Living with and beyond cancer

A report on cancer prevalence in Northern Ireland 2010

May 2013

N. Ireland Cancer Registry

Queen's University Belfast

HSC Public Health Agency

WE ARE MACMILLAN. CANCER SUPPORT

Living with and beyond cancer

A report on cancer prevalence in Northern Ireland 2010

Contents

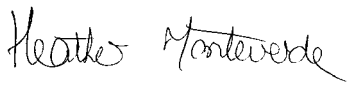
Foreword

Cancer remains a major public health issue in Northern Ireland but the cancer story is changing. The increase in the number of cancer survivors is influenced by many factors, including changes in the population, new developments in treatment and care, screening programs, improvements in survival and public health awareness.

It used to be the case that either people were cured of their cancer or they died, often very quickly. With the number of cancer survivors increasing by 3.5% annually, we now know that many people need more support after treatment to meet their ongoing needs and to live with cancer as a long term illness.

I welcome this report, which provides much needed information to help improve services to meet the needs of people affected by cancer. It will allow more accurate targeting of services with regard to the number of people still requiring active treatment, needing follow up care or monitoring for recurrences, as well as those patients who may have long term side effects from their treatment.

Overall this report gives one of the most detailed and comprehensive looks at cancer survivors thus far in N. Ireland. We hope that it will help inform medical and health policy makers in the decisions they face and will also in some small way provide the general public with some idea of the extent of long term survival after a cancer diagnosis. This report shows yet again that improving public health requires high quality information and that, in the NI Cancer Registry, we have a powerful mechanism for providing this data. I congratulate the report authors and the Registry team for the huge amount of work compiling this report.



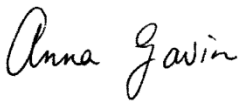
Heather Monteverde
General Manager for Macmillan Cancer Support in Northern Ireland
2013

Acknowledgements

This report is based on the high quality data collected, processed and quality assured by the dedicated staff of the Northern Ireland Cancer Registry. Without their work this report would not have been possible.

The production of this report was primarily supported, through the Registry, by the Public Health Agency (Northern Ireland). I would also like to thank Macmillan Cancer Support for their comments on the report and their assistance in its printing and launch.

I also wish to record my thanks to the Management Group and Council of the Registry who guide this work.



Dr. Anna Gavin
Director of Northern Ireland Cancer Registry
2013

Summary

Cancer survival is improving and some cancer patients recover totally from their disease, especially if it is diagnosed at an early stage. The cancer registry cannot distinguish between people who are cured and those with active cancer and so in this report *Cancer prevalence* is defined as the number of living people who have ever had a cancer diagnosis. This is the commonly accepted international definition of cancer prevalence. It includes people diagnosed with cancer in the past as well those who were recently diagnosed and some who are cured.

The data in this report provides those working with cancer some idea of numbers ever diagnosed, how many are recently diagnosed, their ages and the types of cancer they have had. It also lets us see that cancer is not a death sentence and many people in N. Ireland with cancer live long lives.

Prevalence

At the end of 2010 there were 69,377 people living with a past diagnosis of cancer within the last 18 years. 46.3% of these survivors were male.

Excluding the rarely fatal non-melanoma skin cancer (NMSC), there were 45,265 cancer survivors who had been diagnosed within the last 18 years. 43.4% of these survivors were male.

Among cancer survivors diagnosed within the last 18 years (excluding NMSC), 13% of males were aged under 50, while 19% were aged 80 and over. However 17% of females were aged under 50, while 17% were aged 80 and over.

Time since diagnosis

Among the 19,653 male survivors (excluding NMSC) 14.6% had been diagnosed within the previous year while 5.9% had been first diagnosed between 15 and 18 years ago.

Among the 25,612 female survivors (excluding NMSC) 11.5% had been diagnosed within the previous year while 8.6% had been first diagnosed between 15 and 18 years ago.

Alternative prevalence measures

The 18-year prevalence represents all patients diagnosed with cancer during 1993-2010 who were still alive at the end of 2010. Other prevalence measures are commonly used, which depend upon the diagnosis period considered.

Table S.1: 18-year prevalence of cancer in NI by sex and age at the end of 2010

Age at the end of 2010	Including NMSC			Excluding NMSC		
	Male	Female	Both sexes	Male	Female	Both sexes
Under 50	3,306	5,202	8,508	2,499	4,350	6,849
50-59	3,725	5,749	9,474	2,342	4,629	6,971
60-69	7,988	8,746	16,734	5,058	6,566	11,624
70-79	9,715	8,877	18,592	5,920	5,749	11,669
80-89	6,129	6,581	12,710	3,306	3,490	6,796
90 and over	1,273	2,086	3,359	528	828	1,356
All ages	**32,136**	**37,241**	**69,377**	**19,653**	**25,612**	**45,265**

Figure S.1: 18-year prevalence of all cancers (excluding NMSC) by sex and time since diagnosis of first cancer

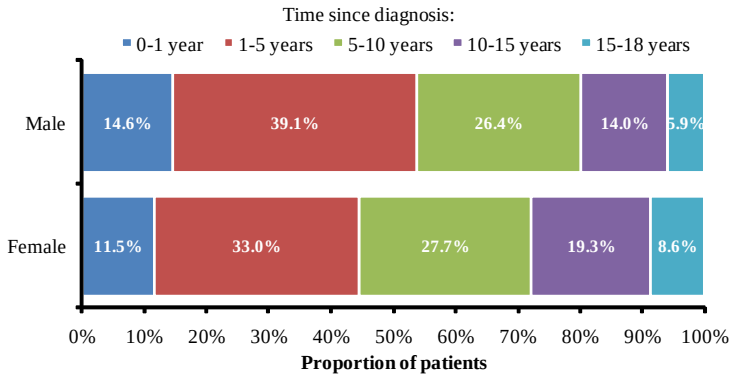
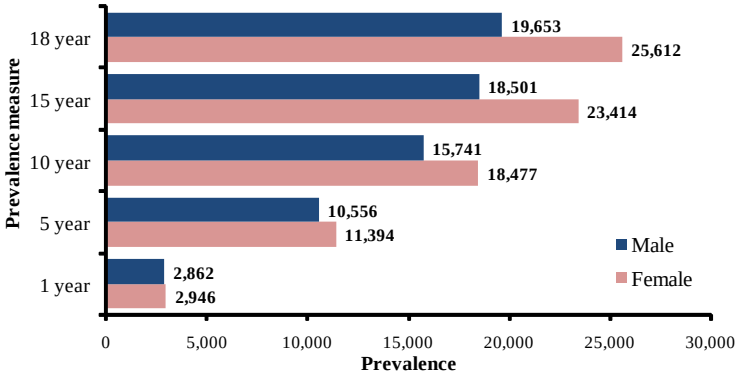


Figure S.2: Alternative prevalence measures (based upon time since diagnosis of first cancer) for all cancers (excluding NMSC) by sex



NMSC: Non-melanoma skin cancer

Cancer site

Prevalence varies considerably by cancer site. It is dependent upon the incidence of the cancer, survival from the cancer and deaths from other causes.

The cancer with the greatest prevalence is non-melanoma skin cancer among both men and women due to its high incidence and excellent survival. After this prostate cancer is the most common among men, while breast cancer is the most common among women.

Colorectal cancer is the third most prevalent cancer among males and females separately (or fourth among both sexes combined); however lung cancer, which is one of the most commonly diagnosed cancers, is only the ninth most prevalent cancer due to its poor survival rate.

Table S.2: Incidence, survival, mortality and prevalence of cancer by sex and cancer site

Cancer Site	Incidence per year (2006-2010)		Cancer mortality per year (2006-2010)		Five-year relative survival (2001-2005)		18-year prevalence (2010)	
	Male	Female	Male	Female	Male	Female	Male	Female
Head & Neck	190	83	63	27	60.2%	56.0%	1,207	503
Oesophageal	121	64	109	58	12.1%	14.5%	280	133
Stomach	137	91	84	60	16.0%	17.4%	371	241
Colorectal	622	509	238	195	50.7%	53.4%	3,491	3,136
Pancreatic	105	100	105	101	2.3%†		77	68
Lung	616	414	529	358	7.2%	9.9%	871	670
Melanoma	116	157	26	28	82.0%	94.2%	1,078	1,779
Non-melanoma skin	1,643	1,350	9	8	99.9%	99.3%	14,190	12,965
Breast	6	1,149	2	299	-	81.3%	53	11,393
Cervical	-	105	-	24	-	72.0%	-	1,041
Uterine	-	214	-	42	-	73.6%	-	1,818
Ovarian	-	158	-	121	-	33.8%	-	874
Prostate	965	-	226	-	79.8%	-	6,646	-
Testicular	59	-	2	-	97.5%	-	918	-
Kidney	154	100	56	41	44.2%	47.1%	838	573
Bladder	158	62	69	32	63.7%	48.5%	1,004	351
Brain	81	53	61	39	19.4%	20.2%	260	222
Lymphoma	178	170	54	55	61.8%	61.5%	1,317	1,285
Leukaemia	104	78	53	43	41.3%	42.6%	578	435
Unknown primary	131	176	120	137	12.2%	9.8%	233	319
All (ex. NMSC)	**4,080**	**4,000**	**2,039**	**1,855**	**45.9%**	**53.8%**	**19,653**	**25,612**
All (inc. NMSC)	**5,723**	**5,350**	**2,048**	**1,863**	**60.5%**	**64.7%**	**32,136**	**37,241**

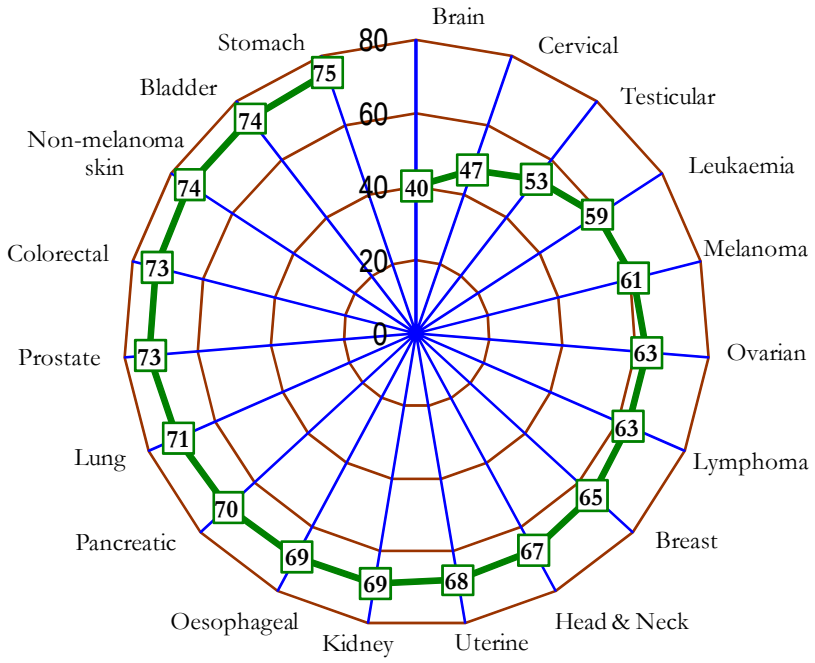
† *Male and Female combined; NMSC: Non-melanoma skin cancer*

Cancer site and age

The median age of cancer survivors diagnosed within the last 18 years at the end of 2010 ranged from 40 years of age for brain cancer survivors to 75 years of age for stomach cancer survivors.

The median age of survivors at the end of 2010 was similar to the median age at diagnosis for cancers with poor survival or more frequently diagnosed among the elderly, such as lung cancer. However it differed for those cancers with excellent survival which were also more commonly diagnosed among younger people, such as testicular cancer and melanoma.

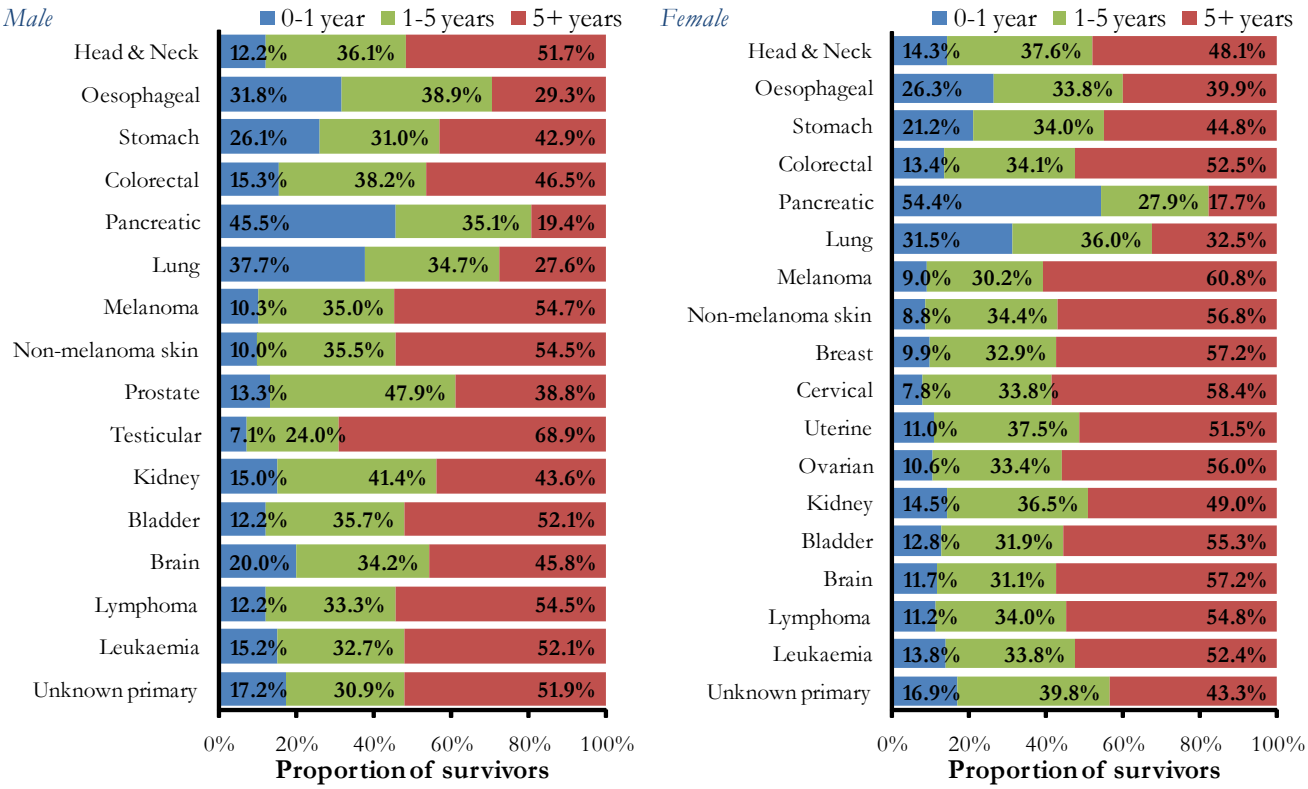
Figure S.3: Median age of cancer survivors diagnosed within the last 18 years at the end of 2010 by cancer site



Time since diagnosis

The proportion of survivors diagnosed within the last 18 years who were diagnosed less than one year ago varied depending upon how good or bad survival from the disease is. Thus 45.5% of male and 54.4% of female pancreatic cancer survivors were diagnosed during 2010, while only 10.3% of male melanoma and 9.0% of female melanoma survivors were diagnosed in 2010 as many melanoma patients survive a long time after their diagnosis.

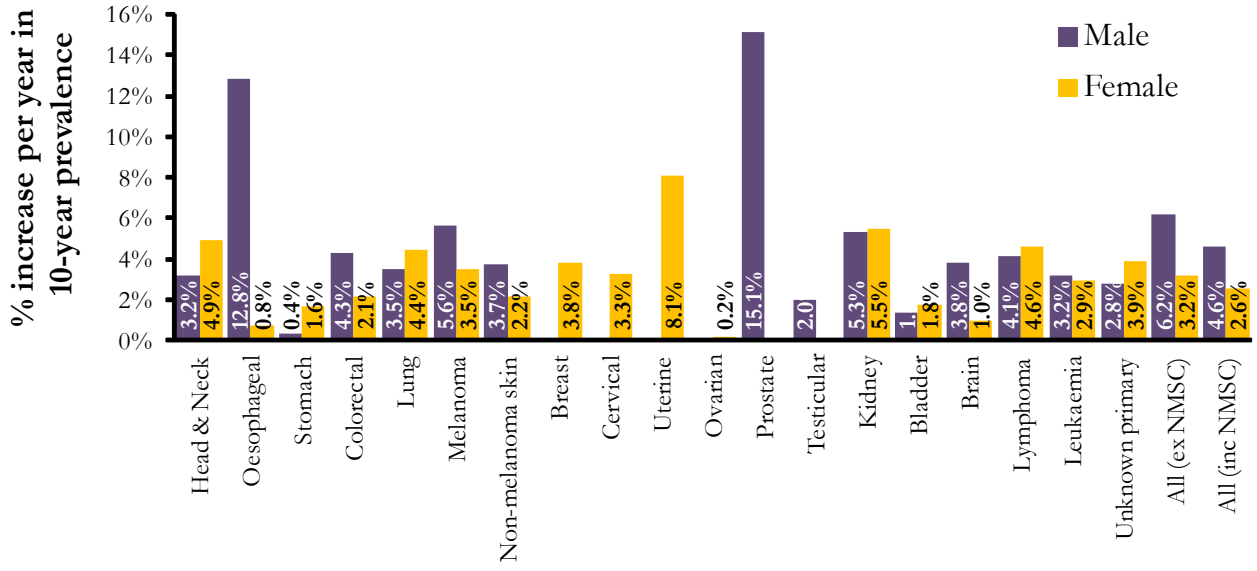
Figure S.4: 18-year prevalence by sex, cancer site and time since diagnosis



Trends in 10-year prevalence

To allow for analysis of the change in prevalence over time we look at a fixed period of time after diagnosis. Including NMSC the number of cancer survivors diagnosed within the previous 10 years increased by 4.6% for males and 2.6% for females each year between 2002 and 2010. Excluding NMSC the number of cancer survivors increased by 6.2% for males and 3.2% for females each year.

Figure S.5: Annual percentage increase in 10-year prevalence between 2002 and 2010 by cancer site and sex



Excluding those cancers with a small number of survivors, the average percentage increase in 10-year prevalence per year between 2002 and 2010 was greatest among male prostate and oesophageal cancer, both of which saw the number of survivors more than double over the eight year period. Among females the percentage increase was greatest for uterine and kidney cancers.

The increases were caused by several factors. Incidence of cancer increased due to the increase and ageing of the Northern Ireland population, with incidence of many cancers also increasing due to increases in lifestyle related risk factors (e.g. increases in obesity leading to a rise in uterine cancer) and changes in diagnostic procedures (e.g. increases in the use of PSA testing leading to a rise in diagnosis of prostate cancer). In addition, improvements in survival from cancer, greater completeness of cancer registration and reductions in the number of deaths from other diseases (such as heart disease) have also contributed to the increase in the number of cancer survivors.

Area of residence

18-year cancer prevalence (excluding NMSC) at the end of 2010 in each Health and Social Care Trust ranged from 5,018 males and 6,447 females in the Northern Trust to 3,075 males and 3,775 females in the Western Trust. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

18-year cancer prevalence at the end of 2010 in each Local Government District (LGD) ranged from 475 in Moyle LGD to 7,038 in Belfast LGD.

Figure S.6: 18-year prevalence from all cancers (excluding NMSC) by Local Government District

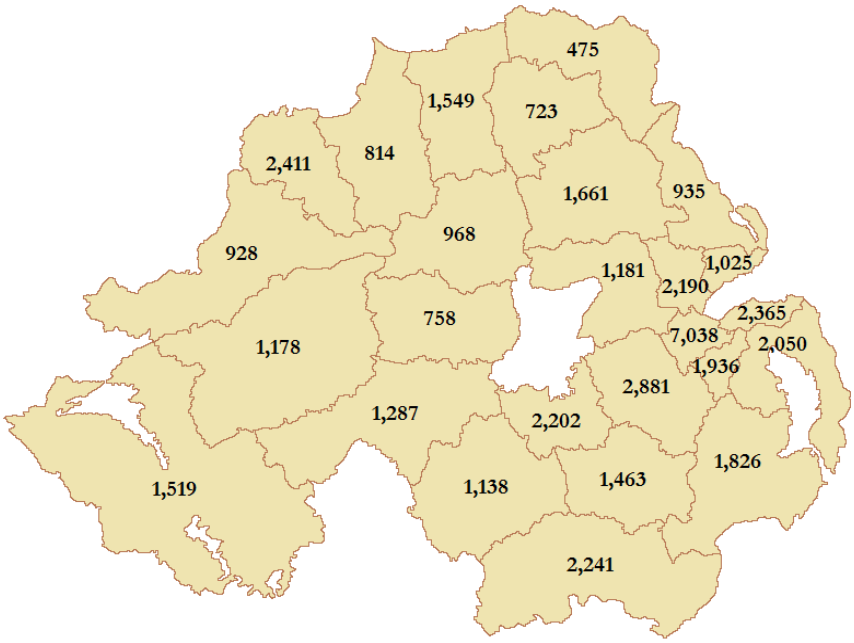


Table S.3: 18-year prevalence of cancer in Northern Ireland by sex, and Health and Social Care Trust of residence

Sex and cancer site	Health and Social Care Trust						Northern Ireland
	Belfast	Northern	South-Eastern	Southern	Western	Unknown	
Male							
Non-melanoma skin	2,465	3,425	2,670	2,763	1,905	962	**14,190**
Prostate	1,105	1,744	1,318	1,301	1,102	76	**6,646**
Colorectal	655	947	723	609	528	29	**3,491**
Lung	232	197	148	138	130	26	**871**
All cancers (ex. NMSC)	3,715	5,018	3,902	3,659	3,075	284	**19,653**
All cancers (inc. NMSC)	**5,859**	**8,018**	**6,193**	**6,068**	**4,763**	**1,235**	**32,136**
Female							
Non-melanoma skin	2,578	3,018	2,639	2,513	1,587	630	**12,965**
Breast	2,243	2,935	2,372	2,082	1,705	56	**11,393**
Colorectal	631	790	653	533	505	24	**3,136**
Lung	199	141	121	90	101	18	**670**
All cancers (ex. NMSC)	5,259	6,447	5,220	4,672	3,775	239	**25,612**
All cancers (inc. NMSC)	**7,552**	**9,149**	**7,576**	**6,907**	**5,194**	**863**	**37,241**

NMSC: Non-melanoma skin cancer

01 Introduction

As the population in Northern Ireland increases and ages, the number of people being diagnosed with cancer is steadily increasing. Over the last 18 years the number of cancers diagnosed each year increased from 8,389 in 1993 to 11,399 in 2010[1]. In addition cancer survival has improved over this time period while deaths from non cancer related factors such as heart disease has decreased[2]. Consequently the number of people living in Northern Ireland that have had a diagnosis of cancer at some point has increased dramatically. This measure is known as cancer prevalence. It includes people diagnosed with cancer in the past as well those who were recently diagnosed and some who are cured

The data in this report provides those working with cancer some idea of numbers ever diagnosed, how many are recently diagnosed, their ages and the types of cancer they have had. It also lets us see that cancer is not a death sentence and many people in N. Ireland with cancer live long lives.

It is a complicated and in some ways arbitrary measure in that its interpretation is difficult especially given that there is no exact point at which cancer is considered cured. While some people diagnosed with cancer may be cancer free within a few years, others may need treatment for a considerable length of time. Thus in order to develop prevalence figures, either an assumption must be made as to an average "cure" point (sometimes arbitrarily taken as being five or ten years) or all people who have been diagnosed with cancer and are still alive at a certain point must be included. The cancer registry in Northern Ireland has information on people diagnosed with cancer from 1993 onwards. However with regard to measuring prevalence, this means that there is no information on members of the population who had a diagnosis of cancer prior to 1993. Thus any prevalence figures produced are an undercount of the true value.

With these difficulties in mind this report consequently presents a range of prevalence measures: one-year, five-year, ten-year, fifteen-year and eighteen-year. These refer to the number of people who are alive and living in Northern Ireland on the 31st December 2010 and have previously been diagnosed with cancer up to one, five, ten, fifteen and eighteen years ago respectively. It is also worth highlighting that cancer prevalence is based upon patients rather than tumours and only the first diagnosed tumour of the cancer type under consideration is counted. Thus if a patient has been diagnosed with one colorectal tumour and one breast tumour from 1993 onwards they contribute to both the colorectal cancer and breast cancer prevalence count, however they contribute only once to the all cancers count. Similarly a patient with two breast cancers from 1993 onwards contributes only once to the breast cancer count.

Cancer prevalence provides a much needed indicator of the burden of cancer within Northern Ireland and thereby informs health service planning particularly with regard to providing care for those directly or indirectly affected by cancer. The choice of prevalence measure used in such planning however can vary. One-year prevalence is highly correlated with incidence and therefore is an indication of the number of people still requiring active treatment. Five-year and ten-year prevalence are correlated with both incidence and survival with many of these people still requiring active treatment, follow up care or monitoring for recurrences, while eighteen-year prevalence encompasses these patients plus those

suffering from long term side effects from their treatment. These figures will also include those patients who are now completely free from their cancer and require no further health service intervention.

In addition to the cancer prevalence figures we have provided cancer incidence, mortality and survival data. Incidence data is a good measure of the resource needed for diagnostic and initial treatment, cancer mortality data quantifies the needs for palliative and terminal care and cancer survival data provides a measure of the effectiveness of the health service in its treatment of cancer.

The data in this report is for all malignant cancers diagnosed between 1993 and 2010 registered by the NI Cancer Registry. In addition to all cancers including and excluding non-melanoma skin cancer we provide data for 19 common cancers plus data for those with an unknown primary cancer. Prevalence is influenced by both incidence and survival, thus some cancers which are commonly diagnosed but have poor survival (such as lung cancer) can have lower prevalence than less commonly diagnosed cancers which have good survival (such as melanoma).

Where possible we have broken down cancer prevalence by area of residence. The level of detail depends upon the number of patients, as preserving patient confidentiality is of paramount importance in any report of this nature. Thus Local Government District is provided for some of the more common cancers, while Health and Social Care Trust of residence is provided for the remainder.

This report gives a detailed account of cancer prevalence in Northern Ireland. We hope that it will help inform medical and health policy makers in the decisions they face in the planning of treatment and support services for individuals having had a recent diagnosis of cancer and those still suffering from side effects of cancer treatment in the past.

02 All cancers (including non-melanoma skin cancer) (C00-C97)

On average there were 11,073 cases of cancer (including non-melanoma skin cancer (NMSC)) diagnosed each year during 2006-2010 in Northern Ireland, while 3,911 people died each year from the disease. Relative survival from the disease was 74.8% after one year and 62.6% after five years, although this varied considerably depending upon the type of cancer. (Tab. 2.1)

Table 2.1: Summary statistics for all cancers (including NMSC)

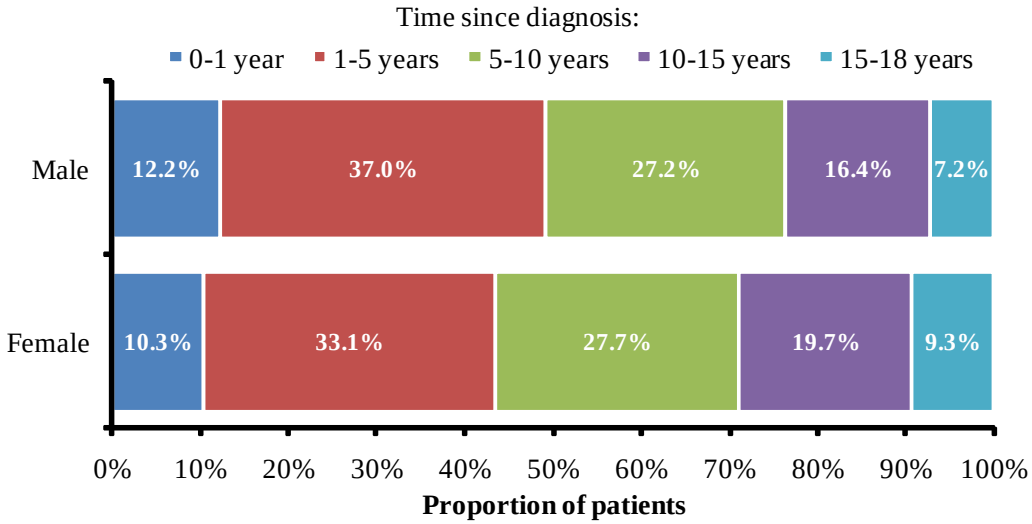
	Males	Females	Both sexes
New cases diagnosed per year (2006-2010)	5,723	5,350	11,073
Deaths per year (2006-2010)	2,048	1,863	3,911
1-year relative survival (diagnosed 2001-2005)	72.8%	76.7%	74.8%
5-year relative survival (diagnosed 2001-2005)	60.5%	64.7%	62.6%
10-year prevalence (2010)*	24,555	26,476	51,031
18-year prevalence (2010)**	32,136	37,241	69,377

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of cancer survivors at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 69,377.

