

Cancer in Norway 2022

Cancer incidence, mortality, survival
and prevalence in Norway



Cancer in Norway 2022

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General requests for cancer information or possible research collaboration are welcome, and should be sent to datautlevering@kreftregisteret.no. The application form on <https://helsedata.no/> should be used to request for data from the Cancer Registry of Norway.

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Foreword

The Cancer Registry of Norway has completed 70 years of registration of cancer cases. Most cancer types show increasing rates over time, but treatments have improved and for many cancers the prognosis is now very good. Our hope is that the data we provide will contribute to even better diagnostic efforts and treatment over the next decade. For the more recent trends, we may still be seeing some effects from the Covid-19 pandemic. In the long-term trends, these observed changes in diagnostic activity will only be a small blip.

The Cancer Registry of Norway celebrated its 70th anniversary last year. Because we count 1953 as the first year with complete cancer data, with the 2022 cancer numbers, we have also completed 70 years of cancer registration. Much can be said about the changes over time, and the curious reader is referred to our plots both on incidence of all cancers combined in the incidence chapter, as well as our plots of trends in incidence, mortality and survival over time. While incidence rates have increased substantially, mortality has decreased, and the decline has been substantial the past two decades.

As for the more recent trends, discussions at cancer registries worldwide the past two years have been on the effect of the Covid-19 pandemic, both acutely and on longer term on cancer rates. It will take some time before we know the full answer, but the longer time trends seem to have normalized. The pandemic will in the long run remain a small blip in the curves, only visible for some cancers, mostly breast cancer, and possibly for melanoma.

In general, the number of cancer cases in Norway increases with about 2% per year in absolute counts. In 2022, the increase was above 3%. The melanoma rates have rapidly increased over several years, but now the curve shifts even more abruptly upwards. Is this because of a delay in diagnostic activity during the pandemic? Or is it because men and women have finally taken their moles in for a check-up after the pandemic? Or can a post-pandemic excessive sun exposure have provided a final growth spurt for pre-existing dysplastic changes?

We do not know, but the increase is large and mostly in localized disease.

Breast cancer rates are also increasing, both on the longer and the shorter term. Over decades, we think changes have been caused by continuously improved diagnostic instruments. Over the short term the increase seems to be limited to women outside of screening age. In particular we are puzzled at the recent increase in rates in women above 80 years of age. Is there some increased diagnostic efforts in this group we do not know about? On the positive side, we think lung cancer rates are starting to decline also in women. Our anticipation is supported by a decline seen in all age groups except for the oldest women.

We are also watching cervical cancer rates closely, and see a small reduction this year. This is good news, but we still need to halve the rate to reach WHO's target. This year all women will be screened with HPV test as the primary screening method. Combined with the HPV vaccine this should contribute to a decline, albeit slowly.

A question has been raised whether delay during the pandemic has led to general changes in the stage-specific trends. This is not completely clear in the Norwegian data. Although we see some increases in advanced stage disease for some cancers in 2020 or 2021, the changes were minor and possible within what we expect from random variation.

Thank you to the personnel throughout the country who reports cancer cases to the Cancer Registry. Thank you also to everyone involved at the Cancer Registry who code cancer, those who assist the coders in any way, and to the data managers and statisticians who contribute to the data analyses. A big thank you also to Inger Kristin Larsen and the editorial team. We all hope that the readers will find the report useful.

Oslo, May 2023
Giske Ursin, MD, PhD
Director

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Chapter 1 Definitions

Incidence The number of new cases of a disease in a defined population within a specific period of time.

Incidence rate The number of new cases that arise in a population (incidence) divided by the number of people who are at risk of getting cancer in the same period. The rate is expressed per 100 000 person-years. Person-years is a metric that combines persons and time (in years) as the denominator in rates.

Crude rate Unadjusted rates, often estimated for the entire population, with no standardisation by age.

Age-specific rate A rate calculated within an age stratum, often a five-year interval.

Age-standardisation A procedure for adjusting rates, e.g. incidence rates, designed to minimize the disturbing effects of differences in age composition when comparing rates for different populations (observed by geographical residence or over different time periods). The adjusted rates are referred to as age-standardised (or age-adjusted) rates. For this report, we use a standard chosen to be the Norwegian mid-year population in 2014 (referred to in the text as Norwegian standard).

Prevalence Prevalence is the number or proportion of a population that has the disease at a given point in

time. In this report we use lifetime cancer prevalence that can be defined as the number of living individuals having ever been diagnosed with cancer.

Relative survival The observed survival after a given period of time in a patient group, divided by the expected survival of a comparable group in the general population, comparable with respect to key factors affecting survival such as age, sex and calendar year of observation. Relative survival is thus determined by the mortality experienced by the patients regardless of whether an excess mortality (or even deficiency) may be attributable or linked to the disease under investigation. A key advantage is that it does not require information about cause of death.

Conditional relative survival The probability of surviving an additional number of years given that the person has already survived a certain number of years. As time from diagnosis lengthens, this statistic becomes more informative to survivors than the conventional relative survival estimate. A five-year conditional relative survival that reaches close to 100% some number of years after diagnosis indicates that from that point, there is little or no excess mortality in the patient group.

Most definitions are based on Last & al, 2001^[1].

Chapter 2 Summary

The aim of the annual publication of Cancer in Norway (CiN) is to provide detailed cancer statistics. This publication should help health professionals, policy-makers and researchers to identify and make decisions about areas that need more attention and investigation. This publication may also be valuable for the media, educators and members of the public with an interest in cancer. Due to random variation in incidence rates from one year to another, cancer trends should be interpreted by examining the rates over several years. Furthermore, the number of cancer cases for 2022 might be slightly underreported due to delayed notification of cancer cases. The data for this report were extracted on 16 April 2023.

The report is available online at:

<https://www.kreftregisteret.no/>

Incidence data are available online at:

<https://www.kreftregisteret.no/Registrene/data-og-statistikk/statistikkbank/>

Incidence

A total of 38 265 new cancer cases were reported in 2022: 53.5% among males and 46.5% among females. The five most frequent types of cancer in males in 2018–2022 were prostate, lung, colon, skin, non-melanoma and urinary tract. The five most frequent types of cancer in females in 2018–2022 were breast, lung, colon, skin, non-melanoma and melanoma of the skin.

The incidence rate for all sites combined has decreased by 3.5% in males and increased by 2.3% in females when comparing the last five-year period (2018–2022) with the previous one (2013–2017) (Table 2.1). Looking at specific cancer sites, skin, non-melanoma still has the largest increase in rates. The incidence of thyroid cancer and melanoma of the skin has also increased markedly, but not to the same extent as for non-melanoma skin cancer. On the positive side, we observed a decline in the incidence rates for several cancers, e.g. prostate, lung (still only among males), colorectal and ovarian. Cancers of the central nervous system have also decreased between 2013–2017 and 2018–2022. However, there may have been some underreporting of cases that were not

morphologically verified, and thus not reported directly from the pathology departments. In addition, the worrying increase in cervical cancer has flattened out, and now shows a slight decrease.

After the publication of CiN, we usually receive information about 1–2% additional cases that should have been included in the last year incidence numbers. In particular, this is evident for cervical cancer and this must be taken into account when interpreting the incidence numbers.

The first-generation immigrants in Norway comprise 16% of the total population, while 9% of all cancer cases diagnosed in 2018–2022 were among immigrants.

Cancer incidence and COVID-19

In CiN 2021, we observed that the decline in incidence for breast, ovarian and lung cancer among females in 2020 was followed by an increase in the rates in 2021. For breast cancer we observed that the increase in rates from 2020 to 2021 was most pronounced for females in screening age (50–69 years). Such an increase was not observed for cervical cancer, which also had a decrease in 2020. However, we assumed that the numbers for cervical cancer in 2021 were incomplete and thus difficult to interpret. In this report, where we expect the numbers for 2021 to be complete, we still did not observe any increase in numbers for cervical cancer in 2021 and neither in 2022.

Another concern has arisen for the 2022 numbers, namely the remarkable increase in the number of new skin cancers (both melanoma and non-melanoma). As the rates for 2020 and 2021 were relatively flat, the sharp increase may be due to lower diagnostic intensity during the pandemic, but this needs to be investigated further.

Prevalence

At the end of 2022 a total of 327 101 persons were alive after having had at least one cancer diagnosis at some point in time.

¹We have not received complete data for 2022

Mortality

There were 11 121 deaths due to cancer in 2021¹. Cancer of the lung accounts for 20% of cancer mortality, followed by cancer in the colon (11%), prostate (8%), pancreas (7%) and female breast (5%). Together these cancer sites account for 52% of the cancer mortality.

Survival

There was a slight increase in the five-year relative survival for most cancers when comparing the current five-

year period (2018–2022) with the previous one. For the most common cancers, the largest increase in survival was observed for lung cancer.

Prostate cancer: Increased from 95.0% to 95.7%.

Breast cancer: Increased from 91.8% to 92.5%.

Lung cancer (M): Increased from 21.3% to 26.5%.

Lung cancer (F): Increased from 27.3% to 33.7%.

Colon cancer (M): Increased from 67.5% to 69.2%.

Colon cancer (F): Increased from 70.3% to 71.2%.

Rectum cancer (M): Increased from 71.4% to 71.8%.

Rectum cancer (F): Increased from 72.3% to 73.4%.

Table 2.1: Summary of cancer statistics for selected cancers

ICD-10	Site	Sex	Incidence cases, 2022 ¹	Incidence rate, 2018–22 ²	Change in rate (%) ³	Mortality rate, 2021 ⁴	Five-year relative survival (%)	
							2013–17	2018–22
C00–96	All sites	M	20 487	711.7	-3.5	221.4	75.2	77.1
		F	17 778	566.8	2.3	164.2	74.4	76.9
C18	Colon	M	1 603	56.3	-5.5	22.6	67.5	69.2
		F	1 649	52.5	-2.9	20.0	70.3	71.2
C19–20	Rectum, rectosigmoid	M	886	30.2	-8.8	7.3	71.4	71.8
		F	607	18.6	-8.0	4.7	72.3	73.4
C33–34	Lung, trachea	M	1 804	62.9	-8.7	41.6	21.3	26.5
		F	1 730	54.7	2.4	32.3	27.3	33.7
C43	Melanoma of the skin	M	1 462	46.2	9.3	6.8	88.0	90.3
		F	1 449	41.8	11.7	3.2	93.9	95.7
C44	Skin, non-melanoma	M	1 686	59.2	28.0	...	...	...
		F	1 375	38.9	33.2	...	...	...
C50	Breast	F	4 224	133.6	5.2	18.9	91.8	92.5
C53	Cervix uteri	F	302	13.4	-1.2	2.7	80.8	82.5
C54	Corpus uteri	F	817	26.7	-3.6	3.7	85.4	86.2
C56, C57.0–4, C48.2	Ovary etc.	F	506	17.3	-10.1	9.9	49.7	51.2
C61	Prostate	M	5 474	183.2	-11.4	38.3	95.0	95.7
C62	Testis	M	286	11.0	-5.2	0.2	98.8	98.5
		F	1 388	49.2	-4.9	9.6	79.3	80.6
C65–68	Urinary tract	M	456	16.8	-15.3	8.0	59.8	56.4
		F	532	19.1	-12.6	6.9	77.2	75.9
C70–72	Central nervous system	M	158	5.2	9.3	0.4	88.8	90.5
		F	321	12.4	16.1	0.6	93.9	95.3
C73	Thyroid gland	M	617	21.8	-1.7	5.8	74.4	77.3
C82–86, C96	Non-Hodgkin lymphoma	M	465	15.5	-0.8	3.8	77.4	81.3
		F	744	28.8	-1.8	9.1	68.0	72.3
C91–95	Leukaemia	M	558	20.0	-0.4	5.8	74.4	75.5

¹ Number of new cases.

² Age-standardised (Norwegian std.) incidence rates per 100 000 person-years.

³ Percent change in age-standardised incidence rate from 2013–17 to 2018–22.

⁴ Age-standardised (Norwegian std.) mortality rates per 100 000 person-years. The mortality data was obtained from the Cause of Death Registry.

... Not estimated in this report.

Chapter 3 Data and data sources

3.1 The population of Norway

By 1 January 2023, the total number of inhabitants in Norway was 5 488 984^[2]. Table 3.1 shows the age structure by sex for the Norwegian mid-year population in 2022. The population has increased by 64% from 1953, when cancer registration started in Norway, to 2023. This increase is largely due to the rising life expectancy and,

more recently, to an increase in net immigration. The size of the population is expected to reach 6.1 million in 2060¹, and the elderly will represent an increasing proportion of the population of Norway over the next decades^[3]. Recent updates from Statistics Norway estimate that the proportion of persons 70 years or older will increase from 13% in 2022, to 22% in 2060^[3].

Table 3.1: Norwegian mid-year population 2022 by five-year age group and sex

Age group	Males	Females	Total
0–4	143 124	135 789	278 913
5–9	157 743	149 399	307 142
10–14	169 566	160 408	329 974
15–19	165 035	157 019	322 054
20–24	172 571	161 867	334 438
25–29	188 642	178 794	367 436
30–34	199 061	191 205	390 266
35–39	188 181	178 774	366 955
40–44	181 083	172 201	353 284
45–49	185 034	176 714	361 748
50–54	193 727	185 844	379 571
55–59	179 480	171 725	351 205
60–64	158 753	154 927	313 680
65–69	142 277	144 483	286 760
70–74	126 164	129 616	255 780
75–79	102 529	112 074	214 603
80–84	55 609	69 392	125 001
85+	42 828	75 499	118 327

The immigrant population

In 2018, the Regulations (*Kreftregisterforskriften*) were revised, and the Cancer Registry of Norway (CRN) was allowed to collect and process data on country of birth. Data on cancer incidence among immigrants has since then been included in CiN. The immigrant population is heterogeneous with respect to length of stay, country of birth and reason for immigration. By 1 January 2023 the first-generation immigrants in Norway comprised 16.0% of the total population (877 227 persons). An additional 3.9% of the Norwegian population are second-generation immigrants (born in Norway with

two foreign born parents). When classifying immigrants by country of birth, immigrants from Poland are the largest group with 107 442 persons followed by immigrants from Lithuania, Ukraine, Sweden and Syria^[4]. The number of immigrants from most countries are small, and it is thus not possible to provide cancer statistics by country of birth. In this report, immigrants are therefore categorised in six groups, of which cancer statistics are presented for five. We do not present data for immigrants from Latin America and the Caribbean due to too few cases. Many immigrants in Norway are born in European countries, and Europe was divided

¹ Considered the scenario of medium national growth

in three categories: Nordic countries, Western Europe (including North America and Oceania as these countries have similar cancer patterns) and other European countries. Table 3.2 shows the countries included in each

group. The countries are listed according to the number of immigrants and restricted to countries with more than 1000 immigrants.

Table 3.2: Number of first generation immigrants by country per 1 January 2023

Number of first generation immigrants	Nordic countries	Western Europe, North America and Oceania	Other European Countries	Middle East and Africa	Asia	Latin America and the Caribbean*
≥100 000			Poland			
50 000–99 999						
40 000–49 999			Lithuania			
30 000–39 999	Sweden		Ukraine	Syria		
20 000–29 999		Germany	Russia	Somalia	Philippines	
				Eritrea	Pakistan	
				Iraq	Thailand	
10 000–19 999	Denmark	United Kingdom	Romania	Iran	Afghanistan	
		United States	Turkey		India	
			Bosnia and Herzegovina		Vietnam	
			Latvia			
			Kosovo			
1 000–9 999	Iceland	Netherlands	Serbia	Ethiopia	China	Brazil
	Finland	Spain	Bulgaria	Morocco	Sri Lanka	Chile
		France	Croatia	Sudan	Myanmar	Colombia
		Italy	Estonia	DR Congo	Nepal	Mexico
		Portugal	Hungary	Lebanon	Bangladesh	Argentina
		Canada	Greece	Palestine	Indonesia	Peru
		Australia	Slovakia	Uganda	South Korea	Venezuela
		Switzerland	Albania	Nigeria	Kazakhstan	Cuba
		Belgium	North Macedonia	Kenya	Japan	
		Austria	Czech Republic	Ghana	Malaysia	
		Ireland	Moldova	Egypt		
			Belarus	South Africa		
				Algeria		
				The Gambia		
				Tunisia		
				Burundi		
				Saudi Arabia		
				Rwanda		
				Libya		

* Not shown as a separate group in table 5.25, 5.26, 5.27 and 5.28 due to few cancer cases.

3.2 The Cancer Registry of Norway

Since the implementation of a directive from the Ministry of Health and Social Affairs in January 1952, the CRN has systematically collected notifications on cancer occurrence for the Norwegian population. The registration is considered to be close to complete from 1953. The completeness for the registration period 2018–2022 is estimated to be 98.6% (Table 3.6), which is the same level

as reported for the early 2000s^[5]. The Regulations for the collection and processing of data in the CRN came into force in 2002. It is mandatory to report:

- All malignant neoplasms
- Precancerous disorders
- Benign tumours of the central nervous system and meninges

Main objectives

The main objectives of the CRN can be summarized as the following:

- Collect data on cancer occurrence and describe the distribution of cancer and changes over time.
- Provide a basis for research on the aetiology, diagnostic procedures, natural course of the disease, and effects of treatment in order to determine appropriate preventive measures and to improve the quality of medical care.
- Provide advice and information to public authorities and the public about preventive measures.
- Perform epidemiological research of high international standard.

The incidence registry

The incidence registry contains basic data items collected from clinicians and pathologists, hospital administered cancer medications and radiation therapy machines, as well as information from the Norwegian Patient Registry (NPR) and the Cause of Death Registry. As of 16 April 2023, the incidence registry contained information registered since 1953 on 2 220 181 cancer cases (including premalignant cases and benign conditions of the central nervous system). Of these cases, 1 337 987 (60.3%) are included in CiN. The main reasons for excluding cases registered in the incidence registry from the official cancer statistics are:

- Premalignant cases: 673 973 (30.4%)
- Basal cell carcinomas: 167 711 (7.6%)
- Multiple primary neoplasms, according to IARC rules: 30 981 (1.4%)
- Other reasons: 9529 (0.4%)

”Other reasons” include cases registered as malignant, but not regarded as cancers (some borderline tumors of the ovary and Pagets disease of the breast), cases diagnosed before 1953 and after 2022, cases registered to persons with unknown vital status, and cases in persons who emigrated before the date of diagnosis.

Each cancer case is based on an average of five notifications, ranging from three notifications as the lowest average number for ”other digestive organs” to eight as the highest for bone and Hodgkin lymphoma. This includes clinical notifications, pathology reports and death certificates. Death certificates are only registered if no information already exists in the incidence registry about the given case (DCN). If all death certificates were registered – both those notifying the CRN of a new case and those supporting an already registered case – the average number of notifications for each case would be higher.

On average, there is a solid base of notifications and information records behind each registered cancer case. The incidence registry is updated continuously with information on both new cases and cases diagnosed in previous years.

The clinical registries

Clinical registries have comprehensive registration schemes dedicated to specific cancers, and were established to provide detailed information about diagnostic procedures, pathology examinations, treatment and follow-up. The clinical registries aim to provide data for monitoring patient outcome and survival, and to be an empirical basis for scientific studies concerning prognostic factors and treatment outcomes, as well as for evaluation of the quality of cancer care. Each clinical registry has an advisory board consisting of multidisciplinary experts from clinical and research environments in Norway. These experts advise on the contents and activities of each clinical registry and its strategic direction. Registries are integrated with the CRN coding, quality assurance and registration activities. Table 3.3 shows the status of the clinical registries as of April 2023. Recent reports (in Norwegian) from these registries can be found here:

<https://www.kreftregisteret.no/Generelt/Rapporter/Arsrapport-fra-kvalitetsregistrene/>

Of note: The incidence numbers reported in these reports may differ from those reported in CiN. The discrepancy is due to differences in inclusion and exclusion criteria. A detailed overview of the criteria is provided in each individual report.

Table 3.3: Status of the clinical registries, April 2023

Clinical registry for	Clinical reference/ project group	Established with extended data*	Clinical parameters for electronical report specified	Electronical report form in use	National status
Colorectal cancer	Yes	Yes	Yes	Yes	2009
Prostate cancer	Yes	Yes	Yes	Yes	2009
Breast cancer	Yes	Yes	Yes	Yes	2013
Childhood cancer	Yes	Yes	Yes	Yes	2013
Gynecological cancer**	Yes	Yes	Yes	Yes	2013
Lung cancer	Yes	Yes	Yes	Yes	2013
Lymphomas and lymphoid leukaemias	Yes	Yes	Yes	Yes	2013
Melanoma of the skin	Yes	Yes	Yes	Yes	2013
Oesophagus and stomach cancer	Yes	Yes	Yes	Yes	***
Sarcoma	Yes	Yes	Yes	Yes	***
Central nervous system	Yes	No	Yes	No	****
Urinary tract	Yes	No	Yes	No	***
Pancreatic cancer	Yes	Yes	Yes	Yes	****

* Either by having a separate clinical report form and/or by having a database with extended information beyond the incidence registry.

** Established for ovarian and cervical cancer, and will be extended to include all gynecological cancer.

*** Funding and status as national clinical registry has been applied for.

**** Applied for status as national clinical registry. The CRN has received funding from the Norwegian Cancer Society for establishment and operation for three years.

3.3 Sources of information

The sources of information and the notification process are illustrated in Figure 3.1. Information from clinical notifications, pathology reports and death certificates are the main sources that enable the CRN to code and store data on cancer patients in Norway. Information from the NPR is an important additional source for identifying cancer cases. The information is identified and linked by the personal identification number system that was established in Norway in 1964.

Pathology departments

Pathology reports from hospitals and independent laboratories provide histological, cytological or autopsy information. All pathology reports are sent electronically to the CRN.

Hospitals and specialists

Clinical notifications

The CRN Regulations, as issued by the Ministry of Health and Social Affairs, require all health institutions in Norway involved in cancer diagnostics, treatment and follow-up to report to the CRN. Reporting should be done as soon as possible after end of diagnostics or treatment. The clinical registries use specific forms with extended information relevant for each cancer site. In addition, there are two generic forms for reporting solid or non-solid tumours not yet included in a clinical registry. These forms provide information on primary site, stage of disease, the basis for the diagnosis and primary treatment given to the patient. Clinical notifications are sent using the CRN electronic reporting service (KREMT) in the Norwegian Health Network. It is mandatory to report clinical information on all new cases of cancer, except those diagnosed by autopsy. Thus, at least one clinical notification should be registered for each cancer case. In those cases where the clinical notification is missing, a reminder is sent via the KREMT-portal to the hospital/ward/physician responsible for the treatment. More information about KREMT can be found at:

<https://www.kreftregisteret.no/Registre/Innrapportering/KREMT---Kreftregisterets-elektroniske-meldetjeneste/>

Radiotherapy

Information on doses and fractions is received directly from the radiation therapy machines.

Medical treatment

Information on medical treatment is received from the hospital administered cancer medication systems. The data are received for hospitals in the South-Eastern, Western and Central Norway Regional Health Trusts, but are not yet available from the Northern Regional Health Trust. The CRN also receives information on drug treatment prescribed from the hospital but administered at home (h-prescription).

National registries

The Norwegian Population Registry

The CRN receives monthly updates on patients' vital status from the Norwegian Population Registry. These data are used to estimate incidence rates and long-term survival patterns and trends.

The Norwegian Patient Registry

Since 2002, the CRN has received data from the Patient Administrative Data System used in all Norwegian hospitals. Information was first sent directly from the hospitals, and from 2010 it has been provided by the NPR. The data contains information regarding patients who have been treated for premalignant and malignant conditions. Reminders are sent to clinicians for all cancer cases not previously registered in the CRN. The NPR is a key source in finding information on unreported cases (Figure 3.1).

Cause of Death Registry

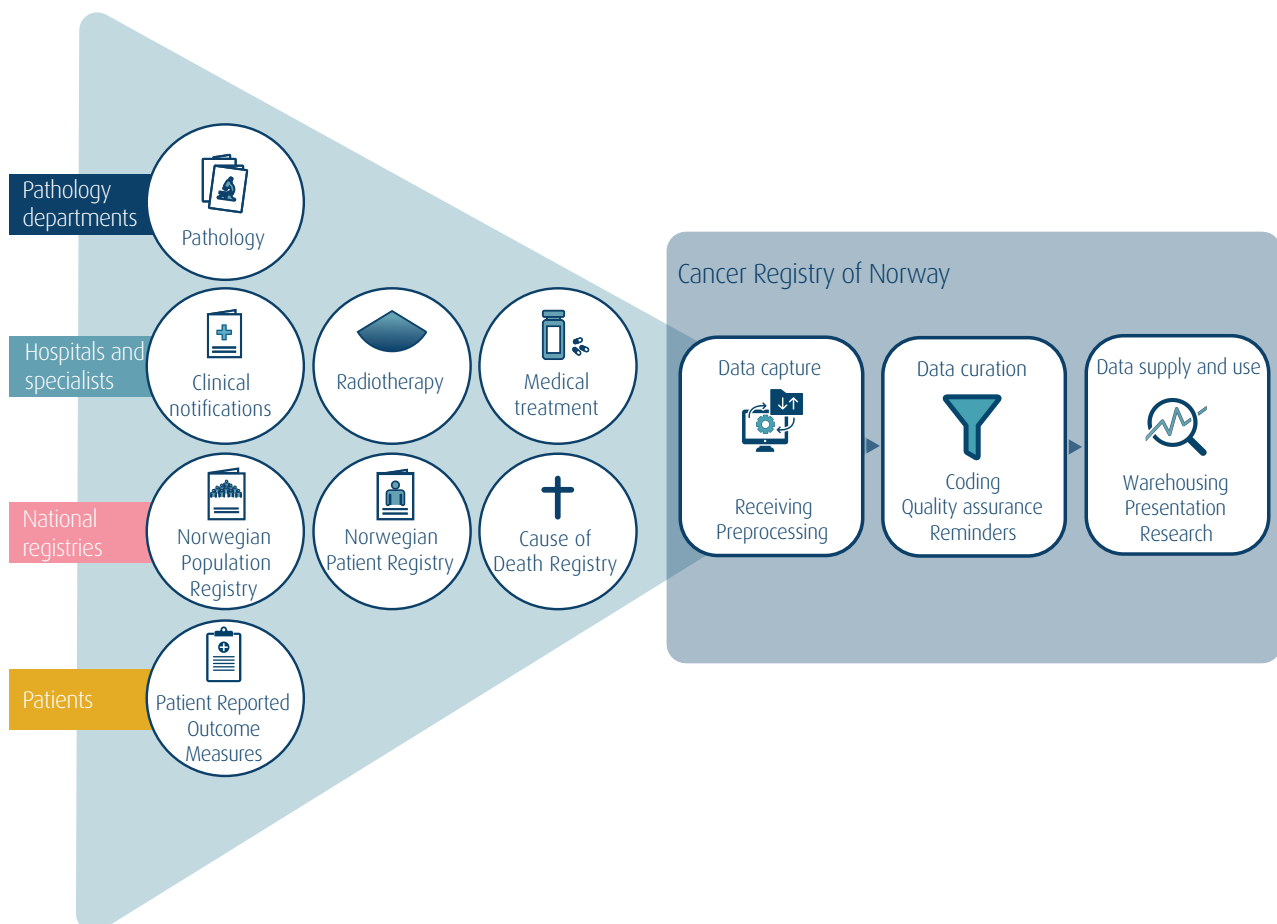
The Cause of Death Registry, run by the Norwegian Institute of Public Health, sends death certificates and information on cause of death to the CRN throughout the year. The automated procedure that matches registered cancer cases to death certificates is important for maintaining quality control, facilitating a high level of completeness and ensuring validity of the CRN data. Death certificates also represent a complementary source of information on new cancer cases which are not previously reported, or where the diagnosis differs. Cancer cases first identified from death certificates are traced back to the health institution responsible for the treatment of the patient to verify the diagnosis and, if possible, get clinical information about the case. A recent study validating the cancer information on death certificates showed that 90% of the cancers mentioned on death certificates were already registered in the CRN^[6]. Of the remaining notifications, 40% were not regarded as a new case.

Patient Reported Outcome Measures

Most cancer patients have received some form of treatment (surgery, radiotherapy, medical treatment) or symptom directed palliative therapy. Extensive cancer treatments sometimes causes harmful complications and late side effects, which may also affect the quality of life. To gain better knowledge in this field, the CRN invites patients with prostate cancer, breast cancer, colorectal

cancer, lung cancer and melanoma of the skin to research projects and/or population surveys. Additional cancers will be included in the next few years. The results from these Patient Reported Outcome Measures (PROMs), and some few Experience Measures (PREMs), will provide valuable information that can be used to improve current health care and optimise future treatment strategies for cancer patients.

Figure 3.1: Sources of information and the process of cancer registration at the Cancer Registry of Norway



3.4 Incidence and mortality data

The incidence data presented in the first part of this report are based on an extraction from the incidence registry on 16 April 2023. The tables and figures in general represent either the latest year of complete incidence (2022) or the latest five-year period (2018–2022). Population data, stratified by year, sex and age, are provided by Statistics Norway.

Codes registered from ICD-7, ICD-O-2 and ICD-O-3 are converted to ICD-10 using a combination of topography and morphology. According to the ICD-10 classification this means that, for example, a neuroendocrine tumour is included in the cancer site from which

it originated. It is important to be aware of this when interpreting the cancer statistics. It will, for instance, influence survival of pancreas. The main cancer types are tabulated according to their ICD-10 categories.

Table 3.4 gives a detailed description of specific morphologies that are included or excluded in all cancer statistics presented in the present report. The “All sites” figure comprises all malignant neoplasms (ICD-10 C00–96) and the D-diagnoses listed in Table 3.4. Corresponding mortality data coded in ICD-10 were obtained from the Cause of Death Registry and are presented in the same ICD-10 categories as for the rest of this report. Of note is that in the subsequent tables and figures, the D-codes are not shown in labels due to lack of space.

Table 3.4: Description of ICD-10 codes

ICD-10	Site	Comments
C00–96*	All sites	Includes the following D-diagnoses: D09, D32–33, D35.2–4, D41–43, D44.3–5 and D45–47. Excludes all basal cell carcinomas of all topographies. Registered codes from ICD-7, ICD-O-2 and ICD-O-3 are converted to ICD-10 using a combination of topography and morphology. This means that, for example, a neuroendocrine tumor is included in the cancer site from which it originated
C00	Lip	Includes the following ICD-10 codes: C00.0–2, C00.6, C00.8 (only included if Lip NOS), C00.9
C02–06	Oral cavity	Includes the following ICD-10 codes: C00.3–5, C00.8 (if the tumor is in mucosa of upper or lower lip), C02.0–4, C02.8–9, C03.0–9, C04.0–9, C05.0, C05.8, C05.9, C06.0–9
C07–08	Salivary glands	Includes the following ICD-10 codes: C07.9, C08.0–9
C09–10, C01, C14	Oropharynx	Includes the following ICD-10 codes: C01.9, C05.1–2, C09.0–9, C10.0–9, C14.0–8
C11	Nasopharynx	Includes the following ICD-10 codes: C11.0–9
C12–13	Hypopharynx	Includes the following ICD-10 codes: C12.9, C13.0–9
C38	Heart, mediastinum and pleura	Excludes mesotheliomas (which are included in C45)
C44	Skin, non-melanoma	Excludes all basal cell carcinomas and keratoacanthomas
C46	Kaposi's sarcoma	In this report cases of Kaposi's sarcoma are included under the site where the diseases have been diagnosed. Most cases are diagnosed under skin, non-melanoma (C44), but some are included under soft tissue (C48–49) and a few are included in other sites
C48–49	Soft tissues etc.	Includes retroperitoneum and peritoneum (C48). In women, cases in peritoneum (C48.2) are excluded, as these are included in ovary etc. (C56, C57.0–4, C48.2)
C50	Breast	Excludes Pagets disease
C56, C57.0–4, C48.2	Ovary etc.	Excludes borderline tumours. Includes the following sites: Neoplasms in peritoneum (C48.2, epithelial tumours), fallopian tube (C57.0), broad ligament (C57.1), round ligament (C57.2), parametrium (C57.3), uterine adnexa, unspecified (C57.4), and epithelial tumors supposed to originate from tube, ovary or peritoneum. It also includes adult granulosa cell tumour
C64	Kidney (excl. renal pelvis)	Excludes non-invasive tumours
C65	Renal pelvis	Includes non-invasive papillary tumours, dysplasia and carcinoma in situ (D09, D41)
C66	Ureter	Includes non-invasive papillary tumours, dysplasia and carcinoma in situ (D09, D41)
C67	Bladder	Includes non-invasive papillary tumours, dysplasia and carcinoma in situ (D09, D41)
C68	Other and unspecified urinary organs	Includes non-invasive papillary tumours, dysplasia and carcinoma in situ (D09, D41)
C70	Meninges	Includes benign tumours (D18, D32–33, D42–43)
C71	Brain	Includes benign tumours (D18, D32–33, D42–43)
C72	Spinal cord, cranial nerves and other parts of central nervous system	Includes benign tumours (D18, D32–33, D42–43)
C75	Other endocrine glands and related structures	Includes benign tumours (D35.2–4, D44.3–5)
C90	Multiple myeloma	Includes plasmacytomas (C90.2–3)
C92	Myeloid leukaemia	Includes myelodysplastic syndrome (D46)
C95	Leukaemia of unspecified cell type	Includes polycythaemia vera (D45) and other unspecified tumours in lymphatic or hematopoietic tissue (D47)

* Sarcomas are according to ICD-10 included under the site where the tumour is diagnosed. Most cases are diagnosed in bone (C40–41) and soft tissues etc (C48–49).

Multiple primary neoplasms

Multiple primaries occur where two or more primary cancers develop within the same organ (or a pair of organs), as opposed to a recurrence or progression of an existing cancer. They may occur at the same time (synchronous), or in sequences (metachronous).

We use the recommendations for counting multiple primary neoplasms as outlined by the IARC/WHO/ENCR/IACR Working group in 2004. These are available at:

http://www.iacr.com.fr/images/doc/MPrules_july2004.pdf

The guidelines state that when counting cases, only one tumour is recognized as arising in an organ or a pair of organs or tissue. Furthermore, the IARC recommendations have a list of 17 groups of malignant neoplasms considered to be histologically 'different' for the purpose of defining multiple tumours (as described in Table 25, page 26, World health Organization International Classification of Diseases for Oncology, third edition, first revision, 2013^[7]).

Thus, in this report only the first invasive tumour of a defined histological type is counted within one two-digit topography code (ICD-O-3) (for example breast C50). A new cancer of the same histological group in the same organ at a later point in time will not be counted. If there are different histological diagnoses, for example an adenocarcinoma and a sarcoma in the same organ, these will be counted as two cancer cases. Some organs are considered as only one organ in this respect (for example trachea C33 and lung C34). Multifocal tumours are counted only once. This is also the case for the systemic cancers like lymphomas, leukaemias and Kaposi's sarcomas (defined as histological groups 8–15 in the IARC recommendations).

For metachronous cases within the same histological group, i.e. cancer cases considered to be histologically similar, the case with the first date of diagnosis is reported. For synchronous cases, the case with the most severe metastasis status is reported. If the metastasis status is equal, the case with the numerically highest morphology code (ICD-O-3) is reported. Finally, if metastasis status and morphology code are equal, we report the first registered case.

In publications before CiN 2020 we reported a slightly higher number of cases than if the IARC recommendations had been strictly followed because we considered non-specific groups as separate morphology groups. We

have adjusted this to better comply to the IARC recommendations:

We exclude cases with unspecific histological groups (5 and 17) if the person also is registered with another case within the same organ or pair of organs or tissue that has a specific histology (1–4, 6–7 and 16). Histology group 5 is preferred over 17 if a person only has several tumours with unspecific histology in the same organ. Among cases with tumours of haematopoietic and lymphoid tissues, we exclude cases with an unspecified histology (14) if the person also has a case with specified histology (8–13). These rules are followed regardless of time of diagnosis.

Extent of disease

In the present report we have classified stage as follows:

Localised stage: All cases where the tumour is confined to the primary organ.

Regional stage: All cases where the tumour has invaded neighbouring tissue outside of the primary organ or metastasised to regional lymph nodes.

Distant stage: All cases where the tumour has metastasised to other organs or distant lymph nodes.

Unknown: All cases where the primary origin of the tumour is not known and cases with insufficient information to set stage. For some cancer sites, stage is set to unknown for patients who received neoadjuvant treatment. This may explain the increased proportion of unknown stage in recent years.

For some cases, the CRN only receive histological reports and no clinical notifications. A large proportion of these cases lack verified information on metastases at the time of diagnosis.

The following rules are used to set a specific stage for these patients: If a patient has major surgery and there is no clinical or pathological information that indicates metastasis, the patient is considered to have localised disease. If only a cytology or biopsy exist for the case, and there is no information about extent of disease, the patient is registered with an unknown stage.

Prostate cancer cases are classified as localised stage if they have cT = 0–2 and cN = 0 or X and cM = 0 or X.

A detailed description of the assessment of stage is available at:

<https://metadata.kreftregisteret.no/variables/detail/733>

3.5 Data quality

A comprehensive assessment of the data quality in the CRN was conducted in 2007^[5]. Larsen & al. reported that the coding and classification systems in general followed international standards. Practical aspects and techniques for addressing the data quality at a cancer registry, including the documentation of comparability, validity and timeliness were reviewed in 2009^[8]. Methods for the evaluation of registry completeness were also assessed the same year^[9].

In Table 3.5, two indicators of accuracy are shown, namely the percentage of cases morphologically verified (MV%), and the percentage of death certificate only registrations (DCO%). For all sites combined, the proportion of morphologically verified cases was 93.0%, but varied between sites from about 50% to 100%. The proportion of DCO cases was 1.4% for all sites combined, and varied between 0% and 24% for specific cancer sites, and was even higher for cases with unspecified cancer ("Other or unspecified").

3.6 Completeness and timeliness

Table 3.6 presents estimates of completeness for the period 2018–2022. For all cancers combined, the estim-

ates are nearly the same as those reported for the early 2000s. We still see that a few cancers have estimated completeness below 95% (e.g. cancer of the liver, pancreas, gallbladder and central nervous system).

Table 3.7 shows the number of cancer cases diagnosed in 2021 as extracted on 1 May 2022 (for CiN 2021), and on 16 April 2023.

The number of cancer cases diagnosed in 2021 reported and appearing in this issue (CiN 2022) are 568 (1.5%) more than reported in the previous report (CiN 2021). Of note is the high percentage difference for cervical cancer (6.4%). This is probably due to unreceived biopsy reports confirming all the malignant cases, especially for those diagnosed in the latest months of 2021. Moreover, there were 179 fewer cases of non-melanoma skin cancer in April 2023 than reported in CiN 2021. This is because keratoacanthomas cases were included last year, but are now excluded. If these cases were also included in April 2023, the difference for all cases combined would be 2.0%.

This report is published before we have received the complete number of deaths from the Cause of Death Registry. However, since we receive death certificates throughout the year, we expect that death certificates for 2022 are close to complete.

Table 3.5: Percentage distribution of morphologically verified (MV) and death certificate only (DCO) cases by primary site, 2018–2022

ICD-10	Site	Cases	MV (%)	DCO (%)
C00–96	All sites	182 531	93.0	1.4
C00–14	Mouth, pharynx	3 440	98.5	0.4
C00	Lip	473	100.0	0.0
C02–06	Oral cavity	1 127	98.9	0.2
C07–08	Salivary glands	335	96.1	2.1
C09–10, C01, C14	Oropharynx	1 265	98.3	0.4
C11	Nasopharynx	90	97.8	1.1
C12–13	Hypopharynx	150	98.7	0.0
C15–26	Digestive organs	36 800	89.1	2.0
C15	Oesophagus	1 749	95.4	1.2
C16	Stomach	2 244	94.5	1.4
C17	Small intestine	1 163	94.7	1.5
C18	Colon	15 853	94.3	1.6
C19–20	Rectum, rectosigmoid	6 989	97.3	0.4
C21	Anus	521	92.7	0.0
C22	Liver	1 923	60.8	5.1
C23–24	Gallbladder, bile ducts	900	73.1	5.0
C25	Pancreas	4 889	69.1	3.2
C26	Other digestive organs	569	83.8	12.5
C30–34, C38	Respiratory organs	18 107	86.5	2.3
C30–31	Nose, sinuses	233	98.7	0.9
C32	Larynx, epiglottis	550	96.5	0.4
C33–34	Lung, trachea	17 251	86.1	2.3
C38	Heart, mediastinum and pleura	73	63.0	19.2
C40–41	Bone	294	98.0	0.3
C43	Melanoma of the skin	12 437	99.8	0.1
C44	Skin, non-melanoma	13 798	99.7	0.1
C45	Mesothelioma	422	93.6	1.2
C47	Autonomic nervous system	48	100.0	0.0
C48–49	Soft tissues	868	97.2	0.8
C50	Breast	19 168	99.4	0.4
C51–58	Female genital organs	9 072	97.2	1.2
C51–52, C57.7–9	Other female genital	631	94.6	3.5
C53	Cervix uteri	1 807	99.3	0.4
C54	Corpus uteri	4 009	99.0	0.4
C55	Uterus, other	41	56.1	24.4
C56, C57.0–4, C48.2	Ovary etc.	2 575	94.4	2.1
C58	Placenta	9	77.8	0.0
C60–63	Male genital organs	27 677	95.0	0.7
C61	Prostate	25 825	94.7	0.8
C62	Testis	1 497	99.6	0.0
C60, C63	Other male genital	355	99.2	0.3
C64–68	Urinary organs	13 638	96.0	1.1
C64	Kidney (excl. renal pelvis)	4 613	92.8	1.7
C65–68	Urinary tract	9 025	97.7	0.8
C69	Eye	430	53.3	0.5
C70–72	Central nervous system	5 033	70.5	2.1
C73	Thyroid gland	2 414	99.6	0.2
C37, C74–75	Other endocrine glands	856	64.5	1.1
C39, C76, C80	Other or unspecified	1 790	51.0	32.2
C81–96	Lymphoid/haematopoietic tissue	16 239	93.8	1.0
C81	Hodgkin lymphoma	756	99.2	0.0
C82–86, C96	Non-Hodgkin lymphoma	5 379	99.1	0.3
C88	Immunoproliferative disease	471	96.6	1.3
C90	Multiple myeloma	2 719	93.5	0.9
C91–95	Leukaemia	6 914	88.9	1.8

Table 3.6: Completeness by primary site, 2018–2022

ICD-10	Site	Completeness (%)
C00–96	All sites	98.6
C00–14	Mouth, pharynx	99.7
C00	Lip	99.4
C02–06	Oral cavity	99.7
C07–08	Salivary glands	99.6
C09–10, C01, C14	Oropharynx	99.8
C11	Nasopharynx	98.6
C12–13	Hypopharynx	99.4
C15–26	Digestive organs	98.8
C15	Oesophagus	99.7
C16	Stomach	99.2
C17	Small intestine	98.2
C18	Colon	99.7
C19–20	Rectum, rectosigmoid	99.9
C21	Anus	99.2
C22	Liver	81.1
C23–24	Gallbladder, bile ducts	91.2
C25	Pancreas	91.9
C26	Other digestive organs	92.9
C30–34, C38	Respiratory organs	99.1
C30–31	Nose, sinuses	98.9
C32	Larynx, epiglottis	99.5
C33–34	Lung, trachea	99.2
C38	Heart, mediastinum and pleura	94.5
C40–41	Bone	99.9
C43	Melanoma of the skin	100.0
C44	Skin, non-melanoma	99.9
C45	Mesothelioma	98.8
C47	Autonomic nervous system	-
C48–49	Soft tissues	99.8
C50	Breast	100.0
C51–58	Female genital organs	99.8
C51–52, C57.7–9	Other female genital	99.8
C53	Cervix uteri	100.0
C54	Corpus uteri	99.9
C55	Uterus, other	93.4
C56, C57.0–4, C48.2	Ovary etc.	99.8
C58	Placenta	96.4
C60–63	Male genital organs	99.6
C61	Prostate	99.7
C62	Testis	99.8
C60, C63	Other male genital	99.6
C64–68	Urinary organs	98.9
C64	Kidney (excl. renal pelvis)	97.2
C65–68	Urinary tract	99.6
C69	Eye	91.7
C70–72	Central nervous system	81.9
C73	Thyroid gland	99.5
C37, C74–75	Other endocrine glands	67.9
C39, C76, C80	Other or unspecified	69.4
C81–96	Lymphoid/haematopoietic tissue	97.7
C81	Hodgkin lymphoma	99.9
C82–86, C96	Non-Hodgkin lymphoma	99.8
C88	Immunoproliferative disease	99.7
C90	Multiple myeloma	96.4
C91–95	Leukaemia	94.9

- Not estimable (see CiN Technical Supplement^[10]).

Table 3.7: Registered cancer cases in Norway 2021, as obtained by 1 May 2022 and 16 April 2023

ICD-10	Site	Cases diagnosed 2021 as of			
		1.5.2022	16.4.2023	Difference	%
C00–C96*	All sites	36 998	37 566	568	1.5
C00–14	Mouth, pharynx	737	736	-1	-0.1
C00	Lip	102	100	-2	-2.0
C02–06	Oral cavity	232	230	-2	-0.9
C07–08	Salivary glands	79	81	2	2.5
C09–10, C01, C14	Oropharynx	270	270	0	0.0
C11	Nasopharynx	21	21	0	0.0
C12–13	Hypopharynx	33	34	1	3.0
C15–26	Digestive organs	7 328	7 490	162	2.2
C15	Oesophagus	344	348	4	1.2
C16	Stomach	393	409	16	4.1
C17	Small intestine	245	257	12	4.9
C18	Colon	3 204	3 276	72	2.2
C19–20	Rectum, rectosigmoid	1 346	1 366	20	1.5
C21	Anus	106	109	3	2.8
C22	Liver	404	416	12	3.0
C23–24	Gallbladder, bile ducts	190	198	8	4.2
C25	Pancreas	962	1 013	51	5.3
C26	Other digestive organs	134	98	-36	-26.9
C30–34, C38	Respiratory organs	3 685	3 744	59	1.6
C30–31	Nose, sinuses	47	47	0	0.0
C32	Larynx, epiglottis	123	122	-1	-0.8
C33–34	Lung, trachea	3 499	3 557	58	1.7
C38	Heart, mediastinum and pleura	16	18	2	12.5
C40–41	Bone	56	57	1	1.8
C43	Melanoma of the skin	2 443	2 465	22	0.9
C44**	Skin, non-melanoma	3 097	2 918	-179	-5.8
C45	Mesothelioma	84	91	7	8.3
C47	Autonomic nervous system	11	12	1	9.1
C48–49	Soft tissues	101	157	56	55.4
C50	Breast	4 023	4 070	47	1.2
C51–58	Female genital organs	1 777	1 817	40	2.3
C51–52, C57.7–9	Other female genital	119	119	0	0.0
C53	Cervix uteri	345	367	22	6.4
C54	Corpus uteri	774	781	7	0.9
C55	Uterus, other	8	9	1	12.5
C56, C57.0–4, C48.2	Ovary etc.	531	541	10	1.9
C58	Placenta	0	0	0	0.0
C60–63	Male genital organs	5 564	5 641	77	1.4
C61	Prostate	5 188	5 258	70	1.3
C62	Testis	295	299	4	1.4
C60, C63	Other male genital	81	84	3	3.7
C64–68	Urinary organs	2 801	2 806	5	0.2
C64	Kidney (excl. renal pelvis)	930	938	8	0.9
C65–68	Urinary tract	1 871	1 868	-3	-0.2
C69	Eye	84	87	3	3.6
C70–72	Central nervous system	988	1 093	105	10.6
C73	Thyroid gland	527	532	5	0.9
C37, C74–75	Other endocrine glands	155	164	9	5.8
C39, C76, C80	Other or unspecified	356	357	1	0.3
C81–96	Lymphoid/haematopoietic tissue	3 181	3 329	148	4.7
C81	Hodgkin lymphoma	142	147	5	3.5
C82–86, C96	Non-Hodgkin lymphoma	1 090	1 103	13	1.2
C88	Immunoproliferative disease	97	107	10	10.3
C90	Multiple myeloma	521	547	26	5.0
C91–95	Leukaemia	1 331	1 425	94	7.1

* If keratoacanthomas were included in both observation points the difference would be 2.0 %

** Keratoacanthomas were included in skin, non-melanoma when publishing CIN 2021 but are now excluded and this explains the decrease in number.

Chapter 4 Statistical methods

In this report, we use four measures to describe the burden and risk of cancer: *incidence*, *mortality*, *prevalence* and *survival*.

4.1 Incidence and mortality

Incidence and mortality refer to the number of new cases and deaths, respectively. Both measures can be expressed as the absolute number, or as the rate, taking into account the size of the population at risk. Rates are essential for the comparisons of groups, and within a group over time. The denominator is the underlying person-time at risk in which the new cases or deaths in the numerator arise. Cancer incidence and mortality are presented in this report both as numbers and rates. Several different types of rates are also used in this report. We use the mid-year population (calculated as the mean of the population as obtained by January 1st and December 31st) as the denominator in the calculation of rates. For periods spanning several years, we use the sum of mid-year populations.

Age-specific rates

There are compelling reasons for adjusting for the distribution of age when comparing cancer risk in populations. Age is a strong determinant of cancer risk. The crude rate is a rate based on the frequency of cancer in the entire population irrespective of age. Although this measure is useful as an indicator of the total cancer burden, its utility in comparing cancer risk between different populations is severely limited when the age distribution differs between the groups, or where demographic changes in the size and age structure of a population have occurred over time.

To obtain a more accurate picture of the true risk of cancer, rates can be calculated for specific age strata, usually grouped in five-year intervals. The age-specific rate for age group i , denoted as r_i , is obtained by dividing the number of events, d_i , by the corresponding person-years, Y_i . As rates are most often given per 100 000 person-years we multiply by 100 000:

$$r_i = \frac{d_i}{Y_i} \cdot 100000$$

Usually, rates are provided separately for males and females, because of the different patterns by sex both in terms of number of cases (see Table 5.9 and 5.10) and persons under risk (see Table 3.1). Age- and sex-specific incidence and mortality rates are the basis of epidemiological analysis of cancer frequency data. Table 3.1

Age-standardised rates

To facilitate comparisons, a summary rate is derived that takes into account age-specific rates in each comparison group. The summary measure that appears in this report is the age-standardised rate (ASR), a statistic that is independent of the effects of age, thus allowing comparisons of cancer risk between different groups and over time. The calculation of the ASR is an example of direct standardisation, whereby the observed age-specific rates are applied to a standard population. The population size or proportion in each age group of the standard population are known as the weights to be used in the standardisation process. The ASR is calculated as:

$$ASR = \frac{\sum_i r_i w_i}{\sum_i w_i}$$

where w_i is a weight given a reference population.

The World Standard Population^[11,12] has been used as reference population in several previous report of CiN. Since CiN 2014 we have used the Norwegian mid-year population in 2014 as the reference population. This standard is referred to as the *Norwegian standard*.

The two standards, using 18 age groups, are shown in Figure 4.1, and it clearly illustrates the difference between them: The Norwegian standard has higher weights for the oldest age groups.

The main advantage of using the Norwegian standard as the reference population is that we are getting age-standardised rates that resemble the crude rates for the Norwegian population. The main disadvantage is that the rates are not comparable with national rates from other countries. Table 5.1 shows the ASR in 2022 with the two different standards.

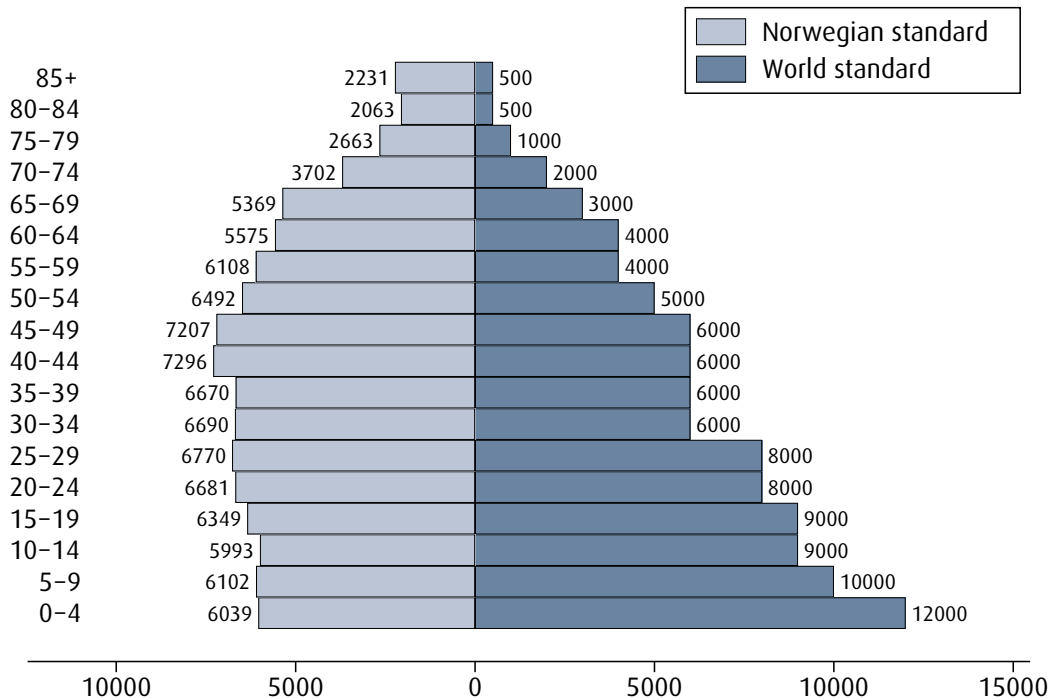
Of notice is that, in general, the ASRs with Norwegian standard gives twice as high rates as the ASRs with World standard. This is because the World standard has lower weights for the oldest age groups. Cancers that have

the highest incidence rates in the youngest age groups (e.g. testicular cancer) are less affected by the choice of reference population.

