bone	5.1	3.2	3.6	3.3	5.7	3.0	4.1	4.0	4.5	3.5	3.0	2.6
VIIId	Other specified malignant bone tumour	0.2	0.5	0.4	0.5	0.1	0.3	0.1	0.1	0.3	0.8	0.6	0.8
VIIIe	Unspecified malignant bone tumour	0.2	0.3	0.1	0.1	0.2	0.3	0.1	0.0	0.1	0.3	0.0	0.2
IX	Soft tissue and other extraosseous sarcoma	12.0	12.1	11.7	11.4	13.0	12.5	12.9	12.6	11.0	11.8	10.5	10.2
IXa	Rhabdomyosarcoma	4.9	5.0	4.7	4.2	6.0	5.9	6.7	5.5	3.7	4.1	2.6	2.7
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	1.0	1.3	1.0	1.0	1.2	0.8	0.6	0.9	0.8	1.7	1.5	1.1
IXc	Kaposi sarcoma	0.0	0.2	0.1	0.0	0.0	0.3	0.1	0.0	0.0	0.1	0.1	0.0
IXd	Other specified soft tissue sarcoma	5.7	5.3	4.9	5.1	5.0	5.1	4.5	4.8	6.3	5.6	5.2	5.4
IXe	Unspecified soft tissue sarcoma	0.5	0.3	1.0	1.2	0.8	0.4	1.0	1.4	0.1	0.2	1.0	1.0
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	10.8	10.4	11.9	10.0	13.5	12.4	14.0	12.9	7.9	8.3	9.7	7.1
Xa	Intracranial and intraspinal germ cell tumour	1.7	1.6	2.4	1.8	2.9	1.9	2.8	2.7	0.5	1.4	2.0	0.9
Xb	Malignant extracranial and extragonadal germ cell tumour	2.2	1.6	2.0	2.1	0.9	1.0	1.0	1.6	3.5	2.1	3.0	2.6
Xc	Malignant gonadal germ cell tumour	6.5	6.8	7.1	5.7	9.7	9.2	10.1	8.6	3.2	4.4	4.0	2.8
Xd	Gonadal carcinoma	0.3	0.1	0.3	0.3	0.0	0.0	0.0	0.0	0.6	0.3	0.6	0.6
Xe	Other and unspecified malignant gonadal tumour	0.1	0.2	0.1	0.1	0.0	0.3	0.2	0.0	0.1	0.2	0.1	0.1
XI	Other malignant epithelial neoplasm and melanoma	22.1	25.5	26.3	23.1	17.0	18.0	20.0	18.8	27.4	33.2	32.9	27.6
XIa	Adrenocortical carcinoma	0.2	0.2	0.3	0.3	0.1	0.0	0.3	0.2	0.3	0.5	0.3	0.3
XIb	Thyroid carcinoma	3.4	4.9	4.8	4.6	2.1	2.4	1.7	2.0	4.7	7.5	8.0	7.3
XIc	Nasopharyngeal carcinoma	0.5	0.6	0.7	0.5	0.7	0.7	0.9	0.8	0.3	0.5	0.4	0.1
XId	Melanoma	5.2	5.5	4.0	4.1	4.7	3.4	2.9	3.0	5.7	7.7	5.0	5.3
XIe	Skin carcinoma	3.3	3.7	6.7	4.8	2.3	2.8	5.1	5.6	4.2	4.7	8.3	4.0
XIf	Other and unspecified carcinoma	9.5	10.4	10.0	8.8	7.0	8.6	9.1	7.2	12.1	12.3	10.9	10.5
XII	Other and unspecified malignant neoplasm	0.4	0.4	0.2	0.2	0.3	0.6	0.3	0.3	0.5	0.3	0.1	0.1
XIIa	Other specified malignant tumour	0.2	0.4	0.2	0.1	0.2	0.5	0.3	0.1	0.3	0.3	0.1	0.0
XIIb	Other unspecified malignant tumour	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.2	0.0	0.0	0.1
I-XII	**All tumours**	**202.7**	**208.5**	**215.8**	**204.9**	**216.4**	**221.5**	**231.2**	**217.9**	**188.4**	**194.9**	**199.8**	**191.3**

Source: Belgian Cancer Registry

WSR: Age-standardised incidence using the World standard population (N/1,000,000 person years)

Appendix 5: Incidence (WSR) by sex, children (0-14y), Belgium 2004-2008, 2008-2012, 2012-2016, 2016-2020

Belgium: 2004-2020		Children (0-14 years)				Boys (0-14 years)				Girls (0-14 years)			
		WSR				WSR				WSR			
		'04-'08	'08-'12	'12-'16	'16-'20	'04-'08	'08-'12	'12-'16	'16-'20	'04-'08	'08-'12	'12-'16	'16-'20
I	Leukaemia, myeloproliferative and myelodysplastic disease	48.0	48.7	55.4	49.3	54.2	53.3	59.4	53.0	41.6	44.0	51.3	45.4
Ia	Lymphoid leukaemia	38.8	36.7	41.6	38.4	44.3	41.8	46.9	41.8	33.1	31.3	36.0	34.9
Ib	Acute myeloid leukaemia	6.6	6.1	7.4	6.7	6.5	5.0	6.6	6.9	6.7	7.2	8.2	6.5
Ic	Chronic myeloproliferative disease	0.7	1.6	2.2	0.9	0.8	1.4	1.7	0.2	0.6	1.9	2.6	1.6
Id	Myelodysplastic syndrome and other myeloproliferative disease	1.9	3.9	3.2	2.9	2.6	4.7	3.5	3.8	1.2	3.1	2.8	1.9
Ie	Unspecified and other specified leukaemia	0.0	0.4	1.1	0.4	0.0	0.2	0.6	0.4	0.0	0.5	1.6	0.4
II	Lymphoma and reticuloendothelial neoplasm	26.5	24.5	23.4	18.7	33.2	29.8	30.4	23.9	19.4	18.9	16.1	13.2
IIa	Hodgkin lymphoma	7.5	5.7	7.1	7.7	8.9	7.1	8.1	8.8	6.0	4.2	6.1	6.4
IIb	Non-Hodgkin lymphoma	3.8	3.7	2.7	3.8	4.5	5.4	3.4	4.3	3.1	2.0	2.0	3.2
IIc	Burkitt lymphoma	5.8	5.8	5.7	4.6	8.2	8.3	9.5	7.3	3.4	3.2	1.7	1.8
IId	Miscellaneous lymphoreticular neoplasm	8.9	9.3	7.9	2.5	11.0	9.0	9.4	3.4	6.7	9.6	6.2	1.6
IIe	Unspecified lymphoma	0.4	0.0	0.0	0.1	0.6	0.0	0.0	0.0	0.2	0.0	0.0	0.2
III	CNS and miscellaneous intracranial and intraspinal neoplasm	41.9	48.7	49.2	47.6	42.4	51.9	54.7	49.2	41.4	45.3	43.4	45.9
IIIa	Ependymoma and choroid plexus tumour	6.0	5.1	4.8	5.1	5.4	4.7	4.8	5.3	6.6	5.6	4.8	4.9
IIIb	Astrocytoma	18.3	19.1	18.2	16.0	16.2	19.6	21.0	14.6	20.6	18.6	15.3	17.5
IIIc	Intracranial and intraspinal embryonal tumour	6.6	8.2	7.8	5.6	7.7	8.6	9.7	7.5	5.4	7.7	5.8	3.5
IIId	Other glioma	4.0	5.3	5.9	6.9	4.0	6.1	6.9	8.4	4.0	4.4	4.8	5.4
IIIe	Other specified intracranial and intraspinal neoplasm	6.1	7.2	8.3	8.4	8.0	9.1	8.4	8.6	4.1	5.3	8.3	8.2
IIIf	Unspecified intracranial and intraspinal neoplasm	0.9	3.7	4.2	5.5	1.2	3.7	3.9	4.8	0.7	3.7	4.5	6.3
IV	Neuroblastoma and other peripheral nervous cell tumour	13.8	13.8	11.4	12.9	15.0	16.7	11.4	12.5	12.5	10.7	11.4	13.3
IVa	Neuroblastoma and ganglioneuroblastoma	12.9	13.5	10.8	12.3	13.7	16.1	10.6	12.1	12.2	10.7	11.0	12.5
IVb	Other peripheral nervous cell tumour	0.8	0.3	0.6	0.5	1.3	0.6	0.8	0.4	0.4	0.0	0.4	0.7
V	Retinoblastoma	6.2	6.6	6.4	6.1	6.9	6.9	7.8	6.8	5.4	6.3	4.9	5.4
VI	Renal tumour	10.4	8.5	9.0	10.6	10.0	8.2	9.3	10.4	10.8	8.8	8.7	10.8
VIa	Nephroblastoma and other nonepithelial renal tumour	9.8	8.2	8.9	10.2	9.3	8.0	9.3	10.4	10.3	8.4	8.5	10.1
VIb	Renal carcinoma	0.3	0.3	0.1	0.4	0.4	0.2	0.0	0.0	0.2	0.4	0.2	0.8
VIc	Unspecified malignant renal tumour	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0
VII	Hepatic tumour	1.1	2.0	2.1	3.3	0.8	2.2	2.1	3.3	1.4	1.7	2.1	3.2
VIIa	Hepatoblastoma	0.9	1.8	1.9	2.7	0.8	1.9	1.9	2.7	1.1	1.7	1.9	2.6
VIIb	Hepatic carcinoma	0.1	0.2	0.2	0.6	0.0	0.4	0.2	0.7	0.3	0.0	0.2	0.6
VIIc	Unspecified malignant hepatic tumour	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Belgian Cancer Registry

Appendix 5: Incidence (WSR) by sex, children (0-14y), Belgium 2004-2008, 2008-2012, 2012-2016, 2016-2020

	Belgium: 2004-2020	Children (0-14 years)				Boys (0-14 years)				Girls (0-14 years)			
		WSR				WSR				WSR			
		04-'08	08-'12	12-'16	16-'20	04-'08	08-'12	12-'16	16-'20	04-'08	08-'12	12-'16	16-'20
VIII	Malignant bone tumour	8.4	7.7	6.5	5.7	8.6	7.7	6.8	5.7	8.2	7.7	6.1	5.7
VIIIa	Osteosarcoma	3.4	4.0	2.8	2.5	3.2	4.4	3.1	2.7	3.7	3.6	2.6	2.3
VIIIb	Chondrosarcoma	0.1	0.2	0.2	0.0	0.2	0.4	0.0	0.0	0.0	0.0	0.4	0.0
VIIIc	Ewing tumour and related sarcoma of bone	4.6	2.8	3.2	2.7	4.8	2.4	3.7	2.8	4.3	3.2	2.7	2.6
VIIId	Other specified malignant bone tumour	0.2	0.5	0.2	0.4	0.2	0.2	0.0	0.2	0.2	0.8	0.4	0.6
VIIIe	Unspecified malignant bone tumour	0.1	0.1	0.0	0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.3
IX	Soft tissue and other extraosseous sarcoma	9.4	10.8	10.5	10.7	11.2	12.0	12.5	11.3	7.4	9.5	8.4	10.0
IXa	Rhabdomyosarcoma	5.6	5.5	4.9	4.4	6.7	6.2	7.0	6.1	4.4	4.7	2.8	2.6
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	0.7	1.1	0.7	0.9	1.1	1.1	0.6	0.6	0.3	1.1	0.8	1.2
IXc	Kaposi sarcoma	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
IXd	Other specified soft tissue sarcoma	2.8	3.8	4.2	4.5	3.0	4.1	4.5	3.8	2.5	3.4	3.9	5.2
IXe	Unspecified soft tissue sarcoma	0.3	0.3	0.7	0.9	0.4	0.5	0.4	0.9	0.2	0.2	0.9	0.9
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	5.5	6.4	7.1	6.1	4.0	4.9	6.3	5.6	7.2	8.0	7.8	6.7
Xa	Intracranial and intraspinal germ cell tumour	1.1	1.7	2.3	1.9	1.8	1.6	2.7	2.7	0.4	1.8	2.0	1.0
Xb	Malignant extracranial and extragonadal germ cell tumour	2.9	1.8	2.3	2.1	1.2	1.0	0.9	1.0	4.6	2.7	3.6	3.2
Xc	Malignant gonadal germ cell tumour	1.6	2.8	2.4	2.1	1.0	2.4	2.5	1.9	2.2	3.3	2.2	2.3
Xd	Gonadal carcinoma	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Xe	Other and unspecified malignant gonadal tumour	0.0	0.1	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0
XI	Other malignant epithelial neoplasm and melanoma	10.8	11.0	12.0	11.8	9.0	8.1	10.1	11.9	12.8	14.0	13.9	11.7
XIa	Adrenocortical carcinoma	0.2	0.1	0.1	0.3	0.2	0.0	0.0	0.2	0.2	0.3	0.2	0.4
XIb	Thyroid carcinoma	1.3	1.7	1.9	1.7	0.9	0.8	0.4	1.1	1.7	2.6	3.5	2.5
XIc	Nasopharyngeal carcinoma	0.6	0.4	0.4	0.3	0.7	0.6	0.7	0.5	0.4	0.2	0.0	0.0
XId	Melanoma	2.3	2.1	1.1	1.3	2.3	1.6	0.4	1.0	2.3	2.7	1.8	1.6
XIe	Skin carcinoma	2.0	2.0	3.1	3.2	0.8	1.7	3.0	4.6	3.2	2.2	3.1	1.8
XIf	Other and unspecified carcinoma	4.5	4.7	5.4	4.9	4.0	3.4	5.6	4.5	4.9	6.0	5.3	5.4
XII	Other and unspecified malignant neoplasm	0.3	0.2	0.1	0.0	0.3	0.4	0.2	0.0	0.3	0.0	0.0	0.0
XIIa	Other specified malignant tumour	0.1	0.2	0.1	0.0	0.3	0.4	0.2	0.0	0.0	0.0	0.0	0.0
XIIb	Other unspecified malignant tumour	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
I-XII	**All tumours**	**182.2**	**188.9**	**193.0**	**182.7**	**195.4**	**202.3**	**211.1**	**193.7**	**168.3**	**175.0**	**174.1**	**171.2**

Source: Belgian Cancer Registry

WSR: Age-standardised incidence using the World standard population (N/1,000,000 person years)

Appendix 6: Incidence (WSR) by sex, adolescents (15-19y), Belgium 2004-2008, 2008-2012, 2012-2016, 2016-2020

	Belgium: 2004-2020	Adolescents (15-19 years)				Boys (15-19 years)				Girls (15-19 years)			
		WSR				WSR				WSR			
		'04-'08	'08-'12	'12-'16	'16-'20	'04-'08	'08-'12	'12-'16	'16-'20	'04-'08	'08-'12	'12-'16	'16-'20
I	Leukaemia, myeloproliferative and myelodysplastic disease	36.4	34.9	33.6	31.8	40.9	45.4	41.6	40.4	31.7	23.9	25.3	22.7
Ia	Lymphoid leukaemia	20.6	17.6	16.2	16.2	23.6	24.8	23.0	22.4	17.5	10.1	9.1	9.7
Ib	Acute myeloid leukaemia	8.5	9.9	9.5	8.3	8.1	10.9	11.8	10.6	9.1	8.8	7.1	5.8
Ic	Chronic myeloproliferative disease	4.4	4.9	4.4	5.1	5.6	5.4	3.7	5.0	3.2	4.4	5.2	5.2
Id	Myelodysplastic syndrome and other myeloproliferative disease	2.2	2.5	3.2	1.6	2.5	4.2	2.5	1.2	1.9	0.6	3.9	1.9
Ie	Unspecified and other specified leukaemia	0.6	0.0	0.3	0.6	1.2	0.0	0.6	1.2	0.0	0.0	0.0	0.0
II	Lymphoma and reticuloendothelial neoplasm	63.0	63.3	71.4	73.7	67.0	67.8	77.7	78.3	58.9	58.6	64.8	68.9
IIa	Hodgkin lymphoma	42.1	42.9	46.3	51.5	41.6	41.1	46.6	51.6	42.7	44.7	46.0	51.3
IIb	Non-Hodgkin lymphoma	16.1	13.0	17.8	13.7	17.4	15.7	20.5	15.5	14.9	10.1	14.9	11.7
IIc	Burkitt lymphoma	2.8	3.1	4.1	6.7	5.6	6.1	7.5	9.3	0.0	0.0	0.6	3.9
IId	Miscellaneous lymphoreticular neoplasm	0.9	3.1	2.2	1.3	1.2	3.6	1.9	0.6	0.6	2.5	2.6	1.9
IIe	Unspecified lymphoma	0.9	1.2	1.0	0.6	1.2	1.2	1.2	1.2	0.6	1.3	0.6	0.0
III	CNS and miscellaneous intracranial and intraspinal neoplasm	37.4	41.4	48.5	54.9	39.7	46.0	48.5	58.4	34.9	36.6	48.6	51.3
IIIa	Ependymoma and choroid plexus tumour	3.2	2.5	3.2	3.5	4.3	2.4	3.7	3.1	1.9	2.5	2.6	3.9
IIIb	Astrocytoma	15.2	14.5	14.6	17.8	15.5	16.9	18.0	18.6	14.9	12.0	11.0	16.9
IIIc	Intracranial and intraspinal embryonal tumour	2.8	3.4	2.5	1.3	2.5	3.6	1.9	1.2	3.2	3.2	3.2	1.3
IIId	Other glioma	2.5	2.2	3.8	4.1	1.9	3.6	3.1	4.3	3.2	0.6	4.5	3.9
IIIe	Other specified intracranial and intraspinal neoplasm	11.1	15.1	20.6	23.8	13.0	15.1	18.0	24.2	9.1	15.1	23.3	23.4
IIIf	Unspecified intracranial and intraspinal neoplasm	2.5	3.7	3.8	4.4	2.5	4.2	3.7	6.8	2.6	3.2	3.9	1.9
IV	Neuroblastoma and other peripheral nervous cell tumour	1.9	1.2	1.6	2.2	1.9	1.2	1.9	2.5	1.9	1.3	1.3	1.9
IVa	Neuroblastoma and ganglioneuroblastoma	0.6	0.0	0.0	0.3	0.6	0.0	0.0	0.0	0.6	0.0	0.0	0.6
IVb	Other peripheral nervous cell tumour	1.3	1.2	1.6	1.9	1.2	1.2	1.9	2.5	1.3	1.3	1.3	1.3
V	Retinoblastoma	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VI	Renal tumour	1.6	2.2	1.3	1.3	2.5	1.8	0.0	0.6	0.6	2.5	2.6	1.9
VIa	Nephroblastoma and other nonepithelial renal tumour	0.9	0.9	0.0	0.0	1.9	0.6	0.0	0.0	0.0	1.3	0.0	0.0
VIb	Renal carcinoma	0.6	1.2	1.3	1.3	0.6	1.2	0.0	0.6	0.6	1.3	2.6	1.9
VIc	Unspecified malignant renal tumour	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VII	Hepatic tumour	0.3	0.3	0.6	0.3	0.6	0.6	1.2	0.0	0.0	0.0	0.0	0.6
VIIa	Hepatoblastoma	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VIIb	Hepatic carcinoma	0.3	0.3	0.6	0.3	0.6	0.6	1.2	0.0	0.0	0.0	0.0	0.6
VIIc	Unspecified malignant hepatic tumour	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Belgian Cancer Registry

Appendix 6: Incidence (WSR) by sex, adolescents (15-19y), Belgium 2004-2008, 2008-2012, 2012-2016, 2016-2020

	Belgium: 2004-2020	Adolescents (15-19 years)				Boys (15-19 years)				Girls (15-19 years)			
		WSR				WSR				WSR			
		04-'08	08-'12	12-'16	16-'20	04-'08	08-'12	12-'16	16-'20	04-'08	08-'12	12-'16	16-'20
VIII	Malignant bone tumour	20.9	15.1	16.5	16.5	24.8	19.4	19.9	22.4	16.8	10.7	13.0	10.4
VIIIa	Osteosarcoma	11.1	8.3	8.9	9.8	14.3	12.7	10.6	13.7	7.8	3.8	7.1	5.8
VIIIb	Chondrosarcoma	2.2	0.6	1.6	0.6	1.9	0.6	2.5	0.6	2.6	0.6	0.6	0.6
VIIIc	Ewing tumour and related sarcoma of bone	7.0	4.6	4.8	5.4	8.7	4.8	5.6	8.1	5.2	4.4	3.9	2.6
VIIId	Other specified malignant bone tumour	0.3	0.6	1.0	0.6	0.0	0.6	0.6	0.0	0.6	0.6	1.3	1.3
VIIIe	Unspecified malignant bone tumour	0.3	0.9	0.3	0.0	0.0	0.6	0.6	0.0	0.6	1.3	0.0	0.0
IX	Soft tissue and other extraosseous sarcoma	21.2	16.7	15.9	14.0	19.2	13.9	14.3	16.8	23.3	19.5	17.5	11.0
IXa	Rhabdomyosarcoma	2.5	3.4	3.8	3.5	3.7	4.8	5.6	3.7	1.3	1.9	1.9	3.2
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	1.9	1.9	2.2	1.3	1.2	0.0	0.6	1.9	2.6	3.8	3.9	0.6
IXc	Kaposi sarcoma	0.0	0.6	0.6	0.0	0.0	0.6	0.6	0.0	0.0	0.6	0.6	0.0
IXd	Other specified soft tissue sarcoma	15.5	10.8	7.0	7.0	11.8	8.5	4.4	8.1	19.4	13.2	9.7	5.8
IXe	Unspecified soft tissue sarcoma	1.3	0.0	2.2	2.2	2.5	0.0	3.1	3.1	0.0	0.0	1.3	1.3
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	28.8	24.1	28.5	23.5	46.5	38.1	40.4	37.9	10.3	9.5	16.2	8.4
Xa	Intracranial and intraspinal germ cell tumour	3.8	1.5	2.5	1.6	6.8	3.0	3.1	2.5	0.6	0.0	1.9	0.6
Xb	Malignant extracranial and extragonadal germ cell tumour	0.0	0.6	1.0	2.2	0.0	1.2	1.2	3.7	0.0	0.0	0.6	0.6
Xc	Malignant gonadal germ cell tumour	23.4	20.7	23.5	18.4	39.7	32.7	36.1	31.7	6.5	8.2	10.4	4.5
Xd	Gonadal carcinoma	1.3	0.6	1.3	1.0	0.0	0.0	0.0	0.0	2.6	1.3	2.6	1.9
Xe	Other and unspecified malignant gonadal tumour	0.3	0.6	0.3	0.3	0.0	1.2	0.0	0.0	0.6	0.0	0.6	0.6
XI	Other malignant epithelial neoplasm and melanoma	60.8	75.3	75.8	62.2	44.7	52.0	54.1	42.9	77.6	99.6	98.4	82.5
XIa	Adrenocortical carcinoma	0.3	0.6	1.0	0.0	0.0	0.0	1.2	0.0	0.6	1.3	0.6	0.0
XIb	Thyroid carcinoma	10.4	16.1	14.6	14.3	6.2	7.9	6.2	5.0	14.9	24.6	23.3	24.0
XIc	Nasopharyngeal carcinoma	0.3	1.2	1.6	1.3	0.6	1.2	1.2	1.9	0.0	1.3	1.9	0.6
XId	Melanoma	15.2	17.3	14.0	14.0	13.0	9.7	11.8	9.9	17.5	25.2	16.2	18.2
XIe	Skin carcinoma	7.6	9.9	19.0	10.5	7.4	6.7	12.4	9.3	7.8	13.2	25.9	11.7
XIf	Other and unspecified carcinoma	26.9	30.3	25.7	22.2	17.4	26.6	21.1	16.8	36.9	34.0	30.4	27.9
XII	Other and unspecified malignant neoplasm	0.9	1.2	0.6	1.0	0.6	1.2	0.6	1.2	1.3	1.3	0.6	0.6
XIIa	Other specified malignant tumour	0.6	0.9	0.6	0.3	0.0	0.6	0.6	0.6	1.3	1.3	0.6	0.0
XIIb	Other unspecified malignant tumour	0.3	0.3	0.0	0.6	0.6	0.6	0.0	0.6	0.0	0.0	0.0	0.6
I-XII	**All tumours**	**273.2**	**275.7**	**294.3**	**281.4**	**288.4**	**287.4**	**300.2**	**301.2**	**257.4**	**263.4**	**288.2**	**260.6**

Source: Belgian Cancer Registry

WSR: Age-standardised incidence using the World standard population (N/1,000,000 person years)