- Among males there were 32,136 survivors. 12.2% had been diagnosed within the previous year while 7.2% had been diagnosed between 15 and 18 years ago.
- Among females there were 37,241 survivors. 10.3% had been diagnosed within the previous year while 9.3% had been diagnosed between 15 and 18 years ago. (Fig. 2.1)

Figure 2.1: 18-year prevalence of all cancers (including NMSC) by sex and time since diagnosis

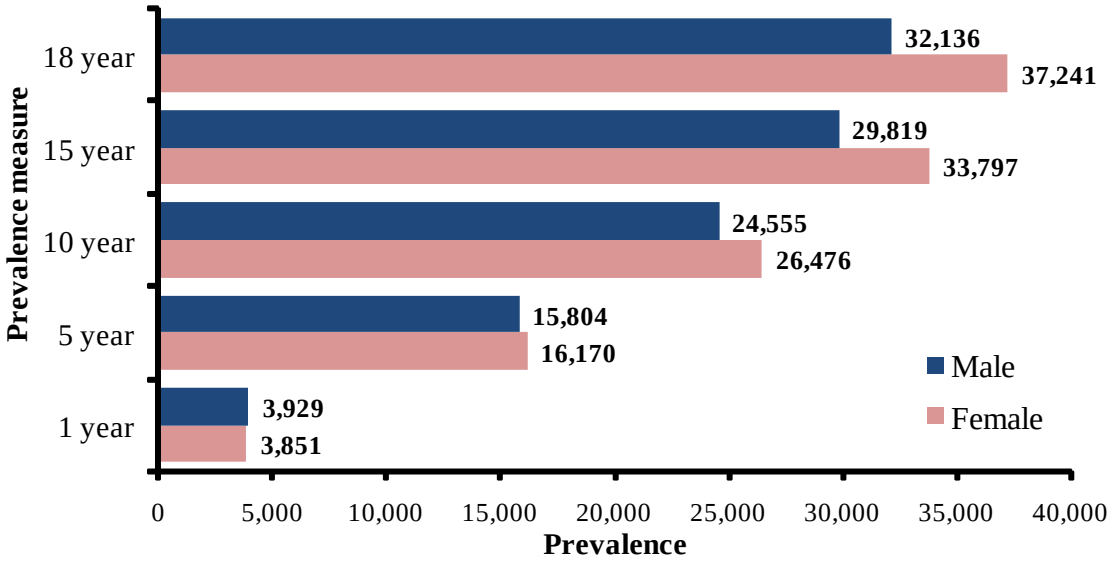


The 18-year prevalence represents all patients diagnosed with cancer during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 7,780 (Male: 3,929, Female: 3,851).

- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 31,974 (Male: 15,804, Female: 16,170).
- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 51,031 (Male: 24,555, Female: 26,476). (Fig. 2.2)

Figure 2.2: Different prevalence measures (based upon time since diagnosis) for all cancers (including NMSC) by sex



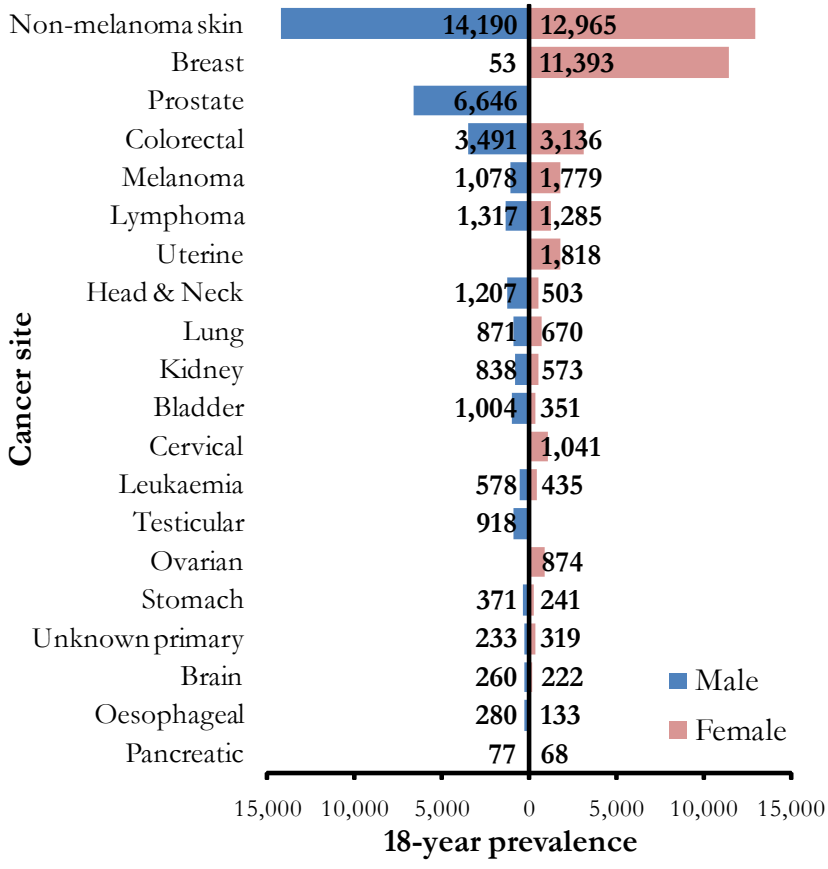
2.1: Prevalence by site

Prevalence varies considerably by cancer site. It is dependent upon incidence of the cancer, survival from the cancer and deaths from other causes. The later of these will be more frequent among patients with cancers more commonly diagnosed at an older age (e.g. prostate cancer).

The cancer with the greatest prevalence is non-melanoma skin cancer among both men and women due to its high incidence and excellent survival. After this prostate cancer is the most common among men, while breast cancer is the most common among women.

Colorectal cancer is the third most prevalent cancer among

Figure 2.3: 18-year prevalence of all cancers (including NMSC) by sex and cancer site



males and females separately (or fourth among both sexes combined); however lung cancer, which is one of the most commonly diagnosed cancers, is only the ninth most prevalent cancer due to its poor survival rate. (Fig. 2.3, Tab. 2.2)

Table 2.2: Different prevalence measures (based upon time since diagnosis) for all cancers (including NMSC) by sex and cancer type

Cancer type	Sex	Prevalence 2010				
		One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Head & neck cancer	Male	147	583	911	1,118	1,207
	Female	72	261	395	472	503
	Both sexes	219	844	1,306	1,590	1,710
Oesophageal cancer	Male	89	198	245	275	280
	Female	35	80	105	120	133
	Both sexes	124	278	350	395	413
Stomach cancer	Male	97	212	287	343	371
	Female	51	133	189	225	241
	Both sexes	148	345	476	568	612
Colorectal cancer	Male	533	1,866	2,743	3,278	3,491
	Female	421	1,489	2,306	2,904	3,136
	Both sexes	954	3,355	5,049	6,182	6,627
Pancreatic cancer	Male	35	62	70	76	77
	Female	37	56	63	66	68
	Both sexes	72	118	133	142	145
Lung cancer	Male	328	630	757	838	871
	Female	211	452	579	640	670
	Both sexes	539	1,082	1,336	1,478	1,541
Malignant melanoma	Male	111	488	791	982	1,078
	Female	160	698	1,215	1,576	1,779
	Both sexes	271	1,186	2,006	2,558	2,857
Non-melanoma skin cancer	Male	1,422	6,463	10,381	13,007	14,190
	Female	1,141	5,596	9,160	11,696	12,965
	Both sexes	2,563	12,059	19,541	24,703	27,155
Breast cancer	Male	5	18	34	49	53
	Female	1,133	4,883	8,216	10,451	11,393
	Both sexes	1,138	4,901	8,250	10,500	11,446
Cervical cancer	Female	81	433	695	931	1,041
Uterine cancer	Female	200	882	1,391	1,695	1,818
Ovarian cancer (ex. borderline)	Female	93	385	619	785	874
Prostate cancer	Male	881	4,065	5,976	6,513	6,646
Testicular cancer	Male	65	285	566	801	918

Table 2.2 cont. Different prevalence measures (based upon time since diagnosis) for all cancers (including NMSC) by sex and cancer type

Cancer site	Sex	Prevalence 2010				
		One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Kidney cancer	Male	126	473	649	779	838
	Female	83	292	431	533	573
	Both sexes	209	765	1,080	1,312	1,411
Bladder cancer	Male	122	480	759	932	1,004
	Female	45	157	247	331	351
	Both sexes	167	637	1,006	1,263	1,355
Brain cancer (including central nervous system)	Male	52	141	201	243	260
	Female	26	95	153	198	222
	Both sexes	78	236	354	441	482
Lymphoma	Male	161	599	958	1,193	1,317
	Female	144	581	958	1,182	1,285
	Both sexes	305	1,180	1,916	2,375	2,602
Leukaemia	Male	88	277	431	526	578
	Female	60	207	322	400	435
	Both sexes	148	484	753	926	1,013
Cancer of unknown primary	Male	40	112	179	214	233
	Female	54	181	244	287	319
	Both sexes	94	293	423	501	552
All cancers excluding NMSC*	Male	2,862	10,556	15,741	18,501	19,653
	Female	2,946	11,394	18,477	23,414	25,612
	Both sexes	5,808	21,950	34,218	41,915	45,265
All cancers including NMSC*	Male	3,929	15,804	24,555	29,819	32,136
	Female	3,851	16,170	26,476	33,797	37,241
	Both sexes	7,780	31,974	51,031	63,616	69,377

** Prevalence figures for all cancers including and excluding NMSC include prevalence of rarer cancer sites (such as cancer of the small intestine, vulva and penis) not detailed in the table.*

2.2: Prevalence by age

Since cancer is a disease which occurs primarily among the elderly, prevalence of the disease is greater among older age groups (Fig. 2.4, Tab 2.3):

Among cancer survivors diagnosed within the last 10 years:

- 10% of male survivors were aged under 50, while 20% were aged 80 and over.
- 16% of female survivors were aged under 50, while 21% were aged 80 and over.

Among cancer survivors diagnosed within the last 18 years:

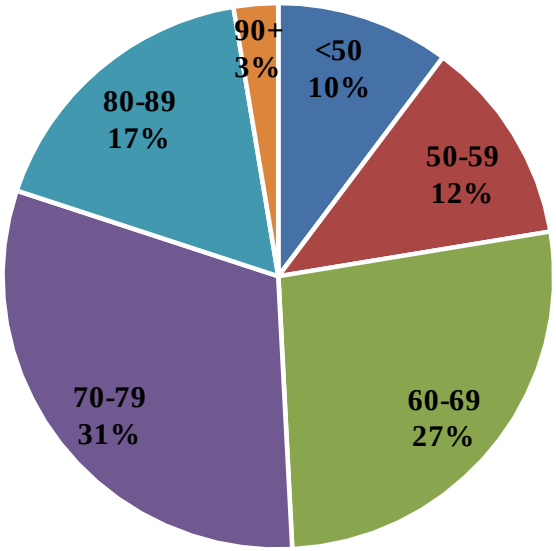
- 10% of male survivors were aged under 50, while 23% were aged 80 and over.
- 14% of female survivors were aged under 50, while 24% were aged 80 and over.

Table 2.3: Different prevalence measures (based upon time since diagnosis) for all cancers (including NMSC) by sex and age at the end of 2010

Sex and age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
MALE							
Under 50	491	92	426	1,638	2,508	3,060	3,306
50-59	741	206	589	2,089	2,990	3,490	3,725
60-69	1,567	488	1,106	4,476	6,582	7,602	7,988
70-79	1,820	692	1,147	4,815	7,580	9,119	9,715
80-89	993	498	590	2,464	4,251	5,537	6,129
90 and over	110	72	71	322	644	1,011	1,273
All ages	**5,723**	**2,048**	**3,929**	**15,804**	**24,555**	**29,819**	**32,136**
FEMALE							
Under 50	803	122	711	2,829	4,176	4,893	5,202
50-59	799	201	606	2,755	4,409	5,393	5,749
60-69	1,170	369	924	3,731	6,222	7,983	8,746
70-79	1,365	546	905	3,735	6,104	7,974	8,877
80-89	1,000	504	587	2,511	4,396	5,828	6,581
90 and over	213	121	118	609	1,169	1,726	2,086
All ages	**5,350**	**1,863**	**3,851**	**16,170**	**26,476**	**33,797**	**37,241**
BOTH SEXES							
Under 50	1,294	214	1,137	4,467	6,684	7,953	8,508
50-59	1,540	407	1,195	4,844	7,399	8,883	9,474
60-69	2,738	857	2,030	8,207	12,804	15,585	16,734
70-79	3,185	1,237	2,052	8,550	13,684	17,093	18,592
80-89	1,993	1,002	1,177	4,975	8,647	11,365	12,710
90 and over	324	194	189	931	1,813	2,737	3,359
All ages	**11,073**	**3,911**	**7,780**	**31,974**	**51,031**	**63,616**	**69,377**

Figure 2.4a: 10-year prevalence of all cancers (including NMSC) by sex and age at the end of 2010

Male



Female

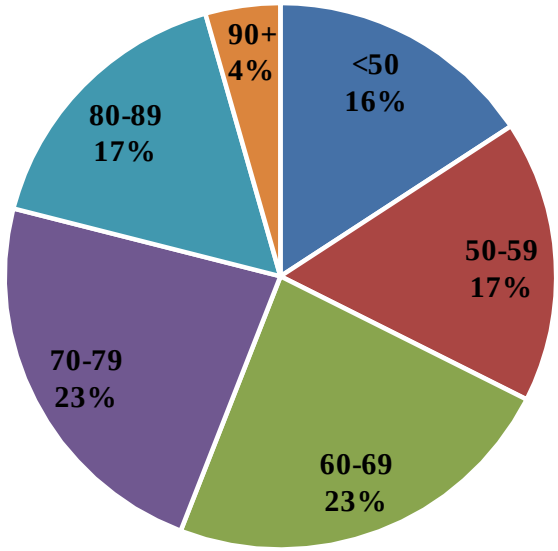
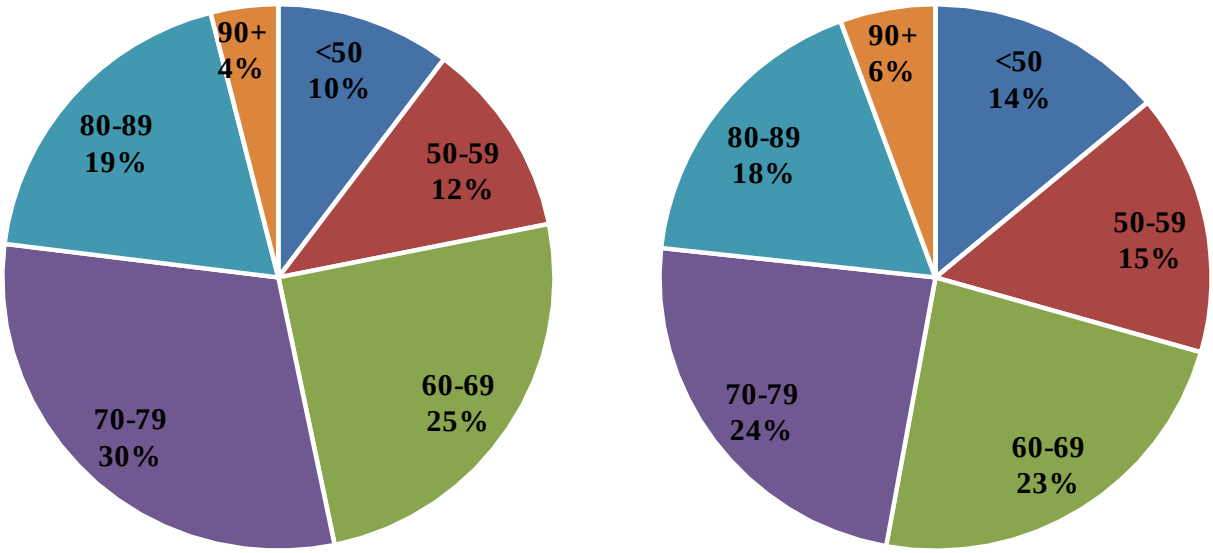


Figure 2.4b: 18-year prevalence of all cancers (including NMSC) by sex and age at the end of 2010

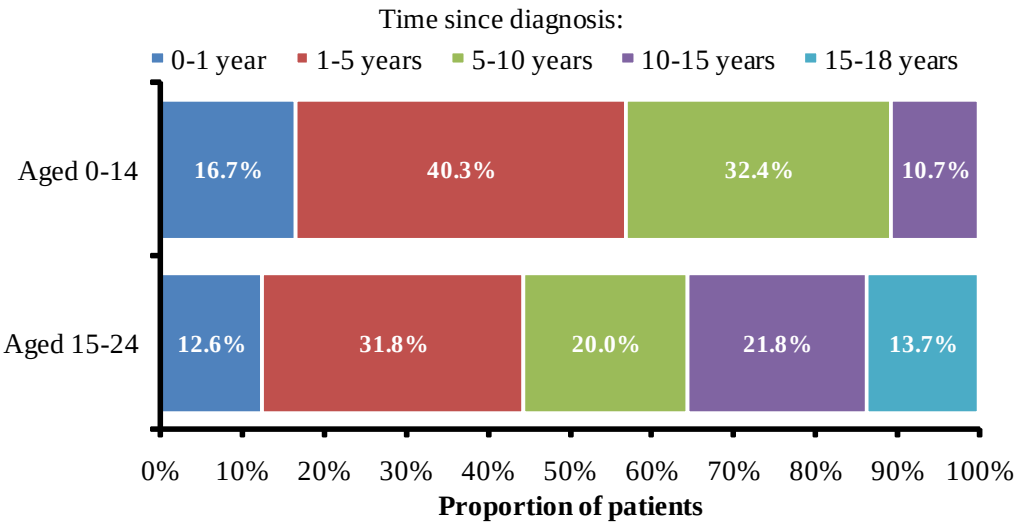
Male *Female*



2.3: Prevalence among children and young people

There was an average of 123 cases of cancer diagnosed each year during 2006-2010 in Northern Ireland among children and young people (49 aged 0-14, 74 aged 15-24), while 20 died each year from the disease.

Figure 2.5: 18-year prevalence of all cancers (including NMSC) among children and young people by time since diagnosis



The number of survivors at the end of 2010 in this age group who had been diagnosed since 1993 (18-year prevalence) was 849.

- Among children aged 0-14 there were 318 survivors, 56.9% of which were diagnosed within the last five years.[1]
- Among young people aged 15-24 there were 531 survivors, 44.4% of which were diagnosed within the last five years. (Fig. 2.5, Tab. 2.4)

[1] *Due to ageing the maximum fixed term prevalence for children is 14-year prevalence, thus the 10-15 year category in figure 2.5 represents 10-14 years, while the 15-18 category cannot have children aged 0-14*

Table 2.4: Different prevalence measures (based upon time since diagnosis) for all cancers (including NMSC) among children and young people by age at the end of 2010

Sex and age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
0-4	24	3	28	63	63	63	63
5-9	12	2	15	71	110	110	110
10-14	13	4	10	47	111	145	145
15-19	27	5	23	81	125	192	227
20-24	47	6	44	155	217	266	304
All ages (0-24)	**123**	**20**	**120**	**417**	**626**	**776**	**849**

These figures however do not represent all people in the population who were diagnosed with cancer when they were children or aged 15 to 24, as at the end of 2010 many will be aged 25 and over. The number of people in the population diagnosed with cancer when they were aged under 25 in presented in table 2.5 along with their age at the end of 2010.

The total number of survivors is 1,562, with 645 of these people diagnosed when they were children and 917 diagnosed when they were aged 15-24. This however only represents people diagnosed within the last 18 years and data beyond that point is not available. There will thus be additional people in the population who were diagnosed with cancer under the age of 24 prior to 1993. (Tab. 2.5)

Table 2.5: 18-year prevalence of all cancers (including NMSC) among people diagnosed when aged under 25 by age at diagnosis and age at the end of 2010

Age at the end of 2010	Age at diagnosis					
	0-4	5-9	10-14	15-19	20-24	All ages (0-24)
0-4	63	-	-	-	-	**63**
5-9	80	30	-	-	-	**110**
10-14	68	51	26	-	-	**145**
15-19	82	42	49	54	-	**227**
20-24	14	49	45	96	100	**304**
25-29	-	5	32	75	187	**299**
30-34	-	-	9	64	143	**216**
35-39	-	-	-	19	140	**159**
40-44	-	-	-	-	39	**39**
All ages (0-44)	**307**	**177**	**161**	**308**	**609**	**1,562**

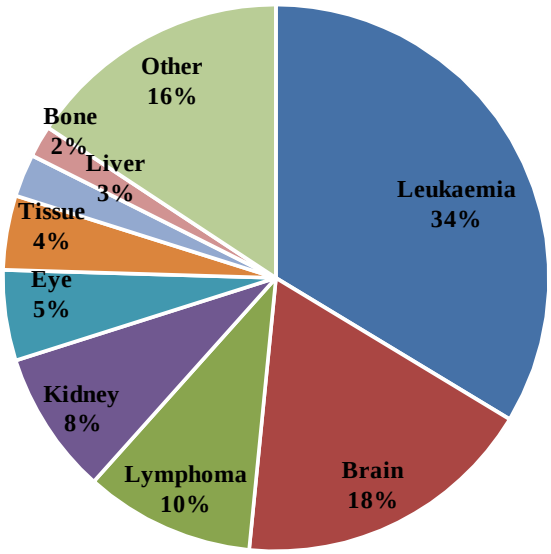
Cancer site

Among the 318 children living with cancer or a past cancer diagnosis at the end of 2010, 33.6% (107 children) had leukaemia, 17.9% (57 children) had brain cancer, 10.1% (32 children) had lymphoma and 8.5% (27 children) had kidney cancer.

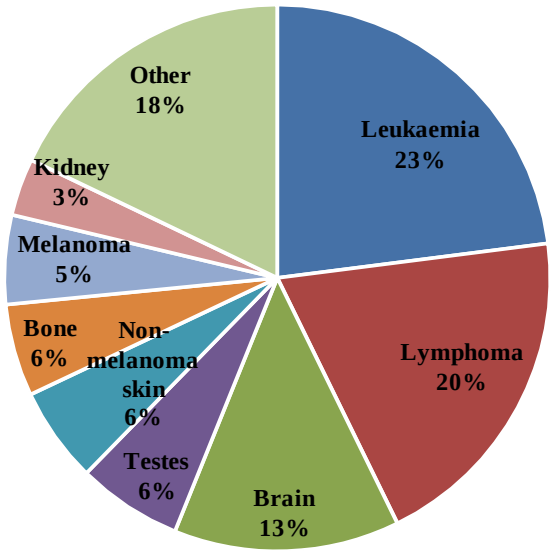
Among the 531 people aged 15-24 and living with cancer or a past cancer diagnosis (within the last 18 years) at the end of 2010, 23.0% (122 people) had leukaemia, 19.8% (105 people) had lymphoma and 13.4% (71 people) had brain cancer. Testicular cancer (6.2%), non-melanoma skin cancer (5.6%), bone cancer (5.5%) and malignant melanoma (5.3%) were also common among this group. (Fig. 2.6)

Figure 2.6: 18-year prevalence of all cancers (including NMSC) among children and young people by site and age at the end of 2010

Children (aged 0-14)



Young people (aged 15-24)

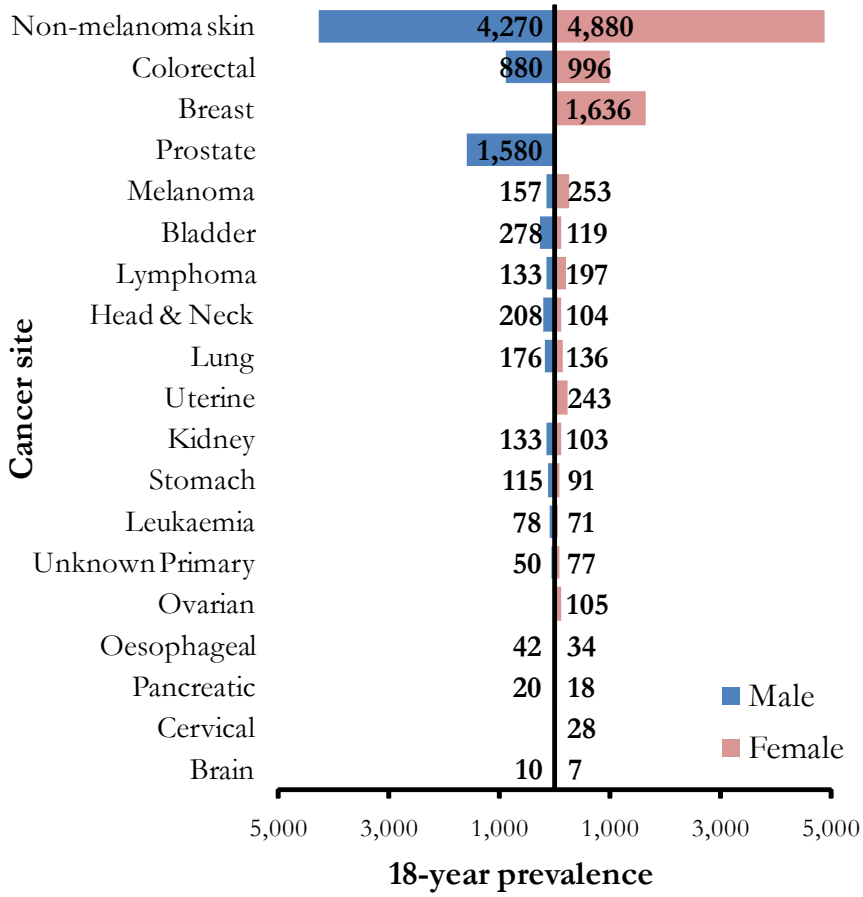


2.4: Prevalence among the elderly

At the end of 2010 there were 16,069 people (7,402 male and 8,667 female) aged 80 and over who had had a diagnosis of at least one cancer within the previous 18 years. 2,432 of these people had more than one cancer.