Age-standardised incidence rates (World standard) are available at:

<https://sb.kreftregisteret.no/insidens>

Figure 4.1: Comparison of population weights



Cumulative risk

The cumulative risk is the probability that an individual will develop the cancer under study during a certain age span, in the absence of other competing causes of death^[13]. The age span over which the risk is accumulated must be specified, and in this report, the range 0–79 years is used and provides an approximation of the risk of developing cancer. If before the age of 80 the cumulative risk is less than 10%, as is the case for most cancer forms, it is reasonably approximated by the cumulative rate. This is the summation of the age-specific rates over each year of age from birth to a defined upper age limit. As age-specific incidence rates are computed according to five-year age groups, the cumulative rate is five times the sum of the age-specific rates calculated over the five-year age groups, assuming the age-specific rates are the same for all ages within the five-year age stratum:

$$\text{Cumulative rate} = 5 \sum_i r_i$$

The cumulative rate has several advantages compared to age-standardised rates. First, as a form of direct standardisation, the problem of choosing an arbitrary reference population is eliminated. Second, as an approx-

imation to the cumulative risk, it has a greater intuitive appeal, and is more directly interpretable as a measurement of lifetime risk, assuming no other causes of death are in operation. The precise mathematical relationship between the two is:

$$\text{Cumulative risk} = 1 - e^{-\text{Cumulative rate}}$$

Completeness

Completeness was estimated by the use of the capture-recapture method described by Parkin and Bray^[9].

This method has been used to estimate the size of a population and is widely used in field biology to estimate the size of a closed animal population. In that purpose, and briefly explained, animals are captured, marked, and released, followed by a new catch (recapture). The number of captured animals in the first catch, the number of recaptured and new animals in the second catch are used to estimate the number of uncaptured animals.

When this method is used to estimate completeness in a cancer registry context, we assume that cases are registered by two different data sources. Cases registered on pathology reports and/or death certificates (source

A) is the first 'catch', and cases registered on clinical notifications (source B) is the second 'catch'. A detailed description of the method can be found in CiN Technical Supplement^[10].

4.2 Prevalence

Prevalence is the number or proportion of a population that has the disease at a given point in time. It is a complex measure of cancer incidence, mortality, and other factors affecting individuals after diagnosis and treatment.

Prevalence is a useful measure of the number of persons requiring care for chronic illnesses such as hypertension and diabetes. For cancer, on the other hand, many patients diagnosed in the past may now be considered cured, that is to say they no longer have a greater risk of death. However, there may be special needs and disabilities subsequent to cancer disease and treatment, thus it is likely that the number of prevalent cancer cases also represents a useful measure.

Cancer prevalence can be defined as the number of persons alive having ever been diagnosed with cancer. Such a measure can easily be derived from the CRN data, given the registration of cases and complete follow up over many decades. We provide additional estimates that may be useful for quantifying care burden. Therefore, this report shows the numbers of persons alive on December 31st 2022 who were previously diagnosed with cancer during the last year, one to four years, five to nine years, and 10 or more years.

We also show the number of patients who have been diagnosed with metastatic disease or local recurrence with metastasis and who were alive at various specific time points. This is another estimate of how the cancer burden has increased over time.

4.3 Survival

The survival time of a cancer patient is defined as the time that elapses between a cancer diagnosis and subsequent death, emigration, or end of follow-up. A common measure of survival is five-year observed survival, which represents the percentage of patients still alive five years after their date of diagnosis.

Follow-up data

To estimate long-term survival patterns and trends, vital statistics of patients diagnosed with cancer during 1965–2022 were obtained from the National Population Registry and Statistics Norway through to December 31st 2022.

The 23 most common cancers were selected for analysis, grouped according to their respective ICD-10 categories. About 3% of cases were excluded as they were either registered on death certificate only (DCO), emigrated before diagnosis, or had zero survival time. It has been shown that exclusion of patients with a prior cancer diagnosis, which often is associated with a poorer prognosis, may artificially elevate estimates of survival^[14]. Therefore patients with previous cancer diagnoses were included in each site-specific analysis. However, to provide an estimate of "all sites" survival, analysis was restricted to first primary cancers. While the inclusion of multiple primaries has been recommended for comparative purposes, the corresponding reduction in the overall survival estimates has been shown to be negligible. In Norway, the effect of their inclusion has been shown to reduce five-year survival by less than one percentage point^[15].

Survival results should be interpreted with caution. Survival of prostate cancer and breast cancer has been affected by PSA testing and mammographic screening, respectively.

Relative survival (net survival)

Not all deaths among cancer patients are due to the cancer under study. Deaths resulting from other causes will lower the survival and may possibly invalidate comparisons between populations. Relative survival is calculated to circumvent this problem by providing an estimate of *net survival* the survival in a hypothetical world where the cancer is the only possible cause of death.

Relative survival is calculated as the observed survival proportion in a patient group divided by the expected survival of a comparable group in the general population with respect to age, sex and calendar year of investigation. At each time, $t(\text{year})$, since diagnosis, the relative survival from the cancer, $R(t)$, is defined as follows:

$$R(t) = \frac{S_O(t)}{S_E(t)}$$

where $S_O(t)$ is the *observed survival* of cancer patients, the *expected survival*, $S_E(t)$, is based on the general population survival using national population life tables from Statistics Norway by sex, one-year age group and calendar year. Age-standardised relative survival (net survival) was estimated by the Stata program `stnet`^[16] using the Pohar Perme estimator^[17]. The estimates were age-standardised applying weights to individuals^[18,19] based on the age distribution of the patient group the last five-year period 2018–2022 (females and males combined for all groups, other than "All sites" where sex-specific weights were used).

For patient cohorts with complete five-year follow-up the *cohort* method was used.

With traditional cohort-based analyses, the most up-to-date estimates of long-term survival pertain to patients diagnosed in the distant past, with corresponding profiles of prognosis. A more up-to date picture of the current survival is obtained using the period method. In this report we used a five-year period window (2018–2022) to *predict* relative survival up to 15 years for patients diagnosed in 2018–2022 (Table 8.3 and Figure 8.1). The period approach consists of the pieces of survival experience observed in the period 2018–2022 for patients diagnosed up to 15 years ago. Thus, patients diagnosed in 2017–2022 contribute with (part of) their survival experience the first year of follow up, patients diagnosed in 2016–2021 contribute to the second year of follow-up, patients diagnosed in 2015–2020 contribute to the third year of follow-up and so on.

When analysing time trends in five-year relative survival (Figure 9.1), a rolling five-year window was used to obtain smoother curves. For patients with (potential) five-year observation, the cohort approach was used. Thus, estimates for e.g. 2017 are based on patients diagnosed in 2013–2017. Estimates for 2022 were obtained using the most recent five-year period window, while estimates for the years where only part of the cohort had

complete follow-up (2018–2021) were obtained using a combination of the cohort and period approach to ensure that minimal survival experience from patients diagnosed in the past was used.

Estimation was performed for groups with 30 or more patients at start of follow-up.

A detailed description of the methods can be found in the CiN Technical Supplement^[10].

Conditional relative survival

Cancer survivors want information on their current prognosis, once they have survived a certain period of time. Conditional survival is a key indicator in this respect, estimating survival proportions given that patients have already survived a certain duration of time^[20,21].

The time at which five-year relative survival reaches 100% is the point from which there is no excess mortality among the cancer patients, and their survival is equivalent to survival in the general population. We present estimates of sex-specific five-year relative survival conditional on being alive 1 to 10 years after diagnosis in Figure 8.1.

Estimates were not plotted when there were less than twenty patients alive ($n < 20$).

Chapter 5 Incidence

5.1 New cancer cases

Number of new cases

In 2022, there were 38 265 new cases of cancer (in 37 277 individuals) recorded in Norway, of which 20 487 cases were diagnosed in males, and 17 778 in females (Table 5.1). This was over 1200 more new cases of cancer than reported in CiN 2021. The four most common cancers (cancers of the prostate, female breast, lung and colon) accounted for 43% of the new cancer cases in 2022. This proportion would increase to 63% if rectal cancer and skin cancers were included. In males, prostate cancer continued to be the most common cancer site, with 5474 new cases; followed by lung cancer (1804 cases) and skin, non-melanoma (1686 cases). In females, breast cancer remained the most frequent cancer site with 4224 new cases; followed by lung cancer (1730 cases) and colon cancer (1649 cases).

Incidence rates

Among males, there has been a slight decrease in the age-standardised incidence rate for all sites combined since 2016 (Table 5.7). In females, the rate was stable during the same period (Table 5.8). The interpretation of rates from one year to another is however prone to random variation, especially for rare cancers, and in the period between 2020 to 2022 when rates may have been affected by the pandemic. Thus, in order to interpret the risk of cancer, we often compare rates between five-year periods. When comparing the rates in the most recent five-year period (2018–2022) with the previous one (2013–2017) (Tables 5.15, 5.16 and summarized in table 2.1) we observed that:

- The rate for all cancers combined decreased by 3.5% for males and increased by 2.3% for females.
- The rate of prostate cancer decreased by 11.4%.
- The rate of breast cancer increased by 5.2%.
- The rate of lung cancer for males decreased by 8.7% and increased by 2.4% in females.

- The rate of colon decreased by 5.5% in males and 2.9% in females, and rectal cancer decreased by 8.8% in males and 8.0% in females.
- The rates of non-melanoma skin cancer increased by 28.0% in males and 33.2% in females, while the melanoma incidence increased with 9.3% in males and 11.7% in females.
- Among more uncommon cancers, the notable increase in the rates for liver (especially in males) and thyroid cancer continues.

In 2018–2022, 9% of all cancer cases occurred in immigrants. While immigrants have lower incidence rates for most cancers compared to Norwegian-borns, some immigrants have higher rates of certain cancers, such as lung cancer in males, and liver and stomach cancers in both sexes. The incidence numbers and rates presented in Tables 5.25–5.28 must however be interpreted with caution as the number of cancer cases among immigrants are low and thus prone to random variation.

Cancer incidence and COVID-19

In CiN 2021, we observed that the decline in incidence for breast, ovarian and lung cancer among females in 2020 was followed by an increase in the rates in 2021. For breast cancer we observed that the increase in rates from 2020 to 2021 was most pronounced for females in screening age (50–69 years). Such an increase was not observed for cervical cancer, which also had a decrease in 2020. However, we assumed that the numbers for cervical cancer in 2021 were incomplete and thus difficult to interpret. In this report, where we expect the numbers for 2021 to be complete, we still did not observe any increase in numbers for cervical cancer in 2021 and neither in 2022.

Another concern has arisen for the 2022 numbers, namely the remarkable increase in the number of new skin cancers (both melanoma and non-melanoma). As the rates for 2020 and 2021 were relatively flat, the sharp increase may be due to lower diagnostic intensity during the pandemic, but this needs to be investigated further.

Table 5.1: Number and age-standardised rates of new cases by primary site and sex, 2022

ICD-10	Site	Cases			Age-standardised rates			
		Males	Females	Total	Norwegian std.		World std.	
					Males	Females	Males	Females
C00-96	All sites	20 487	17 778	38 265	708.1	574.7	360.2	325.9
C00-14	Mouth, pharynx	469	227	696	16.2	7.3	9.0	4.1
C00	Lip	50	41	91	1.7	1.3	0.7	0.5
C02-06	Oral cavity	134	98	232	4.7	3.1	2.5	1.7
C07-08	Salivary glands	37	28	65	1.4	0.9	0.6	0.6
C09-10, C01, C14	Oropharynx	205	50	255	6.9	1.6	4.2	1.0
C11	Nasopharynx	19	4	23	0.6	0.1	0.4	0.1
C12-13	Hypopharynx	24	6	30	0.8	0.2	0.4	0.1
C15-26	Digestive organs	4 169	3 522	7 691	144.4	109.9	71.0	55.3
C15	Oesophagus	274	89	363	9.4	2.7	4.6	1.3
C16	Stomach	298	196	494	10.4	6.2	5.0	3.3
C17	Small intestine	144	107	251	5.1	3.4	2.8	1.9
C18	Colon	1 603	1 649	3 252	55.5	50.8	26.7	24.5
C19-20	Rectum, rectosigmoid	886	607	1 493	30.5	19.6	15.9	10.9
C21	Anus	28	63	91	0.9	2.1	0.5	1.2
C22	Liver	242	149	391	8.3	4.7	4.1	2.5
C23-24	Gallbladder, bile ducts	94	96	190	3.3	3.0	1.6	1.6
C25	Pancreas	523	503	1 026	18.2	15.4	8.5	7.4
C26	Other digestive organs	77	63	140	2.7	1.9	1.3	0.8
C30-34, C38	Respiratory organs	1 907	1 778	3 685	64.7	54.7	30.3	27.0
C30-31	Nose, sinuses	30	19	49	1.1	0.6	0.7	0.4
C32	Larynx, epiglottis	66	25	91	2.2	0.8	1.1	0.4
C33-34	Lung, trachea	1 804	1 730	3 534	61.2	53.1	28.3	26.1
C38	Heart, mediastinum and pleura	7	4	11	0.3	0.1	0.2	0.1
C40-41	Bone	31	36	67	1.1	1.3	1.0	1.2
C43	Melanoma of the skin	1 462	1 449	2 911	51.1	47.8	27.3	29.0
C44	Skin, non-melanoma	1 686	1 375	3 061	62.6	40.9	22.6	16.1
C45	Mesothelioma	72	22	94	2.5	0.7	0.9	0.4
C47	Autonomic nervous system	8	7	15	0.3	0.3	0.5	0.4
C48-49	Soft tissues	87	72	159	3.1	2.4	1.9	1.5
C50	Breast	23	4 224	4 247	0.8	144.1	0.4	91.6
C51-58	Female genital organs		1 770	1 770		58.3		34.9
C51-52, C57.7-9	Other female genital		136	136		4.3		2.1
C53	Cervix uteri		302	302		10.8		8.4
C54	Corpus uteri		817	817		26.1		14.3
C55	Uterus, other		7	7		0.2		0.1
C56, C57.0-4, C48.2	Ovary etc.		506	506		16.7		10.0
C58	Placenta		2	2		0.1		0.1
C60-63	Male genital organs	5 844		5 844	196.9		105.2	
C61	Prostate	5 474		5 474	183.6		94.1	
C62	Testis	286		286	10.4		9.6	
C60, C63	Other male genital	84		84	2.9		1.4	
C64-68	Urinary organs	2 015	775	2 790	69.3	24.6	34.4	13.3
C64	Kidney (excl. renal pelvis)	627	310	937	21.3	10.1	12.8	6.3
C65-68	Urinary tract	1 388	465	1 853	48.0	14.4	21.6	7.0
C69	Eye	64	27	91	2.3	0.9	1.4	0.7
C70-72	Central nervous system	456	532	988	16.0	17.8	11.0	12.2
C73	Thyroid gland	158	321	479	5.6	11.4	3.7	8.7
C37, C74-75	Other endocrine glands	59	47	106	2.1	1.6	1.4	1.0
C39, C76, C80	Other or unspecified	172	200	372	6.3	6.0	2.6	2.3
C81-96	Lymphoid/haematopoietic tissue	1 805	1 394	3 199	63.0	44.6	35.6	26.2
C81	Hodgkin lymphoma	85	68	153	3.0	2.4	2.4	2.2
C82-86, C96	Non-Hodgkin lymphoma	617	465	1 082	21.3	14.8	12.1	8.0
C88	Immunoproliferative disease	41	43	84	1.4	1.3	0.6	0.6
C90	Multiple myeloma	318	260	578	11.1	8.1	5.3	4.0
C91-95	Leukaemia	744	558	1 302	26.2	18.1	15.2	11.4

5.2 Incidence by age

Most cancers in Norway, over 90% in males and 86% in females, are diagnosed among people aged 50 years and over (Figure 5.1). In males, 55% of all new cases occur in males aged 70 years or older, while 38% of the cases are diagnosed in those aged 50 to 69 years. In females, 49% of all cases are diagnosed at ages 70 years or older, and 37% are diagnosed in the age group 50 to 69 years. In the age group 25 to 49 years, a smaller proportion of the cancers are diagnosed in males (6%) than in females (12%). About 1% of all cancers occurs in children and young adults (younger than 25 years), with equal frequencies in males and females.

Table 5.2 shows the median age at diagnosis at different time periods. For all sites combined, the median age at diagnosis was 70 years in 2018–2022, and has been stable over the last decades. However, there was some variation between the sites. Cancer in the autonomic nervous system, a very rare cancer, has the lowest median age at diagnosis (12.5 years). Among the more common cancers, testis had the lowest median age at diagnosis (36 years). Non-melanoma skin cancer, on the other hand, had the highest median age (79 years). Moreover, the median age at diagnosis was 62 years for breast and 70 years for prostate cancer in 2018–2022. For these two cancers there has been a reduction in median age at dia-

gnosis compared to 1988–1992. For melanoma of the skin, the median age at diagnosis has increased by 11 years during the same period. Changes in median age at diagnosis may be influenced by changes in the age distribution of the population, by diagnostic intensity, and by the age-specific incidence rates at different periods. Thus, it might be difficult to interpret patterns and trends without information about these factors.

Figure 5.2 shows the most common cancer types by sex and age at diagnosis. The most commonly occurring cancers in boys and girls (0–14 years old) were leukaemia and tumours in the central nervous system. Testicular cancer was by far the most common cancer in young males (15–24 years) and was also the most common cancer in males aged 25–49 years. In young females, there was no single cancer standing out as the most common. Instead, Hodgkin lymphoma, melanoma of the skin, thyroid gland and tumours in the central nervous system each made up 11–13% of the cases in this age group (15–24 years). Prostate cancer was the most frequent cancer in males above 50 years, while breast cancer was the most common cancer in females aged 25 through 69. For females above age 69 years, breast, colon, lung, and skin (non-melanoma) cancers stood out as the most common ones. Each of them made up between 12–14% of all cases in the oldest age group (70+ years).

Figure 5.1: Percentage distribution of cancer incidence by age, 2018–2022

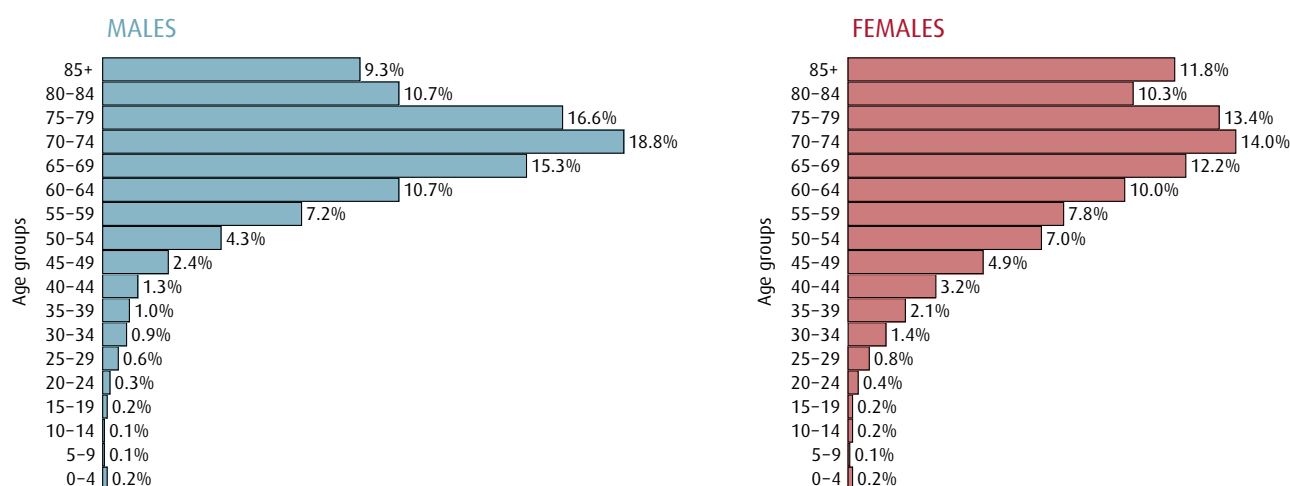


Table 5.2: Median age at diagnosis at different time periods by primary site

ICD-10	Site	Median age in			
		1988-92	1998-02	2008-12	2018-22
C00-96	All sites	70.0	70.0	68.0	70.0
C00-14	Mouth, pharynx	68.0	66.0	65.0	67.0
C00	Lip	71.0	72.0	74.0	75.0
C02-06	Oral cavity	68.0	67.0	67.0	69.0
C07-08	Salivary glands	66.0	67.0	65.5	69.0
C09-10, C01, C14	Oropharynx	63.0	60.0	61.0	63.0
C11	Nasopharynx	65.0	60.0	53.0	59.0
C12-13	Hypopharynx	65.0	67.0	66.0	69.0
C15-26	Digestive organs	72.0	74.0	72.0	72.0
C15	Oesophagus	70.0	71.0	69.0	71.0
C16	Stomach	74.0	75.0	73.0	73.0
C17	Small intestine	69.0	69.0	67.0	69.0
C18	Colon	72.0	74.0	74.0	74.0
C19-20	Rectum, rectosigmoid	72.0	72.0	70.0	70.0
C21	Anus	67.0	67.0	66.0	67.0
C22	Liver	71.0	73.0	70.5	71.0
C23-24	Gallbladder, bile ducts	73.0	75.0	72.0	73.0
C25	Pancreas	73.0	75.0	73.0	73.0
C26	Other digestive organs	80.0	78.0	74.0	74.0
C30-34, C38	Respiratory organs	69.0	70.0	70.0	72.0
C30-31	Nose, sinuses	71.0	68.0	66.0	70.0
C32	Larynx, epiglottis	67.0	69.0	67.0	70.0
C33-34	Lung, trachea	69.0	70.0	70.0	72.0
C38	Heart, mediastinum and pleura	70.0	71.5	70.0	72.0
C40-41	Bone	44.0	39.5	47.0	51.0
C43	Melanoma of the skin	56.0	60.0	64.0	67.0
C44	Skin, non-melanoma	76.0	77.0	79.0	79.0
C45	Mesothelioma	69.0	71.0	72.0	76.0
C47	Autonomic nervous system	37.0	17.0	16.0	12.5
C48-49	Soft tissues	63.0	64.0	63.0	65.0
C50	Breast	66.0	61.0	61.0	62.0
C51-58	Female genital organs	63.0	63.0	64.0	66.0
C51-52, C57.7-9	Other female genital	74.0	76.0	72.0	73.0
C53	Cervix uteri	51.0	48.0	46.0	47.0
C54	Corpus uteri	66.0	67.0	67.0	69.0
C55	Uterus, other	82.0	80.0	78.5	81.0
C56, C57.0-4, C48.2	Ovary etc.	65.0	64.0	65.0	68.0
C58	Placenta	26.0	32.0	29.0	35.0
C60-63	Male genital organs	74.0	72.0	68.0	70.0
C61	Prostate	75.0	73.0	69.0	70.0
C62	Testis	32.0	33.0	35.0	36.0
C60, C63	Other male genital	69.0	71.0	67.0	71.0
C64-68	Urinary organs	71.0	72.0	71.0	72.0
C64	Kidney (excl. renal pelvis)	69.0	70.0	67.0	67.0
C65-68	Urinary tract	72.0	73.0	73.0	73.0
C69	Eye	65.0	65.0	64.0	66.0
C70-72	Central nervous system	58.5	57.0	59.0	61.0
C73	Thyroid gland	53.0	52.0	52.0	54.0
C37, C74-75	Other endocrine glands	49.0	52.0	54.0	59.0
C39, C76, C80	Other or unspecified	74.0	77.0	78.0	79.0
C81-96	Lymphoid/haematopoietic tissue	69.0	70.0	68.0	70.0
C81	Hodgkin lymphoma	38.0	35.0	38.0	44.0
C82-86, C96	Non-Hodgkin lymphoma	67.0	67.0	67.0	70.0
C88	Immunoproliferative disease	70.0	73.0	72.0	74.0
C90	Multiple myeloma	72.0	73.0	72.0	72.0
C91-95	Leukaemia	70.0	71.0	69.0	71.0

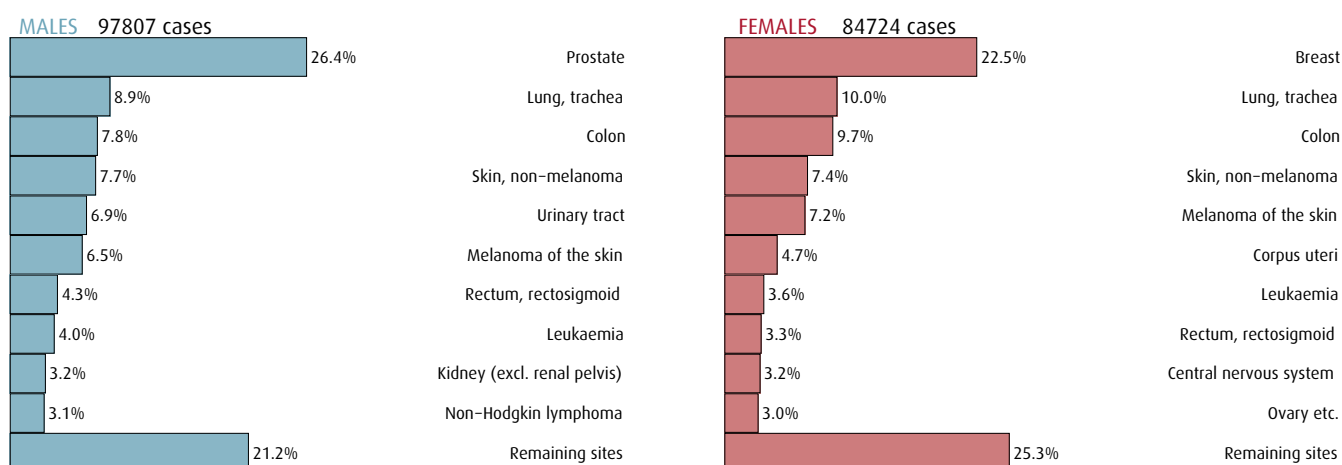
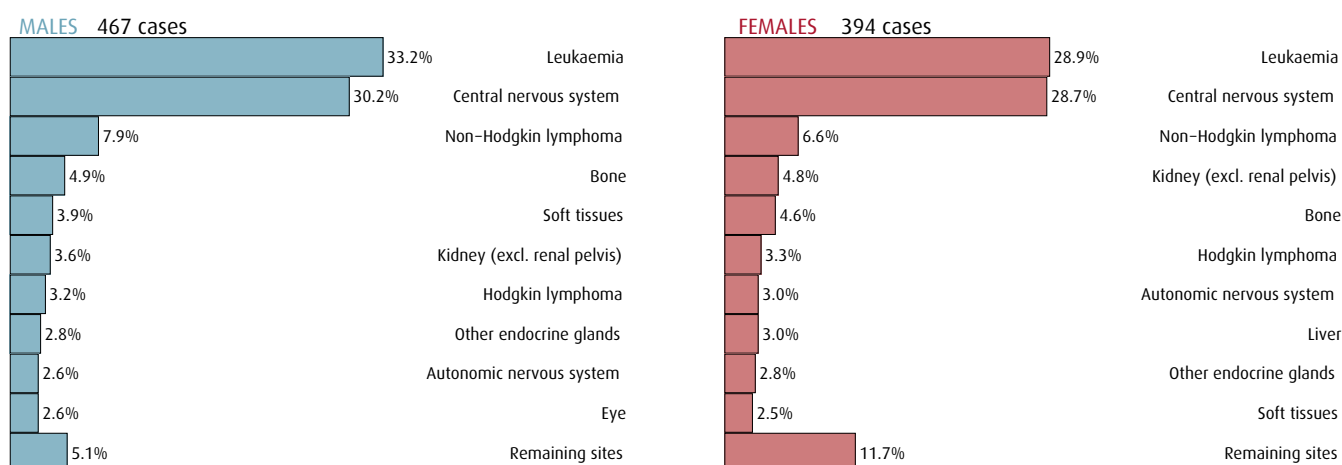
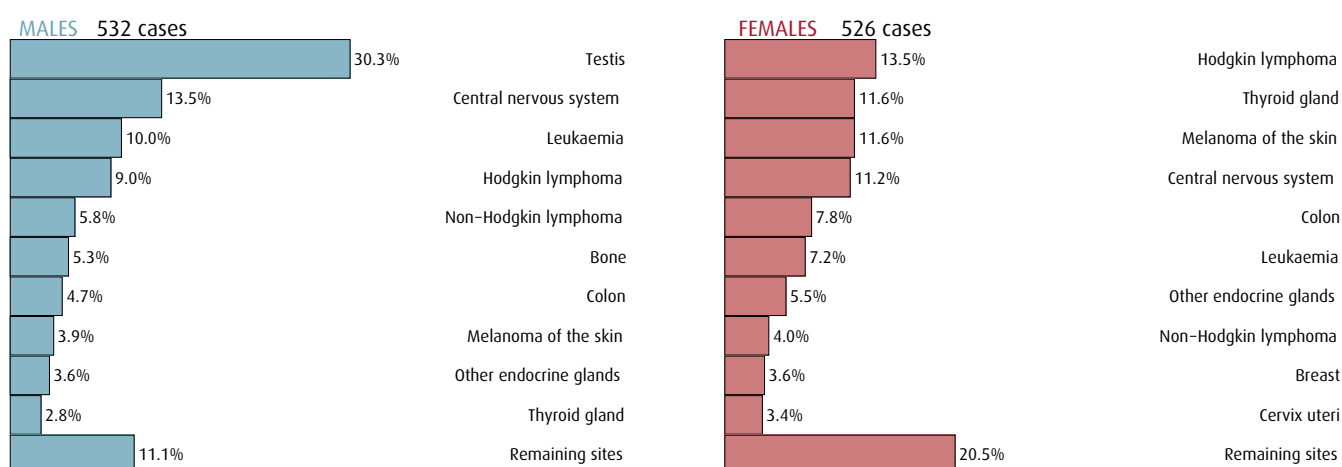
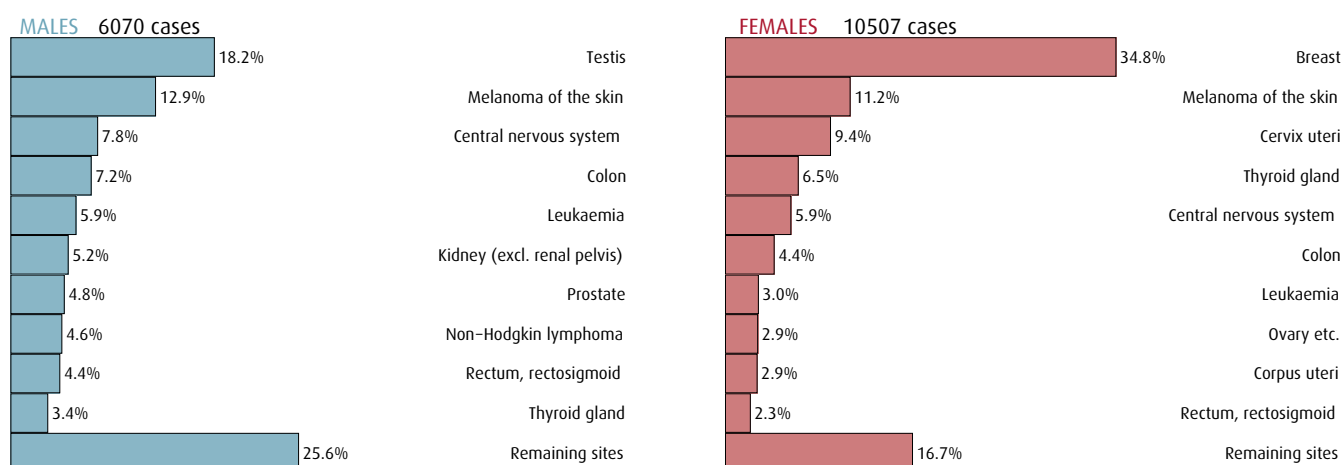
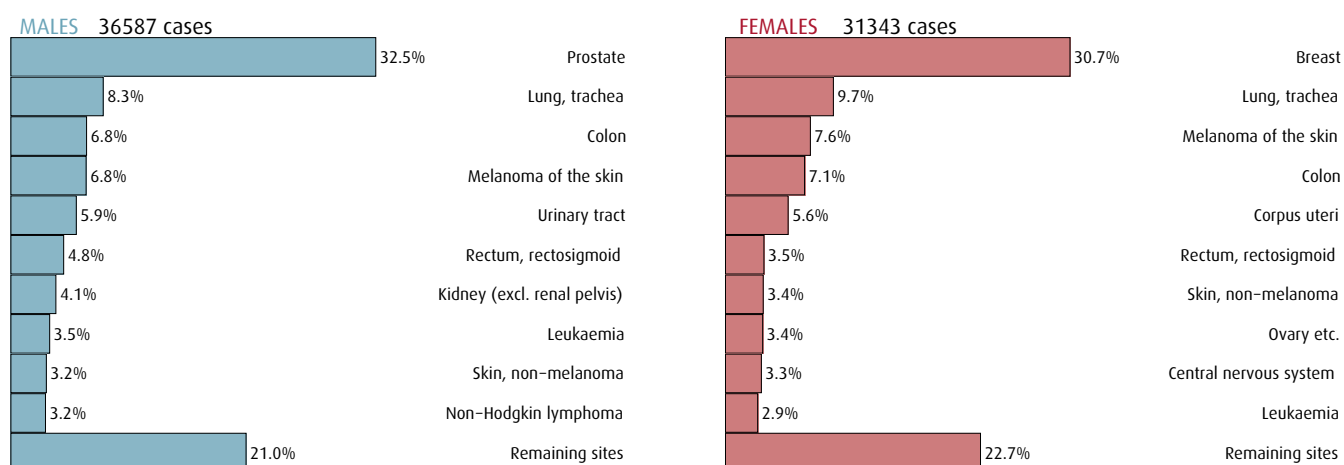
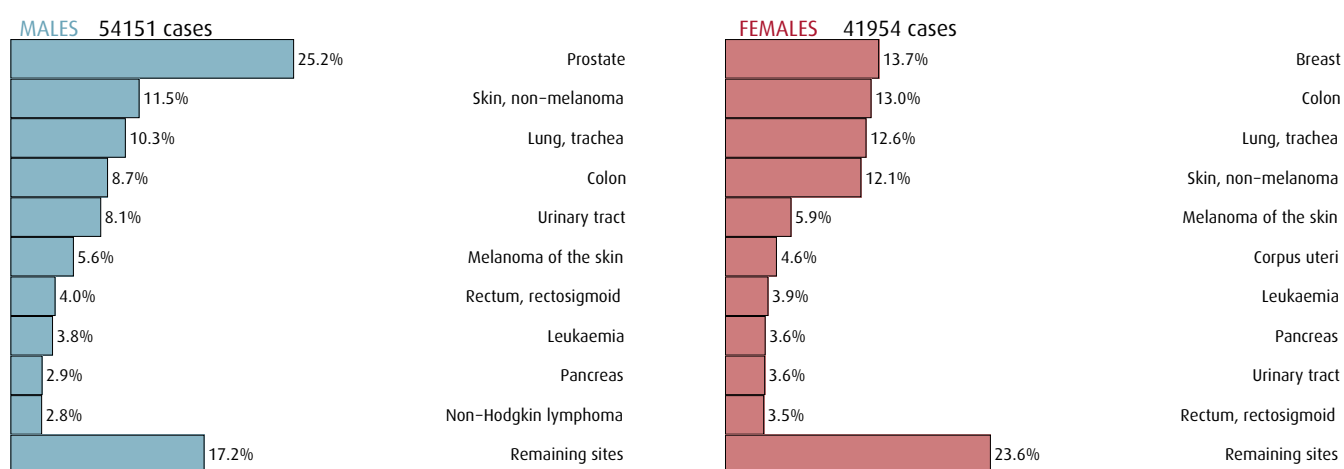
Figure 5.2: The most frequent types of cancer by age and sex, 2018–2022**Figure 5.2-A: All ages****Figure 5.2-B: 0–14 years****Figure 5.2-C: 15–24 years**

Figure 5.2: The most frequent types of cancer by age and sex, 2018–2022**Figure 5.2-D: 25–49 years****Figure 5.2-E: 50–69 years****Figure 5.2-F: 70+ years**

5.3 Male to female ratios

The age-standardised rates and male to female ratio (M:F) for selected cancer types in 1988–1992 and 2018–2022 are shown in Table 5.3. Males tend to have higher incidence rates for most cancer types in both time periods, except for cancer of thyroid gland, anus, and central nervous system. The highest M:F ratios were ob-

served for mesothelioma, several sites of the head and neck and for cancers in the urinary tract.

The decline in the M:F ratio for several cancers over the last 30 years is largely a result of a more rapid increase in the incidence rates in females. For lung cancer, the increase in rate in females has been accompanied by a levelling off and a slight decline in the rate in males, and the M:F ratio is now at 1.2 compared to 2.9 thirty years ago.

Table 5.3: Sex ratio (male:female) of age-adjusted incidence rates (Norwegian standard) in 1988–1992 and 2018–2022 for selected cancers, sorted in descending order in last period

ICD-10	Site	1988-92			2018-22		
		M	F	M:F ratio	M	F	M:F ratio
C00-96	All sites	548.8	401.0	1.4	711.7	566.8	1.3
C12-13	Hypopharynx	1.4	0.3	4.7	0.9	0.2	5.3
C45	Mesothelioma	2.1	0.3	6.3	2.5	0.5	4.9
C32	Larynx, epiglottis	5.8	0.6	10.3	3.2	0.7	4.6
C38	Heart, mediastinum and pleura	0.5	0.2	2.8	0.4	0.1	3.4
C09-10, C01, C14	Oropharynx	2.0	0.5	3.9	6.8	2.0	3.4
C15	Oesophagus	6.0	1.6	3.7	9.4	2.8	3.3
C65-68	Urinary tract	45.6	12.2	3.7	49.2	14.8	3.3
C11	Nasopharynx	0.5	0.1	4.5	0.5	0.2	3.0
C64	Kidney (excl. renal pelvis)	14.9	8.3	1.8	22.3	9.9	2.3
C22	Liver	3.5	2.0	1.8	9.0	4.4	2.0
C16	Stomach	29.7	13.9	2.1	10.1	5.8	1.8
C88	Immunoproliferative disease	0.5	0.3	1.7	2.1	1.2	1.8
C00	Lip	4.7	1.0	4.9	2.0	1.3	1.6
C19-20	Rectum, rectosigmoid	31.2	18.9	1.7	30.2	18.6	1.6
C30-31	Nose, sinuses	1.3	0.6	2.0	1.0	0.6	1.5
C07-08	Salivary glands	1.1	0.6	1.8	1.4	1.0	1.5
C17	Small intestine	1.5	1.4	1.1	4.9	3.2	1.5
C44	Skin, non-melanoma	25.4	13.9	1.8	59.2	38.9	1.5
C90	Multiple myeloma	9.2	6.0	1.5	11.4	7.5	1.5
C82-86, C96	Non-Hodgkin lymphoma	15.2	11.6	1.3	21.8	15.5	1.4
C91-95	Leukaemia	13.3	8.7	1.5	28.8	20.0	1.4
C02-06	Oral cavity	4.7	2.6	1.8	4.6	3.2	1.4
C40-41	Bone	1.0	0.7	1.4	1.2	0.9	1.3
C48-49	Soft tissues	2.3	2.2	1.1	3.5	2.7	1.3
C69	Eye	1.3	1.1	1.2	1.7	1.3	1.3
C25	Pancreas	16.7	12.3	1.4	18.9	14.6	1.3
C26	Other digestive organs	2.0	2.2	0.9	2.1	1.8	1.2
C33-34	Lung, trachea	64.8	22.2	2.9	62.9	54.7	1.2
C81	Hodgkin lymphoma	2.5	1.6	1.6	3.0	2.5	1.2
C23-24	Gallbladder, bile ducts	3.1	3.2	1.0	3.2	3.0	1.1
C43	Melanoma of the skin	22.5	22.2	1.0	46.2	41.8	1.1
C39, C76, C80	Other or unspecified	17.1	13.0	1.3	6.4	6.1	1.1
C18	Colon	46.4	39.1	1.2	56.3	52.5	1.1
C37, C74-75	Other endocrine glands	2.2	2.1	1.1	3.2	3.0	1.1
C47	Autonomic nervous system	0.4	0.4	1.0	0.2	0.2	1.0
C70-72	Central nervous system	12.7	12.6	1.0	16.8	19.1	0.9
C21	Anus	0.7	1.5	0.5	1.3	2.4	0.5
C73	Thyroid gland	2.5	6.4	0.4	5.2	12.4	0.4

5.4 Incidence trends

Figure 5.3: Time trends in age-standardised (Norwegian standard) incidence rates for selected cancers, 1953–2022

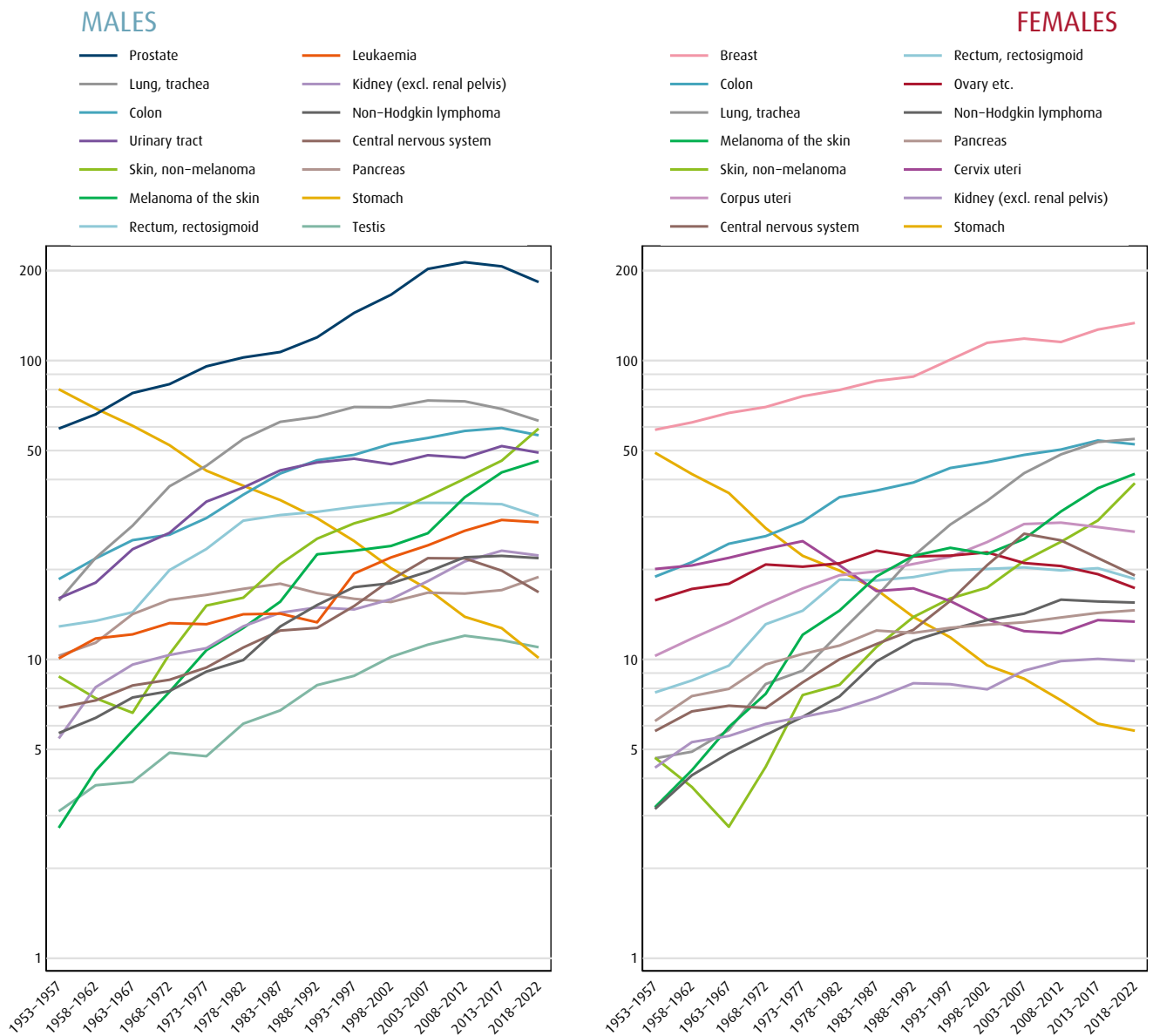


Figure 5.3 depicts time trends in incidence over seven decades for some selected cancers. The incidence rates have increased in Norway for most cancer types since the first observation period. The upward trends have been most pronounced for lung cancer among females and skin cancer (melanoma and non-melanoma) in both sexes. Stomach cancer is the only cancer that has had a sharp and steady decline in incidence since the early 1950s. The rate for cervical cancer has also declined from mid 1970s to late 1990s but has since been followed by more stable rates and even had a slight increase for a few years during the last 10 to 15 years.

For most cancers, it is difficult to give a proper explanation of the incidence trends over time, even for cancers

with known risk factors. Rates may also be influenced by diagnostic methods, screening activities, and changes in life expectancy or age distribution. Below we have given a short description of the trends for selected sites and listed some known factors that may have influenced the trends.

Stomach cancer is the only cancer that has had a sharp and consistent decline. In the first observation period, stomach cancer was the most common cancer in males and second most common cancer in females, in line with observations of cancer mortality reported by Norwegian general practitioners one hundred years ago^[22]. The monotonous drop in incidence from 1953 until today reflects improvement in hygiene and environmental exposures. Changes in the prevalence of *Helicobacter pylori*

infection and in dietary habits and food storage (refrigerators) are likely contributors to this trend. The decline illustrates the vast potential for primary prevention worldwide. Interestingly, the causes of stomach cancer were not adequately known until the 1980s, and the waning of the rates has been a chance phenomenon rather than an intended one.

Prostate cancer has been the most common cancer in males for many decades, and the age-standardised incidence rate has tripled since registration started in the early 1950s. A dramatic upsurge came from around 1990 with changes in diagnostic practice with unorganised screening and testing in the primary health care system. The introduction and subsequent widespread use of the Prostate Specific Antigen (PSA) test, followed by biopsies, are considered the main explanation for the increased rate. The rate is now on the decline.

Breast cancer has been the most common cancer in females since the establishment of the CRN, and during this period the incidence rate has doubled. There has been a monotonous increase in the rate up to 1990s with a steeper increase in the mid-1990s followed by a slight decline between 2005 and 2009. The Norwegian Breast Cancer Screening Programme started in 1996, and gradually expanded to become nationwide by 2005. The programme invites females aged 50–69 years to biennial mammography. The implementation of the screening programme explains much of the increasing incidence trend from the mid-1990s to 2005. There has been an increase in the last ten years, and this is observed in all age groups over 30 years.

Lung cancer in females has almost had a tenfold increase in incidence since the early 1950s. The rate reached an all-time high in 2018 (details are shown in Table 5.8). In the following years, we have observed signs of stabilisation in the rate, and we also observed that the lung cancer rates seemed to decline for all age groups below 80. In males, the incidence has been levelling off over the last two decades (Table 5.7), and a slight overall decline is now observed in all age groups.

Colon and rectum cancer incidence rates are sometimes presented combined. However, the incidence trends for these cancers differ — colon cancer has increased steadily throughout the registration period. Fortunately, we are now seeing a decline among both males and females.

The incidence of rectal cancer has remained relatively stable over the last three decades in both sexes, and a decline is seen in recent years.

Skin cancer i.e. skin melanoma and non-melanoma are cancers of concern. From being rare in 1953, they now rank among the leading cancers in males and females alike. The rates have had a remarkable increase, especially in the oldest age groups (above 70 years) (Table 5.7 and 5.8), most probably caused by adverse suntanning habits but might also be influenced by other factors including awareness and diagnostic intensity.

Cervical cancer has had a downward incidence trend since the early 1970s. This is probably a result of identification and treatment of premalignant conditions as part of an organised screening programme. In 2009, vaccination against human papilloma virus (HPV) was introduced as part of the Norwegian Childhood Immunisation Programme for girls born in 1997 or later. A catch-up program was implemented in November 2016. In 2018, the programme also offered vaccination to boys. Still, we do not expect this primary prevention to affect the incidence rates for another 15 to 20 years. Furthermore, the worrying increase in cervical cancer observed some years ago has flattened out.

The incidence rates of **tumours in the central nervous system** in both sexes have declined in recent years. We believe that this is due to underreporting, and as shown in Tables 5.23–5.24 the reduction in rates is limited to non-malignant cases.

For **testicular cancer** and **non-Hodgkin lymphoma**, for example, genetic factors play a role, while other determinants are largely unknown.

Even if rates were to remain stable over the next 15 years, the number of new cases would increase as a result of the joint effects of population growth and aging. The NORDCAN project provides online access to predictions of incidence and mortality in the Nordic countries available at:

<http://www-dep.iarc.fr/nordcan.htm>

Trends in cancer incidence for all sites are given in Tables 5.15–5.16, and detailed trends in incidence, mortality and survival for 23 cancers are provided in Chapter 9.

5.5 Cumulative risk

Figure 5.4 and Table 5.4 show the cumulative risk of cancer in males and females. About four in ten Norwegians will develop a cancer before the age of 80. The risk of prostate cancer is the highest in males, and 16.1% are expected to have a diagnosis by the age of 80. The risk of breast cancer is the highest in females, with 10.7%, or one in ten Norwegian females, expected to be diagnosed with the disease before turning 80. In both sexes, lung and colon cancer rank second and third.

5.6 Incidence by county of residence

There has been a reform of the county structure in Norway, and the original 19 counties are now reduced to 11. The new county Viken is by far the most populous county and covers 24% of the Norwegian population. Nordland, on the other hand, has the lowest number of inhabitants and covers 4% of the population. Four of the original counties were not affected by the reform, and one of these, Rogaland, had, and still has, the highest

incidence of cancer (all sites combined) for both males and females. Some of the original counties had clear differences in the cancer incidence, and the merging of counties makes it difficult to keep up with some interesting trends, e.g. the lung cancer rates in males in the former county Finnmark, which has had the highest rate of lung cancer for several decades (Tables 5.17–5.20).

Digital maps are available online at:

<https://www.kreftregisteret.no/Registrene/data-og-statistikk/statistikkbank/>

5.7 Incidence tables

Tables 5.5–5.28 provide further information on cancer incidence in Norway. The number of incident cases and rates are tabulated according to year of diagnosis (Tables 5.5–5.8), age group (Tables 5.9–5.12), five-year period (Tables 5.13–5.16), county of residence (Tables 5.17–5.20), stage (Tables 5.21–5.24), and continent of birth (Tables 5.25–5.28).