Appendix 7: Incidence (N) by age, both sexes, Belgium 2011-2020

Belgium: Both sexes 2011-2020		Tot	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
I	Leukaemia, myeloproliferative and myelodysplastic disease	1,121	67	68	128	113	88	71	58	39	46	36	42	30	50	39	49	48	37	38	35	39
Ia	Lymphoid leukaemia	799	28	51	113	103	79	63	42	34	34	26	24	21	33	23	27	27	21	17	17	16
Ib	Acute myeloid leukaemia	180	24	12	11	4	6	5	8	2	8	4	6	6	10	8	11	14	8	10	13	10
Ic	Chronic myeloproliferative disease	56	1	0	0	2	2	0	3	2	1	2	2	1	4	4	4	2	6	6	3	11
Id	Myelodysplastic syndrome and other myeloproliferative disease	72	9	5	4	4	0	2	5	1	3	3	10	1	3	1	7	5	2	3	2	2
Ie	Unspecified and other specified leukaemia	14	5	0	0	0	1	1	0	0	0	1	0	1	0	3	0	0	0	2	0	0
II	Lymphoma and reticuloendothelial neoplasm	869	28	15	14	18	33	17	23	26	25	20	24	29	42	40	60	75	75	86	110	109
IIa	Hodgkin lymphoma	464	0	0	0	3	6	8	5	3	2	8	12	16	23	25	40	53	47	60	80	73
IIb	Non-Hodgkin lymphoma	161	1	2	1	2	6	1	4	5	8	5	4	3	9	4	12	12	19	21	21	21
IIc	Burkitt lymphoma	134	1	0	6	9	15	5	9	13	10	4	2	7	8	7	7	10	4	5	5	7
IId	Miscellaneous lymphoreticular neoplasm	103	26	13	7	4	6	3	5	5	5	3	6	3	2	3	1	0	3	0	2	6
IIe	Unspecified lymphoma	7	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	2	2
III	CNS and miscellaneous intracranial and intraspinal neoplasm	1,235	67	67	74	64	51	61	77	51	66	49	51	52	81	58	53	56	58	70	68	61
IIIa	Ependymoma and choroid plexus tumour	109	16	15	11	2	3	7	5	2	4	5	1	3	7	6	3	2	3	4	7	3
IIIb	Astrocytoma	426	17	18	28	28	23	27	29	14	29	18	16	23	32	11	16	18	14	19	17	29
IIIc	Intracranial and intraspinal embryonal tumour	142	11	15	15	13	7	10	6	10	12	2	10	6	6	5	2	2	1	3	4	2
IIId	Other glioma	143	9	3	3	8	4	8	17	15	6	6	11	5	10	9	5	1	10	5	3	5
IIIe	Other specified intracranial and intraspinal neoplasm	297	7	10	9	7	10	4	15	6	7	14	9	10	15	19	22	25	27	27	34	20
IIIf	Unspecified intracranial and intraspinal neoplasm	118	7	6	8	6	4	5	5	4	8	4	4	5	11	8	5	8	3	12	3	2
IV	Neuroblastoma and other peripheral nervous cell tumour	229	90	36	17	25	13	8	8	4	2	1	2	2	2	6	2	0	2	2	4	3
IVa	Neuroblastoma and ganglioneuroblastoma	207	90	36	17	24	13	8	8	4	2	1	0	0	0	3	0	0	1	0	0	0
IVb	Other peripheral nervous cell tumour	22	0	0	0	1	0	0	0	0	0	0	2	2	2	3	2	0	1	2	4	3
V	Retinoblastoma	96	47	30	11	7	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VI	Renal tumour	179	34	21	24	36	19	15	5	1	5	4	1	0	1	2	1	0	2	4	3	1
VIa	Nephroblastoma and other nonepithelial renal tumour	164	34	21	24	36	19	15	4	1	4	4	0	0	0	1	0	0	1	0	0	0
VIb	Renal carcinoma	15	0	0	0	0	0	0	1	0	1	0	1	0	1	1	1	0	1	4	3	1
VIc	Unspecified malignant renal tumour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VII	Hepatic tumour	50	12	17	4	2	1	2	3	0	0	1	1	0	0	2	1	1	0	2	0	1
VIIa	Hepatoblastoma	37	12	15	4	2	0	1	2	0	0	1	0	0	0	0	0	0	0	0	0	0
VIIb	Hepatic carcinoma	13	0	2	0	0	1	1	1	0	0	0	1	0	0	2	1	1	0	2	0	1
VIIc	Unspecified malignant hepatic tumour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: Belgian Cancer Registry

Appendix 7: Incidence (N) by age, both sexes, Belgium 2011-2020

Belgium: Both sexes 2011-2020		Tot	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
VIII	Malignant bone tumour	238	1	3	1	0	5	7	6	6	8	17	14	12	12	19	24	18	29	18	22	16
VIIIa	Osteosarcoma	124	0	0	0	0	0	2	2	3	3	11	7	6	5	10	13	10	17	12	13	10
VIIIb	Chondrosarcoma	9	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1	1	1	1	2
VIIIc	Ewing tumour and related sarcoma of bone	90	0	3	0	0	5	3	4	2	5	5	6	4	6	9	9	6	8	5	6	4
VIIId	Other specified malignant bone tumour	13	0	0	1	0	0	2	0	0	0	0	1	2	1	0	1	1	2	0	2	0
VIIIe	Unspecified malignant bone tumour	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
IX	Soft tissue and other extraosseous sarcoma	289	28	14	12	18	12	11	8	8	11	10	6	7	7	22	16	20	20	22	13	24
IXa	Rhabdomyosarcoma	111	11	6	9	9	8	5	5	3	8	4	2	2	2	7	4	7	6	8	2	3
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	29	5	0	0	2	0	1	1	1	1	1	1	2	1	1	1	1	1	3	0	6
IXc	Kaposi sarcoma	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1
IXd	Other specified soft tissue sarcoma	124	9	7	2	6	2	4	2	3	2	5	2	3	4	14	10	11	11	8	9	10
IXe	Unspecified soft tissue sarcoma	22	3	1	1	1	2	1	0	1	0	0	1	0	0	0	1	1	1	2	2	4
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	279	33	17	2	2	1	1	4	2	3	5	5	6	7	15	16	20	27	31	37	45
Xa	Intracranial and intraspinal germ cell tumour	51	7	3	0	0	1	0	3	0	1	2	4	3	4	5	7	1	1	3	3	3
Xb	Malignant extracranial and extragonadal germ cell tumour	39	20	7	0	1	0	0	0	1	0	0	0	0	0	0	1	1	2	3	2	1
Xc	Malignant gonadal germ cell tumour	178	6	7	2	1	0	1	1	0	2	3	1	3	3	9	8	18	21	25	31	36
Xd	Gonadal carcinoma	8	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	1	4
Xe	Other and unspecified malignant gonadal tumour	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1
XI	Other malignant epithelial neoplasm and melanoma	686	2	0	2	0	7	3	1	8	8	16	28	34	36	49	54	64	63	95	100	116
XIa	Adrenocortical carcinoma	7	1	0	1	0	1	0	0	0	0	0	0	0	1	0	0	1	1	1	0	0
XIb	Thyroid carcinoma	135	0	0	0	0	0	1	0	1	0	3	3	5	8	10	9	13	16	16	16	34
XIc	Nasopharyngeal carcinoma	15	0	0	0	0	0	0	0	0	0	0	1	1	1	2	2	0	1	2	3	2
XId	Melanoma	115	1	0	1	0	1	0	0	1	1	2	2	4	2	6	5	6	8	17	32	26
XIe	Skin carcinoma	149	0	0	0	0	5	2	1	3	5	3	7	9	8	8	13	15	12	16	17	25
XIf	Other and unspecified carcinoma	265	0	0	0	0	0	0	0	3	2	8	15	15	16	23	25	29	25	43	32	29
XII	Other and unspecified malignant neoplasm	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	1	1	0
XIIa	Other specified malignant tumour	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0
XIIb	Other unspecified malignant tumour	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
I-XII	**All tumours**	**5,277**	**409**	**288**	**289**	**285**	**230**	**197**	**193**	**145**	**174**	**159**	**174**	**172**	**238**	**252**	**277**	**303**	**315**	**369**	**393**	**415**

Source: Belgian Cancer Registry

Appendix 8: Incidence (N) by age, boys, Belgium 2011-2020

Belgium: Boys 2011-2020		Tot	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
I	Leukaemia, myeloproliferative and myelodysplastic disease	632	35	33	74	62	45	43	28	24	23	18	26	17	32	21	26	33	22	24	19	27
Ia	Lymphoid leukaemia	466	15	22	64	58	41	40	22	21	18	13	16	13	22	12	17	16	14	15	13	14
Ib	Acute myeloid leukaemia	94	13	8	8	1	4	1	2	1	4	1	4	3	5	4	3	12	5	3	5	7
Ic	Chronic myeloproliferative disease	24	1	0	0	0	0	0	1	1	0	0	0	0	3	3	2	1	3	3	1	5
Id	Myelodysplastic syndrome and other myeloproliferative disease	42	6	3	2	3	0	2	3	1	1	3	6	0	2	0	4	4	0	1	0	1
Ie	Unspecified and other specified leukaemia	6	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	2	0	0
II	Lymphoma and reticuloendothelial neoplasm	521	16	9	11	15	24	13	15	16	20	16	18	19	21	22	41	48	39	50	61	47
IIa	Hodgkin lymphoma	247	0	0	0	3	5	6	3	2	2	6	7	9	12	11	24	32	26	30	40	29
IIb	Non-Hodgkin lymphoma	96	0	0	1	1	3	0	2	3	6	3	4	2	2	4	11	9	5	15	16	9
IIc	Burkitt lymphoma	111	1	0	4	9	13	5	8	9	9	4	2	6	7	5	5	7	4	5	4	4
IId	Miscellaneous lymphoreticular neoplasm	62	15	9	6	2	3	2	2	2	3	3	5	2	0	2	1	0	2	0	0	3
IIe	Unspecified lymphoma	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	2
III	CNS and miscellaneous intracranial and intraspinal neoplasm	683	35	38	44	34	29	37	38	28	35	27	32	29	45	33	32	32	24	36	34	41
IIIa	Ependymoma and choroid plexus tumour	61	8	7	5	0	3	3	4	2	3	4	0	1	6	3	2	1	2	1	3	3
IIIb	Astrocytoma	232	8	9	18	14	13	19	12	7	15	9	9	10	15	6	10	10	7	13	10	18
IIIc	Intracranial and intraspinal embryonal tumour	91	8	11	10	9	3	7	4	6	8	2	6	3	4	3	2	1	1	0	2	1
IIId	Other glioma	83	7	2	2	4	3	3	11	8	5	2	7	4	5	5	4	1	6	0	2	2
IIIe	Other specified intracranial and intraspinal neoplasm	156	2	5	4	4	6	3	5	2	1	9	8	7	10	14	12	13	6	15	15	15
IIIf	Unspecified intracranial and intraspinal neoplasm	60	2	4	5	3	1	2	2	3	3	1	2	4	5	2	2	6	2	7	2	2
IV	Neuroblastoma and other peripheral nervous cell tumour	120	47	17	10	15	7	4	3	1	1	1	1	1	1	2	2	0	1	2	2	2
IVa	Neuroblastoma and ganglioneuroblastoma	106	47	17	10	14	7	4	3	1	1	1	0	0	0	1	0	0	0	0	0	0
IVb	Other peripheral nervous cell tumour	14	0	0	0	1	0	0	0	0	0	0	1	1	1	1	2	0	1	2	2	2
V	Retinoblastoma	53	34	12	4	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VI	Renal tumour	88	21	11	11	19	6	9	2	0	2	3	0	0	0	2	0	0	0	1	0	1
VIa	Nephroblastoma and other nonepithelial renal tumour	85	21	11	11	19	6	9	2	0	2	3	0	0	0	1	0	0	0	0	0	0
VIb	Renal carcinoma	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1
VIc	Unspecified malignant renal tumour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VII	Hepatic tumour	25	7	8	3	1	1	0	0	0	0	0	1	0	0	1	0	1	0	1	0	1
VIIa	Hepatoblastoma	17	7	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VIIb	Hepatic carcinoma	8	0	2	0	0	1	0	0	0	0	0	1	0	0	1	0	1	0	1	0	1
VIIc	Unspecified malignant hepatic tumour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: Belgian Cancer Registry

Appendix 8: Incidence (N) by age, boys, Belgium 2011-2020

Belgium: Boys 2011-2020		Tot	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
VIII	Malignant bone tumour	138	0	2	0	0	2	2	2	2	4	13	8	4	5	9	14	8	22	13	14	14
VIIIa	Osteosarcoma	75	0	0	0	0	0	0	0	1	1	8	4	2	2	4	10	5	14	8	8	8
VIIIb	Chondrosarcoma	5	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	2
VIIIc	Ewing tumour and related sarcoma of bone	54	0	2	0	0	2	2	2	0	3	5	4	2	3	5	3	3	5	4	5	4
VIIId	Other specified malignant bone tumour	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0
VIIIe	Unspecified malignant bone tumour	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
IX	Soft tissue and other extraosseous sarcoma	157	11	8	7	8	7	8	5	5	10	2	2	3	5	13	12	9	12	12	7	11
IXa	Rhabdomyosarcoma	73	5	5	6	5	5	5	4	2	8	1	1	0	2	6	2	5	3	6	2	0
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	11	1	0	0	1	0	0	0	1	1	0	1	1	0	0	1	0	1	1	0	2
IXc	Kaposi sarcoma	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
IXd	Other specified soft tissue sarcoma	58	4	3	0	1	1	3	1	1	1	1	0	2	3	7	8	4	6	3	3	6
IXe	Unspecified soft tissue sarcoma	13	1	0	1	1	1	0	0	1	0	0	0	0	0	0	1	0	1	1	2	3
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	173	12	12	2	1	1	0	1	1	0	1	4	3	3	3	8	13	18	25	30	35
Xa	Intracranial and intraspinal germ cell tumour	32	1	2	0	0	1	0	1	0	0	1	4	3	3	3	6	0	1	3	1	2
Xb	Malignant extracranial and extragonadal germ cell tumour	15	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	2	1
Xc	Malignant gonadal germ cell tumour	124	6	7	2	1	0	0	0	0	0	0	0	0	0	0	2	12	14	21	27	32
Xd	Gonadal carcinoma	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Xe	Other and unspecified malignant gonadal tumour	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0
XI	Other malignant epithelial neoplasm and melanoma	268	0	0	2	0	5	1	0	4	4	9	12	17	16	12	31	27	21	30	35	42
XIa	Adrenocortical carcinoma	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
XIb	Thyroid carcinoma	27	0	0	0	0	0	0	0	0	0	1	2	2	1	0	2	3	3	2	2	9
XIc	Nasopharyngeal carcinoma	12	0	0	0	0	0	0	0	0	0	0	1	1	1	2	2	0	1	1	1	2
XId	Melanoma	42	0	0	1	0	1	0	0	0	0	1	0	1	1	0	3	1	4	8	11	10
XIe	Skin carcinoma	71	0	0	0	0	4	1	0	3	4	2	4	7	4	3	8	6	4	4	8	9
XIf	Other and unspecified carcinoma	113	0	0	0	0	0	0	0	1	0	5	5	6	9	7	16	17	8	14	13	12
XII	Other and unspecified malignant neoplasm	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0
XIIa	Other specified malignant tumour	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
XIIb	Other unspecified malignant tumour	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
I-XII	**All tumours**	**2,862**	**218**	**150**	**168**	**158**	**127**	**117**	**94**	**81**	**99**	**90**	**104**	**93**	**128**	**118**	**167**	**172**	**161**	**194**	**202**	**221**

Source: Belgian Cancer Registry

Appendix 9: Incidence (N) by age, girls, Belgium 2011-2020

Belgium: Girls 2011-2020		Tot	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
I	Leukaemia, myeloproliferative and myelodysplastic disease	489	32	35	54	51	43	28	30	15	23	18	16	13	18	18	23	15	15	14	16	12
Ia	Lymphoid leukaemia	333	13	29	49	45	38	23	20	13	16	13	8	8	11	11	10	11	7	2	4	2
Ib	Acute myeloid leukaemia	86	11	4	3	3	2	4	6	1	4	3	2	3	5	4	8	2	3	7	8	3
Ic	Chronic myeloproliferative disease	32	0	0	0	2	2	0	2	1	1	2	2	1	1	1	2	1	3	3	2	6
Id	Myelodysplastic syndrome and other myeloproliferative disease	30	3	2	2	1	0	0	2	0	2	0	4	1	1	1	3	1	2	2	2	1
Ie	Unspecified and other specified leukaemia	8	5	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
II	Lymphoma and reticuloendothelial neoplasm	348	12	6	3	3	9	4	8	10	5	4	6	10	21	18	19	27	36	36	49	62
IIa	Hodgkin lymphoma	217	0	0	0	0	1	2	2	1	0	2	5	7	11	14	16	21	21	30	40	44
IIb	Non-Hodgkin lymphoma	65	1	2	0	1	3	1	2	2	2	2	0	1	7	0	1	3	14	6	5	12
IIc	Burkitt lymphoma	23	0	0	2	0	2	0	1	4	1	0	0	1	1	2	2	3	0	0	1	3
IId	Miscellaneous lymphoreticular neoplasm	41	11	4	1	2	3	1	3	3	2	0	1	1	2	1	0	0	1	0	2	3
IIe	Unspecified lymphoma	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
III	CNS and miscellaneous intracranial and intraspinal neoplasm	552	32	29	30	30	22	24	39	23	31	22	19	23	36	25	21	24	34	34	34	20
IIIa	Ependymoma and choroid plexus tumour	48	8	8	6	2	0	4	1	0	1	1	1	2	1	3	1	1	1	3	4	0
IIIb	Astrocytoma	194	9	9	10	14	10	8	17	7	14	9	7	13	17	5	6	8	7	6	7	11
IIIc	Intracranial and intraspinal embryonal tumour	51	3	4	5	4	4	3	2	4	4	0	4	3	2	2	0	1	0	3	2	1
IIId	Other glioma	60	2	1	1	4	1	5	6	7	1	4	4	1	5	4	1	0	4	5	1	3
IIIe	Other specified intracranial and intraspinal neoplasm	141	5	5	5	3	4	1	10	4	6	5	1	3	5	5	10	12	21	12	19	5
IIIf	Unspecified intracranial and intraspinal neoplasm	58	5	2	3	3	3	3	3	1	5	3	2	1	6	6	3	2	1	5	1	0
IV	Neuroblastoma and other peripheral nervous cell tumour	109	43	19	7	10	6	4	5	3	1	0	1	1	1	4	0	0	1	0	2	1
IVa	Neuroblastoma and ganglioneuroblastoma	101	43	19	7	10	6	4	5	3	1	0	0	0	0	2	0	0	1	0	0	0
IVb	Other peripheral nervous cell tumour	8	0	0	0	0	0	0	0	0	0	0	1	1	1	2	0	0	0	0	2	1
V	Retinoblastoma	43	13	18	7	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VI	Renal tumour	91	13	10	13	17	13	6	3	1	3	1	1	0	1	0	1	0	2	3	3	0
VIa	Nephroblastoma and other nonepithelial renal tumour	79	13	10	13	17	13	6	2	1	2	1	0	0	0	0	0	0	1	0	0	0
VIb	Renal carcinoma	12	0	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	3	3	0
VIc	Unspecified malignant renal tumour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VII	Hepatic tumour	25	5	9	1	1	0	2	3	0	0	1	0	0	0	1	1	0	0	1	0	0
VIIa	Hepatoblastoma	20	5	9	1	1	0	1	2	0	0	1	0	0	0	0	0	0	0	0	0	0
VIIb	Hepatic carcinoma	5	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	1	0	0
VIIc	Unspecified malignant hepatic tumour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: Belgian Cancer Registry

Appendix 9: Incidence (N) by age, girls, Belgium 2011-2020

Belgium: Girls 2011-2020		Tot	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
VIII	Malignant bone tumour	100	1	1	1	0	3	5	4	4	4	4	6	8	7	10	10	10	7	5	8	2
VIIIa	Osteosarcoma	49	0	0	0	0	0	2	2	2	2	3	3	4	3	6	3	5	3	4	5	2
VIIIb	Chondrosarcoma	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1	0
VIIIc	Ewing tumour and related sarcoma of bone	36	0	1	0	0	3	1	2	2	2	0	2	2	3	4	6	3	3	1	1	0
VIIId	Other specified malignant bone tumour	10	0	0	1	0	0	2	0	0	0	0	1	2	1	0	0	1	1	0	1	0
VIIIe	Unspecified malignant bone tumour	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IX	Soft tissue and other extraosseous sarcoma	132	17	6	5	10	5	3	3	3	1	8	4	4	2	9	4	11	8	10	6	13
IXa	Rhabdomyosarcoma	38	6	1	3	4	3	0	1	1	0	3	1	2	0	1	2	2	3	2	0	3
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	18	4	0	0	1	0	1	1	0	0	1	0	1	1	1	0	1	0	2	0	4
IXc	Kaposi sarcoma	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
IXd	Other specified soft tissue sarcoma	66	5	4	2	5	1	1	1	2	1	4	2	1	1	7	2	7	5	5	6	4
IXe	Unspecified soft tissue sarcoma	9	2	1	0	0	1	1	0	0	0	0	1	0	0	0	0	1	0	1	0	1
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	106	21	5	0	1	0	1	3	1	3	4	1	3	4	12	8	7	9	6	7	10
Xa	Intracranial and intraspinal germ cell tumour	19	6	1	0	0	0	0	2	0	1	1	0	0	1	2	1	1	0	0	2	1
Xb	Malignant extracranial and extragonadal germ cell tumour	24	15	4	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	2	0	0
Xc	Malignant gonadal germ cell tumour	54	0	0	0	0	0	1	1	0	2	3	1	3	3	9	6	6	7	4	4	4
Xd	Gonadal carcinoma	8	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	0	1	4
Xe	Other and unspecified malignant gonadal tumour	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
XI	Other malignant epithelial neoplasm and melanoma	418	2	0	0	0	2	2	1	4	4	7	16	17	20	37	23	37	42	65	65	74
XIa	Adrenocortical carcinoma	4	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
XIb	Thyroid carcinoma	108	0	0	0	0	0	1	0	1	0	2	1	3	7	10	7	10	13	14	14	25
XIc	Nasopharyngeal carcinoma	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
XId	Melanoma	73	1	0	0	0	0	0	0	1	1	1	2	3	1	6	2	5	4	9	21	16
XIe	Skin carcinoma	78	0	0	0	0	1	1	1	0	1	1	3	2	4	5	5	9	8	12	9	16
XIf	Other and unspecified carcinoma	152	0	0	0	0	0	0	0	2	2	3	10	9	7	16	9	12	17	29	19	17
XII	Other and unspecified malignant neoplasm	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
XIIa	Other specified malignant tumour	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
XIIb	Other unspecified malignant tumour	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
I-XII	**All tumours**	**2,415**	**191**	**138**	**121**	**127**	**103**	**80**	**99**	**64**	**75**	**69**	**70**	**79**	**110**	**134**	**110**	**131**	**154**	**175**	**191**	**194**

Source: Belgian Cancer Registry

Appendix 10: Incidence (age-specific, N/1,000,000), both sexes, Belgium 2011-2020

Belgium: Both sexes 2011-2020		Tot (N)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
I	Leukaemia, myeloproliferative and myelodysplastic disease	1,121	54.5	54.3	100.7	88.0	68.0	54.7	44.7	30.2	35.8	28.2	33.1	23.8	40.0	31.3	39.5	38.7	29.8	30.3	27.4	30.0
Ia	Lymphoid leukaemia	799	22.8	40.7	88.9	80.2	61.1	48.5	32.4	26.3	26.5	20.4	18.9	16.7	26.4	18.5	21.7	21.8	16.9	13.5	13.3	12.3
Ib	Acute myeloid leukaemia	180	19.5	9.6	8.7	3.1	4.6	3.9	6.2	1.5	6.2	3.1	4.7	4.8	8.0	6.4	8.9	11.3	6.4	8.0	10.2	7.7
Ic	Chronic myeloproliferative disease	56	0.8	0.0	0.0	1.6	1.5	0.0	2.3	1.5	0.8	1.6	1.6	0.8	3.2	3.2	3.2	1.6	4.8	4.8	2.3	8.5
Id	Myelodysplastic syndrome and other myeloproliferative disease	72	7.3	4.0	3.1	3.1	0.0	1.5	3.9	0.8	2.3	2.4	7.9	0.8	2.4	0.8	5.6	4.0	1.6	2.4	1.6	1.5
Ie	Unspecified and other specified leukaemia	14	4.1	0.0	0.0	0.0	0.8	0.8	0.0	0.0	0.0	0.8	0.0	0.8	0.0	2.4	0.0	0.0	0.0	1.6	0.0	0.0
II	Lymphoma and reticuloendothelial neoplasm	869	22.8	12.0	11.0	14.0	25.5	13.1	17.7	20.1	19.5	15.7	18.9	23.0	33.6	32.1	48.3	60.5	60.3	68.5	86.1	83.8
IIa	Hodgkin lymphoma	464	0.0	0.0	0.0	2.3	4.6	6.2	3.9	2.3	1.6	6.3	9.5	12.7	18.4	20.1	32.2	42.7	37.8	47.8	62.6	56.1
IIb	Non-Hodgkin lymphoma	161	0.8	1.6	0.8	1.6	4.6	0.8	3.1	3.9	6.2	3.9	3.2	2.4	7.2	3.2	9.7	9.7	15.3	16.7	16.4	16.2
IIc	Burkitt lymphoma	134	0.8	0.0	4.7	7.0	11.6	3.9	6.9	10.1	7.8	3.1	1.6	5.6	6.4	5.6	5.6	8.1	3.2	4.0	3.9	5.4
IId	Miscellaneous lymphoreticular neoplasm	103	21.1	10.4	5.5	3.1	4.6	2.3	3.9	3.9	3.9	2.4	4.7	2.4	1.6	2.4	0.8	0.0	2.4	0.0	1.6	4.6
IIe	Unspecified lymphoma	7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.6	0.0	1.6	1.5
III	CNS and miscellaneous intracranial and intraspinal neoplasm	1,235	54.5	53.5	58.2	49.8	39.4	47.0	59.3	39.5	51.4	38.4	40.2	41.3	64.8	46.6	42.7	45.1	46.7	55.8	53.2	46.9
IIIa	Ependymoma and choroid plexus tumour	109	13.0	12.0	8.7	1.6	2.3	5.4	3.9	1.5	3.1	3.9	0.8	2.4	5.6	4.8	2.4	1.6	2.4	3.2	5.5	2.3
IIIb	Astrocytoma	426	13.8	14.4	22.0	21.8	17.8	20.8	22.4	10.8	22.6	14.1	12.6	18.3	25.6	8.8	12.9	14.5	11.3	15.1	13.3	22.3
IIIc	Intracranial and intraspinal embryonal tumour	142	8.9	12.0	11.8	10.1	5.4	7.7	4.6	7.7	9.3	1.6	7.9	4.8	4.8	4.0	1.6	1.6	0.8	2.4	3.1	1.5
IIId	Other glioma	143	7.3	2.4	2.4	6.2	3.1	6.2	13.1	11.6	4.7	4.7	8.7	4.0	8.0	7.2	4.0	0.8	8.0	4.0	2.3	3.8
IIIe	Other specified intracranial and intraspinal neoplasm	297	5.7	8.0	7.1	5.5	7.7	3.1	11.6	4.6	5.5	11.0	7.1	7.9	12.0	15.3	17.7	20.2	21.7	21.5	26.6	15.4
IIIf	Unspecified intracranial and intraspinal neoplasm	118	5.7	4.8	6.3	4.7	3.1	3.9	3.9	3.1	6.2	3.1	3.2	4.0	8.8	6.4	4.0	6.4	2.4	9.6	2.3	1.5
IV	Neuroblastoma and other peripheral nervous cell tumour	229	73.1	28.7	13.4	19.5	10.1	6.2	6.2	3.1	1.6	0.8	1.6	1.6	1.6	4.8	1.6	0.0	1.6	1.6	3.1	2.3
IVa	Neuroblastoma and ganglioneuroblastoma	207	73.1	28.7	13.4	18.7	10.1	6.2	6.2	3.1	1.6	0.8	0.0	0.0	0.0	2.4	0.0	0.0	0.8	0.0	0.0	0.0
IVb	Other peripheral nervous cell tumour	22	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6	2.4	1.6	0.0	0.8	1.6	3.1	2.3
V	Retinoblastoma	96	38.2	24.0	8.7	5.5	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VI	Renal tumour	179	27.6	16.8	18.9	28.0	14.7	11.6	3.9	0.8	3.9	3.1	0.8	0.0	0.8	1.6	0.8	0.0	1.6	3.2	2.3	0.8
VIa	Nephroblastoma and other nonepithelial renal tumour	164	27.6	16.8	18.9	28.0	14.7	11.6	3.1	0.8	3.1	3.1	0.0	0.0	0.0	0.8	0.0	0.0	0.8	0.0	0.0	0.0
VIb	Renal carcinoma	15	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.8	0.0	0.8	0.0	0.8	0.8	0.8	0.0	0.8	3.2	2.3	0.8
VIc	Unspecified malignant renal tumour	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VII	Hepatic tumour	50	9.8	13.6	3.1	1.6	0.8	1.5	2.3	0.0	0.0	0.8	0.8	0.0	0.0	1.6	0.8	0.8	0.0	1.6	0.0	0.8
VIIa	Hepatoblastoma	37	9.8	12.0	3.1	1.6	0.0	0.8	1.5	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VIIb	Hepatic carcinoma	13	0.0	1.6	0.0	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.8	0.0	0.0	1.6	0.8	0.8	0.0	1.6	0.0	0.8
VIIc	Unspecified malignant hepatic tumour	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Belgian Cancer Registry