The most common cancer among this group was non-melanoma skin cancer, followed by colorectal cancer. However considering men and women separately, breast cancer was the second most prevalent female cancer while prostate cancer was the second most prevalent male cancer. (Fig. 2.7)

Figure 2.7: 18-year prevalence of all cancers (including NMSC) among the elderly (aged 80+) by sex and cancer site



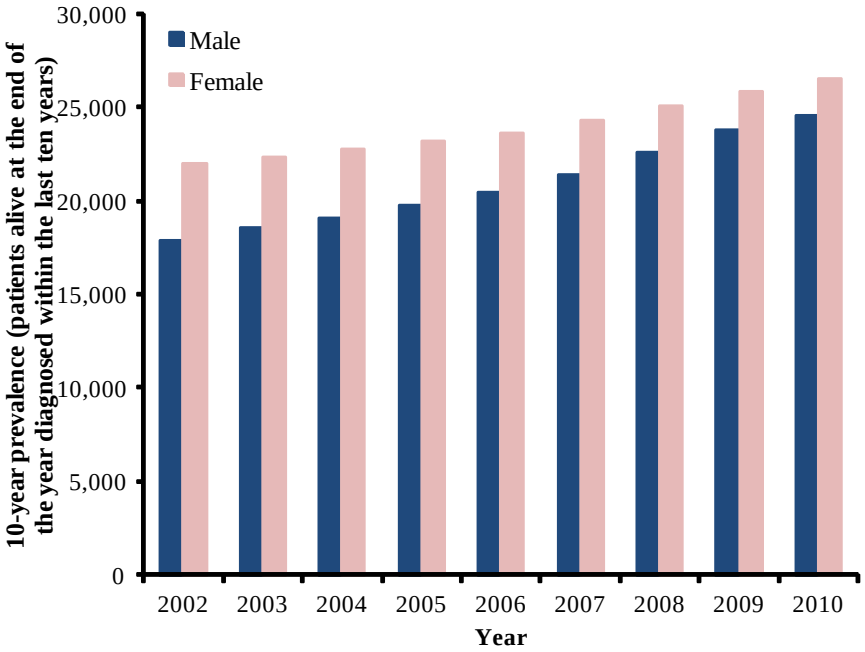
2.5: Prevalence trends

Ten-year prevalence of all cancers (including NMSC) is increasing, rising from 17,912 male and 21,986 female survivors in 2002 to 24,555 male and 26,476 female survivors in 2010. Part of the change in earlier years is an expected artefact of establishing a new cancer registry. (Fig. 2.8a)

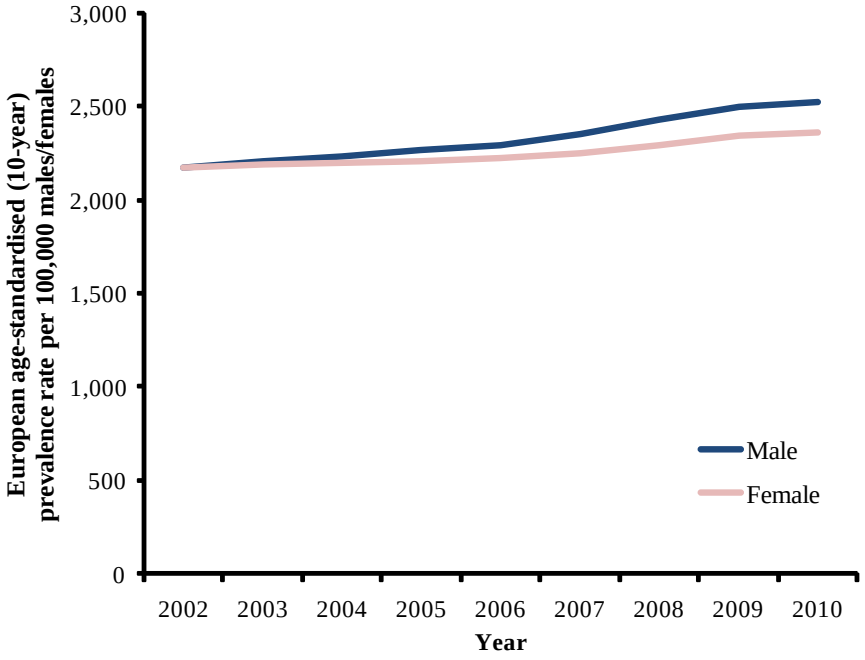
Part of the increasing trend however is due to the growth and ageing of the population. Adjusting for these factors using European age-standardised rates illustrates an underlying increase in prevalence. Specifically prevalence rates increased between 2002 and 2006 by 1.4% per year among men and by 0.6% per year among women. Since then the rate of increase has accelerated. Age-standardised rates increased between 2006 and 2010 by 2.6% per year among men and by 1.6% per year among women. (Fig. 2.8b)

Figure 2.8: Trends in 10-year prevalence of all cancers (including NMSC) by sex

(a) Number of patients



(b) Age-standardised rates (per 100,000 persons)



2.6: Geographic variation

Table 2.6 presents the various prevalence measures by area of residence. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

Table 2.6: Different prevalence measures (based upon time since diagnosis) for all cancers (including NMSC) by Health and Social Care Trust (HSCT) and Local Government District (LGD) of residence at diagnosis

MALE

HSCT and LGD of residence	Cases per year 2006-2010	Deaths per year 2006-2010	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
BELFAST HSCT							
Belfast	933	392	568	2,315	3,504	4,249	4,575
Castlereagh	232	85	164	627	1,000	1,202	1,284
TOTAL	**1,165**	**477**	**732**	**2,942**	**4,504**	**5,451**	**5,859**
NORTHERN HSCT							
Antrim	148	54	109	423	654	764	811
Ballymena	207	65	168	612	902	1,086	1,152
Ballymoney	102	35	57	271	410	491	514
Carrickfergus	140	53	105	375	579	688	741
Coleraine	195	65	150	566	877	1,029	1,099
Cookstown	106	35	68	303	476	547	581
Larne	110	43	63	298	479	572	612
Magherafelt	122	39	87	349	555	650	682
Moyle	58	20	39	176	293	348	364
Newtownabbey	280	105	196	762	1,143	1,362	1,462
TOTAL	**1,467**	**513**	**1,042**	**4,135**	**6,368**	**7,537**	**8,018**
SOUTH-EASTERN HSCT							
Ards	253	99	154	670	1,041	1,273	1,351
Down	234	73	171	690	1,036	1,242	1,338
Lisburn	338	120	227	955	1,456	1,802	1,932
North Down	282	96	196	758	1,199	1,453	1,572
TOTAL	**1,107**	**388**	**748**	**3,073**	**4,732**	**5,770**	**6,193**
SOUTHERN HSCT							
Armagh	185	61	108	516	792	978	1,057
Banbridge	138	44	103	411	647	787	847
Craigavon	281	101	185	744	1,176	1,448	1,577
Dungannon	162	57	100	444	697	849	914
Newry & Mourne	283	98	172	757	1,244	1,544	1,673
TOTAL	**1,049**	**362**	**668**	**2,872**	**4,556**	**5,606**	**6,068**
WESTERN HSCT							
Derry	293	102	244	840	1,270	1,535	1,647
Fermanagh	194	72	119	527	831	991	1,072
Limavady	96	34	62	288	437	514	544
Omagh	150	50	135	458	686	815	869
Strabane	115	45	91	317	508	591	631
TOTAL	**848**	**303**	**651**	**2,430**	**3,732**	**4,446**	**4,763**
Unknown	**87**	**5**	**88**	**352**	**663**	**1,009**	**1,235**
Northern Ireland	**5,723**	**2,048**	**3,929**	**15,804**	**24,555**	**29,819**	**32,136**

Table 2.6 cont. Different prevalence measures (based upon time since diagnosis) for all cancers (including NMSC) by Health and Social Care Trust (HSCT) and Local Government District (LGD) of residence at diagnosis

FEMALE

HSCT and LGD of residence	Cases per year 2006-2010	Deaths per year 2006-2010	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
BELFAST HSCT							
Belfast	909	360	617	2,556	4,201	5,367	5,926
Castlereagh	218	80	175	678	1,163	1,468	1,626
TOTAL	**1,127**	**440**	**792**	**3,234**	**5,364**	**6,835**	**7,552**
NORTHERN HSCT							
Antrim	143	44	99	443	709	862	939
Ballymena	194	66	144	597	928	1,186	1,291
Ballymoney	89	30	85	268	449	534	587
Carrickfergus	126	44	88	390	662	817	884
Coleraine	192	67	129	567	924	1,163	1,258
Cookstown	93	32	53	281	457	559	604
Larne	106	40	69	316	534	673	734
Magherafelt	104	37	78	319	533	660	734
Moyle	58	19	48	168	263	323	358
Newtownabbey	245	86	185	735	1,248	1,599	1,760
TOTAL	**1,350**	**466**	**978**	**4,084**	**6,707**	**8,376**	**9,149**
SOUTH-EASTERN HSCT							
Ards	243	80	184	743	1,202	1,556	1,704
Down	213	69	162	648	1,074	1,362	1,498
Lisburn	335	108	225	1,010	1,709	2,149	2,349
North Down	275	99	176	850	1,435	1,856	2,025
TOTAL	**1,066**	**356**	**747**	**3,251**	**5,420**	**6,923**	**7,576**
SOUTHERN HSCT							
Armagh	171	61	122	511	831	1,065	1,174
Banbridge	125	39	90	390	623	818	915
Craigavon	260	87	157	786	1,279	1,648	1,835
Dungannon	146	49	126	443	717	937	1,041
Newry & Mourne	263	95	186	816	1,347	1,764	1,942
TOTAL	**964**	**331**	**681**	**2,946**	**4,797**	**6,232**	**6,907**
WESTERN HSCT							
Derry	290	102	224	884	1,353	1,729	1,880
Fermanagh	170	59	122	524	807	1,029	1,118
Limavady	82	26	64	257	417	542	598
Omagh	127	43	93	392	598	777	862
Strabane	112	36	96	361	543	670	736
TOTAL	**781**	**266**	**599**	**2,418**	**3,718**	**4,747**	**5,194**
Unknown	**63**	**4**	**54**	**237**	**470**	**684**	**863**
Northern Ireland	**5,350**	**1,863**	**3,851**	**16,170**	**26,476**	**33,797**	**37,241**

Table 2.6 cont. Different prevalence measures (based upon time since diagnosis) for all cancers (including NMSC) by Health and Social Care Trust (HSCT) and Local Government District (LGD) of residence at diagnosis

BOTH SEXES

HSCT and LGD of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
BELFAST HSCT							
Belfast	1,842	752	1,185	4,871	7,705	9,616	10,501
Castlereagh	450	165	339	1,305	2,163	2,670	2,910
TOTAL	**2,292**	**917**	**1,524**	**6,176**	**9,868**	**12,286**	**13,411**
NORTHERN HSCT							
Antrim	291	97	208	866	1,363	1,626	1,750
Ballymena	402	131	312	1,209	1,830	2,272	2,443
Ballymoney	191	65	142	539	859	1,025	1,101
Carrickfergus	266	97	193	765	1,241	1,505	1,625
Coleraine	387	133	279	1,133	1,801	2,192	2,357
Cookstown	199	68	121	584	933	1,106	1,185
Larne	215	83	132	614	1,013	1,245	1,346
Magherafelt	226	75	165	668	1,088	1,310	1,416
Moyle	115	39	87	344	556	671	722
Newtownabbey	525	191	381	1,497	2,391	2,961	3,222
TOTAL	**2,817**	**979**	**2,020**	**8,219**	**13,075**	**15,913**	**17,167**
SOUTH-EASTERN HSCT							
Ards	496	179	338	1,413	2,243	2,829	3,055
Down	447	142	333	1,338	2,110	2,604	2,836
Lisburn	673	228	452	1,965	3,165	3,951	4,281
North Down	557	195	372	1,608	2,634	3,309	3,597
TOTAL	**2,173**	**745**	**1,495**	**6,324**	**10,152**	**12,693**	**13,769**
SOUTHERN HSCT							
Armagh	356	122	230	1,027	1,623	2,043	2,231
Banbridge	262	83	193	801	1,270	1,605	1,762
Craigavon	541	189	342	1,530	2,455	3,096	3,412
Dungannon	308	106	226	887	1,414	1,786	1,955
Newry & Mourne	546	193	358	1,573	2,591	3,308	3,615
TOTAL	**2,013**	**693**	**1,349**	**5,818**	**9,353**	**11,838**	**12,975**
WESTERN HSCT							
Derry	582	204	468	1,724	2,623	3,264	3,527
Fermanagh	365	131	241	1,051	1,638	2,020	2,190
Limavady	178	61	126	545	854	1,056	1,142
Omagh	277	93	228	850	1,284	1,592	1,731
Strabane	227	81	187	678	1,051	1,261	1,367
TOTAL	**1,629**	**569**	**1,250**	**4,848**	**7,450**	**9,193**	**9,957**
Unknown	**150**	**9**	**142**	**589**	**1,133**	**1,693**	**2,098**
Northern Ireland	**11,073**	**3,911**	**7,780**	**31,974**	**51,031**	**63,616**	**69,377**

03 All cancers (excluding non-melanoma skin cancer) (C00-C97, ex. C44)

There was an average of 8,080 cases of cancer (excluding non-melanoma skin cancer (NMSC)) diagnosed each year during 2006-2010 in Northern Ireland, while 3,894 people died each year from the disease. (Tab. 3.1)

Table 3.1: Summary statistics for all cancers (excluding NMSC)

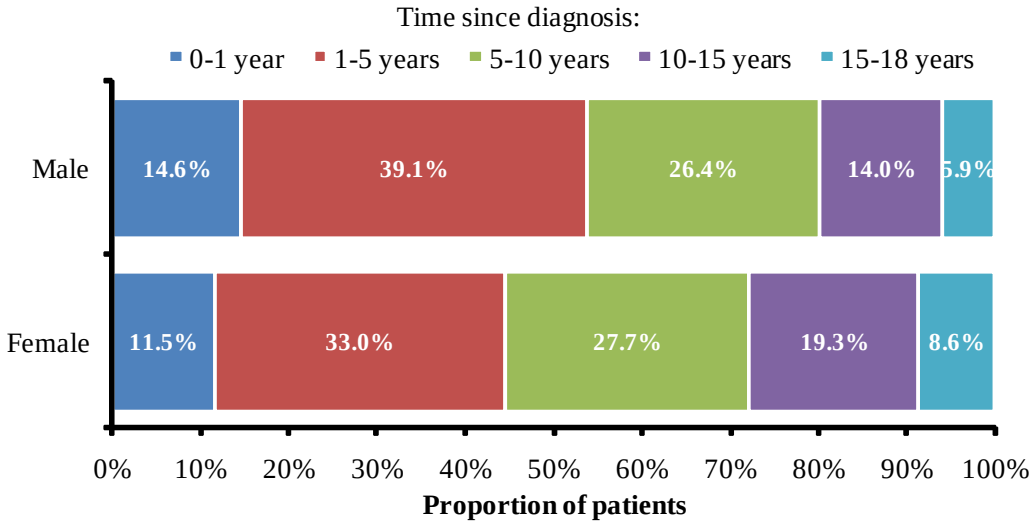
	Males	Females	Both sexes
New cases diagnosed per year (2006-2010)	4,080	4,000	8,080
Deaths per year (2006-2010)	2,039	1,855	3,894
1-year relative survival (diagnosed 2001-2005)	63.2%	69.2%	66.2%
5-year relative survival (diagnosed 2001-2005)	45.9%	53.8%	50.0%
10-year prevalence (2010)*	15,741	18,477	34,218
18-year prevalence (2010)**	19,653	25,612	45,265

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of cancer survivors at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 45,265.

- Among males there were 19,653 survivors. 14.6% had been diagnosed within the previous year while 5.9% had been diagnosed between 15 and 18 years ago.
- Among females there were 25,612 survivors. 11.5% had been diagnosed within the previous year while 8.6% had been diagnosed between 15 and 18 years ago. (Fig. 3.1)

Figure 3.1: 18-year prevalence of all cancers (excluding NMSC) by sex and time since diagnosis

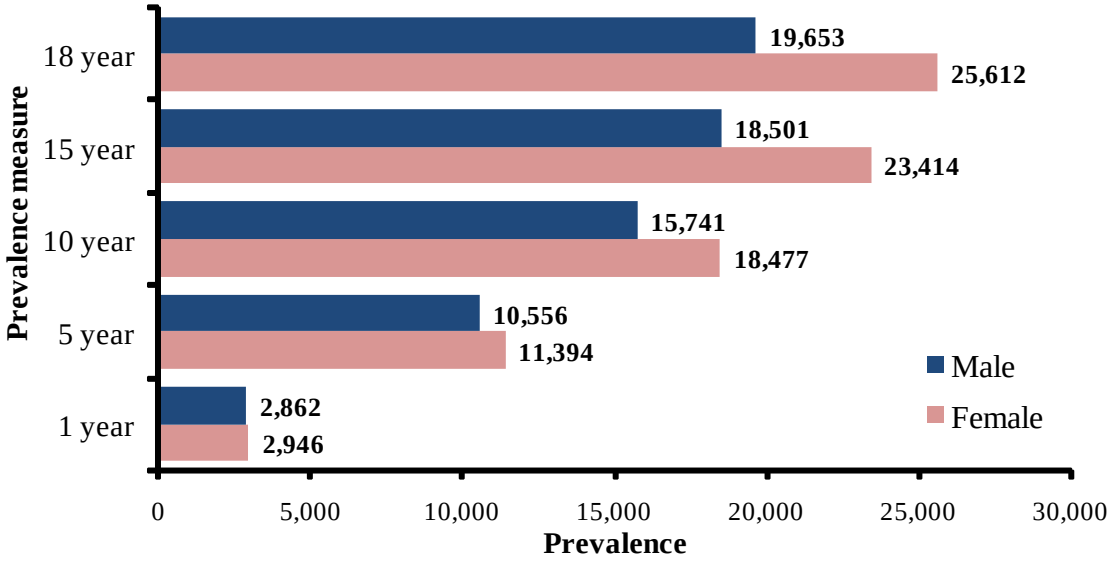


The 18-year prevalence represents all patients diagnosed with cancer during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 5,808 (Male: 2,862, Female: 2,946).
- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 21,950 (Male: 10,556, Female: 11,394).

- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 34,218 (Male: 15,741, Female: 18,477). (Fig. 3.2)

Figure 3.2: Different prevalence measures (based upon time since diagnosis) for all cancers (excluding NMSC) by sex



3.1: Prevalence by age

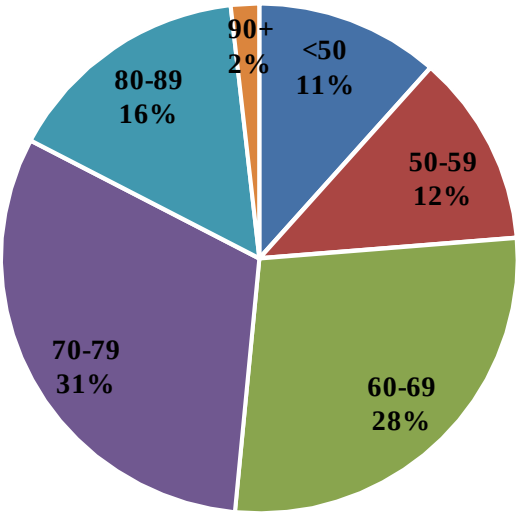
Since cancer is a disease which occurs primarily among the elderly, prevalence of all cancers excluding NMSC is greater among older age groups: (Fig. 3.3, Tab 3.2):

Among cancer survivors diagnosed within the last 10 years:

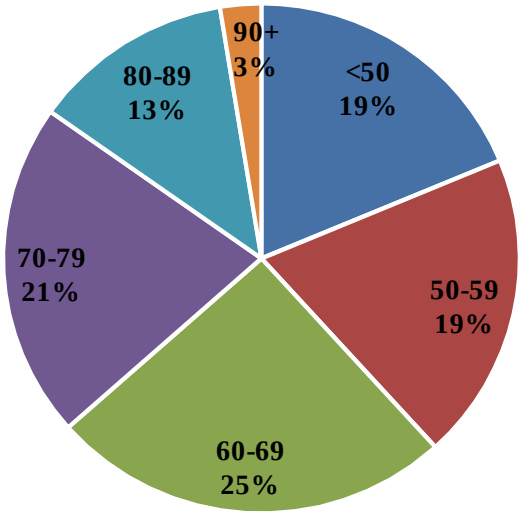
- 11% of males were aged under 50, while 18% were aged 80 and over.
- 19% of females were aged under 50, while 16% were aged 80 and over.

Figure 3.3a: 10-year prevalence of all cancers (excluding NMSC) by sex and age at the end of 2010

Male



Female

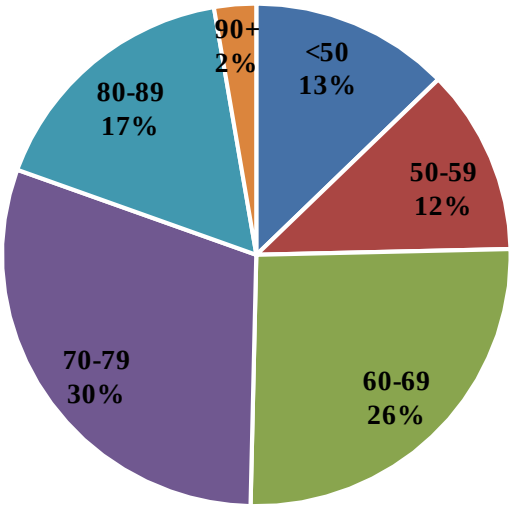


Among cancer survivors diagnosed within the last 18 years:

- 13% of males were aged under 50, while 19% were aged 80 and over.
- 17% of females were aged under 50, while 17% were aged 80 and over.

Figure 3.3b: 18-year prevalence of all cancers (excluding NMSC) by sex and age at the end of 2010

Male



Female

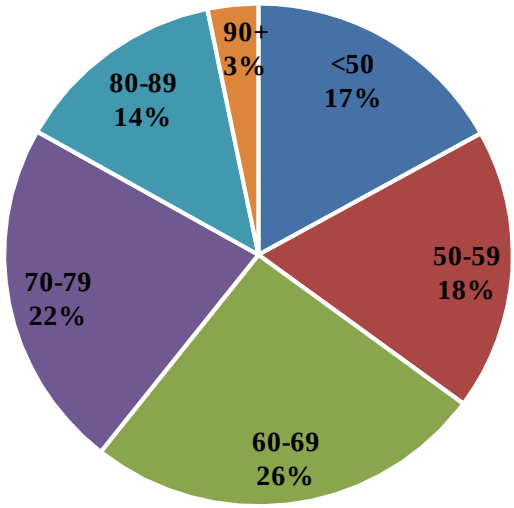


Table 3.2: Different prevalence measures (based upon time since diagnosis) for all cancers (excluding NMSC) by sex and age at the end of 2010

Sex and age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
MALE							
Under 50	359	92	317	1,165	1,820	2,282	2,499
50-59	552	206	424	1,385	1,912	2,193	2,342
60-69	1,171	488	843	3,141	4,378	4,884	5,058
70-79	1,289	688	848	3,226	4,897	5,671	5,920
80-89	647	495	386	1,493	2,453	3,043	3,306
90 and over	62	71	44	146	281	428	528
All ages	**4,080**	**2,039**	**2,862**	**10,556**	**15,741**	**18,501**	**19,653**
FEMALE							
Under 50	669	122	593	2,320	3,462	4,080	4,350
50-59	665	201	516	2,267	3,599	4,362	4,629
60-69	904	368	731	2,803	4,672	6,011	6,566
70-79	974	545	660	2,396	3,925	5,143	5,749
80-89	665	501	386	1,372	2,340	3,120	3,490
90 and over	124	118	60	236	479	698	828
All ages	**4,000**	**1,855**	**2,946**	**11,394**	**18,477**	**23,414**	**25,612**
BOTH SEXES							
Under 50	1,027	214	910	3,485	5,282	6,362	6,849
50-59	1,217	407	940	3,652	5,511	6,555	6,971
60-69	2,075	856	1,574	5,944	9,050	10,895	11,624
70-79	2,263	1,233	1,508	5,622	8,822	10,814	11,669
80-89	1,312	996	772	2,865	4,793	6,163	6,796
90 and over	186	189	104	382	760	1,126	1,356
All ages	**8,080**	**3,894**	**5,808**	**21,950**	**34,218**	**41,915**	**45,265**

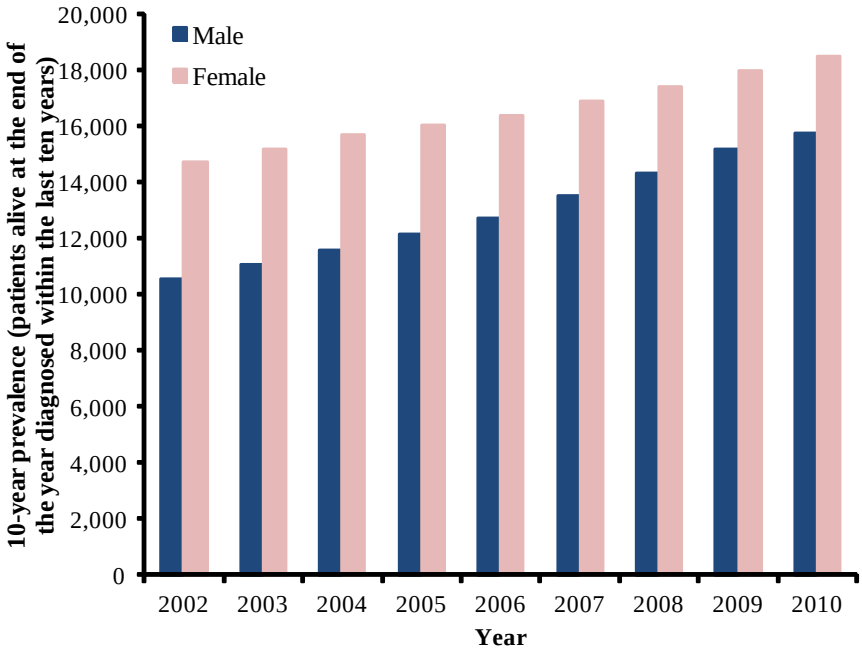
3.2: Prevalence trends

Ten-year prevalence of all cancers (excluding NMSC) is increasing, rising from 10,535 male and 14,736 female survivors in 2002 to 15,741 male and 18,477 female survivors in 2010. (Fig. 3.4a)

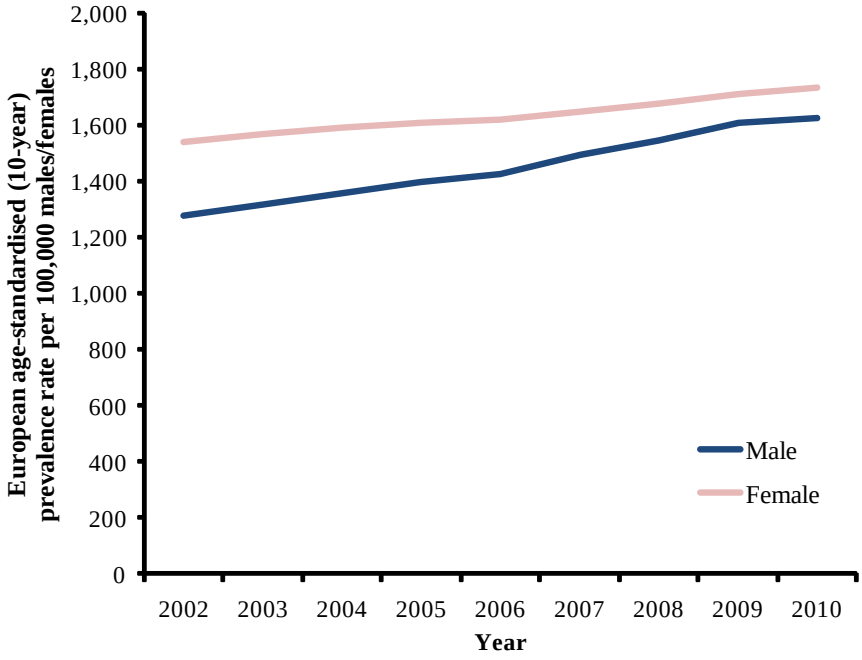
This is partly due to the growth and ageing of the population. Adjusting for these factors using European age-standardised rates illustrates an underlying increase in prevalence. Specifically prevalence rates increased between 2002 and 2010 by 3.2% per year among men and by 1.5% per year among women. (Fig. 3.4b)

Figure 3.4: Trends in 10-year prevalence of all cancers (excluding NMSC) by sex

(a) Number of patients



(b) Age-standardised rates (per 100,000 persons)



3.3: Geographic variation

Table 3.3 presents the various prevalence measures by area of residence. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

Table 3.3: Different prevalence measures (based upon time since diagnosis) for all cancers (excluding NMSC) by Health and Social Care Trust (HSCT) and Local Government District (LGD) of residence at diagnosis

MALE

HSCT and LGD of residence	Cases per year 2006-2010	Deaths per year 2006-2010	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
BELFAST HSCT							
Belfast	699	391	429	1,599	2,321	2,739	2,910
Castlereagh	165	85	114	400	634	747	805
TOTAL	**863**	**476**	**543**	**1,999**	**2,955**	**3,486**	**3,715**
NORTHERN HSCT							
Antrim	110	53	90	293	427	483	513
Ballymena	141	65	115	391	570	675	710
Ballymoney	73	35	45	181	264	308	317
Carrickfergus	99	53	73	246	378	428	456
Coleraine	133	65	102	362	557	643	678
Cookstown	75	35	46	203	292	330	344
Larne	84	43	45	222	333	381	405
Magherafelt	83	39	64	235	355	413	432
Moyle	40	20	28	116	190	219	230
Newtownabbey	205	104	156	525	752	871	933
TOTAL	**1,043**	**511**	**764**	**2,774**	**4,118**	**4,751**	**5,018**
SOUTH-EASTERN HSCT							
Ards	192	99	123	483	704	817	849
Down	164	73	127	453	654	768	815
Lisburn	250	119	171	670	989	1,175	1,246
North Down	200	96	136	518	788	926	992
TOTAL	**806**	**387**	**557**	**2,124**	**3,135**	**3,686**	**3,902**
SOUTHERN HSCT							
Armagh	133	61	89	363	511	602	645
Banbridge	96	43	72	279	409	482	513
Craigavon	203	101	132	514	778	913	974
Dungannon	115	57	79	308	460	538	568
Newry & Mourne	191	97	129	497	747	902	959
TOTAL	**740**	**359**	**501**	**1,961**	**2,905**	**3,437**	**3,659**
WESTERN HSCT							
Derry	204	101	165	528	816	993	1,056
Fermanagh	137	71	93	360	561	653	694
Limavady	70	34	43	194	292	341	361
Omagh	102	50	87	295	448	532	563
Strabane	80	45	62	205	329	378	401
TOTAL	**593**	**301**	**450**	**1,582**	**2,446**	**2,897**	**3,075**
Unknown	**34**	**5**	**47**	**116**	**182**	**244**	**284**
Northern Ireland	**4,080**	**2,039**	**2,862**	**10,556**	**15,741**	**18,501**	**19,653**

Table 3.3 cont. Different prevalence measures (based upon time since diagnosis) for all cancers (excluding NMSC) by Health and Social Care Trust (HSCT) and Local Government District (LGD) of residence at diagnosis

FEMALE

HSCT and LGD of residence	Cases per year 2006-2010	Deaths per year 2006-2010	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
BELFAST HSCT							
Belfast	691	359	476	1,789	2,956	3,755	4,128
Castlereagh	162	80	133	470	819	1,034	1,131
TOTAL	**852**	**438**	**609**	**2,259**	**3,775**	**4,789**	**5,259**
NORTHERN HSCT							
Antrim	107	43	76	312	504	608	668
Ballymena	148	66	112	434	677	877	951
Ballymoney	67	30	63	197	309	374	406
Carrickfergus	86	44	68	243	422	525	569
Coleraine	138	67	94	377	622	807	871
Cookstown	67	32	43	191	312	383	414
Larne	82	40	51	230	382	487	530
Magherafelt	80	37	56	236	391	484	536
Moyle	43	19	40	126	186	222	245
Newtownabbey	185	86	150	541	907	1,143	1,257
TOTAL	**1,001**	**464**	**753**	**2,887**	**4,712**	**5,910**	**6,447**
SOUTH-EASTERN HSCT							
Ards	184	80	144	536	852	1,103	1,201
Down	156	69	115	456	739	936	1,011
Lisburn	250	107	161	710	1,204	1,513	1,635
North Down	208	99	134	603	990	1,260	1,373
TOTAL	**799**	**355**	**554**	**2,305**	**3,785**	**4,812**	**5,220**
SOUTHERN HSCT							
Armagh	133	61	99	371	589	744	818
Banbridge	90	39	70	270	425	559	625
Craigavon	190	87	125	552	891	1,113	1,228
Dungannon	113	49	102	335	498	645	719
Newry & Mourne	193	94	135	566	914	1,178	1,282
TOTAL	**719**	**330**	**531**	**2,094**	**3,317**	**4,239**	**4,672**
WESTERN HSCT							
Derry	226	101	174	639	976	1,248	1,355
Fermanagh	128	58	103	384	598	761	825
Limavady	65	26	56	201	319	412	453
Omagh	95	43	67	273	435	559	615
Strabane	83	36	74	258	394	477	527
TOTAL	**597**	**264**	**474**	**1,755**	**2,722**	**3,457**	**3,775**
Unknown	**32**	**4**	**25**	**94**	**166**	**207**	**239**
Northern Ireland	**4,000**	**1,855**	**2,946**	**11,394**	**18,477**	**23,414**	**25,612**