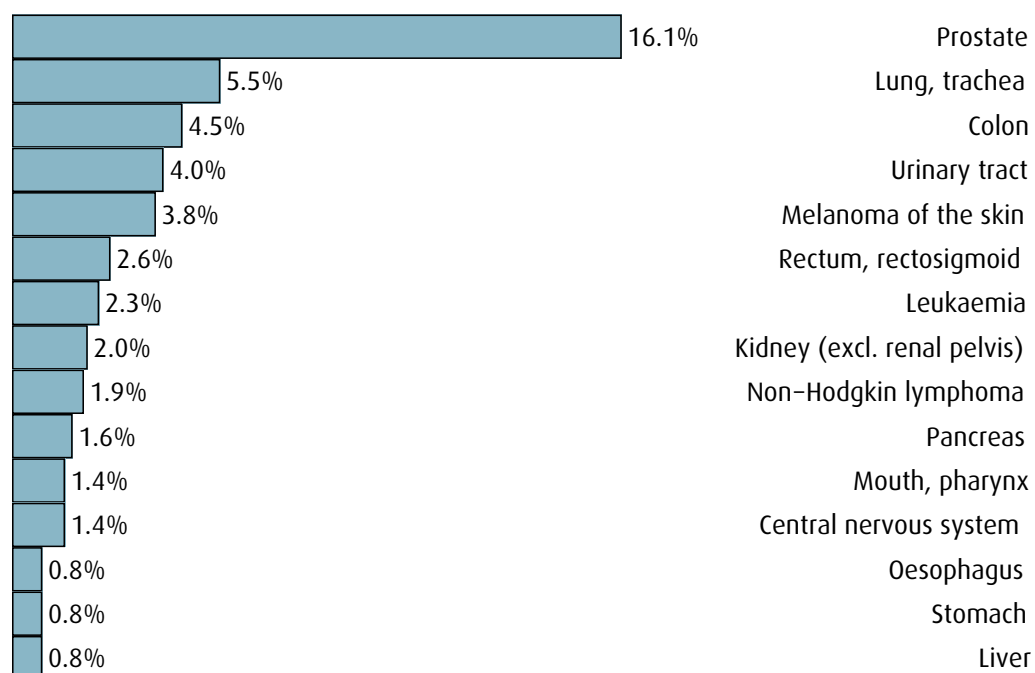
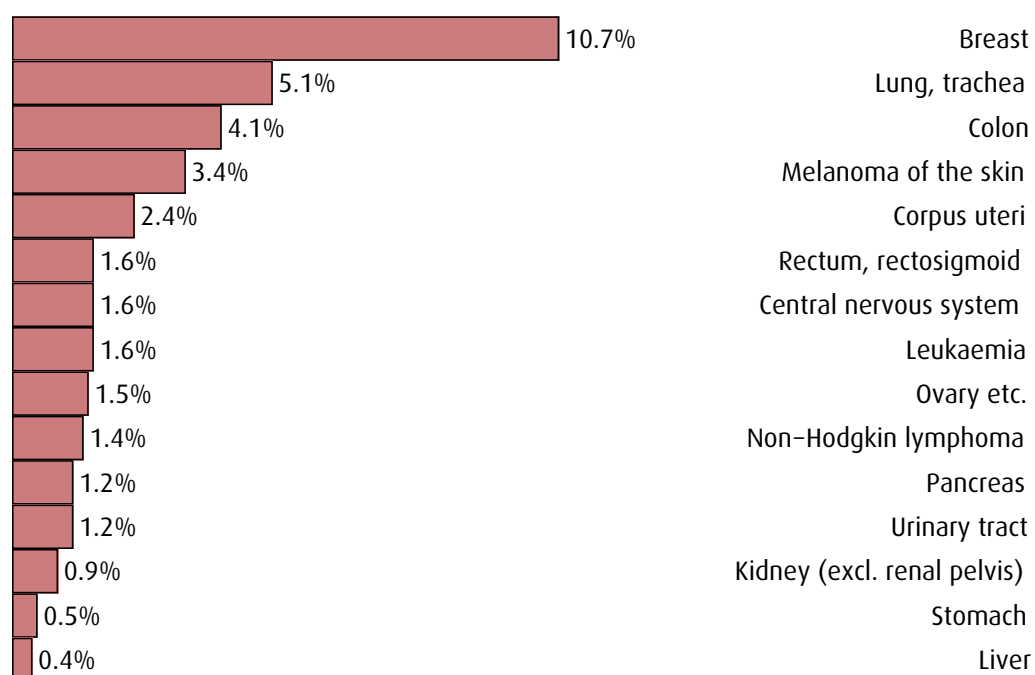
Figure 5.4: Cumulative risk of developing cancer (%) by the age of 80 for selected cancers, 2018–2022**MALES****FEMALES**

Table 5.4: Cumulative risk of developing cancer (%) by age of 80 by primary site and sex, 2018–2022

ICD-10	Site	Males	Females
C00–96	All sites	45.5	37.8
C00–14	Mouth, pharynx	1.4	0.7
C00	Lip	0.1	0.1
C02–06	Oral cavity	0.4	0.3
C07–08	Salivary glands	0.1	0.1
C09–10, C01, C14	Oropharynx	0.6	0.2
C11	Nasopharynx	0.0	0.0
C12–13	Hypopharynx	0.1	0.0
C15–26	Digestive organs	11.5	8.6
C15	Oesophagus	0.8	0.2
C16	Stomach	0.8	0.5
C17	Small intestine	0.4	0.3
C18	Colon	4.5	4.1
C19–20	Rectum, rectosigmoid	2.6	1.6
C21	Anus	0.1	0.2
C22	Liver	0.8	0.4
C23–24	Gallbladder, bile ducts	0.3	0.2
C25	Pancreas	1.6	1.2
C26	Other digestive organs	0.2	0.1
C30–34, C38	Respiratory organs	5.8	5.2
C30–31	Nose, sinuses	0.1	0.1
C32	Larynx, epiglottis	0.3	0.1
C33–34	Lung, trachea	5.5	5.1
C38	Heart, mediastinum and pleura	0.0	0.0
C40–41	Bone	0.1	0.1
C43	Melanoma of the skin	3.8	3.4
C44	Skin, non-melanoma	3.5	2.4
C45	Mesothelioma	0.2	0.0
C47	Autonomic nervous system	0.0	0.0
C48–49	Soft tissues	0.3	0.2
C50	Breast	0.1	10.7
C51–58	Female genital organs		5.2
C51–52, C57.7–9	Other female genital		0.3
C53	Cervix uteri		1.0
C54	Corpus uteri		2.4
C55	Uterus, other		0.0
C56, C57.0–4, C48.2	Ovary etc.		1.5
C58	Placenta		0.0
C60–63	Male genital organs	16.9	
C61	Prostate	16.1	
C62	Testis	0.8	
C60, C63	Other male genital	0.2	
C64–68	Urinary organs	5.9	2.1
C64	Kidney (excl. renal pelvis)	2.0	0.9
C65–68	Urinary tract	4.0	1.2
C69	Eye	0.1	0.1
C70–72	Central nervous system	1.4	1.6
C73	Thyroid gland	0.4	1.0
C37, C74–75	Other endocrine glands	0.3	0.3
C39, C76, C80	Other or unspecified	0.4	0.4
C81–96	Lymphoid/haematopoietic tissue	5.5	3.9
C81	Hodgkin lymphoma	0.3	0.2
C82–86, C96	Non-Hodgkin lymphoma	1.9	1.4
C88	Immunoproliferative disease	0.2	0.1
C90	Multiple myeloma	1.0	0.6
C91–95	Leukaemia	2.3	1.6

Table 5.5: Number of new cases by primary site and year, 2013–2022, **males**

ICD-10	Site	Year									
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
C00–96	All sites	16 812	17 433	18 093	18 578	18 566	18 720	19 119	19 500	19 981	20 487
C00–14	Mouth, pharynx	333	398	397	407	388	430	420	459	477	469
C00	Lip	46	58	59	49	50	50	49	65	55	50
C02–06	Oral cavity	112	115	118	123	123	138	114	122	123	134
C07–08	Salivary glands	28	45	36	43	28	43	27	38	47	37
C09–10, C01, C14	Oropharynx	124	146	155	161	152	175	197	189	204	205
C11	Nasopharynx	8	11	7	8	11	12	10	11	16	19
C12–13	Hypopharynx	15	23	22	23	24	12	23	34	32	24
C15–26	Digestive organs	3 436	3 488	3 644	3 715	3 685	3 880	3 845	4 056	3 980	4 169
C15	Oesophagus	200	225	224	213	215	242	236	297	257	274
C16	Stomach	307	309	297	309	291	244	292	288	239	298
C17	Small intestine	90	98	106	117	122	109	128	149	144	144
C18	Colon	1 337	1 367	1 432	1 451	1 460	1 511	1 468	1 527	1 545	1 603
C19–20	Rectum, rectosigmoid	802	813	798	844	800	849	790	842	819	886
C21	Anus	16	29	22	35	34	28	43	38	38	28
C22	Liver	179	147	185	195	193	228	239	259	278	242
C23–24	Gallbladder, bile ducts	96	72	81	85	66	86	82	83	93	94
C25	Pancreas	364	385	443	412	443	511	517	526	523	523
C26	Other digestive organs	45	43	56	54	61	72	50	47	44	77
C30–34, C38	Respiratory organs	1 722	1 782	1 750	1 833	1 869	1 832	1 809	1 866	1 965	1 907
C30–31	Nose, sinuses	35	30	16	25	28	24	27	30	25	30
C32	Larynx, epiglottis	105	115	88	86	72	107	85	83	107	66
C33–34	Lung, trachea	1 575	1 630	1 640	1 706	1 755	1 692	1 684	1 740	1 821	1 804
C38	Heart, mediastinum and pleura	7	7	6	16	14	9	13	13	12	7
C40–41	Bone	15	30	33	31	26	34	43	27	31	31
C43	Melanoma of the skin	851	1 042	1 046	1 081	1 176	1 179	1 218	1 191	1 288	1 462
C44	Skin, non-melanoma	863	937	1 007	1 060	1 200	1 289	1 425	1 519	1 584	1 686
C45	Mesothelioma	78	58	69	62	76	54	82	54	81	72
C47	Autonomic nervous system	3	5	3	1	7	7	3	1	6	8
C48–49	Soft tissues	110	90	102	91	101	88	120	94	84	87
C50	Breast	35	24	24	31	33	28	27	31	31	23
C60–63	Male genital organs	5 268	5 352	5 544	5 697	5 474	5 343	5 391	5 458	5 641	5 844
C61	Prostate	4 889	4 965	5 192	5 319	5 119	4 954	5 025	5 114	5 258	5 474
C62	Testis	332	328	292	291	291	323	301	288	299	286
C60, C63	Other male genital	47	59	60	87	64	66	65	56	84	84
C64–68	Urinary organs	1 629	1 754	1 833	1 913	1 876	1 877	1 969	1 990	1 999	2 015
C64	Kidney (excl. renal pelvis)	539	581	582	612	590	640	646	596	630	627
C65–68	Urinary tract	1 090	1 173	1 251	1 301	1 286	1 237	1 323	1 394	1 369	1 388
C69	Eye	32	50	42	42	48	44	40	47	42	64
C70–72	Central nervous system	512	535	511	445	509	471	446	447	489	456
C73	Thyroid gland	105	115	106	141	136	120	146	135	163	158
C37, C74–75	Other endocrine glands	119	127	97	117	91	95	105	95	85	59
C39, C76, C80	Other or unspecified	165	173	162	147	132	157	151	164	168	172
C81–96	Lymphoid/haematopoietic tissue	1 536	1 473	1 723	1 764	1 739	1 792	1 879	1 866	1 867	1 805
C81	Hodgkin lymphoma	72	79	109	92	94	93	70	95	76	85
C82–86, C96	Non-Hodgkin lymphoma	528	524	585	568	529	582	624	594	613	617
C88	Immunoproliferative disease	39	40	47	55	47	53	59	65	70	41
C90	Multiple myeloma	241	211	262	271	301	285	306	339	318	318
C91–95	Leukaemia	656	619	720	778	768	779	820	773	790	744

Table 5.6: Number of new cases by primary site and year, 2013–2022, **females**

ICD-10	Site	Year									
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
C00–96	All sites	14 257	15 009	15 559	15 694	15 819	16 197	16 618	16 546	17 585	17 778
C00–14	Mouth, pharynx	191	213	221	238	255	239	228	232	259	227
C00	Lip	41	29	43	42	51	35	46	37	45	41
C02–06	Oral cavity	83	97	80	108	93	108	81	102	107	98
C07–08	Salivary glands	18	27	39	29	40	29	28	24	34	28
C09–10, C01, C14	Oropharynx	38	43	54	49	59	56	63	60	66	50
C11	Nasopharynx	6	8	3	6	9	5	5	3	5	4
C12–13	Hypopharynx	5	9	2	4	3	6	5	6	2	6
C15–26	Digestive organs	3 020	3 128	3 256	3 194	3 236	3 227	3 239	3 372	3 510	3 522
C15	Oesophagus	63	71	77	72	76	80	87	96	91	89
C16	Stomach	166	189	168	151	195	165	170	182	170	196
C17	Small intestine	50	78	78	75	108	80	81	108	113	107
C18	Colon	1 462	1 475	1 580	1 646	1 572	1 599	1 585	1 635	1 731	1 649
C19–20	Rectum, rectosigmoid	579	575	580	536	539	536	548	565	547	607
C21	Anus	61	71	63	81	55	68	76	68	71	63
C22	Liver	82	89	105	115	121	121	129	140	138	149
C23–24	Gallbladder, bile ducts	104	109	83	76	83	69	94	98	105	96
C25	Pancreas	391	399	452	383	419	454	406	436	490	503
C26	Other digestive organs	62	72	70	59	68	55	63	44	54	63
C30–34, C38	Respiratory organs	1 382	1 507	1 576	1 564	1 595	1 740	1 744	1 687	1 779	1 778
C30–31	Nose, sinuses	20	19	23	15	10	17	20	19	22	19
C32	Larynx, epiglottis	21	20	20	23	18	24	20	18	15	25
C33–34	Lung, trachea	1 338	1 464	1 529	1 523	1 566	1 695	1 700	1 649	1 736	1 730
C38	Heart, mediastinum and pleura	3	4	4	3	1	4	4	1	6	4
C40–41	Bone	24	29	27	31	27	24	20	22	26	36
C43	Melanoma of the skin	899	1 014	1 002	1 062	1 064	1 166	1 137	1 170	1 177	1 449
C44	Skin, non-melanoma	783	857	802	961	985	1 071	1 206	1 309	1 334	1 375
C45	Mesothelioma	11	11	13	14	15	14	15	18	10	22
C47	Autonomic nervous system	5	6	5	2	2	1	4	5	6	7
C48–49	Soft tissues	71	66	83	76	71	81	89	80	73	72
C50	Breast	3 183	3 322	3 423	3 393	3 591	3 564	3 738	3 463	4 039	4 224
C51–58	Female genital organs	1 664	1 755	1 848	1 822	1 713	1 847	1 891	1 747	1 817	1 770
C51–52, C57.7–9	Other female genital	104	128	117	125	125	136	117	123	119	136
C53	Cervix uteri	291	358	392	371	333	384	392	362	367	302
C54	Corpus uteri	768	735	788	787	710	809	832	770	781	817
C55	Uterus, other	7	12	7	9	8	9	10	6	9	7
C56, C57.0–4, C48.2	Ovary etc.	492	520	542	526	536	506	537	485	541	506
C58	Placenta	2	2	2	4	1	3	3	1	0	2
C64–68	Urinary organs	675	645	779	785	733	742	717	747	807	775
C64	Kidney (excl. renal pelvis)	235	236	316	298	292	279	275	302	308	310
C65–68	Urinary tract	440	409	463	487	441	463	442	445	499	465
C69	Eye	45	46	41	31	43	43	46	32	45	27
C70–72	Central nervous system	567	586	574	549	630	495	545	548	604	532
C73	Thyroid gland	251	252	265	327	294	303	318	381	369	321
C37, C74–75	Other endocrine glands	142	122	124	101	105	104	95	92	79	47
C39, C76, C80	Other or unspecified	191	198	170	194	160	175	192	222	189	200
C81–96	Lymphoid/haematopoietic tissue	1 153	1 252	1 350	1 350	1 300	1 361	1 394	1 419	1 462	1 394
C81	Hodgkin lymphoma	55	59	56	77	45	62	80	56	71	68
C82–86, C96	Non-Hodgkin lymphoma	407	440	453	440	427	461	472	461	490	465
C88	Immunoproliferative disease	34	38	21	22	37	33	32	38	37	43
C90	Multiple myeloma	183	198	216	200	196	209	222	233	229	260
C91–95	Leukaemia	474	517	604	611	595	596	588	631	635	558

Table 5.7: Age-standardised (Norwegian standard) incidence rates per 100 000 person-years by primary site and year, 2013–2022, **males**

ICD-10	Site	Year									
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
C00–96	All sites	724.9	735.8	746.3	749.5	731.0	716.0	716.5	707.6	709.5	708.1
C00–14	Mouth, pharynx	13.9	16.2	15.8	16.0	14.8	16.2	15.5	16.5	16.8	16.2
C00	Lip	2.1	2.5	2.6	2.1	2.0	2.0	2.0	2.5	2.0	1.7
C02–06	Oral cavity	4.7	4.7	4.6	4.9	4.7	5.2	4.2	4.4	4.3	4.7
C07–08	Salivary glands	1.2	1.9	1.5	1.8	1.0	1.6	1.1	1.4	1.7	1.4
C09–10, C01, C14	Oropharynx	5.0	5.7	6.0	6.1	5.7	6.4	7.1	6.6	7.1	6.9
C11	Nasopharynx	0.3	0.4	0.3	0.3	0.4	0.5	0.4	0.4	0.6	0.6
C12–13	Hypopharynx	0.6	0.9	0.9	0.8	0.9	0.4	0.8	1.2	1.1	0.8
C15–26	Digestive organs	149.7	148.9	151.9	150.5	146.2	149.3	144.0	146.7	142.8	144.4
C15	Oesophagus	8.7	9.5	9.1	8.6	8.4	9.3	8.6	10.5	9.1	9.4
C16	Stomach	13.4	13.3	12.7	12.6	11.7	9.7	11.2	10.6	8.8	10.4
C17	Small intestine	3.8	4.1	4.3	4.6	4.7	4.1	4.7	5.4	5.2	5.1
C18	Colon	59.2	59.6	60.4	59.5	58.8	58.3	55.8	55.7	56.1	55.5
C19–20	Rectum, rectosigmoid	34.2	34.0	32.8	33.6	30.9	32.2	29.2	30.4	28.8	30.5
C21	Anus	0.7	1.2	0.9	1.4	1.3	1.1	1.6	1.4	1.4	0.9
C22	Liver	7.7	6.1	7.6	7.9	7.6	8.8	8.9	9.3	9.9	8.3
C23–24	Gallbladder, bile ducts	4.2	3.0	3.4	3.4	2.6	3.3	3.1	3.0	3.3	3.3
C25	Pancreas	15.9	16.4	18.4	16.9	17.7	19.7	19.1	18.9	18.6	18.2
C26	Other digestive organs	2.0	1.9	2.3	2.2	2.4	2.9	1.9	1.7	1.6	2.7
C30–34, C38	Respiratory organs	74.7	76.1	72.5	74.3	73.6	69.6	67.4	66.9	69.1	64.7
C30–31	Nose, sinuses	1.5	1.3	0.6	1.0	1.1	0.9	1.0	1.1	0.9	1.1
C32	Larynx, epiglottis	4.5	4.8	3.6	3.4	2.8	4.1	3.2	2.9	3.7	2.2
C33–34	Lung, trachea	68.5	69.7	68.1	69.2	69.1	64.2	62.7	62.4	64.0	61.2
C38	Heart, mediastinum and pleura	0.3	0.3	0.3	0.7	0.6	0.4	0.5	0.5	0.5	0.3
C40–41	Bone	0.6	1.2	1.3	1.2	1.0	1.2	1.6	1.0	1.1	1.1
C43	Melanoma of the skin	36.0	43.4	42.3	42.8	46.1	45.2	45.5	43.0	45.9	51.1
C44	Skin, non-melanoma	41.3	43.5	45.8	47.9	52.1	54.3	58.2	59.6	60.9	62.6
C45	Mesothelioma	3.5	2.5	3.0	2.5	3.1	2.0	3.2	2.0	2.9	2.5
C47	Autonomic nervous system	0.1	0.2	0.1	0.0	0.3	0.3	0.1	0.0	0.2	0.3
C48–49	Soft tissues	4.6	3.7	4.2	3.6	3.9	3.4	4.6	3.4	3.1	3.1
C50	Breast	1.5	1.0	1.1	1.3	1.3	1.1	1.0	1.1	1.1	0.8
C60–63	Male genital organs	223.6	222.1	223.8	225.1	210.8	199.5	197.9	194.2	195.2	196.9
C61	Prostate	208.7	207.0	210.3	210.7	197.3	185.0	184.3	181.6	181.2	183.6
C62	Testis	12.8	12.5	11.0	10.9	10.8	12.0	11.1	10.6	10.9	10.4
C60, C63	Other male genital	2.1	2.6	2.4	3.5	2.6	2.5	2.5	2.1	3.0	2.9
C64–68	Urinary organs	70.7	74.7	76.7	77.9	74.2	71.8	73.7	72.5	70.3	69.3
C64	Kidney (excl. renal pelvis)	22.4	23.5	23.3	23.8	22.5	23.7	23.5	21.4	21.7	21.3
C65–68	Urinary tract	48.3	51.1	53.3	54.1	51.7	48.1	50.2	51.2	48.6	48.0
C69	Eye	1.3	2.0	1.7	1.7	1.8	1.7	1.5	1.7	1.5	2.3
C70–72	Central nervous system	20.8	21.5	20.2	17.3	19.4	17.6	16.5	16.3	17.5	16.0
C73	Thyroid gland	4.3	4.6	4.1	5.5	5.1	4.4	5.3	4.9	5.7	5.6
C37, C74–75	Other endocrine glands	4.9	5.0	3.8	4.5	3.4	3.5	3.8	3.4	3.0	2.1
C39, C76, C80	Other or unspecified	7.7	7.8	7.2	6.4	5.7	6.6	6.3	6.5	6.4	6.3
C81–96	Lymphoid/haematopoietic tissue	65.7	61.5	70.9	70.8	68.1	68.4	70.3	67.9	66.1	63.0
C81	Hodgkin lymphoma	2.8	3.1	4.2	3.5	3.5	3.4	2.5	3.4	2.7	3.0
C82–86, C96	Non-Hodgkin lymphoma	22.3	21.8	23.8	22.5	20.6	22.0	23.1	21.3	21.5	21.3
C88	Immunoproliferative disease	1.6	1.7	1.9	2.3	1.9	2.1	2.2	2.4	2.5	1.4
C90	Multiple myeloma	10.7	8.8	11.0	11.0	11.9	11.1	11.3	12.2	11.2	11.1
C91–95	Leukaemia	28.3	26.1	29.9	31.6	30.2	29.8	31.2	28.6	28.2	26.2

Table 5.8: Age-standardised (Norwegian standard) incidence rates per 100 000 person-years by primary site and year, 2013–2022, **females**

ICD-10	Site	Year									
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
C00–96	All sites	533.5	553.7	565.4	560.4	556.3	560.4	567.1	552.4	578.6	574.7
C00–14	Mouth, pharynx	7.1	7.9	8.0	8.5	8.8	8.2	7.8	7.6	8.5	7.3
C00	Lip	1.5	1.0	1.5	1.4	1.7	1.2	1.5	1.1	1.4	1.3
C02–06	Oral cavity	3.1	3.6	2.8	3.9	3.2	3.7	2.7	3.2	3.4	3.1
C07–08	Salivary glands	0.7	1.0	1.4	1.0	1.4	1.0	1.0	0.8	1.1	0.9
C09–10, C01, C14	Oropharynx	1.5	1.7	2.0	1.8	2.1	2.0	2.3	2.1	2.3	1.6
C11	Nasopharynx	0.2	0.3	0.1	0.2	0.3	0.2	0.2	0.1	0.2	0.1
C12–13	Hypopharynx	0.2	0.3	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2
C15–26	Digestive organs	109.9	112.2	114.8	110.7	110.3	108.3	106.9	108.9	111.2	109.9
C15	Oesophagus	2.3	2.6	2.7	2.5	2.6	2.7	2.8	3.1	2.9	2.7
C16	Stomach	6.0	6.8	5.8	5.2	6.6	5.6	5.7	5.9	5.5	6.2
C17	Small intestine	1.9	2.8	2.9	2.7	3.8	2.8	2.7	3.6	3.7	3.4
C18	Colon	52.6	52.6	55.3	56.5	53.2	53.1	52.0	52.3	54.2	50.8
C19–20	Rectum, rectosigmoid	21.5	21.0	20.9	19.0	18.7	18.3	18.4	18.8	17.7	19.6
C21	Anus	2.3	2.7	2.4	3.0	1.9	2.4	2.7	2.3	2.4	2.1
C22	Liver	3.1	3.2	3.7	4.0	4.1	4.2	4.2	4.6	4.4	4.7
C23–24	Gallbladder, bile ducts	3.8	3.9	2.9	2.6	2.8	2.3	3.1	3.1	3.3	3.0
C25	Pancreas	14.2	14.3	15.7	13.1	14.2	15.2	13.2	13.8	15.5	15.4
C26	Other digestive organs	2.3	2.5	2.5	2.1	2.3	1.8	2.1	1.4	1.6	1.9
C30–34, C38	Respiratory organs	51.9	55.5	56.9	55.0	54.9	58.5	57.5	54.1	56.1	54.7
C30–31	Nose, sinuses	0.7	0.7	0.8	0.5	0.4	0.6	0.7	0.6	0.7	0.6
C32	Larynx, epiglottis	0.8	0.7	0.7	0.8	0.6	0.9	0.7	0.6	0.5	0.8
C33–34	Lung, trachea	50.3	53.9	55.2	53.5	53.9	56.9	56.0	52.8	54.7	53.1
C38	Heart, mediastinum and pleura	0.1	0.1	0.1	0.1	0.0	0.2	0.1	0.0	0.2	0.1
C40–41	Bone	0.9	1.1	1.0	1.2	1.0	0.9	0.7	0.8	1.0	1.3
C43	Melanoma of the skin	34.3	38.1	37.2	38.8	38.6	41.2	39.7	40.3	39.6	47.8
C44	Skin, non-melanoma	26.6	28.9	26.7	31.4	32.2	34.2	38.3	40.4	40.3	40.9
C45	Mesothelioma	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.3	0.7
C47	Autonomic nervous system	0.2	0.2	0.2	0.1	0.1	0.0	0.2	0.2	0.2	0.3
C48–49	Soft tissues	2.7	2.5	3.0	2.8	2.5	2.9	3.0	2.7	2.4	2.4
C50	Breast	122.8	126.4	128.3	126.0	131.1	128.5	133.5	121.4	140.1	144.1
C51–58	Female genital organs	63.6	65.9	68.7	66.2	61.3	65.4	65.6	59.4	61.1	58.3
C51–52, C57.7–9	Other female genital	3.7	4.5	4.2	4.4	4.3	4.6	3.9	4.0	3.8	4.3
C53	Cervix uteri	11.5	14.1	15.2	14.3	12.6	14.6	14.6	13.5	13.4	10.8
C54	Corpus uteri	29.3	27.4	29.0	28.1	25.0	28.1	28.3	25.5	25.7	26.1
C55	Uterus, other	0.2	0.4	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.2
C56, C57.0–4, C48.2	Ovary etc.	18.8	19.5	20.0	19.0	19.1	17.6	18.3	16.2	17.9	16.7
C58	Placenta	0.1	0.1	0.1	0.2	0.0	0.1	0.1	0.0	0.0	0.1
C64–68	Urinary organs	24.8	23.6	27.9	27.4	25.4	25.1	23.9	24.4	25.7	24.6
C64	Kidney (excl. renal pelvis)	8.8	8.8	11.6	10.6	10.4	9.7	9.3	10.1	10.0	10.1
C65–68	Urinary tract	16.0	14.8	16.3	16.8	15.0	15.3	14.6	14.3	15.6	14.4
C69	Eye	1.7	1.8	1.6	1.1	1.6	1.5	1.6	1.1	1.5	0.9
C70–72	Central nervous system	21.8	22.3	21.6	20.3	23.0	17.9	19.4	19.3	21.0	17.8
C73	Thyroid gland	9.9	9.8	10.1	12.4	11.1	11.2	11.8	14.1	13.3	11.4
C37, C74–75	Other endocrine glands	5.6	4.7	4.7	3.8	4.0	3.8	3.5	3.3	2.8	1.6
C39, C76, C80	Other or unspecified	6.4	6.6	5.7	6.4	5.1	5.7	6.1	6.8	5.8	6.0
C81–96	Lymphoid/haematopoietic tissue	42.8	45.7	48.7	47.9	45.0	46.8	47.1	47.0	47.7	44.6
C81	Hodgkin lymphoma	2.2	2.3	2.2	2.9	1.7	2.3	3.0	2.1	2.6	2.4
C82–86, C96	Non-Hodgkin lymphoma	15.2	16.2	16.4	15.5	14.8	15.8	15.8	15.3	15.8	14.8
C88	Immunoproliferative disease	1.3	1.4	0.8	0.8	1.2	1.1	1.0	1.2	1.2	1.3
C90	Multiple myeloma	6.6	7.1	7.7	7.0	6.6	7.1	7.4	7.5	7.2	8.1
C91–95	Leukaemia	17.4	18.8	21.7	21.6	20.7	20.5	19.9	20.9	20.9	18.1

Table 5.9: Average annual number of new cases by primary site and five-year age group, 2018–2022, **males**

ICD-10	Site	0–4	5–9	10–14	15–19	20–24	25–29	30–34
C00–96	All sites	38	26	29	41	66	114	171
C00–14	Mouth, pharynx	1	0	0	1	0	2	3
C00	Lip	0	0	0	0	0	0	0
C02–06	Oral cavity	0	0	0	0	0	1	1
C07–08	Salivary glands	0	0	0	0	0	1	1
C09–10, C01, C14	Oropharynx	0	0	0	0	0	0	0
C11	Nasopharynx	0	0	0	0	0	0	0
C12–13	Hypopharynx	0	0	0	0	0	0	0
C15–26	Digestive organs	0	0	1	3	4	10	18
C15	Oesophagus	0	0	0	0	0	0	1
C16	Stomach	0	0	0	0	0	1	1
C17	Small intestine	0	0	0	0	0	0	1
C18	Colon	0	0	1	2	3	5	10
C19–20	Rectum, rectosigmoid	0	0	0	0	0	1	4
C21	Anus	0	0	0	0	0	0	0
C22	Liver	0	0	0	0	1	1	0
C23–24	Gallbladder, bile ducts	0	0	0	0	0	1	0
C25	Pancreas	0	0	0	0	0	1	1
C26	Other digestive organs	0	0	0	0	0	0	0
C30–34, C38	Respiratory organs	0	0	0	1	1	2	3
C30–31	Nose, sinuses	0	0	0	0	0	1	0
C32	Larynx, epiglottis	0	0	0	0	0	0	0
C33–34	Lung, trachea	0	0	0	0	0	1	2
C38	Heart, mediastinum and pleura	0	0	0	0	0	0	0
C40–41	Bone	1	0	4	4	2	1	2
C43	Melanoma of the skin	0	0	0	1	3	8	19
C44	Skin, non-melanoma	0	0	0	0	1	1	2
C45	Mesothelioma	0	0	0	0	0	0	0
C47	Autonomic nervous system	2	0	0	0	0	0	0
C48–49	Soft tissues	2	1	1	1	1	2	3
C50	Breast	0	0	0	0	0	0	0
C60–63	Male genital organs	0	0	0	7	26	47	55
C61	Prostate	0	0	0	0	0	0	0
C62	Testis	0	0	0	7	25	47	55
C60, C63	Other male genital	0	0	0	0	0	0	0
C64–68	Urinary organs	2	1	0	0	2	4	9
C64	Kidney (excl. renal pelvis)	2	1	0	0	1	2	5
C65–68	Urinary tract	0	0	0	0	1	1	3
C69	Eye	2	0	0	0	0	0	0
C70–72	Central nervous system	10	9	10	7	7	11	16
C73	Thyroid gland	0	0	0	1	2	5	9
C37, C74–75	Other endocrine glands	1	1	1	2	2	2	3
C39, C76, C80	Other or unspecified	0	0	0	0	0	0	0
C81–96	Lymphoid/haematopoietic tissue	16	13	12	12	14	19	27
C81	Hodgkin lymphoma	0	1	2	4	6	7	8
C82–86, C96	Non-Hodgkin lymphoma	1	3	3	4	3	4	7
C88	Immunoproliferative disease	0	0	0	0	0	0	0
C90	Multiple myeloma	0	0	0	0	0	0	0
C91–95	Leukaemia	15	9	7	5	5	8	12

35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
196	256	477	834	1 404	2 090	2 989	3 681	3 243	2 092	1 814
5	7	18	36	53	70	75	70	53	34	25
0	1	1	1	3	5	6	10	9	10	8
2	2	5	9	14	15	20	20	15	13	7
1	1	2	2	2	3	5	5	5	4	5
1	2	7	21	30	41	36	28	18	5	4
0	0	2	1	2	2	1	2	1	1	0
0	0	0	1	2	4	7	5	5	1	1
33	54	102	190	286	400	598	741	681	476	386
1	2	6	11	18	35	45	54	40	25	21
3	4	5	11	17	25	39	49	45	37	35
3	3	6	9	15	18	19	22	17	11	10
16	21	37	58	93	132	214	280	283	205	171
6	15	27	55	71	98	126	156	129	87	61
0	0	2	2	4	5	6	6	6	2	2
2	4	4	12	23	28	42	43	43	25	21
1	1	1	5	5	6	16	18	13	11	9
1	4	12	23	38	50	82	103	94	64	49
0	0	1	3	3	4	9	11	10	9	6
5	8	23	55	106	187	309	414	368	226	169
0	1	1	1	3	4	3	4	5	2	3
1	1	2	5	7	10	16	17	17	8	6
3	6	19	48	96	173	289	392	345	215	159
0	0	1	1	0	1	1	1	1	2	2
1	1	1	1	2	2	3	4	3	1	0
29	40	62	92	117	131	155	200	183	122	106
2	5	10	20	31	67	119	243	312	305	382
0	0	0	1	1	3	8	14	19	12	11
0	0	0	0	0	0	0	0	0	0	0
3	3	5	8	7	8	10	10	12	9	8
0	1	0	1	2	3	4	6	6	2	2
49	44	90	186	431	748	1 080	1 165	883	409	316
2	6	50	166	413	732	1 066	1 150	871	400	308
46	37	36	16	12	9	5	2	1	1	0
1	1	3	4	6	7	10	12	11	8	8
13	21	53	87	163	193	287	379	342	236	179
8	14	32	46	80	76	97	117	80	39	25
5	6	20	41	83	117	190	261	262	197	153
1	1	3	2	5	7	7	6	5	3	3
19	22	27	40	41	45	49	53	48	26	23
9	8	10	14	18	16	15	17	11	6	4
2	5	7	9	8	9	10	12	8	4	3
0	1	2	6	7	13	14	25	25	27	42
26	37	64	85	126	187	247	322	283	195	155
5	5	5	4	7	7	5	8	6	2	1
11	12	23	32	46	64	90	114	93	57	42
0	0	1	2	2	5	9	11	12	9	6
2	3	9	12	23	35	45	62	54	37	31
9	17	26	35	48	77	98	127	117	91	75

Table 5.10: Average annual number of new cases by primary site and five-year age group, 2018–2022, **females**

ICD-10	Site	0–4	5–9	10–14	15–19	20–24	25–29	30–34
C00–96	All sites	33	20	26	38	67	143	234
C00–14	Mouth, pharynx	0	0	0	0	1	1	3
C00	Lip	0	0	0	0	0	0	0
C02–06	Oral cavity	0	0	0	0	1	0	1
C07–08	Salivary glands	0	0	0	0	0	0	1
C09–10, C01, C14	Oropharynx	0	0	0	0	0	0	0
C11	Nasopharynx	0	0	0	0	0	0	0
C12–13	Hypopharynx	0	0	0	0	0	0	0
C15–26	Digestive organs	2	1	2	6	8	10	19
C15	Oesophagus	0	0	0	0	0	0	0
C16	Stomach	0	0	0	0	1	1	1
C17	Small intestine	0	0	0	0	0	0	1
C18	Colon	0	1	1	3	5	6	10
C19–20	Rectum, rectosigmoid	0	0	0	0	1	1	4
C21	Anus	0	0	0	0	0	0	0
C22	Liver	2	0	0	1	0	0	1
C23–24	Gallbladder, bile ducts	0	0	0	0	0	0	1
C25	Pancreas	0	0	0	1	1	1	1
C26	Other digestive organs	0	0	0	0	0	1	0
C30–34, C38	Respiratory organs	1	0	0	0	1	2	3
C30–31	Nose, sinuses	0	0	0	0	0	0	0
C32	Larynx, epiglottis	0	0	0	0	0	0	0
C33–34	Lung, trachea	1	0	0	0	1	2	3
C38	Heart, mediastinum and pleura	0	0	0	0	0	0	0
C40–41	Bone	0	1	3	2	1	0	2
C43	Melanoma of the skin	0	0	0	2	10	19	30
C44	Skin, non-melanoma	0	0	0	0	1	1	2
C45	Mesothelioma	0	0	0	0	0	0	0
C47	Autonomic nervous system	2	1	0	0	0	0	0
C48–49	Soft tissues	0	1	1	1	2	1	1
C50	Breast	0	0	0	0	3	20	54
C51–58	Female genital organs	0	0	1	2	5	36	50
C51–52, C57.7–9	Other female genital	0	0	0	0	0	0	2
C53	Cervix uteri	0	0	0	0	3	31	37
C54	Corpus uteri	0	0	0	0	0	1	4
C55	Uterus, other	0	0	0	0	0	0	0
C56, C57.0–4, C48.2	Ovary etc.	0	0	1	1	2	4	6
C58	Placenta	0	0	0	0	0	0	0
C64–68	Urinary organs	3	1	0	1	1	2	4
C64	Kidney (excl. renal pelvis)	3	1	0	0	0	1	2
C65–68	Urinary tract	0	0	0	0	1	1	2
C69	Eye	2	0	0	0	0	1	0
C70–72	Central nervous system	6	7	10	7	5	12	16
C73	Thyroid gland	0	0	0	4	8	16	23
C37, C74–75	Other endocrine glands	1	0	1	2	4	3	5
C39, C76, C80	Other or unspecified	1	0	0	0	0	0	1
C81–96	Lymphoid/haematopoietic tissue	14	8	8	11	15	18	19
C81	Hodgkin lymphoma	0	0	2	6	8	8	6
C82–86, C96	Non-Hodgkin lymphoma	2	2	1	1	3	3	5
C88	Immunoproliferative disease	0	0	0	0	0	0	0
C90	Multiple myeloma	0	0	0	0	0	0	0
C91–95	Leukaemia	12	6	4	4	4	8	8

35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
351	537	837	1 186	1 317	1 693	2 073	2 376	2 266	1 744	2 005
4	5	11	17	20	28	26	38	33	19	30
0	0	1	1	3	3	4	7	7	6	9
2	2	3	5	7	10	11	19	15	8	15
2	2	1	3	1	3	1	4	2	3	4
0	1	4	7	9	11	9	7	7	2	1
0	0	1	1	1	1	0	0	0	0	0
0	0	0	0	0	0	1	1	1	0	1
33	57	90	142	202	295	405	534	557	474	540
0	1	2	2	4	10	13	17	14	12	14
2	5	7	10	11	11	22	23	28	24	29
1	2	3	7	10	10	14	17	15	11	7
17	26	34	56	81	124	184	258	287	255	292
8	13	24	34	46	65	74	83	81	65	63
1	2	4	6	6	11	11	8	8	6	5
1	2	4	5	9	13	18	19	21	18	22
1	1	3	4	5	9	10	16	13	14	16
3	4	9	17	27	38	53	83	80	60	80
0	1	1	1	3	4	6	10	9	9	11
6	9	25	51	102	185	286	389	328	204	154
0	1	1	1	1	2	2	3	2	2	2
0	0	1	1	3	3	4	5	2	2	0
5	8	23	49	97	180	280	380	324	200	151
0	0	0	0	0	0	0	1	0	0	1
1	1	1	1	1	3	2	3	1	1	1
38	56	91	113	116	120	129	148	136	98	113
3	5	15	23	38	57	97	162	208	229	417
0	0	0	1	1	2	2	4	1	2	2
0	0	0	0	0	0	0	0	0	0	0
2	5	6	6	6	6	7	12	10	4	8
108	205	344	485	430	496	512	355	347	229	217
69	80	99	144	159	195	221	251	208	152	144
2	4	3	7	8	11	15	15	16	18	26
48	45	36	33	26	26	25	19	12	10	8
8	16	31	60	81	103	110	134	111	80	63
0	0	0	0	0	0	1	1	1	1	3
10	14	28	43	43	54	71	81	68	42	44
0	0	0	0	0	0	0	0	0	0	0
5	13	23	37	56	78	97	131	120	86	101
3	8	15	21	26	35	39	52	41	23	23
1	5	7	16	30	43	58	79	78	64	78
1	0	2	3	5	5	6	6	4	2	2
19	28	49	47	54	52	53	64	52	33	32
32	34	32	34	29	31	33	26	17	10	9
5	4	8	4	6	6	9	9	8	4	2
1	0	3	6	7	11	13	19	29	31	74
24	34	41	73	86	125	173	224	208	165	158
5	4	2	3	4	2	4	4	5	3	2
8	13	10	25	33	45	65	81	77	52	44
0	0	1	1	1	3	6	8	7	5	4
1	2	5	11	16	21	33	40	36	34	30
10	15	22	33	32	54	66	91	82	72	78

Table 5.11: Age-specific incidence rates per 100 000 person-years by primary site and five-year age group, 2018–2022, **males**

ICD-10	Site	0–4	5–9	10–14	15–19	20–24	25–29	30–34
C00–96	All sites	25.6	16.3	17.6	24.7	37.6	60.2	88.9
C00–14	Mouth, pharynx	0.4	0.0	0.1	0.4	0.2	1.0	1.6
C00	Lip	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C02–06	Oral cavity	0.1	0.0	0.1	0.1	0.0	0.4	0.7
C07–08	Salivary glands	0.3	0.0	0.0	0.1	0.0	0.4	0.5
C09–10, C01, C14	Oropharynx	0.0	0.0	0.0	0.0	0.2	0.0	0.1
C11	Nasopharynx	0.0	0.0	0.0	0.1	0.0	0.1	0.2
C12–13	Hypopharynx	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C15–26	Digestive organs	0.3	0.2	0.7	1.7	2.5	5.4	9.5
C15	Oesophagus	0.0	0.0	0.0	0.1	0.0	0.2	0.5
C16	Stomach	0.0	0.0	0.0	0.0	0.2	0.5	0.7
C17	Small intestine	0.0	0.0	0.0	0.0	0.1	0.2	0.5
C18	Colon	0.0	0.1	0.5	1.3	1.6	2.4	5.0
C19–20	Rectum, rectosigmoid	0.0	0.0	0.0	0.0	0.0	0.7	2.1
C21	Anus	0.0	0.0	0.0	0.0	0.0	0.1	0.0
C22	Liver	0.3	0.1	0.2	0.2	0.3	0.3	0.2
C23–24	Gallbladder, bile ducts	0.0	0.0	0.0	0.0	0.1	0.3	0.0
C25	Pancreas	0.0	0.0	0.0	0.0	0.1	0.4	0.4
C26	Other digestive organs	0.0	0.0	0.0	0.0	0.0	0.1	0.0
C30–34, C38	Respiratory organs	0.3	0.0	0.0	0.4	0.5	1.0	1.4
C30–31	Nose, sinuses	0.0	0.0	0.0	0.0	0.2	0.3	0.2
C32	Larynx, epiglottis	0.0	0.0	0.0	0.0	0.0	0.0	0.1
C33–34	Lung, trachea	0.1	0.0	0.0	0.2	0.1	0.5	1.0
C38	Heart, mediastinum and pleura	0.1	0.0	0.0	0.1	0.1	0.1	0.0
C40–41	Bone	0.4	0.2	2.2	2.2	1.1	0.7	0.8
C43	Melanoma of the skin	0.0	0.1	0.2	0.5	1.9	4.0	10.0
C44	Skin, non-melanoma	0.0	0.1	0.0	0.0	0.3	0.5	1.2
C45	Mesothelioma	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C47	Autonomic nervous system	1.5	0.1	0.0	0.2	0.1	0.1	0.0
C48–49	Soft tissues	1.2	0.7	0.4	0.6	0.8	0.8	1.8
C50	Breast	0.0	0.0	0.0	0.0	0.0	0.0	0.1
C60–63	Male genital organs	0.3	0.0	0.1	4.4	14.7	25.1	28.6
C61	Prostate	0.0	0.0	0.0	0.1	0.1	0.0	0.0
C62	Testis	0.3	0.0	0.1	4.1	14.5	25.0	28.5
C60, C63	Other male genital	0.0	0.0	0.0	0.1	0.1	0.1	0.1
C64–68	Urinary organs	1.6	0.6	0.0	0.2	1.0	1.9	4.5
C64	Kidney (excl. renal pelvis)	1.6	0.6	0.0	0.1	0.6	1.2	2.8
C65–68	Urinary tract	0.0	0.0	0.0	0.1	0.5	0.7	1.7
C69	Eye	1.5	0.1	0.0	0.1	0.1	0.1	0.2
C70–72	Central nervous system	6.5	5.3	6.0	4.5	4.0	5.8	8.4
C73	Thyroid gland	0.0	0.0	0.1	0.6	1.1	2.4	4.9
C37, C74–75	Other endocrine glands	0.9	0.4	0.4	1.2	1.0	1.0	1.7
C39, C76, C80	Other or unspecified	0.0	0.0	0.0	0.1	0.0	0.2	0.2
C81–96	Lymphoid/haematopoietic tissue	10.7	8.2	7.4	7.6	8.0	10.2	14.1
C81	Hodgkin lymphoma	0.0	0.6	1.2	2.2	3.4	3.7	4.3
C82–86, C96	Non-Hodgkin lymphoma	0.8	2.0	1.8	2.2	1.5	2.1	3.5
C88	Immunoproliferative disease	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C90	Multiple myeloma	0.0	0.0	0.0	0.0	0.0	0.1	0.1
C91–95	Leukaemia	9.9	5.6	4.4	3.2	3.1	4.2	6.1

35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
106.6	142.5	250.0	437.6	816.8	1 345.9	2 156.7	2 917.5	3 700.9	4 115.4	4 385.9
2.7	3.7	9.2	18.7	30.8	45.2	53.8	55.3	60.3	66.5	61.4
0.0	0.3	0.4	0.6	1.5	3.2	4.3	8.2	10.0	19.7	20.3
1.3	1.2	2.7	4.6	8.3	9.8	14.6	15.9	17.3	25.2	17.4
0.5	0.7	1.3	1.3	1.3	2.1	3.5	3.8	5.9	7.9	11.6
0.7	1.1	3.8	11.2	17.7	26.4	26.0	22.0	20.3	9.8	8.7
0.2	0.2	0.9	0.5	1.2	1.3	0.7	1.4	1.4	2.0	0.5
0.0	0.1	0.1	0.4	0.9	2.4	4.8	4.0	5.3	2.0	2.9
18.0	30.2	53.7	99.6	166.6	257.8	431.5	587.6	776.8	935.9	933.1
0.7	1.2	3.3	5.7	10.7	22.7	32.8	42.6	46.1	50.0	49.8
1.5	2.2	2.7	5.6	9.9	16.0	27.9	38.8	51.6	73.2	84.6
1.6	1.7	3.4	4.8	8.7	11.5	13.6	17.4	19.9	21.2	23.7
8.6	11.5	19.4	30.6	54.2	85.1	154.7	222.1	322.5	402.8	414.3
3.0	8.6	14.4	28.8	41.2	63.2	90.6	123.6	147.7	171.5	148.4
0.1	0.2	1.2	1.3	2.1	3.0	4.5	4.4	6.4	3.1	5.8
1.2	2.3	2.3	6.4	13.1	17.8	30.0	34.2	48.6	48.8	50.3
0.4	0.4	0.5	2.6	2.9	4.1	11.5	14.4	15.3	22.0	21.8
0.8	2.0	6.1	12.1	21.9	32.1	59.2	81.3	106.8	125.5	118.9
0.1	0.1	0.5	1.8	1.9	2.4	6.8	8.6	11.9	17.7	15.5
2.6	4.4	11.9	28.6	61.8	120.7	222.7	328.1	420.2	444.9	408.5
0.1	0.6	0.4	0.6	1.9	2.3	1.9	2.9	5.7	3.5	6.8
0.7	0.6	0.8	2.4	4.1	6.4	11.4	13.8	19.4	16.1	13.5
1.7	3.1	10.1	25.2	55.8	111.4	208.7	310.9	393.5	422.1	383.4
0.1	0.2	0.5	0.4	0.0	0.5	0.7	0.6	1.6	3.1	4.8
0.5	0.4	0.7	0.7	1.2	1.2	2.2	3.3	3.9	1.2	1.0
15.5	22.2	32.3	48.5	67.9	84.5	111.7	158.7	208.9	239.2	255.7
1.2	2.6	5.5	10.7	18.0	42.9	85.7	192.4	356.3	600.7	923.4
0.0	0.0	0.0	0.4	0.7	2.2	5.9	10.9	21.5	23.2	25.6
0.0	0.1	0.1	0.1	0.2	0.0	0.1	0.2	0.2	0.4	0.0
1.6	1.8	2.6	4.3	4.0	5.0	7.2	8.1	14.2	16.9	20.3
0.0	0.4	0.2	0.6	1.0	1.7	3.0	4.6	7.1	4.7	5.8
26.5	24.5	47.2	97.6	250.5	481.6	779.3	923.0	1 007.3	804.1	763.8
1.2	3.3	26.4	87.3	240.1	471.6	769.1	911.5	993.6	786.8	744.5
24.8	20.4	19.0	8.3	6.7	5.8	3.3	1.9	1.4	2.4	1.0
0.5	0.8	1.8	2.0	3.6	4.2	6.9	9.7	12.3	14.9	18.4
7.2	11.6	27.7	45.6	94.8	124.3	207.2	300.1	389.9	465.0	431.7
4.6	8.0	17.0	23.9	46.3	49.2	70.1	92.9	91.1	77.1	61.4
2.6	3.6	10.7	21.7	48.5	75.1	137.1	207.2	298.8	387.9	370.3
0.3	0.6	1.4	1.0	3.0	4.8	5.1	5.1	5.9	6.3	8.2
10.3	12.0	14.1	20.8	24.0	28.8	35.2	42.3	55.0	50.4	55.6
4.8	4.2	5.5	7.3	10.4	10.4	10.7	13.3	12.8	11.0	9.7
1.2	2.6	3.6	4.8	4.9	5.8	7.1	9.5	9.1	7.5	6.3
0.2	0.4	0.8	3.3	4.0	8.5	10.0	19.7	28.8	53.1	100.6
13.9	20.7	33.7	44.8	73.1	120.7	178.2	255.2	322.8	384.4	375.2
2.6	2.6	2.8	2.1	4.1	4.6	3.8	6.2	7.3	4.7	2.9
5.8	6.6	12.0	17.0	26.5	40.9	64.7	90.0	105.7	111.7	102.0
0.0	0.1	0.5	1.3	1.3	3.1	6.2	9.0	13.9	16.9	15.0
0.9	1.9	4.9	6.2	13.1	22.4	32.6	49.3	61.9	72.8	74.0
4.7	9.6	13.4	18.3	28.0	49.6	71.0	100.7	134.0	178.2	181.3

Table 5.12: Age-specific incidence rates per 100 000 person-years by primary site and five-year age group, 2018–2022, **females**

ICD-10	Site	0–4	5–9	10–14	15–19	20–24	25–29	30–34
C00–96	All sites	23.6	13.2	16.2	24.7	40.8	79.3	126.9
C00–14	Mouth, pharynx	0.1	0.0	0.3	0.1	0.6	0.6	1.5
C00	Lip	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C02–06	Oral cavity	0.0	0.0	0.0	0.1	0.4	0.2	0.8
C07–08	Salivary glands	0.0	0.0	0.3	0.0	0.1	0.1	0.5
C09–10, C01, C14	Oropharynx	0.0	0.0	0.0	0.0	0.1	0.2	0.0
C11	Nasopharynx	0.1	0.0	0.0	0.0	0.0	0.0	0.1
C12–13	Hypopharynx	0.0	0.0	0.0	0.0	0.0	0.0	0.1
C15–26	Digestive organs	1.3	0.8	1.0	3.6	4.8	5.3	10.5
C15	Oesophagus	0.0	0.0	0.0	0.0	0.0	0.0	0.1
C16	Stomach	0.0	0.0	0.0	0.1	0.5	0.6	0.8
C17	Small intestine	0.0	0.0	0.0	0.0	0.1	0.0	0.5
C18	Colon	0.0	0.4	0.8	2.2	2.9	3.3	5.2
C19–20	Rectum, rectosigmoid	0.0	0.0	0.0	0.0	0.7	0.3	2.0
C21	Anus	0.0	0.0	0.0	0.1	0.0	0.0	0.2
C22	Liver	1.3	0.3	0.1	0.4	0.1	0.2	0.5
C23–24	Gallbladder, bile ducts	0.0	0.0	0.0	0.0	0.0	0.1	0.5
C25	Pancreas	0.0	0.1	0.1	0.8	0.4	0.4	0.7
C26	Other digestive organs	0.0	0.0	0.0	0.0	0.0	0.3	0.0
C30–34, C38	Respiratory organs	0.9	0.0	0.0	0.1	0.4	1.2	1.5
C30–31	Nose, sinuses	0.3	0.0	0.0	0.0	0.0	0.2	0.1
C32	Larynx, epiglottis	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C33–34	Lung, trachea	0.6	0.0	0.0	0.0	0.4	0.9	1.4
C38	Heart, mediastinum and pleura	0.0	0.0	0.0	0.1	0.0	0.1	0.0
C40–41	Bone	0.3	0.4	1.6	1.5	0.6	0.1	1.0
C43	Melanoma of the skin	0.0	0.0	0.0	1.2	6.4	10.4	16.5
C44	Skin, non-melanoma	0.0	0.1	0.0	0.3	0.6	0.6	1.3
C45	Mesothelioma	0.0	0.0	0.0	0.0	0.1	0.1	0.2
C47	Autonomic nervous system	1.3	0.4	0.0	0.3	0.1	0.0	0.1
C48–49	Soft tissues	0.3	0.5	0.5	0.4	1.5	0.6	0.7
C50	Breast	0.0	0.0	0.0	0.3	2.1	11.0	29.5
C51–58	Female genital organs	0.0	0.3	0.6	1.3	3.2	20.1	27.0
C51–52, C57.7–9	Other female genital	0.0	0.0	0.0	0.0	0.0	0.2	0.9
C53	Cervix uteri	0.0	0.0	0.0	0.3	2.0	17.2	20.3
C54	Corpus uteri	0.0	0.0	0.0	0.0	0.0	0.4	2.4
C55	Uterus, other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C56, C57.0–4, C48.2	Ovary etc.	0.0	0.3	0.6	0.9	1.2	2.1	3.3
C58	Placenta	0.0	0.0	0.0	0.1	0.0	0.1	0.2
C64–68	Urinary organs	1.9	0.5	0.3	0.4	0.7	1.1	2.0
C64	Kidney (excl. renal pelvis)	1.9	0.5	0.3	0.1	0.2	0.7	1.0
C65–68	Urinary tract	0.0	0.0	0.0	0.3	0.5	0.4	1.0
C69	Eye	1.1	0.1	0.0	0.1	0.1	0.4	0.2
C70–72	Central nervous system	4.6	4.3	6.1	4.2	3.2	6.8	8.8
C73	Thyroid gland	0.1	0.0	0.3	2.7	4.9	8.8	12.7
C37, C74–75	Other endocrine glands	0.9	0.3	0.4	1.2	2.4	1.8	2.6
C39, C76, C80	Other or unspecified	0.7	0.0	0.1	0.0	0.0	0.2	0.3
C81–96	Lymphoid/haematopoietic tissue	10.2	5.5	5.1	7.1	9.2	10.2	10.5
C81	Hodgkin lymphoma	0.0	0.1	1.5	4.1	4.8	4.3	3.3
C82–86, C96	Non-Hodgkin lymphoma	1.6	1.2	0.8	0.5	2.1	1.6	2.5
C88	Immunoproliferative disease	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C90	Multiple myeloma	0.0	0.0	0.0	0.0	0.0	0.1	0.2
C91–95	Leukaemia	8.6	4.2	2.8	2.4	2.3	4.2	4.6