Appendix 10: Incidence (age-specific, N/1,000,000), both sexes, Belgium 2011-2020

Belgium: Both sexes 2011-2020		Tot (N)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
VIII	Malignant bone tumour	238	0.8	2.4	0.8	0.0	3.9	5.4	4.6	4.6	6.2	13.3	11.0	9.5	9.6	15.3	19.3	14.5	23.3	14.3	17.2	12.3
VIIIa	Osteosarcoma	124	0.0	0.0	0.0	0.0	0.0	1.5	1.5	2.3	2.3	8.6	5.5	4.8	4.0	8.0	10.5	8.1	13.7	9.6	10.2	7.7
VIIIb	Chondrosarcoma	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.8	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	1.5
VIIIc	Ewing tumour and related sarcoma of bone	90	0.0	2.4	0.0	0.0	3.9	2.3	3.1	1.5	3.9	3.9	4.7	3.2	4.8	7.2	7.2	4.8	6.4	4.0	4.7	3.1
VIIId	Other specified malignant bone tumour	13	0.0	0.0	0.8	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.8	1.6	0.8	0.0	0.8	0.8	1.6	0.0	1.6	0.0
VIIIe	Unspecified malignant bone tumour	2	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0
IX	Soft tissue and other extraosseous sarcoma	289	22.8	11.2	9.4	14.0	9.3	8.5	6.2	6.2	8.6	7.8	4.7	5.6	5.6	17.7	12.9	16.1	16.1	17.5	10.2	18.5
IXa	Rhabdomyosarcoma	111	8.9	4.8	7.1	7.0	6.2	3.9	3.9	2.3	6.2	3.1	1.6	1.6	1.6	5.6	3.2	5.6	4.8	6.4	1.6	2.3
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	29	4.1	0.0	0.0	1.6	0.0	0.8	0.8	0.8	0.8	0.8	0.8	1.6	0.8	0.8	0.8	0.8	0.8	2.4	0.0	4.6
IXc	Kaposi sarcoma	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.0	0.8
IXd	Other specified soft tissue sarcoma	124	7.3	5.6	1.6	4.7	1.5	3.1	1.5	2.3	1.6	3.9	1.6	2.4	3.2	11.2	8.1	8.9	8.8	6.4	7.0	7.7
IXe	Unspecified soft tissue sarcoma	22	2.4	0.8	0.8	0.8	1.5	0.8	0.0	0.8	0.0	0.0	0.8	0.0	0.0	0.0	0.8	0.8	0.8	1.6	1.6	3.1
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	279	26.8	13.6	1.6	1.6	0.8	0.8	3.1	1.5	2.3	3.9	3.9	4.8	5.6	12.0	12.9	16.1	21.7	24.7	28.9	34.6
Xa	Intracranial and intraspinal germ cell tumour	51	5.7	2.4	0.0	0.0	0.8	0.0	2.3	0.0	0.8	1.6	3.2	2.4	3.2	4.0	5.6	0.8	0.8	2.4	2.3	2.3
Xb	Malignant extracranial and extragonadal germ cell tumour	39	16.3	5.6	0.0	0.8	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	1.6	2.4	1.6	0.8
Xc	Malignant gonadal germ cell tumour	178	4.9	5.6	1.6	0.8	0.0	0.8	0.8	0.0	1.6	2.4	0.8	2.4	2.4	7.2	6.4	14.5	16.9	19.9	24.3	27.7
Xd	Gonadal carcinoma	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.6	0.0	0.8	3.1
Xe	Other and unspecified malignant gonadal tumour	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8
XI	Other malignant epithelial neoplasm and melanoma	686	1.6	0.0	1.6	0.0	5.4	2.3	0.8	6.2	6.2	12.5	22.1	27.0	28.8	39.3	43.5	51.6	50.7	75.7	78.2	89.2
XIa	Adrenocortical carcinoma	7	0.8	0.0	0.8	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8	0.8	0.8	0.0	0.0
XIb	Thyroid carcinoma	135	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.8	0.0	2.4	2.4	4.0	6.4	8.0	7.2	10.5	12.9	12.8	12.5	26.2
XIc	Nasopharyngeal carcinoma	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	1.6	1.6	0.0	0.8	1.6	2.3	1.5
XId	Melanoma	115	0.8	0.0	0.8	0.0	0.8	0.0	0.0	0.8	0.8	1.6	1.6	3.2	1.6	4.8	4.0	4.8	6.4	13.5	25.0	20.0
XIe	Skin carcinoma	149	0.0	0.0	0.0	0.0	3.9	1.5	0.8	2.3	3.9	2.4	5.5	7.2	6.4	6.4	10.5	12.1	9.7	12.8	13.3	19.2
XIf	Other and unspecified carcinoma	265	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	1.6	6.3	11.8	11.9	12.8	18.5	20.1	23.4	20.1	34.3	25.0	22.3
XII	Other and unspecified malignant neoplasm	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	1.6	0.8	0.8	0.0
XIIa	Other specified malignant tumour	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.0	0.8	0.0
XIIb	Other unspecified malignant tumour	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.0	0.0
I-XII	**All tumours**	**5,277**	**332.4**	**230.0**	**227.4**	**222.0**	**177.8**	**151.7**	**148.8**	**112.2**	**135.5**	**124.6**	**137.3**	**136.7**	**190.5**	**202.4**	**223.1**	**244.3**	**253.4**	**294.0**	**307.4**	**319.2**

Source: Belgian Cancer Registry

Appendix 11: Incidence (age-specific, N/1,000,000), boys, Belgium 2011-2020

Belgium: Boys 2011-2020		Tot (N)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
I	Leukaemia, myeloproliferative and myelodysplastic disease	632	55.6	51.5	113.8	94.4	68.0	64.7	42.2	36.3	35.0	27.6	40.1	26.4	50.1	33.0	41.0	52.1	34.6	37.4	29.1	40.7
Ia	Lymphoid leukaemia	466	23.8	34.3	98.4	88.3	62.0	60.2	33.2	31.8	27.4	19.9	24.7	20.2	34.5	18.9	26.8	25.2	22.0	23.4	19.9	21.1
Ib	Acute myeloid leukaemia	94	20.7	12.5	12.3	1.5	6.0	1.5	3.0	1.5	6.1	1.5	6.2	4.7	7.8	6.3	4.7	18.9	7.9	4.7	7.7	10.6
Ic	Chronic myeloproliferative disease	24	1.6	0.0	0.0	0.0	0.0	0.0	1.5	1.5	0.0	0.0	0.0	0.0	4.7	4.7	3.2	1.6	4.7	4.7	1.5	7.5
Id	Myelodysplastic syndrome and other myeloproliferative disease	42	9.5	4.7	3.1	4.6	0.0	3.0	4.5	1.5	1.5	4.6	9.3	0.0	3.1	0.0	6.3	6.3	0.0	1.6	0.0	1.5
Ie	Unspecified and other specified leukaemia	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	1.6	0.0	3.1	0.0	0.0	0.0	3.1	0.0	0.0
II	Lymphoma and reticuloendothelial neoplasm	521	25.4	14.0	16.9	22.8	36.3	19.6	22.6	24.2	30.4	24.5	27.8	29.5	32.9	34.6	64.6	75.7	61.4	77.9	93.4	70.9
IIa	Hodgkin lymphoma	247	0.0	0.0	0.0	4.6	7.6	9.0	4.5	3.0	3.0	9.2	10.8	14.0	18.8	17.3	37.8	50.5	40.9	46.8	61.3	43.7
IIb	Non-Hodgkin lymphoma	96	0.0	0.0	1.5	1.5	4.5	0.0	3.0	4.5	9.1	4.6	6.2	3.1	3.1	6.3	17.3	14.2	7.9	23.4	24.5	13.6
IIc	Burkitt lymphoma	111	1.6	0.0	6.2	13.7	19.7	7.5	12.1	13.6	13.7	6.1	3.1	9.3	11.0	7.9	7.9	11.0	6.3	7.8	6.1	6.0
IId	Miscellaneous lymphoreticular neoplasm	62	23.8	14.0	9.2	3.0	4.5	3.0	3.0	3.0	4.6	4.6	7.7	3.1	0.0	3.1	1.6	0.0	3.1	0.0	0.0	4.5
IIe	Unspecified lymphoma	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	1.5	3.0
III	CNS and miscellaneous intracranial and intraspinal neoplasm	683	55.6	59.3	67.7	51.7	43.8	55.7	57.3	42.4	53.3	41.4	49.4	45.1	70.5	51.9	50.4	50.5	37.8	56.1	52.1	61.8
IIIa	Ependymoma and choroid plexus tumour	61	12.7	10.9	7.7	0.0	4.5	4.5	6.0	3.0	4.6	6.1	0.0	1.6	9.4	4.7	3.2	1.6	3.1	1.6	4.6	4.5
IIIb	Astrocytoma	232	12.7	14.0	27.7	21.3	19.7	28.6	18.1	10.6	22.8	13.8	13.9	15.5	23.5	9.4	15.8	15.8	11.0	20.3	15.3	27.1
IIIc	Intracranial and intraspinal embryonal tumour	91	12.7	17.2	15.4	13.7	4.5	10.5	6.0	9.1	12.2	3.1	9.3	4.7	6.3	4.7	3.2	1.6	1.6	0.0	3.1	1.5
IIId	Other glioma	83	11.1	3.1	3.1	6.1	4.5	4.5	16.6	12.1	7.6	3.1	10.8	6.2	7.8	7.9	6.3	1.6	9.4	0.0	3.1	3.0
IIIe	Other specified intracranial and intraspinal neoplasm	156	3.2	7.8	6.2	6.1	9.1	4.5	7.5	3.0	1.5	13.8	12.3	10.9	15.7	22.0	18.9	20.5	9.4	23.4	23.0	22.6
IIIf	Unspecified intracranial and intraspinal neoplasm	60	3.2	6.2	7.7	4.6	1.5	3.0	3.0	4.5	4.6	1.5	3.1	6.2	7.8	3.1	3.2	9.5	3.1	10.9	3.1	3.0
IV	Neuroblastoma and other peripheral nervous cell tumour	120	74.7	26.5	15.4	22.8	10.6	6.0	4.5	1.5	1.5	1.5	1.5	1.6	1.6	3.1	3.2	0.0	1.6	3.1	3.1	3.0
IVa	Neuroblastoma and ganglioneuroblastoma	106	74.7	26.5	15.4	21.3	10.6	6.0	4.5	1.5	1.5	1.5	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
IVb	Other peripheral nervous cell tumour	14	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.6	1.6	1.6	3.2	0.0	1.6	3.1	3.1	3.0
V	Retinoblastoma	53	54.1	18.7	6.2	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VI	Renal tumour	88	33.4	17.2	16.9	28.9	9.1	13.5	3.0	0.0	3.0	4.6	0.0	0.0	0.0	3.1	0.0	0.0	0.0	1.6	0.0	1.5
VIa	Nephroblastoma and other nonepithelial renal tumour	85	33.4	17.2	16.9	28.9	9.1	13.5	3.0	0.0	3.0	4.6	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
VIb	Renal carcinoma	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	1.6	0.0	1.5
VIc	Unspecified malignant renal tumour	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VII	Hepatic tumour	25	11.1	12.5	4.6	1.5	1.5	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.6	0.0	1.6	0.0	1.6	0.0	1.5
VIIa	Hepatoblastoma	17	11.1	9.4	4.6	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VIIb	Hepatic carcinoma	8	0.0	3.1	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.6	0.0	1.6	0.0	1.6	0.0	1.5
VIIc	Unspecified malignant hepatic tumour	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Belgian Cancer Registry

Appendix 11: Incidence (age-specific, N/1,000,000), boys, Belgium 2011-2020

Belgium: Boys 2011-2020		Tot (N)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
VIII	Malignant bone tumour	138	0.0	3.1	0.0	0.0	3.0	3.0	3.0	3.0	6.1	19.9	12.3	6.2	7.8	14.1	22.1	12.6	34.6	20.3	21.4	21.1
VIIIa	Osteosarcoma	75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	12.3	6.2	3.1	3.1	6.3	15.8	7.9	22.0	12.5	12.3	12.1
VIIIb	Chondrosarcoma	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	0.0	3.0
VIIIc	Ewing tumour and related sarcoma of bone	54	0.0	3.1	0.0	0.0	3.0	3.0	3.0	0.0	4.6	7.7	6.2	3.1	4.7	7.9	4.7	4.7	7.9	6.2	7.7	6.0
VIIId	Other specified malignant bone tumour	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.6	0.0	1.5	0.0
VIIIe	Unspecified malignant bone tumour	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0
IX	Soft tissue and other extraosseous sarcoma	157	17.5	12.5	10.8	12.2	10.6	12.0	7.5	7.6	15.2	3.1	3.1	4.7	7.8	20.4	18.9	14.2	18.9	18.7	10.7	16.6
IXa	Rhabdomyosarcoma	73	7.9	7.8	9.2	7.6	7.6	7.5	6.0	3.0	12.2	1.5	1.5	0.0	3.1	9.4	3.2	7.9	4.7	9.4	3.1	0.0
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	11	1.6	0.0	0.0	1.5	0.0	0.0	0.0	1.5	1.5	0.0	1.5	1.6	0.0	0.0	1.6	0.0	1.6	1.6	0.0	3.0
IXc	Kaposi sarcoma	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	0.0	0.0
IXd	Other specified soft tissue sarcoma	58	6.4	4.7	0.0	1.5	1.5	4.5	1.5	1.5	1.5	1.5	0.0	3.1	4.7	11.0	12.6	6.3	9.4	4.7	4.6	9.0
IXe	Unspecified soft tissue sarcoma	13	1.6	0.0	1.5	1.5	1.5	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.6	1.6	3.1	4.5
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	173	19.1	18.7	3.1	1.5	1.5	0.0	1.5	1.5	0.0	1.5	6.2	4.7	4.7	4.7	12.6	20.5	28.3	39.0	45.9	52.8
Xa	Intracranial and intraspinal germ cell tumour	32	1.6	3.1	0.0	0.0	1.5	0.0	1.5	0.0	0.0	1.5	6.2	4.7	4.7	4.7	9.5	0.0	1.6	4.7	1.5	3.0
Xb	Malignant extracranial and extragonadal germ cell tumour	15	7.9	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.1	1.6	3.1	1.5
Xc	Malignant gonadal germ cell tumour	124	9.5	10.9	3.1	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	18.9	22.0	32.7	41.4	48.3
Xd	Gonadal carcinoma	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Xe	Other and unspecified malignant gonadal tumour	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0
XI	Other malignant epithelial neoplasm and melanoma	268	0.0	0.0	3.1	0.0	7.6	1.5	0.0	6.1	6.1	13.8	18.5	26.4	25.1	18.9	48.9	42.6	33.1	46.8	53.6	63.3
XIa	Adrenocortical carcinoma	3	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	0.0	0.0
XIb	Thyroid carcinoma	27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	3.1	3.1	1.6	0.0	3.2	4.7	4.7	3.1	3.1	13.6
XIc	Nasopharyngeal carcinoma	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.6	1.6	3.1	3.2	0.0	1.6	1.6	1.5	3.0
XId	Melanoma	42	0.0	0.0	1.5	0.0	1.5	0.0	0.0	0.0	0.0	1.5	0.0	1.6	1.6	0.0	4.7	1.6	6.3	12.5	16.8	15.1
XIe	Skin carcinoma	71	0.0	0.0	0.0	0.0	6.0	1.5	0.0	4.5	6.1	3.1	6.2	10.9	6.3	4.7	12.6	9.5	6.3	6.2	12.3	13.6
XIf	Other and unspecified carcinoma	113	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	7.7	7.7	9.3	14.1	11.0	25.2	26.8	12.6	21.8	19.9	18.1
XII	Other and unspecified malignant neoplasm	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	3.1	0.0	0.0	0.0
XIIa	Other specified malignant tumour	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6	0.0	0.0	0.0
XIIb	Other unspecified malignant tumour	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0
I-XII	**All tumours**	**2,862**	**346.6**	**234.1**	**258.3**	**240.4**	**192.0**	**176.1**	**141.7**	**122.5**	**150.7**	**137.9**	**160.4**	**144.5**	**200.5**	**185.4**	**263.2**	**271.4**	**253.4**	**302.4**	**309.4**	**333.2**

Source: Belgian Cancer Registry

Appendix 12: Incidence (age-specific, N/1,000,000), girls, Belgium 2011-2020

Belgium: Girls 2011-2020		Tot (N)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
I	Leukaemia, myeloproliferative and myelodysplastic disease	489	53.2	57.2	87.0	81.3	68.1	44.1	47.3	23.8	36.7	28.9	25.8	21.1	29.5	29.6	37.9	24.7	24.7	22.8	25.6	18.8
Ia	Lymphoid leukaemia	333	21.6	47.4	79.0	71.8	60.1	36.3	31.6	20.6	25.5	20.9	12.9	13.0	18.0	18.1	16.5	18.1	11.5	3.3	6.4	3.1
Ib	Acute myeloid leukaemia	86	18.3	6.5	4.8	4.8	3.2	6.3	9.5	1.6	6.4	4.8	3.2	4.9	8.2	6.6	13.2	3.3	4.9	11.4	12.8	4.7
Ic	Chronic myeloproliferative disease	32	0.0	0.0	0.0	3.2	3.2	0.0	3.2	1.6	1.6	3.2	3.2	1.6	1.6	1.6	3.3	1.6	4.9	4.9	3.2	9.4
Id	Myelodysplastic syndrome and other myeloproliferative disease	30	5.0	3.3	3.2	1.6	0.0	0.0	3.2	0.0	3.2	0.0	6.5	1.6	1.6	1.6	4.9	1.6	3.3	3.3	3.2	1.6
Ie	Unspecified and other specified leukaemia	8	8.3	0.0	0.0	0.0	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
II	Lymphoma and reticuloendothelial neoplasm	348	20.0	9.8	4.8	4.8	14.2	6.3	12.6	15.8	8.0	6.4	9.7	16.3	34.4	29.6	31.3	44.5	59.2	58.7	78.4	97.3
IIa	Hodgkin lymphoma	217	0.0	0.0	0.0	0.0	1.6	3.2	3.2	1.6	0.0	3.2	8.1	11.4	18.0	23.0	26.4	34.6	34.6	48.9	64.0	69.1
IIb	Non-Hodgkin lymphoma	65	1.7	3.3	0.0	1.6	4.7	1.6	3.2	3.2	3.2	3.2	0.0	1.6	11.5	0.0	1.6	4.9	23.0	9.8	8.0	18.8
IIc	Burkitt lymphoma	23	0.0	0.0	3.2	0.0	3.2	0.0	1.6	6.3	1.6	0.0	0.0	1.6	1.6	3.3	3.3	4.9	0.0	0.0	1.6	4.7
IId	Miscellaneous lymphoreticular neoplasm	41	18.3	6.5	1.6	3.2	4.7	1.6	4.7	4.8	3.2	0.0	1.6	1.6	3.3	1.6	0.0	0.0	1.6	0.0	3.2	4.7
IIe	Unspecified lymphoma	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	1.6	0.0
III	CNS and miscellaneous intracranial and intraspinal neoplasm	552	53.2	47.4	48.4	47.9	34.8	37.8	61.5	36.4	49.4	35.3	30.7	37.4	58.9	41.1	34.6	39.6	55.9	55.4	54.4	31.4
IIIa	Ependymoma and choroid plexus tumour	48	13.3	13.1	9.7	3.2	0.0	6.3	1.6	0.0	1.6	1.6	1.6	3.3	1.6	4.9	1.6	1.6	1.6	4.9	6.4	0.0
IIIb	Astrocytoma	194	15.0	14.7	16.1	22.3	15.8	12.6	26.8	11.1	22.3	14.4	11.3	21.1	27.8	8.2	9.9	13.2	11.5	9.8	11.2	17.3
IIIc	Intracranial and intraspinal embryonal tumour	51	5.0	6.5	8.1	6.4	6.3	4.7	3.2	6.3	6.4	0.0	6.5	4.9	3.3	3.3	0.0	1.6	0.0	4.9	3.2	1.6
IIId	Other glioma	60	3.3	1.6	1.6	6.4	1.6	7.9	9.5	11.1	1.6	6.4	6.5	1.6	8.2	6.6	1.6	0.0	6.6	8.2	1.6	4.7
IIIe	Other specified intracranial and intraspinal neoplasm	141	8.3	8.2	8.1	4.8	6.3	1.6	15.8	6.3	9.6	8.0	1.6	4.9	8.2	8.2	16.5	19.8	34.6	19.6	30.4	7.8
IIIf	Unspecified intracranial and intraspinal neoplasm	58	8.3	3.3	4.8	4.8	4.7	4.7	4.7	1.6	8.0	4.8	3.2	1.6	9.8	9.9	4.9	3.3	1.6	8.2	1.6	0.0
IV	Neuroblastoma and other peripheral nervous cell tumour	109	71.5	31.1	11.3	16.0	9.5	6.3	7.9	4.8	1.6	0.0	1.6	1.6	1.6	6.6	0.0	0.0	1.6	0.0	3.2	1.6
IVa	Neuroblastoma and ganglioneuroblastoma	101	71.5	31.1	11.3	16.0	9.5	6.3	7.9	4.8	1.6	0.0	0.0	0.0	0.0	3.3	0.0	0.0	1.6	0.0	0.0	0.0
IVb	Other peripheral nervous cell tumour	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6	3.3	0.0	0.0	0.0	0.0	3.2	1.6
V	Retinoblastoma	43	21.6	29.4	11.3	6.4	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VI	Renal tumour	91	21.6	16.3	21.0	27.1	20.6	9.5	4.7	1.6	4.8	1.6	1.6	0.0	1.6	0.0	1.6	0.0	3.3	4.9	4.8	0.0
VIa	Nephroblastoma and other nonepithelial renal tumour	79	21.6	16.3	21.0	27.1	20.6	9.5	3.2	1.6	3.2	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0
VIb	Renal carcinoma	12	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.6	0.0	1.6	0.0	1.6	0.0	1.6	0.0	1.6	4.9	4.8	0.0
VIc	Unspecified malignant renal tumour	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VII	Hepatic tumour	25	8.3	14.7	1.6	1.6	0.0	3.2	4.7	0.0	0.0	1.6	0.0	0.0	0.0	1.6	1.6	0.0	0.0	1.6	0.0	0.0
VIIa	Hepatoblastoma	20	8.3	14.7	1.6	1.6	0.0	1.6	3.2	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VIIb	Hepatic carcinoma	5	0.0	0.0	0.0	0.0	0.0	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	0.0	0.0	1.6	0.0	0.0
VIIc	Unspecified malignant hepatic tumour	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Belgian Cancer Registry