Table 3.3 cont. Different prevalence measures (based upon time since diagnosis) for all cancers (excluding NMSC) by Health and Social Care Trust (HSCT) and Local Government District (LGD) of residence at diagnosis

BOTH SEXES

HSCT and LGD of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
BELFAST HSCT							
Belfast	1,389	749	905	3,388	5,277	6,494	7,038
Castlereagh	326	164	247	870	1,453	1,781	1,936
TOTAL	**1,716**	**914**	**1,152**	**4,258**	**6,730**	**8,275**	**8,974**
NORTHERN HSCT							
Antrim	217	97	166	605	931	1,091	1,181
Ballymena	289	130	227	825	1,247	1,552	1,661
Ballymoney	140	65	108	378	573	682	723
Carrickfergus	185	96	141	489	800	953	1,025
Coleraine	270	132	196	739	1,179	1,450	1,549
Cookstown	142	68	89	394	604	713	758
Larne	166	83	96	452	715	868	935
Magherafelt	162	75	120	471	746	897	968
Moyle	83	39	68	242	376	441	475
Newtownabbey	389	190	306	1,066	1,659	2,014	2,190
TOTAL	**2,044**	**975**	**1,517**	**5,661**	**8,830**	**10,661**	**11,465**
SOUTH-EASTERN HSCT							
Ards	376	178	267	1,019	1,556	1,920	2,050
Down	320	142	242	909	1,393	1,704	1,826
Lisburn	501	227	332	1,380	2,193	2,688	2,881
North Down	408	195	270	1,121	1,778	2,186	2,365
TOTAL	**1,604**	**742**	**1,111**	**4,429**	**6,920**	**8,498**	**9,122**
SOUTHERN HSCT							
Armagh	266	122	188	734	1,100	1,346	1,463
Banbridge	187	82	142	549	834	1,041	1,138
Craigavon	393	188	257	1,066	1,669	2,026	2,202
Dungannon	228	106	181	643	958	1,183	1,287
Newry & Mourne	385	192	264	1,063	1,661	2,080	2,241
TOTAL	**1,459**	**689**	**1,032**	**4,055**	**6,222**	**7,676**	**8,331**
WESTERN HSCT							
Derry	430	202	339	1,167	1,792	2,241	2,411
Fermanagh	266	130	196	744	1,159	1,414	1,519
Limavady	135	61	99	395	611	753	814
Omagh	197	93	154	568	883	1,091	1,178
Strabane	163	80	136	463	723	855	928
TOTAL	**1,191**	**566**	**924**	**3,337**	**5,168**	**6,354**	**6,850**
Unknown	**66**	**9**	**72**	**210**	**348**	**451**	**523**
Northern Ireland	**8,080**	**3,894**	**5,808**	**21,950**	**34,218**	**41,915**	**45,265**

04 Head and neck cancer (C00-C14, C30-C32)

There was an average of 273 cases of head and neck cancer diagnosed each year during 2006-2010 in Northern Ireland, while 90 people died each year from the disease. Incidence of the disease was much greater among men than women (190 cases per year among men compared to 83 per year among women). Survival from the disease was average with 79.6% of patients diagnosed in 2001-2005 surviving one year and 58.9% surviving five years. (Tab. 4.1)

Table 4.1: Summary statistics for head and neck cancer

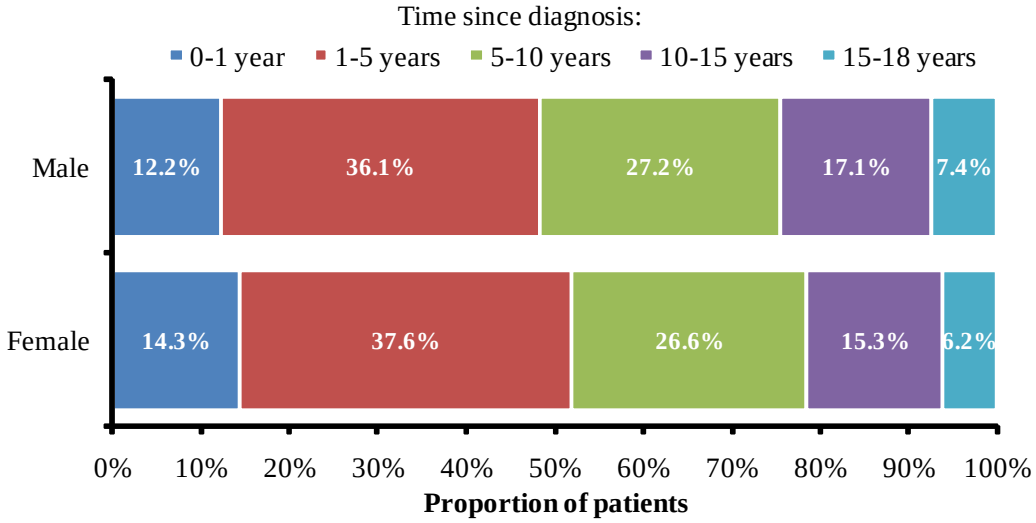
	Males	Females	Both sexes
New cases diagnosed per year (2006-2010)	190	83	273
Deaths per year (2006-2010)	63	27	90
1-year relative survival (diagnosed 2001-2005)	80.2%	78.2%	79.6%
5-year relative survival (diagnosed 2001-2005)	60.2%	56.0%	58.9%
10-year prevalence (2010)*	911	395	1,306
18-year prevalence (2010)**	1,207	503	1,710

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of head and neck cancer survivors at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 1,710. Prevalence among men was almost two and a half times greater than among women due to the higher incidence rates.

- Among males there were 1,207 survivors. 12.2% had been diagnosed within the previous year while 7.4% had been diagnosed between 15 and 18 years ago.
- Among females there were 503 survivors. 14.3% had been diagnosed within the previous year while 6.2% had been diagnosed between 15 and 18 years ago. (Fig. 4.1)

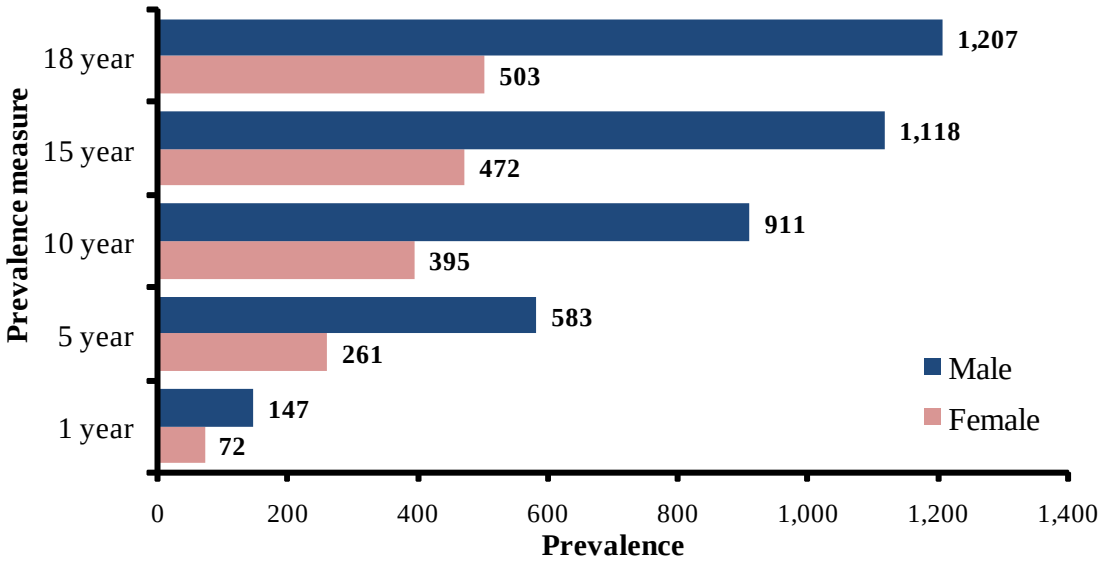
Figure 4.1: 18-year prevalence of head and neck cancer by sex and time since diagnosis



The 18-year prevalence represents all patients diagnosed with head and neck cancer during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 219 (Male: 147, Female: 72).
- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 844 (Male: 583, Female: 261).
- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 1,306 (Male: 911, Female: 395). (Fig. 4.2)

Figure 4.2: Different prevalence measures (based upon time since diagnosis) for head and neck cancer by sex



4.1: Prevalence by site

Head and neck cancer is made up of several different types of cancer. Head and neck cancer patients can get more than one type of these cancers, but are only counted once in the prevalence figures. Of the 1,710 head and neck cancer patients alive at the end of 2010, 55 (3.2%) had more than one head and neck cancer diagnosed within the previous 18 years.

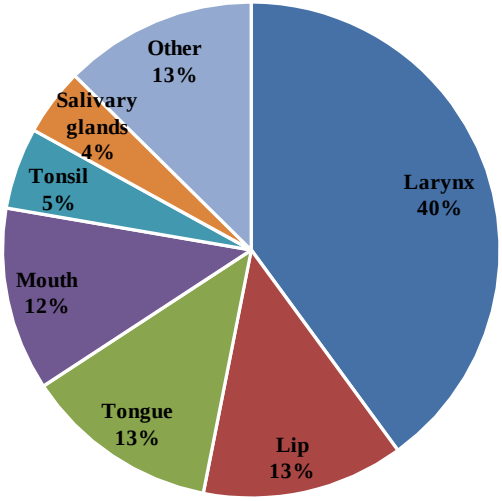
Table 4.2: Different prevalence measures (based upon time since diagnosis) for head and neck cancer by first cancer site diagnosed

Cancer site	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Lip	18	1	13	74	119	169	193
Tongue	47	16	38	141	202	231	239
Mouth	50	16	41	135	206	246	267
Salivary glands	15	6	10	52	86	111	122
Tonsil	17	6	20	60	82	90	91
Oropharynx	8	2	11	21	29	31	31
Nasopharynx	7	4	<5	24	40	48	54
Hypopharynx	18	4	15	36	48	55	56
Nasal cavity & sinuses	13	3	9	36	58	68	75
Larynx	75	25	58	260	426	528	569
Unspecified	4	7	<5	5	10	13	13

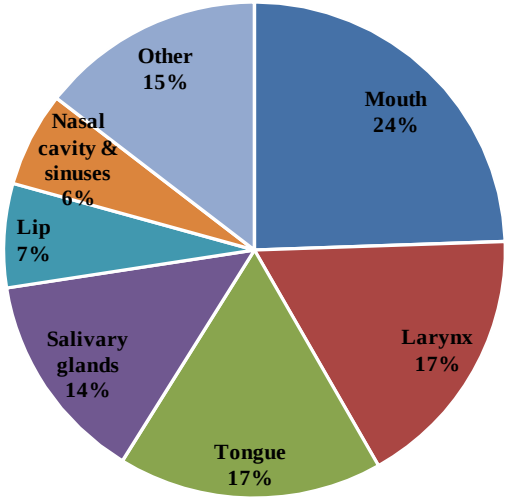
Cancer of the larynx was the most common of the head and neck cancers, with 569 (33.3%) of head and neck cancer patients diagnosed with this cancer in the 18 years prior to the end of 2010. This was followed by cancer of the mouth (15.6%) and tongue (14.0%). The distribution by cancer site differed slightly between men and women, with cancer of the larynx the most common among men (39.9%) while cancer of the mouth (24.5%) was the most common among women. (Fig. 4.3, Tab. 4.2)

Figure 4.3: 18-year prevalence of head and neck cancer by sex and first cancer site diagnosed

Male



Female



4.2: Prevalence by age

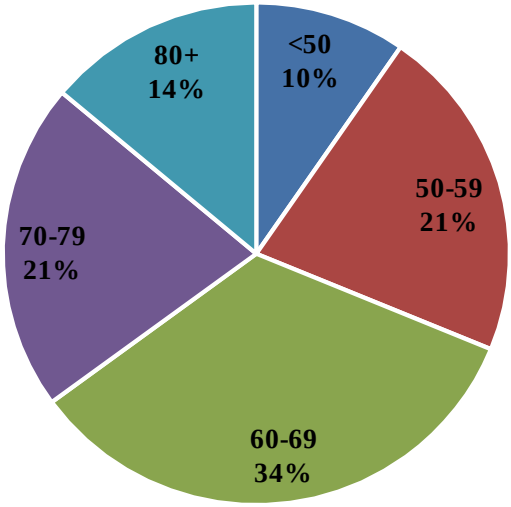
Since cancer is a disease which occurs primarily among the elderly, prevalence of head and neck cancer is greater among older age groups (Fig. 4.4, Tab 4.3):

Among head and neck cancer survivors diagnosed within the last 10 years the median age at the end of 2010 was 65. This was the same for men and women. However

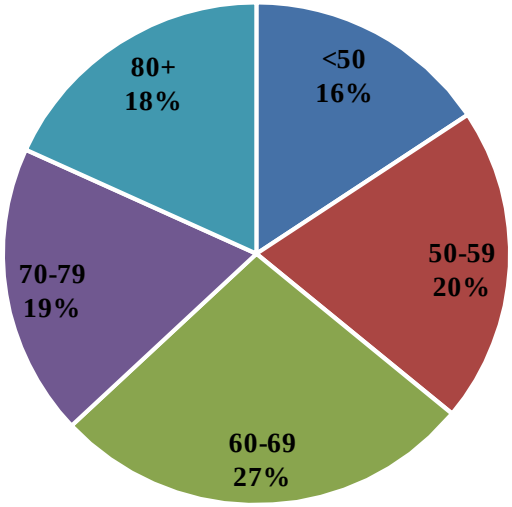
- 10% of males were aged under 50, while 14% were aged 80 and over.
- 16% of females were aged under 50, while 18% were aged 80 and over.

Figure 4.4a: 10-year prevalence of head and neck cancer by sex and age at the end of 2010

Male



Female

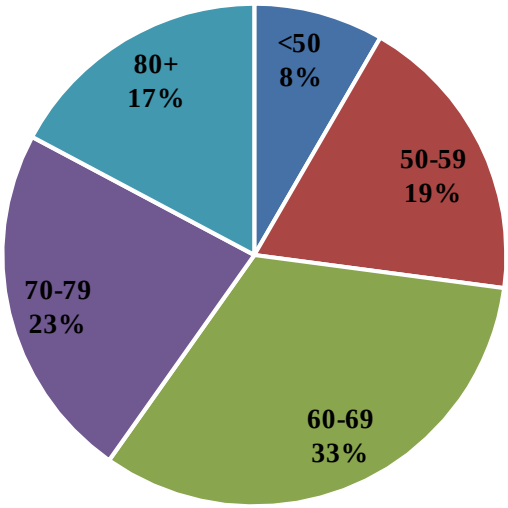


Among head and neck cancer survivors diagnosed within the last 18 years the median age at the end of 2010 was 67 for men and 66 for women. In addition:

- 8% of males were aged under 50, while 17% were aged 80 and over.
- 15% of females were aged under 50, while 21% were aged 80 and over.

Figure 4.4b: 18-year prevalence of head and neck cancer by sex and age at the end of 2010

Male



Female

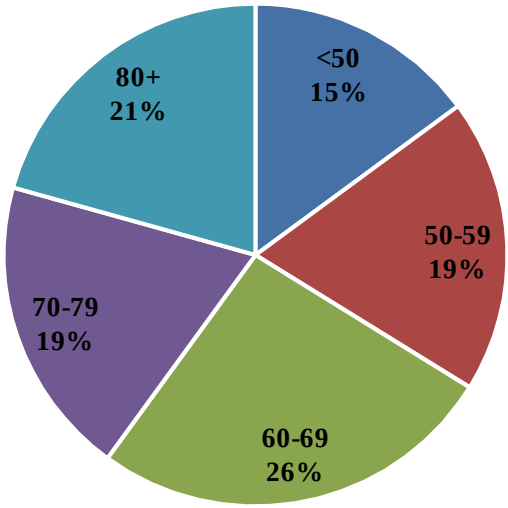


Table 4.3: Different prevalence measures (based upon time since diagnosis) for head and neck cancer by sex and age at the end of 2010

Sex and age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
MALE							
Under 50	23	5	15	64	88	98	101
50-59	43	11	36	137	196	219	226
60-69	61	17	51	198	308	378	395
70-79	44	19	29	117	192	250	277
80 and over	19	11	16	67	127	173	208
All ages	**190**	**63**	**147**	**583**	**911**	**1,118**	**1,207**
FEMALE							
Under 50	16	3	13	48	62	66	75
50-59	14	2	9	54	80	93	95
60-69	18	7	25	74	107	126	132
70-79	20	7	14	44	74	90	97
80 and over	14	8	11	41	72	97	104
All ages	**83**	**27**	**72**	**261**	**395**	**472**	**503**
BOTH SEXES							
Under 50	39	8	28	112	150	164	176
50-59	57	13	45	191	276	312	321
60-69	80	24	76	272	415	504	527
70-79	65	26	43	161	266	340	374
80 and over	32	19	27	108	199	270	312
All ages	**273**	**90**	**219**	**844**	**1,306**	**1,590**	**1,710**

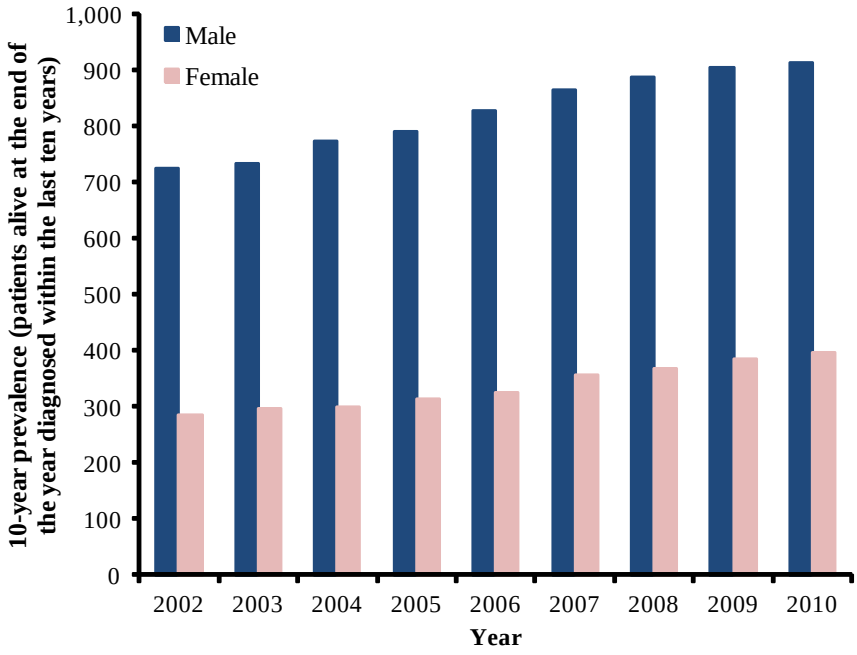
4.3: Prevalence trends

Ten-year prevalence of head and neck cancer is increasing, rising from 725 male and 284 female survivors in 2002 to 911 male and 395 female survivors in 2010. (Fig. 4.5a)

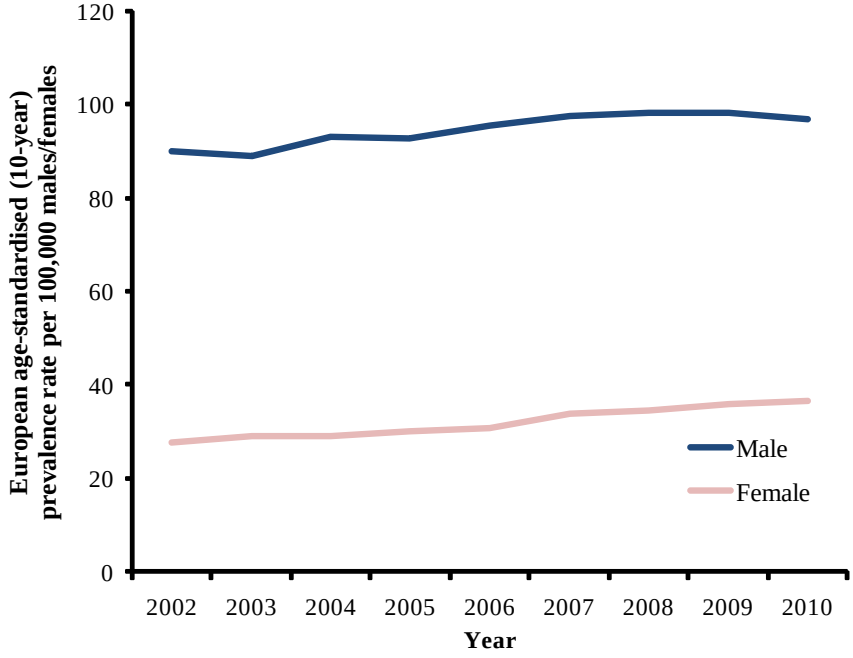
This is partly due to the growth and ageing of the population. Adjusting for these factors using European age-standardised rates illustrates an underlying increase in prevalence. Specifically prevalence rates increased between 2002 and 2010 by 1.2% per year among men and by 3.8% per year among women. (Fig. 4.5b)

Figure 4.5: Trends in 10-year prevalence of head and neck cancer by sex

(a) Number of patients



(b) Age-standardised rates (per 100,000 persons)



4.4: Geographic variation

Table 4.4 presents the various prevalence measures by area of residence. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

Table 4.4: Different prevalence measures (based upon time since diagnosis) for head and neck cancer by Health and Social Care Trust (HSCT) of residence at diagnosis

MALE

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	49	14	36	146	224	256	282
Northern	45	14	32	138	215	273	288
South-Eastern	31	12	23	91	153	185	202
Southern	35	12	27	109	159	201	211
Western	29	10	28	96	155	197	216
Unknown	1	0	1	3	5	6	8
Northern Ireland	**190**	**63**	**147**	**583**	**911**	**1,118**	**1,207**

FEMALE

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	19	6	21	61	92	107	118
Northern	18	6	11	51	84	103	108
South-Eastern	17	5	18	52	83	97	100
Southern	13	5	5	45	63	80	85
Western	15	5	17	49	68	80	87
Unknown	1	0	0	3	5	5	5
Northern Ireland	**83**	**27**	**72**	**261**	**395**	**472**	**503**

BOTH SEXES

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	68	20	57	207	316	363	400
Northern	63	20	43	189	299	376	396
South-Eastern	48	17	41	143	236	282	302
Southern	48	17	32	154	222	281	296
Western	44	15	45	145	223	277	303
Unknown	2	0	1	6	10	11	13
Northern Ireland	**273**	**90**	**219**	**844**	**1,306**	**1,590**	**1,710**

05 Oesophageal cancer (C15)

There were on average 185 cases of oesophageal cancer diagnosed each year in Northern Ireland during 2006-2010, with almost two thirds (65.4%, 121 cases) of these occurring among men. On average 167 people died each year from the disease, as survival from oesophageal cancer was poor. Specifically, for those diagnosed in 2001-2005 one-year relative survival was 34.1%, while five-year relative survival was 13.0%. There were no significant differences in survival between males and females. (Tab. 5.1)

Table 5.1: Summary statistics for oesophageal cancer

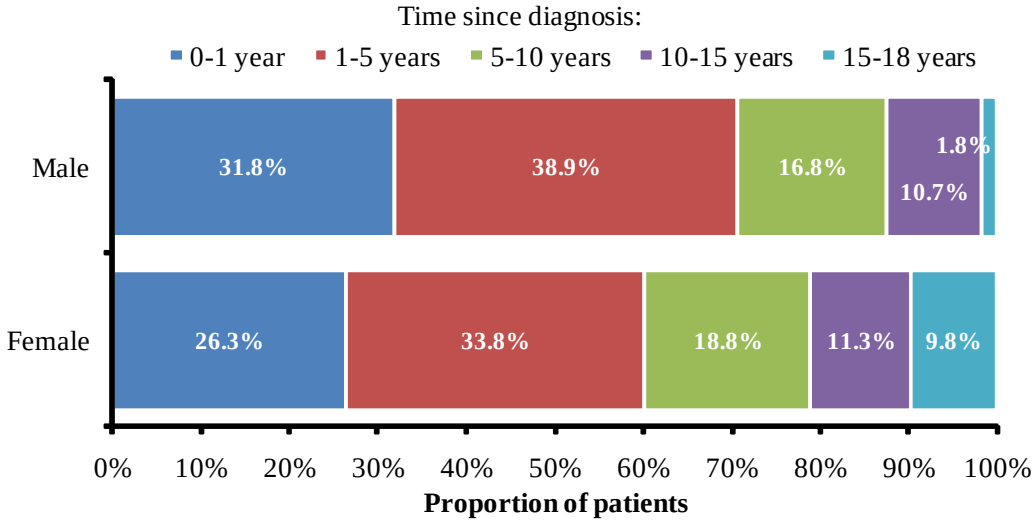
	Males	Females	Both sexes
New cases diagnosed per year (2006-2010)	121	64	185
Deaths per year (2006-2010)	109	58	167
1-year relative survival (diagnosed 2001-2005)	34.6%	33.0%	34.1%
5-year relative survival (diagnosed 2001-2005)	12.1%	14.5%	13.0%
10-year prevalence (2010)*	245	105	350
18-year prevalence (2010)**	280	133	413

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of oesophageal cancer survivors at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 413, with most of these survivors having been diagnosed within the previous five-years. In particular:

- Among males there were 280 survivors. 31.8% had been diagnosed within the previous year while 1.8% had been diagnosed between 15 and 18 years ago.
- Among females there were 133 survivors. 26.3% had been diagnosed within the previous year while 9.8% had been diagnosed between 15 and 18 years ago. (Fig. 5.1)

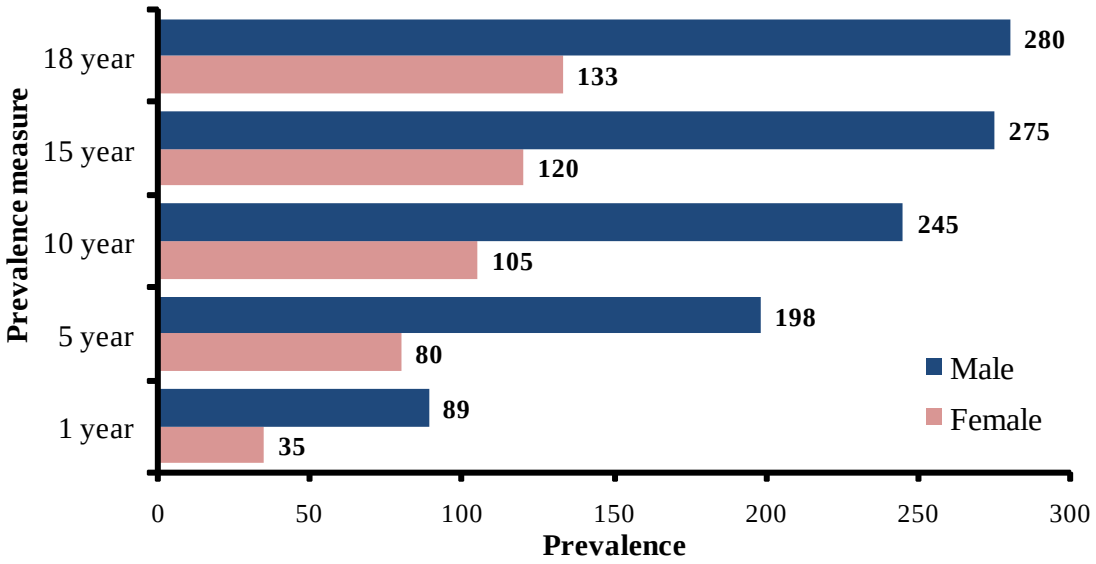
Figure 5.1: 18-year prevalence of oesophageal cancer by sex and time since diagnosis



The 18-year prevalence represents all patients diagnosed with oesophageal cancer during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 124 (Male: 89, Female: 35).
- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 278 (Male: 198, Female: 80).
- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 350 (Male: 245, Female: 105). (Fig. 5.2)

Figure 5.2: Different prevalence measures (based upon time since diagnosis) for oesophageal cancer by sex



5.1: Prevalence by type

There are two main types of oesophageal cancer: adenocarcinoma and squamous cell carcinoma. While oesophageal cancer patients can get both these types of cancer, they are only counted once in the oesophageal cancer prevalence figures. However of the 413 oesophageal cancer patients alive at the end of 2010, there were no patients with a history of more than one oesophageal cancer diagnosed within the previous 18 years.