35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
201.7	315.2	461.2	653.4	799.9	1 108.5	1 481.8	1 820.9	2 320.6	2 670.4	2 636.0
2.2	2.9	6.0	9.4	12.4	18.3	18.6	29.0	33.8	29.4	40.0
0.1	0.0	0.6	0.7	1.6	2.2	3.0	5.1	7.4	8.9	11.3
1.0	1.2	1.8	2.6	4.3	6.5	7.7	14.3	15.4	12.6	20.0
0.9	1.1	0.8	1.5	0.9	1.7	0.7	3.4	2.5	4.6	5.8
0.0	0.4	2.3	4.0	5.3	7.3	6.1	5.7	7.2	3.1	1.8
0.1	0.2	0.3	0.3	0.4	0.4	0.1	0.2	0.4	0.0	0.3
0.0	0.1	0.2	0.2	0.0	0.1	0.9	0.5	1.0	0.3	0.8
19.1	33.2	49.5	78.0	122.4	193.1	289.5	409.6	570.1	725.5	709.3
0.0	0.7	0.9	0.9	2.4	6.3	9.4	13.3	14.7	18.1	17.9
1.4	2.8	3.9	5.6	6.8	7.3	15.6	17.9	28.5	36.7	38.6
0.7	1.1	1.5	3.9	6.1	6.3	10.0	12.7	15.4	17.1	9.7
9.7	15.2	19.0	30.9	49.4	81.5	131.4	197.8	293.9	390.5	383.3
4.4	7.5	13.0	18.7	27.8	42.8	53.0	63.3	83.4	99.8	82.3
0.6	1.4	2.0	3.3	3.5	7.2	8.0	6.4	8.2	9.2	6.8
0.3	1.3	2.3	2.5	5.5	8.3	12.7	14.6	21.1	27.9	28.9
0.3	0.7	1.4	2.0	2.9	5.6	7.3	12.6	13.3	21.1	21.6
1.6	2.2	5.1	9.5	16.3	25.0	37.7	63.3	82.1	91.9	105.2
0.1	0.4	0.4	0.8	1.7	2.8	4.3	7.7	9.4	13.2	15.0
3.2	5.2	13.8	28.3	61.8	121.0	204.6	298.2	336.1	312.4	202.2
0.2	0.4	0.4	0.7	0.7	1.2	1.6	2.5	2.3	3.7	3.2
0.0	0.1	0.4	0.6	1.7	2.2	2.7	3.5	2.0	2.4	0.3
3.0	4.6	12.8	27.1	59.2	117.6	200.0	291.6	331.4	305.6	198.0
0.0	0.1	0.1	0.0	0.2	0.0	0.3	0.6	0.4	0.6	0.8
0.7	0.8	0.3	0.8	0.7	1.7	1.6	2.1	1.0	1.5	1.6
22.1	32.9	50.0	62.3	70.5	78.6	92.2	113.7	139.3	149.4	148.8
1.5	3.2	8.0	12.8	23.2	37.2	69.5	124.5	212.8	350.6	547.9
0.0	0.1	0.2	0.4	0.4	1.2	1.1	2.9	1.4	3.4	2.9
0.1	0.2	0.2	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.0
1.4	2.7	3.1	3.2	3.6	3.8	5.3	9.2	10.0	6.1	11.0
62.0	120.3	189.3	267.2	260.9	325.1	366.1	272.0	355.2	351.0	285.8
39.6	46.7	54.3	79.4	96.3	127.6	158.1	192.2	212.8	232.1	189.0
1.1	2.2	1.5	4.0	4.9	7.1	10.6	11.7	16.4	27.6	33.7
27.7	26.3	20.1	18.1	16.0	17.3	17.6	14.7	12.5	15.6	10.8
4.8	9.4	17.2	33.3	49.0	67.5	78.6	102.7	113.5	121.9	82.3
0.1	0.1	0.0	0.2	0.1	0.1	0.4	0.8	1.0	2.1	3.9
5.5	8.5	15.4	23.9	26.4	35.6	50.9	62.4	69.4	64.9	58.4
0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.8	7.6	12.5	20.2	33.8	51.1	69.5	100.7	122.5	132.3	133.0
2.0	4.7	8.5	11.6	15.5	23.2	28.0	39.9	42.2	34.9	30.8
0.8	2.9	4.0	8.6	18.2	27.9	41.5	60.9	80.3	97.4	102.3
0.3	0.2	1.0	1.4	3.2	3.0	4.3	4.8	3.7	3.1	2.9
11.0	16.2	26.8	25.7	32.9	33.8	37.7	49.1	53.1	51.1	42.3
18.5	20.0	17.7	18.5	17.4	20.0	23.9	19.6	17.8	15.6	11.3
3.0	2.5	4.5	2.4	3.6	4.2	6.4	7.2	8.2	6.4	3.2
0.5	0.2	1.4	3.3	4.3	6.9	9.4	14.3	29.7	47.8	97.3
13.8	20.2	22.5	40.1	52.5	81.9	123.9	171.7	212.8	252.7	207.7
2.6	2.3	1.0	1.9	2.2	1.6	2.9	2.8	5.1	4.0	2.4
4.6	7.6	5.7	13.8	19.8	29.3	46.2	62.2	78.9	79.6	58.4
0.0	0.2	0.7	0.4	0.9	1.8	4.1	6.3	7.6	7.0	5.3
0.8	1.1	3.0	5.9	10.0	14.0	23.9	30.4	37.1	51.8	39.2
5.7	8.9	12.1	18.1	19.7	35.1	46.9	70.1	84.2	110.2	102.5

Table 5.13: Average annual number of new cases by primary site and five-year period, 1963–2022, **males**

ICD-10	Site	1963–67	1968–72	1973–77	1978–82	1983–87
C00–96	All sites	4 886	5 778	6 771	7 808	8 732
C00–14	Mouth, pharynx	190	226	239	241	258
C00	Lip	92	112	107	101	95
C02–06	Oral cavity	38	55	57	72	84
C07–08	Salivary glands	13	15	16	14	14
C09–10, C01, C14	Oropharynx	22	17	27	25	31
C11	Nasopharynx	10	10	11	9	12
C12–13	Hypopharynx	15	18	21	20	23
C15–26	Digestive organs	1 778	1 901	2 015	2 242	2 362
C15	Oesophagus	75	82	81	89	86
C16	Stomach	787	726	638	602	560
C17	Small intestine	14	17	18	21	28
C18	Colon	329	367	442	562	693
C19–20	Rectum, rectosigmoid	189	287	352	466	512
C21	Anus	7	5	8	9	13
C22	Liver	28	44	51	56	66
C23–24	Gallbladder, bile ducts	24	26	32	38	48
C25	Pancreas	197	232	255	279	297
C26	Other digestive organs	129	114	140	119	58
C30–34, C38	Respiratory organs	509	715	869	1 086	1 244
C30–31	Nose, sinuses	19	24	24	22	22
C32	Larynx, epiglottis	58	67	80	92	109
C33–34	Lung, trachea	424	609	746	952	1 103
C38	Heart, mediastinum and pleura	9	16	19	19	10
C40–41	Bone	17	17	23	22	23
C43	Melanoma of the skin	88	123	179	221	278
C44	Skin, non-melanoma	71	124	196	229	316
C45	Mesothelioma	2	5	13	20	29
C47	Autonomic nervous system	16	13	11	8	8
C48–49	Soft tissues	32	41	52	55	44
C50	Breast	8	9	10	11	11
C60–63	Male genital organs	1 001	1 185	1 463	1 711	1 914
C61	Prostate	912	1 079	1 351	1 562	1 742
C62	Testis	65	85	88	122	145
C60, C63	Other male genital	24	21	24	27	26
C64–68	Urinary organs	451	553	706	835	973
C64	Kidney (excl. renal pelvis)	137	163	179	219	250
C65–68	Urinary tract	314	390	527	616	724
C69	Eye	18	22	22	24	25
C70–72	Central nervous system	141	152	173	202	236
C73	Thyroid gland	26	38	37	47	44
C37, C74–75	Other endocrine glands	9	23	26	37	42
C39, C76, C80	Other or unspecified	95	131	167	191	242
C81–96	Lymphoid/haematopoietic tissue	435	497	568	625	683
C81	Hodgkin lymphoma	55	63	64	64	49
C82–86, C96	Non-Hodgkin lymphoma	111	123	149	169	226
C88	Immunoproliferative disease	0	3	7	9	8
C90	Multiple myeloma	85	101	133	152	155
C91–95	Leukaemia	184	207	216	232	244

1988-92	1993-97	1998-02	2003-07	2008-12	2013-17	2018-22
9 585	10 688	11 602	13 504	15 671	17 896	19 561
252	253	250	258	320	385	451
81	59	45	41	61	52	54
82	91	83	82	97	118	126
21	18	23	19	24	36	38
34	49	64	83	111	148	194
9	11	11	9	10	9	14
25	25	24	23	18	21	25
2 417	2 449	2 562	2 755	3 114	3 594	3 986
105	110	122	140	171	215	261
504	438	367	328	295	303	272
27	37	49	57	84	107	135
794	854	959	1 063	1 226	1 409	1 531
543	573	611	652	721	811	837
13	18	16	21	24	27	35
60	56	78	85	119	180	249
52	53	59	65	75	80	88
288	283	283	322	353	409	520
30	26	18	22	47	52	58
1 304	1 406	1 456	1 579	1 702	1 791	1 876
23	20	25	22	25	27	27
103	108	110	98	102	93	90
1 168	1 266	1 308	1 448	1 569	1 661	1 748
10	13	14	12	7	10	11
20	22	21	24	30	27	33
406	440	469	541	778	1 039	1 268
410	476	538	647	797	1 013	1 501
38	46	58	68	69	69	69
7	4	5	4	5	4	5
44	69	66	75	89	99	95
13	12	16	16	21	29	28
2 246	2 745	3 232	4 174	4 949	5 467	5 535
2 037	2 505	2 963	3 868	4 606	5 097	5 165
183	204	240	262	298	307	299
25	36	30	44	45	63	71
1 050	1 094	1 125	1 300	1 471	1 801	1 970
263	269	302	369	476	581	628
787	825	823	931	995	1 220	1 342
25	29	28	33	32	43	47
241	296	378	465	503	502	462
47	45	49	64	77	121	144
43	60	72	105	134	110	88
288	327	279	221	172	156	162
734	916	997	1 176	1 408	1 647	1 842
53	52	57	74	79	89	84
277	326	344	402	486	547	606
9	24	29	34	37	46	58
158	161	161	187	220	257	313
237	352	405	480	586	708	781

Table 5.14: Average annual number of new cases by primary site and five-year period, 1963–2022, **females**

ICD-10	Site	1963–67	1968–72	1973–77	1978–82	1983–87
C00–96	All sites	4 830	5 557	6 365	7 221	8 018
C00–14	Mouth, pharynx	70	76	82	90	108
C00	Lip	5	7	8	9	14
C02–06	Oral cavity	23	35	36	44	57
C07–08	Salivary glands	14	14	10	16	13
C09–10, C01, C14	Oropharynx	13	9	15	11	14
C11	Nasopharynx	5	5	6	4	5
C12–13	Hypopharynx	10	6	7	6	5
C15–26	Digestive organs	1 503	1 631	1 781	2 073	2 174
C15	Oesophagus	32	28	31	33	35
C16	Stomach	538	468	415	406	379
C17	Small intestine	11	16	19	23	27
C18	Colon	381	451	546	714	808
C19–20	Rectum, rectosigmoid	153	229	274	376	402
C21	Anus	11	11	16	20	24
C22	Liver	13	27	29	37	44
C23–24	Gallbladder, bile ducts	51	60	55	74	84
C25	Pancreas	129	169	202	231	280
C26	Other digestive organs	183	172	195	159	91
C30–34, C38	Respiratory organs	124	174	207	276	371
C30–31	Nose, sinuses	13	13	13	14	15
C32	Larynx, epiglottis	6	7	7	11	11
C33–34	Lung, trachea	97	148	178	247	341
C38	Heart, mediastinum and pleura	8	5	9	5	4
C40–41	Bone	10	13	13	14	14
C43	Melanoma of the skin	98	133	218	277	375
C44	Skin, non-melanoma	38	70	131	159	237
C45	Mesothelioma	1	2	3	2	5
C47	Autonomic nervous system	9	17	8	5	6
C48–49	Soft tissues	26	33	43	44	48
C50	Breast	1 112	1 234	1 403	1 540	1 734
C51–58	Female genital organs	992	1 147	1 248	1 267	1 288
C51–52, C57.7–9	Other female genital	57	62	77	82	83
C53	Cervix uteri	375	409	444	389	338
C54	Corpus uteri	232	281	331	373	394
C55	Uterus, other	17	13	7	8	5
C56, C57.0–4, C48.2	Ovary etc.	308	378	387	412	465
C58	Placenta	4	4	1	3	3
C64–68	Urinary organs	229	282	340	388	419
C64	Kidney (excl. renal pelvis)	93	113	125	141	161
C65–68	Urinary tract	137	169	215	247	258
C69	Eye	17	17	21	22	20
C70–72	Central nervous system	124	128	162	197	228
C73	Thyroid gland	65	95	113	139	143
C37, C74–75	Other endocrine glands	6	14	20	37	44
C39, C76, C80	Other or unspecified	74	100	128	181	236
C81–96	Lymphoid/haematopoietic tissue	332	391	446	510	568
C81	Hodgkin lymphoma	40	45	43	40	35
C82–86, C96	Non-Hodgkin lymphoma	81	101	121	154	210
C88	Immunoproliferative disease	0	1	4	5	6
C90	Multiple myeloma	70	87	112	127	133
C91–95	Leukaemia	141	157	165	184	185

1988-92	1993-97	1998-02	2003-07	2008-12	2013-17	2018-22
8 785	9 838	10 843	12 133	13 371	15 268	16 945
111	125	131	155	188	224	237
22	19	15	24	35	41	41
57	61	62	69	75	92	99
14	18	21	21	24	31	29
11	19	24	29	44	49	59
2	3	3	5	4	6	4
6	5	6	7	6	5	5
2 214	2 354	2 464	2 599	2 821	3 167	3 374
37	43	51	54	62	72	89
326	292	240	223	198	174	177
31	30	50	47	65	78	98
898	1 043	1 125	1 231	1 344	1 547	1 640
429	462	481	501	518	562	561
32	36	35	47	47	66	69
45	39	50	48	74	102	135
74	75	80	78	91	91	92
290	310	331	342	370	409	458
51	24	22	27	52	66	56
506	655	798	1 029	1 270	1 525	1 746
15	16	16	21	17	17	19
12	20	20	16	19	20	20
474	612	757	985	1 229	1 484	1 702
4	6	6	7	5	3	4
14	18	20	19	23	28	26
463	508	511	598	785	1 008	1 220
326	392	450	582	705	878	1 259
8	9	10	13	13	13	16
8	5	3	3	3	4	5
46	57	68	79	86	73	79
1 871	2 160	2 521	2 746	2 861	3 382	3 806
1 341	1 395	1 473	1 573	1 652	1 760	1 814
85	100	91	106	106	120	126
357	338	307	293	301	349	361
427	464	551	666	718	758	802
6	8	9	8	7	9	8
461	482	511	498	517	523	515
7	3	3	3	3	2	2
466	478	496	565	628	723	758
187	192	190	224	252	275	295
280	287	305	341	376	448	463
25	30	29	31	34	41	39
264	341	464	618	623	581	545
136	127	131	157	203	278	338
44	52	70	115	136	119	83
303	367	345	289	206	183	196
637	764	859	961	1 135	1 281	1 406
37	33	45	50	56	58	67
255	283	316	343	404	433	470
8	15	18	21	26	30	37
140	138	149	156	171	199	231
198	295	331	391	477	560	602

Table 5.15: Age-standardised (Norwegian standard) incidence rates per 100 000 person-years by primary site and five-year period, 1963–2022, **males**

ICD-10	Site	1963–67	1968–72	1973–77	1978–82	1983–87
C00–96	All sites	365.3	400.5	441.5	482.0	516.5
C00–14	Mouth, pharynx	14.4	15.7	15.5	14.8	15.3
C00	Lip	7.4	8.0	7.0	6.4	5.8
C02–06	Oral cavity	3.0	3.7	3.7	4.4	5.0
C07–08	Salivary glands	0.8	1.0	1.0	0.9	0.7
C09–10, C01, C14	Oropharynx	1.5	1.1	1.7	1.4	1.8
C11	Nasopharynx	0.6	0.6	0.7	0.5	0.6
C12–13	Hypopharynx	1.0	1.2	1.3	1.2	1.3
C15–26	Digestive organs	135.5	134.8	134.7	141.8	142.6
C15	Oesophagus	5.6	5.9	5.4	5.6	5.1
C16	Stomach	60.5	52.1	42.8	38.1	34.1
C17	Small intestine	1.0	1.2	1.1	1.3	1.7
C18	Colon	25.1	26.1	29.7	35.6	41.9
C19–20	Rectum, rectosigmoid	14.4	19.9	23.4	29.1	30.4
C21	Anus	0.5	0.4	0.5	0.6	0.8
C22	Liver	1.9	2.9	3.1	3.3	3.9
C23–24	Gallbladder, bile ducts	1.7	1.9	2.2	2.4	2.8
C25	Pancreas	14.2	15.8	16.4	17.2	17.9
C26	Other digestive organs	10.6	8.6	10.0	8.5	4.0
C30–34, C38	Respiratory organs	34.0	44.8	51.9	62.4	70.4
C30–31	Nose, sinuses	1.5	1.5	1.5	1.3	1.3
C32	Larynx, epiglottis	3.9	4.3	4.8	5.3	6.1
C33–34	Lung, trachea	28.0	38.0	44.5	54.7	62.4
C38	Heart, mediastinum and pleura	0.6	1.0	1.1	1.2	0.6
C40–41	Bone	1.0	0.9	1.2	1.1	1.1
C43	Melanoma of the skin	5.8	7.8	10.7	12.7	15.6
C44	Skin, non-melanoma	6.6	10.4	15.1	16.1	20.8
C45	Mesothelioma	0.2	0.3	0.8	1.2	1.7
C47	Autonomic nervous system	1.0	0.7	0.6	0.4	0.4
C48–49	Soft tissues	2.1	2.8	3.2	3.3	2.4
C50	Breast	0.6	0.6	0.7	0.8	0.7
C60–63	Male genital organs	83.7	89.9	102.1	110.3	115.2
C61	Prostate	77.9	83.4	95.7	102.4	106.8
C62	Testis	3.9	4.9	4.7	6.1	6.8
C60, C63	Other male genital	2.0	1.6	1.7	1.7	1.6
C64–68	Urinary organs	33.0	36.9	44.6	50.5	57.2
C64	Kidney (excl. renal pelvis)	9.6	10.3	10.9	12.9	14.3
C65–68	Urinary tract	23.4	26.5	33.7	37.6	42.9
C69	Eye	1.1	1.3	1.3	1.4	1.4
C70–72	Central nervous system	8.2	8.5	9.4	11.0	12.5
C73	Thyroid gland	1.7	2.4	2.4	2.7	2.4
C37, C74–75	Other endocrine glands	0.5	1.3	1.4	2.0	2.2
C39, C76, C80	Other or unspecified	6.8	9.5	10.9	12.2	14.8
C81–96	Lymphoid/haematopoietic tissue	29.1	31.9	35.1	37.4	39.7
C81	Hodgkin lymphoma	3.4	3.7	3.6	3.3	2.6
C82–86, C96	Non-Hodgkin lymphoma	7.5	7.8	9.1	10.0	12.9
C88	Immunoproliferative disease	0.0	0.2	0.5	0.6	0.5
C90	Multiple myeloma	6.1	6.9	8.7	9.4	9.5
C91–95	Leukaemia	12.1	13.2	13.1	14.2	14.2

1988-92	1993-97	1998-02	2003-07	2008-12	2013-17	2018-22
548.8	598.0	627.8	690.0	725.0	737.8	711.7
14.4	14.1	13.2	12.8	14.3	15.4	16.3
4.7	3.3	2.5	2.2	2.9	2.2	2.0
4.7	5.1	4.4	4.0	4.4	4.7	4.6
1.1	1.0	1.2	1.0	1.1	1.5	1.4
2.0	2.7	3.3	4.0	4.7	5.7	6.8
0.5	0.6	0.6	0.5	0.4	0.3	0.5
1.4	1.4	1.3	1.1	0.8	0.8	0.9
140.7	138.5	140.5	142.2	145.9	149.5	145.4
6.0	6.3	6.6	7.2	7.8	8.8	9.4
29.7	24.9	20.2	17.2	13.9	12.7	10.1
1.5	2.0	2.7	2.8	3.8	4.3	4.9
46.4	48.4	52.6	55.1	58.2	59.5	56.3
31.2	32.4	33.4	33.4	33.4	33.1	30.2
0.7	1.1	0.8	1.0	1.1	1.1	1.3
3.5	2.9	4.2	4.3	5.4	7.4	9.0
3.1	3.1	3.3	3.3	3.5	3.3	3.2
16.7	16.0	15.6	16.7	16.6	17.1	18.9
2.0	1.5	1.0	1.2	2.2	2.2	2.1
72.5	77.8	77.6	80.1	79.1	74.2	67.5
1.3	1.1	1.2	1.1	1.1	1.1	1.0
5.8	6.0	5.8	4.9	4.6	3.8	3.2
64.8	69.9	69.8	73.5	73.0	68.9	62.9
0.5	0.7	0.7	0.6	0.3	0.4	0.4
1.0	1.0	1.0	1.1	1.3	1.1	1.2
22.5	23.1	24.0	26.4	34.9	42.2	46.2
25.4	28.5	30.9	35.1	40.2	46.3	59.2
2.1	2.6	3.1	3.5	3.3	2.9	2.5
0.4	0.2	0.2	0.2	0.2	0.1	0.2
2.3	3.7	3.3	3.6	4.0	4.0	3.5
0.8	0.7	0.9	0.8	0.9	1.2	1.0
129.4	155.2	177.9	216.1	227.5	221.0	196.8
119.7	144.4	166.1	202.6	213.4	206.7	183.2
8.2	8.8	10.2	11.2	12.0	11.6	11.0
1.5	2.0	1.6	2.2	2.0	2.7	2.6
60.6	61.6	60.9	66.5	68.6	74.9	71.5
14.9	14.7	15.9	18.3	21.3	23.1	22.3
45.6	46.9	45.0	48.2	47.3	51.7	49.2
1.3	1.5	1.4	1.6	1.4	1.7	1.7
12.7	15.1	18.5	21.8	21.8	19.8	16.8
2.5	2.3	2.4	3.0	3.3	4.7	5.2
2.2	3.0	3.5	4.8	5.7	4.3	3.2
17.1	19.3	15.5	11.9	8.5	6.9	6.4
40.8	49.8	53.0	58.3	64.2	67.5	67.1
2.5	2.4	2.6	3.3	3.3	3.4	3.0
15.2	17.5	18.0	19.7	22.0	22.2	21.8
0.5	1.3	1.6	1.7	1.7	1.9	2.1
9.2	9.2	8.8	9.5	10.2	10.7	11.4
13.3	19.4	21.9	24.1	27.0	29.3	28.8

Table 5.16: Age-standardised (Norwegian standard) incidence rates per 100 000 person-years by primary site and five-year period, 1963–2022, **females**

ICD-10	Site	1963–67	1968–72	1973–77	1978–82	1983–87
C00–96	All sites	297.2	315.6	340.6	363.3	381.6
C00–14	Mouth, pharynx	4.6	4.4	4.5	4.5	5.1
C00	Lip	0.3	0.4	0.4	0.5	0.7
C02–06	Oral cavity	1.6	2.0	1.9	2.2	2.6
C07–08	Salivary glands	0.8	0.8	0.6	0.8	0.6
C09–10, C01, C14	Oropharynx	0.9	0.5	0.9	0.5	0.7
C11	Nasopharynx	0.3	0.3	0.3	0.2	0.3
C12–13	Hypopharynx	0.6	0.3	0.4	0.3	0.2
C15–26	Digestive organs	98.4	94.8	94.9	101.5	98.7
C15	Oesophagus	2.3	1.6	1.6	1.7	1.6
C16	Stomach	36.0	27.5	22.2	19.8	17.1
C17	Small intestine	0.6	0.9	1.0	1.1	1.2
C18	Colon	24.4	25.9	28.9	34.9	36.7
C19–20	Rectum, rectosigmoid	9.5	13.1	14.6	18.5	18.4
C21	Anus	0.8	0.6	0.8	1.0	1.2
C22	Liver	0.8	1.5	1.5	1.8	2.0
C23–24	Gallbladder, bile ducts	3.3	3.4	2.8	3.5	3.8
C25	Pancreas	8.0	9.6	10.4	11.1	12.5
C26	Other digestive organs	12.7	10.7	11.1	8.1	4.2
C30–34, C38	Respiratory organs	7.5	9.7	10.7	13.7	17.7
C30–31	Nose, sinuses	0.9	0.8	0.7	0.6	0.7
C32	Larynx, epiglottis	0.3	0.4	0.4	0.5	0.5
C33–34	Lung, trachea	5.8	8.3	9.2	12.3	16.2
C38	Heart, mediastinum and pleura	0.5	0.3	0.4	0.2	0.2
C40–41	Bone	0.5	0.7	0.7	0.7	0.6
C43	Melanoma of the skin	5.9	7.7	12.1	14.6	19.0
C44	Skin, non-melanoma	2.8	4.4	7.6	8.2	11.0
C45	Mesothelioma	0.1	0.1	0.1	0.1	0.3
C47	Autonomic nervous system	0.5	0.9	0.4	0.3	0.3
C48–49	Soft tissues	1.6	1.8	2.3	2.2	2.2
C50	Breast	66.8	69.9	76.0	79.8	85.5
C51–58	Female genital organs	58.0	64.1	67.1	65.5	64.0
C51–52, C57.7–9	Other female genital	3.5	3.6	4.0	4.1	3.9
C53	Cervix uteri	21.9	23.4	24.9	20.7	16.9
C54	Corpus uteri	13.3	15.3	17.3	19.1	19.7
C55	Uterus, other	1.2	0.9	0.4	0.5	0.3
C56, C57.0–4, C48.2	Ovary etc.	17.9	20.8	20.4	21.0	23.1
C58	Placenta	0.2	0.2	0.1	0.1	0.2
C64–68	Urinary organs	14.2	15.9	17.6	18.8	19.1
C64	Kidney (excl. renal pelvis)	5.5	6.1	6.4	6.8	7.4
C65–68	Urinary tract	8.6	9.8	11.2	12.0	11.6
C69	Eye	0.9	1.0	1.1	1.1	1.0
C70–72	Central nervous system	7.0	6.9	8.4	10.0	11.3
C73	Thyroid gland	4.0	5.4	6.1	7.2	7.0
C37, C74–75	Other endocrine glands	0.3	0.7	1.0	1.9	2.1
C39, C76, C80	Other or unspecified	4.5	5.8	6.8	8.8	10.6
C81–96	Lymphoid/haematopoietic tissue	19.5	21.5	23.2	24.7	26.1
C81	Hodgkin lymphoma	2.3	2.4	2.2	1.9	1.6
C82–86, C96	Non-Hodgkin lymphoma	4.9	5.6	6.4	7.5	9.9
C88	Immunoproliferative disease	0.0	0.1	0.2	0.3	0.2
C90	Multiple myeloma	4.2	4.8	5.7	6.1	6.0
C91–95	Leukaemia	8.2	8.6	8.7	8.9	8.4

1988-92	1993-97	1998-02	2003-07	2008-12	2013-17	2018-22
401.1	436.6	466.5	500.9	521.3	554.2	566.8
5.1	5.5	5.7	6.4	7.3	8.1	7.9
1.0	0.8	0.6	0.9	1.3	1.4	1.3
2.6	2.6	2.6	2.9	2.9	3.3	3.2
0.6	0.8	0.9	0.9	0.9	1.1	1.0
0.5	0.9	1.1	1.3	1.8	1.8	2.0
0.1	0.1	0.2	0.2	0.2	0.2	0.2
0.3	0.2	0.3	0.3	0.2	0.2	0.2
96.0	98.6	100.3	102.6	106.2	111.6	109.0
1.6	1.8	2.1	2.1	2.4	2.5	2.8
13.9	11.8	9.6	8.6	7.3	6.1	5.8
1.4	1.3	2.2	1.9	2.5	2.8	3.2
39.1	43.7	45.7	48.4	50.4	54.0	52.5
18.9	19.9	20.1	20.3	19.9	20.2	18.6
1.5	1.6	1.5	1.9	1.8	2.4	2.4
2.0	1.7	2.0	1.9	2.7	3.6	4.4
3.2	3.1	3.2	3.0	3.4	3.2	3.0
12.3	12.8	13.1	13.3	13.8	14.3	14.6
2.2	1.0	0.8	1.0	1.9	2.3	1.8
23.6	30.2	35.7	43.8	50.2	54.9	56.1
0.6	0.7	0.7	0.9	0.7	0.6	0.6
0.6	1.0	0.9	0.7	0.8	0.8	0.7
22.2	28.3	34.0	42.0	48.5	53.4	54.7
0.2	0.3	0.2	0.3	0.2	0.1	0.1
0.7	0.8	0.9	0.8	0.9	1.1	0.9
22.2	23.6	22.5	25.3	31.3	37.4	41.8
13.9	16.0	17.4	21.4	24.8	29.2	38.9
0.3	0.4	0.5	0.5	0.5	0.5	0.5
0.4	0.2	0.1	0.1	0.1	0.2	0.2
2.2	2.5	2.8	3.3	3.4	2.7	2.7
88.4	100.7	114.7	118.5	115.4	127.0	133.6
64.5	64.7	65.3	66.4	65.8	65.2	61.9
3.7	4.2	3.6	4.2	4.0	4.2	4.1
17.3	15.7	13.6	12.4	12.2	13.5	13.4
20.9	22.0	24.7	28.4	28.7	27.7	26.7
0.3	0.4	0.4	0.3	0.3	0.3	0.3
22.1	22.3	22.8	21.0	20.5	19.3	17.3
0.3	0.1	0.1	0.1	0.1	0.1	0.1
20.5	20.3	20.5	22.7	24.0	25.8	24.7
8.3	8.3	7.9	9.2	9.9	10.0	9.9
12.2	12.0	12.6	13.5	14.1	15.8	14.8
1.1	1.4	1.2	1.3	1.4	1.5	1.3
12.6	15.7	20.7	26.4	25.0	21.8	19.1
6.4	5.8	5.8	6.7	8.3	10.7	12.4
2.1	2.4	3.2	5.0	5.6	4.6	3.0
13.0	15.0	13.3	10.7	7.3	6.0	6.1
28.2	32.8	35.8	39.1	44.0	46.1	46.6
1.6	1.4	1.9	2.1	2.3	2.3	2.5
11.6	12.6	13.5	14.2	15.9	15.6	15.5
0.3	0.7	0.7	0.8	1.0	1.1	1.2
6.0	5.7	6.1	6.2	6.5	7.0	7.5
8.7	12.4	13.5	15.7	18.3	20.1	20.0

Table 5.17: Average annual number of new cases by primary site and county, 2018–2022, **males**

ICD-10	Site	Norway	Viken	Oslo	Innlandet
C00–96	All sites	19 561	4 531	1 856	1 549
C00–14	Mouth, pharynx	451	103	50	34
C00	Lip	54	10	4	4
C02–06	Oral cavity	126	29	14	10
C07–08	Salivary glands	38	9	4	3
C09–10, C01, C14	Oropharynx	194	49	20	14
C11	Nasopharynx	14	3	3	0
C12–13	Hypopharynx	25	4	5	3
C15–26	Digestive organs	3 986	862	357	332
C15	Oesophagus	261	53	26	23
C16	Stomach	272	57	23	19
C17	Small intestine	135	28	12	9
C18	Colon	1 531	328	129	124
C19–20	Rectum, rectosigmoid	837	173	71	80
C21	Anus	35	7	7	3
C22	Liver	249	55	28	24
C23–24	Gallbladder, bile ducts	88	22	7	8
C25	Pancreas	520	124	48	38
C26	Other digestive organs	58	15	5	5
C30–34, C38	Respiratory organs	1 876	413	153	156
C30–31	Nose, sinuses	27	6	2	4
C32	Larynx, epiglottis	90	18	9	6
C33–34	Lung, trachea	1 748	386	139	146
C38	Heart, mediastinum and pleura	11	3	2	1
C40–41	Bone	33	7	4	2
C43	Melanoma of the skin	1 268	312	134	85
C44	Skin, non-melanoma	1 501	385	134	102
C45	Mesothelioma	69	20	5	4
C47	Autonomic nervous system	5	1	1	0
C48–49	Soft tissues	95	23	12	7
C50	Breast	28	5	3	3
C60–63	Male genital organs	5 535	1 300	554	460
C61	Prostate	5 165	1 226	507	433
C62	Testis	299	61	38	23
C60, C63	Other male genital	71	13	8	5
C64–68	Urinary organs	1 970	464	173	154
C64	Kidney (excl. renal pelvis)	628	147	60	47
C65–68	Urinary tract	1 342	316	112	107
C69	Eye	47	12	5	5
C70–72	Central nervous system	462	105	45	31
C73	Thyroid gland	144	31	21	6
C37, C74–75	Other endocrine glands	88	24	7	4
C39, C76, C80	Other or unspecified	162	39	13	16
C81–96	Lymphoid/haematopoietic tissue	1 842	425	187	147
C81	Hodgkin lymphoma	84	20	10	4
C82–86, C96	Non-Hodgkin lymphoma	606	131	59	51
C88	Immunoproliferative disease	58	12	6	4
C90	Multiple myeloma	313	74	28	26
C91–95	Leukaemia	781	189	85	62

Vestfold og Telemark	Agder	Rogaland	Vestland	Møre og Romsdal	Trøndelag	Nordland	Troms og Finnmark
1 751	1 109	1 772	2 430	1 009	1 621	1 026	906
44	27	35	52	23	35	25	24
7	5	6	7	3	4	2	1
14	9	10	14	7	8	5	5
2	4	2	6	2	4	1	1
17	7	13	21	10	15	14	13
1	0	1	1	0	1	0	1
2	1	2	3	1	2	2	2
351	219	333	507	240	357	227	201
25	17	25	29	13	25	14	12
24	14	21	38	18	23	18	18
13	6	13	17	10	14	6	8
140	86	129	205	97	139	85	70
69	43	71	112	50	76	51	41
2	1	3	3	2	3	2	2
22	16	19	23	15	22	15	11
7	4	5	13	6	6	4	5
43	29	44	60	28	46	29	31
6	4	4	8	2	4	3	3
174	122	168	230	108	133	108	112
2	2	1	4	1	2	1	2
11	3	7	11	5	7	6	5
159	116	159	214	101	124	100	105
2	1	1	1	0	0	1	0
2	3	2	5	1	4	1	1
131	84	114	159	45	118	42	43
172	112	147	199	41	111	54	44
7	6	7	9	3	4	2	1
0	0	0	1	0	1	0	0
7	6	7	10	6	7	5	4
2	2	3	4	2	2	2	1
432	271	547	690	287	445	312	237
401	248	514	648	264	414	296	214
24	19	29	34	17	25	13	16
7	4	5	9	6	6	3	7
179	109	167	227	117	163	116	102
53	37	52	75	36	53	36	31
126	72	115	152	81	110	80	71
3	2	4	6	3	4	2	2
40	30	47	60	17	39	28	20
14	9	9	16	5	15	8	11
6	2	10	15	3	6	5	5
22	9	11	19	10	12	7	7
165	95	163	223	99	164	84	89
8	7	7	10	5	7	4	3
53	35	53	76	32	55	27	36
6	1	5	5	4	6	5	3
33	15	27	38	17	28	13	13
66	37	71	94	41	68	35	33

Table 5.18: Average annual number of new cases by primary site and county, 2018–2022, **females**

ICD-10	Site	Norway	Viken	Oslo	Innlandet
C00–96	All sites	16 945	3 979	1 750	1 322
C00–14	Mouth, pharynx	237	51	27	19
C00	Lip	41	9	3	2
C02–06	Oral cavity	99	19	11	8
C07–08	Salivary glands	29	8	3	2
C09–10, C01, C14	Oropharynx	59	14	7	6
C11	Nasopharynx	4	1	0	0
C12–13	Hypopharynx	5	1	2	0
C15–26	Digestive organs	3 374	748	322	289
C15	Oesophagus	89	21	11	8
C16	Stomach	177	39	19	13
C17	Small intestine	98	23	9	9
C18	Colon	1 640	358	148	136
C19–20	Rectum, rectosigmoid	561	116	52	48
C21	Anus	69	17	7	4
C22	Liver	135	31	14	15
C23–24	Gallbladder, bile ducts	92	22	10	10
C25	Pancreas	458	105	46	41
C26	Other digestive organs	56	15	6	5
C30–34, C38	Respiratory organs	1 746	398	165	149
C30–31	Nose, sinuses	19	4	3	3
C32	Larynx, epiglottis	20	3	3	1
C33–34	Lung, trachea	1 702	390	159	144
C38	Heart, mediastinum and pleura	4	1	1	1
C40–41	Bone	26	5	3	1
C43	Melanoma of the skin	1 220	281	124	87
C44	Skin, non-melanoma	1 259	310	103	73
C45	Mesothelioma	16	5	2	1
C47	Autonomic nervous system	5	1	0	0
C48–49	Soft tissues	79	20	9	7
C50	Breast	3 806	946	448	282
C51–58	Female genital organs	1 814	429	189	156
C51–52, C57.7–9	Other female genital	126	31	11	10
C53	Cervix uteri	361	85	44	31
C54	Corpus uteri	802	184	83	74
C55	Uterus, other	8	2	1	1
C56, C57.0–4, C48.2	Ovary etc.	515	127	50	40
C58	Placenta	2	1	0	0
C64–68	Urinary organs	758	179	60	61
C64	Kidney (excl. renal pelvis)	295	70	17	25
C65–68	Urinary tract	463	109	43	36
C69	Eye	39	9	4	4
C70–72	Central nervous system	545	124	58	44
C73	Thyroid gland	338	75	51	18
C37, C74–75	Other endocrine glands	83	23	9	5
C39, C76, C80	Other or unspecified	196	43	19	16
C81–96	Lymphoid/haematopoietic tissue	1 406	332	158	109
C81	Hodgkin lymphoma	67	16	10	5
C82–86, C96	Non-Hodgkin lymphoma	470	93	49	38
C88	Immunoproliferative disease	37	8	4	2
C90	Multiple myeloma	231	59	24	18
C91–95	Leukaemia	602	155	71	46

Vestfold og Telemark	Agder	Rogaland	Vestland	Møre og Romsdal	Trøndelag	Nordland	Troms og Finnmark
1 544	999	1 419	2 019	832	1 450	862	769
21	13	19	27	9	25	14	11
5	3	4	5	2	5	2	1
8	5	8	15	4	10	6	6
2	2	2	3	1	2	2	1
6	3	4	3	2	6	3	3
0	0	1	1	0	1	0	0
1	0	0	0	0	0	0	0
295	181	252	415	204	300	204	166
8	5	6	9	4	8	5	4
11	10	9	24	12	18	11	11
8	6	7	12	7	8	5	3
149	92	129	194	106	150	101	77
52	24	40	77	34	53	35	29
9	3	5	9	2	6	5	3
10	7	11	14	6	13	6	9
5	4	8	11	5	8	4	6
39	27	32	59	26	33	28	22
4	4	4	6	3	4	3	2
144	115	146	188	93	146	104	96
2	1	2	2	0	2	0	0
2	2	1	2	1	2	2	2
140	113	142	184	92	143	102	94
0	0	0	0	0	0	0	0
2	2	3	3	2	2	2	1
130	93	110	146	46	125	36	42
155	106	131	186	29	90	41	37
1	0	2	1	1	1	1	0
1	1	0	0	0	0	0	0
7	6	8	6	5	6	3	2
315	212	336	419	203	309	176	160
157	103	147	229	84	155	82	82
13	6	9	15	5	12	8	5
33	19	30	47	13	30	14	14
64	47	64	107	40	67	38	34
1	1	0	1	1	1	0	1
47	30	44	59	25	45	22	26
0	0	0	0	0	0	0	0
74	41	56	84	36	70	55	41
27	15	22	38	13	29	22	17
48	25	34	46	23	41	33	24
3	2	2	4	1	4	2	2
51	27	47	71	20	43	32	27
29	15	24	40	13	38	17	18
6	3	10	12	3	4	5	4
22	11	12	23	9	16	15	9
129	67	113	165	72	116	74	70
3	4	6	7	3	6	3	3
45	26	39	60	23	41	28	27
3	1	2	4	2	5	4	1
21	10	19	28	10	17	14	11
57	26	47	67	34	46	25	27

Table 5.19: Age-standardised (Norwegian standard) incidence rates per 100 000 person-years by primary site and county, 2018–2022, **males**

ICD-10	Site	Norway	Viken	Oslo	Innlandet
C00–96	All sites	711.7	709.1	707.5	669.6
C00–14	Mouth, pharynx	16.3	15.7	18.2	15.0
C00	Lip	2.0	1.6	1.7	1.8
C02–06	Oral cavity	4.6	4.4	4.8	4.5
C07–08	Salivary glands	1.4	1.4	1.5	1.4
C09–10, C01, C14	Oropharynx	6.8	7.3	7.5	6.1
C11	Nasopharynx	0.5	0.4	1.1	0.1
C12–13	Hypopharynx	0.9	0.5	1.7	1.1
C15–26	Digestive organs	145.4	135.1	137.2	143.1
C15	Oesophagus	9.4	8.0	10.0	9.7
C16	Stomach	10.1	9.2	8.7	8.1
C17	Small intestine	4.9	4.2	4.1	3.9
C18	Colon	56.3	51.9	50.5	53.5
C19–20	Rectum, rectosigmoid	30.2	26.7	26.2	35.0
C21	Anus	1.3	1.1	2.7	1.3
C22	Liver	9.0	8.6	10.7	9.9
C23–24	Gallbladder, bile ducts	3.2	3.5	2.8	3.5
C25	Pancreas	18.9	19.5	19.3	16.1
C26	Other digestive organs	2.1	2.4	2.0	2.1
C30–34, C38	Respiratory organs	67.5	63.8	58.8	65.1
C30–31	Nose, sinuses	1.0	1.0	0.8	1.6
C32	Larynx, epiglottis	3.2	2.7	3.6	2.6
C33–34	Lung, trachea	62.9	59.5	53.8	60.7
C38	Heart, mediastinum and pleura	0.4	0.6	0.6	0.3
C40–41	Bone	1.2	1.1	1.3	1.2
C43	Melanoma of the skin	46.2	48.8	49.7	37.8
C44	Skin, non-melanoma	59.2	66.3	60.9	45.9
C45	Mesothelioma	2.5	3.2	2.1	1.8
C47	Autonomic nervous system	0.2	0.2	0.3	0.1
C48–49	Soft tissues	3.5	3.7	4.1	3.6
C50	Breast	1.0	0.7	1.0	1.1
C60–63	Male genital organs	196.8	198.8	206.7	194.8
C61	Prostate	183.2	186.8	194.3	179.7
C62	Testis	11.0	10.0	9.1	13.0
C60, C63	Other male genital	2.6	2.0	3.2	2.1
C64–68	Urinary organs	71.5	72.1	66.2	66.9
C64	Kidney (excl. renal pelvis)	22.3	22.2	21.8	20.9
C65–68	Urinary tract	49.2	49.9	44.4	46.0
C69	Eye	1.7	1.9	1.8	2.1
C70–72	Central nervous system	16.8	16.3	14.7	14.4
C73	Thyroid gland	5.2	4.8	6.8	2.9
C37, C74–75	Other endocrine glands	3.2	3.7	2.4	2.1
C39, C76, C80	Other or unspecified	6.4	6.6	5.4	6.9
C81–96	Lymphoid/haematopoietic tissue	67.1	66.4	69.8	65.0
C81	Hodgkin lymphoma	3.0	3.0	2.6	2.2
C82–86, C96	Non-Hodgkin lymphoma	21.8	20.0	22.0	22.3
C88	Immunoproliferative disease	2.1	1.9	2.2	1.6
C90	Multiple myeloma	11.4	11.7	10.7	11.1
C91–95	Leukaemia	28.8	29.7	32.3	27.8

Vestfold og Telemark	Agder	Rogaland	Vestland	Møre og Romsdal	Trøndelag	Nordland	Troms og Finnmark
732.0	707.1	803.5	748.4	671.5	663.4	704.2	685.8
18.6	17.2	15.4	15.8	15.0	14.3	17.2	17.8
2.8	3.5	3.1	2.1	2.0	2.0	1.2	1.2
6.3	5.4	4.3	4.4	4.8	3.6	3.7	4.0
1.0	2.7	1.1	1.8	1.1	1.6	1.0	1.0
7.0	4.7	5.6	6.1	6.4	5.9	9.9	9.6
0.5	0.3	0.5	0.4	0.3	0.6	0.3	0.7
1.0	0.6	0.7	1.0	0.5	0.7	1.1	1.3
146.2	140.3	152.8	156.2	160.3	146.3	155.7	152.6
10.2	10.5	11.2	8.6	8.8	10.4	9.9	8.9
10.8	9.0	9.6	11.8	11.8	9.6	12.7	13.8
5.6	3.4	5.7	5.2	6.8	5.8	4.5	6.1
58.3	55.3	59.9	63.7	65.1	56.7	58.3	53.5
28.5	27.9	31.6	34.2	32.9	30.8	34.5	30.8
0.8	0.7	1.3	0.8	1.2	1.0	1.5	2.0
9.0	9.9	8.8	7.2	9.9	9.2	9.9	8.3
2.9	2.5	2.5	3.8	4.2	2.8	2.8	3.4
17.6	18.6	20.4	18.3	18.3	18.5	19.8	23.3
2.5	2.5	1.8	2.4	1.3	1.4	1.8	2.4
70.3	77.1	76.4	70.7	70.5	53.3	72.3	84.2
0.9	1.3	0.6	1.1	0.9	0.7	0.8	1.3
4.7	1.9	2.9	3.6	3.5	2.8	4.0	3.5
63.9	73.2	72.6	65.7	66.1	49.7	66.8	79.4
0.8	0.6	0.2	0.3	0.0	0.1	0.6	0.0
0.9	2.0	0.9	1.4	0.9	1.6	0.7	0.9
55.7	53.5	51.3	48.9	29.9	48.8	29.9	32.0
76.5	76.2	73.9	64.6	28.8	48.8	39.2	36.2
2.9	3.9	3.5	2.9	2.1	1.5	1.3	0.8
0.1	0.1	0.2	0.3	0.0	0.3	0.4	0.0
3.0	3.7	2.9	3.2	4.4	3.0	3.4	3.4
0.8	1.4	1.2	1.2	1.3	0.8	1.4	1.1
176.7	168.0	240.3	208.6	186.6	178.6	209.8	175.0
161.7	152.8	226.7	195.4	169.3	165.6	196.3	156.5
12.1	12.7	11.5	10.5	13.4	10.4	11.8	13.5
2.9	2.4	2.1	2.8	3.9	2.7	1.7	5.0
74.1	68.5	76.3	69.5	78.1	66.7	78.9	77.4
22.0	22.7	22.6	22.3	24.2	21.7	24.6	22.8
52.2	45.8	53.6	47.2	53.9	45.0	54.3	54.6
1.4	1.3	1.6	2.0	1.9	1.6	1.4	1.4
17.1	19.1	20.4	18.4	12.1	16.5	20.2	15.8
5.9	5.8	3.7	4.8	3.4	6.1	6.0	8.4
2.8	1.5	4.3	4.6	1.8	2.5	3.5	3.9
9.7	6.2	5.4	6.3	7.1	5.4	4.9	5.9
69.3	61.3	73.0	68.9	67.4	67.2	57.9	68.9
3.4	4.3	2.7	3.1	3.2	2.7	3.4	2.7
21.9	22.5	22.9	23.2	21.8	21.9	18.2	27.7
2.7	0.8	2.5	1.5	2.5	2.7	3.0	2.2
13.3	9.7	11.8	11.8	11.4	11.7	9.1	10.4
27.9	24.1	33.1	29.3	28.5	28.2	24.2	25.9

Table 5.20: Age-standardised (Norwegian standard) incidence rates per 100 000 person-years by primary site and county, 2018–2022, **females**

ICD-10	Site	Norway	Viken	Oslo	Innlandet
C00–96	All sites	566.8	563.8	556.2	542.1
C00–14	Mouth, pharynx	7.9	7.3	8.4	7.9
C00	Lip	1.3	1.2	1.0	0.9
C02–06	Oral cavity	3.2	2.6	3.4	3.3
C07–08	Salivary glands	1.0	1.2	1.0	0.9
C09–10, C01, C14	Oropharynx	2.0	2.1	2.3	2.7
C11	Nasopharynx	0.2	0.1	0.1	0.1
C12–13	Hypopharynx	0.2	0.1	0.6	0.0
C15–26	Digestive organs	109.0	103.1	103.5	111.8
C15	Oesophagus	2.8	2.9	3.7	3.2
C16	Stomach	5.8	5.4	6.1	4.9
C17	Small intestine	3.2	3.2	3.0	4.0
C18	Colon	52.5	49.1	47.2	51.9
C19–20	Rectum, rectosigmoid	18.6	16.3	17.0	19.3
C21	Anus	2.4	2.4	2.3	1.6
C22	Liver	4.4	4.4	4.4	6.0
C23–24	Gallbladder, bile ducts	3.0	2.9	3.1	3.8
C25	Pancreas	14.6	14.4	14.8	15.2
C26	Other digestive organs	1.8	2.1	1.9	1.8
C30–34, C38	Respiratory organs	56.1	54.0	53.6	56.1
C30–31	Nose, sinuses	0.6	0.6	0.9	1.2
C32	Larynx, epiglottis	0.7	0.5	0.8	0.5
C33–34	Lung, trachea	54.7	52.8	51.6	54.1
C38	Heart, mediastinum and pleura	0.1	0.1	0.3	0.2
C40–41	Bone	0.9	0.8	0.9	0.7
C43	Melanoma of the skin	41.8	40.5	38.8	37.1
C44	Skin, non-melanoma	38.9	41.4	31.8	25.7
C45	Mesothelioma	0.5	0.7	0.7	0.4
C47	Autonomic nervous system	0.2	0.1	0.1	0.0
C48–49	Soft tissues	2.7	2.9	2.7	3.1
C50	Breast	133.6	138.8	144.3	124.8
C51–58	Female genital organs	61.9	61.7	59.2	67.5
C51–52, C57.7–9	Other female genital	4.1	4.4	3.8	4.3
C53	Cervix uteri	13.4	13.4	11.9	16.9
C54	Corpus uteri	26.7	25.8	27.2	29.5
C55	Uterus, other	0.3	0.2	0.2	0.3
C56, C57.0–4, C48.2	Ovary etc.	17.3	17.8	16.1	16.6
C58	Placenta	0.1	0.1	0.1	0.0
C64–68	Urinary organs	24.7	24.8	19.3	24.5
C64	Kidney (excl. renal pelvis)	9.9	10.0	5.4	10.7
C65–68	Urinary tract	14.8	14.8	13.9	13.9
C69	Eye	1.3	1.3	1.5	1.7
C70–72	Central nervous system	19.1	18.5	18.0	19.4
C73	Thyroid gland	12.4	11.6	14.7	8.9
C37, C74–75	Other endocrine glands	3.0	3.6	2.7	2.5
C39, C76, C80	Other or unspecified	6.1	5.8	5.9	6.1
C81–96	Lymphoid/haematopoietic tissue	46.6	46.9	50.1	43.9
C81	Hodgkin lymphoma	2.5	2.6	2.6	2.8
C82–86, C96	Non-Hodgkin lymphoma	15.5	13.1	15.9	14.7
C88	Immunoproliferative disease	1.2	1.1	1.3	0.9
C90	Multiple myeloma	7.5	8.1	7.8	6.8
C91–95	Leukaemia	20.0	21.9	22.6	18.5