Appendix 12: Incidence (age-specific, N/1,000,000), girls, Belgium 2011-2020

Belgium: Girls 2011-2020		Tot (N)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
VIII	Malignant bone tumour	100	1.7	1.6	1.6	0.0	4.7	7.9	6.3	6.3	6.4	6.4	9.7	13.0	11.5	16.4	16.5	16.5	11.5	8.2	12.8	3.1
VIIIa	Osteosarcoma	49	0.0	0.0	0.0	0.0	0.0	3.2	3.2	3.2	3.2	4.8	4.8	6.5	4.9	9.9	4.9	8.2	4.9	6.5	8.0	3.1
VIIIb	Chondrosarcoma	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	1.6	1.6	0.0	0.0	1.6	0.0
VIIIc	Ewing tumour and related sarcoma of bone	36	0.0	1.6	0.0	0.0	4.7	1.6	3.2	3.2	3.2	0.0	3.2	3.3	4.9	6.6	9.9	4.9	4.9	1.6	1.6	0.0
VIIId	Other specified malignant bone tumour	10	0.0	0.0	1.6	0.0	0.0	3.2	0.0	0.0	0.0	0.0	1.6	3.3	1.6	0.0	0.0	1.6	1.6	0.0	1.6	0.0
VIIIe	Unspecified malignant bone tumour	1	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IX	Soft tissue and other extraosseous sarcoma	132	28.3	9.8	8.1	16.0	7.9	4.7	4.7	4.8	1.6	12.8	6.5	6.5	3.3	14.8	6.6	18.1	13.2	16.3	9.6	20.4
IXa	Rhabdomyosarcoma	38	10.0	1.6	4.8	6.4	4.7	0.0	1.6	1.6	0.0	4.8	1.6	3.3	0.0	1.6	3.3	3.3	4.9	3.3	0.0	4.7
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	18	6.7	0.0	0.0	1.6	0.0	1.6	1.6	0.0	0.0	1.6	0.0	1.6	1.6	1.6	0.0	1.6	0.0	3.3	0.0	6.3
IXc	Kaposi sarcoma	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
IXd	Other specified soft tissue sarcoma	66	8.3	6.5	3.2	8.0	1.6	1.6	1.6	3.2	1.6	6.4	3.2	1.6	1.6	11.5	3.3	11.5	8.2	8.2	9.6	6.3
IXe	Unspecified soft tissue sarcoma	9	3.3	1.6	0.0	0.0	1.6	1.6	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	1.6	0.0	1.6	0.0	1.6
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	106	34.9	8.2	0.0	1.6	0.0	1.6	4.7	1.6	4.8	6.4	1.6	4.9	6.5	19.7	13.2	11.5	14.8	9.8	11.2	15.7
Xa	Intracranial and intraspinal germ cell tumour	19	10.0	1.6	0.0	0.0	0.0	0.0	3.2	0.0	1.6	1.6	0.0	0.0	1.6	3.3	1.6	1.6	0.0	0.0	3.2	1.6
Xb	Malignant extracranial and extragonadal germ cell tumour	24	24.9	6.5	0.0	1.6	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	3.3	0.0	0.0
Xc	Malignant gonadal germ cell tumour	54	0.0	0.0	0.0	0.0	0.0	1.6	1.6	0.0	3.2	4.8	1.6	4.9	4.9	14.8	9.9	9.9	11.5	6.5	6.4	6.3
Xd	Gonadal carcinoma	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	3.3	0.0	1.6	6.3
Xe	Other and unspecified malignant gonadal tumour	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
XI	Other malignant epithelial neoplasm and melanoma	418	3.3	0.0	0.0	0.0	3.2	3.2	1.6	6.3	6.4	11.2	25.8	27.6	32.7	60.8	37.9	61.0	69.1	106.0	103.9	116.2
XIa	Adrenocortical carcinoma	4	1.7	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	1.6	0.0	0.0	0.0	0.0
XIb	Thyroid carcinoma	108	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.6	0.0	3.2	1.6	4.9	11.5	16.4	11.5	16.5	21.4	22.8	22.4	39.2
XIc	Nasopharyngeal carcinoma	3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.2	0.0
XId	Melanoma	73	1.7	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6	3.2	4.9	1.6	9.9	3.3	8.2	6.6	14.7	33.6	25.1
XIe	Skin carcinoma	78	0.0	0.0	0.0	0.0	1.6	1.6	1.6	0.0	1.6	1.6	4.8	3.3	6.5	8.2	8.2	14.8	13.2	19.6	14.4	25.1
XIf	Other and unspecified carcinoma	152	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	3.2	4.8	16.1	14.6	11.5	26.3	14.8	19.8	28.0	47.3	30.4	26.7
XII	Other and unspecified malignant neoplasm	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	0.0
XIIa	Other specified malignant tumour	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0
XIIb	Other unspecified malignant tumour	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0
I-XII	**All tumours**	**2,415**	**317.6**	**225.6**	**195.0**	**202.6**	**163.0**	**126.1**	**156.2**	**101.3**	**119.6**	**110.7**	**113.0**	**128.4**	**180.0**	**220.1**	**181.2**	**216.0**	**253.4**	**285.3**	**305.4**	**304.5**

Source: Belgian Cancer Registry

Appendix 13: Observed survival for both sexes, children and adolescents (0-19y), Belgium 2004-2020

Belgium 2004-2020		Children and adolescents (0-19y)									
		N at risk	Observed survival					95% CI			
			1 yr	3 yr	5 yr	10 yr	15 yr	1 yr	3 yr	5 yr	10 yr	15 yr
I	Leukaemia, myeloproliferative and myelodysplastic disease	1,861	93.2	87.0	85.3	84.0	83.6	[91.9:94.2]	[85.4:88.5]	[83.6:86.8]	[82.2:85.6]	[81.7:85.3]
Ia	Lymphoid leukaemia	1,347	95.8	90.9	89.2	87.9	87.5	[94.6:96.7]	[89.2:92.4]	[87.4:90.8]	[86.0:89.6]	[85.5:89.3]
Ib	Acute myeloid leukaemia	294	80.9	67.5	65.5	64.3	63.4	[76.0:85.0]	[61.9:72.7]	[59.8:70.8]	[58.4:69.7]	[57.4:69.0]
Ic	Chronic myeloproliferative disease	91	98.9	96.5	94.1	92.7	92.7	[94.0:99.8]	[90.3:98.8]	[86.9:97.5]	[84.9:96.6]	[84.9:96.6]
Id	Myelodysplastic syndrome and other myeloproliferative disease	116	89.7	83.4	83.4	82.4	82.4	[82.8:94.0]	[75.6:89.1]	[75.6:89.1]	[74.3:88.3]	[74.3:88.3]
Ie	Unspecified and other specified leukaemia	17	82.4	76.0	-	-	-	[59.0:93.8]	[52.0:90.3]	-	-	-
II	Lymphoma and reticuloendothelial neoplasm	1,473	97.6	95.9	95.6	95.0	94.8	[96.7:98.3]	[94.8:96.8]	[94.4:96.6]	[93.7:96.0]	[93.4:95.9]
IIa	Hodgkin lymphoma	748	99.5	98.1	97.7	96.8	96.8	[98.6:99.8]	[96.8:98.8]	[96.3:98.6]	[95.1:98.0]	[95.1:98.0]
IIb	Non-Hodgkin lymphoma	275	93.5	90.0	89.6	88.5	88.5	[89.9:95.8]	[85.9:93.1]	[85.4:92.7]	[84.0:91.9]	[84.0:91.9]
IIc	Burkitt lymphoma	218	96.8	96.3	95.8	95.8	94.2	[93.5:98.4]	[92.9:98.1]	[92.2:97.8]	[92.2:97.8]	[88.8:97.1]
IId	Miscellaneous lymphoreticular neoplasm	218	98.2	96.8	96.8	96.8	96.8	[95.4:99.3]	[93.5:98.4]	[93.5:98.4]	[93.5:98.4]	[93.5:98.4]
III	CNS and miscellaneous intracranial and intraspinal neoplasm	1,945	90.2	83.7	81.5	77.9	76.0	[88.8:91.4]	[82.0:85.3]	[79.6:83.2]	[75.8:79.8]	[73.8:78.2]
IIIa	Ependymoma and choroid plexus tumour	182	91.8	86.7	81.4	77.5	75.9	[86.8:94.9]	[80.9:90.9]	[74.8:86.5]	[70.4:83.3]	[68.3:82.2]
IIIb	Astrocytoma	734	90.9	83.6	82.4	79.0	76.9	[88.6:92.7]	[80.7:86.1]	[79.4:85.0]	[75.7:82.0]	[73.2:80.2]
IIIc	Intracranial and intraspinal embryonal tumour	240	78.6	66.6	60.3	52.0	51.0	[73.0:83.4]	[60.3:72.3]	[53.8:66.4]	[45.2:58.7]	[44.1:57.9]
IIId	Other glioma	210	80.5	64.4	62.7	60.0	58.4	[74.6:85.3]	[57.7:70.6]	[55.9:69.0]	[52.9:66.8]	[50.8:65.7]
IIIe	Other specified intracranial and intraspinal neoplasm	428	97.4	97.4	96.8	94.6	93.2	[95.4:98.6]	[95.4:98.6]	[94.6:98.1]	[91.4:96.7]	[89.3:95.8]
IIIf	Unspecified intracranial and intraspinal neoplasm	161	96.3	96.3	94.6	94.6	90.8	[92.1:98.3]	[92.1:98.3]	[89.6:97.3]	[89.6:97.3]	[79.5:96.2]
IV	Neuroblastoma and other peripheral nervous cell tumour	387	94.3	84.3	80.2	77.9	77.3	[91.5:96.2]	[80.2:87.6]	[75.8:84.0]	[73.2:82.0]	[72.5:81.5]
IVa	Neuroblastoma and ganglioneuroblastoma	355	94.1	83.4	79.4	76.8	76.2	[91.1:96.1]	[79.1:87.0]	[74.7:83.4]	[71.8:81.2]	[71.1:80.7]
IVb	Other peripheral nervous cell tumour	32	96.9	93.6	89.9	89.9	-	[84.3:99.4]	[79.5:98.2]	[74.0:96.5]	[74.0:96.5]	-
V	Retinoblastoma	139	100.0	97.8	97.8	97.8	97.8	[100.0:100.0]	[93.8:99.3]	[93.8:99.3]	[93.8:99.3]	[93.8:99.3]
VI	Renal tumour	280	96.0	93.3	92.1	92.1	92.1	[93.0:97.8]	[89.7:95.8]	[88.2:94.8]	[88.2:94.8]	[88.2:94.8]
VIa	Nephroblastoma and other nonepithelial renal tumour	256	97.2	94.7	93.8	93.8	93.8	[94.4:98.7]	[91.1:96.9]	[90.0:96.2]	[90.0:96.2]	[90.0:96.2]
VII	Hepatic tumour	64	90.6	85.6	83.5	80.7	-	[81.0:95.6]	[74.8:92.3]	[72.1:90.8]	[68.2:89.1]	-
VIIa	Hepatoblastoma	48	91.7	87.1	87.1	87.1	-	[80.4:96.7]	[74.6:94.0]	[74.6:94.0]	[74.6:94.0]	-

Source: Belgian Cancer Registry

Appendix 13: Observed survival for both sexes, children and adolescents (0-19y), Belgium 2004-2020

Belgium 2004-2020		Children and adolescents (0-19y)									
		N at risk	Observed survival					95% CI				
			1 yr	3 yr	5 yr	10 yr	15 yr	1 yr	3 yr	5 yr	10 yr	15 yr
VIII	Malignant bone tumour	434	94.7	81.9	75.1	70.5	67.8	[92.2:96.4]	[77.9:85.3]	[70.6:79.1]	[65.6:74.9]	[62.4:72.8]
VIIIa	Osteosarcoma	220	94.5	84.2	77.2	73.2	72.2	[90.7:96.8]	[78.7:88.5]	[70.9:82.4]	[66.4:79.0]	[65.2:78.2]
VIIIb	Chondrosarcoma	20	100.0	100.0	89.5	89.5	-	[100.0:100.0]	[100.0:100.0]	[68.6:97.1]	[68.6:97.1]	-
VIIIc	Ewing tumour and related sarcoma of bone	171	93.5	74.1	68.4	62.7	57.9	[88.8:96.4]	[66.8:80.2]	[60.8:75.2]	[54.4:70.3]	[48.7:66.6]
IX	Soft tissue and other extraosseous sarcoma	492	90.8	77.1	72.8	70.8	69.3	[87.9:93.1]	[73.2:80.7]	[68.5:76.6]	[66.4:74.9]	[64.7:73.6]
IXa	Rhabdomyosarcoma	186	92.4	76.4	69.4	65.8	63.1	[87.7:95.4]	[69.7:82.0]	[62.1:75.8]	[58.1:72.7]	[54.9:70.6]
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	44	86.4	79.3	76.6	76.6	-	[73.3:93.6]	[65.2:88.7]	[62.0:86.8]	[62.0:86.8]	-
IXd	Other specified soft tissue sarcoma	228	90.3	78.8	76.2	75.0	75.0	[85.7:93.5]	[73.0:83.7]	[70.1:81.4]	[68.7:80.3]	[68.7:80.3]
IXe	Unspecified soft tissue sarcoma	30	90.0	62.4	58.0	-	-	[74.4:96.5]	[44.3:77.6]	[39.7:74.3]	-	-
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	464	98.7	96.5	95.8	95.2	94.7	[97.2:99.4]	[94.4:97.8]	[93.5:97.3]	[92.7:96.8]	[92.0:96.5]
Xa	Intracranial and intraspinal germ cell tumour	78	97.4	94.8	93.4	91.6	91.6	[91.1:99.3]	[87.3:97.9]	[85.4:97.1]	[82.8:96.1]	[82.8:96.1]
Xb	Malignant extracranial and extragonadal germ cell tumour	68	97.1	95.6	95.6	95.6	95.6	[89.9:99.2]	[87.8:98.5]	[87.8:98.5]	[87.8:98.5]	[87.8:98.5]
Xc	Malignant gonadal germ cell tumour	299	99.7	97.6	97.2	97.2	97.2	[98.1:99.9]	[95.2:98.8]	[94.6:98.6]	[94.6:98.6]	[94.6:98.6]
XI	Other malignant epithelial neoplasm and melanoma	1,105	98.5	96.6	95.8	94.4	93.1	[97.7:99.1]	[95.4:97.6]	[94.4:96.8]	[92.7:95.7]	[90.8:94.8]
XIb	Thyroid carcinoma	212	100.0	99.5	99.5	98.7	97.2	[100.0:100.0]	[97.1:99.9]	[97.1:99.9]	[95.2:99.6]	[91.4:99.1]
XIc	Nasopharyngeal carcinoma	24	100.0	100.0	90.8	-	-	[100.0:100.0]	[100.0:100.0]	[71.7:97.5]	-	-
XId	Melanoma	226	99.6	97.7	97.3	94.7	94.7	[97.5:99.9]	[94.8:99.0]	[94.2:98.7]	[90.3:97.1]	[90.3:97.1]
XIe	Skin carcinoma	179	100.0	98.8	98.8	97.8	96.2	[100.0:100.0]	[95.8:99.7]	[95.8:99.7]	[93.7:99.3]	[90.0:98.6]
XIf	Other and unspecified carcinoma	455	96.9	94.6	93.3	92.4	91.8	[94.9:98.2]	[92.1:96.4]	[90.5:95.3]	[89.5:94.6]	[88.5:94.2]
I-XII	**All tumours**	8,609	94.4	89.0	87.2	85.3	84.4	[94.4:94.4]	[89.0:89.0]	[87.2:87.2]	[85.3:85.3]	**[84.4:84.4]**

Source: Belgian Cancer Registry

N at risk: Number of patients at risk at start of survival analysis

1,3,5,10,15 yr OS: one, three, five, ten and fifteen-year observed survival (%)

95% CI: 95% confidence interval of the observed survival (%)

Observed survival calculated on less than 30 patients (N at risk) are purely indicative and no strong conclusions can be drawn.

Appendix 14: Observed survival for boys, children and adolescents (0-19y), Belgium 2004-2020

Belgium 2004-2020		Boys (0-19y)									
		N at risk	Observed survival					95% CI			
			1 yr	3 yr	5 yr	10 yr	15 yr	1 yr	3 yr	5 yr	10 yr	15 yr
I	Leukaemia, myeloproliferative and myelodysplastic disease	1,059	92.9	86.7	84.6	83.3	83.0	[91.2:94.3]	[84.5:88.6]	[82.2:86.7]	[80.8:85.5]	[80.5:85.3]
Ia	Lymphoid leukaemia	788	95.3	90.3	88.3	87.0	86.7	[93.6:96.6]	[88.0:92.2]	[85.8:90.5]	[84.4:89.3]	[83.9:89.0]
Ib	Acute myeloid leukaemia	149	79.7	66.4	64.0	62.6	62.6	[72.5:85.4]	[58.4:73.6]	[55.9:71.4]	[54.2:70.3]	[54.2:70.3]
Ic	Chronic myeloproliferative disease	44	97.7	95.2	90.1	90.1	-	[88.2:99.6]	[84.1:98.7]	[77.1:96.1]	[77.1:96.1]	-
Id	Myelodysplastic syndrome and other myeloproliferative disease	72	88.9	82.9	82.9	81.1	-	[79.6:94.3]	[72.5:90.0]	[72.5:90.0]	[70.3:88.7]	-
Ie	Unspecified and other specified leukaemia	9	-	-	-	-	-	-	-	-	-	-
II	Lymphoma and reticuloendothelial neoplasm	873	97.2	95.9	95.4	94.5	94.5	[95.9:98.1]	[94.4:97.1]	[93.8:96.6]	[92.6:95.9]	[92.6:95.9]
IIa	Hodgkin lymphoma	399	99.7	98.9	98.3	97.0	97.0	[98.6:100.0]	[97.3:99.6]	[96.4:99.2]	[94.3:98.5]	[94.3:98.5]
IIb	Non-Hodgkin lymphoma	165	92.1	89.0	88.3	86.4	86.4	[87.0:95.3]	[83.2:92.9]	[82.4:92.4]	[80.1:91.0]	[80.1:91.0]
IIc	Burkitt lymphoma	173	96.5	95.9	95.3	95.3	95.3	[92.6:98.4]	[91.8:98.0]	[90.9:97.6]	[90.9:97.6]	[90.9:97.6]
IId	Miscellaneous lymphoreticular neoplasm	127	97.6	96.0	96.0	96.0	96.0	[93.3:99.2]	[91.1:98.3]	[91.1:98.3]	[91.1:98.3]	[91.1:98.3]
III	CNS and miscellaneous intracranial and intraspinal neoplasm	1,060	90.5	83.8	81.0	77.1	75.6	[88.6:92.2]	[81.4:85.9]	[78.5:83.3]	[74.3:79.7]	[72.5:78.5]
IIIa	Ependymoma and choroid plexus tumour	94	91.5	88.2	81.6	77.0	73.8	[84.1:95.6]	[80.1:93.3]	[72.0:88.4]	[66.6:84.9]	[61.8:83.0]
IIIb	Astrocytoma	383	91.1	83.8	82.6	79.6	77.4	[87.8:93.6]	[79.8:87.2]	[78.4:86.1]	[75.0:83.5]	[72.2:81.8]
IIIc	Intracranial and intraspinal embryonal tumour	148	80.2	66.8	58.8	49.7	49.7	[73.1:85.9]	[58.8:74.0]	[50.5:66.7]	[41.0:58.5]	[41.0:58.5]
IIId	Other glioma	121	81.0	64.3	61.3	56.6	56.6	[73.1:87.0]	[55.5:72.3]	[52.3:69.6]	[46.9:65.8]	[46.9:65.8]
IIIe	Other specified intracranial and intraspinal neoplasm	238	98.7	98.7	98.2	96.0	96.0	[96.3:99.6]	[96.3:99.6]	[95.3:99.3]	[91.8:98.1]	[91.8:98.1]
IIIf	Unspecified intracranial and intraspinal neoplasm	81	96.3	96.3	94.6	94.6	-	[89.7:98.7]	[89.7:98.7]	[86.8:97.9]	[86.8:97.9]	-
IV	Neuroblastoma and other peripheral nervous cell tumour	211	92.4	81.0	76.5	74.4	73.4	[88.0:95.3]	[75.1:85.8]	[70.1:81.9]	[67.7:80.1]	[66.5:79.3]
IVa	Neuroblastoma and ganglioneuroblastoma	190	92.1	80.0	75.6	73.2	72.1	[87.3:95.1]	[73.6:85.1]	[68.7:81.3]	[66.0:79.3]	[64.7:78.4]
IVb	Other peripheral nervous cell tumour	21	95.2	90.5	84.8	-	-	[77.3:99.2]	[71.1:97.3]	[63.4:94.7]	-	-
V	Retinoblastoma	78	100.0	97.4	97.4	97.4	97.4	[100.0:100.0]	[91.1:99.3]	[91.1:99.3]	[91.1:99.3]	[91.1:99.3]
VI	Renal tumour	136	95.5	92.3	90.5	90.5	90.5	[90.5:97.9]	[86.4:95.8]	[84.1:94.5]	[84.1:94.5]	[84.1:94.5]
VIa	Nephroblastoma and other nonepithelial renal tumour	128	96.8	94.2	92.3	92.3	92.3	[92.1:98.7]	[88.5:97.2]	[86.0:95.9]	[86.0:95.9]	[86.0:95.9]
VII	Hepatic tumour	33	84.8	81.6	77.7	72.5	-	[69.1:93.3]	[65.2:91.3]	[60.4:88.8]	[53.7:85.7]	-
VIIa	Hepatoblastoma	23	87.0	82.1	82.1	-	-	[67.9:95.5]	[61.9:92.8]	[61.9:92.8]	-	-

Source: Belgian Cancer Registry

Appendix 14: Observed survival for boys, children and adolescents (0-19y), Belgium 2004-2020

	Belgium 2004-2020	Boys (0-19y)									
		N at risk	Observed survival					95% CI				
			1 yr	3 yr	5 yr	10 yr	15 yr	1 yr	3 yr	5 yr	10 yr	15 yr
VIII	Malignant bone tumour	254	93.7	78.2	71.2	66.8	65.9	[90.0:96.1]	[72.6:83.0]	[65.1:76.7]	[60.2:72.7]	[59.2:72.1]
VIIIa	Osteosarcoma	134	92.5	81.7	74.5	72.0	70.4	[86.7:95.9]	[74.2:87.4]	[66.1:81.4]	[63.2:79.4]	[61.2:78.2]
VIIIb	Chondrosarcoma	11	100.0	100.0	100.0	-	-	[100.0:100.0]	[100.0:100.0]	[100.0:100.0]	-	-
VIIIc	Ewing tumour and related sarcoma of bone	101	94.1	69.2	62.0	55.8	55.8	[87.6:97.2]	[59.2:77.7]	[51.6:71.3]	[45.0:66.0]	[45.0:66.0]
IX	Soft tissue and other extraosseous sarcoma	265	89.4	73.6	68.2	65.1	64.1	[85.1:92.5]	[67.9:78.6]	[62.2:73.7]	[58.7:70.9]	[57.5:70.1]
IXa	Rhabdomyosarcoma	119	90.7	75.0	69.0	63.0	60.8	[84.1:94.7]	[66.4:82.0]	[59.9:76.9]	[53.0:72.0]	[50.2:70.4]
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	19	78.9	73.7	67.5	-	-	[56.7:91.5]	[51.2:88.2]	[44.7:84.3]	-	-
IXd	Other specified soft tissue sarcoma	105	89.4	73.4	68.9	67.7	67.7	[82.1:94.0]	[64.1:81.1]	[59.2:77.2]	[57.8:76.1]	[57.8:76.1]
IXe	Unspecified soft tissue sarcoma	19	89.5	-	-	-	-	[68.6:97.1]	-	-	-	-
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	297	98.7	97.6	97.2	96.8	96.1	[96.6:99.5]	[95.2:98.8]	[94.6:98.6]	[94.0:98.3]	[92.8:97.9]
Xa	Intracranial and intraspinal germ cell tumour	53	98.1	96.2	94.1	91.6	91.6	[90.1:99.7]	[87.0:98.9]	[83.9:98.0]	[80.2:96.7]	[80.2:96.7]
Xb	Malignant extracranial and extragonadal germ cell tumour	22	90.9	90.9	90.9	-	-	[72.2:97.5]	[72.2:97.5]	[72.2:97.5]	-	-
Xc	Malignant gonadal germ cell tumour	219	99.5	98.6	98.6	98.6	98.6	[97.5:99.9]	[96.0:99.5]	[96.0:99.5]	[96.0:99.5]	[96.0:99.5]
XI	Other malignant epithelial neoplasm and melanoma	419	97.6	94.8	93.4	92.2	91.6	[95.7:98.7]	[92.3:96.6]	[90.5:95.5]	[88.9:94.5]	[88.2:94.2]
XIb	Thyroid carcinoma	50	100.0	97.9	97.9	97.9	-	[100.0:100.0]	[89.1:99.6]	[89.1:99.6]	[89.1:99.6]	-
XIc	Nasopharyngeal carcinoma	17	100.0	100.0	86.3	-	-	[100.0:100.0]	[100.0:100.0]	[60.8:96.2]	-	-
XId	Melanoma	84	100.0	97.6	97.6	92.5	92.5	[100.0:100.0]	[91.6:99.3]	[91.6:99.3]	[83.4:96.8]	[83.4:96.8]
XIe	Skin carcinoma	77	100.0	97.1	97.1	97.1	-	[100.0:100.0]	[90.2:99.2]	[90.2:99.2]	[90.2:99.2]	-
XIf	Other and unspecified carcinoma	188	94.7	92.5	90.7	90.7	90.7	[90.5:97.1]	[87.8:95.5]	[85.5:94.1]	[85.5:94.1]	[85.5:94.1]
I-XII	**All tumours**	4,665	94.0	88.2	85.8	83.9	83.2	[94.0:94.0]	[88.2:88.2]	[85.8:85.8]	[83.9:83.9]	**[83.2:83.2]**

Source: Belgian Cancer Registry

N at risk: Number of patients at risk at start of survival analysis

1,3,5,10,15 yr OS: one, three, five, ten and fifteen-year observed survival (%)

95% CI: 95% confidence interval of the observed survival (%)

Observed survival calculated on less than 30 patients (N at risk) are purely indicative and no strong conclusions can be drawn.