Table 5.2: Different prevalence measures (based upon time since diagnosis) for oesophageal cancer by first cancer type diagnosed

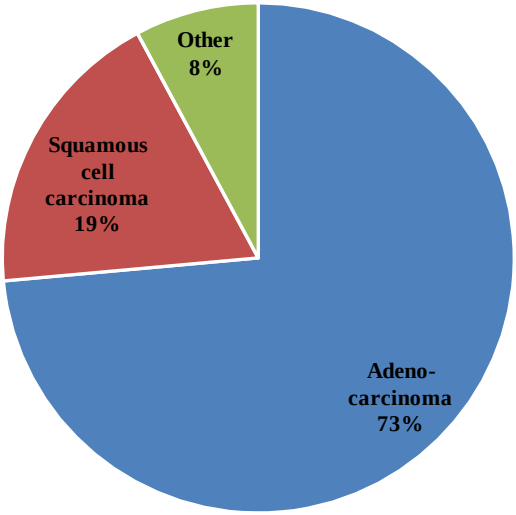
Cancer type	Cases per year (2006-10)	Prevalence 2010				
		One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Adenocarcinoma	100	88	188	228	252	253
Squamous cell carcinoma	53	27	71	96	110	117
Other/Unspecified	32	9	19	26	33	43
Total	**185**	**124**	**278**	**350**	**395**	**413**

Oesophageal adenocarcinoma was the most common of the oesophageal cancers, with 253 (61.3%) oesophageal cancer survivors diagnosed with this cancer in the 18 years prior to the end of 2010. This was followed by squamous cell carcinoma with 117 patients (28.3%). However the distribution by cancer site differed considerably between men and women, with adenocarcinoma the most common

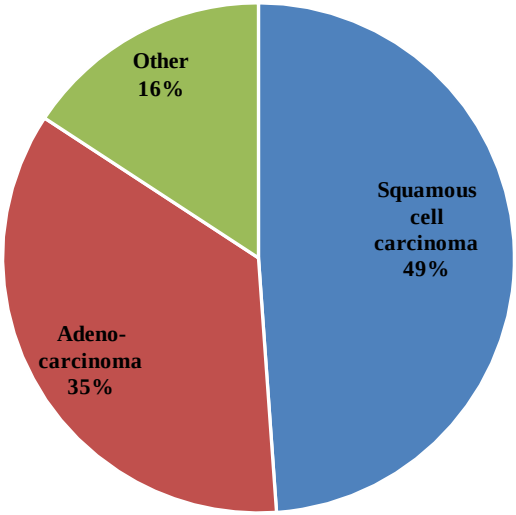
among men (73.4%) and squamous cell carcinoma (48.9%) the most common among women. (Fig. 5.3, Tab. 5.2)

Figure 5.3: 18-year prevalence of oesophageal cancer by sex and first cancer site diagnosed

Male



Female



5.2: Prevalence by age

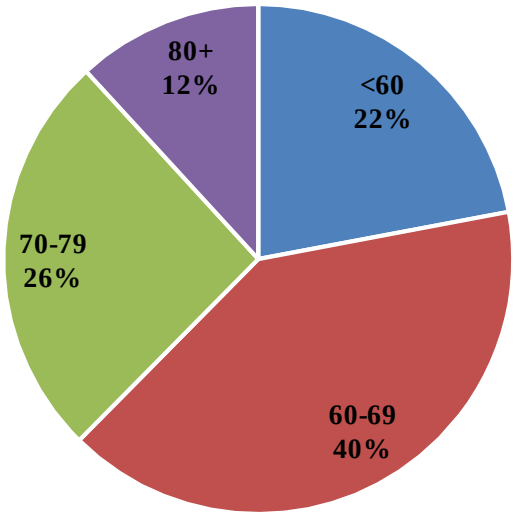
Oesophageal cancer occurs primarily among the elderly, thus prevalence of oesophageal cancer is greater among older age groups (Fig. 5.4, Tab 5.3):

Among oesophageal cancer survivors diagnosed within the last 10 years the median age at the end of 2010 was 68, however this varied by gender:

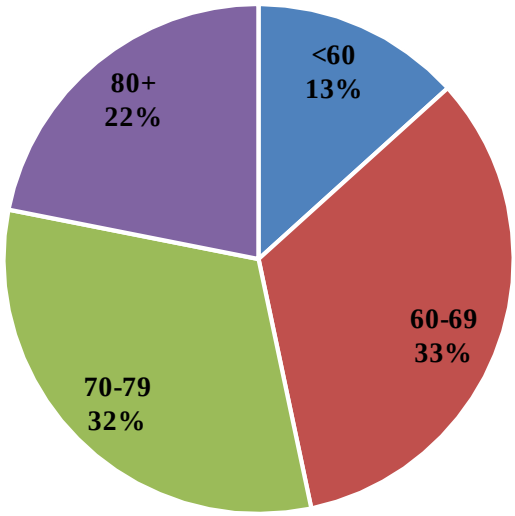
- The median age of male survivors was 67 with 22% aged under 60 and 12% aged 80 and over.
- The median age of female survivors was 72 with 13% aged under 60 and 22% aged 80 and over.

Figure 5.4a: 10-year prevalence of oesophageal cancer by sex and age at the end of 2010

Male



Female

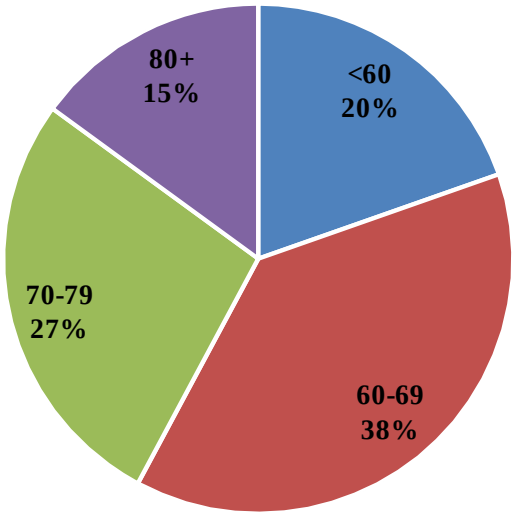


Similarly among cancer survivors diagnosed within the last 18 years the median age at the end of 2010 was 69. Considering each sex separately

- 20% of male survivors were aged under 60 and 15% were aged 80 and over, while the median age was 68.
- 12% of female survivors were aged under 60 and 26% were aged 80 and over, while the median age was 73.

Figure 5.4b: 18-year prevalence of oesophageal cancer by sex and age at the end of 2010

Male



Female

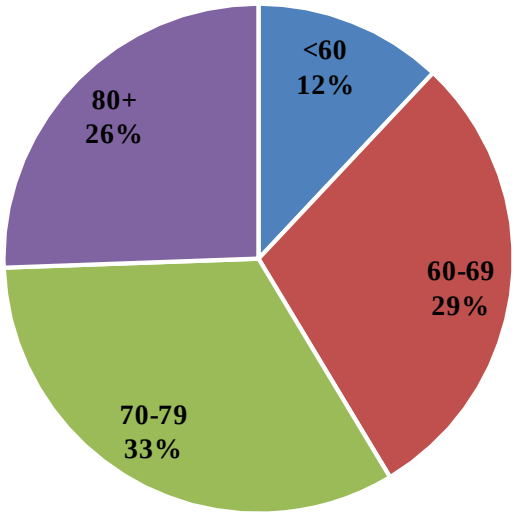


Table 5.3: Different prevalence measures (based upon time since diagnosis) for oesophageal cancer by sex and age at the end of 2010

Sex and age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
MALE							
Under 60	31	24	24	49	54	55	55
60-69	40	32	32	82	99	106	107
70-79	33	32	24	46	63	75	76
80 and over	17	21	9	21	29	39	42
All ages	**121**	**109**	**89**	**198**	**245**	**275**	**280**
FEMALE							
Under 60	10	7	7	14	14	14	16
60-69	13	8	11	27	35	35	39
70-79	18	17	13	23	33	41	44
80 and over	23	26	4	16	23	30	34
All ages	**64**	**58**	**35**	**80**	**105**	**120**	**133**
BOTH SEXES							
Under 50	10	8	6	16	16	16	16
50-59	30	23	25	47	52	53	55
60-69	52	40	43	109	134	141	146
70-79	51	49	37	69	96	116	120
80 and over	40	46	13	37	52	69	76
All ages	**185**	**167**	**124**	**278**	**350**	**395**	**413**

5.3: Prevalence trends

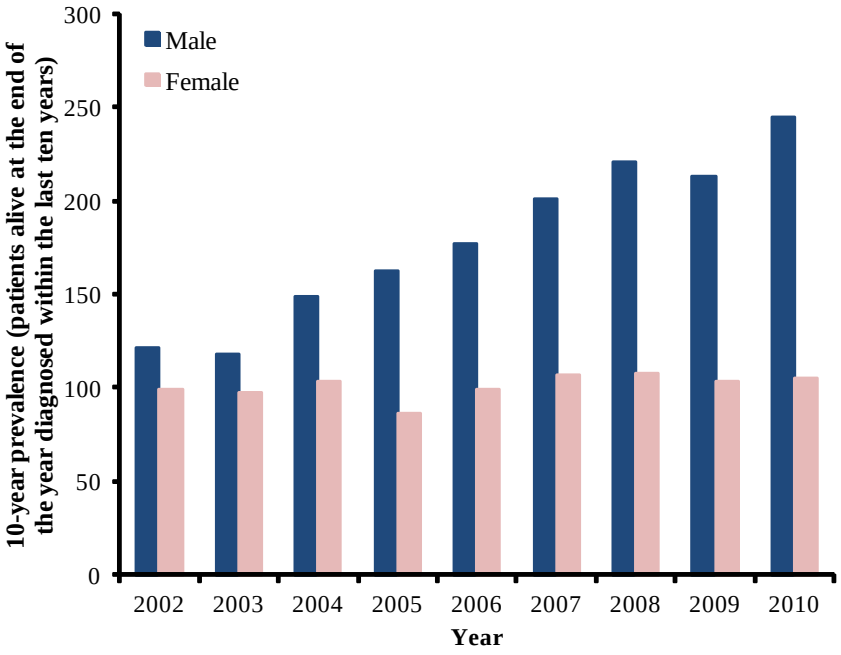
Ten-year prevalence of oesophageal cancer is increasing among men, rising from 121 survivors in 2002 to 245 survivors in 2010. However there has been little change in prevalence among women between 2002 and 2010. (Fig. 5.5a)

Adjusting for population growth and the ageing of the population using European age-standardised rates illustrates an annual increase between 2002 and 2010 of 7.7% in ten-year prevalence rates among men, while there was no significant change among women. (Fig. 5.5b)

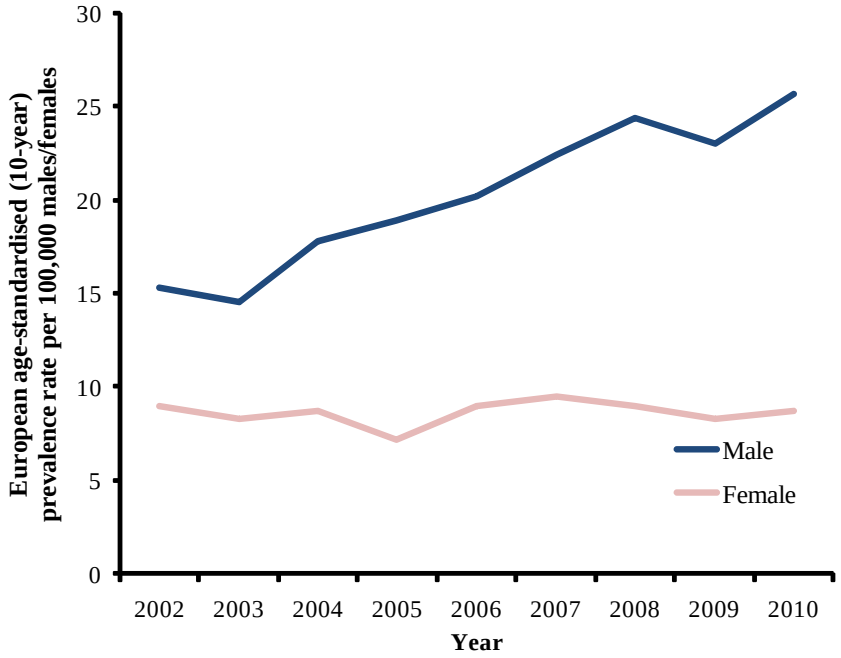
There has been little change in oesophageal cancer incidence rates for males and females over the last 15 years and only small changes in female survival during this period. However, long term male survival improved in the late twentieth century, while a reduction in deaths from other causes among men has also occurred. Both these factors will have contributed to the increase in the number of male oesophageal cancer survivors.

Figure 5.5: Trends in 10-year prevalence of oesophageal cancer by sex

(a) Number of patients



(b) Age-standardised rates (per 100,000 persons)



5.4: Geographic variation

Table 5.4 presents the various prevalence measures by area of residence. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

Table 5.4: Different prevalence measures (based upon time since diagnosis) for oesophageal cancer by Health and Social Care Trust (HSCT) of residence at diagnosis

MALE

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	24	22	20	41	56	60	61
Northern	30	27	18	46	59	66	68
South-Eastern	25	23	17	37	42	52	53
Southern	24	23	13	34	40	45	46
Western	17	13	20	38	44	46	46
Unknown	1	0	1	2	4	6	6
Northern Ireland	**121**	**109**	**89**	**198**	**245**	**275**	**280**

FEMALE

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	17	15	10	20	27	34	35
Northern	15	13	7	24	29	34	41
South-Eastern	12	11	5	13	16	17	20
Southern	11	13	5	8	14	16	17
Western	8	7	8	15	18	18	19
Unknown	0	0	0	0	1	1	1
Northern Ireland	**64**	**58**	**35**	**80**	**105**	**120**	**133**

BOTH SEXES

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	40	37	30	61	83	94	96
Northern	45	40	25	70	88	100	109
South-Eastern	37	34	22	50	58	69	73
Southern	35	36	18	42	54	61	63
Western	25	20	28	53	62	64	65
Unknown	1	0	1	2	5	7	7
Northern Ireland	**185**	**167**	**124**	**278**	**350**	**395**	**413**

06 Stomach cancer (C16)

There was an average of 229 cases (137 male, 91 female) of stomach cancer diagnosed each year in Northern Ireland during 2006-2010, while 144 people died each year from the disease. Survival from the disease was poor with 35.8% of patients diagnosed in 2001-2005 alive one year from diagnosis and 16.5% of patients alive five years from diagnosis. (Tab. 6.1)

Table 6.1: Summary statistics for stomach cancer

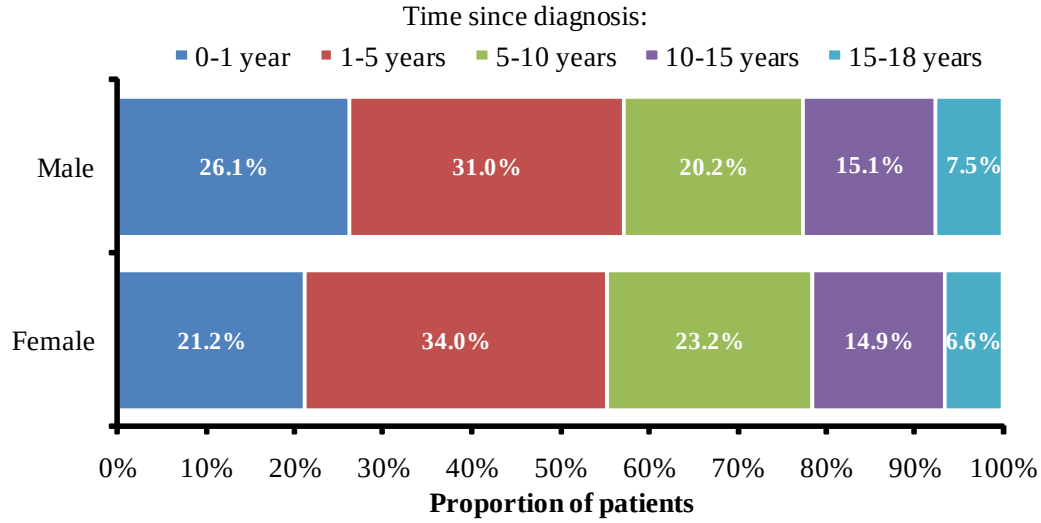
	Males	Females	Both sexes
New cases diagnosed per year (2006-2010)	137	91	229
Deaths per year (2006-2010)	84	60	144
1-year relative survival (diagnosed 2001-2005)	37.1%	33.8%	35.8%
5-year relative survival (diagnosed 2001-2005)	16.0%	17.4%	16.5%
10-year prevalence (2010)*	287	189	476
18-year prevalence (2010)**	371	241	612

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of stomach cancer survivors at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 612, with over three quarters (476 patients, 77.8%) of these diagnosed within the last ten years. The number of survivors and the duration since diagnosis that these patients had survived differed between men and women. In particular:

- Among males there were 371 survivors. 26.1% had been diagnosed within the previous year while 7.5% had been diagnosed between 15 and 18 years ago.
- Among females there were 241 survivors. 21.2% had been diagnosed within the previous year while 6.6% had been diagnosed between 15 and 18 years ago. (Fig. 6.1)

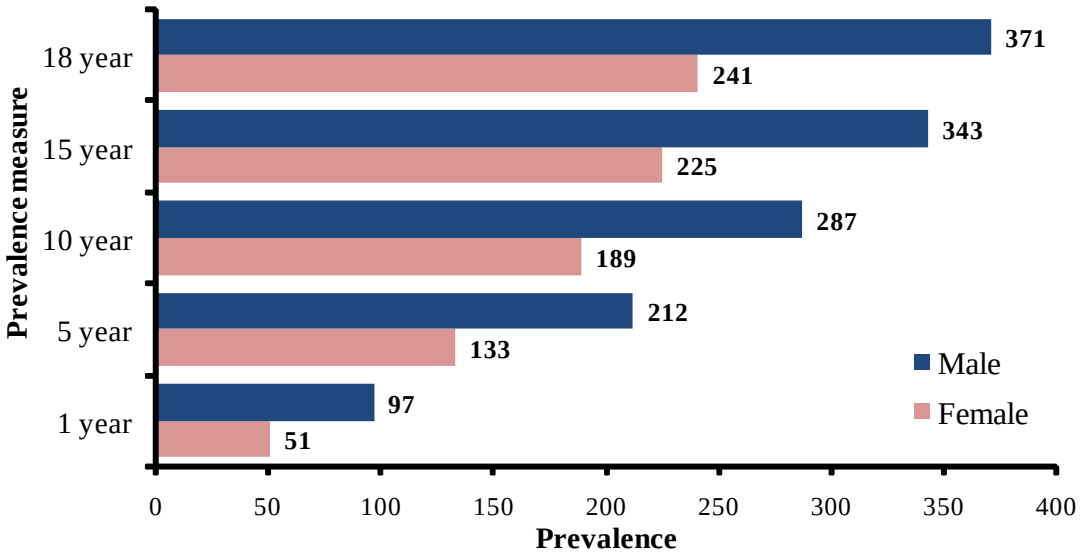
Figure 6.1: 18-year prevalence of stomach cancer by sex and time since diagnosis



The 18-year prevalence represents all patients diagnosed with stomach cancer during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 148 (Male: 97, Female: 51).
- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 345 (Male: 212, Female: 133).
- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 476 (Male: 287, Female: 189). (Fig. 6.2)

Figure 6.2: Different prevalence measures (based upon time since diagnosis) for stomach cancer by sex



6.1: Prevalence by type

The majority of stomach cancers diagnosed are adenocarcinomas, although some rarer types also exist. Stomach cancer patients can get more than one stomach cancer within their lifetime, possibly of different types; however they are only counted once in the stomach cancer prevalence figures. Among the 612 stomach cancer patients alive at the end of 2010, there were less than five patients with a history of more than one stomach cancer diagnosed within the previous 18 years.

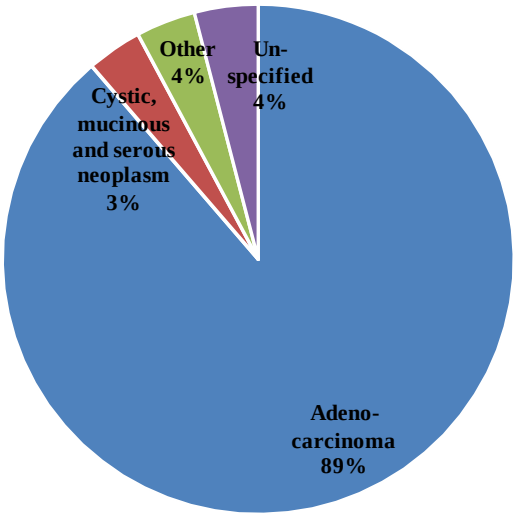
Table 6.2: Different prevalence measures (based upon time since diagnosis) for stomach cancer by first cancer type diagnosed

Cancer type	Cases per year (2006-10)	Prevalence 2010				
		One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Adenocarcinoma	191	127	303	417	498	539
Cystic, mucinous & serous neoplasm	13	11	20	23	25	25
Epithelial neoplasm	6	<5	<5	7	8	10
Squamous cell carcinoma	3	<5	6	8	8	8
Other	2	<5	<5	6	8	9
Unspecified	14	5	10	15	21	21
Total	**229**	**148**	**345**	**476**	**568**	**612**

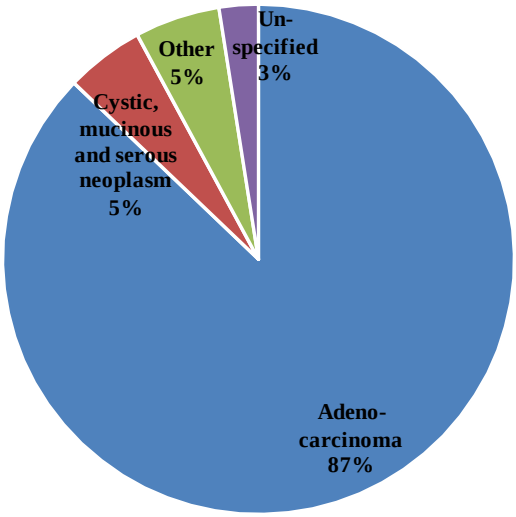
Almost nine out of ten (88.1%) stomach cancer patients who were alive at the end of 2010 had been diagnosed with adenocarcinoma in the 18 years prior to the end of 2010. Among the rarer forms of stomach cancer were cystic, mucinous, serous, epithelial and squamous cell carcinomas. The distribution by cancer site was similar for men and women. (Fig. 6.3, Tab. 6.2)

Figure 6.3: 18-year prevalence of stomach cancer by sex and first cancer site diagnosed

Male



Female



6.2: Prevalence by age

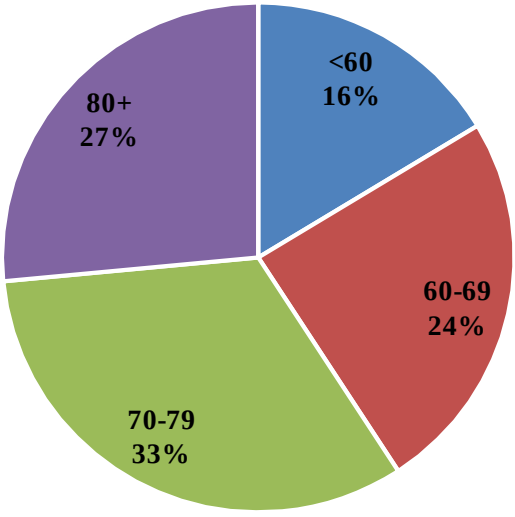
Stomach cancer is a disease which occurs primarily among the elderly, thus prevalence of stomach cancer is also greater among older age groups (Fig. 6.4, Tab. 6.3):

Among cancer survivors diagnosed within the last 10 years the median age at the end of 2010 was 74 (males: 73, females: 74), although there was a slightly different age distribution for males and females:

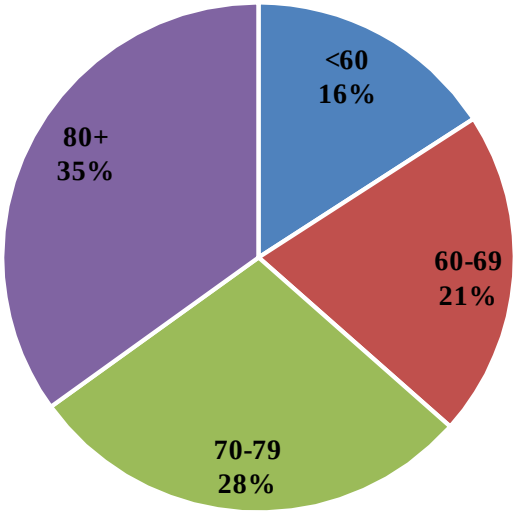
- 16% of male survivors were aged under 60, while 27% were aged 80 and over.
- 16% of female survivors were aged under 60, while 35% were aged 80 and over.

Figure 6.4a: 10-year prevalence of stomach cancer by sex and age at the end of 2010

Male



Female

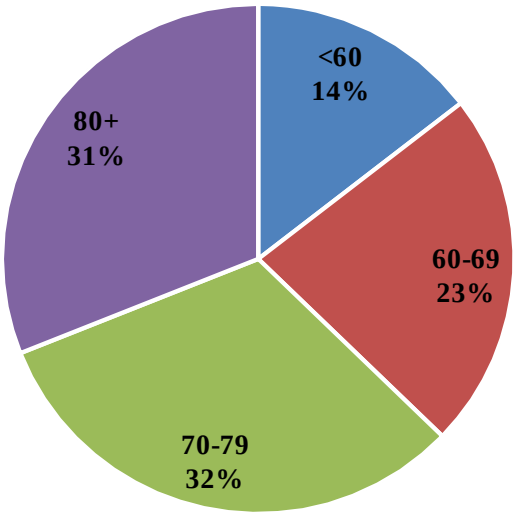


Among cancer survivors diagnosed within the last 18 years the median age at the end of 2010 was 75.

- Among male survivors the median age was 74, with 14% aged under 60 and 31% aged 80 and over.
- Among female survivors the median age was 75, with 16% aged under 60 and 38% aged 80 and over.

Figure 6.4b: 18-year prevalence of stomach cancer by sex and age at the end of 2010

Male



Female

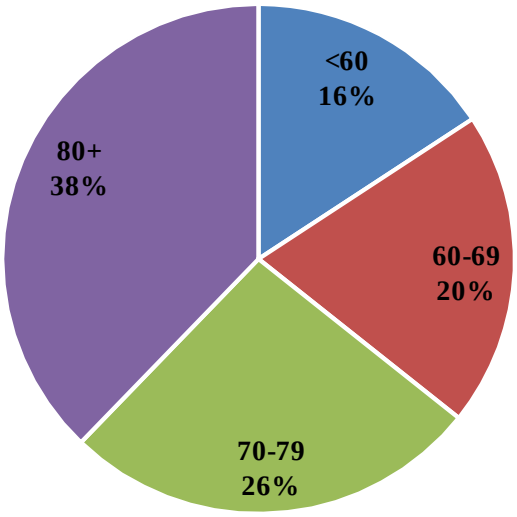


Table 6.3: Different prevalence measures (based upon time since diagnosis) for stomach cancer by sex and age at the end of 2010

Sex and age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
MALE							
Under 60	19	7	17	40	47	52	54
60-69	34	17	21	57	70	80	84
70-79	49	32	30	64	94	110	118
80 and over	35	27	29	51	76	101	115
All ages	**137**	**84**	**97**	**212**	**287**	**343**	**371**
FEMALE							
Under 60	13	7	9	26	30	34	38
60-69	17	9	9	26	39	45	48
70-79	29	18	14	36	54	62	64
80 and over	33	25	19	45	66	84	91
All ages	**91**	**60**	**51**	**133**	**189**	**225**	**241**
BOTH SEXES							
Under 50	12	6	10	21	23	26	29
50-59	20	8	16	45	54	60	63
60-69	50	27	30	83	109	125	132
70-79	78	51	44	100	148	172	182
80 and over	68	52	48	96	142	185	206
All ages	**229**	**144**	**148**	**345**	**476**	**568**	**612**

6.3: Prevalence trends

Ten-year prevalence of stomach cancer in 2010 was similar to that in 2002 for both men and women. There were 287 male survivors in 2010 compared to 279 in 2002, while there were 189 female survivors in 2010 compared to 167 in 2010. (Fig. 6.5a)

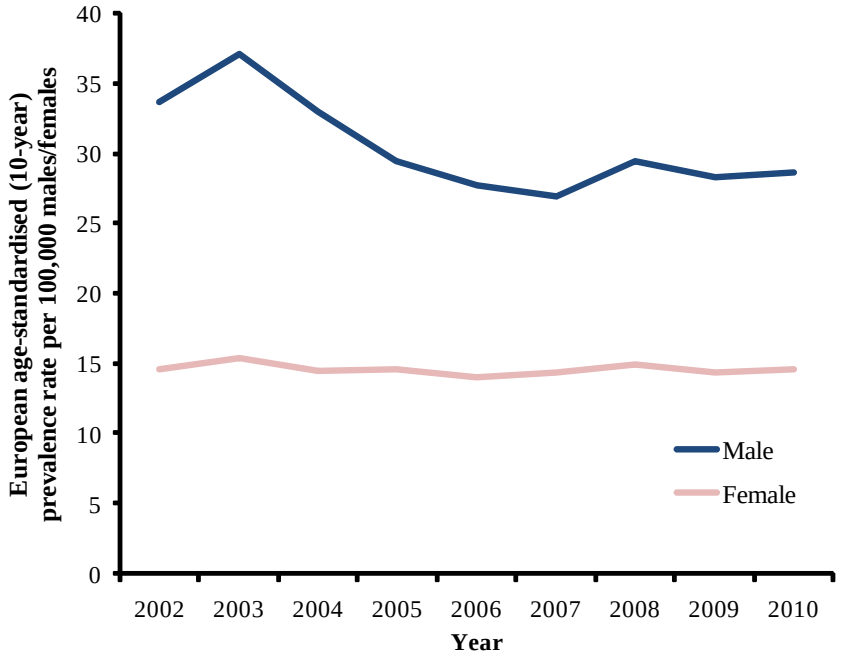
Adjusting for population growth and the ageing of the population using European age-standardised rates illustrates an annual decrease between 2002 and 2010 of 3.0% in prevalence rates among men, while there was no significant change among women. (Fig. 6.5b)

The decrease among men likely reflects the decrease in incidence rates over the last 18 years.