Vestfold og Telemark	Agder	Rogaland	Vestland	Møre og Romsdal	Trøndelag	Nordland	Troms og Finnmark
587.8	579.6	594.4	578.3	530.4	559.1	579.7	562.4
8.0	7.5	8.0	7.6	5.9	9.4	9.1	8.1
1.7	1.7	1.7	1.3	1.1	1.9	1.2	0.4
2.8	2.5	3.4	4.1	2.4	3.6	4.0	4.5
0.8	1.1	0.8	0.9	0.5	0.9	1.2	0.9
2.3	2.0	1.9	0.9	1.6	2.6	2.4	2.1
0.2	0.1	0.2	0.2	0.2	0.3	0.1	0.2
0.2	0.0	0.1	0.1	0.1	0.1	0.3	0.0
107.2	100.5	103.9	114.7	123.2	110.0	128.7	116.5
2.9	2.6	2.5	2.3	2.4	2.8	3.0	2.6
4.3	5.9	3.6	6.6	7.4	6.8	7.4	7.5
3.1	3.2	3.0	3.4	4.3	2.9	3.4	2.5
53.4	51.1	52.7	53.3	62.3	54.1	62.0	53.9
19.4	13.3	17.0	22.4	21.7	19.9	23.9	20.4
3.4	1.8	2.2	2.5	1.4	2.3	3.5	2.3
3.8	3.6	4.7	3.7	3.4	4.8	4.0	6.6
1.9	2.2	3.3	2.9	3.1	3.0	2.7	3.9
13.8	14.7	13.3	15.9	15.3	12.0	17.4	15.3
1.4	2.2	1.6	1.7	1.8	1.4	1.6	1.4
52.1	64.1	61.3	52.2	55.9	53.1	66.1	65.9
0.7	0.3	0.9	0.5	0.2	0.6	0.3	0.3
0.8	0.9	0.6	0.7	0.4	0.6	1.1	1.4
50.6	62.6	59.8	50.9	55.3	51.9	64.6	64.1
0.0	0.2	0.0	0.1	0.0	0.1	0.0	0.2
0.8	1.0	1.1	0.9	1.4	1.0	1.4	1.0
51.1	56.0	46.3	42.5	30.2	50.5	26.6	32.5
53.1	57.2	53.4	47.4	15.8	31.7	25.0	25.8
0.4	0.2	0.8	0.2	0.9	0.3	0.8	0.3
0.5	0.4	0.2	0.1	0.3	0.2	0.2	0.1
2.5	3.8	3.5	1.7	3.0	2.6	1.9	1.8
127.7	129.8	143.6	127.9	138.9	126.6	127.8	122.8
62.2	61.8	62.3	67.4	55.7	60.7	57.5	61.7
5.1	3.6	3.5	4.0	3.0	4.3	5.3	3.9
15.2	12.6	13.0	15.1	10.6	13.4	11.5	12.4
23.8	27.0	26.9	30.7	25.5	25.6	25.3	25.2
0.3	0.4	0.1	0.2	0.4	0.2	0.1	0.7
17.9	17.9	18.9	17.3	16.3	17.2	15.3	19.2
0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.4
27.1	22.9	23.2	23.5	21.8	26.0	36.0	29.0
10.2	8.9	9.2	10.8	8.3	11.1	14.7	11.9
16.9	14.0	13.9	12.7	13.5	14.9	21.3	17.1
1.3	1.2	1.0	1.3	1.0	1.6	1.5	1.2
21.2	16.9	19.6	21.6	13.7	17.8	22.8	21.0
13.2	9.6	10.1	12.8	10.2	16.0	13.6	14.7
2.5	1.9	4.2	3.6	2.0	1.5	3.5	3.6
7.8	5.8	5.1	5.9	5.0	5.7	8.7	6.1
49.1	38.7	47.0	46.9	45.6	44.2	48.4	50.2
1.5	2.8	2.6	2.1	2.3	2.6	2.2	2.7
16.9	14.9	16.2	17.1	14.3	15.7	18.4	19.1
1.0	0.7	0.7	1.1	1.2	1.9	2.3	0.9
7.6	5.4	8.1	7.7	5.8	6.4	8.8	7.8
22.1	14.9	19.3	18.8	22.0	17.6	16.7	19.8

Table 5.21: Average annual number of new cases for selected cancers by stage and period of diagnosis, 1963–2022, **males**

ICD-10	Site	Stage	1963–67	1968–72	1973–77	1978–82
C00–14	Mouth, pharynx	Total	190	226	239	241
		Localised	137	143	158	149
		Regional	41	52	66	78
		Distant	6	11	8	8
		Unknown	5	20	7	6
C15	Oesophagus	Total	75	82	81	89
		Localised	46	40	40	42
		Regional	10	14	17	20
		Distant	17	20	21	22
		Unknown	2	8	4	5
C16	Stomach	Total	787	726	638	602
		Localised	217	175	171	181
		Regional	165	162	140	161
		Distant	338	323	283	227
		Unknown	68	66	43	33
C18	Colon	Total	329	367	442	562
		Localised	133	132	152	154
		Regional	78	89	138	234
		Distant	103	127	137	154
		Unknown	15	19	15	20
C19–20	Rectum, rectosigmoid	Total	189	287	352	466
		Localised	91	132	168	207
		Regional	52	77	99	162
		Distant	41	64	76	87
		Unknown	5	14	9	11
C22	Liver	Total	28	44	51	56
		Localised	15	19	24	27
		Regional	1	1	5	4
		Distant	11	18	20	17
		Unknown	0	5	2	7
C23–24	Gallbladder, bile ducts	Total	24	26	32	38
		Localised	9	8	9	12
		Regional	4	4	8	9
		Distant	10	12	14	15
		Unknown	1	2	1	3
C25	Pancreas	Total	197	232	255	279
		Localised	58	48	48	49
		Regional	25	30	33	35
		Distant	104	131	153	160
		Unknown	8	23	21	35
C33–34	Lung, trachea	Total	424	609	746	952
		Localised	147	196	239	318
		Regional	89	114	138	163
		Distant	170	255	315	408
		Unknown	17	43	54	63
C43	Melanoma of the skin	Total	88	123	179	221
		Localised	57	81	144	181
		Regional	13	15	16	16
		Distant	15	16	16	16
		Unknown	2	12	3	8
C61	Prostate	Total	912	1 079	1 351	1 562
		Localised	609	677	908	1 055
		Regional	32	45	76	65
		Distant	218	239	286	337
		Unknown	53	119	81	105

1983-87	1988-92	1993-97	1998-02	2003-07	2008-12	2013-17	2018-22	2018-22 (%)
258	252	253	250	258	320	385	451	100.0
153	136	115	81	81	121	136	125	27.7
87	85	90	100	127	151	196	204	45.1
6	9	12	13	12	14	14	11	2.5
12	22	36	56	38	35	38	111	24.7
86	105	110	122	140	171	215	261	100.0
32	29	20	20	27	27	31	26	10.1
24	24	23	26	41	49	61	86	33.1
23	33	28	36	43	52	55	66	25.3
7	18	40	40	29	43	68	82	31.5
560	504	438	367	328	295	303	272	100.0
155	133	77	55	60	62	48	44	16.3
157	136	135	104	101	85	89	81	29.6
199	166	140	131	115	96	94	72	26.5
50	69	86	77	52	51	72	75	27.6
693	794	854	959	1063	1226	1409	1531	100.0
201	266	186	159	190	176	269	270	17.7
283	275	392	467	543	648	705	815	53.2
180	216	226	251	265	342	358	353	23.1
28	37	51	82	65	61	77	93	6.1
512	543	573	611	652	721	811	837	100.0
205	229	189	151	159	136	203	199	23.8
195	185	224	244	295	376	384	402	48.0
89	101	106	126	131	152	159	160	19.1
23	28	54	89	67	57	66	76	9.1
66	60	56	78	85	119	180	249	100.0
32	27	19	26	27	44	49	59	23.5
5	4	2	5	10	13	21	25	10.2
18	10	11	19	20	29	42	33	13.4
11	19	24	28	28	34	69	132	52.9
48	52	53	59	65	75	80	88	100.0
17	16	9	10	11	13	11	9	10.7
10	10	10	13	23	30	38	31	35.6
16	15	17	14	19	22	18	24	27.9
6	11	18	21	13	10	14	23	25.8
297	288	283	283	322	353	409	520	100.0
58	57	23	18	24	30	30	31	6.0
42	26	35	43	77	77	93	93	17.9
155	152	134	141	173	197	202	239	45.9
42	53	91	82	48	49	85	157	30.3
1103	1168	1266	1308	1448	1569	1661	1748	100.0
330	334	247	189	184	262	276	357	20.4
235	224	276	325	437	437	484	491	28.1
430	463	495	599	673	730	683	767	43.9
108	147	248	194	153	140	218	133	7.6
278	406	440	469	541	778	1039	1268	100.0
233	345	357	273	283	591	873	1047	82.6
16	18	14	18	22	43	81	124	9.8
18	25	24	31	34	30	40	42	3.3
11	17	44	147	203	114	45	54	4.3
1742	2037	2505	2963	3868	4606	5097	5165	100.0
1096	1246	1034	913	1768	2175	2544	2762	53.5
61	68	106	130	304	1091	1353	1526	29.5
465	463	398	395	424	407	377	461	8.9
121	259	968	1525	1372	933	822	417	8.1

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Table 5.21: Average annual number of new cases for selected cancers
by stage and period of diagnosis, 1963–2022, **males** (Continued)

ICD-10	Site	Stage	1963–67	1968–72	1973–77	1978–82
C62	Testis	Total	65	85	88	122
		Localised	42	51	48	64
		Regional	3	9	18	32
		Distant	17	21	22	23
		Unknown	1	3	1	3
C64	Kidney (excl. renal pelvis)	Total	137	163	179	219
		Localised	74	73	72	87
		Regional	19	26	42	48
		Distant	40	59	61	78
		Unknown	4	5	4	6
C65–68	Urinary tract	Total	314	390	527	616
		Localised	265	301	417	510
		Regional	25	46	63	61
		Distant	19	25	35	32
		Unknown	5	18	12	12
C70–72	Central nervous system	Total	141	152	173	202
		Non-malignant	36	45	44	63
		Malignant	105	107	128	138
C73	Thyroid gland	Total	26	38	37	47
		Localised	5	14	18	22
		Regional	14	14	14	17
		Distant	7	9	5	7
		Unknown	0	1	1	1

1983-87	1988-92	1993-97	1998-02	2003-07	2008-12	2013-17	2018-22	2018-22 (%)
145	183	204	240	262	298	307	299	100.0
86	123	138	127	149	230	252	210	70.2
35	33	33	37	45	37	33	65	21.6
22	25	23	30	27	27	20	19	6.5
2	3	9	46	40	3	2	5	1.7
250	263	269	302	369	476	581	628	100.0
112	123	126	112	168	299	404	380	60.6
51	41	42	41	40	44	54	91	14.5
75	82	68	74	87	88	77	75	11.9
11	17	32	74	75	46	47	81	13.0
724	787	825	823	931	995	1 220	1 342	100.0
585	653	592	412	507	775	1 069	1 142	85.1
63	52	45	49	82	74	77	97	7.2
32	32	28	40	40	44	47	55	4.1
44	49	160	323	303	102	28	48	3.6
236	241	296	378	465	503	502	462	100.0
73	80	136	184	257	270	250	194	42.0
163	161	160	193	207	233	252	268	58.0
44	47	45	49	64	77	121	144	100.0
20	25	20	17	21	31	48	68	47.2
16	14	13	19	27	35	48	60	41.4
7	7	9	7	8	6	8	6	4.4
1	2	2	7	8	5	18	10	6.9

Table 5.22: Average annual number of new cases for selected cancers by stage and period of diagnosis, 1963–2022, **females**

ICD-10	Site	Stage	1963–67	1968–72	1973–77	1978–82
C00–14	Mouth, pharynx	Total	70	76	82	90
		Localised	39	42	44	54
		Regional	27	25	28	30
		Distant	3	4	4	3
		Unknown	1	4	5	4
C15	Oesophagus	Total	32	28	31	33
		Localised	22	15	17	16
		Regional	4	3	7	6
		Distant	5	6	5	8
		Unknown	2	3	2	3
C16	Stomach	Total	538	468	415	406
		Localised	157	104	103	119
		Regional	98	89	89	107
		Distant	223	218	188	145
		Unknown	60	57	34	35
C18	Colon	Total	381	451	546	714
		Localised	152	168	183	195
		Regional	91	123	175	296
		Distant	119	136	166	189
		Unknown	18	24	21	35
C19–20	Rectum, rectosigmoid	Total	153	229	274	376
		Localised	72	106	128	167
		Regional	39	62	79	126
		Distant	34	52	59	71
		Unknown	7	9	8	12
C22	Liver	Total	13	27	29	37
		Localised	6	12	15	16
		Regional	1	1	1	1
		Distant	7	11	12	16
		Unknown	0	3	1	4
C23–24	Gallbladder, bile ducts	Total	51	60	55	74
		Localised	15	14	15	22
		Regional	7	9	10	12
		Distant	28	34	27	34
		Unknown	1	3	3	6
C25	Pancreas	Total	129	169	202	231
		Localised	43	39	43	47
		Regional	13	20	26	30
		Distant	66	90	113	124
		Unknown	6	20	19	30
C33–34	Lung, trachea	Total	97	148	178	247
		Localised	32	49	51	73
		Regional	12	21	27	34
		Distant	47	67	87	118
		Unknown	5	11	13	22
C43	Melanoma of the skin	Total	98	133	218	277
		Localised	79	96	194	247
		Regional	6	10	9	12
		Distant	10	11	13	11
		Unknown	3	16	3	7

1983-87	1988-92	1993-97	1998-02	2003-07	2008-12	2013-17	2018-22	2018-22 (%)
108	111	125	131	155	188	224	237	100.0
57	67	64	46	58	84	104	95	40.0
41	31	36	45	60	74	91	77	32.5
4	4	4	5	5	6	5	5	2.3
6	9	20	36	31	24	24	60	25.2
35	37	43	51	54	62	72	89	100.0
16	12	9	10	12	16	12	12	14.0
9	8	6	8	15	14	16	26	29.8
5	9	8	11	12	14	15	16	18.1
5	9	20	21	16	18	29	34	38.1
379	326	292	240	223	198	174	177	100.0
115	95	59	41	44	42	28	30	16.8
94	82	74	62	58	44	40	42	24.0
126	106	92	79	81	69	50	51	29.0
45	43	67	58	39	43	56	53	30.2
808	898	1 043	1 125	1 231	1 344	1 547	1 640	100.0
224	308	231	197	226	205	267	297	18.1
350	328	482	552	635	730	812	869	53.0
198	214	246	262	295	334	362	351	21.4
36	49	85	113	76	75	105	124	7.5
402	429	462	481	501	518	562	561	100.0
165	193	152	132	125	111	148	142	25.4
142	131	174	190	220	252	254	255	45.6
73	72	81	87	95	103	107	104	18.6
23	33	55	73	60	52	53	59	10.5
44	45	39	50	48	74	102	135	100.0
19	18	9	11	14	26	24	28	20.5
3	2	2	6	8	9	14	15	10.9
12	10	7	11	10	19	22	24	17.9
9	14	21	22	17	21	42	69	50.7
84	74	75	80	78	91	91	92	100.0
26	20	15	9	16	11	11	11	12.3
21	13	12	16	20	29	35	28	30.5
27	24	23	26	28	36	28	28	30.5
10	16	25	29	15	14	17	25	26.6
280	290	310	331	342	370	409	458	100.0
61	70	28	26	34	40	39	26	5.8
36	28	33	44	72	78	89	80	17.5
139	129	132	150	167	186	184	184	40.1
44	64	118	110	68	66	97	168	36.7
341	474	612	757	985	1 229	1 484	1 702	100.0
88	119	113	108	146	241	290	424	24.9
62	93	124	175	265	313	393	442	25.9
154	201	247	360	467	564	604	689	40.5
37	61	129	114	108	111	198	147	8.7
375	463	508	511	598	785	1 008	1 220	100.0
339	423	422	324	327	626	895	1 065	87.3
14	11	12	11	17	27	52	87	7.2
12	12	20	20	20	18	22	27	2.2
10	17	54	155	234	113	39	40	3.3

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Table 5.22: Average annual number of new cases for selected cancers by stage and period of diagnosis, 1963–2022, **females** (Continued)

ICD-10	Site	Stage	1963–67	1968–72	1973–77	1978–82
C50	Breast	Total	1 112	1 234	1 403	1 540
		I	530	585	719	835
		II	360	391	422	438
		III	92	84	106	87
		IV	101	117	110	108
		Unknown	29	57	46	71
C53	Cervix uteri	Total	375	409	444	389
		I	162	204	241	198
		II	134	122	107	84
		III	46	50	59	53
		IV	23	20	24	22
		Unknown	10	14	13	31
C54	Corpus uteri	Total	232	281	331	373
		Localised	190	227	272	280
		Regional	13	15	26	48
		Distant	27	34	31	34
		Unknown	1	6	3	11
C56, C57.0–4, C48.2	Ovary etc.	Total	308	378	387	412
		Localised	101	128	122	99
		Regional	15	25	23	41
		Distant	186	213	235	259
		Unknown	6	12	8	13
C64	Kidney (excl. renal pelvis)	Total	93	113	125	141
		Localised	52	58	63	64
		Regional	9	17	24	31
		Distant	28	34	34	42
		Unknown	3	4	4	5
C65–68	Urinary tract	Total	137	169	215	247
		Localised	90	109	146	179
		Regional	20	25	31	32
		Distant	20	24	27	23
		Unknown	7	11	11	13
C70–72	Central nervous system	Total	124	128	162	197
		Non-malignant	59	56	62	87
		Malignant	65	71	100	110
C73	Thyroid gland	Total	65	95	113	139
		Localised	32	52	70	90
		Regional	23	29	29	32
		Distant	10	10	12	13
		Unknown	1	5	3	4

1983-87	1988-92	1993-97	1998-02	2003-07	2008-12	2013-17	2018-22	2018-22 (%)
1 734	1 871	2 160	2 521	2 746	2 861	3 382	3 806	100.0
684	308	552	850	1 097	1 219	1 512	1 629	42.8
586	697	665	1 009	1 133	956	1 098	1 099	28.9
115	113	77	142	156	289	377	375	9.8
113	126	124	135	128	112	127	169	4.4
235	628	743	385	231	286	269	534	14.0
338	357	338	307	293	301	349	361	100.0
172	127	136	159	148	136	145	183	50.6
68	71	59	58	56	65	62	49	13.5
51	41	33	34	28	19	24	54	14.9
20	12	18	21	25	21	18	30	8.2
28	106	93	35	34	59	100	46	12.8
394	427	464	551	666	718	758	802	100.0
293	311	327	326	413	531	563	567	70.7
49	47	46	64	78	54	54	87	10.9
40	53	58	72	89	97	91	72	9.0
12	16	33	89	86	36	50	76	9.4
465	461	482	511	498	517	523	515	100.0
123	131	117	90	96	110	109	104	20.2
32	18	16	13	14	19	21	43	8.3
294	294	310	341	341	350	361	338	65.7
16	17	38	66	47	38	32	30	5.9
161	187	192	190	224	252	275	295	100.0
71	98	97	69	105	160	191	176	59.6
33	25	22	18	24	20	21	38	13.0
48	48	45	53	40	41	30	32	10.9
9	17	28	51	55	30	33	48	16.4
258	280	287	305	341	376	448	463	100.0
191	217	182	137	178	277	370	357	77.2
29	20	24	23	37	35	37	52	11.2
16	20	17	23	22	22	22	28	6.1
22	23	64	122	104	42	19	26	5.5
228	264	341	464	618	623	581	545	100.0
111	142	208	315	454	450	407	356	65.4
118	122	133	148	164	173	174	188	34.6
143	136	127	131	157	203	278	338	100.0
97	90	72	60	70	116	148	227	67.1
32	31	38	39	51	64	81	86	25.4
10	10	9	10	10	7	10	6	1.8
3	5	8	22	26	17	39	19	5.7

Table 5.23: Age-standardised (Norwegian standard) incidence rates per 100 000 person-years for selected cancers by stage and period of diagnosis, 1963–2022, **males**

ICD-10	Site	Stage	1963–67	1968–72	1973–77	1978–82
C00–14	Mouth, pharynx	Total	14.4	15.7	15.5	14.8
		Localised	10.6	9.8	10.3	9.2
		Regional	2.9	3.6	4.2	4.7
		Distant	0.4	0.7	0.5	0.5
		Unknown	0.4	1.5	0.4	0.4
C15	Oesophagus	Total	5.6	5.9	5.4	5.6
		Localised	3.6	2.9	2.8	2.8
		Regional	0.7	0.9	1.1	1.1
		Distant	1.1	1.4	1.3	1.2
		Unknown	0.3	0.6	0.3	0.4
C16	Stomach	Total	60.5	52.1	42.8	38.1
		Localised	18.1	13.4	12.1	12.3
		Regional	11.6	10.7	9.0	9.6
		Distant	24.4	21.8	18.1	13.8
		Unknown	6.3	6.2	3.6	2.4
C18	Colon	Total	25.1	26.1	29.7	35.6
		Localised	10.4	9.7	10.3	10.1
		Regional	5.5	5.9	9.0	14.5
		Distant	7.6	8.8	9.2	9.5
		Unknown	1.5	1.7	1.2	1.5
C19–20	Rectum, rectosigmoid	Total	14.4	19.9	23.4	29.1
		Localised	7.1	9.3	11.4	13.4
		Regional	3.8	5.1	6.3	9.5
		Distant	3.0	4.3	4.9	5.2
		Unknown	0.6	1.2	0.8	0.9
C22	Liver	Total	1.9	2.9	3.1	3.3
		Localised	1.0	1.3	1.5	1.6
		Regional	0.1	0.1	0.3	0.3
		Distant	0.7	1.2	1.2	1.0
		Unknown	0.0	0.4	0.1	0.5
C23–24	Gallbladder, bile ducts	Total	1.7	1.9	2.2	2.4
		Localised	0.6	0.6	0.6	0.8
		Regional	0.3	0.3	0.5	0.5
		Distant	0.8	0.8	1.0	1.0
		Unknown	0.1	0.2	0.1	0.2
C25	Pancreas	Total	14.2	15.8	16.4	17.2
		Localised	4.3	3.4	3.2	3.3
		Regional	1.9	2.0	2.1	2.1
		Distant	7.3	8.8	9.7	9.5
		Unknown	0.7	1.6	1.4	2.3
C33–34	Lung, trachea	Total	28.0	38.0	44.5	54.7
		Localised	9.9	12.3	14.4	18.4
		Regional	5.7	6.8	7.9	9.0
		Distant	11.2	15.9	18.7	23.2
		Unknown	1.2	2.9	3.5	4.0
C43	Melanoma of the skin	Total	5.8	7.8	10.7	12.7
		Localised	3.9	5.1	8.5	10.5
		Regional	0.8	0.9	1.0	0.9
		Distant	1.0	1.1	1.0	0.9
		Unknown	0.1	0.8	0.2	0.4

1983-87	1988-92	1993-97	1998-02	2003-07	2008-12	2013-17	2018-22
15.3	14.4	14.1	13.2	12.8	14.3	15.4	16.3
9.1	7.8	6.4	4.4	4.2	5.5	5.5	4.6
5.1	4.8	5.0	5.2	6.1	6.6	7.7	7.2
0.4	0.5	0.6	0.7	0.6	0.6	0.6	0.4
0.7	1.3	2.1	3.0	2.0	1.6	1.6	4.0
5.1	6.0	6.3	6.6	7.2	7.8	8.8	9.4
2.0	1.8	1.2	1.1	1.4	1.3	1.3	0.9
1.3	1.3	1.3	1.4	2.1	2.2	2.4	3.1
1.3	1.8	1.5	1.9	2.2	2.4	2.2	2.4
0.5	1.1	2.3	2.2	1.6	2.0	2.9	3.0
34.1	29.7	24.9	20.2	17.2	13.9	12.7	10.1
10.2	8.2	4.3	3.0	3.3	3.0	2.0	1.6
9.0	7.5	7.5	5.6	5.1	3.9	3.7	2.9
11.5	9.6	7.7	7.1	5.9	4.5	3.9	2.6
3.5	4.4	5.4	4.5	2.9	2.5	3.1	3.0
41.9	46.4	48.4	52.6	55.1	58.2	59.5	56.3
12.3	15.3	10.4	8.7	9.8	8.3	11.2	9.9
16.9	16.0	22.2	25.5	28.1	30.7	29.7	29.7
10.7	12.6	12.5	13.6	13.6	16.0	14.9	12.9
2.0	2.5	3.3	4.8	3.6	3.1	3.7	3.7
30.4	31.2	32.4	33.4	33.4	33.4	33.1	30.2
12.4	13.1	10.6	8.2	8.3	6.3	8.2	7.1
11.2	10.5	12.3	13.2	14.9	17.3	15.6	14.4
5.3	5.7	6.0	6.9	6.7	7.0	6.4	5.8
1.6	1.9	3.4	5.1	3.5	2.8	2.9	2.9
3.9	3.5	2.9	4.2	4.3	5.4	7.4	9.0
1.8	1.6	1.0	1.4	1.4	2.0	2.0	2.1
0.3	0.2	0.1	0.2	0.5	0.6	0.8	0.9
1.1	0.6	0.6	1.0	1.0	1.3	1.7	1.2
0.6	1.1	1.3	1.5	1.4	1.6	2.9	4.9
2.8	3.1	3.1	3.3	3.3	3.5	3.3	3.2
1.0	1.0	0.5	0.6	0.6	0.7	0.4	0.3
0.5	0.6	0.6	0.7	1.1	1.4	1.5	1.1
0.9	0.8	0.9	0.8	1.0	1.0	0.7	0.8
0.4	0.7	1.1	1.3	0.7	0.5	0.7	0.9
17.9	16.7	16.0	15.6	16.7	16.6	17.1	18.9
3.8	3.4	1.4	1.0	1.3	1.4	1.2	1.1
2.4	1.4	1.9	2.3	4.0	3.6	3.8	3.3
9.0	8.6	7.3	7.6	8.8	9.2	8.2	8.5
2.8	3.2	5.4	4.7	2.6	2.4	3.9	6.0
62.4	64.8	69.9	69.8	73.5	73.0	68.9	62.9
18.7	18.5	13.5	10.0	9.3	12.2	11.3	12.6
13.1	12.3	14.9	17.1	22.1	20.3	19.6	17.4
24.1	25.6	27.3	31.8	34.0	33.7	28.1	27.5
6.4	8.4	14.3	10.8	8.1	6.8	9.8	5.4
15.6	22.5	23.1	24.0	26.4	34.9	42.2	46.2
13.0	19.0	18.6	13.9	13.8	26.4	35.4	38.1
1.0	1.0	0.8	0.9	1.1	2.0	3.3	4.5
1.0	1.4	1.3	1.6	1.6	1.4	1.6	1.5
0.6	1.0	2.4	7.5	9.9	5.1	1.9	2.0

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Table 5.23: Age-standardised (Norwegian standard) incidence rates per 100 000 person-years for selected cancers by stage and period of diagnosis, 1963–2022, **males** (Continued)

ICD-10	Site	Stage	1963–67	1968–72	1973–77	1978–82
C61	Prostate	Total	77.9	83.4	95.7	102.4
		Localised	51.9	51.9	63.1	68.3
		Regional	2.9	3.6	5.3	4.1
		Distant	18.0	17.8	20.5	22.3
		Unknown	5.0	10.1	6.8	7.8
C62	Testis	Total	3.9	4.9	4.7	6.1
		Localised	2.5	2.9	2.6	3.3
		Regional	0.2	0.5	1.0	1.6
		Distant	1.0	1.2	1.2	1.1
		Unknown	0.1	0.2	0.0	0.1
C64	Kidney (excl. renal pelvis)	Total	9.6	10.3	10.9	12.9
		Localised	5.3	4.8	4.5	5.2
		Regional	1.3	1.6	2.5	2.8
		Distant	2.8	3.6	3.7	4.5
		Unknown	0.3	0.3	0.3	0.4
C65–68	Urinary tract	Total	23.4	26.5	33.7	37.6
		Localised	19.6	20.2	26.5	31.0
		Regional	2.0	3.2	3.9	3.6
		Distant	1.4	1.8	2.4	2.0
		Unknown	0.4	1.4	0.9	0.9
C70–72	Central nervous system	Total	8.2	8.5	9.4	11.0
		Non-malignant	2.2	2.6	2.5	3.6
		Malignant	6.0	5.9	6.9	7.4
C73	Thyroid gland	Total	1.7	2.4	2.4	2.7
		Localised	0.3	0.9	1.1	1.2
		Regional	0.9	0.8	0.9	0.9
		Distant	0.5	0.6	0.3	0.5
		Unknown	0.0	0.1	0.0	0.1

1983-87	1988-92	1993-97	1998-02	2003-07	2008-12	2013-17	2018-22
106.8	119.7	144.4	166.1	202.6	213.4	206.7	183.2
66.6	72.8	58.6	50.5	91.3	98.4	100.4	96.1
3.7	3.9	6.3	7.4	15.9	51.0	54.9	53.5
28.7	27.1	22.9	22.3	22.6	20.0	16.5	17.6
7.8	15.9	56.5	85.9	72.8	44.0	34.9	16.0
6.8	8.2	8.8	10.2	11.2	12.0	11.6	11.0
4.0	5.5	5.9	5.4	6.3	9.3	9.5	7.7
1.6	1.5	1.5	1.6	1.9	1.5	1.2	2.4
1.0	1.1	1.0	1.3	1.2	1.1	0.8	0.7
0.1	0.1	0.4	2.0	1.7	0.1	0.1	0.2
14.3	14.9	14.7	15.9	18.3	21.3	23.1	22.3
6.4	6.9	6.8	5.7	8.2	13.1	15.8	13.4
2.9	2.3	2.3	2.2	1.9	2.0	2.1	3.2
4.3	4.6	3.7	3.9	4.4	4.0	3.1	2.7
0.7	1.0	1.9	4.1	3.7	2.2	2.1	3.1
42.9	45.6	46.9	45.0	48.2	47.3	51.7	49.2
34.8	37.9	33.4	22.3	26.1	36.7	45.2	41.8
3.5	3.0	2.5	2.6	4.1	3.5	3.2	3.5
1.8	1.8	1.6	2.2	2.0	2.1	2.0	2.1
2.8	3.0	9.4	18.0	15.9	5.0	1.3	1.9
12.5	12.7	15.1	18.5	21.8	21.8	19.8	16.8
4.0	4.3	6.9	9.0	12.0	11.6	9.9	7.1
8.5	8.4	8.2	9.5	9.8	10.1	9.9	9.7
2.4	2.5	2.3	2.4	3.0	3.3	4.7	5.2
1.1	1.3	1.0	0.8	0.9	1.3	1.8	2.4
0.8	0.7	0.7	0.9	1.2	1.5	1.9	2.1
0.4	0.4	0.5	0.4	0.4	0.3	0.3	0.2
0.0	0.1	0.2	0.3	0.4	0.2	0.7	0.4

Table 5.24: Age-standardised (Norwegian standard) incidence rates per 100 000 person-years for selected cancers by stage and period of diagnosis, 1963–2022, **females**

ICD-10	Site	Stage	1963–67	1968–72	1973–77	1978–82
C00–14	Mouth, pharynx	Total	4.6	4.4	4.5	4.5
		Localised	2.6	2.4	2.4	2.7
		Regional	1.8	1.5	1.5	1.5
		Distant	0.1	0.2	0.2	0.1
		Unknown	0.1	0.3	0.3	0.2
C15	Oesophagus	Total	2.3	1.6	1.6	1.7
		Localised	1.5	0.8	0.9	0.8
		Regional	0.2	0.2	0.4	0.3
		Distant	0.3	0.4	0.3	0.4
		Unknown	0.2	0.2	0.1	0.2
C16	Stomach	Total	36.0	27.5	22.2	19.8
		Localised	11.0	6.3	5.8	5.9
		Regional	5.8	4.9	4.5	5.0
		Distant	14.3	12.3	9.9	7.0
		Unknown	4.9	4.0	2.0	1.9
C18	Colon	Total	24.4	25.9	28.9	34.9
		Localised	10.0	9.8	9.8	9.5
		Regional	5.5	6.7	9.1	14.3
		Distant	7.4	7.7	8.7	9.2
		Unknown	1.5	1.7	1.4	1.9
C19–20	Rectum, rectosigmoid	Total	9.5	13.1	14.6	18.5
		Localised	4.5	6.2	6.8	8.4
		Regional	2.4	3.4	4.1	6.0
		Distant	2.1	2.9	3.1	3.5
		Unknown	0.5	0.6	0.5	0.7
C22	Liver	Total	0.8	1.5	1.5	1.8
		Localised	0.3	0.7	0.8	0.8
		Regional	0.0	0.0	0.1	0.1
		Distant	0.4	0.7	0.6	0.8
		Unknown	0.0	0.1	0.1	0.2
C23–24	Gallbladder, bile ducts	Total	3.3	3.4	2.8	3.5
		Localised	1.0	0.8	0.8	1.1
		Regional	0.4	0.5	0.5	0.5
		Distant	1.8	1.9	1.4	1.6
		Unknown	0.1	0.2	0.1	0.3
C25	Pancreas	Total	8.0	9.6	10.4	11.1
		Localised	2.7	2.2	2.3	2.3
		Regional	0.7	1.1	1.3	1.4
		Distant	4.1	5.0	5.8	6.0
		Unknown	0.4	1.3	1.0	1.5
C33–34	Lung, trachea	Total	5.8	8.3	9.2	12.3
		Localised	2.0	2.7	2.6	3.5
		Regional	0.7	1.2	1.4	1.7
		Distant	2.8	3.7	4.5	6.0
		Unknown	0.3	0.7	0.7	1.1
C43	Melanoma of the skin	Total	5.9	7.7	12.1	14.6
		Localised	4.8	5.6	10.8	13.1
		Regional	0.4	0.6	0.5	0.6
		Distant	0.6	0.6	0.7	0.6
		Unknown	0.2	0.9	0.1	0.3

1983-87	1988-92	1993-97	1998-02	2003-07	2008-12	2013-17	2018-22
5.1	5.1	5.5	5.7	6.4	7.3	8.1	7.9
2.6	3.1	2.8	2.0	2.4	3.3	3.7	3.1
2.0	1.4	1.6	2.0	2.5	3.0	3.4	2.6
0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
0.3	0.4	0.9	1.5	1.2	0.9	0.8	2.0
1.6	1.6	1.8	2.1	2.1	2.4	2.5	2.8
0.7	0.5	0.4	0.4	0.5	0.6	0.4	0.4
0.5	0.3	0.3	0.4	0.6	0.6	0.6	0.9
0.2	0.4	0.3	0.5	0.5	0.5	0.5	0.5
0.2	0.4	0.8	0.8	0.6	0.7	1.0	1.1
17.1	13.9	11.8	9.6	8.6	7.3	6.1	5.8
5.2	4.1	2.4	1.6	1.7	1.5	1.0	1.0
4.2	3.6	3.0	2.5	2.3	1.6	1.4	1.4
5.7	4.4	3.8	3.3	3.3	2.6	1.8	1.7
2.1	1.8	2.6	2.1	1.4	1.5	1.9	1.7
36.7	39.1	43.7	45.7	48.4	50.4	54.0	52.5
10.2	13.4	9.6	8.0	8.7	7.8	9.5	9.5
15.8	14.2	20.2	22.5	25.0	27.5	28.3	27.8
9.1	9.5	10.5	10.8	11.8	12.7	12.9	11.4
1.7	2.1	3.3	4.4	2.8	2.5	3.4	3.8
18.4	18.9	19.9	20.1	20.3	19.9	20.2	18.6
7.6	8.4	6.5	5.6	5.1	4.3	5.4	4.7
6.4	5.9	7.7	8.0	9.0	9.7	9.2	8.5
3.3	3.2	3.5	3.6	4.0	4.0	3.9	3.5
1.1	1.4	2.2	2.9	2.3	1.8	1.8	1.9
2.0	2.0	1.7	2.0	1.9	2.7	3.6	4.4
0.9	0.8	0.4	0.5	0.5	1.0	0.9	0.9
0.1	0.1	0.1	0.2	0.3	0.3	0.5	0.5
0.6	0.5	0.3	0.4	0.4	0.7	0.8	0.8
0.4	0.6	0.9	0.9	0.7	0.7	1.4	2.2
3.8	3.2	3.1	3.2	3.0	3.4	3.2	3.0
1.2	0.9	0.6	0.3	0.6	0.4	0.4	0.4
1.0	0.5	0.5	0.7	0.8	1.2	1.3	0.9
1.2	1.0	1.0	1.1	1.1	1.4	1.0	0.9
0.4	0.7	1.0	1.1	0.5	0.5	0.5	0.8
12.5	12.3	12.8	13.1	13.3	13.8	14.3	14.6
2.7	2.9	1.1	1.0	1.2	1.4	1.4	0.9
1.6	1.2	1.5	1.8	2.9	3.0	3.2	2.6
6.2	5.6	5.6	6.2	6.7	7.1	6.5	5.9
1.9	2.6	4.5	4.1	2.5	2.3	3.2	5.2
16.2	22.2	28.3	34.0	42.0	48.5	53.4	54.7
4.1	5.4	5.3	4.8	6.2	9.7	10.5	13.6
3.1	4.4	5.8	8.0	11.4	12.4	14.3	14.2
7.4	9.7	11.7	16.4	20.0	22.4	21.9	22.3
1.7	2.6	5.5	4.8	4.4	4.1	6.8	4.5
19.0	22.2	23.6	22.5	25.3	31.3	37.4	41.8
17.2	20.4	19.6	14.5	13.9	25.1	33.4	36.6
0.6	0.5	0.6	0.5	0.6	1.0	1.9	3.0
0.6	0.6	0.9	0.9	0.9	0.7	0.8	0.9
0.5	0.8	2.5	6.8	9.9	4.4	1.4	1.3

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Table 5.24: Age-standardised (Norwegian standard) incidence rates per 100 000 person-years for selected cancers by stage and period of diagnosis, 1963–2022, **females** (Continued)

ICD-10	Site	Stage	1963–67	1968–72	1973–77	1978–82
C50	Breast	Total	66.8	69.9	76.0	79.8
		I	31.7	33.3	38.8	43.0
		II	21.0	21.7	22.8	22.7
		III	5.8	4.8	5.7	4.5
		IV	6.3	6.6	5.9	5.5
		Unknown	2.0	3.5	2.8	4.0
C53	Cervix uteri	Total	21.9	23.4	24.9	20.7
		I	9.4	12.0	14.0	10.8
		II	7.8	6.8	5.8	4.4
		III	2.7	2.8	3.1	2.7
		IV	1.3	1.1	1.3	1.1
		Unknown	0.6	0.8	0.7	1.6
C54	Corpus uteri	Total	13.3	15.3	17.3	19.1
		Localised	10.9	12.3	14.2	14.6
		Regional	0.8	0.8	1.3	2.4
		Distant	1.6	1.9	1.6	1.6
		Unknown	0.1	0.3	0.1	0.6
C56, C57.0–4, C48.2	Ovary etc.	Total	17.9	20.8	20.4	21.0
		Localised	5.8	7.0	6.6	5.1
		Regional	0.9	1.4	1.2	2.1
		Distant	10.8	11.6	12.3	13.1
		Unknown	0.4	0.8	0.4	0.7
C64	Kidney (excl. renal pelvis)	Total	5.5	6.1	6.4	6.8
		Localised	3.2	3.2	3.3	3.1
		Regional	0.5	0.9	1.2	1.4
		Distant	1.6	1.8	1.7	2.0
		Unknown	0.2	0.2	0.2	0.2
C65–68	Urinary tract	Total	8.6	9.8	11.2	12.0
		Localised	5.6	6.3	7.6	8.7
		Regional	1.3	1.4	1.6	1.6
		Distant	1.2	1.4	1.4	1.1
		Unknown	0.5	0.7	0.7	0.6
C70–72	Central nervous system	Total	7.0	6.9	8.4	10.0
		Non-malignant	3.4	3.1	3.3	4.5
		Malignant	3.6	3.8	5.1	5.6
C73	Thyroid gland	Total	4.0	5.4	6.1	7.2
		Localised	2.0	2.9	3.8	4.7
		Regional	1.4	1.6	1.5	1.6
		Distant	0.6	0.6	0.6	0.6
		Unknown	0.0	0.3	0.2	0.2

1983-87	1988-92	1993-97	1998-02	2003-07	2008-12	2013-17	2018-22
85.5	88.4	100.7	114.7	118.5	115.4	127.0	133.6
33.4	14.7	26.1	40.8	49.6	50.6	57.8	58.2
29.3	33.4	31.4	46.1	48.7	38.5	41.1	38.3
5.6	5.2	3.4	6.2	6.4	11.6	14.1	13.1
5.4	5.9	5.7	5.9	5.3	4.4	4.7	5.7
11.8	29.3	34.0	15.8	8.5	10.3	9.4	18.3
16.9	17.3	15.7	13.6	12.4	12.2	13.5	13.4
8.7	6.2	6.3	7.1	6.3	5.6	5.7	6.9
3.5	3.5	2.8	2.6	2.4	2.7	2.4	1.8
2.5	2.0	1.5	1.5	1.2	0.8	0.9	2.0
0.9	0.6	0.8	0.9	1.1	0.8	0.7	1.1
1.4	5.1	4.3	1.5	1.4	2.4	3.9	1.7
19.7	20.9	22.0	24.7	28.4	28.7	27.7	26.7
14.9	15.5	15.7	14.9	17.8	21.3	20.7	19.1
2.3	2.2	2.1	2.8	3.3	2.1	1.9	2.8
1.9	2.4	2.8	3.2	3.8	3.9	3.3	2.4
0.6	0.7	1.5	3.9	3.6	1.4	1.7	2.4
23.1	22.1	22.3	22.8	21.0	20.5	19.3	17.3
6.2	6.4	5.5	4.2	4.2	4.4	4.2	3.7
1.7	0.9	0.7	0.6	0.6	0.7	0.8	1.5
14.5	14.1	14.4	15.3	14.4	14.0	13.3	11.3
0.7	0.7	1.6	2.8	1.9	1.4	1.1	0.9
7.4	8.3	8.3	7.9	9.2	9.9	10.0	9.9
3.3	4.4	4.3	3.0	4.4	6.4	7.1	6.0
1.5	1.2	1.0	0.7	1.0	0.8	0.8	1.3
2.2	2.1	1.9	2.2	1.6	1.5	1.1	1.1
0.4	0.7	1.1	2.0	2.2	1.1	1.1	1.5
11.6	12.2	12.0	12.6	13.5	14.1	15.8	14.8
8.6	9.5	7.7	5.8	7.2	10.4	13.1	11.5
1.3	0.9	1.0	1.0	1.4	1.3	1.3	1.6
0.7	0.8	0.7	1.0	0.9	0.9	0.8	0.9
1.0	1.0	2.6	4.8	4.0	1.5	0.6	0.8
11.3	12.6	15.7	20.7	26.4	25.0	21.8	19.1
5.5	6.8	9.5	14.1	19.4	18.1	15.3	12.6
5.8	5.8	6.2	6.6	7.0	6.9	6.5	6.5
7.0	6.4	5.8	5.8	6.7	8.3	10.7	12.4
4.9	4.4	3.3	2.7	3.0	4.8	5.7	8.4
1.5	1.4	1.7	1.7	2.2	2.6	3.1	3.1
0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.2
0.2	0.2	0.3	0.9	1.1	0.7	1.5	0.7

Table 5.25: Average annual number of new cases by primary site and origin, 2018–2022, **males**

ICD-10	Site	Norwegian born	Nordic countries	W Europe, North America and Oceania	Other European Countries	Middle East and Africa	Asia
C00–96	All sites	17 905	308	349	347	216	160
C00–14	Mouth, pharynx	402	10	10	10	7	5
C00	Lip	51	0	1	1	0	0
C02–06	Oral cavity	112	3	3	3	1	2
C07–08	Salivary glands	34	1	0	1	1	1
C09–10, C01, C14	Oropharynx	176	4	5	4	1	1
C11	Nasopharynx	8	1	0	1	2	1
C12–13	Hypopharynx	22	1	0	0	1	0
C15–26	Digestive organs	3 653	59	63	66	49	39
C15	Oesophagus	241	6	5	3	2	1
C16	Stomach	235	3	5	10	8	5
C17	Small intestine	123	2	2	3	3	1
C18	Colon	1 428	16	19	23	15	10
C19–20	Rectum, rectosigmoid	775	14	14	12	6	6
C21	Anus	33	0	1	0	0	0
C22	Liver	214	4	5	5	7	9
C23–24	Gallbladder, bile ducts	77	3	2	2	1	2
C25	Pancreas	472	10	9	7	6	6
C26	Other digestive organs	54	1	1	0	1	1
C30–34, C38	Respiratory organs	1 692	31	37	49	19	20
C30–31	Nose, sinuses	24	0	1	1	0	0
C32	Larynx, epiglottis	78	1	2	4	2	1
C33–34	Lung, trachea	1 581	29	34	44	16	18
C38	Heart, mediastinum and pleura	9	0	0	0	0	0
C40–41	Bone	28	1	1	2	1	1
C43	Melanoma of the skin	1 200	19	17	13	2	1
C44	Skin, non-melanoma	1 420	19	25	6	4	3
C45	Mesothelioma	64	1	1	0	0	0
C47	Autonomic nervous system	5	0	0	0	0	0
C48–49	Soft tissues	84	2	1	3	1	1
C50	Breast	25	1	0	0	1	0
C60–63	Male genital organs	5 110	92	101	70	52	33
C61	Prostate	4 775	85	92	58	49	32
C62	Testis	268	5	8	11	4	1
C60, C63	Other male genital	66	2	1	1	0	0
C64–68	Urinary organs	1 779	30	36	52	29	18
C64	Kidney (excl. renal pelvis)	554	8	13	23	9	8
C65–68	Urinary tract	1 225	22	23	29	20	10
C69	Eye	45	1	1	0	0	0
C70–72	Central nervous system	402	9	9	18	10	6
C73	Thyroid gland	119	3	3	7	5	4
C37, C74–75	Other endocrine glands	74	1	2	4	3	3
C39, C76, C80	Other or unspecified	150	2	2	4	1	2
C81–96	Lymphoid/haematopoietic tissue	1 654	27	38	42	30	23
C81	Hodgkin lymphoma	71	1	2	3	3	2
C82–86, C96	Non-Hodgkin lymphoma	540	8	15	16	11	9
C88	Immunoproliferative disease	54	1	1	1	0	0
C90	Multiple myeloma	290	3	5	4	4	3
C91–95	Leukaemia	699	14	16	19	13	10

Table 5.26: Average annual number of new cases by primary site and origin, 2018–2022, **females**

ICD-10	Site	Norwegian born	Nordic countries	W Europe, North America and Oceania	Other European Countries	Middle East and Africa	Asia
C00–96	All sites	15 302	286	271	391	175	281
C00–14	Mouth, pharynx	216	4	5	4	2	4
C00	Lip	39	1	1	0	0	0
C02–06	Oral cavity	91	2	2	1	0	2
C07–08	Salivary glands	25	0	1	1	0	2
C09–10, C01, C14	Oropharynx	54	1	1	1	0	0
C11	Nasopharynx	3	0	0	0	1	0
C12–13	Hypopharynx	4	0	0	0	0	0
C15–26	Digestive organs	3 106	52	45	53	26	44
C15	Oesophagus	81	2	2	1	1	1
C16	Stomach	148	4	2	9	3	8
C17	Small intestine	88	2	2	1	1	1
C18	Colon	1 531	24	20	19	10	14
C19–20	Rectum, rectosigmoid	517	8	8	8	5	8
C21	Anus	64	2	1	1	0	0
C22	Liver	118	1	2	4	2	6
C23–24	Gallbladder, bile ducts	83	1	1	2	1	2
C25	Pancreas	424	8	6	6	3	4
C26	Other digestive organs	52	0	0	1	1	0
C30–34, C38	Respiratory organs	1 621	25	22	27	7	18
C30–31	Nose, sinuses	18	0	0	0	0	0
C32	Larynx, epiglottis	18	0	1	1	0	0
C33–34	Lung, trachea	1 582	24	21	26	6	17
C38	Heart, mediastinum and pleura	3	0	0	0	0	0
C40–41	Bone	22	0	0	2	0	0
C43	Melanoma of the skin	1 154	20	16	15	1	1
C44	Skin, non-melanoma	1 190	18	19	6	3	3
C45	Mesothelioma	13	0	0	0	0	1
C47	Autonomic nervous system	4	0	0	0	0	0
C48–49	Soft tissues	70	2	1	3	2	1
C50	Breast	3 330	74	79	121	58	93
C51–58	Female genital organs	1 599	33	31	62	20	45
C51–52, C57.7–9	Other female genital	117	2	1	2	1	1
C53	Cervix uteri	304	6	7	20	3	16
C54	Corpus uteri	712	16	15	24	9	15
C55	Uterus, other	8	0	0	0	0	0
C56, C57.0–4, C48.2	Ovary etc.	456	9	8	16	7	12
C58	Placenta	2	0	0	0	0	0
C64–68	Urinary organs	695	13	11	15	5	8
C64	Kidney (excl. renal pelvis)	269	4	4	8	3	4
C65–68	Urinary tract	426	9	7	8	3	3
C69	Eye	35	0	1	1	0	0
C70–72	Central nervous system	474	11	9	21	10	11
C73	Thyroid gland	256	9	7	21	14	25
C37, C74–75	Other endocrine glands	69	1	1	4	3	3
C39, C76, C80	Other or unspecified	185	2	1	2	1	2
C81–96	Lymphoid/haematopoietic tissue	1 262	22	23	37	21	23
C81	Hodgkin lymphoma	57	1	1	3	3	1
C82–86, C96	Non-Hodgkin lymphoma	417	9	8	11	7	11
C88	Immunoproliferative disease	34	1	1	0	0	0
C90	Multiple myeloma	214	1	3	5	1	2
C91–95	Leukaemia	540	9	10	17	9	8

Table 5.27: Age-standardised (Norwegian standard) incidence rates per 100 000 person-years by primary site and origin, 2018–2022, **males**

ICD-10	Site	Norwegian born	Nordic countries	W Europe, North America and Oceania	Other European Countries	Middle East and Africa	Asia
C00–96	All sites	726.6	718.8	666.9	514.5	464.5	385.9
C00–14	Mouth, pharynx	16.4	18.5	20.1	14.4	13.8	9.9
C00	Lip	2.1	0.7	3.0	2.5	2.4	0.0
C02–06	Oral cavity	4.6	6.6	6.3	2.9	1.1	4.4
C07–08	Salivary glands	1.4	1.5	1.3	1.0	3.5	1.2
C09–10, C01, C14	Oropharynx	7.1	6.9	8.4	5.8	1.3	1.4
C11	Nasopharynx	0.3	1.1	0.5	2.1	3.7	2.1
C12–13	Hypopharynx	0.9	1.6	0.6	0.1	1.8	0.9
C15–26	Digestive organs	148.3	143.5	118.0	120.5	115.0	97.2
C15	Oesophagus	9.7	15.4	8.3	4.6	4.9	1.6
C16	Stomach	9.7	6.0	10.4	19.9	20.5	11.0
C17	Small intestine	5.1	5.0	2.7	3.8	3.2	1.1
C18	Colon	58.2	38.7	38.4	47.2	36.4	24.5
C19–20	Rectum, rectosigmoid	31.4	35.2	25.6	18.8	8.4	16.0
C21	Anus	1.3	0.6	0.7	0.2	0.6	0.5
C22	Liver	8.6	8.8	9.1	9.8	16.6	19.1
C23–24	Gallbladder, bile ducts	3.1	8.3	4.1	4.5	0.6	3.6
C25	Pancreas	19.0	23.4	17.2	11.6	22.1	18.8
C26	Other digestive organs	2.2	2.1	1.5	0.0	1.8	1.0
C30–34, C38	Respiratory organs	67.0	71.5	70.4	78.1	51.0	54.3
C30–31	Nose, sinuses	1.0	1.5	0.9	0.8	0.4	0.4
C32	Larynx, epiglottis	3.1	2.1	3.6	4.4	4.5	2.9
C33–34	Lung, trachea	62.5	67.5	65.6	72.9	45.8	50.7
C38	Heart, mediastinum and pleura	0.4	0.3	0.2	0.0	0.3	0.4
C40–41	Bone	1.2	1.6	1.5	1.1	1.1	0.6
C43	Melanoma of the skin	49.9	41.4	31.1	12.9	2.8	2.0
C44	Skin, non-melanoma	60.3	63.4	62.3	16.7	11.3	11.8
C45	Mesothelioma	2.6	4.6	3.6	0.0	0.2	0.5
C47	Autonomic nervous system	0.2	0.0	0.0	0.0	0.2	0.0
C48–49	Soft tissues	3.5	5.5	2.0	1.5	2.8	3.5
C50	Breast	1.0	1.6	0.8	0.8	1.8	0.0
C60–63	Male genital organs	203.3	202.2	190.4	111.6	119.3	87.3
C61	Prostate	187.5	188.3	177.1	104.3	116.6	85.8
C62	Testis	13.1	9.3	9.9	4.5	2.7	1.1
C60, C63	Other male genital	2.7	4.6	3.3	2.8	0.0	0.3
C64–68	Urinary organs	71.7	70.2	67.3	72.1	64.4	42.7
C64	Kidney (excl. renal pelvis)	22.4	16.5	22.8	24.7	18.3	15.6
C65–68	Urinary tract	49.3	53.7	44.5	47.3	46.0	27.1
C69	Eye	1.9	1.2	1.2	0.2	0.0	0.0
C70–72	Central nervous system	17.0	19.6	14.4	13.9	11.7	8.7
C73	Thyroid gland	5.1	5.8	4.7	3.8	6.2	5.4
C37, C74–75	Other endocrine glands	3.1	1.8	2.9	1.7	4.2	5.0
C39, C76, C80	Other or unspecified	6.4	6.0	5.8	9.0	3.1	6.4
C81–96	Lymphoid/haematopoietic tissue	67.6	60.6	70.5	56.2	55.6	50.6
C81	Hodgkin lymphoma	3.1	2.0	3.1	2.6	3.3	2.1
C82–86, C96	Non-Hodgkin lymphoma	21.9	18.9	23.6	18.9	18.7	18.5
C88	Immunoproliferative disease	2.2	2.0	1.7	2.6	0.6	0.4
C90	Multiple myeloma	11.7	5.0	8.9	4.9	6.2	7.7
C91–95	Leukaemia	28.8	32.6	33.3	27.3	26.9	21.9

Table 5.28: Age-standardised (Norwegian standard) incidence rates per 100 000 person-years by primary site and origin, 2018–2022, **females**

ICD-10	Site	Norwegian born	Nordic countries	W Europe, North America and Oceania	Other European Countries	Middle East and Africa	Asia
C00–96	All sites	578.7	537.6	509.8	470.6	356.8	365.5
C00–14	Mouth, pharynx	8.0	7.4	9.2	5.7	2.8	3.6
C00	Lip	1.3	2.1	1.3	0.1	0.0	0.0
C02–06	Oral cavity	3.3	3.0	4.0	2.0	0.4	2.0
C07–08	Salivary glands	0.9	0.4	1.0	0.9	0.3	1.0
C09–10, C01, C14	Oropharynx	2.2	1.6	2.6	2.4	1.1	0.3
C11	Nasopharynx	0.1	0.4	0.3	0.0	0.7	0.2
C12–13	Hypopharynx	0.1	0.0	0.0	0.2	0.2	0.2
C15–26	Digestive organs	111.1	96.0	88.2	80.5	59.0	80.2
C15	Oesophagus	2.9	2.8	3.8	1.6	1.0	2.8
C16	Stomach	5.3	6.7	4.7	10.5	6.7	10.9
C17	Small intestine	3.3	4.1	4.8	2.2	4.2	0.8
C18	Colon	54.1	45.2	39.5	31.6	22.4	27.2
C19–20	Rectum, rectosigmoid	19.3	14.3	14.6	11.5	9.3	12.4
C21	Anus	2.5	3.8	2.0	0.6	0.0	0.4
C22	Liver	4.2	1.4	4.1	5.0	4.4	13.1
C23–24	Gallbladder, bile ducts	2.9	1.4	2.8	2.6	2.9	4.6
C25	Pancreas	14.9	15.6	11.1	13.7	6.0	7.5
C26	Other digestive organs	1.8	0.7	0.6	1.2	2.1	0.5
C30–34, C38	Respiratory organs	57.2	46.8	43.4	45.3	19.8	31.2
C30–31	Nose, sinuses	0.7	0.7	0.0	0.6	1.4	0.2
C32	Larynx, epiglottis	0.7	0.8	1.2	0.4	0.2	0.0
C33–34	Lung, trachea	55.8	45.3	42.3	44.3	17.0	30.8
C38	Heart, mediastinum and pleura	0.1	0.0	0.0	0.0	1.1	0.1
C40–41	Bone	1.0	1.4	0.3	1.6	0.3	0.6
C43	Melanoma of the skin	46.2	37.0	27.8	14.9	1.5	1.1
C44	Skin, non-melanoma	39.8	32.5	38.9	13.7	12.5	8.7
C45	Mesothelioma	0.5	0.7	0.9	0.8	0.0	1.6
C47	Autonomic nervous system	0.2	0.0	0.0	0.0	0.2	0.0
C48–49	Soft tissues	2.7	3.5	1.6	3.7	4.8	0.9
C50	Breast	136.0	139.3	140.9	129.2	102.0	102.4
C51–58	Female genital organs	62.9	59.5	55.4	63.8	45.1	50.0
C51–52, C57.7–9	Other female genital	4.3	3.6	1.6	2.5	1.4	3.3
C53	Cervix uteri	14.3	10.6	11.6	12.5	3.8	13.1
C54	Corpus uteri	26.6	29.4	27.0	32.0	26.3	18.2
C55	Uterus, other	0.3	0.0	0.0	0.1	2.3	0.0
C56, C57.0–4, C48.2	Ovary etc.	17.3	16.0	15.3	16.6	11.2	15.3
C58	Placenta	0.1	0.0	0.0	0.0	0.0	0.1
C64–68	Urinary organs	25.1	25.8	21.4	22.5	12.4	10.0
C64	Kidney (excl. renal pelvis)	10.1	8.0	7.6	11.4	5.3	5.7
C65–68	Urinary tract	15.0	17.8	13.8	11.1	7.1	4.3
C69	Eye	1.4	1.0	1.0	0.3	1.5	0.3
C70–72	Central nervous system	19.3	20.4	17.2	17.8	14.1	10.2
C73	Thyroid gland	11.3	17.1	12.2	16.2	17.0	20.1
C37, C74–75	Other endocrine glands	2.9	2.4	2.1	3.4	6.0	3.2
C39, C76, C80	Other or unspecified	6.2	4.8	2.8	4.7	5.4	4.1
C81–96	Lymphoid/haematopoietic tissue	46.7	42.1	46.5	46.5	52.3	37.4
C81	Hodgkin lymphoma	2.5	1.9	2.0	2.5	3.8	1.2
C82–86, C96	Non-Hodgkin lymphoma	15.3	18.4	14.5	15.1	17.4	18.3
C88	Immunoproliferative disease	1.2	2.1	1.4	0.8	0.5	0.4
C90	Multiple myeloma	7.6	2.4	6.3	7.9	5.0	3.9
C91–95	Leukaemia	20.0	17.4	22.2	20.2	25.6	13.6

Chapter 6 Prevalence

As of December 31st 2022, a total of 327 101 individuals were alive and previously diagnosed with cancer in Norway. The cancer prevalence in Table 6.1 provides the numbers of cancer survivors by time after a given diagnosis (< 1, 1–4, 5–9 and ≥ 10 years), and approximates the number of patients in Norway (of both sexes) potentially requiring some form of cancer care. The highest prevalence was seen for prostate cancer (61 591), breast cancer (57 118), melanoma of the skin (33 124) and colon cancer (26 247).