Appendix 15: Observed survival for girls, children and adolescents (0-19y), Belgium 2004-2020

Belgium 2004-2020		Girls (0-19y)									
		N at risk	Observed survival					95% CI			
			1 yr	3 yr	5 yr	10 yr	15 yr	1 yr	3 yr	5 yr	10 yr	15 yr
I	Leukaemia, myeloproliferative and myelodysplastic disease	802	93.5	87.4	86.2	84.9	84.2	[91.6:95.0]	[84.9:89.5]	[83.6:88.4]	[82.1:87.3]	[81.3:86.8]
Ia	Lymphoid leukaemia	559	96.4	91.8	90.5	89.2	88.7	[94.5:97.7]	[89.2:93.8]	[87.7:92.7]	[86.2:91.6]	[85.5:91.2]
Ib	Acute myeloid leukaemia	145	82.1	68.6	67.0	65.9	64.3	[75.0:87.5]	[60.6:75.7]	[58.9:74.2]	[57.6:73.3]	[55.6:72.1]
Ic	Chronic myeloproliferative disease	47	100.0	97.8	97.8	94.8	-	[100.0:100.0]	[88.4:99.6]	[88.4:99.6]	[82.7:98.6]	-
Id	Myelodysplastic syndrome and other myeloproliferative disease	44	90.9	84.1	84.1	84.1	-	[78.8:96.4]	[70.6:92.1]	[70.6:92.1]	[70.6:92.1]	-
Ie	Unspecified and other specified leukaemia	8	-	-	-	-	-	-	-	-	-	-
II	Lymphoma and reticuloendothelial neoplasm	600	98.2	95.9	95.9	95.7	95.2	[96.7:99.0]	[94.0:97.2]	[94.0:97.2]	[93.7:97.1]	[92.9:96.8]
IIa	Hodgkin lymphoma	349	99.1	97.1	97.1	96.7	96.7	[97.5:99.7]	[94.7:98.4]	[94.7:98.4]	[94.1:98.1]	[94.1:98.1]
IIb	Non-Hodgkin lymphoma	110	95.5	91.7	91.7	91.7	91.7	[89.8:98.0]	[84.9:95.6]	[84.9:95.6]	[84.9:95.6]	[84.9:95.6]
IIc	Burkitt lymphoma	45	97.8	97.8	97.8	97.8	-	[88.4:99.6]	[88.4:99.6]	[88.4:99.6]	[88.4:99.6]	-
IId	Miscellaneous lymphoreticular neoplasm	91	98.9	97.8	97.8	97.8	97.8	[94.0:99.8]	[92.2:99.4]	[92.2:99.4]	[92.2:99.4]	[92.2:99.4]
III	CNS and miscellaneous intracranial and intraspinal neoplasm	885	89.7	83.6	82.0	78.8	76.5	[87.5:91.6]	[80.9:85.9]	[79.3:84.4]	[75.7:81.6]	[73.1:79.6]
IIIa	Ependymoma and choroid plexus tumour	88	92.0	85.1	81.1	78.0	78.0	[84.5:96.1]	[76.2:91.1]	[71.4:88.1]	[67.7:85.7]	[67.7:85.7]
IIIb	Astrocytoma	351	90.6	83.3	82.2	78.4	76.3	[87.1:93.2]	[79.0:86.8]	[77.8:85.9]	[73.4:82.7]	[70.8:81.0]
IIIc	Intracranial and intraspinal embryonal tumour	92	76.1	66.2	62.4	55.4	-	[66.4:83.6]	[56.0:75.0]	[52.1:71.7]	[44.7:65.5]	-
IIId	Other glioma	89	79.8	64.5	64.5	64.5	60.9	[70.3:86.8]	[54.0:73.8]	[54.0:73.8]	[54.0:73.8]	[48.9:71.7]
IIIe	Other specified intracranial and intraspinal neoplasm	190	95.8	95.8	95.1	92.9	88.7	[91.9:97.9]	[91.9:97.9]	[91.0:97.4]	[87.1:96.2]	[79.8:94.0]
IIIf	Unspecified intracranial and intraspinal neoplasm	80	96.3	96.3	94.6	94.6	-	[89.5:98.7]	[89.5:98.7]	[86.7:97.9]	[86.7:97.9]	-
IV	Neuroblastoma and other peripheral nervous cell tumour	176	96.6	88.2	84.7	82.1	82.1	[92.7:98.4]	[82.4:92.2]	[78.4:89.5]	[75.2:87.4]	[75.2:87.4]
IVa	Neuroblastoma and ganglioneuroblastoma	165	96.3	87.4	83.7	81.0	81.0	[92.2:98.3]	[81.3:91.7]	[77.0:88.8]	[73.8:86.6]	[73.8:86.6]
IVb	Other peripheral nervous cell tumour	11	100.0	-	-	-	-	[100.0:100.0]	-	-	-	-
V	Retinoblastoma	61	100.0	98.4	98.4	98.4	98.4	[100.0:100.0]	[91.3:99.7]	[91.3:99.7]	[91.3:99.7]	[91.3:99.7]
VI	Renal tumour	144	96.5	94.3	93.5	93.5	93.5	[92.1:98.5]	[89.2:97.1]	[88.1:96.5]	[88.1:96.5]	[88.1:96.5]
VIa	Nephroblastoma and other nonepithelial renal tumour	128	97.7	95.2	95.2	95.2	95.2	[93.3:99.2]	[89.9:97.8]	[89.9:97.8]	[89.9:97.8]	[89.9:97.8]
VII	Hepatic tumour	31	96.8	90.1	90.1	-	-	[83.8:99.4]	[74.6:96.6]	[74.6:96.6]	-	-
VIIa	Hepatoblastoma	25	96.0	91.8	91.8	-	-	[80.5:99.3]	[74.6:97.7]	[74.6:97.7]	-	-

Source: Belgian Cancer Registry

Appendix 15: Observed survival for girls, children and adolescents (0-19y), Belgium 2004-2020

	Belgium 2004-2020	Girls (0-19y)									
		N at risk	Observed survival					95% CI				
			1 yr	3 yr	5 yr	10 yr	15 yr	1 yr	3 yr	5 yr	10 yr	15 yr
VIII	Malignant bone tumour	180	96.1	86.9	80.5	75.6	70.4	[92.2:98.1]	[81.1:91.1]	[73.9:85.8]	[68.2:81.7]	[61.3:78.2]
VIIIa	Osteosarcoma	86	97.7	88.1	81.3	75.1	75.1	[91.9:99.4]	[79.4:93.4]	[71.4:88.4]	[64.1:83.5]	[64.1:83.5]
VIIIb	Chondrosarcoma	9	-	-	-	-	-	-	-	-	-	-
VIIIc	Ewing tumour and related sarcoma of bone	70	92.8	80.8	77.4	72.4	60.9	[84.2:96.9]	[69.8:88.4]	[65.9:85.8]	[59.8:82.3]	[45.0:74.7]
IX	Soft tissue and other extraosseous sarcoma	227	92.5	81.2	78.0	77.4	75.4	[88.3:95.3]	[75.5:85.8]	[72.0:83.0]	[71.3:82.5]	[68.9:81.0]
IXa	Rhabdomyosarcoma	67	95.5	78.7	69.9	69.9	66.7	[87.6:98.5]	[67.4:86.9]	[57.5:79.9]	[57.5:79.9]	[53.4:77.7]
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	25	92.0	83.8	83.8	-	-	[75.0:97.8]	[65.0:93.5]	[65.0:93.5]	-	-
IXd	Other specified soft tissue sarcoma	123	91.0	83.4	82.4	81.3	81.3	[84.6:94.9]	[75.7:89.0]	[74.6:88.2]	[73.2:87.3]	[73.2:87.3]
IXe	Unspecified soft tissue sarcoma	11	90.9	-	-	-	-	[62.3:98.4]	-	-	-	-
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	167	98.8	94.5	93.2	92.2	92.2	[95.7:99.7]	[89.9:97.1]	[88.2:96.1]	[86.9:95.5]	[86.9:95.5]
Xa	Intracranial and intraspinal germ cell tumour	25	96.0	91.8	91.8	-	-	[80.5:99.3]	[74.6:97.7]	[74.6:97.7]	-	-
Xb	Malignant extracranial and extragonadal germ cell tumour	46	100.0	97.8	97.8	97.8	97.8	[100.0:100.0]	[88.7:99.6]	[88.7:99.6]	[88.7:99.6]	[88.7:99.6]
Xc	Malignant gonadal germ cell tumour	80	100.0	94.8	93.4	93.4	93.4	[100.0:100.0]	[87.5:98.0]	[85.3:97.1]	[85.3:97.1]	[85.3:97.1]
XI	Other malignant epithelial neoplasm and melanoma	686	99.1	97.7	97.2	95.7	94.0	[98.1:99.6]	[96.3:98.6]	[95.7:98.2]	[93.7:97.1]	[90.7:96.1]
XIb	Thyroid carcinoma	162	100.0	100.0	100.0	98.9	96.8	[100.0:100.0]	[100.0:100.0]	[100.0:100.0]	[94.2:99.8]	[88.3:99.2]
XIc	Nasopharyngeal carcinoma	7	-	-	-	-	-	-	-	-	-	-
XId	Melanoma	142	99.3	97.9	97.1	95.9	95.9	[96.1:99.9]	[93.9:99.3]	[92.8:98.9]	[90.6:98.3]	[90.6:98.3]
XIe	Skin carcinoma	102	100.0	100.0	100.0	98.5	98.5	[100.0:100.0]	[100.0:100.0]	[100.0:100.0]	[91.8:99.7]	[91.8:99.7]
XIf	Other and unspecified carcinoma	267	98.5	96.1	95.2	93.7	92.6	[96.2:99.4]	[93.0:97.9]	[91.8:97.2]	[89.8:96.2]	[88.0:95.6]
I-XII	**All tumours**	3,944	95.0	90.1	88.7	87.1	85.8	[95.0:95.0]	[90.1:90.1]	[88.7:88.7]	[87.1:87.1]	**[85.8:85.8]**

Source: Belgian Cancer Registry

N at risk: Number of patients at risk at start of survival analysis

1,3,5,10,15 yr OS: one, three, five, ten and fifteen-year observed survival (%)

95% CI: 95% confidence interval of the observed survival (%)

Observed survival calculated on less than 30 patients (N at risk) are purely indicative and no strong conclusions can be drawn.

Appendix 16: Observed survival for both sexes, children (0-14y), Belgium 2004-2020

Belgium 2004-2020		Children (0-14y)									
		N at risk	Observed survival					95% CI				
			1 yr	3 yr	5 yr	10 yr	15 yr	1 yr	3 yr	5 yr	10 yr	15 yr
I	Leukaemia, myeloproliferative and myelodysplastic disease	1,498	94.0	88.9	87.4	86.2	85.7	[92.7:95.1]	[87.2:90.4]	[85.6:89.0]	[84.3:87.9]	[83.6:87.5]
Ia	Lymphoid leukaemia	1,157	96.2	92.5	91.3	90.1	89.6	[94.9:97.2]	[90.8:93.9]	[89.5:92.8]	[88.1:91.8]	[87.5:91.4]
Ib	Acute myeloid leukaemia	202	82.1	69.3	66.4	65.4	64.1	[76.2:86.8]	[62.6:75.3]	[59.4:72.6]	[58.3:71.8]	[56.8:70.9]
Ic	Chronic myeloproliferative disease	40	97.5	95.0	92.4	89.5	-	[87.1:99.6]	[83.5:98.6]	[80.0:97.4]	[76.0:95.9]	-
Id	Myelodysplastic syndrome and other myeloproliferative disease	90	91.1	84.2	84.2	82.8	-	[83.4:95.4]	[75.2:90.4]	[75.2:90.4]	[73.4:89.3]	-
Ie	Unspecified and other specified leukaemia	13	76.9	-	-	-	-	[49.7:91.8]	-	-	-	-
II	Lymphoma and reticuloendothelial neoplasm	742	97.6	96.6	96.4	95.9	95.5	[96.2:98.5]	[95.0:97.7]	[94.8:97.6]	[94.2:97.2]	[93.6:96.9]
IIa	Hodgkin lymphoma	247	99.6	99.2	99.2	98.1	98.1	[97.7:99.9]	[97.1:99.8]	[97.1:99.8]	[95.2:99.3]	[95.2:99.3]
IIb	Non-Hodgkin lymphoma	117	94.0	89.7	88.6	87.4	87.4	[88.2:97.1]	[82.8:94.0]	[81.5:93.2]	[79.9:92.4]	[79.9:92.4]
IIc	Burkitt lymphoma	176	96.6	96.6	96.6	96.6	94.8	[92.7:98.4]	[92.7:98.4]	[92.7:98.4]	[92.7:98.4]	[88.5:97.7]
IId	Miscellaneous lymphoreticular neoplasm	197	98.5	98.0	98.0	98.0	98.0	[95.6:99.5]	[94.9:99.2]	[94.9:99.2]	[94.9:99.2]	[94.9:99.2]
III	CNS and miscellaneous intracranial and intraspinal neoplasm	1,464	88.5	81.4	79.1	75.7	73.9	[86.8:90.0]	[79.3:83.3]	[76.9:81.2]	[73.3:78.0]	[71.2:76.4]
IIIa	Ependymoma and choroid plexus tumour	152	90.8	84.7	78.2	74.5	72.6	[85.1:94.4]	[78.1:89.6]	[70.6:84.2]	[66.4:81.1]	[63.9:79.9]
IIIb	Astrocytoma	568	90.5	83.8	82.9	79.8	77.9	[87.8:92.6]	[80.5:86.6]	[79.6:85.8]	[76.0:83.1]	[73.7:81.5]
IIIc	Intracranial and intraspinal embryonal tumour	216	76.7	64.7	59.2	51.4	50.3	[70.6:81.9]	[58.1:70.8]	[52.4:65.7]	[44.3:58.5]	[43.1:57.6]
IIId	Other glioma	175	79.4	61.9	59.9	58.9	57.1	[72.8:84.8]	[54.5:68.9]	[52.4:67.0]	[51.3:66.1]	[48.9:64.9]
IIIe	Other specified intracranial and intraspinal neoplasm	238	96.2	96.2	95.7	93.2	92.0	[93.0:98.0]	[93.0:98.0]	[92.2:97.6]	[88.4:96.1]	[86.4:95.4]
IIIf	Unspecified intracranial and intraspinal neoplasm	119	95.8	95.8	94.6	94.6	-	[90.5:98.2]	[90.5:98.2]	[88.7:97.5]	[88.7:97.5]	-
IV	Neuroblastoma and other peripheral nervous cell tumour	371	94.6	84.4	80.5	78.5	78.0	[91.8:96.5]	[80.3:87.8]	[76.0:84.4]	[73.8:82.6]	[73.1:82.2]
IVa	Neuroblastoma and ganglioneuroblastoma	352	94.6	83.9	79.8	77.6	77.0	[91.7:96.5]	[79.6:87.4]	[75.1:83.8]	[72.7:81.9]	[72.0:81.4]
IVb	Other peripheral nervous cell tumour	19	94.7	94.7	94.7	-	-	[75.4:99.1]	[75.4:99.1]	[75.4:99.1]	-	-
V	Retinoblastoma	139	100.0	97.8	97.8	97.8	97.8	[100.0:100.0]	[93.8:99.3]	[93.8:99.3]	[93.8:99.3]	[93.8:99.3]
VI	Renal tumour	263	96.5	94.1	93.2	93.2	93.2	[93.6:98.2]	[90.4:96.4]	[89.3:95.7]	[89.3:95.7]	[89.3:95.7]
VIa	Nephroblastoma and other nonepithelial renal tumour	251	97.2	94.6	93.6	93.6	93.6	[94.3:98.6]	[91.0:96.8]	[89.8:96.1]	[89.8:96.1]	[89.8:96.1]
VII	Hepatic tumour	59	91.5	86.1	86.1	83.0	-	[81.6:96.3]	[74.9:92.8]	[74.9:92.8]	[70.3:91.0]	-
VIIa	Hepatoblastoma	48	91.7	87.1	87.1	87.1	-	[80.4:96.7]	[74.6:94.0]	[74.6:94.0]	[74.6:94.0]	-

Source: Belgian Cancer Registry

Appendix 16: Observed survival for both sexes, children (0-14y), Belgium 2004-2020

	Belgium 2004-2020	Children (0-14y)									
		N at risk	Observed survival					95% CI				
			1 yr	3 yr	5 yr	10 yr	15 yr	1 yr	3 yr	5 yr	10 yr	15 yr
VIII	Malignant bone tumour	247	95.9	84.6	78.0	73.2	69.5	[92.7:97.8]	[79.4:88.6]	[72.2:82.9]	[66.8:78.7]	[62.0:76.1]
VIIIa	Osteosarcoma	116	97.4	86.1	80.1	77.8	76.2	[92.7:99.1]	[78.5:91.2]	[71.6:86.5]	[69.0:84.7]	[66.9:83.5]
VIIIb	Chondrosarcoma	5	-	-	-	-	-	-	-	-	-	-
VIIIc	Ewing tumour and related sarcoma of bone	114	93.8	80.6	74.4	67.2	62.1	[87.8:97.0]	[72.2:87.0]	[65.3:81.8]	[57.0:76.0]	[50.6:72.5]
IX	Soft tissue and other extraosseous sarcoma	309	91.2	80.1	75.5	73.3	70.7	[87.5:93.9]	[75.3:84.2]	[70.2:80.1]	[67.7:78.2]	[64.6:76.2]
IXa	Rhabdomyosarcoma	149	92.6	80.0	73.7	70.3	67.1	[87.2:95.8]	[72.8:85.7]	[65.7:80.3]	[61.8:77.6]	[58.0:75.2]
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	25	96.0	96.0	90.9	90.9	-	[80.5:99.3]	[80.5:99.3]	[72.1:97.5]	[72.1:97.5]	-
IXd	Other specified soft tissue sarcoma	118	88.9	80.0	77.9	76.7	76.7	[81.9:93.4]	[71.7:86.3]	[69.4:84.6]	[68.0:83.6]	[68.0:83.6]
IXe	Unspecified soft tissue sarcoma	16	87.5	-	-	-	-	[64.0:96.5]	-	-	-	-
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	184	98.9	96.7	95.5	94.8	94.8	[96.1:99.7]	[93.0:98.5]	[91.3:97.7]	[90.3:97.2]	[90.3:97.2]
Xa	Intracranial and intraspinal germ cell tumour	54	98.1	96.2	94.1	91.4	-	[90.2:99.7]	[87.1:98.9]	[84.1:98.0]	[79.8:96.7]	-
Xb	Malignant extracranial and extragonadal germ cell tumour	57	98.2	96.5	96.5	96.5	96.5	[90.7:99.7]	[88.1:99.0]	[88.1:99.0]	[88.1:99.0]	[88.1:99.0]
Xc	Malignant gonadal germ cell tumour	70	100.0	97.1	95.4	95.4	-	[100.0:100.0]	[90.0:99.2]	[87.4:98.4]	[87.4:98.4]	-
XI	Other malignant epithelial neoplasm and melanoma	386	99.2	97.6	96.0	94.6	92.6	[97.7:99.7]	[95.5:98.7]	[93.4:97.6]	[91.4:96.7]	[87.6:95.6]
XIb	Thyroid carcinoma	63	100.0	100.0	100.0	97.1	-	[100.0:100.0]	[100.0:100.0]	[100.0:100.0]	[85.5:99.5]	-
XIc	Nasopharyngeal carcinoma	13	100.0	100.0	92.3	-	-	[100.0:100.0]	[100.0:100.0]	[66.7:98.6]	-	-
XId	Melanoma	58	100.0	98.2	96.4	91.8	91.8	[100.0:100.0]	[90.7:99.7]	[87.8:99.0]	[80.5:96.8]	[80.5:96.8]
XIe	Skin carcinoma	71	100.0	100.0	100.0	100.0	96.4	[100.0:100.0]	[100.0:100.0]	[100.0:100.0]	[100.0:100.0]	[82.3:99.4]
XIf	Other and unspecified carcinoma	177	98.3	95.9	93.8	93.8	93.8	[95.1:99.4]	[91.7:98.0]	[89.0:96.6]	[89.0:96.6]	[89.0:96.6]
I-XII	**All tumours**	5,643	93.7	88.3	86.4	84.5	83.4	[93.1:94.4]	[87.4:89.1]	[85.4:87.2]	[83.5:85.5]	[82.3:84.5]

Source: Belgian Cancer Registry

N at risk: Number of patients at risk at start of survival analysis

1,3,5,10,15 yr OS: one, three, five, ten and fifteen-year observed survival (%)

95% CI: 95% confidence interval of the observed survival (%)

Observed survival calculated on less than 30 patients (N at risk) are purely indicative and no strong conclusions can be drawn.

Appendix 17: Observed survival for boys, children (0-14y), Belgium 2004-2020

Belgium 2004-2020		N at risk	Boys (0-14y)									
			Observed survival					95% CI				
			1 yr	3 yr	5 yr	10 yr	15 yr	1 yr	3 yr	5 yr	10 yr	15 yr
I	Leukaemia, myeloproliferative and myelodysplastic disease	833	93.6	88.5	86.6	85.2	84.8	[91.8:95.1]	[86.1:90.5]	[84.1:88.8]	[82.4:87.5]	[82.0:87.3]
Ia	Lymphoid leukaemia	660	96.1	92.1	90.7	89.3	88.9	[94.3:97.3]	[89.8:93.9]	[88.1:92.7]	[86.6:91.6]	[86.0:91.2]
Ib	Acute myeloid leukaemia	97	79.2	66.3	62.6	60.5	-	[70.0:86.1]	[56.3:75.0]	[52.4:71.8]	[49.8:70.2]	-
Ic	Chronic myeloproliferative disease	17	94.1	94.1	88.2	-	-	[73.0:99.0]	[73.0:99.0]	[65.7:96.7]	-	-
Id	Myelodysplastic syndrome and other myeloproliferative disease	57	87.7	80.2	80.2	77.9	-	[76.8:93.9]	[67.9:88.6]	[67.9:88.6]	[65.0:86.9]	-
Ie	Unspecified and other specified leukaemia	5	-	-	-	-	-	-	-	-	-	-
II	Lymphoma and reticuloendothelial neoplasm	479	97.3	96.6	96.4	95.9	95.9	[95.4:98.4]	[94.6:97.9]	[94.3:97.7]	[93.6:97.3]	[93.6:97.3]
IIa	Hodgkin lymphoma	149	100.0	100.0	100.0	99.1	99.1	[100.0:100.0]	[100.0:100.0]	[100.0:100.0]	[95.0:99.8]	[95.0:99.8]
IIb	Non-Hodgkin lymphoma	74	91.9	89.2	87.6	85.7	85.7	[83.4:96.2]	[80.1:94.4]	[78.0:93.3]	[75.5:92.1]	[75.5:92.1]
IIc	Burkitt lymphoma	137	96.3	96.3	96.3	96.3	96.3	[91.7:98.4]	[91.7:98.4]	[91.7:98.4]	[91.7:98.4]	[91.7:98.4]
IId	Miscellaneous lymphoreticular neoplasm	116	98.3	97.4	97.4	97.4	97.4	[93.9:99.5]	[92.6:99.1]	[92.6:99.1]	[92.6:99.1]	[92.6:99.1]
III	CNS and miscellaneous intracranial and intraspinal neoplasm	800	89.5	82.0	78.9	75.2	73.3	[87.1:91.4]	[79.1:84.5]	[75.8:81.7]	[71.9:78.3]	[69.6:76.7]
IIIa	Ependymoma and choroid plexus tumour	77	90.9	86.9	78.5	72.6	-	[82.4:95.5]	[77.5:92.7]	[67.3:86.6]	[60.5:82.2]	-
IIIb	Astrocytoma	291	91.7	84.6	83.4	80.8	78.0	[88.0:94.4]	[80.0:88.3]	[78.7:87.3]	[75.6:85.1]	[71.9:83.1]
IIIc	Intracranial and intraspinal embryonal tumour	136	78.5	65.4	58.4	49.9	49.9	[70.8:84.6]	[57.0:73.0]	[49.7:66.6]	[40.8:58.9]	[40.8:58.9]
IIId	Other glioma	104	80.8	63.3	59.9	58.3	58.3	[72.2:87.2]	[53.7:72.0]	[50.1:68.9]	[48.3:67.6]	[48.3:67.6]
IIIe	Other specified intracranial and intraspinal neoplasm	139	98.6	98.6	98.6	96.2	96.2	[94.9:99.6]	[94.9:99.6]	[94.9:99.6]	[90.2:98.5]	[90.2:98.5]
IIIf	Unspecified intracranial and intraspinal neoplasm	56	96.4	96.4	93.8	93.8	-	[87.9:99.0]	[87.9:99.0]	[83.1:97.9]	[83.1:97.9]	-
IV	Neuroblastoma and other peripheral nervous cell tumour	202	92.5	81.2	77.1	74.8	73.8	[88.1:95.4]	[75.1:86.0]	[70.6:82.5]	[68.0:80.6]	[66.8:79.8]
IVa	Neuroblastoma and ganglioneuroblastoma	189	92.6	80.4	76.0	73.5	72.5	[87.9:95.5]	[74.0:85.5]	[69.1:81.7]	[66.4:79.6]	[65.1:78.8]
IVb	Other peripheral nervous cell tumour	13	92.3	92.3	92.3	-	-	[66.7:98.6]	[66.7:98.6]	[66.7:98.6]	-	-
V	Retinoblastoma	78	100.0	97.4	97.4	97.4	97.4	[100.0:100.0]	[91.1:99.3]	[91.1:99.3]	[91.1:99.3]	[91.1:99.3]
VI	Renal tumour	129	96.0	93.5	91.6	91.6	91.6	[91.0:98.3]	[87.6:96.7]	[85.2:95.4]	[85.2:95.4]	[85.2:95.4]
VIa	Nephroblastoma and other nonepithelial renal tumour	125	96.7	94.1	92.1	92.1	92.1	[91.9:98.7]	[88.2:97.1]	[85.7:95.8]	[85.7:95.8]	[85.7:95.8]
VII	Hepatic tumour	29	86.2	82.5	82.5	-	-	[69.4:94.5]	[64.9:92.3]	[64.9:92.3]	-	-
VIIa	Hepatoblastoma	23	87.0	82.1	82.1	-	-	[67.9:95.5]	[61.9:92.8]	[61.9:92.8]	-	-