Figure 6.5: Trends in 10-year prevalence of stomach cancer by sex

(a) Number of patients

(b) Age-standardised rates (per 100,000 persons)



6.4: Geographic variation

Table 6.4 presents the various prevalence measures by area of residence. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

Table 6.4: Different prevalence measures (based upon time since diagnosis) for stomach cancer by Health and Social Care Trust (HSCT) of residence at diagnosis

MALE

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	30	20	22	45	62	75	79
Northern	35	18	29	64	80	89	95
South-Eastern	24	17	13	26	33	43	47
Southern	24	16	14	31	46	62	69
Western	24	13	19	45	65	71	77
Unknown	0	0	0	1	1	3	4
Northern Ireland	**137**	**84**	**97**	**212**	**287**	**343**	**371**

FEMALE

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	28	19	9	34	52	65	72
Northern	19	11	17	33	45	49	52
South-Eastern	14	10	10	21	26	35	37
Southern	17	11	7	22	31	33	35
Western	14	10	8	22	33	37	39
Unknown	0	0	0	1	2	6	6
Northern Ireland	**91**	**60**	**51**	**133**	**189**	**225**	**241**

BOTH SEXES

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	58	39	31	79	114	140	151
Northern	53	29	46	97	125	138	147
South-Eastern	38	26	23	47	59	78	84
Southern	41	26	21	53	77	95	104
Western	38	23	27	67	98	108	116
Unknown	1	0	0	2	3	9	10
Northern Ireland	**229**	**144**	**148**	**345**	**476**	**568**	**612**

07 Colorectal cancer (C18-C21)

Colorectal cancer was the third most common cancer diagnosed in Northern Ireland during 2006-2010 with an average of 1,131 cases diagnosed each year. It was slightly more common among men than women. There were 433 deaths each year from the disease during 2006-2010. Survival from colorectal cancer was average with 73.9% surviving one year and 51.9% surviving five years. However, five-year relative survival was better among women (53.4%) than men (50.7%). (Tab. 7.1)

Table 7.1: Summary statistics for colorectal cancer

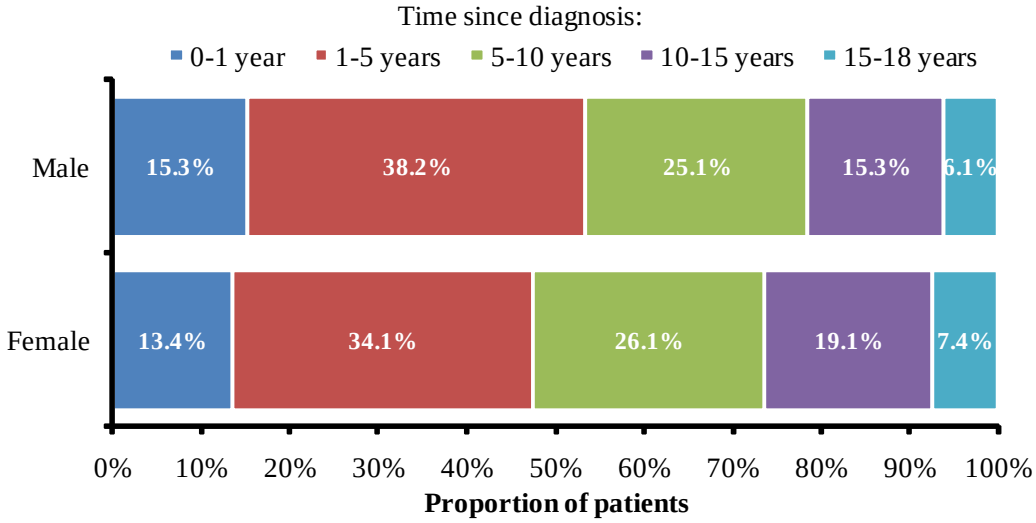
	Males	Females	Both sexes
New cases diagnosed per year (2006-2010)	622	509	1,131
Deaths per year (2006-2010)	238	195	433
1-year relative survival (diagnosed 2001-2005)	74.6%	73.0%	73.9%
5-year relative survival (diagnosed 2001-2005)	50.7%	53.4%	51.9%
10-year prevalence (2010)*	2,743	2,306	5,049
18-year prevalence (2010)**	3,491	3,136	6,627

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of cancer survivors at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 6,627. Due to higher incidence there were more male than female survivors. Specifically:

- There were 3,491 male survivors, 15.3% of which were diagnosed within the previous year while 6.1% had been diagnosed between 15 and 18 years ago.
- There were 3,136 female survivors, 13.4% of which were diagnosed within the previous year while 7.4% had been diagnosed between 15 and 18 years ago. (Fig. 7.1)

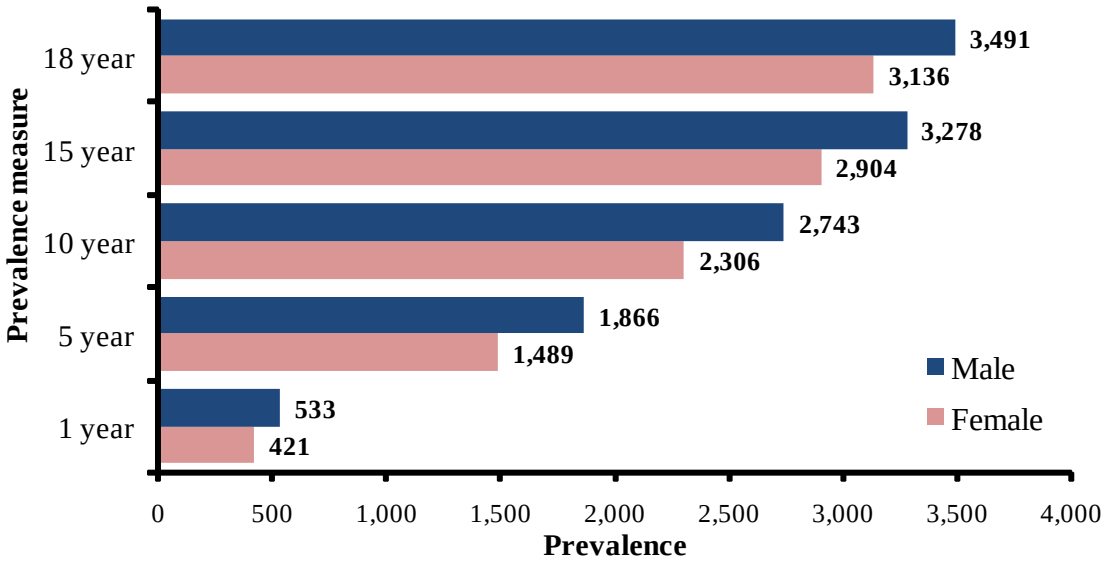
Figure 7.1: 18-year prevalence of colorectal cancer by sex and time since diagnosis



The 18-year prevalence represents all patients diagnosed with colorectal cancer during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 954 (Male: 533, Female: 421).
- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 3,355 (Male: 1,866, Female: 1,489).
- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 5,049 (Male: 2,743, Female: 2,306). (Fig. 7.2)

Figure 7.2: Different prevalence measures (based upon time since diagnosis) for colorectal cancer by sex



7.1: Prevalence by site and type

Colorectal cancer is made up of several different types of cancer. Patients can get more than one type of colorectal cancer or they can get more than one of the same type. In either event they are only counted once in the prevalence figures. Of the 6,627 colorectal cancer patients alive at the end of 2010, 186 (2.8%) had two or more colorectal cancers diagnosed within the previous 18 years.

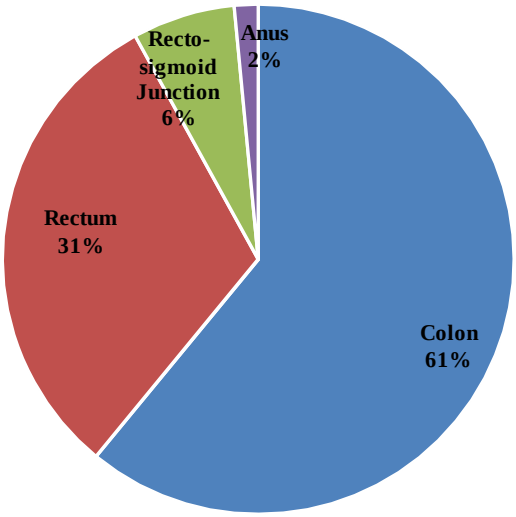
Table 7.2: Different prevalence measures (based upon time since diagnosis) for colorectal cancer by first cancer site diagnosed

Cancer site	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Colon	745	286	600	2,122	3,194	3,972	4,272
Rectum	299	98	262	952	1,415	1,674	1,800
Rectosigmoid junction	63	44	63	204	324	388	403
Anus	24	5	29	77	116	148	152
Total	**1,131**	**433**	**954**	**3,355**	**5,049**	**6,182**	**6,627**

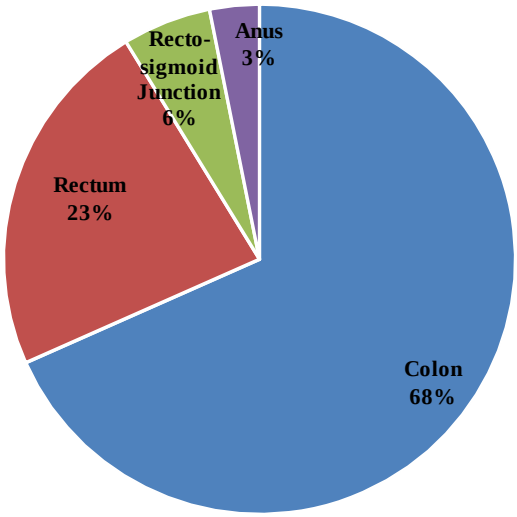
Colon cancer was the most common of the colorectal cancers, with 4,272 (64.5%) of patients diagnosed with this cancer in the 18 years prior to the end of 2010. This was followed by cancer of the rectum (27.2%). The distribution by cancer site was similar for men and women, although women survivors had a slightly higher proportion of colon cancer (68.4% vs. 61.0%). (Fig. 7.3, Tab. 7.2)

Figure 7.3: 18-year prevalence of colorectal cancer by sex and first cancer site diagnosed

Male



Female



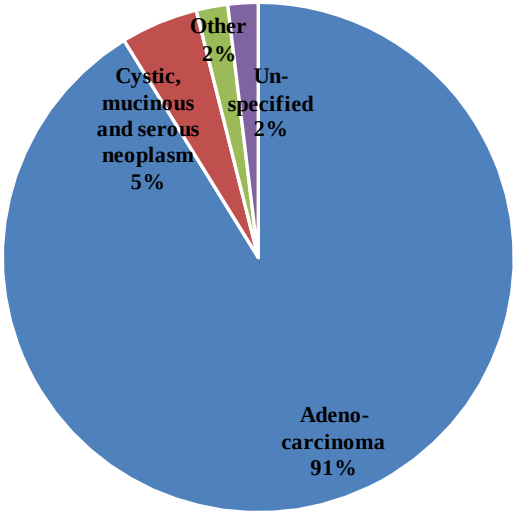
Nine out of ten (89.9%) survivors had been diagnosed with adenocarcinoma in the 18 years prior to the end of 2010. Cystic, mucinous, serous, epithelial and squamous cell carcinomas made up most of the remaining types. The distribution by cancer type was similar for men and women. (Fig. 7.4, Tab. 7.3)

Table 7.3: Different prevalence measures (based upon time since diagnosis) for colorectal cancer by first cancer type diagnosed

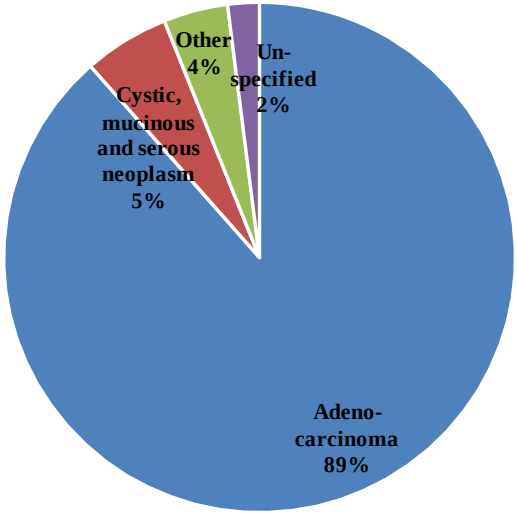
Cancer type	Cases per year (2006-10)	Prevalence 2010				
		One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Adenocarcinoma	934	824	3,009	4,543	5,564	5,958
Cystic, mucinous & serous neoplasm	60	67	193	279	332	341
Epithelial neoplasm	12	<5	13	28	42	53
Squamous cell carcinoma	18	23	64	95	120	123
Other	4	<5	11	16	21	22
Unspecified	103	32	65	88	103	130
Total	**1,131**	**954**	**3,355**	**5,049**	**6,182**	**6,627**

Figure 7.4: 18-year prevalence of colorectal cancer by sex and first cancer type diagnosed

Male



Female



7.2: Prevalence by age

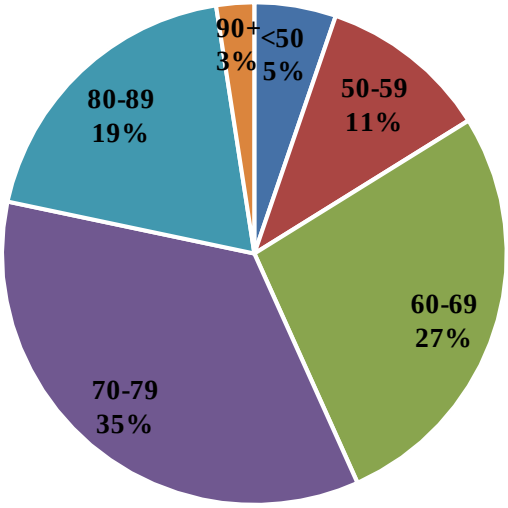
Colorectal cancer occurs primarily among the elderly population, thus prevalence of colorectal cancer is greater among older age groups although a small number of cases are diagnosed among those aged under 50 (Fig. 7.5, Tab 7.4):

Among colorectal cancer survivors diagnosed within the last 10 years:

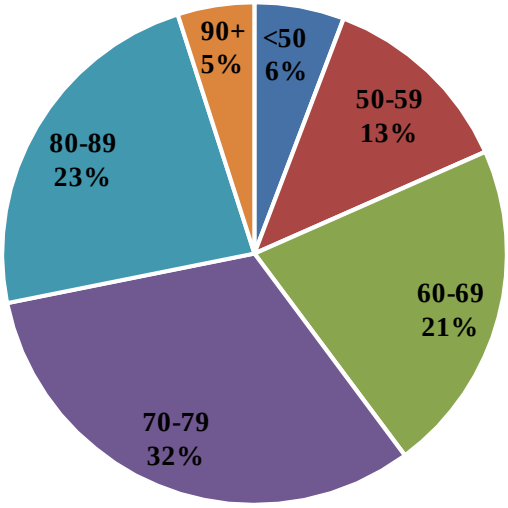
- The median male age was 72, with 5% aged under 50 and 22% aged 80 and over.
- The median female age was 73, with 6% aged under 50 and 28% aged 80 and over.

Figure 7.5a: 10-year prevalence of colorectal cancer by sex and age at the end of 2010

Male



Female

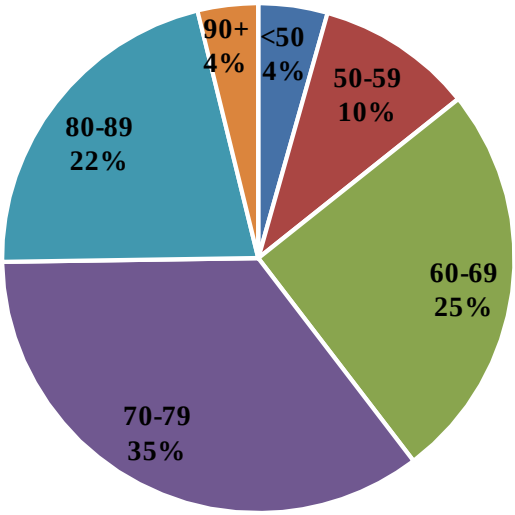


Among cancer survivors diagnosed within the last 18 years the median age at the end of 2010 was 73 and was similar for males and females (males: 73, females: 74), although there were small differences in the overall distribution. In particular:

- 4% of males were aged under 50, while 26% were aged 80 and over.
- 5% of females were aged under 50, while 32% were aged 80 and over.

Figure 7.5b: 18-year prevalence of colorectal cancer by sex and age at the end of 2010

Male



Female

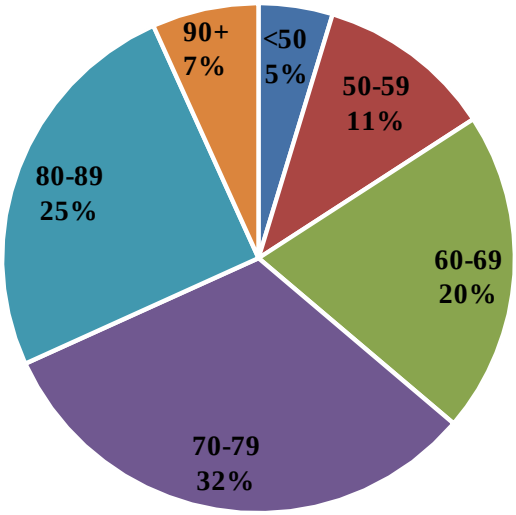


Table 7.4: Different prevalence measures (based upon time since diagnosis) for colorectal cancer by sex and age at the end of 2010

Sex and age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
MALE							
Under 50	41	11	34	113	144	150	153
50-59	77	25	75	224	299	336	346
60-69	179	61	168	550	744	846	884
70-79	208	73	163	624	961	1,159	1,228
80-89	107	61	86	327	528	681	747
90 and over	10	8	7	28	67	106	133
All ages	**622**	**238**	**533**	**1,866**	**2,743**	**3,278**	**3,491**
FEMALE							
Under 50	35	8	26	103	133	145	147
50-59	66	17	69	208	291	338	350
60-69	106	30	106	337	494	598	638
70-79	160	56	129	474	739	934	1,005
80-89	121	67	81	316	535	711	784
90 and over	20	16	10	51	114	178	212
All ages	**509**	**195**	**421**	**1,489**	**2,306**	**2,904**	**3,136**
BOTH SEXES							
Under 50	76	19	60	216	277	295	300
50-59	142	42	144	432	590	674	696
60-69	286	91	274	887	1,238	1,444	1,522
70-79	369	129	292	1,098	1,700	2,093	2,233
80-89	228	128	167	643	1,063	1,392	1,531
90 and over	30	24	17	79	181	284	345
All ages	**1,131**	**433**	**954**	**3,355**	**5,049**	**6,182**	**6,627**

7.3: Prevalence by stage at diagnosis

Prevalence of colorectal cancer was highest for those with stage I or II disease due to the excellent survival for those diagnosed early. However compared to the number of cases of colorectal cancer diagnosed at stage IV, prevalence of people diagnosed at this stage was low due to very poor survival rates. Only 11 of the 347 stage IV survivors were diagnosed more than 15 years ago, while 46.4% had been diagnosed in 2010. (Tab. 7.5)

Table 7.5: Different prevalence measures (based upon time since diagnosis) for colorectal cancer by stage at diagnosis

Stage at diagnosis	Cases per year (2006-10)	Prevalence 2010				
		One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Stage I	135	134	557	828	986	1,051
Stage II	283	261	1,109	1,810	2,220	2,404
Stage III	292	293	1,037	1,519	1,790	1,857
Stage IV	217	161	299	325	336	347
Unknown	203	105	353	567	850	968
Total	**1,131**	**954**	**3,355**	**5,049**	**6,182**	**6,627**

7.4: Prevalence trends

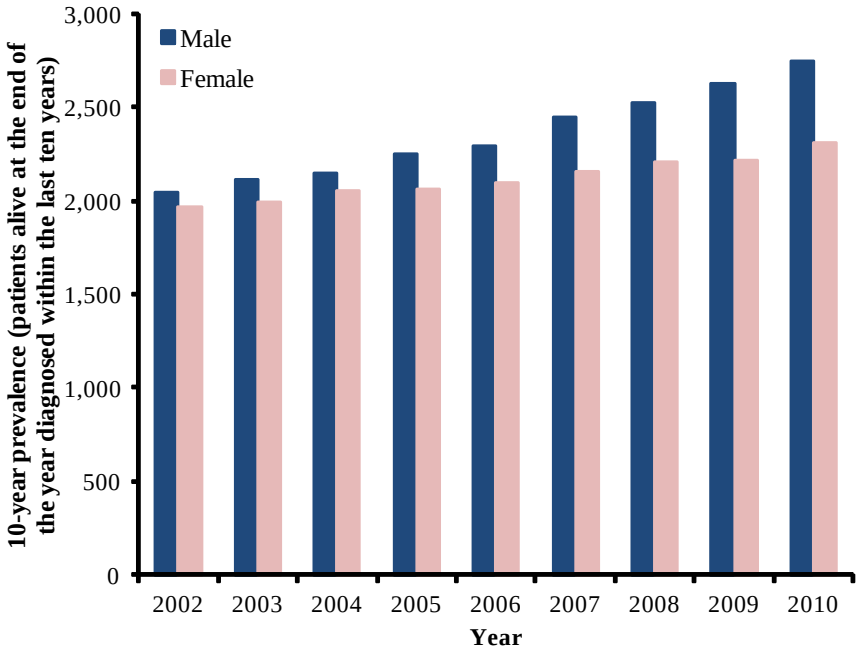
Ten-year prevalence of colorectal cancer is increasing, rising from 2,043 male and 1,970 female survivors in 2002 to 2,743 male and 2,306 female survivors in 2010. (Fig. 7.6a)

This is partly due to the growth and ageing of the population. Adjusting for these factors using European age-standardised rates illustrates an underlying increase in prevalence. Specifically prevalence rates increased between 2002 and 2010 by 1.6% per year among men and by 0.4% per year among women. (Fig. 7.6b)

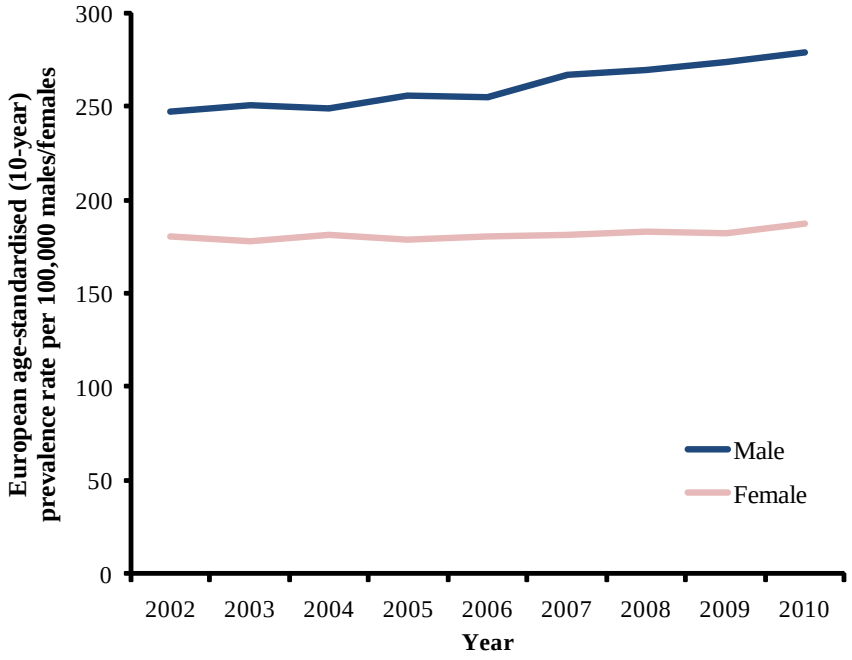
The changes in prevalence are due primarily to small improvements in survival and reductions in deaths from other causes, as incidence rates of colorectal cancer have remained unchanged among men and have fallen slightly among women over the last 15 years.

Figure 7.6: Trends in 10-year prevalence of colorectal cancer by sex

(a) Number of patients



(b) Age-standardised rates (per 100,000 persons)



7.5: Geographic variation

Table 7.6 presents the various prevalence measures by area of residence[2]. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

[2] *Table is presented at Local Government District level. However one-year prevalence is not provided at this level broken down by sex due to the small number of patients in some of these areas.*

Table 7.6: Different prevalence measures (based upon time since diagnosis) for colorectal cancer by Health and Social Care Trust (HSCT) and Local Government District (LGD) of residence at diagnosis

MALE

HSCT and LGD of residence	Cases per year 2006-2010	Deaths per year 2006-2010	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
BELFAST HSCT							
Belfast	104	47	-	276	394	481	513
Castlereagh	23	7	-	69	105	135	142
TOTAL	**127**	**54**	**91**	**345**	**499**	**616**	**655**
NORTHERN HSCT							
Antrim	15	5	-	51	82	88	93
Ballymena	21	6	-	70	95	120	124
Ballymoney	15	5	-	39	55	66	70
Carrickfergus	18	9	-	47	73	81	86
Coleraine	21	6	-	78	117	130	136
Cookstown	11	3	-	37	60	66	70
Larne	10	6	-	27	50	59	67
Magherafelt	12	4	-	38	57	66	70
Moyle	5	3	-	16	28	32	35
Newtownabbey	35	11	-	105	149	184	196
TOTAL	**164**	**58**	**134**	**508**	**766**	**892**	**947**
SOUTH-EASTERN HSCT							
Ards	30	11	-	96	145	164	168
Down	28	9	-	82	118	140	155
Lisburn	38	12	-	130	178	218	233
North Down	26	10	-	76	122	148	167
TOTAL	**122**	**43**	**112**	**384**	**563**	**670**	**723**
SOUTHERN HSCT							
Armagh	20	7	-	65	82	96	100
Banbridge	16	6	-	46	66	78	83
Craigavon	30	13	-	79	116	145	152
Dungannon	19	7	-	62	81	95	99
Newry & Mourne	30	13	-	89	131	161	175
TOTAL	**115**	**46**	**105**	**341**	**476**	**575**	**609**
WESTERN HSCT							
Derry	31	14	-	98	147	180	191
Fermanagh	25	8	-	69	100	117	124
Limavady	9	3	-	31	51	56	58
Omagh	15	7	-	47	65	81	87
Strabane	12	5	-	33	57	63	68
TOTAL	**92**	**37**	**89**	**278**	**420**	**497**	**528**
Unknown	3	0	2	10	19	28	29
Northern Ireland	**622**	**238**	**533**	**1,866**	**2,743**	**3,278**	**3,491**

Table 7.6 cont. Different prevalence measures (based upon time since diagnosis) for colorectal cancer by Health and Social Care Trust (HSCT) and Local Government District (LGD) of residence at diagnosis

FEMALE

HSCT and LGD of residence	Cases per year 2006-2010	Deaths per year 2006-2010	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
BELFAST HSCT							
Belfast	83	36	-	229	366	467	505
Castlereagh	19	9	-	54	94	114	126
TOTAL	**102**	**45**	**73**	**283**	**460**	**581**	**631**
NORTHERN HSCT							
Antrim	15	5	-	48	67	78	83
Ballymena	20	7	-	55	90	117	122
Ballymoney	10	3	-	32	47	55	63
Carrickfergus	9	4	-	28	46	52	58
Coleraine	18	9	-	46	75	102	111
Cookstown	9	3	-	26	43	53	54
Larne	10	3	-	33	45	58	63
Magherafelt	11	5	-	28	46	56	60
Moyle	7	3	-	22	28	31	32
Newtownabbey	19	7	-	59	102	131	144
TOTAL	**127**	**48**	**115**	**377**	**589**	**733**	**790**
SOUTH-EASTERN HSCT							
Ards	23	9	-	66	92	125	137
Down	23	8	-	74	111	135	139
Lisburn	35	16	-	95	149	189	200
North Down	27	11	-	80	121	157	177
TOTAL	**108**	**44**	**98**	**315**	**473**	**606**	**653**
SOUTHERN HSCT							
Armagh	17	6	-	46	68	83	90
Banbridge	10	4	-	23	35	44	52
Craigavon	22	9	-	62	99	121	131
Dungannon	14	4	-	41	67	80	88
Newry & Mourne	25	9	-	82	124	163	172
TOTAL	**88**	**30**	**70**	**254**	**393**	**491**	**533**
WESTERN HSCT							
Derry	30	9	-	94	138	174	188
Fermanagh	18	8	-	55	87	106	111
Limavady	8	2	-	29	34	47	49
Omagh	13	5	-	36	59	78	86
Strabane	11	3	-	39	59	66	71
TOTAL	**81**	**26**	**63**	**253**	**377**	**471**	**505**
Unknown	**2**	**1**	**2**	**7**	**14**	**22**	**24**
Northern Ireland	**509**	**195**	**421**	**1,489**	**2,306**	**2,904**	**3,136**

Table 7.6 cont. Different prevalence measures (based upon time since diagnosis) for colorectal cancer by Health and Social Care Trust (HSCT) and Local Government District (LGD) of residence at diagnosis

BOTH SEXES

HSCT and LGD of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
BELFAST HSCT							
Belfast	187	83	131	505	760	948	1,018
Castlereagh	42	16	33	123	199	249	268
TOTAL	**229**	**99**	**164**	**628**	**959**	**1,197**	**1,286**
NORTHERN HSCT							
Antrim	30	10	38	99	149	166	176
Ballymena	41	13	42	125	185	237	246
Ballymoney	25	8	15	71	102	121	133
Carrickfergus	27	12	24	75	119	133	144
Coleraine	39	14	32	124	192	232	247
Cookstown	20	6	14	63	103	119	124
Larne	21	9	16	60	95	117	130
Magherafelt	23	9	10	66	103	122	130
Moyle	12	6	13	38	56	63	67
Newtownabbey	54	18	45	164	251	315	340
TOTAL	**291**	**106**	**249**	**885**	**1,355**	**1,625**	**1,737**
SOUTH-EASTERN HSCT							
Ards	53	20	47	162	237	289	305
Down	51	17	56	156	229	275	294
Lisburn	73	28	67	225	327	407	433
North Down	53	21	40	156	243	305	344
TOTAL	**231**	**87**	**210**	**699**	**1,036**	**1,276**	**1,376**
SOUTHERN HSCT							
Armagh	37	13	33	111	150	179	190
Banbridge	26	9	24	69	101	122	135
Craigavon	52	22	44	141	215	266	283
Dungannon	33	10	28	103	148	175	187
Newry & Mourne	55	22	46	171	255	324	347
TOTAL	**202**	**76**	**175**	**595**	**869**	**1,066**	**1,142**
WESTERN HSCT							
Derry	61	22	52	192	285	354	379
Fermanagh	43	16	31	124	187	223	235
Limavady	17	5	15	60	85	103	107
Omagh	28	11	30	83	124	159	173
Strabane	23	8	24	72	116	129	139
TOTAL	**173**	**63**	**152**	**531**	**797**	**968**	**1,033**
Unknown	**5**	**1**	**4**	**17**	**33**	**50**	**53**
Northern Ireland	**1,131**	**433**	**954**	**3,355**	**5,049**	**6,182**	**6,627**

08 Pancreatic cancer (C25)

There was an average of 205 cases of pancreatic cancer diagnosed each year during 2006-2010 in Northern Ireland, while 205 people died each year from the disease. Survival from the disease for those diagnosed in 2001-2005 was very poor with one-year relative survival only 11.3% and five-year relative survival only 2.3%. (Tab. 8.1)

Table 8.1: Summary statistics for pancreatic cancer

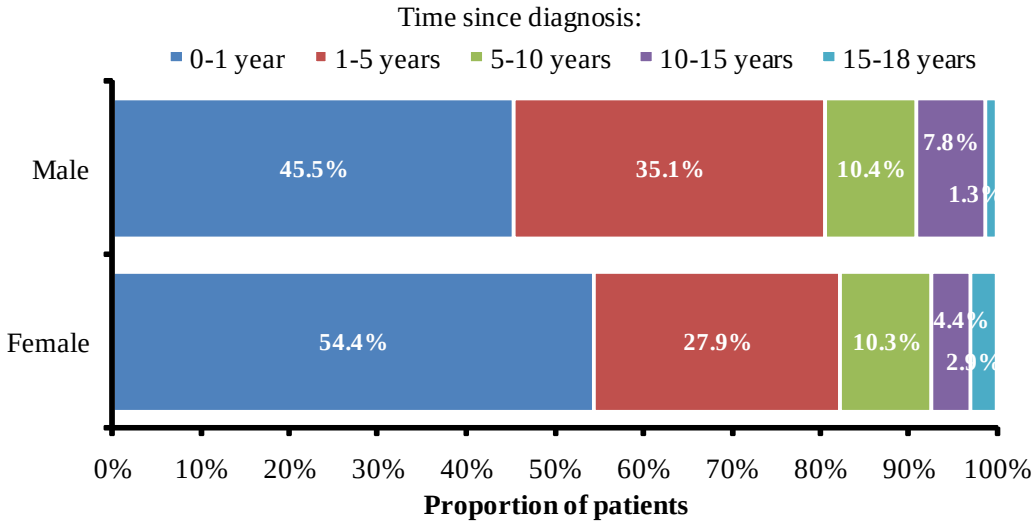
	Males	Females	Both sexes
New cases diagnosed per year (2006-2010)	105	100	205
Deaths per year (2006-2010)	105	101	205
1-year relative survival (diagnosed 2001-2005)	11.2%	11.5%	11.3%
5-year relative survival (diagnosed 2001-2005)	-	-	2.3%
10-year prevalence (2010)*	70	63	133
18-year prevalence (2010)**	77	68	145

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of pancreatic cancer survivors at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 145 with half of these diagnosed during 2010. (Fig. 8.1)

- Among males there were 77 survivors with 45.5% diagnosed during 2010, while 9.1% had been diagnosed between 10 and 18 years ago.
- Among females there were 68 survivors with 54.4% diagnosed during 2010, while 7.3% had been diagnosed between 10 and 18 years ago.