Differences in prognosis and median age at diagnosis (rather than incidence) explain much of the site-specific variability in prevalence. In terms of new incident cases, there are 21% more cases of lung cancer compared to melanoma of the skin in Norway in 2022, but the number of lung cancer survivors ten years after diagnosis is approximately one-third of the number of melanoma

survivors. This reflects the vast difference in prognosis for the two patient groups.

Table 6.2 shows the number of patients with distant metastases alive at specific time points. Only patients with histologically confirmed metastases are included. The number of patients with metastases has increased over the years, probably caused by improvements in the diagnostic quality. This also means that patients with only small distant metastases may contribute to a better prognosis in a group with otherwise quite severe disease. We see that patients with metastatic disease now live longer, have more often diagnostic work-up and surgery for metastatic lesions, and are also given more chemotherapy than before. This patient group represents an increasing demand on personnel and costs in the health care system.

Table 6.1: Prevalence of cancers 31 December 2012 and 31 December 2022, both sexes

ICD-10	Site	Total no. of persons alive		Years after diagnosis			
		31.12.2012	31.12.2022	<1	1–4	5–9	10+
C00–96	All sites	226 320	327 101	27 094	84 319	78 710	136 978
C00–14	Mouth, pharynx	4 117	6 367	620	1 988	1 580	2 179
C00	Lip	1 081	1 130	89	306	268	467
C02–06	Oral cavity	1 326	1 962	204	593	492	673
C07–08	Salivary glands	522	777	58	201	184	334
C09–10, C01, C14	Oropharynx	997	2 235	234	800	586	615
C11	Nasopharynx	129	188	21	55	40	72
C12–13	Hypopharynx	87	123	22	58	20	23
C15–26	Digestive organs	33 613	48 284	5 751	14 869	12 188	15 476
C15	Oesophagus	458	1 050	260	413	233	144
C16	Stomach	1 948	2 194	357	616	458	763
C17	Small intestine	934	1 700	205	628	444	423
C18	Colon	18 533	26 247	2 791	8 194	6 779	8 483
C19–20	Rectum, rectosigmoid	10 314	14 034	1 381	3 930	3 649	5 074
C21	Anus	639	1 011	83	318	270	340
C22	Liver	359	897	191	370	179	157
C23–24	Gallbladder, bile ducts	388	576	125	188	125	138
C25	Pancreas	775	1 688	506	663	312	207
C26	Other digestive organs	83	150	57	46	25	22
C30–34, C38	Respiratory organs	7 447	12 748	2 493	5 134	2 810	2 311
C30–31	Nose, sinuses	326	395	43	109	92	151
C32	Larynx, epiglottis	1 125	1 100	83	314	266	437
C33–34	Lung, trachea	5 979	11 251	2 379	4 734	2 458	1 680
C38	Heart, mediastinum and pleura	68	83	7	19	10	47
C40–41	Bone	733	953	65	156	153	579
C43	Melanoma of the skin	20 429	33 124	2 834	8 315	7 519	14 456
C44	Skin, non-melanoma	12 303	20 857	2 893	8 243	4 757	4 964
C45	Mesothelioma	121	166	60	80	17	9
C47	Autonomic nervous system	215	229	14	26	19	170
C48–49	Soft tissues	1 796	2 333	139	490	454	1 250
C50	Breast	39 451	57 118	4 136	13 383	13 196	26 403
C51–58	Female genital organs	21 565	25 823	1 589	5 325	5 156	13 753
C51–52, C57.7–9	Other female genital	868	1 119	111	303	251	454
C53	Cervix uteri	6 905	7 847	287	1 264	1 319	4 977
C54	Corpus uteri	9 371	11 828	770	2 644	2 663	5 751
C55	Uterus, other	41	43	3	3	8	29
C56, C57.0–4, C48.2	Ovary etc.	4 599	5 248	440	1 201	982	2 625
C58	Placenta	137	142	2	6	10	124
C60–63	Male genital organs	44 108	70 716	5 623	19 179	19 926	25 988
C61	Prostate	37 242	61 591	5 293	17 919	18 378	20 001
C62	Testis	6 562	8 737	283	1 178	1 462	5 814
C60, C63	Other male genital	445	700	78	194	186	242
C64–68	Urinary organs	17 251	25 873	2 511	7 961	6 917	8 484
C64	Kidney (excl. renal pelvis)	5 416	9 183	863	2 788	2 537	2 995
C65–68	Urinary tract	11 951	16 941	1 681	5 273	4 456	5 531
C69	Eye	979	1 293	90	282	275	646
C70–72	Central nervous system	12 088	15 270	816	2 565	3 099	8 790
C73	Thyroid gland	4 793	7 595	448	1 737	1 578	3 832
C37, C74–75	Other endocrine glands	3 508	4 442	95	660	936	2 751
C39, C76, C80	Other or unspecified	598	722	91	205	142	284
C81–96	Lymphoid/haematopoietic tissue	19 797	31 725	2 762	9 324	7 799	11 840
C81	Hodgkin lymphoma	2 435	3 250	145	534	604	1 967
C82–86, C96	Non-Hodgkin lymphoma	7 678	11 824	966	3 246	2 915	4 697
C88	Immunoproliferative disease	521	858	77	324	236	221
C90	Multiple myeloma	1 791	3 313	500	1 440	846	527
C91–95	Leukaemia	7 478	12 715	1 114	3 873	3 251	4 477

Table 6.2: Prevalence of patients diagnosed with distant metastases during lifetime, by health region, both sexes

Health region	Alive by					
	31.12.1997	31.12.2002	31.12.2007	31.12.2012	31.12.2017	31.12.2022
South-Eastern	4 994	6 021	7 464	8 863	10 466	12 203
Western	1 650	2 159	2 574	3 055	3 772	4 485
Central	1 250	1 463	1 858	2 155	2 532	2 844
Northern	822	1 010	1 242	1 484	1 671	2 054
Norway	8 716	10 653	13 138	15 557	18 441	21 586

Chapter 7 Mortality

The mortality data were obtained from the Cause of Death Registry. Of note is that mortality data for 2022 was not complete when this report was published (May 2023), and we therefore report figures for 2021.

There were 11 121 deaths from cancer in Norway in 2021, of which 5848 were males and 5273 females (Table 7.1)¹. Cancer of the lung accounted for 20% of the cancer mortality, followed by cancer in the colon (11%), prostate (8%), pancreas (7%) and female breast (5%). Together these cancer sites accounted for 52% of the cancer mortality.

Among males, lung cancer caused 1156 deaths in 2021. Prostate cancer (895 deaths), colon cancer (593 deaths) and pancreatic cancer (436 deaths) represented the second, third and fourth most frequent causes of cancer death among males, respectively.

Lung cancer mortality also ranked highest among females (1046 deaths), followed by colon (651 deaths), breast (587 deaths) and pancreatic cancer (396 deaths). Figure 7.1 shows the distribution of age-standardised mortality rates for selected cancer sites. There was at least a tenfold difference in rates across these cancers. Given the very poor prognosis for pancreatic cancer, it ranks among the top four causes of cancer death among both males and females, even though pancreatic cancer is only a moderately common cancer.

Table 7.1 also shows the median age at death. These numbers are only for those who died from cancer and must not be interpreted as average life expectancy by comparing them with the median age at diagnosis given in Table 5.2.

The trends section in this report examined the incidence, mortality, and survival for 23 selected cancer sites.

¹We have not received complete data for mortality for 2022.

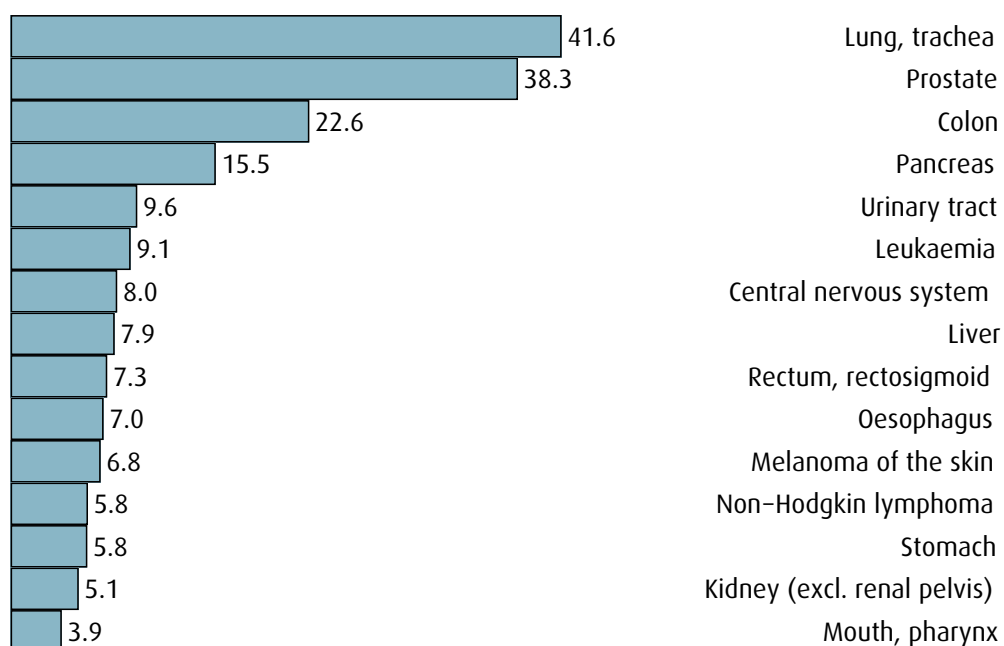
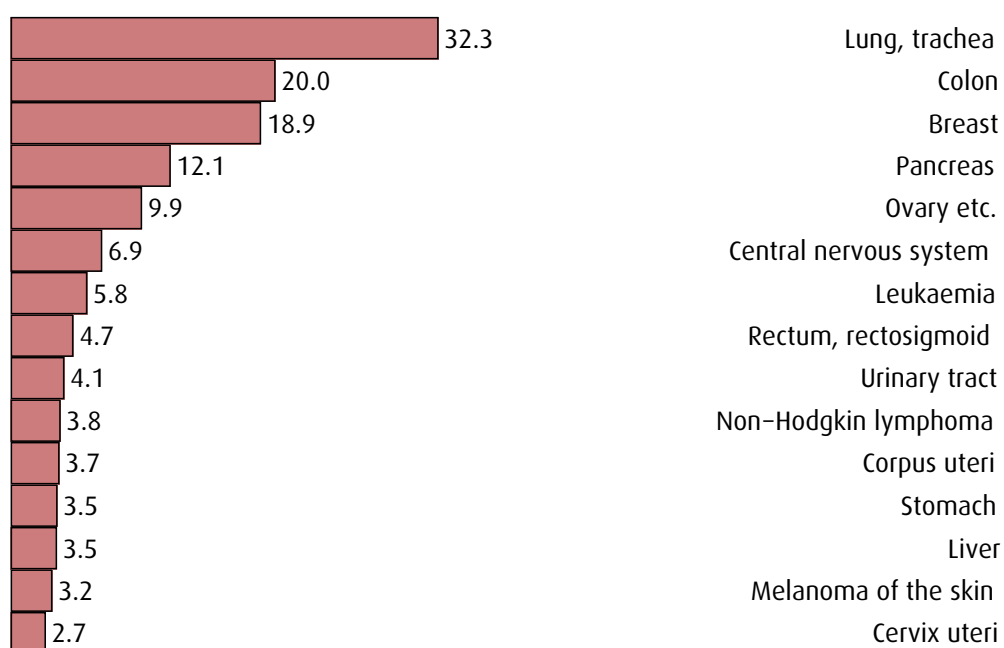
Figure 7.1: Age-standardised (Norwegian standard) mortality rates per 100 000 person-years for selected cancers, 2021**MALES****FEMALES**

Table 7.1: Number of cancer deaths by primary site and sex, 2021, and median age at death, 2017–2021

ICD-10	Site	Number of deaths			Median age
		Males	Females	Total	Total
C00–96	All sites	5 848	5 273	11 121	76.0
C00–14	Mouth, pharynx	109	55	164	72.0
C00	Lip	0	1	1	71.0
C02–06	Oral cavity	34	31	65	75.0
C07–08	Salivary glands	14	6	20	76.0
C09–10, C01, C14	Oropharynx	45	12	57	69.0
C11	Nasopharynx	4	3	7	67.5
C12–13	Hypopharynx	12	2	14	71.0
C15–26	Digestive organs	1 963	1 660	3 623	75.0
C15	Oesophagus	202	60	262	72.0
C16	Stomach	154	113	267	75.0
C17	Small intestine	54	34	88	76.0
C18	Colon	593	651	1 244	77.0
C19–20	Rectum, rectosigmoid	195	152	347	74.0
C21	Anus	11	12	23	74.0
C22	Liver	217	112	329	73.0
C23–24	Gallbladder, bile ducts	48	73	121	75.0
C25	Pancreas	436	396	832	74.0
C26	Other digestive organs	53	57	110	76.0
C30–34, C38	Respiratory organs	1 206	1 069	2 275	74.0
C30–31	Nose, sinuses	6	10	16	74.5
C32	Larynx, epiglottis	34	7	41	75.0
C33–34	Lung, trachea	1 156	1 046	2 202	74.0
C38	Heart, mediastinum and pleura	10	6	16	75.0
C40–41	Bone	9	14	23	69.0
C43	Melanoma of the skin	182	100	282	75.0
C44	Skin, non-melanoma	33	24	57	85.0
C45	Mesothelioma	57	8	65	77.0
C47	Autonomic nervous system	1	0	1	44.0
C48–49	Soft tissues	37	43	80	70.0
C50	Breast	4	587	591	72.5
C51–58	Female genital organs		631	631	74.0
C51–52, C57.7–9	Other female genital		68	68	83.0
C53	Cervix uteri		79	79	67.0
C54	Corpus uteri		119	119	76.0
C55	Uterus, other		49	49	78.0
C56, C57.0–4, C48.2	Ovary etc.		316	316	72.0
C58	Placenta		0	0	-
C60–63	Male genital organs	913		913	83.0
C61	Prostate	895		895	83.0
C62	Testis	6		6	59.0
C60, C63	Other male genital	12		12	72.0
C64–68	Urinary organs	384	210	594	78.0
C64	Kidney (excl. renal pelvis)	141	75	216	74.0
C65–68	Urinary tract	243	135	378	81.0
C69	Eye	11	2	13	79.0
C70–72	Central nervous system	222	211	433	68.0
C73	Thyroid gland	10	20	30	78.0
C37, C74–75	Other endocrine glands	8	12	20	70.0
C39, C76, C80	Other or unspecified	146	190	336	83.0
C81–96	Lymphoid/haematopoietic tissue	553	437	990	78.0
C81	Hodgkin lymphoma	10	11	21	78.0
C82–86, C96	Non-Hodgkin lymphoma	164	126	290	78.0
C88	Immunoproliferative disease	12	12	24	83.0
C90	Multiple myeloma	132	98	230	77.0
C91–95	Leukaemia	235	190	425	79.0

- Not estimated due to too few patients ($n < 5$).

Chapter 8 Survival

Long-term estimates of survival are becoming increasingly relevant as life expectancy amongst cancer patients increases and cancer care continues to advance^[23]. Table 8.3 gives the 1-, 5-, 10- and 15-year relative survival estimates (with 95% confidence intervals) for the follow-up period 2018–2022 by cancer site and sex. Less frequent cancer diagnoses and groups with low survival will have few cases left especially at 10 and 15 years after diagnosis, and the 95% confidence intervals should be taken into consideration in any interpretation of the relative survival estimates.

Given that cancer patients survive longer, there is a need to communicate information about prognosis not only at the time of diagnosis, but also later because prognosis tends to improve for those surviving the first year(s) after diagnosis^[21].

Figures 8.1–A to 8.1–X depict these two aspects of cancer survival in Norway for all cancers combined and for 23 specific cancer sites. Relative survival estimates are presented by sex and age, 1 to 15 years after diagnosis, with age strata determined specifically according to relevant biological and/or clinical criteria.

For some sites, the cumulative survival curve tends to level off a certain number of years after diagnosis, indicating that from this point forward, the cancer patient group has similar mortality as the comparable group without cancer, or in other words, statistically, these patients appear to be “cured”^[24]. This concept of “statistical cure” involves attributes of survival observed among patients as a group, and should be distinguished from clinical cure, which is determined on the basis of lack of specific symptoms in an individual.

Estimates of five-year relative survival conditional on being alive 1 to 10 years after diagnosis are included in the sex-specific figures, which better quantify the prognosis of cancer patients at time points beyond the initial diagnosis (Figure 8.1–A to 8.1–X, dashed lines). When conditional five-year relative survival is above 90–95% we usually say that there is little or no excess mortality — analogous to the notion of statistical cure that may be observed in the long-term relative survival estimates.

The overall profile of the sex- and age-specific survival of all cancer patients 1 to 15 years after diagnosis in

Norway is presented in Figure 8.1–A. The combined cancer group is an aggregate of many different cancer types with different diagnostic and treatment possibilities, and survival estimates will particularly be influenced by PSA testing for prostate cancer and mammographic screening for female breast cancer.

The cumulative five-year relative survival described by cancer site, sex and age, and five-year conditional relative survival by site and age (Figures 8.1–B to 8.1–X) highlight the wide variations in patient survival according to these three variables. The 83 percentage-point difference in five-year survival among patients with testicular cancer (Figure 8.1–Q) compared to patients with pancreatic cancer (Figure 8.1–I) strikingly illustrates the wide differences in prognosis according to cancer type. Moreover, long-term survival following diagnosis of melanoma of the skin and cancers of the oral cavity, central nervous system, colon and thyroid gland clearly varies between males and females. This may be due to biological or anatomical differences or be related to sex-specific differences in stage at presentation¹, subsite or histological type, as well as levels of co-morbidity.

The overall cancer survival tends to diminish with increasing age at diagnosis, yet the age-specific differences are rather narrow for colon cancer (Figure 8.1–E) relative to cervical cancer (Figure 8.1–M) or non-Hodgkin lymphoma (Figure 8.1–W). For certain cancers, including breast and corpus uteri cancer, long-term survival among patients diagnosed before the age of 50 were slightly lower than for patients diagnosed at the ages 50–59. This in part represents the diagnosis of more aggressive tumours in the younger age group, and, for breast cancer, the impact of screening in the older group.

The figures also illustrate a positive aspect of cancer survival; cancer patients who are alive a certain time after diagnosis show good prospects of surviving their cancer and being cured. For many cancers, the five-year conditional relative survival approaches 100% (statistical cured) by 5 years after diagnosis. In general terms, this means that survivors of these cancers will, within a few years of diagnosis, have mortality rates similar to that of the general population, and would be considered (statistically) cured. The extent to which survivors may be considered cured does however vary; five-year con-

¹ For cancers of the central nervous system, this is particularly noticeable. Among males, 58.0% of these tumors are malignant. The corresponding proportion among females is 34.6%.

ditional survival from breast cancer reaches 93% at 1 year after diagnosis and slowly increases to about 95% at 10 years from diagnosis. As is evident from the continual decline in breast cancer relative survival by time since diagnosis, even 10 years after diagnosis, there remains a persistent excess mortality for females with this disease (Figure 8.1–L).

Tables 8.1 and 8.2 provide the five-year relative survival estimates over the last four decades by cancer site and stage for males and females, respectively. While the stage-

specific count of cases by five-year period of diagnosis in Tables 5.21 and 5.22 are not equivalent to the size of the patient groups used in the survival calculations, the numbers do provide a reasonable indication of the absolute number of patients involved in the survival analyses at different time periods and their relative distribution.

For more detailed cancer survival statistics, also featuring measures such as crude probability of death from cancer, death from other causes and expected life-years lost, see the Special Issue of Cancer in Norway 2021^[25].

Table 8.1: Five-year relative survival by primary site, stage and period of diagnosis, 1983–2022, **males**

ICD-10	Site	Stage	Relative survival (%)							
			1983–87	1988–92	1993–97	1998–02	2003–07	2008–12	2013–17	2018–22*
C00–96	All sites	Total	43.9	48.0	52.7	58.1	64.7	70.4	75.2	77.1
		Total	56.6	57.8	54.5	56.2	56.4	66.2	66.6	72.7
C00–14	Mouth, pharynx	Localised	76.6	83.0	80.4	84.3	81.1	83.6	83.4	86.7
		Regional	24.6	27.3	27.1	35.3	39.1	55.3	59.4	65.7
		Distant	6.1	3.9	12.3	7.5	11.7	6.5	6.6	16.6
		Unknown	60.7	34.7	50.5	58.0	67.2	69.5	61.8	72.7
		Total	4.6	4.8	6.0	6.7	8.8	13.7	21.9	22.6
C15	Oesophagus	Localised	7.9	12.0	17.6	21.9	25.3	33.5	58.2	59.5
		Regional	3.2	5.0	4.4	7.4	11.0	15.6	28.2	33.7
		Distant	0.6	-	0.6	0.5	-	1.4	4.2	1.9
		Unknown	4.6	2.5	4.2	6.9	5.1	15.6	12.2	13.9
C16	Stomach	Total	18.8	18.7	17.6	18.9	22.1	25.3	27.7	30.3
		Localised	45.8	48.0	62.4	55.9	61.8	61.9	73.6	83.3
		Regional	19.6	19.6	16.9	20.2	23.6	26.7	35.4	37.4
		Distant	2.3	0.5	0.7	2.0	1.3	3.5	3.5	3.7
		Unknown	6.5	7.3	8.6	22.6	30.0	20.9	19.6	21.1
C18	Colon	Total	47.7	49.3	53.0	56.0	59.0	60.5	67.5	69.2
		Localised	77.2	79.3	89.5	94.5	88.8	92.6	96.9	96.5
		Regional	55.4	57.8	65.6	69.0	73.8	79.0	84.2	83.9
		Distant	5.3	4.1	4.8	6.6	9.2	12.8	16.2	17.7
		Unknown	33.1	28.2	32.3	57.1	54.5	32.8	37.4	45.5
C19–20	Rectum, rectosigmoid	Total	44.7	47.2	54.9	57.3	62.4	67.2	71.4	71.8
		Localised	66.8	72.4	85.3	86.9	89.2	93.7	96.6	97.1
		Regional	43.5	42.0	59.1	65.4	72.5	81.3	81.3	80.6
		Distant	2.2	3.8	4.7	10.6	12.2	15.7	24.3	25.4
		Unknown	29.5	35.5	29.7	54.9	55.3	45.6	47.2	55.0
C22	Liver	Total	3.0	4.3	5.7	5.5	8.9	15.0	19.6	24.3
		Localised	6.2	7.9	12.9	11.9	17.5	25.9	44.0	47.5
		Regional	-	-	-	-	3.0	4.2	9.3	14.5
		Distant	-	-	1.8	1.0	3.6	1.3	4.1	3.8
		Unknown	2.3	2.9	2.2	2.8	8.2	16.7	11.0	15.8
C23–24	Gallbladder, bile ducts	Total	11.7	9.5	11.2	14.9	12.9	17.9	23.0	26.9
		Localised	24.6	17.7	24.1	38.7	31.0	37.5	60.2	61.3
		Regional	15.8	12.3	15.9	19.1	12.5	21.1	24.9	36.8
		Distant	1.6	1.6	1.8	1.7	4.5	1.8	1.0	1.5
		Unknown	-	-	5.0	9.9	11.1	-	-	24.2
C25	Pancreas	Total	1.5	2.1	1.7	3.0	4.8	6.5	12.7	14.9
		Localised	4.6	3.2	6.6	10.1	19.0	30.4	52.9	58.1
		Regional	2.4	7.0	5.2	5.0	7.2	7.9	22.7	26.5
		Distant	0.3	1.3	0.5	1.8	1.9	2.0	1.8	2.6
		Unknown	1.8	1.4	0.8	2.9	3.5	9.7	15.1	20.9
C33–34	Lung, trachea	Total	7.4	7.2	7.9	8.2	10.7	13.6	21.3	26.5
		Localised	17.2	15.3	25.0	32.2	40.8	45.5	60.0	62.6
		Regional	7.8	9.0	8.3	8.4	12.1	15.5	25.9	32.8
		Distant	0.3	0.7	0.4	0.8	1.4	1.9	3.1	6.5
		Unknown	3.9	6.1	5.5	8.2	12.5	10.3	15.8	18.5
C43	Melanoma of the skin	Total	67.3	69.8	75.6	75.5	75.7	81.0	88.0	90.3
		Localised	75.3	77.8	81.7	86.3	83.9	88.5	93.7	95.4
		Regional	28.7	37.5	35.0	40.3	42.6	42.6	68.5	73.9
		Distant	2.2	8.2	16.3	12.2	11.6	13.7	29.9	37.5
		Unknown	57.2	46.6	71.6	73.5	78.8	74.1	64.0	61.0
C61	Prostate	Total	56.4	61.3	70.8	81.4	87.5	93.5	95.0	95.7
		Localised	72.7	75.1	84.0	97.4	97.5	102.7	102.5	102.5
		Regional	42.6	53.3	64.0	74.6	84.1	94.6	95.2	96.9
		Distant	22.3	24.8	24.0	27.0	33.0	38.1	41.5	46.6
		Unknown	55.6	67.6	74.7	84.7	90.0	96.6	98.6	97.8

Continued on next page

Table 8.1: Five-year relative survival by primary site, stage and period of diagnosis, 1983–2022, **males** (Continued)

ICD-10	Site	Stage	Relative survival (%)							
			1983–87	1988–92	1993–97	1998–02	2003–07	2008–12	2013–17	2018–22*
C62	Testis	Total	91.8	95.6	95.0	96.9	96.9	97.9	98.8	98.5
		Localised	98.0	98.6	98.9	99.2	100.0	99.1	99.7	100.1
		Regional	93.1	98.0	96.8	95.3	95.6	96.9	98.4	98.4
		Distant	71.5	76.4	70.3	82.4	83.7	90.1	87.6	86.5
		Unknown	-	-	92.9	100.1	96.3	-	-	-
C64	Kidney (excl. renal pelvis)	Total	43.2	45.3	49.5	53.2	61.3	69.0	76.3	80.1
		Localised	71.5	70.0	74.9	82.2	84.6	88.7	90.8	92.6
		Regional	45.4	55.4	55.2	48.7	57.4	58.9	65.0	75.8
		Distant	7.5	6.1	6.4	6.6	10.4	10.5	17.7	25.6
		Unknown	34.2	31.5	31.4	60.0	72.0	63.0	56.0	60.9
C65–68	Urinary tract	Total	64.9	67.5	70.7	69.5	72.6	74.9	79.3	80.6
		Localised	72.7	73.8	77.6	82.3	84.0	83.5	86.2	87.3
		Regional	20.9	29.5	28.2	22.8	29.3	28.2	33.6	41.9
		Distant	5.9	4.4	6.5	4.8	5.9	6.2	5.5	11.7
		Unknown	67.9	64.3	68.3	68.1	74.3	72.7	56.1	59.0
C70–72	Central nervous system	Total	35.3	37.5	46.2	53.3	60.5	61.0	59.8	56.4
		Non-malignant	72.6	72.0	80.5	91.4	92.7	93.2	94.8	96.0
		Malignant	18.7	21.8	21.0	18.9	23.0	25.7	27.6	27.3
C73	Thyroid gland	Total	80.9	78.4	77.7	82.1	84.2	90.7	88.8	90.5
		Localised	94.6	93.4	102.2	94.4	99.7	101.5	101.8	101.7
		Regional	80.9	82.8	87.1	87.5	86.4	91.6	87.7	87.9
		Distant	46.4	24.2	33.3	-	-	-	34.1	-
		Unknown	-	-	-	-	-	-	81.2	83.2
C81	Hodgkin lymphoma	Total	64.1	73.0	77.9	80.8	80.5	78.0	87.5	90.7
C82–86, C96	Non-Hodgkin lymphoma	Total	43.4	42.9	45.5	48.8	60.8	68.7	74.4	77.3
C91–95	Leukaemia	Total	27.6	36.3	41.4	50.0	55.7	61.4	68.0	72.3

* For 2018–22 the 5-year relative survival estimates are based on the period approach (observation window 2018–22).

- Not estimated due to too few patients (see Chapter 4).

Table 8.2: Five-year relative survival by primary site, stage and period of diagnosis, 1983–2022, **females**

ICD-10	Site	Stage	Relative survival (%)							
			1983–87	1988–92	1993–97	1998–02	2003–07	2008–12	2013–17	2018–22*
C00–96	All sites	Total	53.8	57.2	59.7	63.1	66.9	70.0	74.4	76.9
		Total	55.1	66.1	61.1	58.3	68.9	72.1	76.0	78.1
C00–14	Mouth, pharynx	Localised	71.1	80.6	82.8	83.1	82.8	88.8	90.3	93.7
		Regional	38.5	48.4	31.9	39.8	51.7	54.4	62.3	64.6
		Distant	-	-	-	-	-	-	-	-
		Unknown	-	63.2	58.8	59.2	85.7	79.7	81.9	79.1
		Total	8.2	10.3	9.3	10.6	10.6	21.1	27.6	31.0
C15	Oesophagus	Localised	13.0	19.1	19.7	31.1	28.1	40.5	50.3	60.4
		Regional	6.5	6.1	-	4.8	8.9	22.7	34.7	36.2
		Distant	-	-	-	-	2.2	3.7	10.2	11.6
		Unknown	-	16.5	5.6	8.4	7.6	13.6	22.8	24.7
C16	Stomach	Total	21.9	21.9	24.6	23.2	24.5	25.9	28.6	33.0
		Localised	52.4	50.0	70.0	68.9	64.0	65.4	77.1	82.5
		Regional	22.4	24.4	29.2	26.3	23.7	23.7	29.0	35.7
		Distant	0.8	1.3	1.6	3.6	4.3	2.5	7.4	7.1
		Unknown	15.8	9.9	16.0	19.7	33.3	34.3	25.9	32.5
C18	Colon	Total	50.7	52.8	55.9	59.3	62.5	65.5	70.3	71.2
		Localised	82.2	79.9	89.9	91.6	93.9	96.9	98.4	98.4
		Regional	59.4	61.0	67.0	72.4	75.2	81.4	85.2	84.7
		Distant	3.9	5.0	6.0	8.6	12.9	14.7	20.8	21.7
		Unknown	24.0	36.4	48.7	58.7	61.8	35.0	32.1	44.1
C19–20	Rectum, rectosigmoid	Total	49.7	54.8	58.5	62.8	66.0	68.8	72.3	73.4
		Localised	75.3	78.0	90.0	93.4	95.6	94.6	97.4	95.7
		Regional	47.4	52.2	60.2	67.4	73.3	79.5	83.1	84.6
		Distant	3.9	4.2	5.2	9.5	11.2	22.6	23.4	24.2
		Unknown	27.5	47.5	42.4	61.7	66.5	48.8	43.4	53.3
C22	Liver	Total	8.9	7.6	9.6	10.7	14.7	19.2	26.3	24.6
		Localised	12.7	13.2	17.7	22.8	28.1	36.9	47.6	50.3
		Regional	-	-	-	-	5.9	8.8	31.3	28.3
		Distant	7.8	1.9	-	2.1	6.0	2.2	8.7	5.6
		Unknown	-	6.8	13.1	8.5	14.3	15.9	17.5	19.7
C23–24	Gallbladder, bile ducts	Total	14.1	8.6	11.1	11.6	14.8	16.6	24.0	24.4
		Localised	28.3	21.6	36.7	31.7	26.4	42.1	49.3	70.2
		Regional	13.4	7.1	15.6	20.0	22.6	25.1	32.5	33.1
		Distant	-	-	-	2.5	2.6	2.5	3.5	0.5
		Unknown	17.2	9.1	3.5	11.5	9.2	26.3	-	16.9
C25	Pancreas	Total	1.8	2.5	3.2	3.9	4.9	7.6	12.5	15.1
		Localised	2.9	7.8	14.9	23.5	18.8	36.3	53.8	50.3
		Regional	3.5	3.4	6.9	3.0	6.8	8.9	16.1	23.1
		Distant	0.7	0.4	1.1	1.5	1.9	2.2	2.4	3.3
		Unknown	1.1	3.1	0.9	5.5	5.5	6.6	12.3	14.9
C33–34	Lung, trachea	Total	6.4	9.4	10.9	11.7	13.9	19.1	27.3	33.7
		Localised	18.6	21.9	35.9	43.8	49.4	56.8	68.7	72.0
		Regional	5.1	12.0	11.2	11.0	14.1	19.0	32.0	39.6
		Distant	0.2	1.6	0.9	1.2	1.9	3.1	4.8	8.0
		Unknown	5.4	6.7	5.7	17.1	17.4	15.5	21.9	26.7
C43	Melanoma of the skin	Total	81.4	89.1	85.1	87.6	87.7	88.7	93.9	95.7
		Localised	87.1	93.7	90.5	94.2	94.8	93.7	97.3	98.7
		Regional	42.6	38.8	48.8	59.0	52.8	54.7	73.4	83.2
		Distant	4.3	21.2	20.1	15.7	24.3	24.0	47.0	51.2
		Unknown	81.0	77.7	80.0	87.6	87.0	82.2	76.5	75.5

Continued on next page

Table 8.2: Five-year relative survival by primary site, stage and period of diagnosis, 1983–2022, **females** (Continued)

ICD-10	Site	Stage	Relative survival (%)							
			1983–87	1988–92	1993–97	1998–02	2003–07	2008–12	2013–17	2018–22*
C50	Breast	Total	74.3	76.7	80.3	85.7	88.0	89.6	91.8	92.5
		I	88.6	94.9	95.9	99.3	99.6	100.6	100.5	100.7
		II	69.3	74.5	78.2	86.4	89.3	93.8	95.5	96.4
		III	49.5	49.1	58.1	65.6	67.1	79.3	78.4	79.8
		IV	16.4	22.5	21.7	21.4	23.7	23.4	35.0	39.1
		Unknown	84.1	86.1	83.2	88.2	76.1	69.6	78.4	82.8
C53	Cervix uteri	Total	68.6	69.8	73.7	74.8	77.5	79.2	80.8	82.5
		I	84.7	86.2	93.0	90.3	93.8	96.5	94.9	95.7
		II	53.6	62.5	62.6	65.3	77.5	79.8	81.0	81.5
		III	31.0	20.8	37.2	41.5	49.7	51.6	52.5	57.2
		IV	3.0	-	16.5	11.2	17.2	27.9	18.2	23.3
		Unknown	68.4	72.6	75.2	77.5	78.1	76.5	80.2	84.1
C54	Corpus uteri	Total	71.1	72.2	77.0	80.3	82.2	84.0	85.4	86.2
		Localised	83.3	84.0	89.3	91.8	93.4	95.3	96.4	97.9
		Regional	56.6	61.7	70.4	72.0	75.6	65.4	66.5	72.6
		Distant	20.2	27.1	34.5	33.5	40.0	38.0	42.6	38.6
		Unknown	35.9	44.6	50.9	86.1	83.3	78.3	63.0	63.0
C56, C57.0–4, C48.2 Ovary etc.		Total	34.8	35.4	37.1	41.6	43.9	45.3	49.7	51.2
		Localised	79.5	79.0	85.5	91.2	88.5	88.8	98.0	99.9
		Regional	44.8	49.3	48.6	58.0	71.8	62.0	66.8	67.9
		Distant	15.9	17.2	20.4	26.5	30.5	31.6	36.9	37.9
		Unknown	43.2	35.1	37.9	60.5	57.9	48.4	45.6	27.2
C64	Kidney (excl. renal pelvis)	Total	48.2	53.5	55.0	57.0	68.6	74.6	78.3	80.7
		Localised	76.7	77.2	79.5	85.7	88.9	90.3	91.3	93.3
		Regional	48.8	48.8	53.7	48.8	54.2	53.0	62.5	76.0
		Distant	8.6	10.3	4.0	15.3	13.1	15.4	17.9	17.9
		Unknown	-	26.4	47.5	60.6	71.9	77.8	38.0	60.5
C65–68	Urinary tract	Total	58.2	61.6	61.6	64.7	64.3	69.3	73.3	75.9
		Localised	70.3	70.5	73.0	85.6	80.1	79.8	81.9	85.7
		Regional	15.8	18.7	24.0	28.6	20.7	23.2	33.0	43.1
		Distant	6.9	5.1	4.1	2.3	6.0	9.3	8.0	10.5
		Unknown	44.7	62.4	59.3	61.9	65.0	75.0	29.9	49.1
C70–72	Central nervous system	Total	51.3	58.6	62.1	70.7	77.5	77.7	77.2	75.9
		Non-malignant	82.2	84.6	88.3	92.2	94.5	96.3	97.3	97.4
		Malignant	21.0	27.5	23.8	25.6	29.1	28.0	29.2	32.0
C73	Thyroid gland	Total	86.8	89.1	90.6	86.1	90.7	93.2	93.9	95.3
		Localised	93.6	96.6	99.8	102.7	102.9	101.7	101.0	100.1
		Regional	85.4	85.3	87.3	82.2	89.2	92.8	91.4	92.5
		Distant	-	40.5	63.0	53.6	43.9	-	-	-
		Unknown	-	-	83.6	84.3	85.1	81.4	88.2	89.0
C81	Hodgkin lymphoma	Total	70.3	70.0	80.8	85.3	81.1	83.1	88.7	88.4
C82–86, C96	Non-Hodgkin lymphoma	Total	48.6	55.8	49.4	57.6	66.8	74.8	77.4	81.3
C91–95	Leukaemia	Total	26.9	38.1	49.8	56.3	63.1	68.3	74.4	75.5

* For 2018–22 the 5-year relative survival estimates are based on the period approach (observation window 2018–22).

- Not estimated due to too few patients (see Chapter 4).

Table 8.3: 1-, 5-, 10-, and 15-year relative survival (%) with 95% confidence interval by primary site and sex. Period approach, 2018–2022

ICD-10	Site	Sex	1-year	5-year	10-year	15-year
C00–14	Mouth, pharynx	M	89.4 (87.9–90.9)	72.7 (70.2–75.4)	63.0 (59.0–67.3)	51.8 (39.7–67.7)
		F	90.6 (88.7–92.4)	78.1 (75.0–81.3)	65.7 (61.0–70.7)	54.5 (44.4–66.9)
C15	Oesophagus	M	51.6 (48.8–54.6)	22.6 (20.1–25.5)	18.9 (16.0–22.2)	17.5 (13.8–22.1)
		F	57.5 (52.8–62.6)	31.0 (26.2–36.8)	26.6 (21.1–33.6)	18.3 (10.1–33.2)
C16	Stomach	M	59.0 (56.3–62.0)	30.3 (27.6–33.3)	25.1 (21.6–29.2)	19.6 (14.1–27.3)
		F	59.6 (56.1–63.3)	33.0 (29.3–37.1)	33.1 (28.2–38.9)	32.2 (22.9–45.3)
C18	Colon	M	85.3 (84.4–86.2)	69.2 (67.7–70.8)	61.2 (58.3–64.4)	51.9 (44.4–60.6)
		F	85.0 (84.1–85.9)	71.2 (69.9–72.5)	67.9 (65.6–70.3)	67.0 (61.5–73.1)
C19–20	Rectum, rectosigmoid	M	89.5 (88.4–90.6)	71.8 (70.0–73.7)	66.3 (63.2–69.5)	75.5 (68.3–83.6)
		F	90.2 (89.0–91.5)	73.4 (71.3–75.5)	66.9 (63.8–70.3)	58.5 (51.8–66.1)
C22	Liver	M	51.9 (48.7–55.4)	24.3 (21.1–28.1)	16.0 (9.7–26.3)	12.3 (6.8–22.0)
		F	49.1 (44.9–53.7)	24.6 (20.7–29.1)	16.8 (13.0–21.6)	17.2 (12.5–23.6)
C23–24	Gallbladder, bile ducts	M	57.1 (52.1–62.7)	26.9 (22.4–32.4)	18.7 (13.3–26.4)	19.1 (12.7–28.8)
		F	55.9 (50.9–61.4)	24.4 (19.9–29.8)	19.0 (14.2–25.3)	12.1 (6.5–22.7)
C25	Pancreas	M	40.1 (38.0–42.2)	14.9 (13.3–16.7)	10.5 (8.4–13.2)	5.4 (1.2–24.2)
		F	42.7 (40.5–45.1)	15.1 (13.4–17.1)	11.5 (9.5–14.0)	7.7 (4.8–12.6)
C33–34	Lung, trachea	M	53.3 (52.2–54.5)	26.5 (25.4–27.7)	17.3 (16.0–18.6)	12.9 (11.2–14.8)
		F	60.7 (59.6–61.9)	33.7 (32.5–35.0)	23.8 (22.4–25.3)	17.2 (15.5–19.1)
C43	Melanoma of the skin	M	97.2 (96.7–97.8)	90.3 (89.0–91.6)	86.8 (84.0–89.6)	87.2 (81.6–93.3)
		F	98.4 (97.9–98.9)	95.7 (94.6–96.9)	93.6 (91.0–96.2)	93.5 (87.9–99.4)
C50	Breast	F	98.1 (97.9–98.4)	92.5 (91.9–93.1)	87.2 (86.2–88.3)	83.3 (80.6–86.0)
C53	Cervix uteri	F	93.2 (92.0–94.4)	82.5 (80.7–84.5)	78.3 (75.9–80.7)	75.5 (71.7–79.5)
C54	Corpus uteri	F	94.2 (93.4–95.1)	86.2 (84.6–87.7)	86.4 (83.8–89.1)	84.2 (77.8–91.1)
C56, C57.0–4, C48.2	Ovary etc.	F	84.4 (82.9–85.9)	51.2 (49.1–53.4)	39.1 (36.6–41.7)	35.4 (31.8–39.5)
C61	Prostate	M	99.4 (99.2–99.7)	95.7 (95.1–96.3)	91.8 (90.6–93.0)	84.5 (81.8–87.4)
C62	Testis	M	99.0 (98.4–99.5)	98.5 (97.7–99.4)	98.3 (96.8–99.8)	97.8 (96.0–99.6)
C64	Kidney (excl. renal pelvis)	M	91.8 (90.7–92.9)	80.1 (78.2–82.0)	71.1 (68.0–74.3)	59.1 (50.2–69.6)
		F	91.3 (89.8–92.9)	80.7 (78.1–83.3)	73.3 (69.4–77.4)	60.8 (53.3–69.4)
C65–68	Urinary tract	M	91.2 (90.4–92.1)	80.6 (79.0–82.2)	76.5 (73.4–79.8)	65.6 (57.1–75.4)
		F	87.0 (85.4–88.5)	75.9 (73.5–78.4)	69.7 (65.6–73.9)	56.1 (46.8–67.2)
C70–72	Central nervous system	M	76.0 (74.2–77.9)	56.4 (54.2–58.7)	52.3 (49.6–55.1)	46.0 (41.2–51.4)
		F	87.1 (85.8–88.5)	75.9 (74.1–77.8)	72.9 (70.5–75.4)	70.7 (66.9–74.6)
C73	Thyroid gland	M	94.6 (93.0–96.4)	90.5 (87.8–93.4)	86.1 (81.6–90.8)	84.7 (76.9–93.3)
		F	96.9 (96.0–97.9)	95.3 (93.6–96.9)	94.2 (91.1–97.4)	100.4 (94.9–106.4)
C81	Hodgkin lymphoma	M	94.6 (92.4–96.9)	90.7 (87.6–93.9)	86.5 (82.5–90.7)	84.1 (79.6–88.9)
		F	94.9 (92.1–97.7)	88.4 (84.1–93.0)	81.6 (75.9–87.8)	75.5 (68.4–83.2)
C82–86, C96	Non-Hodgkin lymphoma	M	87.7 (86.4–89.1)	77.3 (75.2–79.5)	66.8 (63.5–70.4)	58.9 (53.4–64.9)
		F	90.2 (88.9–91.5)	81.3 (79.2–83.5)	74.2 (71.2–77.3)	62.0 (54.3–70.6)
C91–95	Leukaemia	M	86.8 (85.6–88.0)	72.3 (70.4–74.3)	60.9 (58.0–64.0)	50.5 (44.9–56.9)
		F	88.2 (86.9–89.5)	75.5 (73.4–77.6)	66.2 (63.0–69.5)	56.0 (50.8–61.7)

- Not estimated due to too few patients (see Chapter 4).