Source: Belgian Cancer Registry

Appendix 17: Observed survival for boys, children (0-14y), Belgium 2004-2020

Belgium 2004-2020		N at risk	Boys (0-14y)									
			Observed survival					95% CI				
			1 yr	3 yr	5 yr	10 yr	15 yr	1 yr	3 yr	5 yr	10 yr	15 yr
VIII	Malignant bone tumour	131	95.4	82.6	75.6	70.3	68.9	[90.4:97.9]	[75.1:88.3]	[67.3:82.4]	[61.3:77.9]	[59.6:76.8]
VIIIa	Osteosarcoma	61	96.7	85.1	79.7	77.6	-	[88.8:99.1]	[74.1:92.0]	[67.7:88.0]	[65.2:86.5]	-
VIIIb	Chondrosarcoma	3	-	-	-	-	-	-	-	-	-	-
VIIIc	Ewing tumour and related sarcoma of bone	63	93.7	78.2	68.8	61.8	61.8	[84.8:97.5]	[66.1:86.8]	[55.8:79.3]	[48.2:73.8]	[48.2:73.8]
IX	Soft tissue and other extraosseous sarcoma	175	91.4	80.0	73.8	69.9	68.3	[86.2:94.7]	[73.3:85.3]	[66.5:80.0]	[62.0:76.8]	[59.9:75.6]
IXa	Rhabdomyosarcoma	94	91.4	80.1	73.6	67.8	65.0	[84.0:95.6]	[70.7:87.1]	[63.3:81.8]	[56.4:77.4]	[52.8:75.4]
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	13	92.3	92.3	-	-	-	[66.7:98.6]	[66.7:98.6]	-	-	-
IXd	Other specified soft tissue sarcoma	59	91.4	79.1	75.2	73.0	-	[81.4:96.3]	[66.9:87.6]	[62.5:84.7]	[60.0:83.0]	-
IXe	Unspecified soft tissue sarcoma	8	-	-	-	-	-	-	-	-	-	-
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	74	98.6	98.6	97.1	95.4	-	[92.7:99.8]	[92.7:99.8]	[90.1:99.2]	[87.2:98.4]	-
Xa	Intracranial and intraspinal germ cell tumour	34	100.0	100.0	96.7	92.5	-	[100.0:100.0]	[100.0:100.0]	[83.3:99.4]	[76.1:97.9]	-
Xb	Malignant extracranial and extragonadal germ cell tumour	13	92.3	92.3	92.3	-	-	[66.7:98.6]	[66.7:98.6]	[66.7:98.6]	-	-
Xc	Malignant gonadal germ cell tumour	26	100.0	100.0	100.0	100.0	-	[100.0:100.0]	[100.0:100.0]	[100.0:100.0]	[100.0:100.0]	-
XI	Other malignant epithelial neoplasm and melanoma	163	98.2	95.6	93.3	92.1	90.5	[94.7:99.4]	[91.1:97.8]	[88.0:96.3]	[86.1:95.6]	[83.6:94.7]
XIb	Thyroid carcinoma	15	100.0	100.0	-	-	-	[100.0:100.0]	[100.0:100.0]	-	-	-
XIc	Nasopharyngeal carcinoma	11	100.0	100.0	-	-	-	[100.0:100.0]	[100.0:100.0]	-	-	-
XId	Melanoma	23	100.0	95.7	95.7	90.0	-	[100.0:100.0]	[79.0:99.2]	[79.0:99.2]	[69.7:97.3]	-
XIe	Skin carcinoma	34	100.0	100.0	100.0	-	-	[100.0:100.0]	[100.0:100.0]	[100.0:100.0]	-	-
XIf	Other and unspecified carcinoma	79	96.2	93.5	90.6	90.6	90.6	[89.4:98.7]	[85.7:97.2]	[81.9:95.4]	[81.9:95.4]	[81.9:95.4]
I-XII	**All tumours**	3,082	93.6	87.9	85.5	83.3	82.4	[92.6:94.4]	[86.7:89.0]	[84.1:86.7]	[81.9:84.7]	**[80.9:83.9]**

Source: Belgian Cancer Registry

N at risk: Number of patients at risk at start of survival analysis

1,3,5,10,15 yr OS: one, three, five, ten and fifteen-year observed survival (%)

95% CI: 95% confidence interval of the observed survival (%)

Observed survival calculated on less than 30 patients (N at risk) are purely indicative and no strong conclusions can be drawn.

Appendix 18: Observed survival for girls, children (0-14y), Belgium 2004-2020

Belgium 2004-2020		Girls (0-14y)									
		N at risk	Observed survival					95% CI			
			1 yr	3 yr	5 yr	10 yr	15 yr	1 yr	3 yr	5 yr	10 yr	15 yr
I	Leukaemia, myeloproliferative and myelodysplastic disease	665	94.4	89.5	88.4	87.6	86.7	[92.4:95.9]	[86.9:91.6]	[85.7:90.7]	[84.7:89.9]	[83.6:89.3]
Ia	Lymphoid leukaemia	497	96.4	93.0	92.1	91.2	90.6	[94.3:97.7]	[90.4:95.0]	[89.3:94.2]	[88.2:93.5]	[87.4:93.1]
Ib	Acute myeloid leukaemia	105	84.8	72.0	69.7	69.7	67.4	[76.7:90.4]	[62.7:79.8]	[60.2:77.8]	[60.2:77.8]	[57.1:76.3]
Ic	Chronic myeloproliferative disease	23	100.0	95.7	95.7	-	-	[100.0:100.0]	[79.0:99.2]	[79.0:99.2]	-	-
Id	Myelodysplastic syndrome and other myeloproliferative disease	33	97.0	90.9	90.9	90.9	-	[84.7:99.5]	[76.4:96.9]	[76.4:96.9]	[76.4:96.9]	-
Ie	Unspecified and other specified leukaemia	8	-	-	-	-	-	-	-	-	-	-
II	Lymphoma and reticuloendothelial neoplasm	263	98.1	96.5	96.5	96.1	95.1	[95.6:99.2]	[93.5:98.2]	[93.5:98.2]	[92.9:97.9]	[91.0:97.3]
IIa	Hodgkin lymphoma	98	99.0	97.9	97.9	96.6	96.6	[94.4:99.8]	[92.8:99.4]	[92.8:99.4]	[90.3:98.8]	[90.3:98.8]
IIb	Non-Hodgkin lymphoma	43	97.7	90.5	90.5	90.5	90.5	[87.9:99.6]	[78.0:96.3]	[78.0:96.3]	[78.0:96.3]	[78.0:96.3]
IIc	Burkitt lymphoma	39	97.4	97.4	97.4	97.4	-	[86.8:99.5]	[86.8:99.5]	[86.8:99.5]	[86.8:99.5]	-
IId	Miscellaneous lymphoreticular neoplasm	81	98.8	98.8	98.8	98.8	98.8	[93.3:99.8]	[93.3:99.8]	[93.3:99.8]	[93.3:99.8]	[93.3:99.8]
III	CNS and miscellaneous intracranial and intraspinal neoplasm	664	87.3	80.7	79.4	76.3	74.5	[84.6:89.7]	[77.5:83.5]	[76.1:82.3]	[72.7:79.6]	[70.5:78.1]
IIIa	Ependymoma and choroid plexus tumour	75	90.7	82.5	77.8	76.1	76.1	[82.0:95.4]	[72.3:89.5]	[66.8:85.9]	[64.8:84.5]	[64.8:84.5]
IIIb	Astrocytoma	277	89.2	82.9	82.4	78.7	77.7	[85.0:92.3]	[78.0:86.9]	[77.5:86.5]	[73.1:83.5]	[71.7:82.7]
IIIc	Intracranial and intraspinal embryonal tumour	80	73.8	63.5	60.6	54.0	-	[63.2:82.1]	[52.6:73.3]	[49.5:70.7]	[42.7:65.0]	-
IIId	Other glioma	71	77.5	59.8	59.8	59.8	-	[66.5:85.6]	[48.1:70.6]	[48.1:70.6]	[48.1:70.6]	-
IIIe	Other specified intracranial and intraspinal neoplasm	99	92.9	92.9	91.7	89.1	-	[86.1:96.5]	[86.1:96.5]	[84.4:95.7]	[79.5:94.5]	-
IIIf	Unspecified intracranial and intraspinal neoplasm	63	95.2	95.2	95.2	95.2	-	[86.9:98.4]	[86.9:98.4]	[86.9:98.4]	[86.9:98.4]	-
IV	Neuroblastoma and other peripheral nervous cell tumour	169	97.0	88.3	84.7	82.9	82.9	[93.2:98.7]	[82.4:92.4]	[78.2:89.5]	[76.1:88.1]	[76.1:88.1]
IVa	Neuroblastoma and ganglioneuroblastoma	163	96.9	87.9	84.1	82.4	82.4	[93.0:98.7]	[81.8:92.1]	[77.4:89.1]	[75.3:87.7]	[75.3:87.7]
IVb	Other peripheral nervous cell tumour	6	-	-	-	-	-	-	-	-	-	-
V	Retinoblastoma	61	100.0	98.4	98.4	98.4	98.4	[100.0:100.0]	[91.3:99.7]	[91.3:99.7]	[91.3:99.7]	[91.3:99.7]
VI	Renal tumour	134	97.0	94.6	94.6	94.6	94.6	[92.6:98.8]	[89.3:97.4]	[89.3:97.4]	[89.3:97.4]	[89.3:97.4]
VIa	Nephroblastoma and other nonepithelial renal tumour	126	97.6	95.1	95.1	95.1	95.1	[93.2:99.2]	[89.7:97.7]	[89.7:97.7]	[89.7:97.7]	[89.7:97.7]
VII	Hepatic tumour	30	96.7	89.8	89.8	-	-	[83.3:99.4]	[73.8:96.5]	[73.8:96.5]	-	-
VIIa	Hepatoblastoma	25	96.0	91.8	91.8	-	-	[80.5:99.3]	[74.6:97.7]	[74.6:97.7]	-	-

Source: Belgian Cancer Registry

Appendix 18: Observed survival for girls, children (0-14y), Belgium 2004-2020

Belgium 2004-2020		Girls (0-14y)									
		N at risk	Observed survival					95% CI				
			1 yr	3 yr	5 yr	10 yr	15 yr	1 yr	3 yr	5 yr	10 yr	15 yr
VIII	Malignant bone tumour	116	96.5	86.7	80.7	76.5	69.8	[91.4:98.6]	[79.2:91.8]	[72.2:87.0]	[67.1:83.9]	[57.2:80.1]
VIIIa	Osteosarcoma	55	98.2	87.1	80.6	78.2	-	[90.4:99.7]	[75.7:93.6]	[67.7:89.1]	[64.9:87.5]	-
VIIIb	Chondrosarcoma	2	-	-	-	-	-	-	-	-	-	-
VIIIc	Ewing tumour and related sarcoma of bone	51	94.1	83.7	81.3	74.1	-	[84.0:98.0]	[70.9:91.5]	[68.1:89.9]	[58.5:85.3]	-
IX	Soft tissue and other extraosseous sarcoma	134	91.0	80.3	77.6	77.6	74.1	[85.0:94.8]	[72.7:86.2]	[69.6:84.0]	[69.6:84.0]	[64.9:81.5]
IXa	Rhabdomyosarcoma	55	94.5	79.8	73.7	73.7	-	[85.1:98.1]	[67.3:88.3]	[60.5:83.7]	[60.5:83.7]	-
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	12	100.0	-	-	-	-	[100.0:100.0]	-	-	-	-
IXd	Other specified soft tissue sarcoma	59	86.3	81.0	81.0	81.0	-	[75.2:92.9]	[69.1:89.1]	[69.1:89.1]	[69.1:89.1]	-
IXe	Unspecified soft tissue sarcoma	8	-	-	-	-	-	-	-	-	-	-
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	110	99.1	95.4	94.4	94.4	94.4	[95.0:99.8]	[89.7:98.0]	[88.2:97.4]	[88.2:97.4]	[88.2:97.4]
Xa	Intracranial and intraspinal germ cell tumour	20	95.0	89.7	89.7	-	-	[76.4:99.1]	[69.2:97.1]	[69.2:97.1]	-	-
Xb	Malignant extracranial and extragonadal germ cell tumour	44	100.0	97.7	97.7	97.7	97.7	[100.0:100.0]	[88.2:99.6]	[88.2:99.6]	[88.2:99.6]	[88.2:99.6]
Xc	Malignant gonadal germ cell tumour	44	100.0	95.3	92.6	92.6	-	[100.0:100.0]	[84.5:98.7]	[80.4:97.5]	[80.4:97.5]	-
XI	Other malignant epithelial neoplasm and melanoma	223	100.0	99.1	98.0	96.5	94.0	[100.0:100.0]	[96.7:99.7]	[95.0:99.2]	[92.4:98.4]	[85.9:97.6]
XIb	Thyroid carcinoma	48	100.0	100.0	100.0	96.3	-	[100.0:100.0]	[100.0:100.0]	[100.0:100.0]	[81.7:99.3]	-
XIc	Nasopharyngeal carcinoma	2	-	-	-	-	-	-	-	-	-	-
XId	Melanoma	35	100.0	100.0	97.0	92.6	-	[100.0:100.0]	[100.0:100.0]	[84.7:99.5]	[76.1:98.0]	-
XIe	Skin carcinoma	37	100.0	100.0	100.0	100.0	100.0	[100.0:100.0]	[100.0:100.0]	[100.0:100.0]	[100.0:100.0]	[100.0:100.0]
XIf	Other and unspecified carcinoma	98	100.0	97.9	96.6	96.6	96.6	[100.0:100.0]	[92.6:99.4]	[90.3:98.8]	[90.3:98.8]	[90.3:98.8]
I-XII	**All tumours**	2,561	94.0	88.8	87.4	86.0	84.6	[93.0:94.8]	[87.5:90.0]	[86.1:88.7]	[84.5:87.4]	[82.9:86.2]

Source: Belgian Cancer Registry

N at risk: Number of patients at risk at start of survival analysis

1,3,5,10,15 yr OS: one, three, five, ten and fifteen-year observed survival (%)

95% CI: 95% confidence interval of the observed survival (%)

Observed survival calculated on less than 30 patients (N at risk) are purely indicative and no strong conclusions can be drawn.

Appendix 19: Observed survival for both sexes, adolescents (15-19y), Belgium 2004-2020

Belgium 2004-2020		Adolescents (15-19y)									
		N at risk	Observed survival					95% CI			
			1 yr	3 yr	5 yr	10 yr	15 yr	1 yr	3 yr	5 yr	10 yr	15 yr
I	Leukaemia, myeloproliferative and myelodysplastic disease	363	89.8	79.0	76.4	74.8	74.8	[86.2:92.5]	[74.4:82.9]	[71.7:80.6]	[69.9:79.1]	[69.9:79.1]
Ia	Lymphoid leukaemia	190	93.2	81.3	77.0	74.7	74.7	[88.6:96.0]	[73.6:87.1]	[67.4:84.4]	[59.0:85.9]	[45.4:91.3]
Ib	Acute myeloid leukaemia	92	78.1	63.6	63.6	61.9	-	[68.3:85.5]	[52.3:73.6]	[49.2:75.9]	[40.4:79.6]	-
Ic	Chronic myeloproliferative disease	51	100.0	97.7	95.4	95.4	-	[100.0:100.0]	[56.4:99.9]	[51.2:99.8]	[31.4:99.9]	-
Id	Myelodysplastic syndrome and other myeloproliferative disease	26	84.6	80.8	80.8	80.8	-	[66.5:93.9]	[57.1:93.0]	[57.1:93.0]	[39.2:96.5]	-
Ie	Unspecified and other specified leukaemia	4	-	-	-	-	-	-	-	-	-	-
II	Lymphoma and reticuloendothelial neoplasm	732	97.7	95.2	94.7	94.0	94.0	[96.3:98.5]	[93.4:96.6]	[92.8:96.2]	[91.8:95.6]	[91.8:95.6]
IIa	Hodgkin lymphoma	501	99.4	97.5	97.0	96.2	96.2	[98.3:99.8]	[91.8:99.3]	[86.7:99.4]	[73.2:99.6]	[46.4:99.9]
IIb	Non-Hodgkin lymphoma	158	93.0	90.4	90.4	89.3	89.3	[88.0:96.1]	[81.1:95.3]	[78.3:96.0]	[63.7:97.6]	[42.3:99.0]
IIc	Burkitt lymphoma	42	97.6	95.2	92.4	92.4	-	[87.7:99.6]	[63.7:99.6]	[46.9:99.4]	[26.6:99.8]	-
IId	Miscellaneous lymphoreticular neoplasm	21	95.2	85.4	85.4	-	-	[77.3:99.2]	[60.9:95.7]	[52.7:96.9]	-	-
III	CNS and miscellaneous intracranial and intraspinal neoplasm	487	95.3	90.8	88.7	84.6	82.9	[93.0:96.8]	[87.8:93.0]	[85.4:91.3]	[80.7:87.9]	[78.5:86.5]
IIIa	Ependymoma and choroid plexus tumour	30	96.7	96.7	96.7	92.1	-	[83.3:99.4]	[74.1:99.7]	[43.9:99.9]	[23.8:99.8]	-
IIIb	Astrocytoma	168	92.3	83.0	80.7	76.3	73.5	[87.2:95.4]	[74.0:89.3]	[68.9:88.7]	[57.6:88.4]	[40.8:91.8]
IIIc	Intracranial and intraspinal embryonal tumour	24	95.8	83.1	69.5	-	-	[79.8:99.3]	[60.9:94.0]	[44.1:86.8]	-	-
IIId	Other glioma	35	85.7	76.8	76.8	-	-	[70.6:93.7]	[56.6:89.4]	[50.7:91.4]	-	-
IIIe	Other specified intracranial and intraspinal neoplasm	190	98.9	98.9	98.2	96.5	94.8	[95.2:99.8]	[68.6:100.0]	[64.4:99.9]	[45.0:99.9]	[15.0:99.9]
IIIf	Unspecified intracranial and intraspinal neoplasm	42	97.6	97.6	94.8	94.8	-	[87.7:99.6]	[63.3:99.9]	[49.0:99.7]	[27.8:99.9]	-
IV	Neuroblastoma and other peripheral nervous cell tumour	16	87.5	81.3	73.9	-	-	[64.0:96.5]	[57.0:93.4]	[48.6:89.4]	-	-
IVa	Neuroblastoma and ganglioneuroblastoma	3	-	-	-	-	-	-	-	-	-	-
IVb	Other peripheral nervous cell tumour	13	100.0	92.3	-	-	-	[100.0:100.0]	[41.5:99.5]	-	-	-
V	Retinoblastoma	0	-	-	-	-	-	-	-	-	-	-
VI	Renal tumour	17	88.2	82.4	75.5	-	-	[65.7:96.7]	[59.0:93.8]	[51.1:90.1]	-	-
VIa	Nephroblastoma and other nonepithelial renal tumour	5	-	-	-	-	-	-	-	-	-	-
VII	Hepatic tumour	5	-	-	-	-	-	-	-	-	-	-
VIIa	Hepatoblastoma	0	-	-	-	-	-	-	-	-	-	-

Source: Belgian Cancer Registry

Appendix 19: Observed survival for both sexes, adolescents (15-19y), Belgium 2004-2020

	Belgium 2004-2020	Adolescents (15-19y)									
		N at risk	Observed survival					95% CI				
			1 yr	3 yr	5 yr	10 yr	15 yr	1 yr	3 yr	5 yr	10 yr	15 yr
VIII	Malignant bone tumour	188	93.1	78.4	71.4	66.9	65.5	[88.5:95.9]	[71.8:83.8]	[64.2:77.6]	[59.2:73.8]	[57.5:72.8]
VIIIa	Osteosarcoma	105	91.4	82.2	74.0	67.4	67.4	[83.9:95.5]	[70.0:90.2]	[60.1:84.4]	[46.2:83.3]	[37.2:87.9]
VIIIb	Chondrosarcoma	15	100.0	100.0	92.9	-	-	[100.0:100.0]	[100.0:100.0]	[57.5:99.2]	-	-
VIIIc	Ewing tumour and related sarcoma of bone	57	93.0	60.6	56.3	53.3	-	[83.3:97.2]	[44.9:74.5]	[38.8:72.3]	[32.5:73.1]	-
IX	Soft tissue and other extraosseous sarcoma	183	90.2	72.1	68.3	66.7	66.7	[85.0:93.7]	[65.0:78.1]	[61.0:74.7]	[59.3:73.4]	[59.3:73.4]
IXa	Rhabdomyosarcoma	37	91.9	61.6	51.9	-	-	[78.7:97.2]	[44.8:76.0]	[32.9:70.3]	-	-
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	19	73.7	57.4	-	-	-	[51.2:88.2]	[34.0:78.0]	-	-	-
IXd	Other specified soft tissue sarcoma	110	91.8	77.5	74.4	73.3	73.3	[85.2:95.6]	[66.6:85.7]	[63.3:83.1]	[57.7:84.6]	[45.6:90.0]
IXe	Unspecified soft tissue sarcoma	14	92.9	-	-	-	-	[68.5:98.7]	-	-	-	-
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	280	98.6	96.4	96.0	95.4	94.7	[96.4:99.4]	[93.5:98.0]	[93.0:97.7]	[92.2:97.4]	[90.9:96.9]
Xa	Intracranial and intraspinal germ cell tumour	24	95.8	91.7	91.7	91.7	-	[79.8:99.3]	[74.2:97.7]	[63.0:98.6]	[30.5:99.6]	-
Xb	Malignant extracranial and extragonadal germ cell tumour	11	90.9	-	-	-	-	[62.3:98.4]	-	-	-	-
Xc	Malignant gonadal germ cell tumour	229	99.6	97.8	97.8	97.8	97.8	[96.0:100.0]	[90.4:99.5]	[81.5:99.8]	[55.7:99.9]	[22.8:100.0]
XI	Other malignant epithelial neoplasm and melanoma	720	98.2	96.1	95.5	94.1	93.2	[96.9:98.9]	[94.5:97.3]	[93.7:96.8]	[91.9:95.7]	[90.7:95.1]
XIb	Thyroid carcinoma	149	100.0	99.3	99.3	99.3	97.2	[100.0:100.0]	[71.1:100.0]	[45.1:100.0]	[18.4:100.0]	[13.1:100.0]
XIc	Nasopharyngeal carcinoma	11	100.0	100.0	-	-	-	[100.0:100.0]	[100.0:100.0]	-	-	-
XId	Melanoma	168	99.4	97.6	97.6	95.8	95.8	[96.7:99.9]	[88.8:99.5]	[77.4:99.8]	[59.7:99.7]	[24.0:99.9]
XIe	Skin carcinoma	109	100.0	98.0	96.9	95.3	95.3	[100.0:100.0]	[80.4:99.8]	[70.0:99.8]	[37.1:99.9]	[11.2:100.0]
XIf	Other and unspecified carcinoma	278	96.0	93.8	93.0	91.6	90.5	[93.1:97.8]	[87.8:97.0]	[84.2:97.0]	[74.4:97.6]	[51.2:98.9]
I-XII	**All tumours**	2,989	95.8	90.4	88.6	86.8	86.1	[95.0:96.4]	[89.3:91.4]	[87.4:89.7]	[85.5:88.1]	[84.7:87.4]

Source: Belgian Cancer Registry

N at risk: Number of patients at risk at start of survival analysis

1,3,5,10,15 yr OS: one, three, five, ten and fifteen-year observed survival (%)

95% CI: 95% confidence interval of the observed survival (%)

Observed survival calculated on less than 30 patients (N at risk) are purely indicative and no strong conclusions can be drawn.