Figure 8.1: 18-year prevalence of pancreatic cancer by sex and time since diagnosis

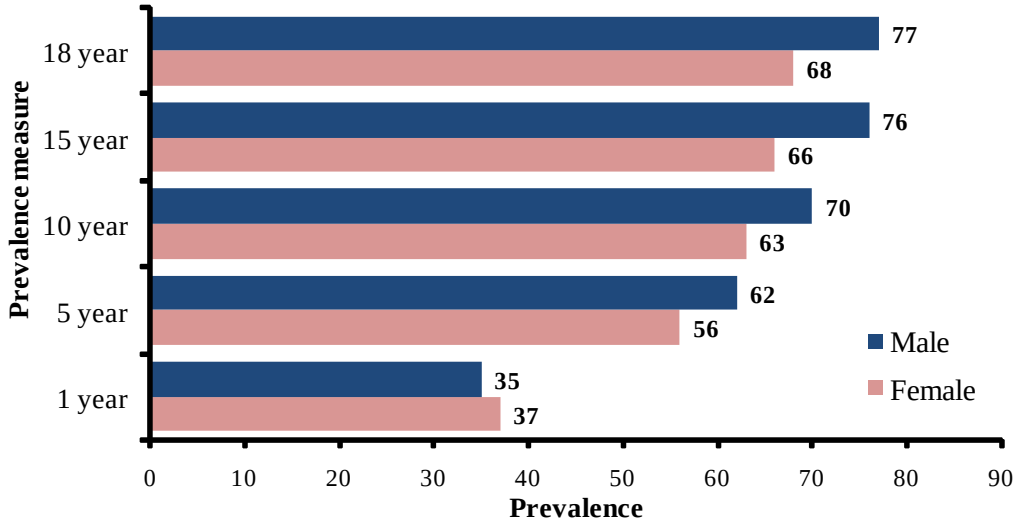


The 18-year prevalence represents all patients diagnosed with pancreatic cancer during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 72 (Male: 35, Female: 37).

- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 118 (Male: 62, Female: 56).
- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 133 (Male: 70, Female: 63). (Fig. 8.2)

Figure 8.2: Different prevalence measures (based upon time since diagnosis) for pancreatic cancer by sex



8.1: Prevalence by age

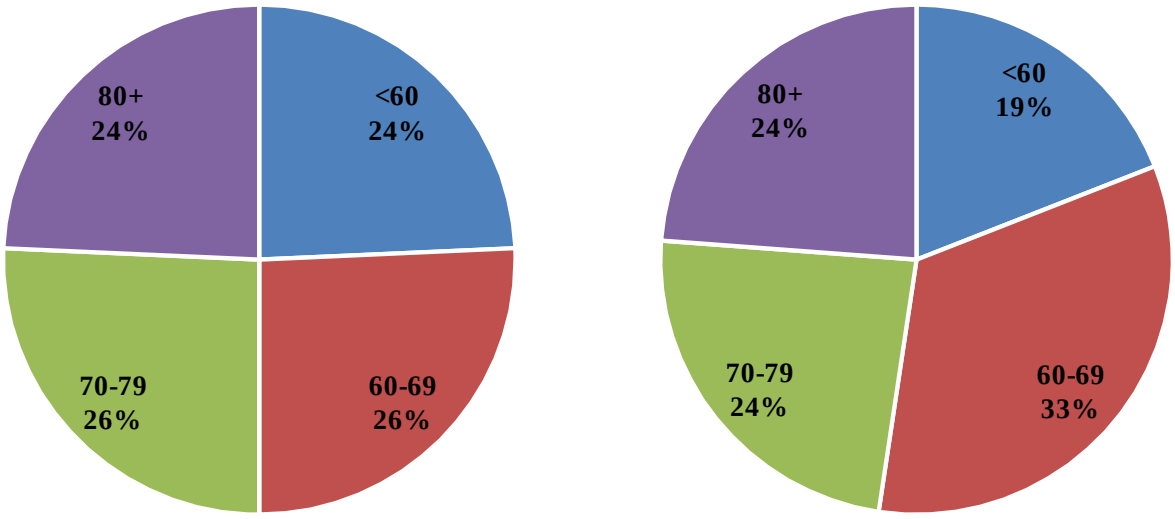
Pancreatic cancer occurs primarily among the elderly although it is not uncommon among younger people. Consequently prevalence of pancreatic cancer is greater among older age groups (Fig. 8.3):

Among cancer survivors diagnosed within the last 10 years the median age at the end of 2010 was 69, which did not vary by sex. However:

- 24% of males were aged under 60, while 24% were aged 80 and over.
- 19% of females were aged under 60, while 24% were aged 80 and over.

Figure 8.3a: 10-year prevalence of pancreatic cancer by sex and age at the end of 2010

Male *Female*

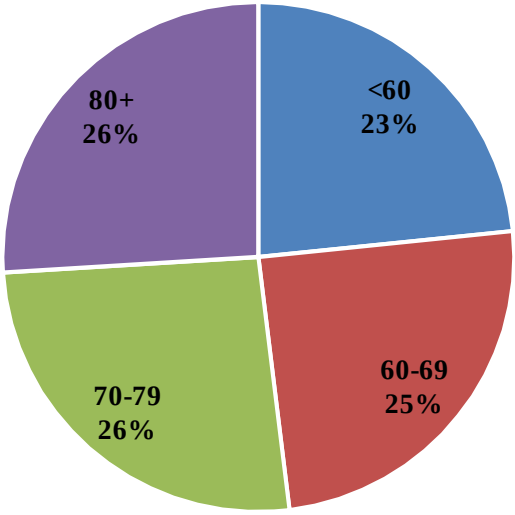


Among cancer survivors diagnosed within the last 18 years the median age at the end of 2010 was 70 and was slightly greater among males than females:

- 23% of male survivors were aged under 60, while 26% were aged 80 and over. The median age at the end of 2010 was 70.
- 21% of female survivors were aged under 60, while 26% were aged 80 and over. The median age at the end of 2010 was 69.

Figure 8.3b: 18-year prevalence of pancreatic cancer by sex and age at the end of 2010

Male



Female

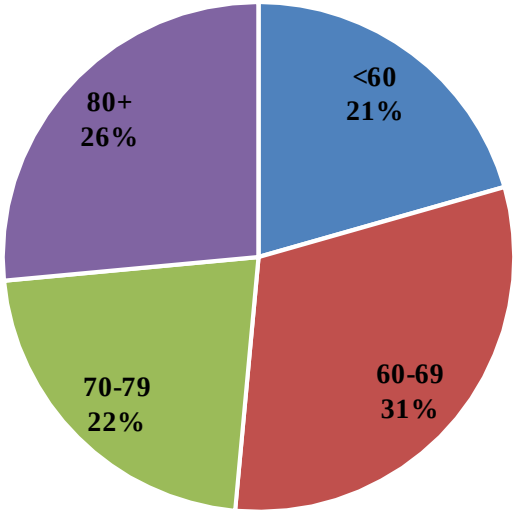


Table 8.2: Different prevalence measures (based upon time since diagnosis) for pancreatic cancer by sex and age at the end of 2010

Sex and age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
MALE							
Under 60	20	18	8	14	17	18	18
60-69	28	30	9	15	18	19	19
70-79	33	32	12	18	18	19	20
80 and over	24	24	6	15	17	20	20
All ages	**105**	**105**	**35**	**62**	**70**	**76**	**77**
FEMALE							
Under 60	13	11	8	11	12	13	14
60-69	22	21	11	16	21	21	21
70-79	31	31	8	14	15	15	15
80 and over	33	38	10	15	15	17	18
All ages	**100**	**101**	**37**	**56**	**63**	**66**	**68**
BOTH SEXES							
Under 50	11	10	6	9	10	11	12
50-59	22	19	10	16	19	20	20
60-69	51	51	20	31	39	40	40
70-79	65	63	20	32	33	34	35
80 and over	57	62	16	30	32	37	38
All ages	**205**	**205**	**72**	**118**	**133**	**142**	**145**

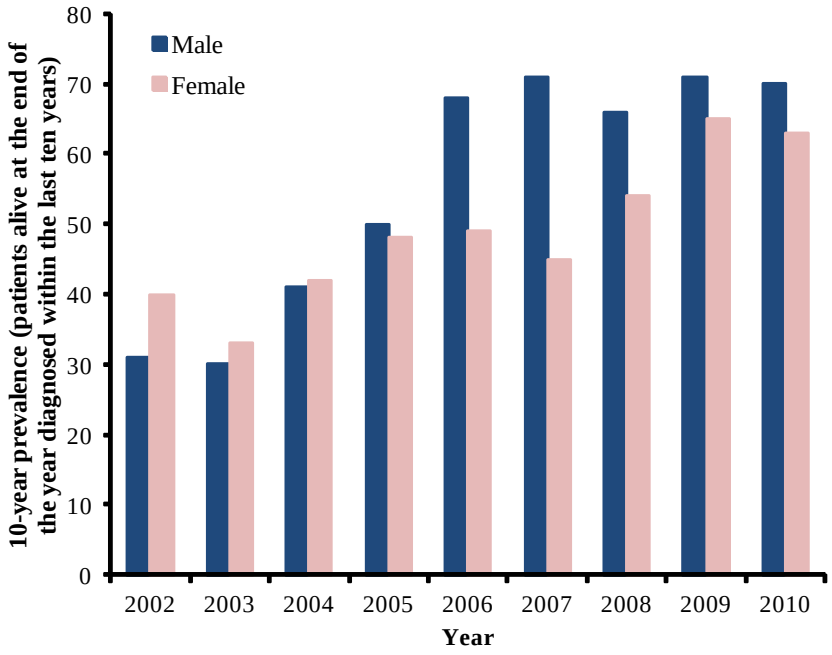
8.2: Prevalence trends

Ten-year prevalence of pancreatic cancer increased considerably between 2002 and 2010, rising from 31 to 70 male and 40 to 63 female survivors. (Fig. 8.4a)

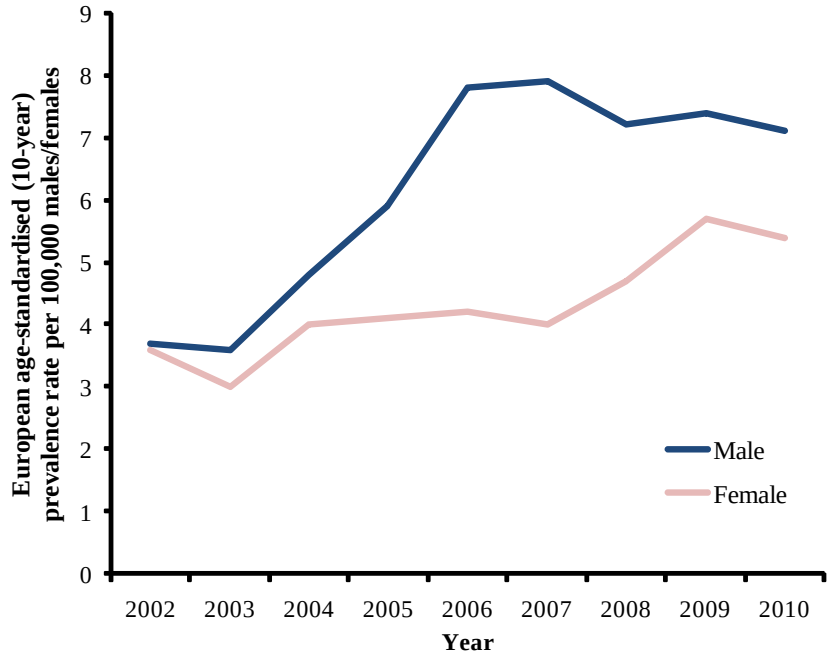
Adjusting for population growth and the ageing of the population using European age-standardised rates illustrates the increase among men occurred between 2002 and 2006, after which there was minimal change. Among women there was an annual increase in prevalence rates between 2002 and 2010 of 6.9%. (Fig. 8.4b)

Figure 8.4: Trends in 10-year prevalence of pancreatic cancer by sex

(a) Number of patients



(b) Age-standardised rates (per 100,000 persons)



8.3: Geographic variation

Table 8.3 presents the various prevalence measures by area of residence[3]. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

[3] *Table is presented at Health and Social Care Trust level. However one-year prevalence is not provided at this level broken down by sex due to the small number of patients in some of these areas.*

Table 8.3: Different prevalence measures (based upon time since diagnosis) for pancreatic cancer by Health and Social Care Trust (HSCT) of residence at diagnosis

MALE

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	20	18	-	15	16	16	17
Northern	30	32	-	15	16	17	17
South-Eastern	19	19	-	10	10	11	11
Southern	20	19	-	10	11	12	12
Western	16	16	-	10	15	17	17
Unknown	1	0	-	2	2	3	3
Northern Ireland	**105**	**105**	**35**	**62**	**70**	**76**	**77**

FEMALES

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	24	23	-	14	15	16	17
Northern	26	29	-	12	17	18	19
South-Eastern	17	17	-	7	8	8	8
Southern	18	18	-	16	16	16	16
Western	13	13	-	6	6	6	6
Unknown	1	0	-	1	1	2	2
Northern Ireland	**100**	**101**	**37**	**56**	**63**	**66**	**68**

BOTH SEXES

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	44	42	18	29	31	32	34
Northern	56	61	17	27	33	35	36
South-Eastern	36	36	10	17	18	19	19
Southern	38	37	13	26	27	28	28
Western	29	29	13	16	21	23	23
Unknown	2	0	1	3	3	5	5
Northern Ireland	**205**	**205**	**72**	**118**	**133**	**142**	**145**

09 Lung cancer (C33-C34)

There was an average of 1,030 cases of lung cancer diagnosed each year during 2006-2010 in Northern Ireland, with a ratio of three male to every two female cases. Lung cancer was the most common cause of cancer death with 887 people dying from the disease each year in 2006-2010. This was a consequence of high incidence and very poor survival from the disease. In particular one-year relative survival for those diagnosed in 2001-2005 was 27.1%, while five-year relative survival was 8.3%, with female survival slightly better than male survival (9.9% vs. 7.2%). (Tab. 9.1)

Table 9.1: Summary statistics for lung cancer

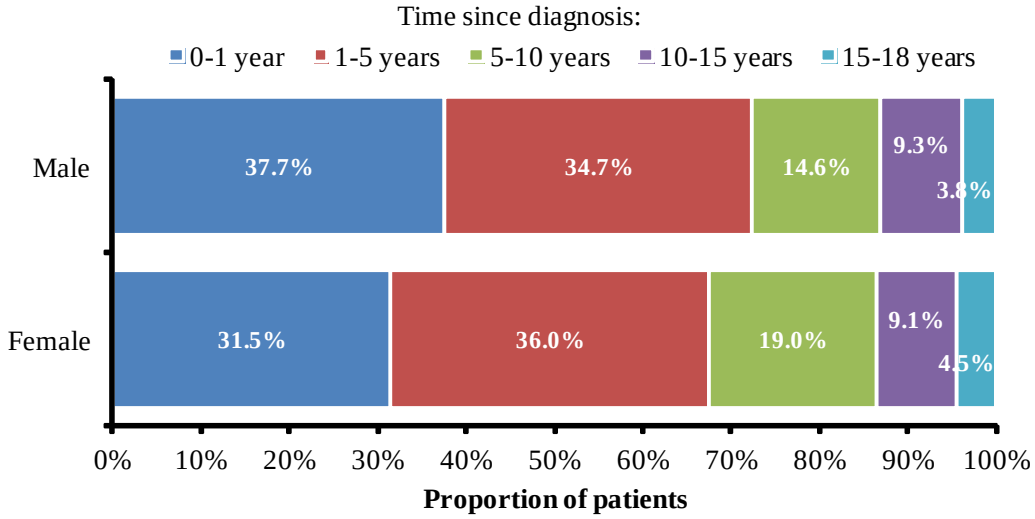
	Males	Females	Both sexes
New cases diagnosed per year (2006-2010)	616	414	1,030
Deaths per year (2006-2010)	529	358	887
1-year relative survival (diagnosed 2001-2005)	26.3%	28.2%	27.1%
5-year relative survival (diagnosed 2001-2005)	7.2%	9.9%	8.3%
10-year prevalence (2010)*	757	579	1,336
18-year prevalence (2010)**	871	670	1,541

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of cancer survivors at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 1,541.

- Among males there were 871 survivors. 37.7% had been diagnosed within the previous year while 3.8% had been diagnosed between 15 and 18 years ago.
- Among females there were 670 survivors. 31.5% had been diagnosed within the previous year while 4.5% had been diagnosed between 15 and 18 years ago. (Fig. 9.1)

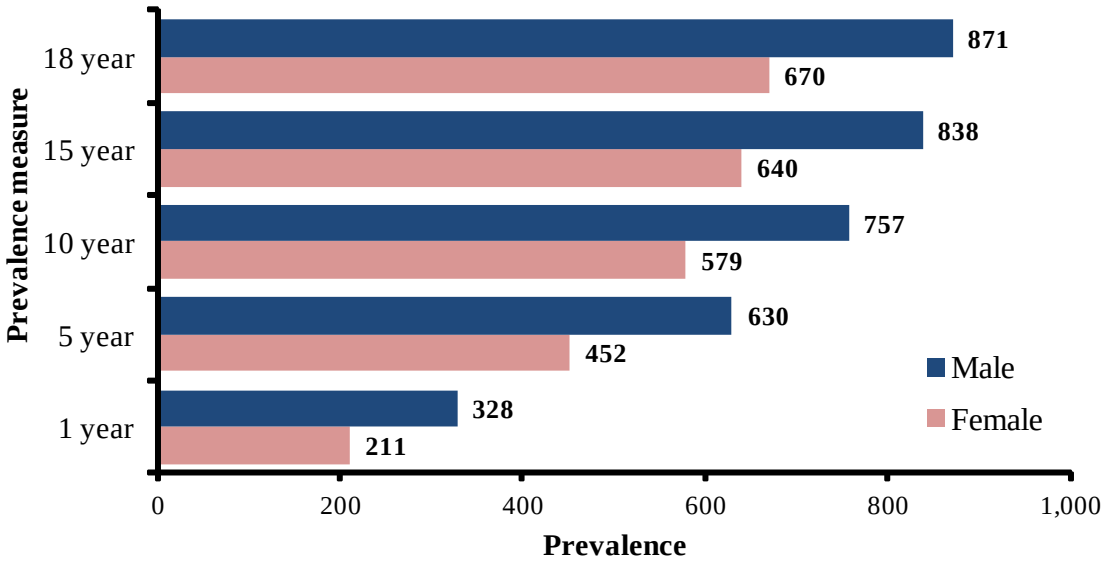
Figure 9.1: 18-year prevalence of lung cancer by sex and time since diagnosis



The 18-year prevalence represents all patients diagnosed with lung cancer during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 539 (Male: 328, Female: 211).
- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 1,082 (Male: 630, Female: 452).
- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 1,336 (Male: 757, Female: 579). (Fig. 9.2)

Figure 9.2: Different prevalence measures (based upon time since diagnosis) for lung cancer by sex



9.1: Prevalence by type

There are two main types of lung cancer: small cell and non-small cell carcinoma. While lung cancer patients can get both these types of cancer, they are only counted once in the lung cancer prevalence figures. However of the 1,541 lung cancer patients alive at the end of 2010, there were less than five patients with a history of more than one lung cancer diagnosed within the previous 18 years.

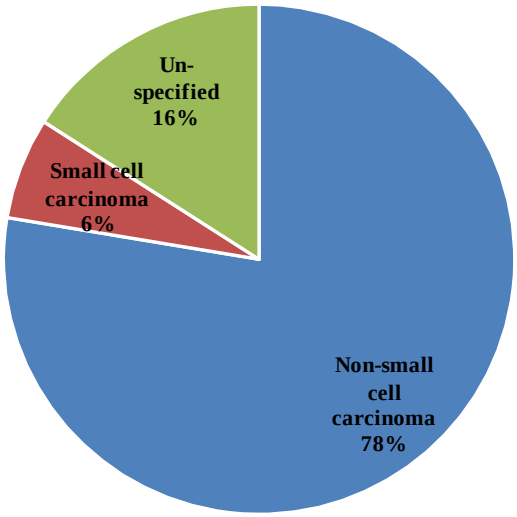
Table 9.2: Different prevalence measures (based upon time since diagnosis) for lung cancer by first cancer type diagnosed

Cancer type	Cases per year (2006-10)	Prevalence 2010				
		One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Non-small cell carcinoma	573	374	810	1,015	1,127	1,179
Small cell carcinoma	131	46	88	107	113	116
Unspecified	326	119	184	214	238	246
Total	**1,030**	**539**	**1,082**	**1,336**	**1,478**	**1,541**

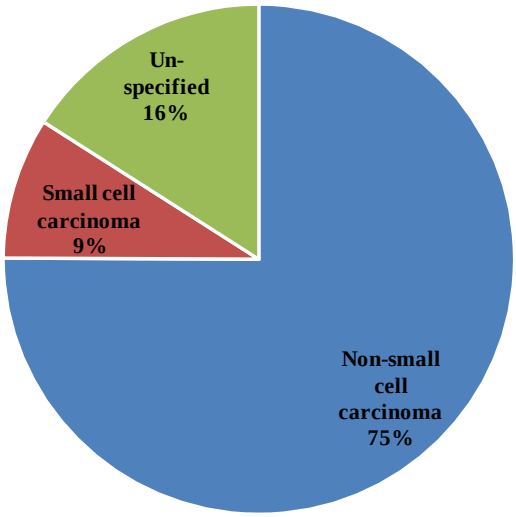
Non-small cell carcinoma was the most common of the lung cancers, with 1,179 (76.5%) lung cancer survivors diagnosed with this cancer in the 18 years prior to the end of 2010. Only 7.5% of survivors had been diagnosed with small cell lung cancer, with the remainder not having a type specified. The distribution by cancer type was similar for men and women, with 77.7% of male and 75.1% of female survivors having non-small cell lung cancer. (Fig. 9.3, Tab. 9.2)

Figure 9.3: 18-year prevalence of lung cancer by sex and first cancer site diagnosed

Male



Female



9.2: Prevalence by age

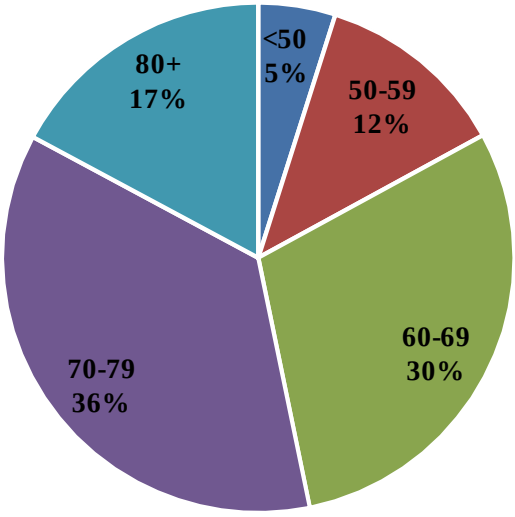
Lung cancer is a disease which occurs primarily among the elderly, thus prevalence of lung cancer is greater among older age groups. (Fig. 9.4, Tab. 9.3)

Among cancer survivors diagnosed within the last 10 years the median age at the end of 2010 was 71, with a one year difference between males and females (males:70, females:71). The distribution by age group only differed slightly between men and women, with:

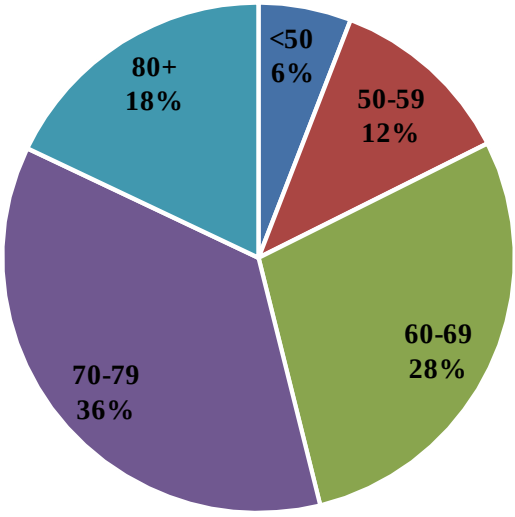
- 5% of male survivors aged under 50 and 17% aged 80 and over.
- 6% of female survivors aged under 50 and 18% aged 80 and over.

Figure 9.4a: 10-year prevalence of lung cancer by sex and age at the end of 2010

Male



Female



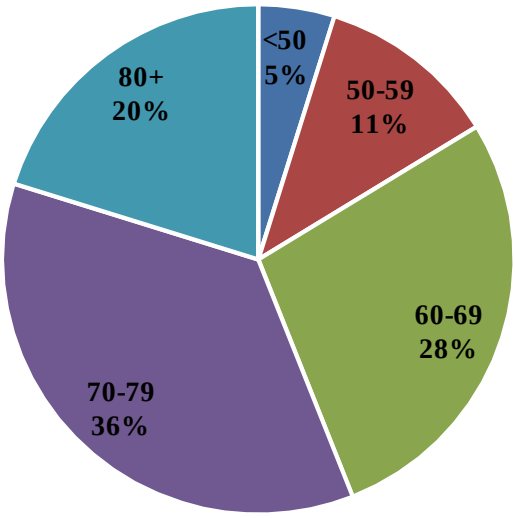
Among cancer survivors diagnosed within the last 18 years the median age at the end of 2010 was 71, with no difference between males and females. The distribution by age group was also similar for men and women, with:

- 5% of male survivors aged under 50 and 20% aged 80 and over.

- 5% of female survivors aged under 50 and 20% aged 80 and over.