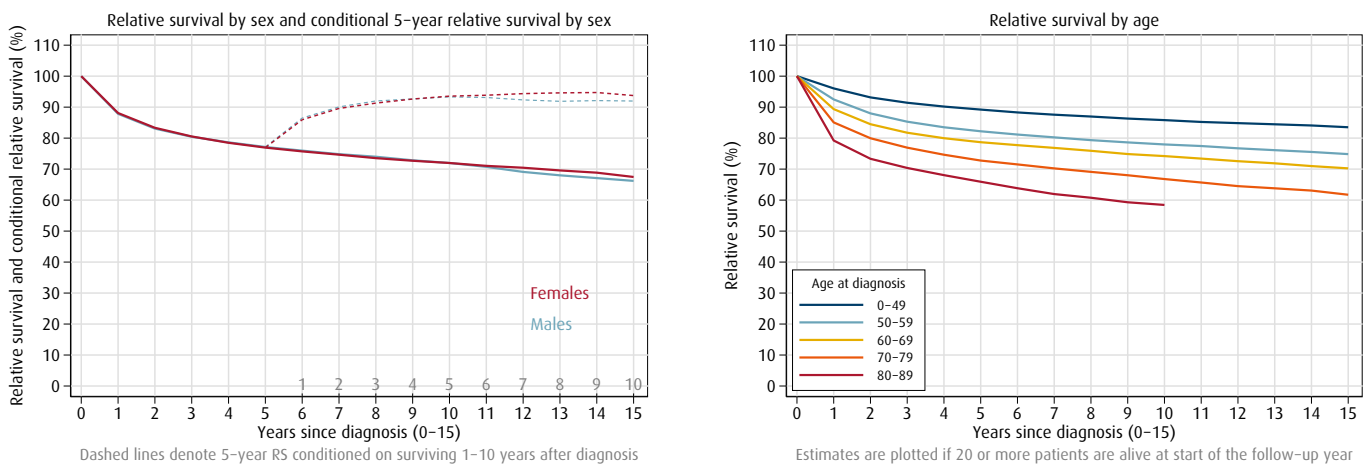
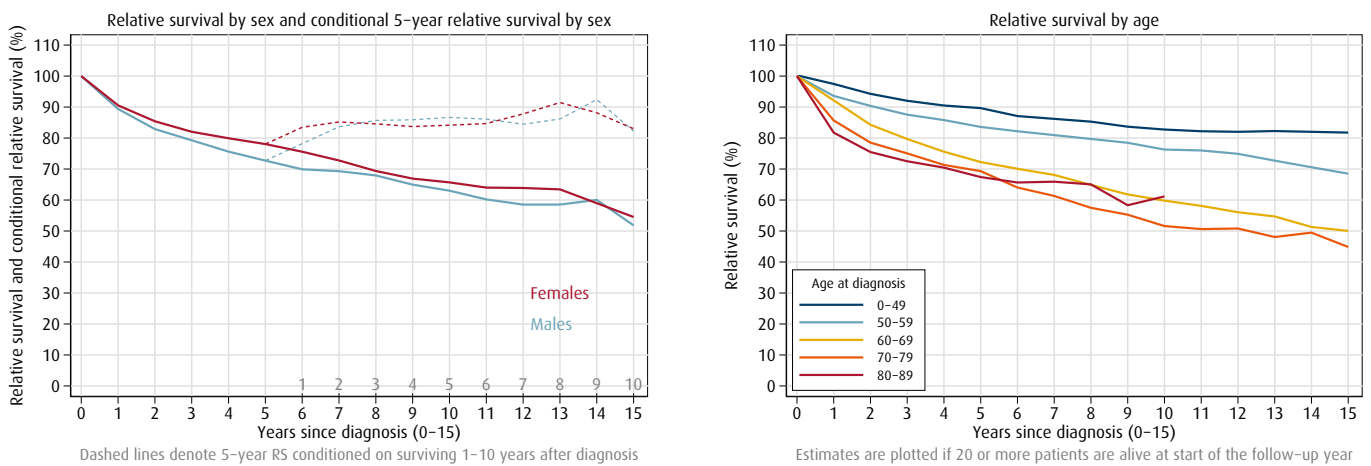
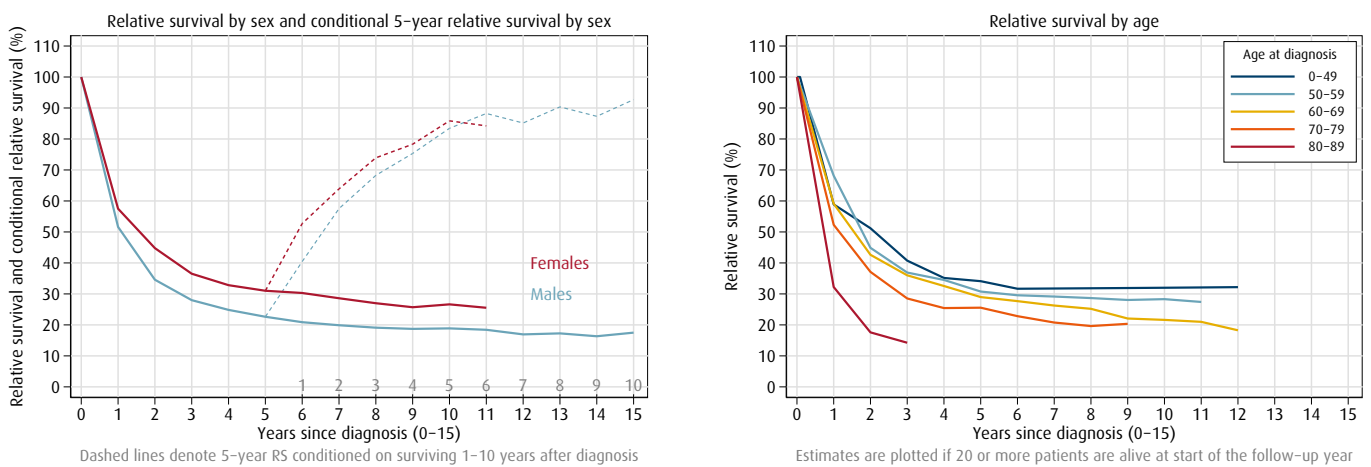
Figure 8.1: Relative survival (RS) up to 15 years after diagnosis by sex and age, 2018–2022**Figure 8.1-A: All sites (ICD-10 C00–96)****Figure 8.1-B: Mouth, pharynx (ICD-10 C00–14)****Figure 8.1-C: Oesophagus (ICD-10 C15)**

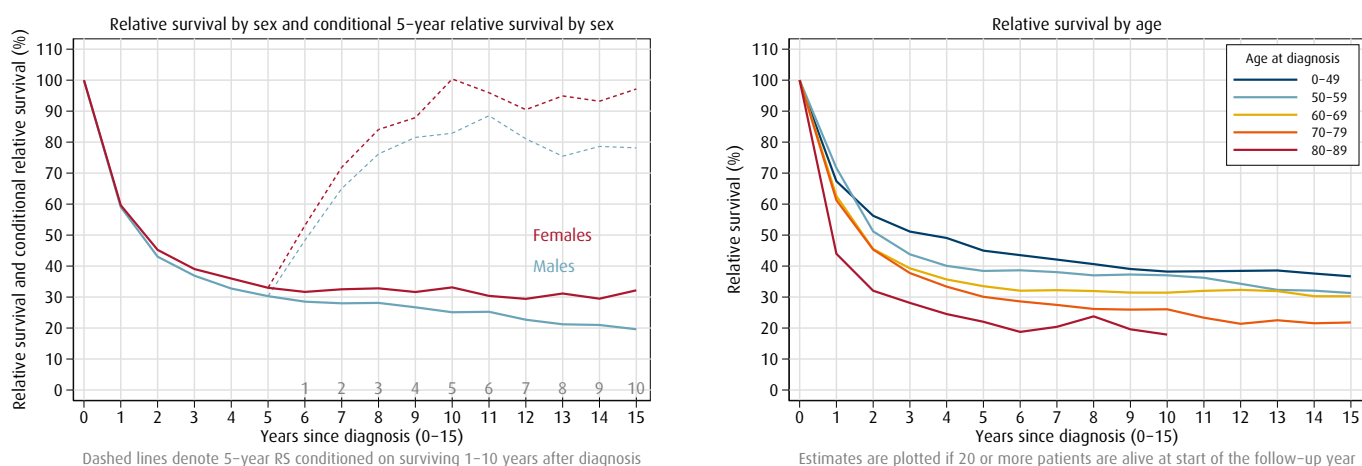
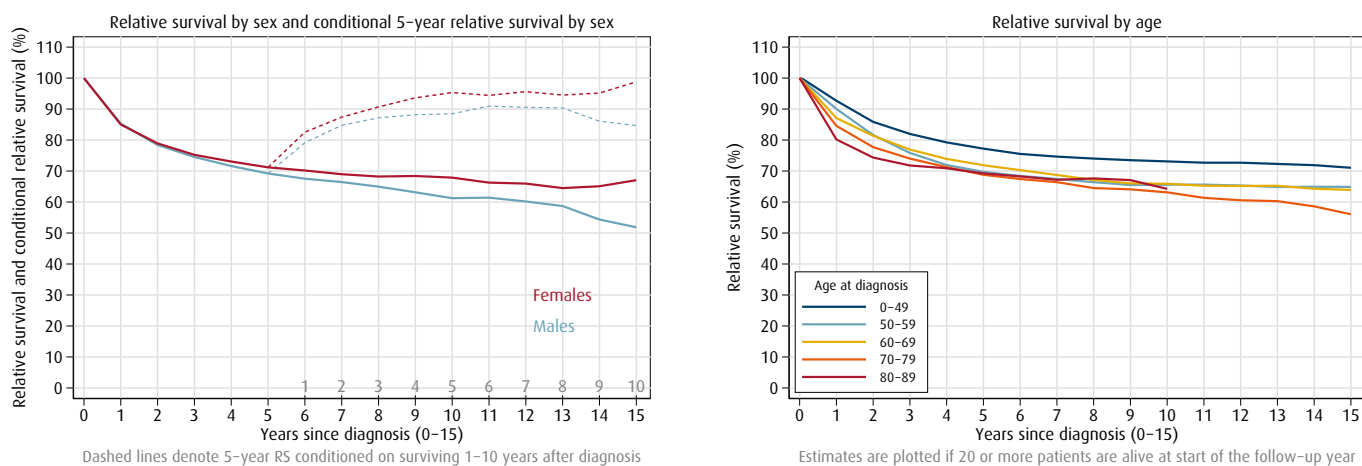
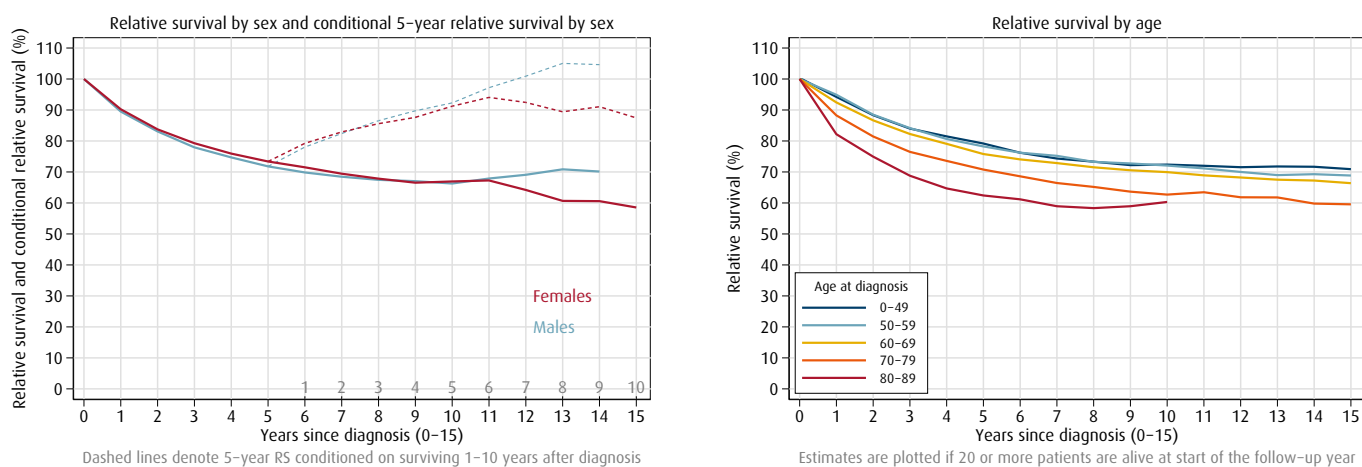
Figure 8.1: Relative survival (RS) up to 15 years after diagnosis by sex and age, 2018–2022**Figure 8.1-D: Stomach (ICD-10 C16)****Figure 8.1-E: Colon (ICD-10 C18)****Figure 8.1-F: Rectum, rectosigmoid (ICD-10 C19–20)**

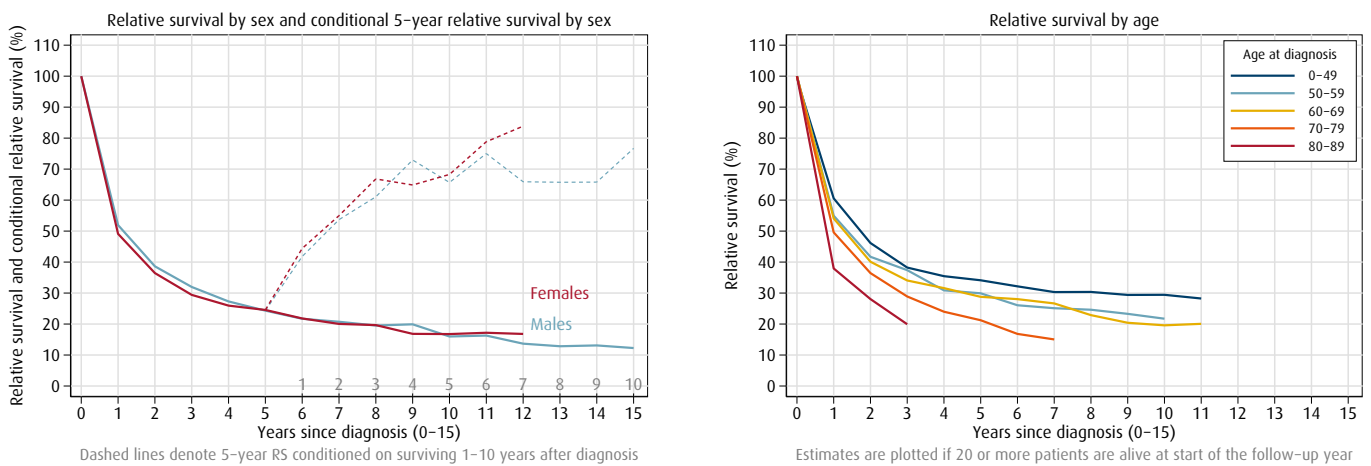
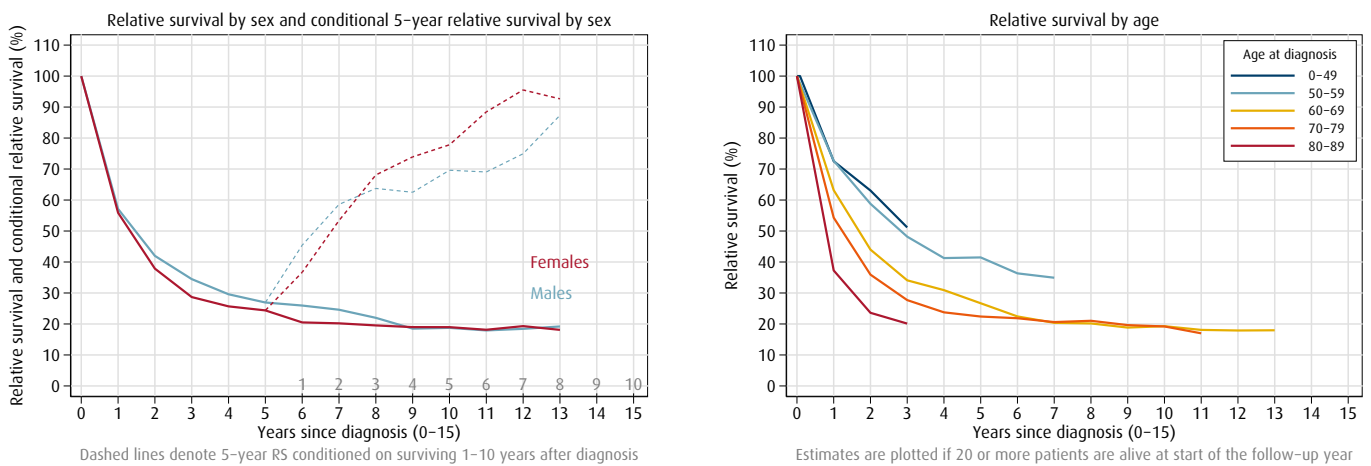
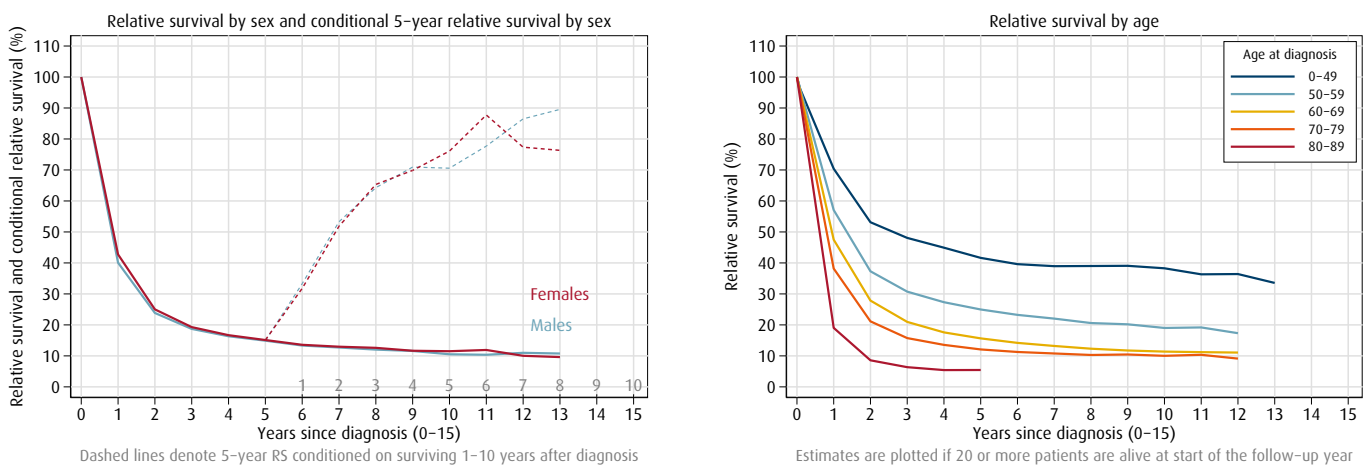
Figure 8.1: Relative survival (RS) up to 15 years after diagnosis by sex and age, 2018–2022**Figure 8.1-G: Liver (ICD-10 C22)****Figure 8.1-H: Gallbladder, bile ducts (ICD-10 C23–24)****Figure 8.1-I: Pancreas (ICD-10 C25)**

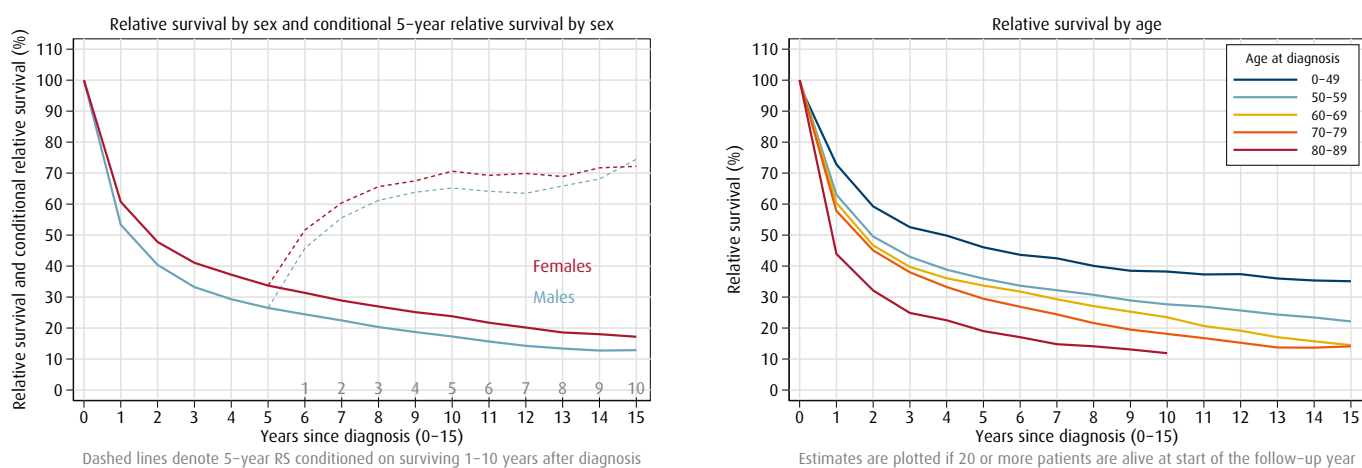
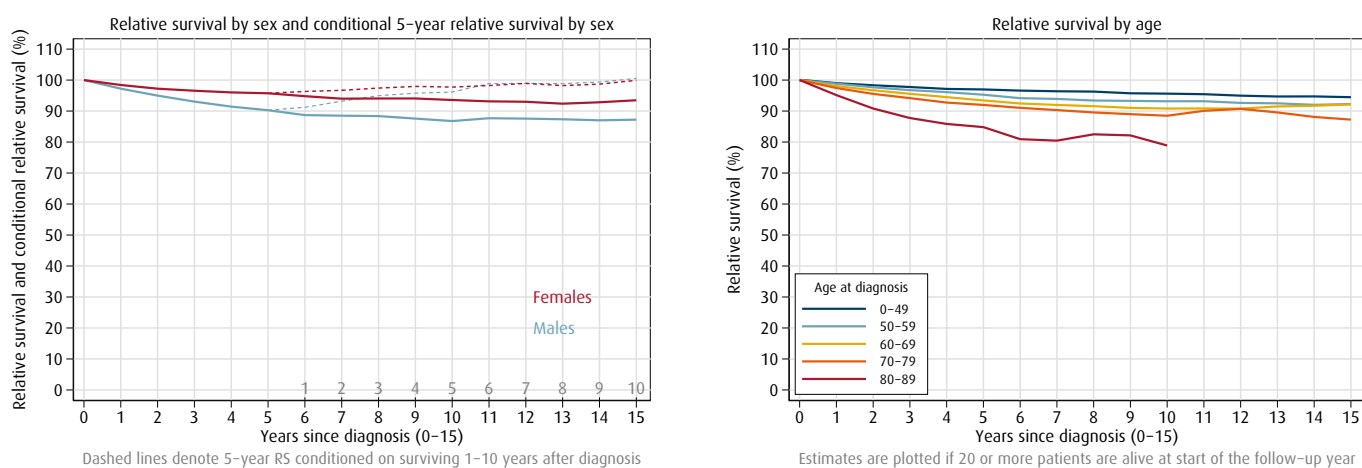
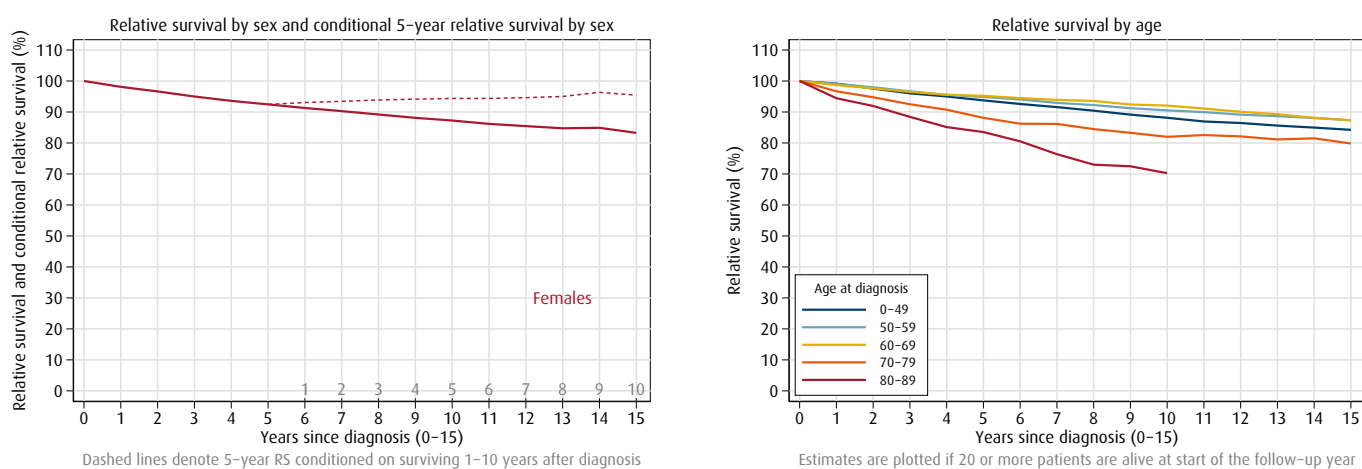
Figure 8.1: Relative survival (RS) up to 15 years after diagnosis by sex and age, 2018–2022**Figure 8.1-J:** Lung, trachea (ICD-10 C33–34)**Figure 8.1-K:** Melanoma of the skin (ICD-10 C43)**Figure 8.1-L:** Breast (ICD-10 C50)

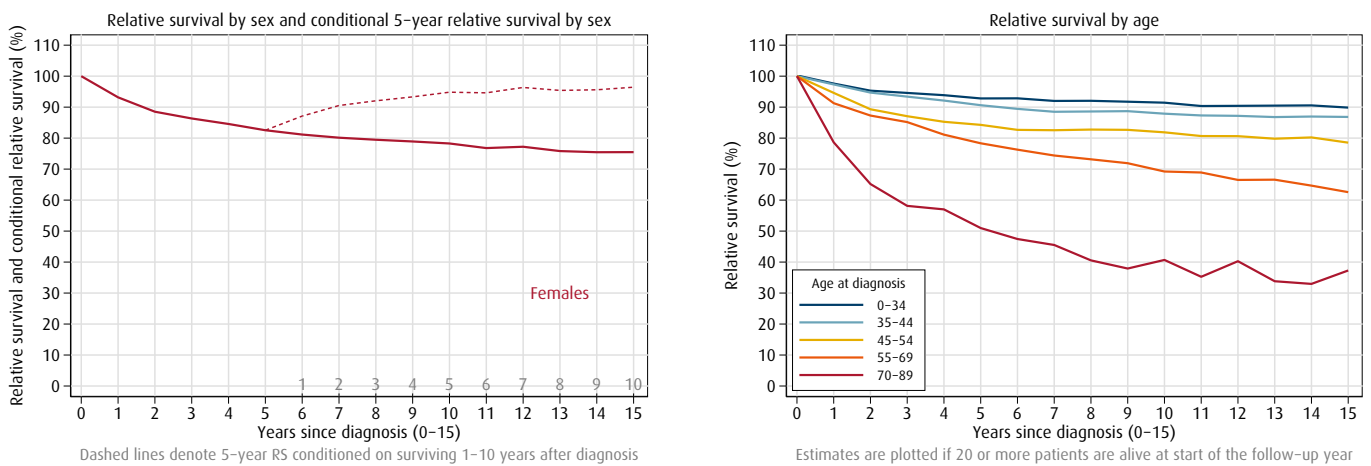
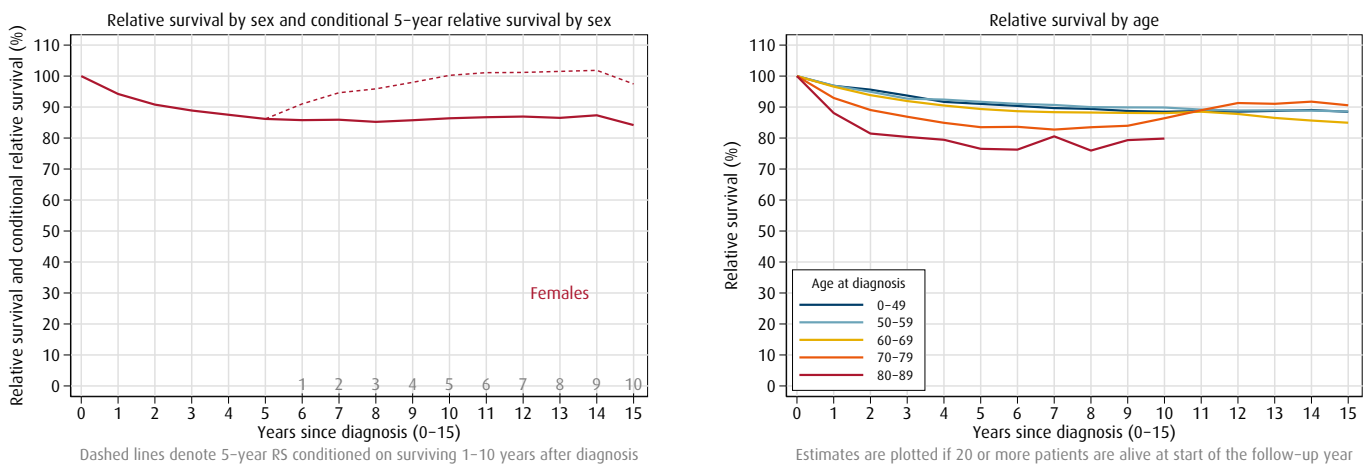
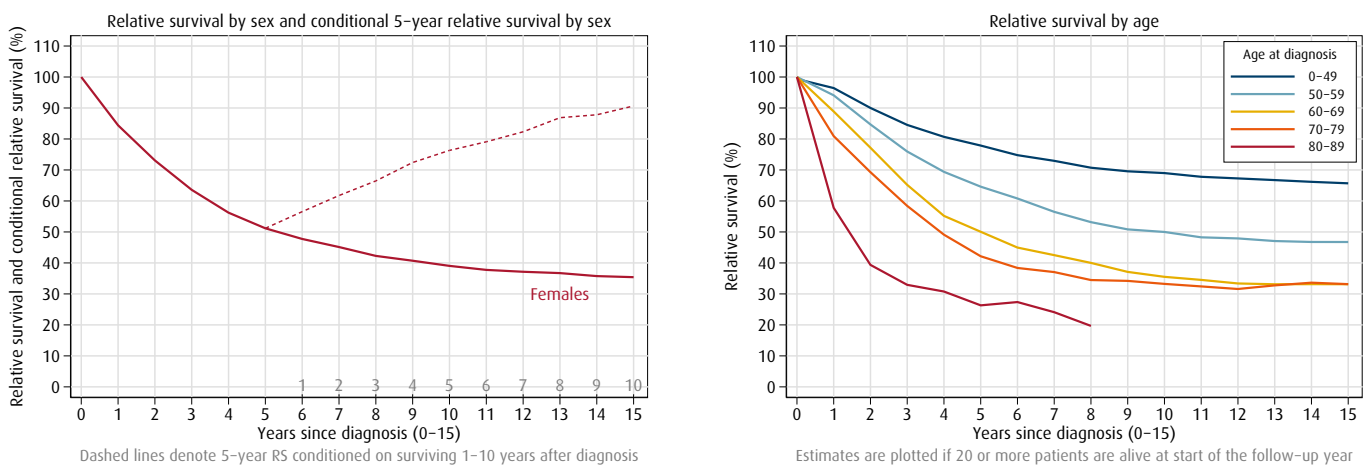
Figure 8.1: Relative survival (RS) up to 15 years after diagnosis by sex and age, 2018–2022**Figure 8.1-M: Cervix uteri (ICD-10 C53)****Figure 8.1-N: Corpus uteri (ICD-10 C54)****Figure 8.1-O: Ovary etc. (ICD-10 C56, C57.0–4, C48.2)**

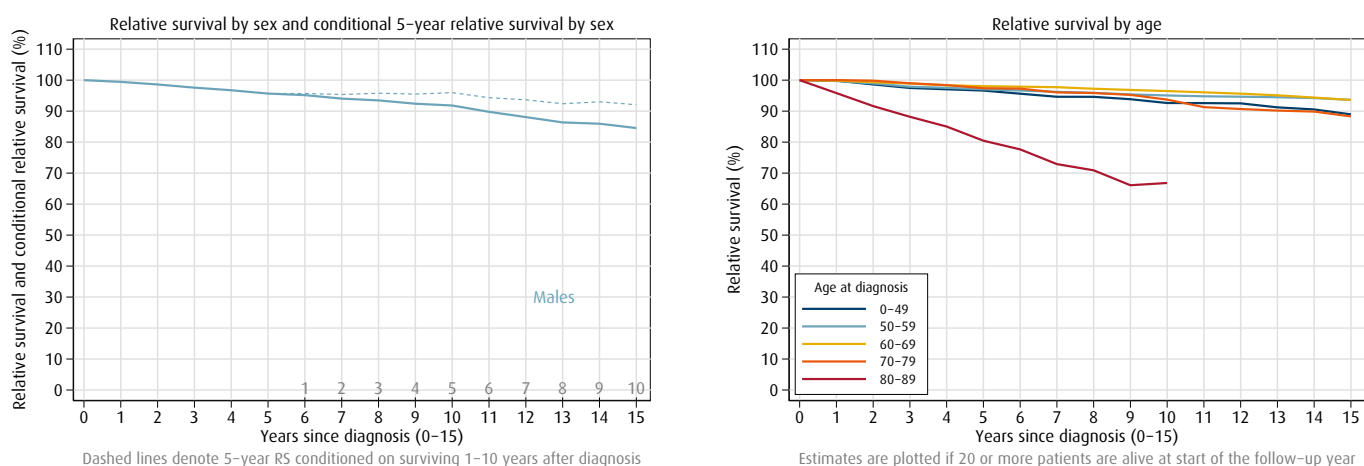
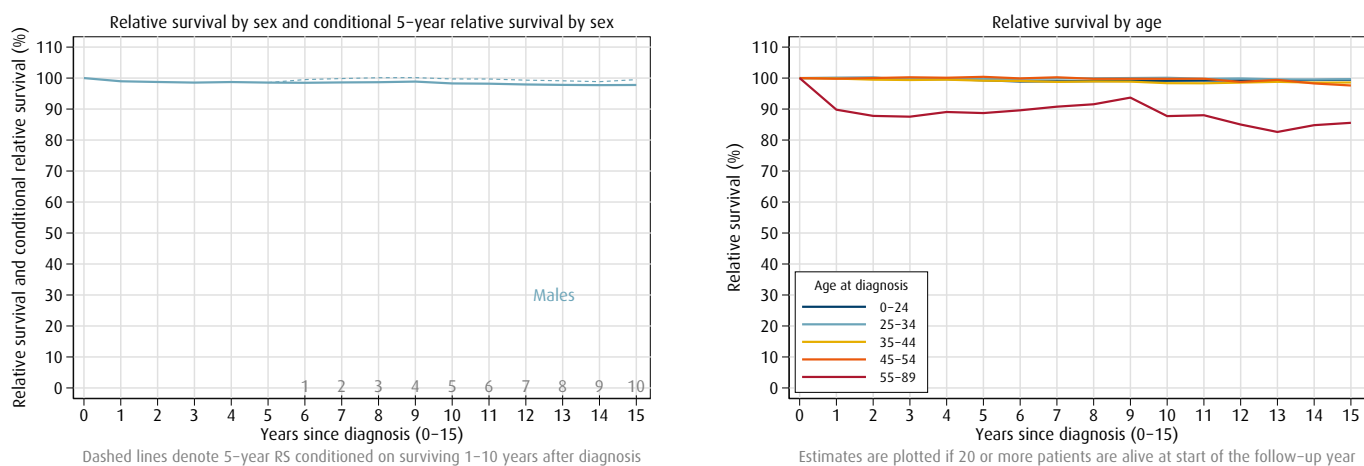
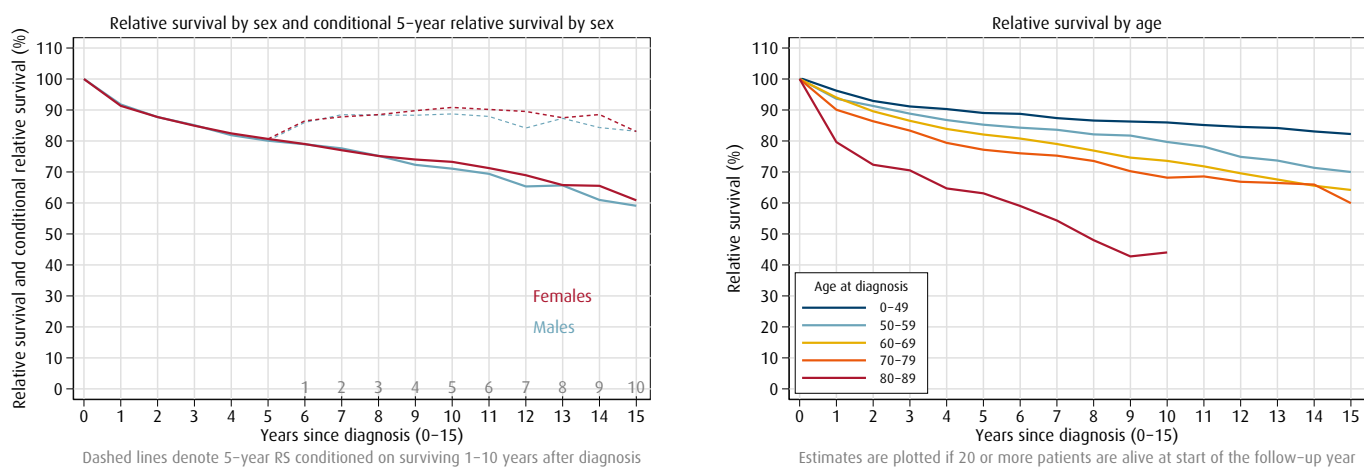
Figure 8.1: Relative survival (RS) up to 15 years after diagnosis by sex and age, 2018–2022**Figure 8.1-P: Prostate (ICD-10 C61)****Figure 8.1-Q: Testis (ICD-10 C62)****Figure 8.1-R: Kidney (excl. renal pelvis) (ICD-10 C64)**

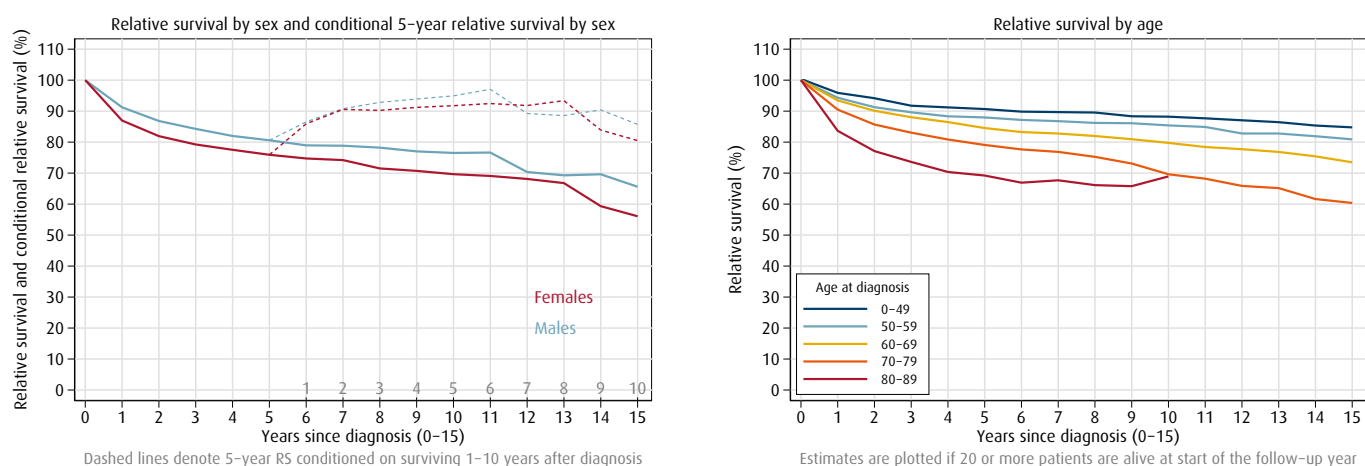
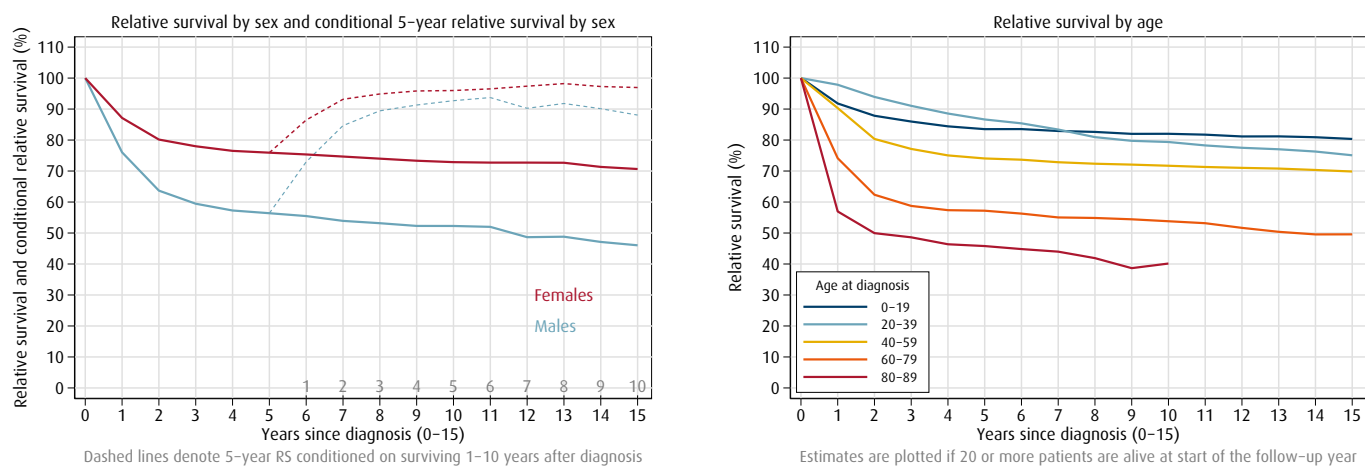
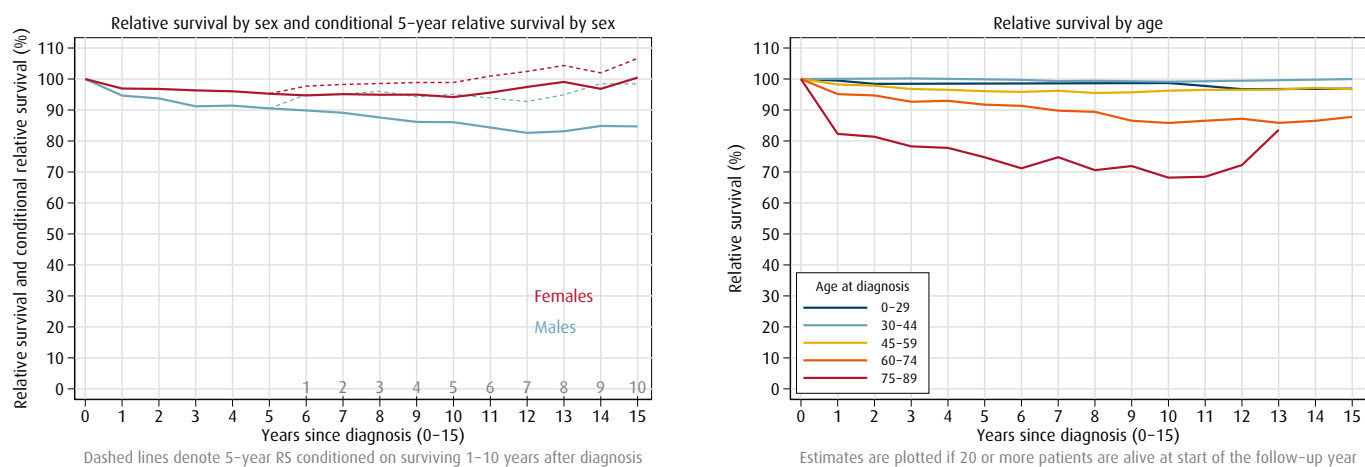
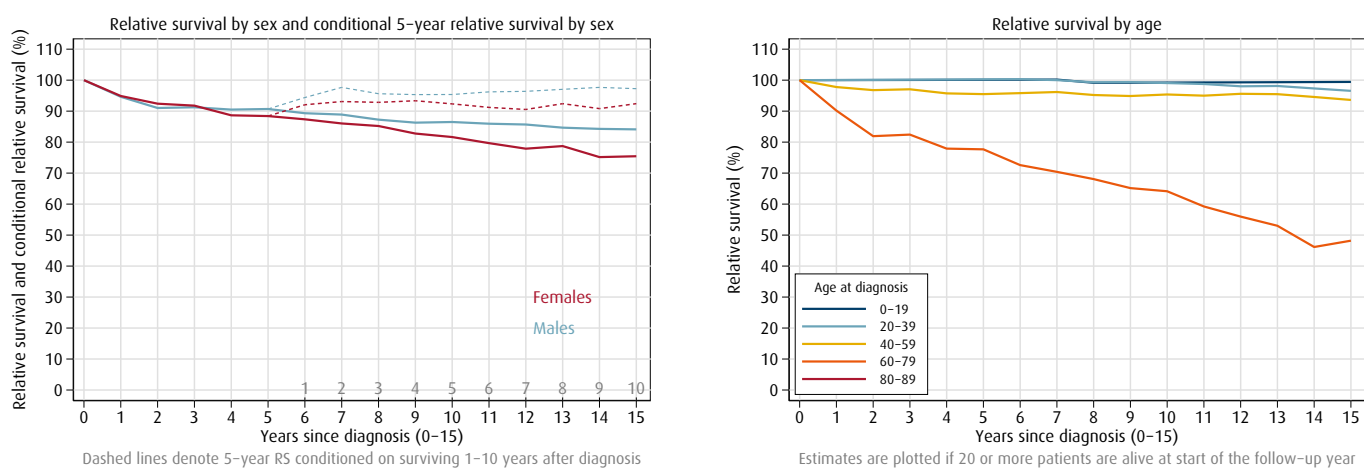
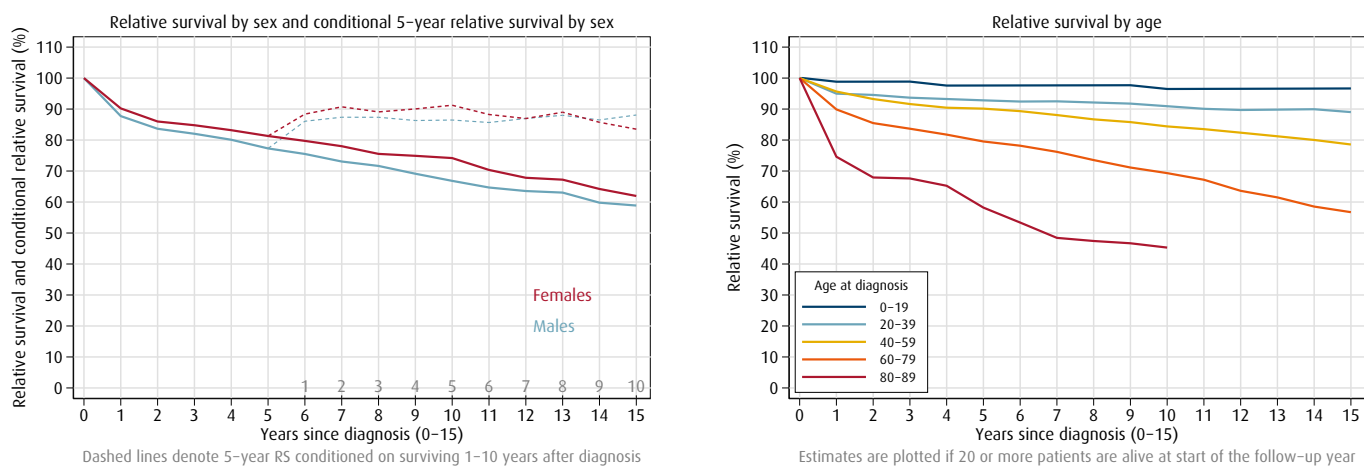
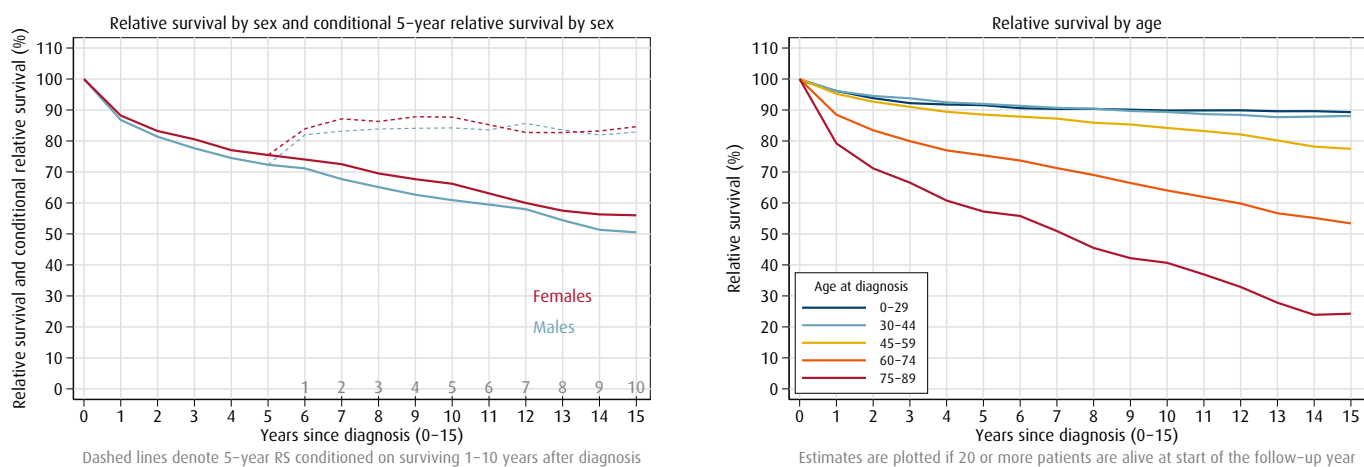
Figure 8.1: Relative survival (RS) up to 15 years after diagnosis by sex and age, 2018–2022**Figure 8.1-S: Urinary tract (ICD-10 C65–68)****Figure 8.1-T: Central nervous system (ICD-10 C70–72)****Figure 8.1-U: Thyroid gland (ICD-10 C73)**

Figure 8.1: Relative survival (RS) up to 15 years after diagnosis by sex and age, 2018–2022**Figure 8.1-V: Hodgkin lymphoma (ICD-10 C81)****Figure 8.1-W: Non-Hodgkin lymphoma (ICD-10 C82–86, C96)****Figure 8.1-X: Leukaemia (ICD-10 C91–95)**

Chapter 9 Trends in incidence, mortality and survival, Norway 1965–2022

There has been considerable discussion of the relative merits of analysing incidence, mortality and survival rates in cancer research, and especially analysing time trends for these disease measures^[26–30]. Trend analyses may provide some insight into changes in the distribution of risk factors, and into the impact of interventions and screening aimed at prevention or early diagnosis. Mortality rates and survival proportions are both key measures of disease outcome, and may, of course, reflect the incidence rates or alert us to beneficial effects of screening, more effective therapies, or improved disease management.

The contribution of artefacts to the observed cancer incidence and mortality trends has been comprehensively addressed^[31,32]. The accuracy of death certificates has also been discussed^[33–35]. Apart from artefacts related to registration practices, many of the factors that affect incidence also apply to mortality, given that both measures rely on the frequency of the disease and the accuracy of the initial cancer diagnosis. As with incidence, survival estimates may be affected by changes in diagnostic methods and precision, as well as the extent of cancer screening that detects more cases in an earlier stage of the disease.

There is a general consensus that a combined description of trends in incidence, mortality and survival helps our understanding of the underlying biological, epidemiological and clinical processes. As each indicator is subject to unique or shared artefacts that tend to vary according to cancer type over time, their simultaneous assessment often enables the identification of systematic deviations in one or more of the three measures. Figures 9.1–A to 9.1–X present time trends during 1965–2022 for age-standardised incidence and mortality rates and five-year relative survival estimates (mortality 1965–2021). It should be noted that these summary measures will often fail to reflect true underlying age-calendar-year interactions for specific cancers, such as differences in survival and mortality trends by age with respect to calendar time, or the presence of strong birth cohort influences in incidence trends.

The trends for **all sites** in Figure 9.1–A show a persistent increase in cancer survival in Norway for both sexes over the last five decades. During these decades, the incidence

rates have also increased, but for males the trend has levelled off and a decrease is seen for the last few years. The mortality rates were fairly stable until the late 1990s both for males and females. From 2000 onwards, there is a notable decline in the mortality rate in males, and a slight decline in females. Still, both incidence and mortality were always lower in females than in males. The interpretation of these aggregated estimates is complex, in that they comprise many different cancer types, with rates differing between females and males, and some of them sex-specific cancer types, which all may vary in terms of their capacity to be diagnosed as well as treated.

Among males, 27% of all cancers diagnosed in 2022 were **prostate cancers**. General screening for prostate cancer using the PSA test is not recommended in Norway. However, the doubling in incidence and the improved relative survival from 1990 to mid-2000s (Figure 9.1–O) probably reflects the availability and upsurge in usage of the PSA test for early detection of disease. During the past two decades, the incidence of prostate cancer has stabilised, and a marked decrease is seen in the last five to six years. Mortality declined from around 1996, and both early diagnosis and improved and more active treatment may have had an impact. These trends may also result from improved workup and diagnostics as suggested in Table 5.23 of the present report, demonstrating trends in age-standardised incidence rates according to stage of the cancer disease. Since 1992, there has been an eight-fold increase in prostate cancer with regional spread (invading neighbouring tissue or metastasised to regional lymph nodes), while the rate of prostate cancer with distant metastases has decreased somewhat. Improved diagnostics may secure a more adequate treatment.

Breast cancer comprised 24% of all female cancer cases diagnosed in 2022. There has been a monotonous increase in the incidence rate up to 2005 with a steeper increase in the mid-1990s followed by a slight but notable decline between 2005 and 2009 (Figure 9.1–M). The Norwegian Breast Cancer Screening Programme started as a four-year pilot project in four of the former nineteen Norwegian counties in 1996, and gradually expanded to become nationwide by 2005. The programme invites females aged 50–69 years to biennial mammography. The implementation of the screening programme explains

much of the increasing incidence trend from the mid 1990s to 2005. The figures for recent years indicate a new increase in incidence, and this is observed in all age groups over 30 years. The increase may be related to more sensitive diagnostic methods both within and outside the screening programme, combined with females continuing to have mammography after the age of 70. There was a drop in breast cancer incidence from 2019 to 2020, which is most likely explained by the fact that all screening activity in the Mammography programme ceased for a few months from mid-March 2020, when large parts of society in general closed down to limit infection of COVID-19 in the population. In 2021, the incidence rates increased to a level above that observed in 2019, and a slight increase was also observed in 2022.

Breast cancer mortality was almost stable up to the mid-1990s when it began declining (Figure 9.1-M). This positive trend most likely reflects a combination of improved diagnostics, better treatment, and earlier detection due to the implementation of the screening programme for breast cancer. Today, 93% of females with breast cancer survive their cancer for five years or more (5-year relative survival).