Appendix 20: Observed survival for boys, adolescents (15-19y), Belgium 2004-2020

Belgium 2004-2020		N at risk	Boys (15-19y)									
			Observed survival					95% CI				
			1 yr	3 yr	5 yr	10 yr	15 yr	1 yr	3 yr	5 yr	10 yr	15 yr
I	Leukaemia, myeloproliferative and myelodysplastic disease	226	90.2	80.1	77.0	76.4	76.4	[85.7:93.5]	[74.3:84.8]	[70.9:82.1]	[70.3:81.6]	[70.3:81.6]
Ia	Lymphoid leukaemia	128	91.4	80.9	76.3	75.3	75.3	[85.3:95.1]	[71.0:88.0]	[64.4:85.1]	[54.9:88.5]	[34.3:94.7]
Ib	Acute myeloid leukaemia	52	80.6	66.8	66.8	66.8	-	[67.1:89.4]	[52.2:78.8]	[46.8:82.2]	[35.0:88.3]	-
Ic	Chronic myeloproliferative disease	27	100.0	95.7	91.1	91.1	-	[100.0:100.0]	[48.4:99.8]	[52.0:99.0]	[35.5:99.5]	-
Id	Myelodysplastic syndrome and other myeloproliferative disease	15	93.3	93.3	93.3	-	-	[70.2:98.8]	[46.1:99.6]	[46.1:99.6]	-	-
Ie	Unspecified and other specified leukaemia	4	-	-	-	-	-	-	-	-	-	-
II	Lymphoma and reticuloendothelial neoplasm	395	97.2	95.1	94.2	92.7	92.7	[95.1:98.4]	[92.4:96.8]	[91.3:96.1]	[89.4:95.1]	[89.4:95.1]
IIa	Hodgkin lymphoma	250	99.6	98.3	97.3	95.7	95.7	[97.8:99.9]	[88.1:99.8]	[79.5:99.7]	[61.1:99.7]	[30.2:99.9]
IIb	Non-Hodgkin lymphoma	91	92.3	88.8	88.8	87.1	87.1	[85.0:96.2]	[76.6:95.0]	[72.5:96.0]	[54.2:97.4]	[29.9:99.1]
IIc	Burkitt lymphoma	36	97.2	94.4	90.9	90.9	-	[85.8:99.5]	[59.0:99.5]	[49.7:99.0]	[30.9:99.6]	-
IId	Miscellaneous lymphoreticular neoplasm	11	90.9	-	-	-	-	[62.3:98.4]	-	-	-	-
III	CNS and miscellaneous intracranial and intraspinal neoplasm	263	93.9	89.5	87.6	82.9	82.9	[90.3:96.2]	[85.2:92.7]	[82.9:91.1]	[77.2:87.5]	[77.2:87.5]
IIIa	Ependymoma and choroid plexus tumour	17	94.1	94.1	94.1	-	-	[73.0:99.0]	[60.1:99.4]	[50.1:99.6]	-	-
IIIb	Astrocytoma	94	89.4	81.7	80.3	75.8	75.8	[81.5:94.1]	[69.9:89.5]	[65.0:90.0]	[50.3:90.7]	[28.8:96.0]
IIIc	Intracranial and intraspinal embryonal tumour	12	100.0	-	-	-	-	[100.0:100.0]	-	-	-	-
IIId	Other glioma	17	82.4	70.6	-	-	-	[59.0:93.8]	[40.4:89.5]	-	-	-
IIIe	Other specified intracranial and intraspinal neoplasm	99	99.0	99.0	97.6	95.9	-	[91.0:99.9]	[47.2:100.0]	[55.7:99.9]	[36.7:99.9]	-
IIIf	Unspecified intracranial and intraspinal neoplasm	25	96.0	96.0	96.0	96.0	-	[80.5:99.3]	[54.2:99.8]	[26.7:99.9]	[14.1:100.0]	-
IV	Neuroblastoma and other peripheral nervous cell tumour	9	-	-	-	-	-	-	-	-	-	-
IVa	Neuroblastoma and ganglioneuroblastoma	1	-	-	-	-	-	-	-	-	-	-
IVb	Other peripheral nervous cell tumour	8	-	-	-	-	-	-	-	-	-	-
V	Retinoblastoma	0	-	-	-	-	-	-	-	-	-	-
VI	Renal tumour	7	-	-	-	-	-	-	-	-	-	-
VIa	Nephroblastoma and other nonepithelial renal tumour	3	-	-	-	-	-	-	-	-	-	-
VII	Hepatic tumour	4	-	-	-	-	-	-	-	-	-	-
VIIa	Hepatoblastoma	0	-	-	-	-	-	-	-	-	-	-

Source: Belgian Cancer Registry

Appendix 20: Observed survival for boys, adolescents (15-19y), Belgium 2004-2020

Belgium 2004-2020		N at risk	Boys (15-19y)									
			Observed survival					95% CI				
			1 yr	3 yr	5 yr	10 yr	15 yr	1 yr	3 yr	5 yr	10 yr	15 yr
VIII	Malignant bone tumour	124	91.9	73.6	66.5	63.2	63.2	[85.7:95.5]	[65.0:80.8]	[57.3:74.6]	[53.3:72.0]	[53.3:72.0]
VIIIa	Osteosarcoma	74	89.1	79.0	70.1	67.0	67.0	[79.2:94.5]	[63.8:88.9]	[52.2:83.4]	[41.6:85.3]	[31.1:90.2]
VIIIb	Chondrosarcoma	8	-	-	-	-	-	-	-	-	-	-
VIIIc	Ewing tumour and related sarcoma of bone	38	94.7	53.6	50.2	-	-	[82.7:98.5]	[34.5:71.6]	[29.9:70.4]	-	-
IX	Soft tissue and other extraosseous sarcoma	90	85.6	61.2	57.3	55.6	55.6	[76.8:91.4]	[50.7:70.8]	[46.7:67.3]	[44.9:65.8]	[44.9:65.8]
IXa	Rhabdomyosarcoma	25	88.0	56.0	52.0	-	-	[70.0:95.8]	[37.1:73.3]	[32.3:71.1]	-	-
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	6	-	-	-	-	-	-	-	-	-	-
IXd	Other specified soft tissue sarcoma	46	87.0	66.0	60.5	60.5	60.5	[74.3:93.9]	[47.6:80.6]	[42.1:76.4]	[38.8:78.8]	[29.6:84.9]
IXe	Unspecified soft tissue sarcoma	11	90.9	-	-	-	-	[62.3:98.4]	-	-	-	-
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	223	98.7	97.3	97.3	97.3	96.4	[96.1:99.5]	[94.2:98.8]	[94.2:98.8]	[94.2:98.8]	[92.5:98.3]
Xa	Intracranial and intraspinal germ cell tumour	19	94.7	89.5	89.5	89.5	-	[75.4:99.1]	[68.6:97.1]	[61.9:97.8]	[35.9:99.2]	-
Xb	Malignant extracranial and extragonadal germ cell tumour	9	-	-	-	-	-	-	-	-	-	-
Xc	Malignant gonadal germ cell tumour	193	99.5	98.4	98.4	98.4	98.4	[97.1:99.9]	[89.7:99.8]	[75.4:99.9]	[44.4:100.0]	[15.0:100.0]
XI	Other malignant epithelial neoplasm and melanoma	257	97.3	94.4	93.0	91.8	91.8	[94.5:98.7]	[90.8:96.6]	[89.1:95.6]	[87.5:94.7]	[87.5:94.7]
XIb	Thyroid carcinoma	35	100.0	97.1	97.1	97.1	-	[100.0:100.0]	[77.5:99.7]	[49.5:99.9]	[21.3:100.0]	-
XIc	Nasopharyngeal carcinoma	6	-	-	-	-	-	-	-	-	-	-
XId	Melanoma	61	100.0	98.3	98.3	93.2	93.2	[100.0:100.0]	[77.0:99.9]	[51.0:100.0]	[41.9:99.6]	[17.7:99.9]
XIe	Skin carcinoma	44	100.0	94.9	91.9	91.9	-	[100.0:100.0]	[66.6:99.4]	[58.4:98.9]	[27.1:99.7]	-
XIf	Other and unspecified carcinoma	109	93.6	91.7	90.7	90.7	90.7	[87.3:96.9]	[81.7:96.5]	[76.4:96.7]	[62.0:98.3]	[28.9:99.6]
I-XII	**All tumours**	1,596	94.9	88.7	86.6	85.0	84.7	[93.7:95.8]	[87.0:90.2]	[84.8:88.2]	[83.0:86.7]	**[82.7:86.5]**

Source: Belgian Cancer Registry

N at risk: Number of patients at risk at start of survival analysis

1,3,5,10,15 yr OS: one, three, five, ten and fifteen-year observed survival (%)

95% CI: 95% confidence interval of the observed survival (%)

Observed survival calculated on less than 30 patients (N at risk) are purely indicative and no strong conclusions can be drawn.

Appendix 21: Observed survival for girls, adolescents (15-19y), Belgium 2004-2020

Belgium 2004-2020		Girls (15-19y)									
		N at risk	Observed survival					95% CI			
			1 yr	3 yr	5 yr	10 yr	15 yr	1 yr	3 yr	5 yr	10 yr	15 yr
I	Leukaemia, myeloproliferative and myelodysplastic disease	137	89.1	77.1	75.4	72.1	72.1	[82.7:93.3]	[69.3:83.4]	[67.5:81.9]	[63.7:79.3]	[63.7:79.3]
Ia	Lymphoid leukaemia	62	96.8	82.2	78.4	73.6	73.6	[89.0:99.1]	[68.8:90.6]	[60.6:89.6]	[48.3:89.2]	[36.5:93.1]
Ib	Acute myeloid leukaemia	40	75.0	59.7	59.7	55.9	-	[59.8:85.8]	[42.0:75.2]	[39.3:77.2]	[30.0:79.0]	-
Ic	Chronic myeloproliferative disease	24	100.0	100.0	100.0	-	-	[100.0:100.0]	[100.0:100.0]	[100.0:100.0]	-	-
Id	Myelodysplastic syndrome and other myeloproliferative disease	11	-	-	-	-	-	-	-	-	-	-
Ie	Unspecified and other specified leukaemia	0	-	-	-	-	-	-	-	-	-	-
II	Lymphoma and reticuloendothelial neoplasm	337	98.2	95.4	95.4	95.4	95.4	[96.2:99.2]	[92.6:97.2]	[92.6:97.2]	[92.6:97.2]	[92.6:97.2]
IIa	Hodgkin lymphoma	251	99.2	96.7	96.7	96.7	96.7	[97.1:99.8]	[87.3:99.2]	[80.1:99.5]	[59.1:99.8]	[31.2:99.9]
IIb	Non-Hodgkin lymphoma	67	94.0	92.5	92.5	92.5	92.5	[85.6:97.7]	[74.5:98.1]	[70.0:98.5]	[45.9:99.4]	[24.8:99.8]
IIc	Burkitt lymphoma	6	-	-	-	-	-	-	-	-	-	-
IId	Miscellaneous lymphoreticular neoplasm	10	100.0	-	-	-	-	[100.0:100.0]	-	-	-	-
III	CNS and miscellaneous intracranial and intraspinal neoplasm	224	96.9	92.2	90.0	86.6	82.5	[93.7:98.5]	[87.9:95.1]	[85.1:93.4]	[80.9:90.8]	[75.2:88.1]
IIIa	Ependymoma and choroid plexus tumour	13	100.0	100.0	-	-	-	[100.0:100.0]	[100.0:100.0]	-	-	-
IIIb	Astrocytoma	74	95.9	84.7	81.0	76.9	70.7	[88.7:98.6]	[69.1:93.2]	[61.0:92.1]	[48.7:92.1]	[31.4:92.7]
IIIc	Intracranial and intraspinal embryonal tumour	12	91.7	83.3	-	-	-	[64.6:98.5]	[55.2:95.3]	-	-	-
IIId	Other glioma	18	88.9	83.0	83.0	-	-	[67.2:96.9]	[55.9:94.9]	[47.0:96.4]	-	-
IIIe	Other specified intracranial and intraspinal neoplasm	91	98.9	98.9	98.9	97.2	-	[94.0:99.8]	[59.9:100.0]	[36.4:100.0]	[22.2:100.0]	-
IIIf	Unspecified intracranial and intraspinal neoplasm	17	100.0	100.0	93.8	-	-	[100.0:100.0]	[100.0:100.0]	[43.2:99.7]	-	-
IV	Neuroblastoma and other peripheral nervous cell tumour	7	-	-	-	-	-	-	-	-	-	-
IVa	Neuroblastoma and ganglioneuroblastoma	2	-	-	-	-	-	-	-	-	-	-
IVb	Other peripheral nervous cell tumour	5	-	-	-	-	-	-	-	-	-	-
V	Retinoblastoma	0	-	-	-	-	-	-	-	-	-	-
VI	Renal tumour	10	-	-	-	-	-	-	-	-	-	-
VIa	Nephroblastoma and other nonepithelial renal tumour	2	-	-	-	-	-	-	-	-	-	-
VII	Hepatic tumour	1	-	-	-	-	-	-	-	-	-	-
VIIa	Hepatoblastoma	0	-	-	-	-	-	-	-	-	-	-

Source: Belgian Cancer Registry

Appendix 21: Observed survival for girls, adolescents (15-19y), Belgium 2004-2020

	Belgium 2004-2020	N at risk	Girls (15-19y)									
			Observed survival					95% CI				
			1 yr	3 yr	5 yr	10 yr	15 yr	1 yr	3 yr	5 yr	10 yr	15 yr
VIII	Malignant bone tumour	64	95.3	87.1	80.3	73.7	70.5	[87.1:98.4]	[76.6:93.3]	[68.5:88.4]	[60.8:83.5]	[56.7:81.4]
VIIIa	Osteosarcoma	31	96.8	89.8	82.7	68.6	-	[83.8:99.4]	[65.5:97.6]	[60.5:93.7]	[33.1:90.6]	-
VIIIb	Chondrosarcoma	7	-	-	-	-	-	-	-	-	-	-
VIIIc	Ewing tumour and related sarcoma of bone	19	89.5	73.3	67.2	-	-	[68.6:97.1]	[48.0:89.1]	[37.6:87.4]	-	-
IX	Soft tissue and other extraosseous sarcoma	93	94.6	82.4	78.7	77.3	77.3	[88.0:97.7]	[73.3:88.9]	[69.1:86.0]	[67.4:84.8]	[67.4:84.8]
IXa	Rhabdomyosarcoma	12	100.0	-	-	-	-	[100.0:100.0]	-	-	-	-
IXb	Fibrosarcoma, peripheral nerve sheath tumour and other fibromatous neoplasm	13	84.6	-	-	-	-	[57.8:95.7]	-	-	-	-
IXd	Other specified soft tissue sarcoma	64	95.3	85.6	83.9	82.0	82.0	[87.1:98.4]	[72.1:93.2]	[70.4:92.0]	[59.3:93.4]	[38.0:97.1]
IXe	Unspecified soft tissue sarcoma	3	-	-	-	-	-	-	-	-	-	-
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	57	98.2	92.8	90.7	88.1	-	[90.6:99.7]	[82.8:97.1]	[80.0:96.0]	[76.2:94.5]	-
Xa	Intracranial and intraspinal germ cell tumour	5	-	-	-	-	-	-	-	-	-	-
Xb	Malignant extracranial and extragonadal germ cell tumour	2	-	-	-	-	-	-	-	-	-	-
Xc	Malignant gonadal germ cell tumour	36	100.0	94.2	94.2	94.2	-	[100.0:100.0]	[66.4:99.3]	[59.7:99.4]	[30.3:99.8]	-
XI	Other malignant epithelial neoplasm and melanoma	463	98.7	97.1	96.9	95.3	94.0	[97.2:99.4]	[95.1:98.3]	[94.8:98.1]	[92.8:97.0]	[90.7:96.2]
XIb	Thyroid carcinoma	114	100.0	100.0	100.0	100.0	97.1	[100.0:100.0]	[100.0:100.0]	[100.0:100.0]	[100.0:100.0]	[10.5:100.0]
XIc	Nasopharyngeal carcinoma	5	-	-	-	-	-	-	-	-	-	-
XId	Melanoma	107	99.1	97.1	97.1	97.1	97.1	[94.9:99.8]	[85.3:99.5]	[71.9:99.8]	[43.9:99.9]	[11.1:100.0]
XIe	Skin carcinoma	65	100.0	100.0	100.0	97.4	-	[100.0:100.0]	[100.0:100.0]	[100.0:100.0]	[17.6:100.0]	-
XIf	Other and unspecified carcinoma	169	97.6	95.2	94.5	92.1	90.6	[94.1:99.1]	[85.9:98.5]	[80.8:98.6]	[67.6:98.5]	[42.7:99.2]
I-XII	**All tumours**	1,393	96.8	92.3	90.9	88.9	87.8	[95.8:97.6]	[90.8:93.6]	[89.3:92.4]	[87.1:90.6]	[85.7:89.6]

Source: Belgian Cancer Registry

N at risk: Number of patients at risk at start of survival analysis

1,3,5,10,15 yr OS: one, three, five, ten and fifteen-year observed survival (%)

95% CI: 95% confidence interval of the observed survival (%)

Observed survival calculated on less than 30 patients (N at risk) are purely indicative and no strong conclusions can be drawn.

Appendix 22: Observed survival for both sexes, children and adolescents (0-19y), Belgium 2004-2009, 2009-2014, 2014-2020

Children and adolescents (0-19 years)

	Belgium 2004-2020	2004-2009			2009-2014			2014-2020		
		N	5 yr OS	95% CI	N	5 yr OS	95%	N	5 yr OS	95% CI
I	Leukaemia, myeloproliferative and myelodysplastic disease	639	81.3	[78.1:84.2]	681	85.2	[82.3:87.7]	771	88.6	[86.0:90.8]
Ia	Lymphoid leukaemia	479	85.8	[82.4:88.6]	479	88.9	[85.8:91.4]	555	92.7	[89.9:94.7]
Ib	Acute myeloid leukaemia	95	56.8	[46.8:66.3]	102	67.2	[57.6:75.6]	126	71.7	[62.9:79.0]
II	Lymphoma and reticuloendothelial neoplasm	520	95.4	[93.2:96.9]	531	95.8	[93.8:97.2]	594	95.8	[93.7:97.2]
IIa	Hodgkin lymphoma	248	97.2	[94.3:98.6]	251	98.0	[95.4:99.1]	337	97.9	[95.5:99.1]
IIb	Non-Hodgkin lymphoma	99	92.9	[86.1:96.5]	95	89.4	[81.7:94.2]	109	86.3	[78.2:91.7]
IIc	Burkitt lymphoma	70	94.2	[86.0:97.7]	74	95.9	[88.7:98.6]	92	97.4	[90.8:99.3]
IId	Miscellaneous lymphoreticular neoplasm	95	95.8	[89.7:98.4]	106	97.1	[91.9:99.0]	53	100.0	[100.0:100.0]
III	CNS and miscellaneous intracranial and intraspinal neoplasm	607	81.4	[78.1:84.3]	715	79.5	[76.4:82.3]	875	83.9	[81.1:86.3]
IIIa	Ependymoma and choroid plexus tumour	65	81.5	[70.4:89.1]	57	77.2	[64.8:86.2]	77	85.1	[74.3:91.8]
IIIb	Astrocytoma	260	82.3	[77.2:86.5]	265	79.5	[74.3:84.0]	304	85.2	[80.7:88.9]
IIIc	Intracranial and intraspinal embryonal tumour	80	62.5	[51.5:72.3]	104	58.2	[48.5:67.3]	89	62.1	[50.8:72.1]
IIId	Other glioma	59	69.5	[56.9:79.7]	76	67.1	[55.9:76.6]	102	59.2	[49.1:68.6]
IIIe	Other specified intracranial and intraspinal neoplasm	113	95.5	[90.0:98.1]	153	96.1	[91.7:98.2]	220	96.9	[92.8:98.7]
IV	Neuroblastoma and other peripheral nervous cell tumour	138	76.1	[68.3:82.4]	141	82.1	[74.9:87.5]	152	82.7	[75.1:88.3]
IVa	Neuroblastoma and ganglioneuroblastoma	126	74.6	[66.4:81.4]	134	82.6	[75.3:88.1]	136	82.0	[74.1:87.9]
V	Retinoblastoma	56	98.2	[90.6:99.7]	55	98.2	[90.4:99.7]	50	96.0	[86.4:98.9]
VI	Renal tumour	99	92.8	[85.9:96.5]	97	90.5	[83.0:94.9]	119	91.7	[84.8:95.6]
VIa	Nephroblastoma and other nonepithelial renal tumour	91	94.4	[87.6:97.6]	90	93.2	[85.9:96.8]	109	91.8	[84.6:95.8]
VIII	Malignant bone tumour	170	72.3	[65.1:78.5]	144	79.0	[71.6:84.9]	162	76.3	[68.4:82.8]
VIIIa	Osteosarcoma	79	69.6	[58.8:78.7]	77	81.5	[71.3:88.6]	82	83.1	[73.1:89.9]
VIIIc	Ewing tumour and related sarcoma of bone	74	70.0	[58.8:79.3]	49	67.3	[53.4:78.8]	65	67.6	[53.5:79.1]
IX	Soft tissue and other extraosseous sarcoma	178	76.8	[70.1:82.4]	175	70.9	[63.7:77.1]	198	67.3	[59.6:74.1]
IXa	Rhabdomyosarcoma	64	79.4	[67.9:87.5]	69	59.4	[47.6:70.2]	75	62.5	[49.0:74.4]
IXd	Other specified soft tissue sarcoma	92	78.3	[68.8:85.5]	78	75.6	[65.1:83.8]	89	73.7	[63.3:82.1]
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	164	93.9	[89.1:96.7]	162	95.1	[90.6:97.5]	192	98.3	[95.0:99.4]
XI	Other malignant epithelial neoplasm and melanoma	366	96.4	[94.0:97.9]	443	94.8	[92.3:96.5]	443	95.8	[93.3:97.4]
I-XII	**All tumours**	2,950	86.1	**[84.8:87.3]**	3,164	86.7	**[85.5:87.9]**	3,585	88.4	**[87.2:89.5]**

Source: Belgian Cancer Registry

N = N at risk: Number of patients at risk at start of survival analysis

5 yr OS: five -year observed survival (%)

95% CI: 95% confidence interval of the observed survival (%)

Observed survival calculated on less than 30 patients (N at risk) are purely indicative and no strong conclusions can be drawn.

Appendix 23: Observed survival by sex, children and adolescents (0-19y), Belgium 2004-2009, 2009-2014, 2014-2020

Belgium 2004-2020		Boys (0-19 years)									Girls (0-19 years)								
		2004-2009			2009-2014			2014-2020			2004-2009			2009-2014			2014-2020		
		N	5 yr OS	95% CI	N	5 yr OS	95% CI	N	5 yr OS	95% CI	N	5 yr OS	95% CI	N	5 yr OS	95%	N	5 yr OS	95% CI
I	Leukaemia, myeloproliferative and myelodysplastic disease	373	80.4	[76.1:84.1]	385	85.4	[81.5:88.6]	436	87.1	[83.4:90.1]	266	82.7	[77.6:86.7]	296	85.0	[80.5:88.6]	335	90.4	[86.6:93.3]
Ia	Lymphoid leukaemia	285	84.9	[80.3:88.6]	283	88.7	[84.4:91.9]	318	91.1	[87.1:93.9]	194	87.1	[81.6:91.1]	196	89.2	[84.1:92.8]	237	94.7	[90.7:97.1]
Ib	Acute myeloid leukaemia	47	51.1	[37.2:64.7]	53	73.2	[59.9:83.3]	69	69.5	[57.5:79.4]	48	62.5	[48.4:74.8]	49	60.8	[46.7:73.3]	57	74.4	[61.3:84.2]
II	Lymphoma and reticuloendothelial neoplasm	304	95.4	[92.4:97.2]	314	94.9	[91.9:96.8]	351	96.1	[93.3:97.8]	216	95.3	[91.7:97.5]	217	97.2	[94.0:98.7]	243	95.3	[91.8:97.4]
IIa	Hodgkin lymphoma	136	97.8	[93.7:99.2]	132	98.5	[94.6:99.6]	179	98.4	[94.2:99.6]	112	96.4	[91.1:98.6]	119	97.5	[92.8:99.1]	158	97.4	[93.4:99.0]
IIb	Non-Hodgkin lymphoma	57	91.2	[81.1:96.2]	60	84.9	[73.8:91.9]	62	87.7	[76.6:94.0]	42	95.2	[84.2:98.7]	35	97.1	[85.5:99.5]	47	84.4	[71.0:92.3]
IIc	Burkitt lymphoma	51	94.0	[83.8:97.9]	60	95.0	[86.3:98.3]	74	96.7	[88.6:99.1]	19	94.7	[75.4:99.1]	14	100.0	[100:100]	18	-	-
IId	Miscellaneous lymphoreticular neoplasm	55	94.5	[85.1:98.1]	59	96.6	[88.5:99.1]	34	100.0	[100:100]	40	97.5	[87.1:99.6]	47	97.8	[88.7:99.6]	19	100.0	[100:100]
III	CNS and miscellaneous intracranial and intraspinal neoplasm	326	81.8	[77.3:85.7]	400	78.4	[74.1:82.2]	477	82.7	[78.8:86.1]	281	80.8	[75.8:85.0]	315	80.9	[76.2:84.9]	398	85.2	[81.2:88.5]
IIIa	Ependymoma and choroid plexus tumour	31	83.9	[67.4:92.9]	32	71.9	[54.6:84.4]	41	88.3	[72.5:95.5]	34	79.4	[63.2:89.7]	25	84.0	[65.3:93.6]	36	81.8	[65.3:91.4]
IIIb	Astrocytoma	124	83.9	[76.4:89.3]	149	80.4	[73.3:86.0]	162	84.6	[78.1:89.4]	136	80.9	[73.5:86.6]	116	78.4	[70.1:84.9]	142	85.9	[79.0:90.8]
IIIc	Intracranial and intraspinal embryonal tumour	48	60.4	[46.3:73.0]	62	55.9	[43.4:67.6]	60	58.1	[44.5:70.7]	32	65.6	[48.3:79.6]	42	61.7	[46.6:74.9]	29	70.0	[50.5:84.2]
IIId	Other glioma	34	64.7	[47.9:78.5]	45	66.7	[52.1:78.6]	60	58.6	[45.5:70.6]	25	76.0	[56.6:88.5]	31	67.7	[50.1:81.4]	42	59.8	[44.1:73.7]
IIIe	Other specified intracranial and intraspinal neoplasm	72	98.6	[92.4:99.8]	84	96.4	[90.0:98.8]	111	98.0	[89.5:99.6]	41	90.2	[77.5:96.1]	69	95.7	[88.0:98.5]	109	95.9	[89.7:98.4]
IV	Neuroblastoma and other peripheral nervous cell tumour	80	70.0	[59.2:78.9]	82	79.1	[69.1:86.5]	77	80.6	[69.1:88.6]	58	84.5	[73.1:91.6]	59	86.2	[75.1:92.8]	75	84.6	[73.7:91.5]
IVa	Neuroblastoma and ganglioneuroblastoma	72	68.1	[56.6:77.7]	76	80.1	[69.7:87.6]	68	80.9	[69.3:88.8]	54	83.3	[71.3:91.0]	58	86.0	[74.7:92.7]	68	83.1	[71.3:90.6]
V	Retinoblastoma	35	97.1	[85.5:99.5]	28	100.0	[100:100]	28	96.4	[82.3:99.4]	21	100.0	[100:100]	27	96.3	[81.7:99.3]	22	95.5	[78.2:99.2]
VI	Renal tumour	50	91.7	[80.6:96.7]	50	91.7	[80.4:96.7]	56	86.5	[74.5:93.3]	49	93.9	[83.5:97.9]	47	89.4	[77.4:95.4]	63	96.3	[87.2:99.0]
VIa	Nephroblastoma and other nonepithelial renal tumour	45	95.4	[84.7:98.7]	47	91.1	[79.3:96.5]	55	88.0	[76.1:94.5]	46	93.5	[82.5:97.8]	43	95.3	[84.5:98.7]	54	95.7	[85.4:98.8]
VIII	Malignant bone tumour	98	67.3	[57.6:75.8]	87	75.5	[65.4:83.4]	101	74.5	[64.1:82.7]	72	79.0	[68.2:86.9]	57	84.2	[72.6:91.5]	61	79.2	[66.2:88.1]
VIIIa	Osteosarcoma	47	63.8	[49.5:76.0]	49	77.0	[63.3:86.6]	52	86.3	[74.3:93.2]	32	78.1	[61.2:89.0]	28	89.3	[72.8:96.3]	30	77.2	[57.6:89.4]
VIIIc	Ewing tumour and related sarcoma of bone	42	64.3	[49.2:77.0]	30	66.7	[48.8:80.8]	42	55.5	[37.4:72.3]	32	77.8	[60.7:88.8]	19	68.4	[46.0:84.6]	23	-	-
IX	Soft tissue and other extraosseous sarcoma	99	71.4	[61.8:79.4]	90	62.2	[51.9:71.5]	110	64.2	[53.9:73.4]	79	83.5	[73.9:90.1]	85	80.0	[70.3:87.1]	88	71.0	[59.3:80.4]
IXa	Rhabdomyosarcoma	41	80.0	[65.2:89.5]	43	53.5	[38.9:67.5]	51	64.0	[48.5:77.1]	23	78.3	[58.1:90.3]	26	69.2	[50.0:83.5]	24	-	-
IXd	Other specified soft tissue sarcoma	43	67.4	[52.5:79.5]	34	67.6	[50.8:80.9]	42	69.5	[53.8:81.7]	49	87.8	[75.8:94.3]	44	81.8	[68.0:90.5]	47	77.6	[63.3:87.5]
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	110	96.4	[91.0:98.6]	98	96.9	[91.4:99.0]	126	98.4	[94.4:99.6]	54	88.9	[77.8:94.8]	64	92.2	[83.0:96.6]	66	98.0	[89.3:99.6]
XI	Other malignant epithelial neoplasm and melanoma	140	94.3	[89.1:97.1]	162	91.3	[85.9:94.7]	177	94.7	[89.8:97.3]	226	97.8	[94.9:99.1]	281	96.8	[94.0:98.3]	266	96.6	[93.4:98.3]
I-XII	**All tumours**	1,621	84.8	**[82.9:86.4]**	1,705	85.1	**[83.3:86.7]**	1,952	87.2	**[85.5:88.7]**	1,329	87.6	**[85.8:89.3]**	1,459	88.6	**[86.9:90.2]**	1,633	89.9	**[88.2:91.4]**

Source: Belgian Cancer Registry

N = N at risk: Number of patients at risk at start of survival analysis

5 yr OS: five -year observed survival (%)

95% CI: 95% confidence interval of the observed survival (%)

Observed survival calculated on less than 30 patients (N at risk) are purely indicative and no strong conclusions can be drawn.

Appendix 24: Observed survival for both sexes, children (0-14y), Belgium 2004-2009, 2009-2014, 2014-2020

Children (0-14 years)

Belgium 2004-2020		2004-2009			2009-2014			2014-2020		
		N	5 yr OS	95% CI	N	5 yr OS	95%	N	5 yr OS	95% CI
I	Leukaemia, myeloproliferative and myelodysplastic disease	498	84.3	[80.9:87.3]	558	86.9	[83.8:89.4]	626	90.1	[87.2:92.3]
Ia	Lymphoid leukaemia	399	89.2	[85.8:91.9]	418	90.9	[87.7:93.3]	485	93.3	[90.4:95.3]
Ib	Acute myeloid leukaemia	63	55.6	[43.3:67.2]	71	68.8	[57.2:78.4]	87	73.0	[62.3:81.5]
II	Lymphoma and reticuloendothelial neoplasm	281	96.4	[93.5:98.0]	273	96.7	[93.8:98.2]	277	96.7	[93.9:98.3]
IIa	Hodgkin lymphoma	88	98.9	[93.8:99.8]	76	100.0	[100.0:100.0]	113	99.1	[95.2:99.8]
IIb	Non-Hodgkin lymphoma	41	95.1	[83.9:98.7]	41	85.3	[71.4:93.1]	47	84.6	[71.4:92.4]
IIc	Burkitt lymphoma	60	94.9	[86.1:98.3]	63	96.8	[89.1:99.1]	69	98.6	[92.2:99.7]
IId	Miscellaneous lymphoreticular neoplasm	88	96.6	[90.5:98.8]	93	98.9	[94.1:99.8]	47	100.0	[100.0:100.0]
III	CNS and miscellaneous intracranial and intraspinal neoplasm	462	80.1	[76.2:83.5]	551	77.4	[73.7:80.7]	640	80.4	[76.9:83.4]
IIIa	Ependymoma and choroid plexus tumour	55	78.2	[65.6:87.1]	48	75.0	[61.2:85.1]	65	81.9	[69.2:90.1]
IIIb	Astrocytoma	200	83.5	[77.7:88.0]	209	80.3	[74.4:85.1]	232	84.8	[79.4:88.9]
IIIc	Intracranial and intraspinal embryonal tumour	70	62.9	[51.1:73.2]	95	57.5	[47.3:67.0]	80	58.7	[46.7:69.7]
IIId	Other glioma	51	70.6	[57.0:81.3]	65	64.6	[52.5:75.1]	83	53.8	[42.7:64.5]
IIIe	Other specified intracranial and intraspinal neoplasm	67	94.0	[85.6:97.7]	86	94.2	[87.1:97.5]	116	96.0	[89.9:98.5]
IV	Neuroblastoma and other peripheral nervous cell tumour	132	75.8	[67.8:82.3]	138	82.4	[75.1:87.9]	144	83.8	[76.3:89.2]
IVa	Neuroblastoma and ganglioneuroblastoma	124	75.0	[66.7:81.8]	134	82.6	[75.3:88.1]	135	82.6	[74.7:88.4]
V	Retinoblastoma	56	98.2	[90.6:99.7]	55	98.2	[90.4:99.7]	50	96.0	[86.4:98.9]
VI	Renal tumour	93	93.4	[86.4:97.0]	91	92.1	[84.6:96.1]	113	92.1	[85.0:96.0]
VIa	Nephroblastoma and other nonepithelial renal tumour	88	94.2	[87.2:97.5]	88	93.0	[85.6:96.8]	109	91.8	[84.6:95.8]
VIII	Malignant bone tumour	98	76.5	[67.2:83.8]	85	82.4	[72.9:89.0]	86	74.0	[62.0:83.2]
VIIIa	Osteosarcoma	43	74.4	[59.8:85.1]	44	84.1	[70.6:92.1]	39	84.3	[69.7:92.6]
VIIIc	Ewing tumour and related sarcoma of bone	49	75.5	[61.9:85.4]	33	75.8	[59.0:87.2]	42	68.0	[49.5:82.1]
IX	Soft tissue and other extraosseous sarcoma	102	79.2	[70.3:86.0]	113	73.5	[64.6:80.7]	131	70.1	[60.4:78.3]
IXa	Rhabdomyosarcoma	54	83.0	[70.8:90.8]	56	64.3	[51.2:75.5]	57	67.5	[51.4:80.3]
IXd	Other specified soft tissue sarcoma	37	75.7	[59.9:86.6]	42	78.6	[64.1:88.3]	56	77.8	[65.0:86.8]
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	59	93.2	[83.8:97.3]	69	92.8	[84.1:96.9]	76	100.0	[100.0:100.0]
XI	Other malignant epithelial neoplasm and melanoma	127	95.3	[90.0:97.8]	146	95.8	[91.2:98.1]	162	97.7	[93.5:99.2]
I-XII	**All tumours**	1,918	85.7	**[84.0:87.2]**	2,095	85.8	**[84.2:87.2]**	2,337	87.2	**[85.7:88.6]**

Source: Belgian Cancer Registry

N = N at risk: Number of patients at risk at start of survival analysis

5 yr OS: five -year observed survival (%)

95% CI: 95% confidence interval of the observed survival (%)

Observed survival calculated on less than 30 patients (N at risk) are purely indicative and no strong conclusions can be drawn.

Appendix 25: Observed survival by sex, children (0-14y), Belgium 2004-2009, 2009-2014, 2014-2020

Belgium 2004-2020		Boys (0-14 years)									Girls (0-14 years)								
		2004-2009			2009-2014			2014-2020			2004-2009			2009-2014			2014-2020		
		N	5 yr OS	95% CI	N	5 yr OS	95% CI	N	5 yr OS	95% CI	N	5 yr OS	95% CI	N	5 yr OS	95%	N	5 yr OS	95% CI
I	Leukaemia, myeloproliferative and myelodysplastic disease	290	83.8	[79.1:87.6]	307	86.9	[82.7:90.3]	343	88.2	[84.0:91.5]	208	85.1	[79.6:89.3]	251	86.8	[82.0:90.4]	283	92.2	[88.2:94.9]
Ia	Lymphoid leukaemia	236	88.6	[83.9:92.0]	240	91.2	[87.0:94.2]	267	92.0	[87.6:94.9]	163	90.2	[84.6:93.9]	178	90.4	[85.1:93.9]	218	94.7	[90.4:97.2]
Ib	Acute myeloid leukaemia	31	48.4	[32.0:65.2]	34	73.5	[56.9:85.4]	45	68.9	[53.6:80.9]	32	62.5	[45.3:77.1]	37	64.3	[48.0:77.8]	42	77.1	[61.7:87.6]
II	Lymphoma and reticuloendothelial neoplasm	175	97.1	[93.5:98.8]	177	95.5	[91.3:97.7]	182	97.2	[93.7:98.8]	106	95.2	[89.3:97.9]	96	98.9	[94.2:99.8]	95	95.7	[89.4:98.3]
IIa	Hodgkin lymphoma	55	100.0	[100:100]	48	100.0	[100:100]	65	100.0	[100:100]	33	96.9	[84.3:99.4]	28	100.0	[100:100]	48	97.9	[89.1:99.6]
IIb	Non-Hodgkin lymphoma	25	96.0	[80.5:99.3]	28	82.0	[64.1:92.1]	28	85.7	[68.5:94.3]	16	93.8	[71.7:98.9]	13	92.3	[66.7:98.6]	19	-	-
IIc	Burkitt lymphoma	41	95.0	[83.5:98.6]	50	96.0	[86.5:98.9]	57	98.2	[90.7:99.7]	19	94.7	[75.4:99.1]	13	100.0	[100:100]	12	-	-
IId	Miscellaneous lymphoreticular neoplasm	51	96.1	[86.8:98.9]	51	98.0	[89.7:99.7]	32	100.0	[100:100]	37	97.3	[86.2:99.5]	42	100.0	[100:100]	15	100.0	[100:100]
III	CNS and miscellaneous intracranial and intraspinal neoplasm	247	81.8	[76.5:86.1]	313	75.9	[70.9:80.3]	354	79.3	[74.5:83.4]	215	78.1	[72.1:83.1]	238	79.4	[73.8:84.1]	286	81.7	[76.5:85.9]
IIIa	Ependymoma and choroid plexus tumour	24	79.2	[59.5:90.8]	27	70.4	[51.5:84.1]	36	86.3	[68.3:94.8]	31	77.4	[60.2:88.6]	21	81.0	[60.0:92.3]	29	76.6	[57.1:89.0]
IIIb	Astrocytoma	94	87.2	[79.0:92.5]	116	79.2	[70.9:85.6]	123	84.8	[77.2:90.2]	106	80.2	[71.6:86.7]	93	81.7	[72.7:88.3]	109	84.7	[76.6:90.4]
IIIc	Intracranial and intraspinal embryonal tumour	43	65.1	[50.2:77.6]	57	53.7	[40.8:66.1]	55	53.8	[39.6:67.5]	27	59.3	[40.7:75.5]	38	63.0	[47.1:76.6]	25	-	-
IIId	Other glioma	31	67.7	[50.1:81.4]	39	66.7	[51.0:79.4]	51	53.4	[39.5:66.8]	20	75.0	[53.1:88.8]	26	61.5	[42.5:77.6]	32	-	-
IIIe	Other specified intracranial and intraspinal neoplasm	43	97.7	[87.9:99.6]	52	96.2	[87.0:98.9]	60	100.0	[100:100]	24	87.5	[69.0:95.7]	34	91.2	[77.0:97.0]	56	92.0	[80.9:96.9]
IV	Neuroblastoma and other peripheral nervous cell tumour	77	70.1	[59.2:79.2]	79	79.6	[69.4:87.0]	73	82.3	[71.4:89.6]	55	83.6	[71.7:91.1]	59	86.2	[75.1:92.8]	71	85.2	[74.0:92.1]
IVa	Neuroblastoma and ganglioneuroblastoma	71	69.0	[57.5:78.6]	76	80.1	[69.7:87.6]	68	80.9	[69.3:88.8]	53	83.0	[70.8:90.8]	58	86.0	[74.7:92.7]	67	84.3	[72.6:91.6]
V	Retinoblastoma	35	97.1	[85.5:99.5]	28	100.0	[100:100]	28	96.4	[82.3:99.4]	21	100.0	[100:100]	27	96.3	[81.7:99.3]	22	95.5	[78.2:99.2]
VI	Renal tumour	45	93.1	[81.6:97.6]	48	91.3	[79.7:96.6]	55	88.0	[76.1:94.5]	48	93.8	[83.2:97.9]	43	93.0	[81.4:97.6]	58	95.9	[86.0:98.9]
VIa	Nephroblastoma and other nonepithelial renal tumour	42	95.1	[83.7:98.6]	47	91.1	[79.3:96.5]	55	88.0	[76.1:94.5]	46	93.5	[82.5:97.8]	41	95.1	[83.9:98.7]	54	95.7	[85.4:98.8]
VIII	Malignant bone tumour	55	76.4	[63.7:85.6]	49	77.6	[64.1:87.0]	46	69.6	[52.6:82.5]	43	76.7	[62.3:86.8]	36	88.9	[74.7:95.6]	40	79.1	[62.2:89.7]
VIIIa	Osteosarcoma	23	69.6	[49.1:84.4]	25	80.0	[60.9:91.1]	21	90.5	[71.1:97.3]	20	80.0	[58.4:91.9]	19	89.5	[68.6:97.1]	18	-	-
VIIIc	Ewing tumour and related sarcoma of bone	27	77.8	[59.2:89.4]	21	71.4	[50.0:86.2]	24	-	-	22	72.7	[51.8:86.8]	12	83.3	[55.2:95.3]	18	-	-
IX	Soft tissue and other extraosseous sarcoma	62	77.1	[65.1:85.8]	63	66.7	[54.4:77.1]	72	69.9	[56.6:80.6]	40	82.5	[68.0:91.3]	50	82.0	[69.2:90.2]	59	70.3	[55.7:81.7]
IXa	Rhabdomyosarcoma	33	84.4	[68.2:93.1]	34	58.8	[42.2:73.6]	39	70.0	[50.8:84.1]	21	81.0	[60.0:92.3]	22	72.7	[51.8:86.8]	18	-	-
IXd	Other specified soft tissue sarcoma	20	70.0	[48.1:85.5]	21	71.4	[50.0:86.2]	26	75.7	[56.0:88.4]	17	82.4	[59.0:93.8]	21	85.7	[65.4:95.0]	30	79.6	[62.1:90.3]
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	21	95.2	[77.3:99.2]	27	96.3	[81.7:99.3]	33	100.0	[100:100]	38	92.1	[79.2:97.3]	42	90.5	[77.9:96.2]	43	100.0	[100:100]
XI	Other malignant epithelial neoplasm and melanoma	52	90.4	[79.4:95.8]	55	92.7	[82.7:97.1]	76	98.6	[92.2:99.7]	75	98.7	[92.8:99.8]	91	97.8	[92.2:99.4]	86	97.0	[89.7:99.2]
I-XII	**All tumours**	1,064	85.2	[82.9:87.2]	1,153	84.2	[82.0:86.2]	1,278	86.2	[84.0:88.1]	854	86.3	[83.8:88.4]	942	87.7	[85.5:89.7]	1,059	88.5	[86.3:90.4]

Source: Belgian Cancer Registry

N = N at risk: Number of patients at risk at start of survival analysis

5 yr OS: five -year observed survival (%)

95% CI: 95% confidence interval of the observed survival (%)

Observed survival calculated on less than 30 patients (N at risk) are purely indicative and no strong conclusions can be drawn.

Appendix 26: Observed survival for both sexes, adolescents (15-19y), Belgium 2004-2009, 2009-2014, 2014-2020

Adolescents (15-19 years)

	Belgium 2004-2020	2004-2009			2009-2014			2014-2020		
		N	5 yr OS	95% CI	N	5 yr OS	95%	N	5 yr OS	95% CI
I	Leukaemia, myeloproliferative and myelodysplastic disease	141	70.7	[62.7:77.6]	123	77.6	[69.4:84.1]	145	82.2	[75.1:87.7]
Ia	Lymphoid leukaemia	80	68.6	[57.8:77.8]	61	75.3	[63.1:84.4]	70	88.4	[78.7:94.0]
Ib	Acute myeloid leukaemia	32	59.4	[42.3:74.5]	31	63.4	[45.6:78.2]	39	68.8	[52.9:81.2]
II	Lymphoma and reticuloendothelial neoplasm	239	94.1	[90.4:96.5]	258	95.0	[91.6:97.0]	317	94.9	[91.6:97.0]
IIa	Hodgkin lymphoma	160	96.3	[92.1:98.3]	175	97.1	[93.5:98.8]	224	97.3	[93.7:98.9]
IIb	Non-Hodgkin lymphoma	58	91.4	[81.4:96.3]	54	92.6	[82.4:97.1]	62	87.6	[76.3:93.9]
III	CNS and miscellaneous intracranial and intraspinal neoplasm	145	85.4	[78.7:90.3]	165	86.7	[80.6:91.0]	236	93.3	[88.9:96.0]
IIIb	Astrocytoma	60	78.3	[66.4:86.9]	56	76.7	[64.1:85.8]	73	87.0	[77.0:93.0]
IIIe	Other specified intracranial and intraspinal neoplasm	46	97.8	[88.4:99.6]	67	98.5	[92.0:99.7]	104	98.1	[89.9:99.7]
VIII	Malignant bone tumour	72	66.4	[54.8:76.2]	59	74.0	[61.4:83.6]	77	78.8	[67.7:86.8]
VIIIa	Osteosarcoma	36	63.9	[47.6:77.5]	33	77.9	[60.8:88.8]	44	82.8	[68.3:91.5]
IX	Soft tissue and other extraosseous sarcoma	76	73.7	[62.8:82.3]	62	66.1	[53.7:76.7]	67	60.9	[47.9:72.4]
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	105	94.3	[88.1:97.4]	93	96.8	[90.9:98.9]	116	97.1	[91.8:99.0]
Xc	Malignant gonadal germ cell tumour	85	96.5	[90.1:98.8]	78	98.7	[93.1:99.8]	95	98.9	[94.2:99.8]
XI	Other malignant epithelial neoplasm and melanoma	239	97.1	[94.1:98.6]	298	93.9	[90.6:96.1]	281	94.7	[91.1:96.9]
XIb	Thyroid carcinoma	44	100.0	[100.0:100.0]	58	100.0	[100.0:100.0]	65	98.0	[89.7:99.7]
XId	Melanoma	61	98.4	[91.3:99.7]	67	97.0	[89.8:99.2]	63	96.6	[88.2:99.1]
I-XII	**All tumours**	1,032	86.8	**[84.6:88.7]**	1,072	88.5	**[86.4:90.3]**	1,252	90.7	**[88.8:92.2]**

Source: Belgian Cancer Registry

N = N at risk: Number of patients at risk at start of survival analysis

5 yr OS: five -year observed survival (%)

95% CI: 95% confidence interval of the observed survival (%)

Observed survival calculated on less than 30 patients (N at risk) are purely indicative and no strong conclusions can be drawn.

Appendix 27: Observed survival by sex, adolescents (15-19y), Belgium 2004-2009, 2009-2014, 2014-2020

Belgium 2004-2020		Boys (15-19 years)									Girls (15-19 years)								
		2004-2009			2009-2014			2014-2020			2004-2009			2009-2014			2014-2020		
		N	5 yr OS	95% CI	N	5 yr OS	95% CI	N	5 yr OS	95% CI	N	5 yr OS	95% CI	N	5 yr OS	95%	N	5 yr OS	95% CI
I	Leukaemia, myeloproliferative and myelodysplastic disease	83	68.7	[58.1:77.6]	78	79.2	[68.9:86.8]	93	83.1	[73.9:89.5]	58	73.7	[61.0:83.4]	45	74.9	[60.4:85.4]	52	80.6	[67.9:89.1]
Ia	Lymphoid leukaemia	49	67.3	[53.4:78.8]	43	74.4	[59.8:85.1]	51	86.3	[74.3:93.2]	31	70.7	[53.0:83.8]	18	77.8	[54.8:91.0]	19	-	-
Ib	Acute myeloid leukaemia	16	-	-	19	72.2	[49.1:87.5]	24	-	-	16	62.5	[38.6:81.5]	12	-	-	15	-	-
II	Lymphoma and reticuloendothelial neoplasm	129	93.0	[87.3:96.3]	137	94.2	[88.9:97.0]	169	94.7	[89.4:97.5]	110	95.5	[89.8:98.0]	121	95.9	[90.7:98.2]	148	95.1	[90.3:97.6]
IIa	Hodgkin lymphoma	81	96.3	[89.7:98.7]	84	97.6	[91.7:99.3]	114	97.5	[91.0:99.3]	79	96.2	[89.4:98.7]	91	96.7	[90.8:98.9]	110	97.1	[91.8:99.0]
IIb	Non-Hodgkin lymphoma	32	87.5	[71.9:95.0]	32	87.5	[71.9:95.0]	34	89.4	[72.9:96.4]	26	96.2	[81.1:99.3]	22	100.0	[100:100]	28	85.6	[68.2:94.2]
III	CNS and miscellaneous intracranial and intraspinal neoplasm	79	82.1	[72.1:89.0]	87	87.4	[78.8:92.8]	124	92.5	[85.6:96.3]	66	89.4	[79.7:94.8]	78	85.8	[76.4:91.9]	112	94.2	[87.8:97.3]
IIIb	Astrocytoma	30	73.3	[55.6:85.8]	33	84.8	[69.1:93.3]	40	84.6	[70.1:92.8]	30	83.3	[66.4:92.7]	23	64.7	[44.2:80.9]	33	89.9	[74.1:96.5]
IIIe	Other specified intracranial and intraspinal neoplasm	29	100.0	[100:100]	32	96.9	[84.3:99.4]	51	95.8	[79.8:99.3]	17	94.1	[73.0:99.0]	35	100.0	[100:100]	53	100.0	[100:100]
VIII	Malignant bone tumour	43	55.8	[41.1:69.6]	38	72.7	[56.7:84.5]	56	78.6	[65.5:87.7]	29	82.2	[64.6:92.2]	21	76.2	[54.9:89.4]	21	79.1	[56.7:91.6]
VIIIa	Osteosarcoma	24	58.3	[38.8:75.5]	24	73.6	[53.0:87.3]	32	84.3	[68.0:93.1]	12	-	-	9	-	-	12	-	-
IX	Soft tissue and other extraosseous sarcoma	37	62.2	[46.1:75.9]	27	51.9	[34.0:69.3]	38	52.8	[36.8:68.3]	39	84.6	[70.3:92.8]	35	77.1	[61.0:87.9]	29	71.8	[51.2:86.0]
X	Germ cell tumour, trophoblastic tumour and neoplasm of gonads	89	96.6	[90.6:98.8]	71	97.2	[90.3:99.2]	93	97.8	[92.5:99.4]	16	81.3	[57.0:93.4]	22	95.5	[78.2:99.2]	23	93.8	[71.7:98.9]
Xc	Malignant gonadal germ cell tumour	75	97.3	[90.8:99.3]	62	100.0	[100:100]	82	98.8	[93.4:99.8]	10	-	-	16	93.8	[71.7:98.9]	13	-	-
XI	Other malignant epithelial neoplasm and melanoma	88	96.6	[90.5:98.8]	108	89.7	[82.5:94.2]	101	91.9	[83.9:96.1]	151	97.4	[93.4:99.0]	190	96.3	[92.6:98.2]	180	96.4	[92.4:98.4]
XIb	Thyroid carcinoma	15	100.0	[100:100]	13	100.0	[100:100]	15	-	-	29	100.0	[100:100]	45	100.0	[100:100]	50	100.0	[100:100]
XId	Melanoma	22	100.0	[100:100]	22	95.5	[78.2:99.2]	24	100.0	[100:100]	39	97.4	[86.8:99.5]	45	97.8	[88.4:99.6]	39	94.4	[81.6:98.5]
I-XII	**All tumours**	557	84.0	**[80.7:86.8]**	554	86.7	**[83.7:89.3]**	678	89.1	**[86.4:91.4]**	475	90.1	**[87.1:92.5]**	518	90.3	**[87.5:92.6]**	574	92.5	**[89.9:94.4]**

Source: Belgian Cancer Registry

N = N at risk: Number of patients at risk at start of survival analysis

5 yr OS: five-year observed survival (%)

95% CI: 95% confidence interval of the observed survival (%)

Observed survival calculated on less than 30 patients (N at risk) are purely indicative and no strong conclusions can be drawn.

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