The trends in **lung cancer** incidence and mortality rates have followed each other closely. Since the early 2000s, the distance between the rates has increased, reflecting improved survival for these patients. Although the survival for lung cancer is still poor compared to other cancers, survival has increased by more than 10 percentage-points during the last ten years, and 27% of males and 34% of females with lung cancer now survive their cancer for at least five years. The varying incidence trends for lung cancer by sex reflect the different stages of the smoking epidemic in Norwegian males and females (Figure 9.1-J). Overall, lung cancer incidence and mortality rates among males began to level off in the mid-1990s and have declined over the past ten years. For females, the rate reached an all-time high level in 2018, but has stabilised during recent years, and the lung cancer rates seem to have declined for all age groups below 80. The number of new lung cancer cases among females surpassed that of males in 2018 and 2019, while the rates remained lower due to a higher number of females attaining high age.

The incidence of **cancer in colon and rectum** has increased for many decades, but the rectal cancer rate levelled off in the 1990s and is now declining. For colon cancer, a levelling off has been seen in the incidence rate since around 2010, and we even observed a slight decline (Figure 9.1-E and 9.1-F). Of particular note is the increasing survival and declining mortality from rectal cancer in both sexes, and the mortality is now almost half of what it used to be before 1995. The most

important determinants are probably the national introduction of total mesorectal excision in the early 1990s, increased specialisation, and use of preoperative radiation. However, Norwegian colon cancer incidence and mortality rates are among the highest in the world and remain a serious health concern.

Trends for some other specific cancer sites are also noteworthy. The long-term decline in **stomach cancer** incidence and mortality is most likely caused by better hygiene and increased intake of fresh or frozen food, which have reduced the prevalence of *Helicobacter pylori* infections and reduced the use of potentially harmful methods of food preservation. The survival of stomach cancer has increased slowly from 10% to 30% five-year relative survival over the past 50 years (Figure 9.1-D).

In contrast, the incidence rate of **testicular cancer** increased gradually until 2007 (Figure 9.1-Q). An improvement in therapy started in the 1970s with the introduction of cisplatin for advanced germ cell tumours, leading to greatly improved prognosis for testicular cancer in young and middle-aged males. This cancer now has the highest five-year relative survival.

A remarkable increase in incidence rates has been seen during the last decades for **melanoma of the skin** in both sexes (Figure 9.1-K). The steep rise is suggested to result from sun exposure habits (including solarium use). However, we cannot exclude the possibility that increased awareness, both in the general population and among general practitioners, and sliding of the diagnostic criteria, may also have contributed to the increase in incidence. Of note is the markable increase in incidence rate for 2022, which might be a result of lower diagnostic intensity during the covid pandemic. The moderate but steady increase in melanoma mortality until 2010 indicates that some of the increase in incidence is indeed caused by a higher risk of the disease.

The classification of diseases has changed over time, and sometimes appears clearly in the incidence trends. In 2002, polycythaemia vera (D45), myelodysplastic syndromes (D46) and other neoplasms of uncertain or unknown behaviour of lymphoid, hematopoietic and related tissue (D47) were included in the statistics for **leukaemia**, and this inclusion caused a sudden rise in the incidence in males. In 2020, a review was made of all registered cases of malignant and benign cases, and we identified benign cases (D45–D47) that were registered before 2002, but previously not counted in the statistics. This is the explanation for the sharp increase in incidence of leukaemia from 1992 to 1993 (Figure 9.1-X). Moreover, due to international guidelines for conversions between ICD-O-3 and ICD-10 and stricter adherence to these in this report there are some cases that

have been reclassified from non-Hodgkin lymphoma to chronic lymphatic leukaemia. The treatment of leukaemia has improved, and a steep prolonged increase in survival has been observed since the early 1970s.

Cancer of the bladder and urinary tract is the fifth most frequent cancer in males but is less frequent in females. For males, the incidence rate increased gradually until the early 1990s, but this increase has since been less pronounced. For females, a slight increase in incidence has lasted until recent years. The incidence trends for both sexes are weak reflections of the incidence rates of lung cancer, as the two cancer forms share a common important cause: tobacco smoking. The mortality rate has decreased since early 2000, reflecting the increase in survival (Figure 9.1–S).

Finally, among more uncommon cancer sites, there has been a notable increase in the rates for **liver and thyroid cancer** in both sexes (Figures 9.1–G and 9.1–U). The rise of incidence in thyroid cancers during the past decade has also been seen in the other Nordic countries, except for Iceland where the rates have been consistently higher than in Scandinavia since 1960. We do not know the exact reason for the Scandinavian increase, but similar trends have been observed internationally, possibly linked to changes in the diagnostic workup. There has been an increased use of ultrasound, CT and MRI

for other indications, possibly resulting in increased incidental findings of tumours in the thyroid^[36]. The increased rate of liver cancer was earlier suspected to be due to a rising proportion of immigrants from areas with higher risk of liver cancer. A study from 2018 revealed that this assumption was incorrect, and that there has been an increase in liver cancer incidence also among Norwegian-born inhabitants^[37].

In summary, the overall trends in cancer survival reflect a complex pattern of factors operating together, such as screening programmes, unrecommended screening, and improved diagnostics, all associated with some degree of overdiagnosis (tumours that would have remained harmless throughout life), improved treatment, and improved general health (less comorbidity among cancer patients). For prostate and breast cancer, both early diagnosis and improvements in treatment are likely to have played a role. For rectal cancer, the improved survival is most likely due to better treatment.

Note: For Figure 9.1–F, the mortality rate for rectosigmoid (C19–20) includes anal cancer.

Note: From CiN 2022 an improved algorithm for estimation of survival for recent periods is used. In the previous publications recent improvements in survival, e.g. lung cancer survival, were concentrated in the start of the periods without complete follow-up time.

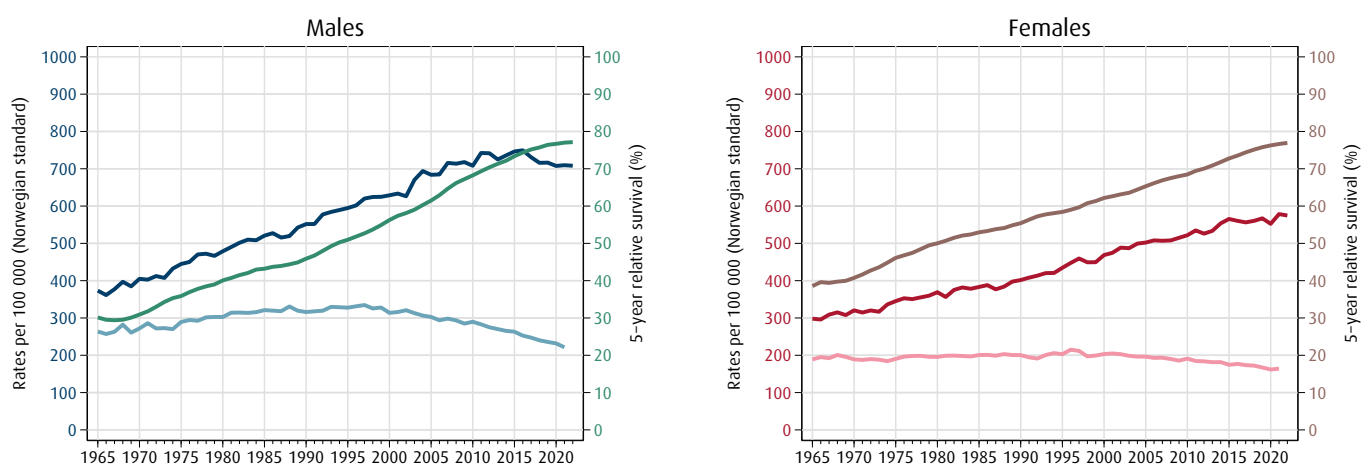
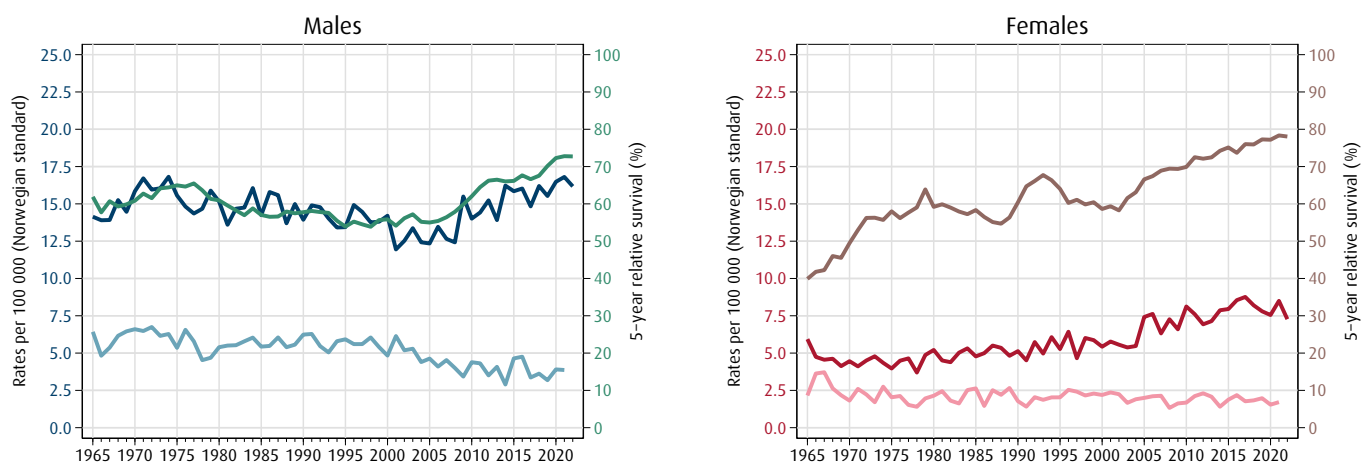
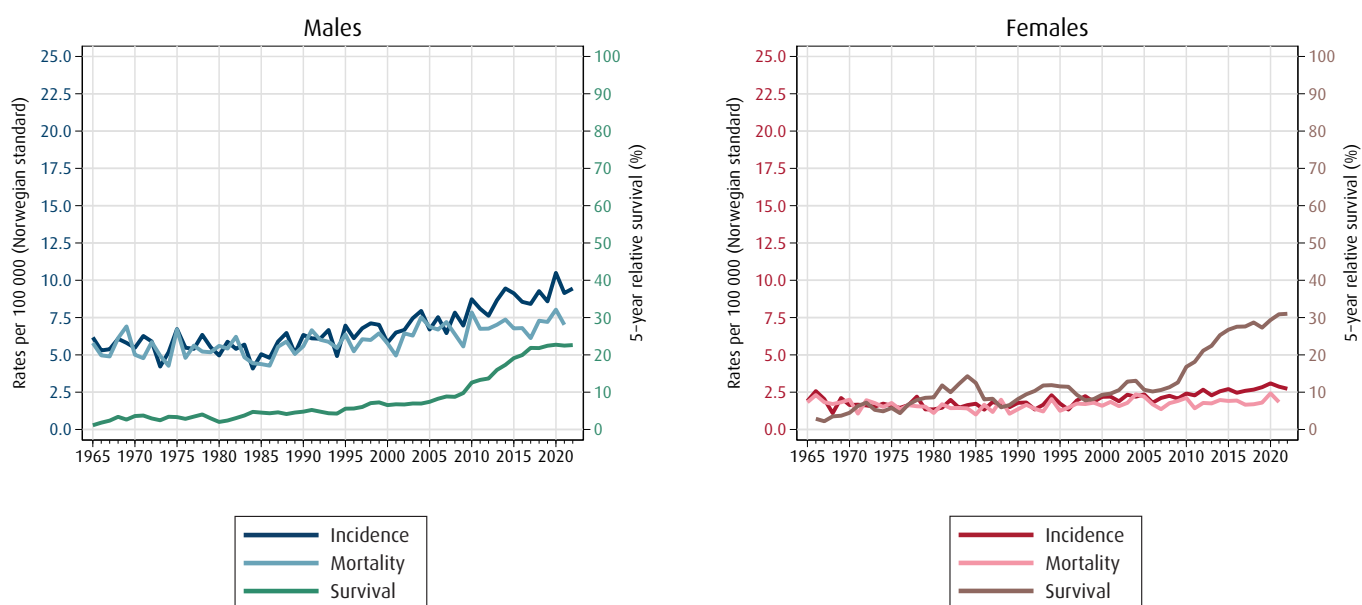
Figure 9.1: Trends in incidence and mortality rates and 5-year relative survival proportions**Figure 9.1-A: All sites (ICD-10 C00-96)****Figure 9.1-B: Mouth, pharynx (ICD-10 C00-14)****Figure 9.1-C: Oesophagus (ICD-10 C15)**

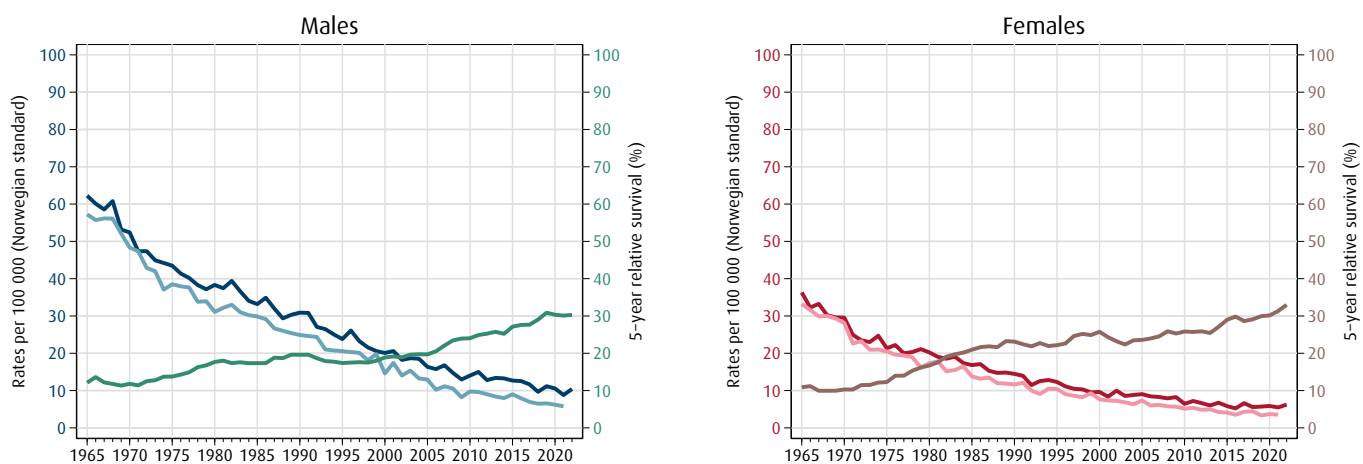
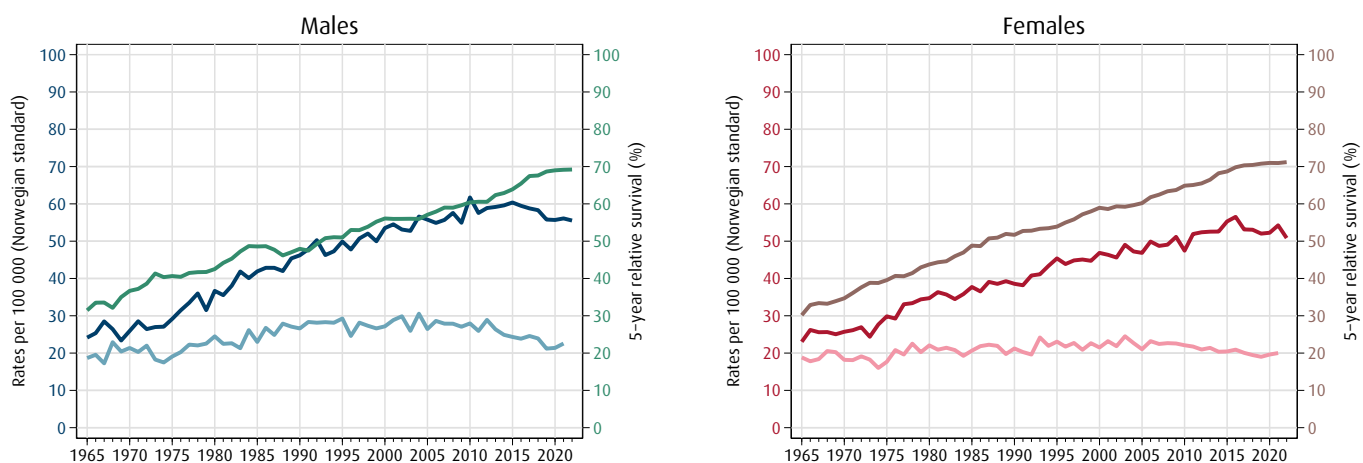
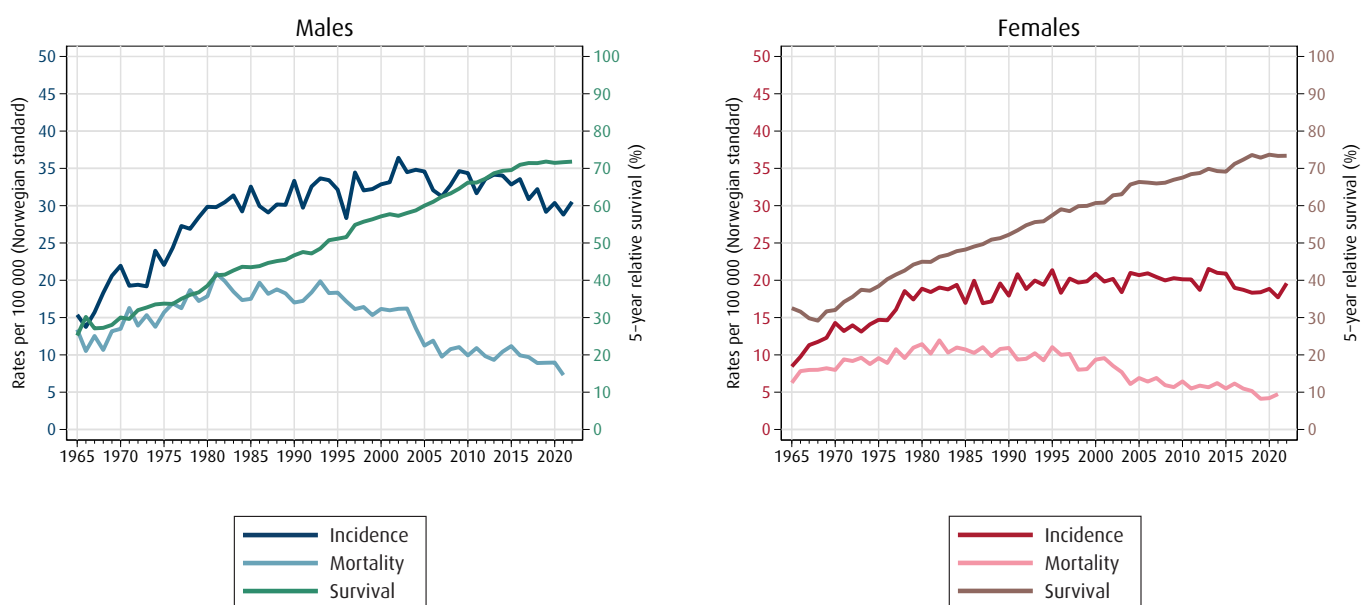
Figure 9.1: Trends in incidence and mortality rates and 5-year relative survival proportions**Figure 9.1-D: Stomach (ICD-10 C16)****Figure 9.1-E: Colon (ICD-10 C18)****Figure 9.1-F: Rectum, rectosigmoid (ICD-10 C19-20)**

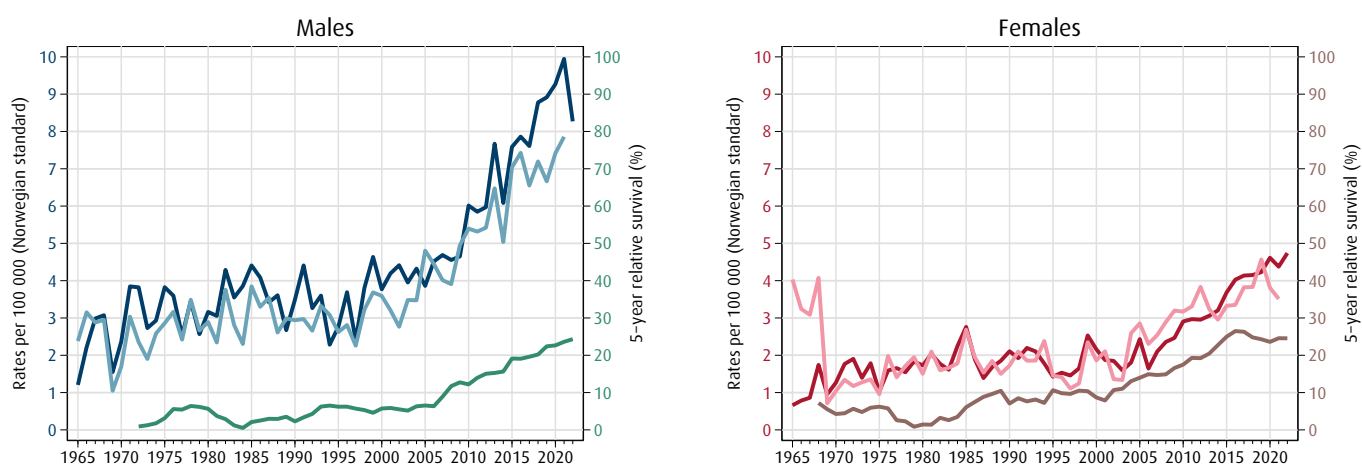
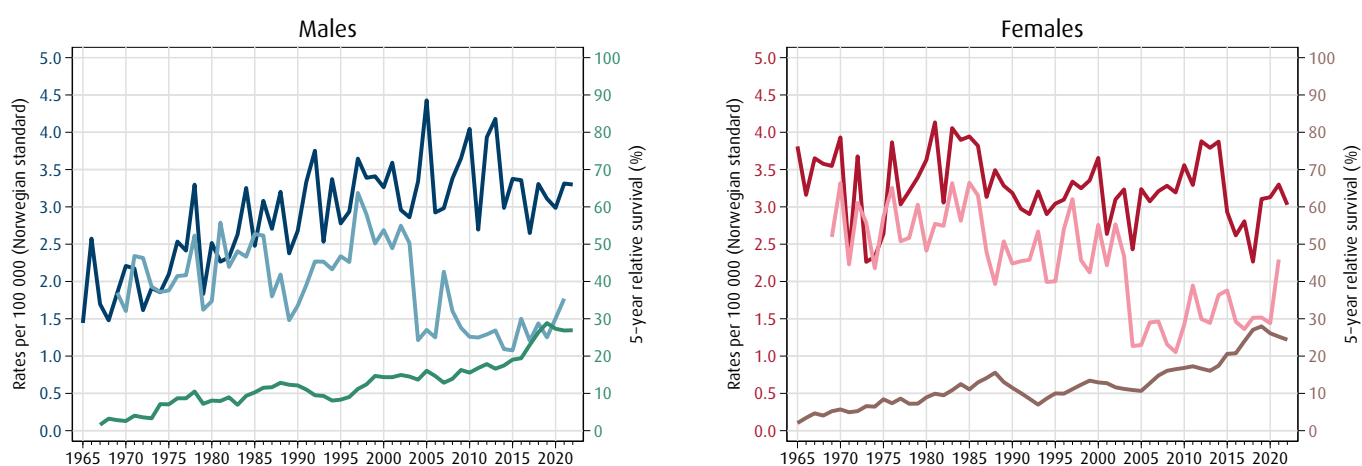
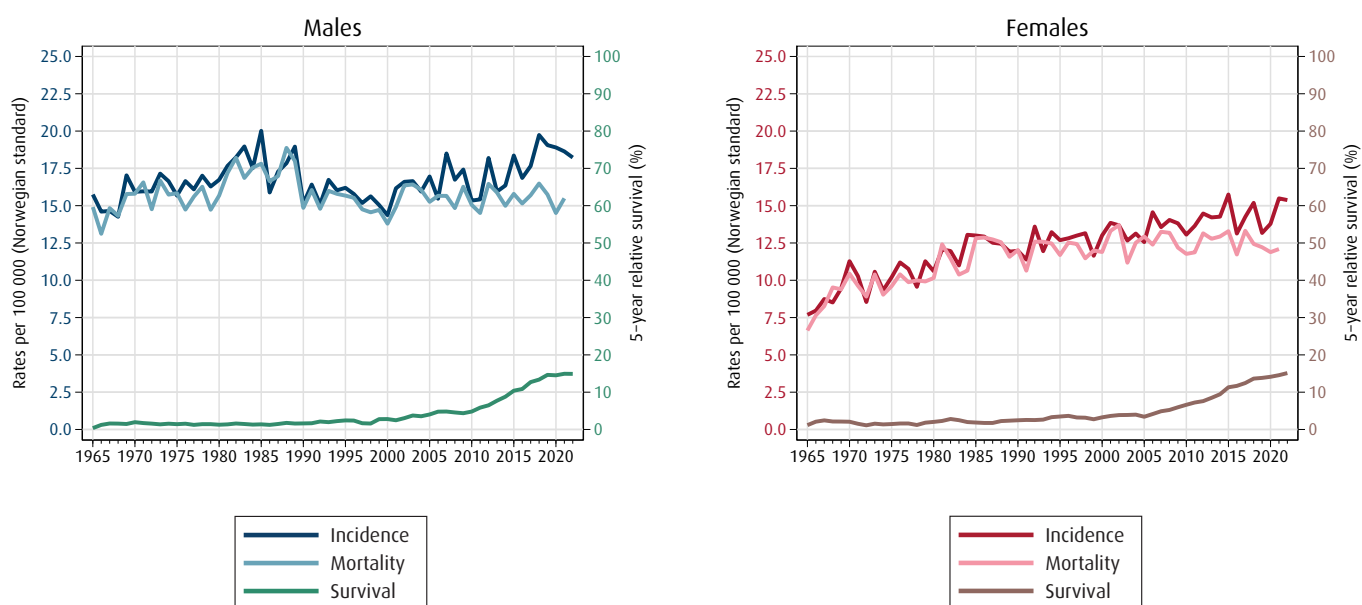
Figure 9.1: Trends in incidence and mortality rates and 5-year relative survival proportions**Figure 9.1-G: Liver (ICD-10 C22)****Figure 9.1-H: Gallbladder, bile ducts (ICD-10 C23-24)****Figure 9.1-I: Pancreas (ICD-10 C25)**

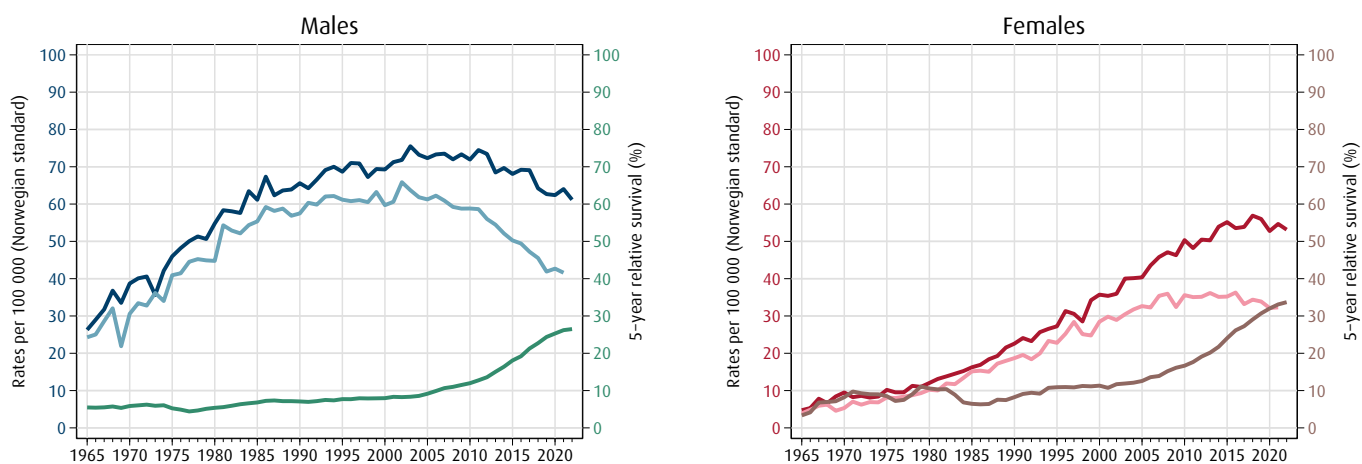
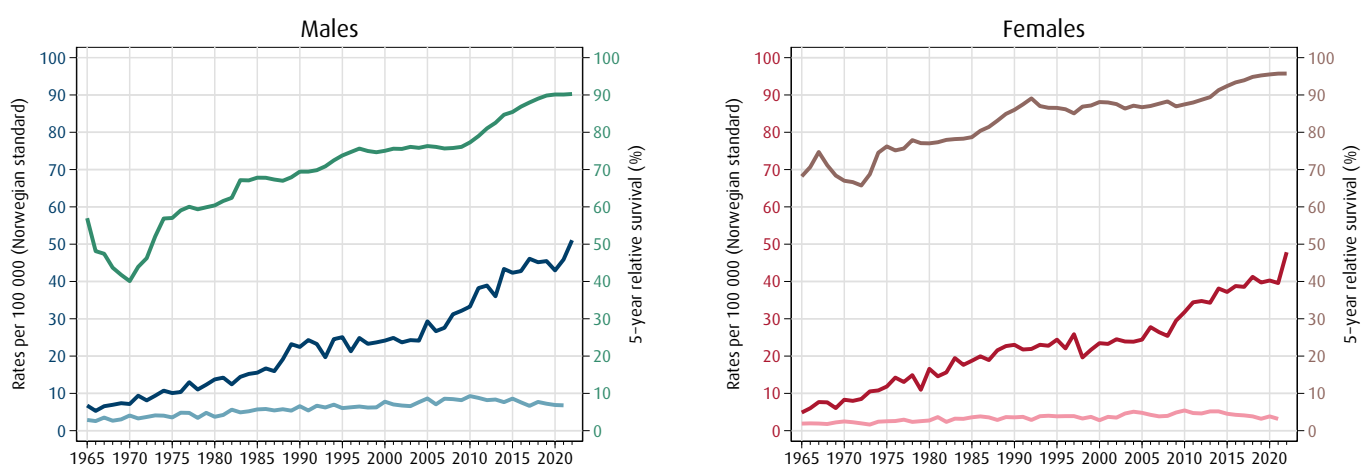
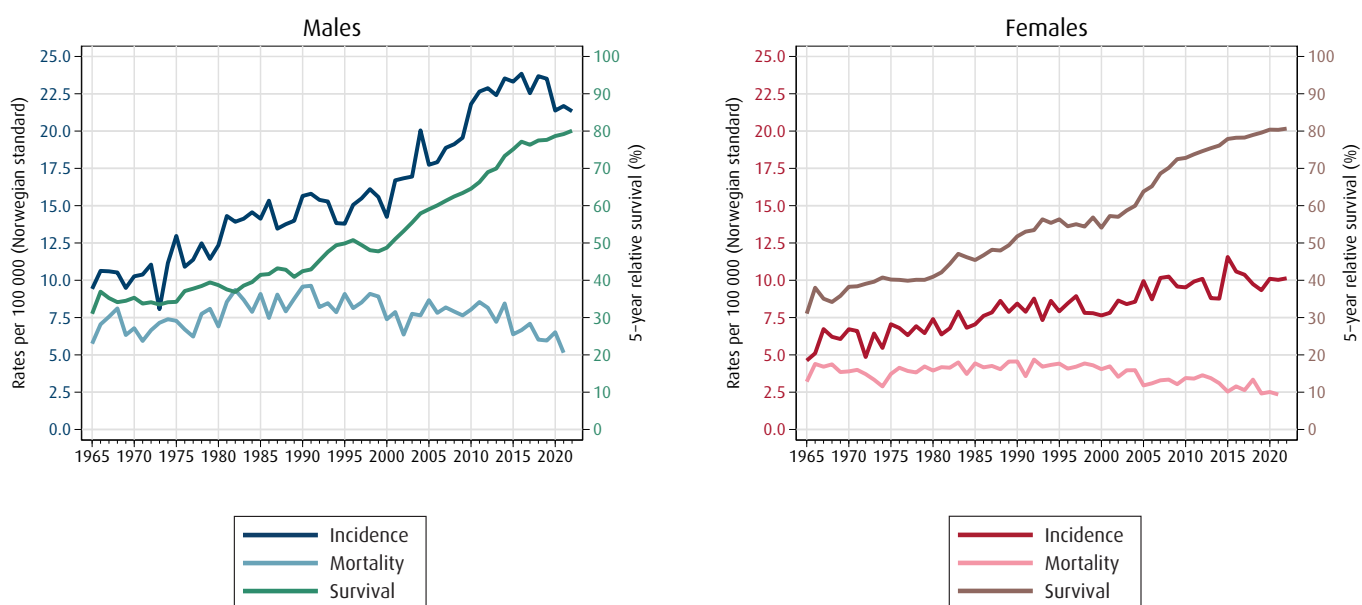
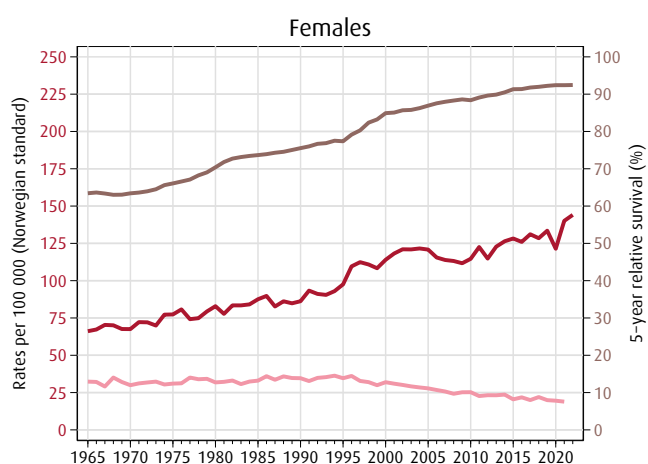
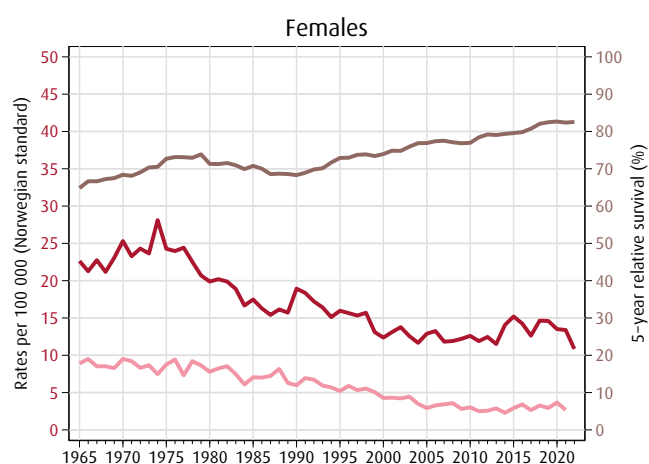
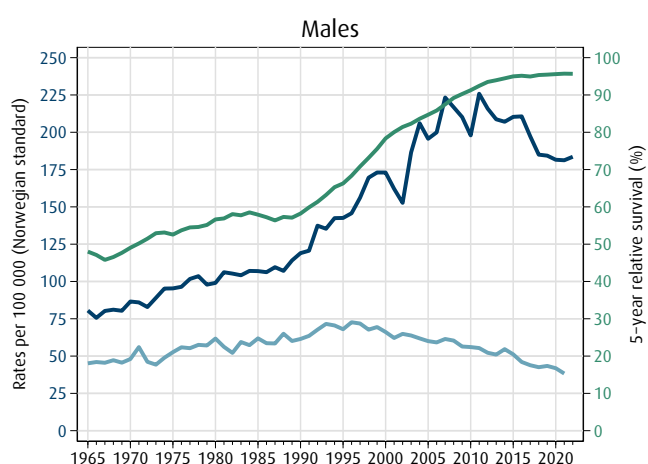
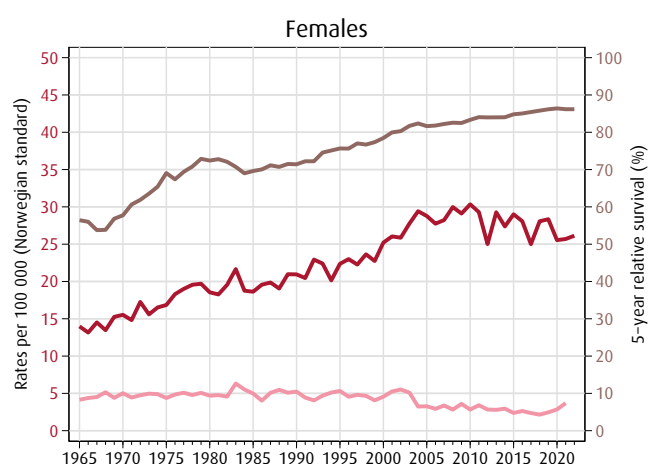
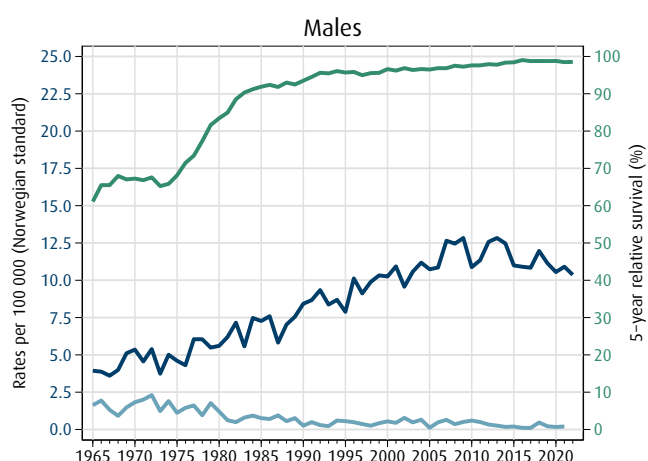
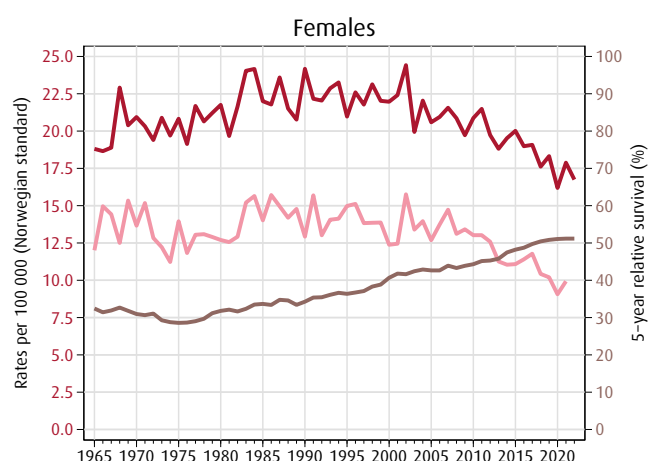
Figure 9.1: Trends in incidence and mortality rates and 5-year relative survival proportions**Figure 9.1-J: Lung, trachea (ICD-10 C33-34)****Figure 9.1-K: Melanoma of the skin (ICD-10 C43)****Figure 9.1-L: Kidney (excl. renal pelvis) (ICD-10 C64)**

Figure 9.1: Trends in incidence and mortality rates and 5-year relative survival proportions**Figure 9.1-M: Breast (ICD-10 C50)****Figure 9.1-N: Cervix uteri (ICD-10 C53)****Figure 9.1-O: Prostate (ICD-10 C61)****Figure 9.1-P: Corpus uteri (ICD-10 C54)****Figure 9.1-Q: Testis (ICD-10 C62)****Figure 9.1-R: Ovary etc. (ICD-10 C56, C57.0-4, C48.2)**

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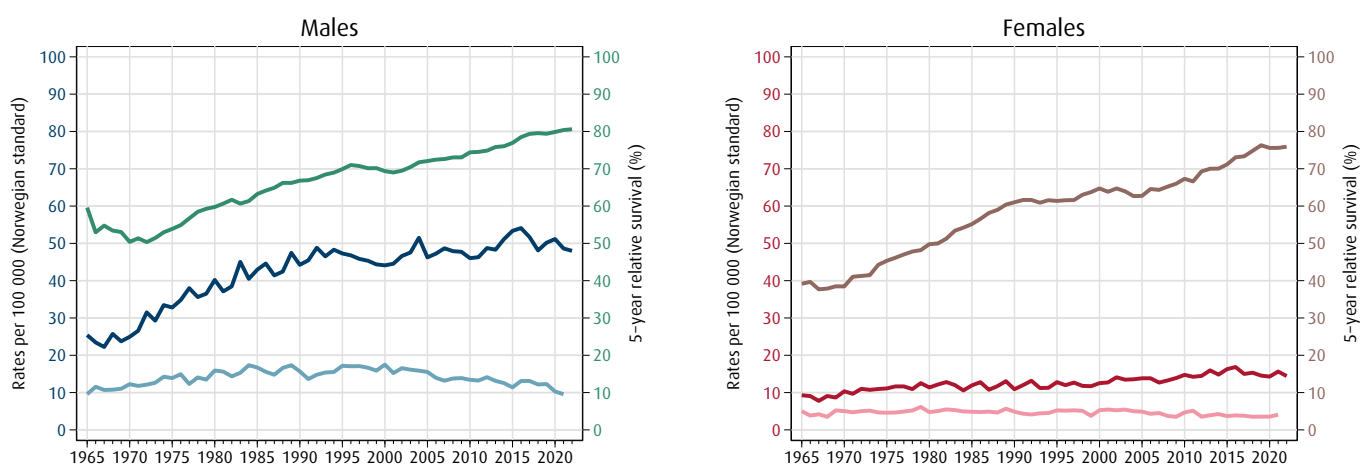
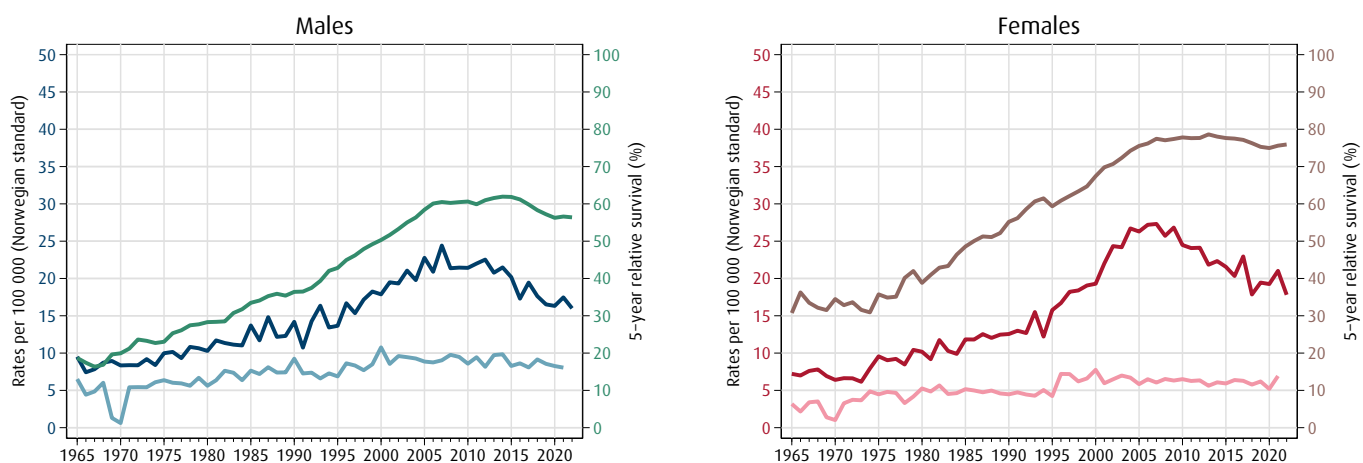
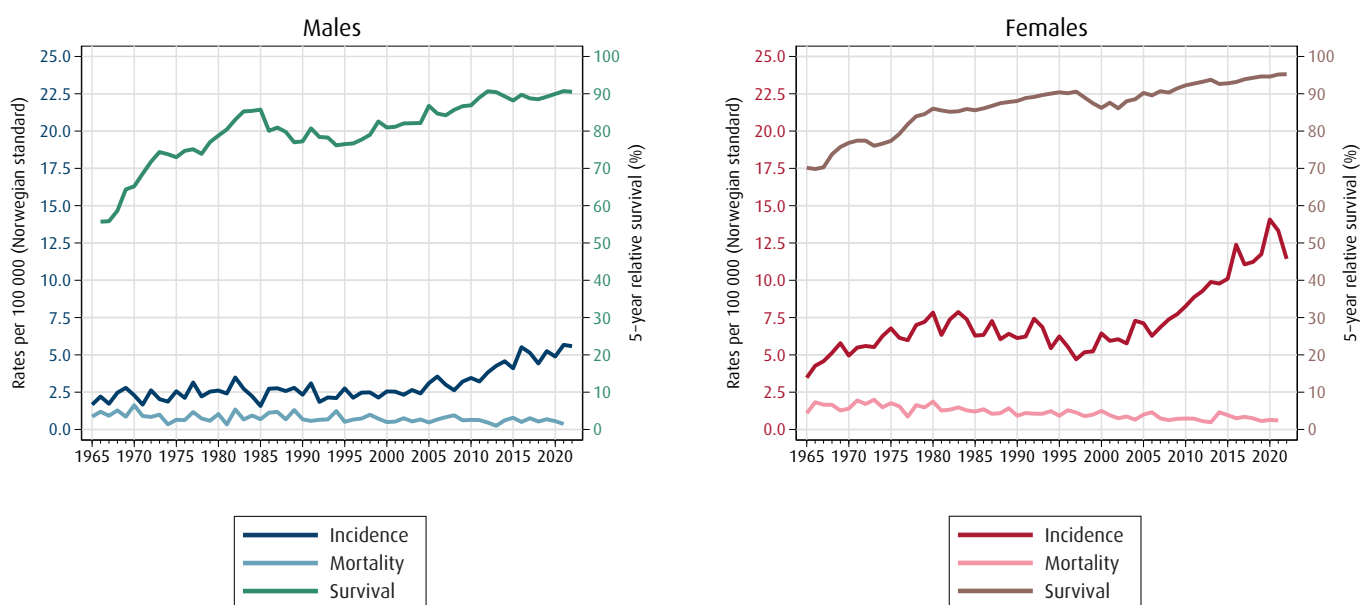
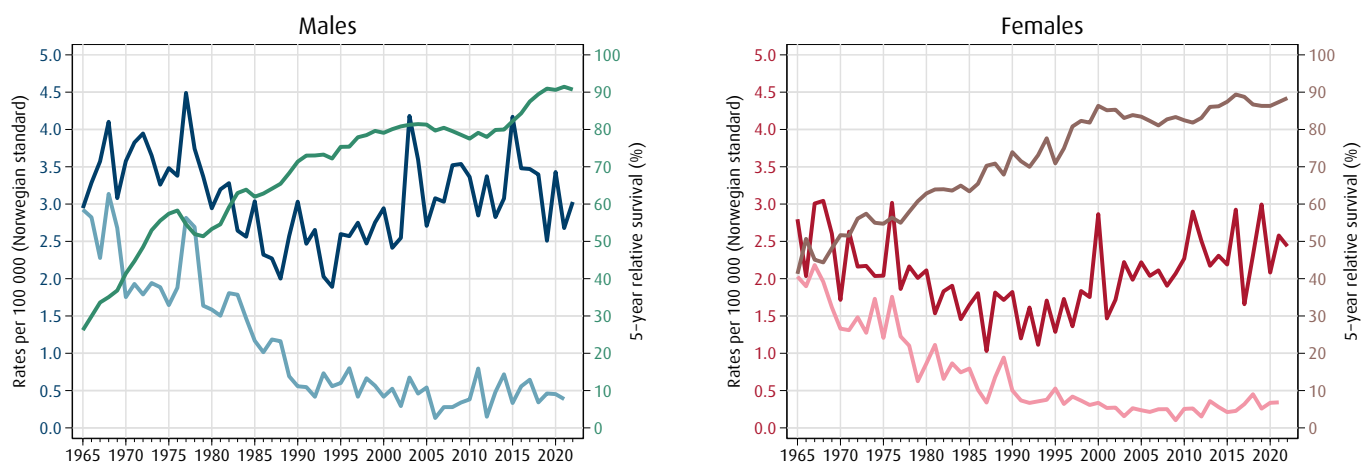
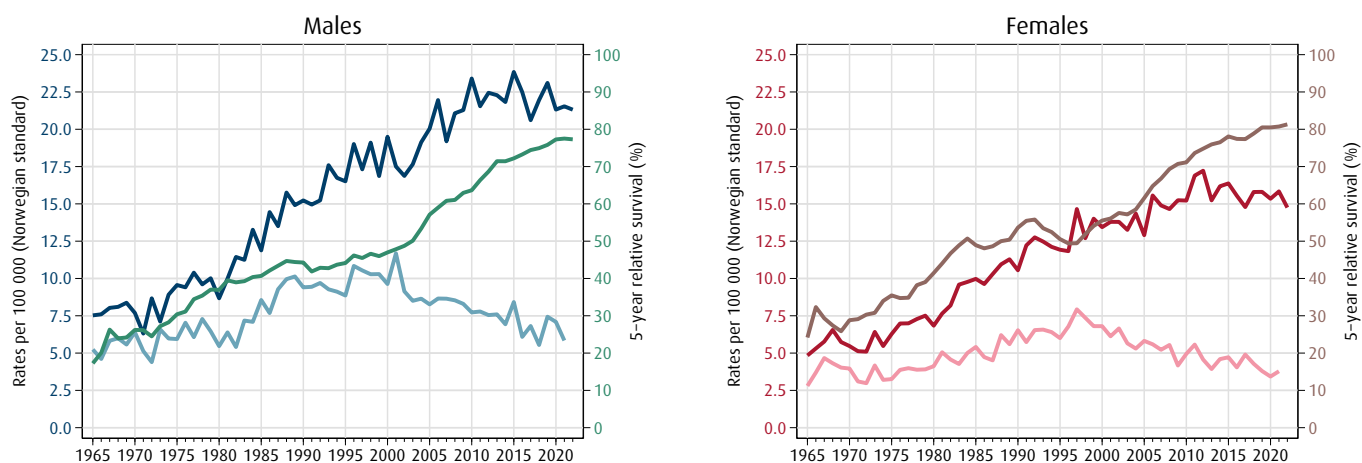
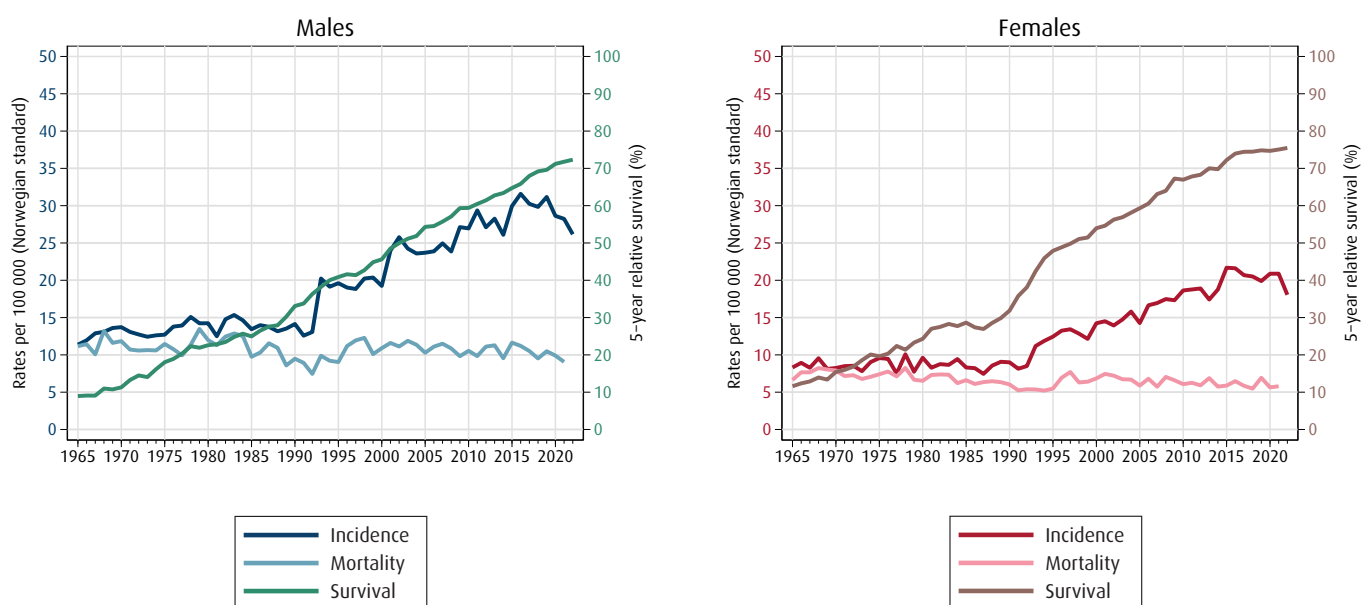
Figure 9.1: Trends in incidence and mortality rates and 5-year relative survival proportions**Figure 9.1-S: Urinary tract (ICD-10 C65-68)****Figure 9.1-T: Central nervous system (ICD-10 C70-72)****Figure 9.1-U: Thyroid gland (ICD-10 C73)**

Figure 9.1: Trends in incidence and mortality rates and 5-year relative survival proportions**Figure 9.1-V: Hodgkin lymphoma (ICD-10 C81)****Figure 9.1-W: Non-Hodgkin lymphoma (ICD-10 C82-86, C96)****Figure 9.1-X: Leukaemia (ICD-10 C91-95)**

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