Figure 9.4b: 18-year prevalence of lung cancer by sex and age at the end of 2010

Male



Female

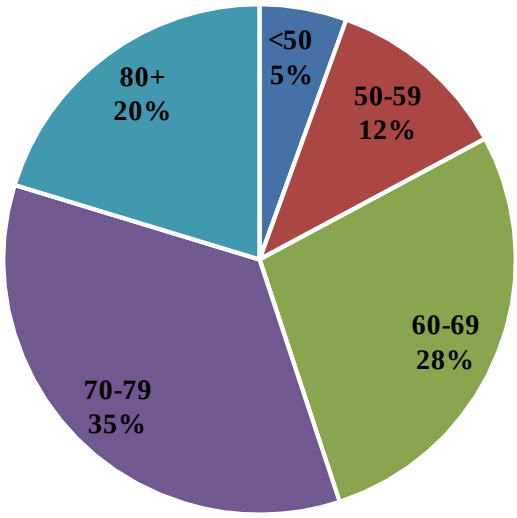


Table 9.3: Different prevalence measures (based upon time since diagnosis) for lung cancer by sex and age at the end of 2010

Sex and age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
MALE							
Under 50	17	10	13	28	37	40	42
50-59	74	59	38	71	92	99	100
60-69	183	146	96	192	225	239	241
70-79	221	192	116	230	273	301	312
80 and over	121	122	65	109	130	159	176
All ages	**616**	**529**	**328**	**630**	**757**	**838**	**871**
FEMALE							
Under 50	19	14	9	24	34	36	37
50-59	52	40	26	58	68	78	78
60-69	116	92	62	127	165	180	186
70-79	147	122	82	171	208	223	233
80 and over	80	89	32	72	104	123	136
All ages	**414**	**358**	**211**	**452**	**579**	**640**	**670**
BOTH SEXES							
Under 50	36	24	22	52	71	76	79
50-59	126	99	64	129	160	177	178
60-69	299	239	158	319	390	419	427
70-79	368	314	198	401	481	524	545
80-89	187	196	92	169	213	251	271
90 and over	14	15	5	12	21	31	41
All ages	**1,030**	**887**	**539**	**1,082**	**1,336**	**1,478**	**1,541**

9.3: Prevalence trends

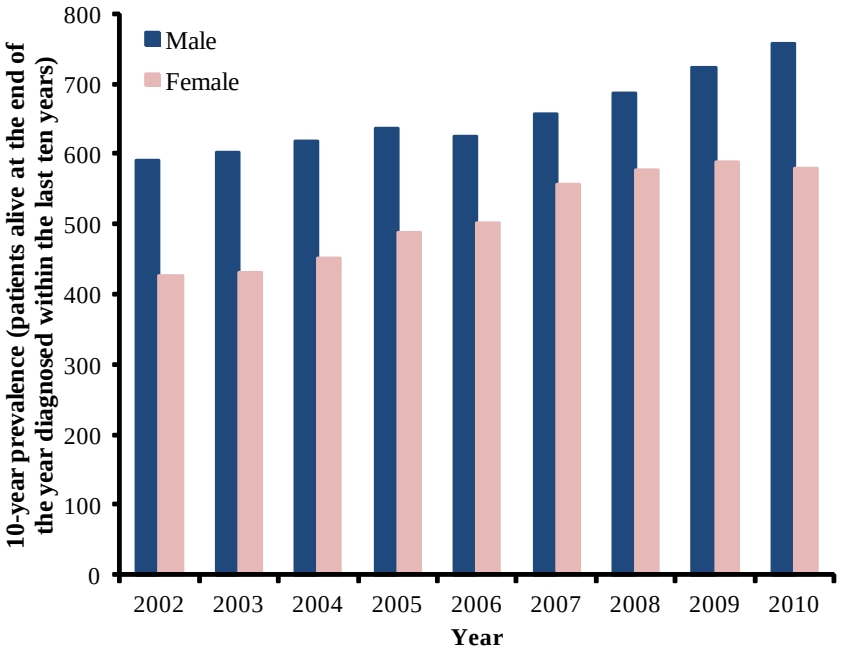
Ten-year prevalence of lung cancer is increasing, rising from 591 male and 427 female survivors in 2002 to 757 male and 579 female survivors in 2010. (Fig. 9.5a)

This is partly due to the growth and ageing of the population. Adjusting for these factors using European age-standardised rates illustrates an underlying increase in prevalence. Specifically prevalence rates increased between 2002 and 2010 by 0.9% per year among men and by 3.3% per year among women. (Fig. 9.5b)

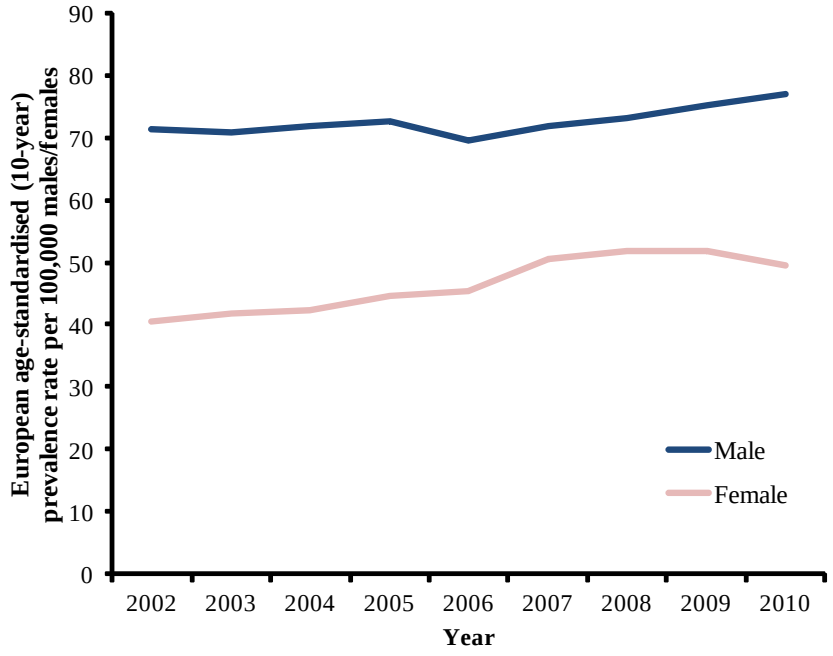
This is due to small improvements in survival and increasing incidence rates among women.

Figure 9.5: Trends in 10-year prevalence of lung cancer by sex

(a) Number of patients



(b) Age-standardised rates (per 100,000 persons)



9.4: Geographic variation

Table 9.4 presents the various prevalence measures by area of residence[4]. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

[4] *Table is presented at Local Government District level. However one-year prevalence is not provided at this level broken down by sex due to the small number of patients in some of these areas. Ballymoney and Moyle LGDs are combined for the same reason.*

Table 9.4: Different prevalence measures (based upon time since diagnosis) for lung cancer by Health and Social Care Trust (HSCT) and Local Government District (LGD) of residence at diagnosis

MALE

HSCT and LGD of residence	Cases per year 2006-2010	Deaths per year 2006-2010	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
BELFAST HSCT							
Belfast	143	125	-	143	174	191	194
Castlereagh	28	26	-	21	29	37	38
TOTAL	**171**	**150**	**83**	**164**	**203**	**228**	**232**
NORTHERN HSCT							
Antrim	17	15	-	19	22	23	23
Ballymena	16	13	-	18	19	20	22
Ballymoney & Moyle	14	10	-	14	16	18	20
Carrickfergus	15	13	-	12	14	16	17
Coleraine	16	14	-	21	23	23	24
Cookstown	9	8	-	8	9	13	13
Larne	11	9	-	8	9	10	10
Magherafelt	14	10	-	15	17	19	19
Newtownabbey	33	29	-	40	43	45	49
TOTAL	**143**	**122**	**77**	**155**	**172**	**187**	**197**
SOUTH-EASTERN HSCT							
Ards	28	22	-	26	31	37	38
Down	20	17	-	27	30	32	34
Lisburn	35	29	-	31	36	41	42
North Down	22	19	-	24	28	32	34
TOTAL	**105**	**88**	**57**	**108**	**125**	**142**	**148**
SOUTHERN HSCT							
Armagh	15	14	-	8	16	17	18
Banbridge	10	9	-	9	13	14	14
Craigavon	32	27	-	30	37	41	41
Dungannon	13	14	-	11	15	16	18
Newry & Mourne	29	23	-	29	38	43	47
TOTAL	**100**	**87**	**46**	**87**	**119**	**131**	**138**
WESTERN HSCT							
Derry	34	29	-	38	43	46	47
Fermanagh	18	18	-	19	24	26	28
Limavady	12	10	-	13	16	17	17
Omagh	14	13	-	16	19	21	22
Strabane	12	11	-	12	15	16	16
TOTAL	**90**	**80**	**49**	**98**	**117**	**126**	**130**
Unknown	**7**	**1**	**16**	**18**	**21**	**24**	**26**
Northern Ireland	**616**	**529**	**328**	**630**	**757**	**838**	**871**

Table 9.4 cont. Different prevalence measures (based upon time since diagnosis) for lung cancer by Health and Social Care Trust (HSCT) and Local Government District (LGD) of residence at diagnosis

FEMALE

HSCT and LGD of residence	Cases per year 2006-2010	Deaths per year 2006-2010	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
BELFAST HSCT							
Belfast	105	91	-	123	151	165	170
Castlereagh	16	16	-	16	25	28	29
TOTAL	**121**	**107**	**65**	**139**	**176**	**193**	**199**
NORTHERN HSCT							
Antrim	11	7	-	6	10	11	13
Ballymena	11	9	-	13	15	17	18
Ballymoney & Moyle	9	8	-	4	6	6	6
Carrickfergus	10	9	-	11	16	17	18
Coleraine	11	11	-	10	11	14	14
Cookstown	7	6	-	10	10	10	10
Larne	7	6	-	6	10	10	11
Magherafelt	6	5	-	9	11	13	13
Newtownabbey	21	17	-	26	32	36	38
TOTAL	**92**	**79**	**46**	**95**	**121**	**134**	**141**
SOUTH-EASTERN HSCT							
Ards	18	14	-	21	25	27	28
Down	17	13	-	21	26	28	32
Lisburn	22	18	-	25	31	38	42
North Down	16	16	-	10	15	17	19
TOTAL	**73**	**61**	**30**	**77**	**97**	**110**	**121**
SOUTHERN HSCT							
Armagh	10	9	-	13	15	19	19
Banbridge	7	5	-	8	9	9	9
Craigavon	15	15	-	14	23	23	24
Dungannon	9	7	-	11	11	11	13
Newry & Mourne	18	18	-	12	18	23	25
TOTAL	**59**	**54**	**24**	**58**	**76**	**85**	**90**
WESTERN HSCT							
Derry	31	26	-	35	46	47	48
Fermanagh	10	9	-	12	15	17	17
Limavady	6	6	-	6	10	11	11
Omagh	8	7	-	9	14	16	16
Strabane	8	9	-	8	8	9	9
TOTAL	**62**	**56**	**34**	**70**	**93**	**100**	**101**
Unknown	**7**	**0**	**12**	**13**	**16**	**18**	**18**
Northern Ireland	**414**	**358**	**211**	**452**	**579**	**640**	**670**

Table 9.4 cont. Different prevalence measures (based upon time since diagnosis) for lung cancer by Health and Social Care Trust (HSCT) and Local Government District (LGD) of residence at diagnosis

BOTH SEXES

HSCT and LGD of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
BELFAST HSCT							
Belfast	248	216	132	266	325	356	364
Castlereagh	44	41	16	37	54	65	67
TOTAL	**292**	**258**	**148**	**303**	**379**	**421**	**431**
NORTHERN HSCT							
Antrim	28	23	12	25	32	34	36
Ballymena & Moyle	27	23	18	31	34	37	40
Ballymoney	21	19	7	18	22	24	26
Carrickfergus	24	22	12	23	30	33	35
Coleraine	26	25	12	31	34	37	38
Cookstown	16	14	7	18	19	23	23
Larne	18	15	6	14	19	20	21
Magherafelt	20	15	15	24	28	32	32
Newtownabbey	53	45	34	66	75	81	87
TOTAL	**235**	**201**	**123**	**250**	**293**	**321**	**338**
SOUTH-EASTERN HSCT							
Ards	46	36	24	47	56	64	66
Down	37	30	22	48	56	60	66
Lisburn	57	48	25	56	67	79	84
North Down	39	35	16	34	43	49	53
TOTAL	**178**	**149**	**87**	**185**	**222**	**252**	**269**
SOUTHERN HSCT							
Armagh	25	23	10	21	31	36	37
Banbridge	17	15	8	17	22	23	23
Craigavon	47	42	24	44	60	64	65
Dungannon	22	21	12	22	26	27	31
Newry & Mourne	47	41	16	41	56	66	72
TOTAL	**159**	**141**	**70**	**145**	**195**	**216**	**228**
WESTERN HSCT							
Derry	65	55	38	73	89	93	95
Fermanagh	28	26	17	31	39	43	45
Limavady	18	16	6	19	26	28	28
Omagh	22	19	12	25	33	37	38
Strabane	20	19	10	20	23	25	25
TOTAL	**152**	**136**	**83**	**168**	**210**	**226**	**231**
Unknown	**14**	**2**	**28**	**31**	**37**	**42**	**44**
Northern Ireland	**1,030**	**887**	**539**	**1,082**	**1,336**	**1,478**	**1,541**

10 Malignant melanoma (C43)

There was an average of 272 cases of malignant melanoma diagnosed each year during 2006-2010 in Northern Ireland, with more female than male cases in the population (157 vs. 116 per year). On average 54 people died each year from the disease. Survival from the disease was very good with 97.3% surviving one year. However while five-year relative survival was also excellent it varied considerably between males and females being 82.0% for men compared to 94.2% for women. (Tab. 10.1)

Table 10.1: Summary statistics for malignant melanoma

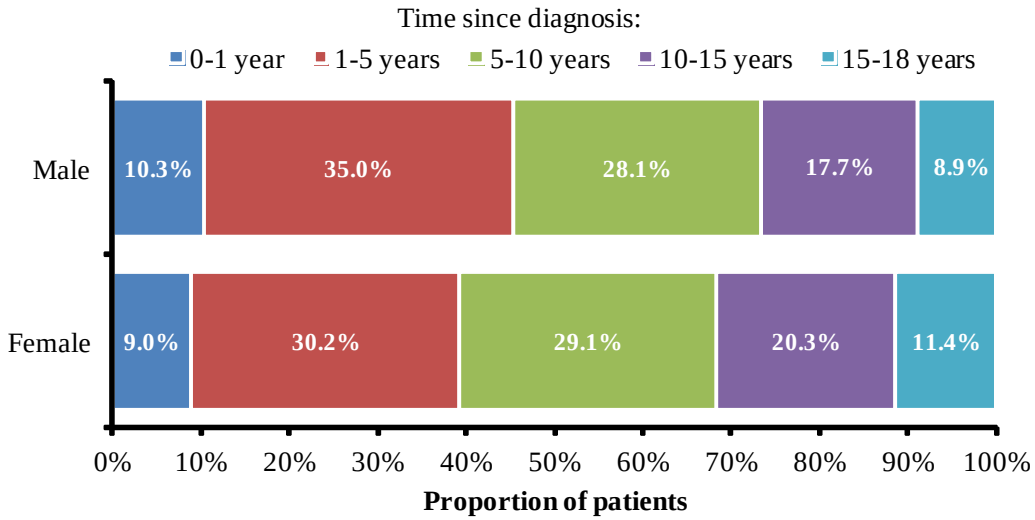
	Males	Females	Both sexes
New cases diagnosed per year (2006-2010)	116	157	272
Deaths per year (2006-2010)	26	28	54
1-year relative survival (diagnosed 2001-2005)	95.2%	98.7%	97.3%
5-year relative survival (diagnosed 2001-2005)	82.0%	94.2%	89.2%
10-year prevalence (2010)*	791	1,215	2,006
18-year prevalence (2010)**	1,078	1,779	2,857

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of malignant melanoma survivors at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 2,857, with 62.3% of these survivors being women. In particular:

- Among males there were 1,078 survivors. 10.3% had been diagnosed within the previous year while 8.9% had been diagnosed between 15 and 18 years ago.
- Among females there were 1,779 survivors. 9.0% had been diagnosed within the previous year while 11.4% had been diagnosed between 15 and 18 years ago. (Fig. 10.1)

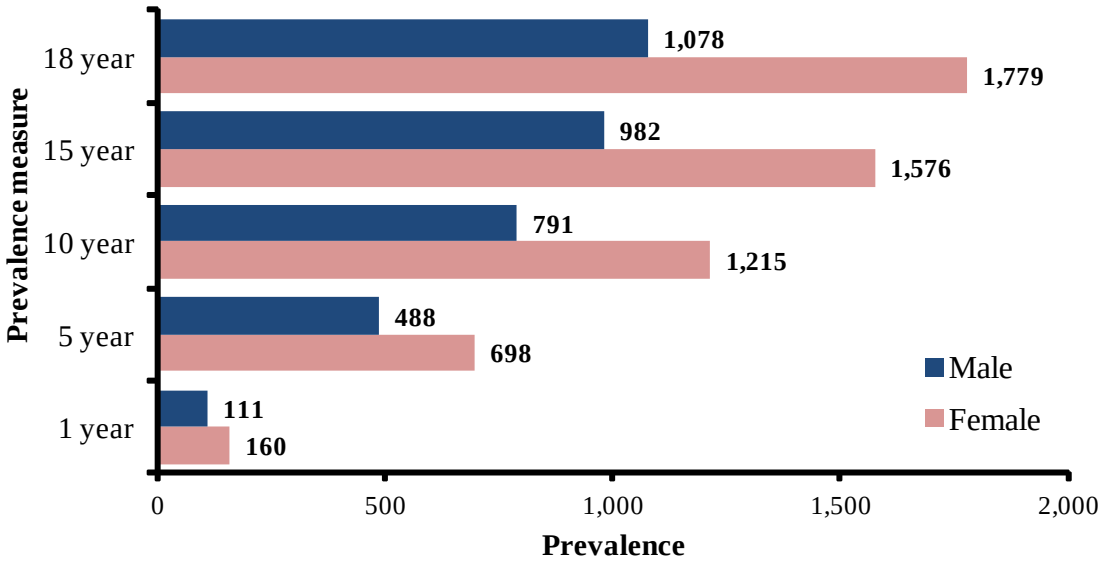
Figure 10.1: 18-year prevalence of malignant melanoma by sex and time since diagnosis



The 18-year prevalence represents all patients diagnosed with malignant melanoma during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 271 (Male: 111, Female: 160).
- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 1,186 (Male: 488, Female: 698).
- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 2,006 (Male: 791, Female: 1,215). (Fig. 10.2)

Figure 10.2: Different prevalence measures (based upon time since diagnosis) for malignant melanoma by sex



10.1: Prevalence by site

Melanoma can develop on any part of the body. Melanoma patients can get more than one type of these cancers or can get more than one of the same type, but are only counted once in the prevalence figures. Of the 2,857 patients alive at the end of 2010 only 17 (0.6%) had two melanomas, while no patients had three or more diagnosed within the previous 18 years.

Table 10.2: Different prevalence measures (based upon time since diagnosis) for malignant melanoma by first cancer site diagnosed

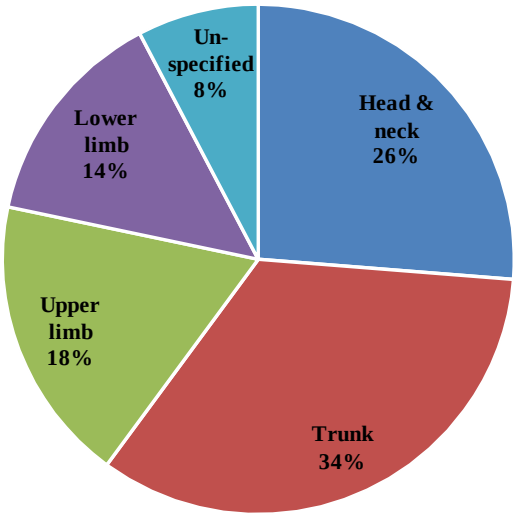
Cancer site	Cases per year (2006-10)	Prevalence 2010				
		One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Head and neck	62	73	250	405	482	529
Trunk	55	51	244	426	538	606
Upper limb (including shoulder)	60	58	267	431	554	604
Lower limb (including hip)	76	79	334	581	774	886
Unspecified	21	10	91	163	210	232
Total	**272**	**271**	**1,186**	**2,006**	**2,558**	**2,857**

Melanoma on the lower limbs (hip, legs and feet) were the most common type of melanoma among survivors, with 886 (31.0%) of patients diagnosed with this cancer in the 18 years prior to the end of

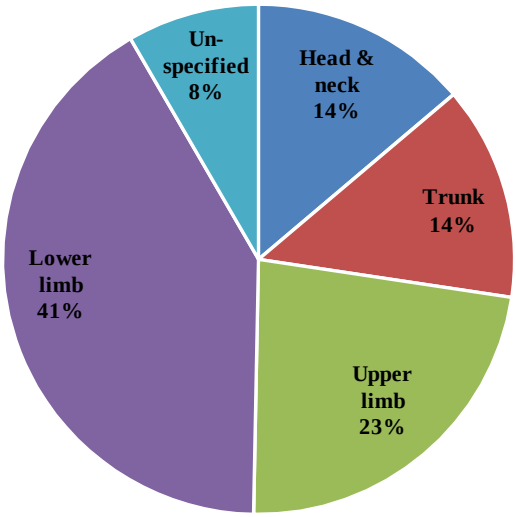
2010. This was followed by melanoma of the trunk (chest and abdomen) and upper limbs (shoulder, arms and hands) which made up 21.2% and 21.1% respectively. The distribution by cancer site however differed between men and women. Melanoma of the trunk was the most common among men (33.9%), while melanoma of the lower limbs was the most common among women survivors (41.3%). (Fig. 10.3, Tab.10.2)

Figure 10.3: 18-year prevalence of malignant melanoma by sex and first cancer site diagnosed

Male



Female



10.2: Prevalence by age

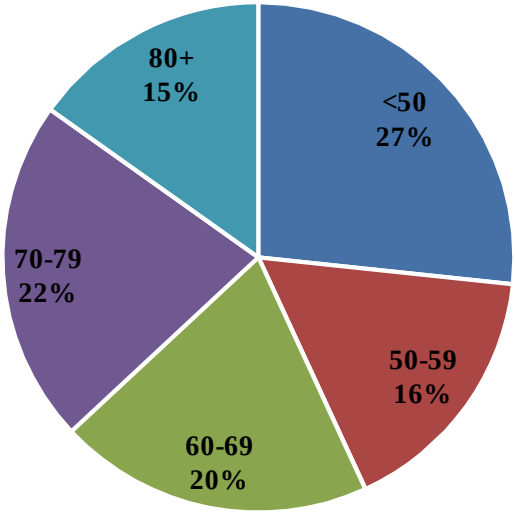
Malignant melanoma is diagnosed frequently among both middle and older age groups, thus prevalence of the disease is widely dispersed among middle and elderly age groups. (Fig. 10.4, Tab. 10.3)

Among cancer survivors diagnosed within the last 10 years the median age at the end of 2010 was 63 for men and 58 for women. The difference was primarily due to a higher proportion of female survivors in the under 50 age group. Specifically:

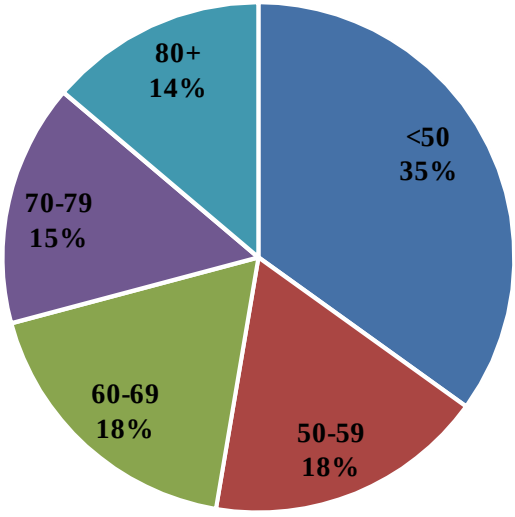
- 27% of male survivors were aged under 50, while 15% were aged 80 and over.
- 35% of female survivors were aged under 50, while 14% were aged 80 and over.

Figure 10.4a: 10-year prevalence of malignant melanoma by sex and age at the end of 2010

Male



Female

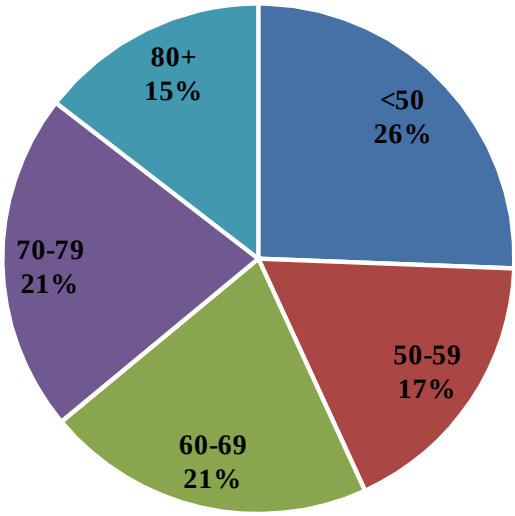


The median age at the end of 2010 of melanoma survivors diagnosed within the last 18 years was 63 among men and 59 among women. In addition:

- 26% of male survivors were aged under 50, while 15% were aged 80 and over.
- 34% of female survivors were aged under 50, while 14% were aged 80 and over.

Figure 10.4b: 18-year prevalence of malignant melanoma by sex and age at the end of 2010

Male



Female

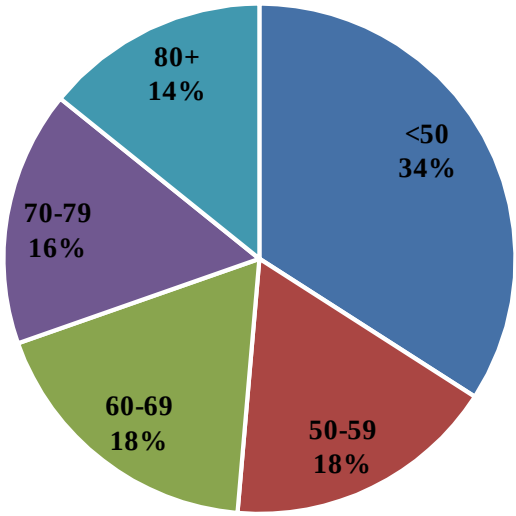


Table 10.3: Different prevalence measures (based upon time since diagnosis) for malignant melanoma by sex and age at the end of 2010

Sex and age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
MALE							
Under 50	31	4	25	128	211	261	276
50-59	19	3	11	65	130	165	189
60-69	23	6	26	115	158	206	225
70-79	26	8	30	101	172	207	231
80 and over	17	5	19	79	120	143	157
All ages	**116**	**26**	**111**	**488**	**791**	**982**	**1,078**
FEMALE							
Under 50	60	4	66	261	424	537	606
50-59	27	3	27	122	216	272	308
60-69	27	5	22	125	221	288	325
70-79	23	7	23	100	186	251	287
80 and over	20	9	22	90	168	228	253
All ages	**157**	**28**	**160**	**698**	**1,215**	**1,576**	**1,779**
BOTH SEXES							
Under 50	91	8	91	389	635	798	882
50-59	46	7	38	187	346	437	497
60-69	50	11	48	240	379	494	550
70-79	49	15	53	201	358	458	518
80 and over	37	14	41	169	288	371	410
All ages	**272**	**54**	**271**	**1,186**	**2,006**	**2,558**	**2,857**

10.3: Prevalence trends

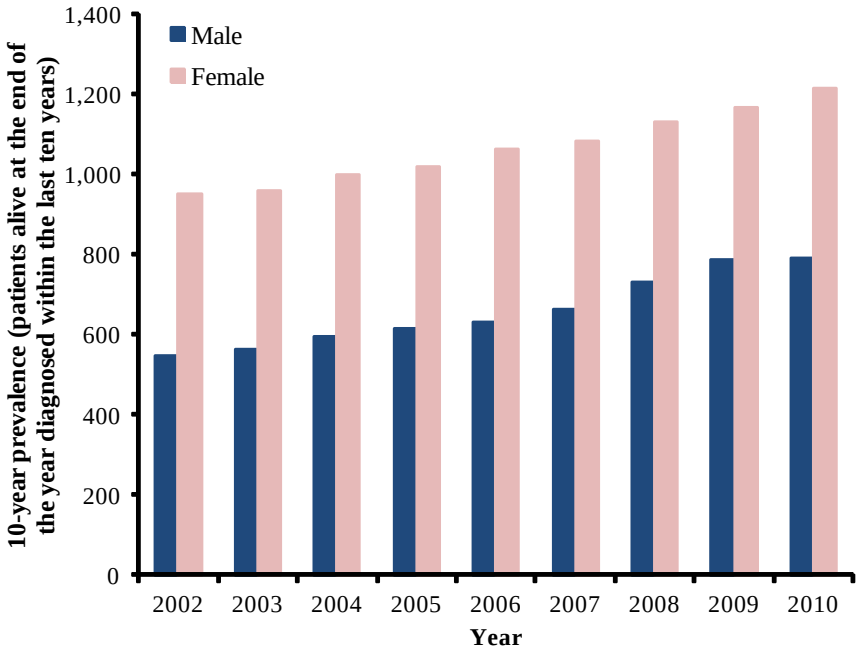
Ten-year prevalence of malignant melanoma increased considerably between 2002 and 2010, rising from 546 male and 950 female survivors to 791 male and 1,215 female survivors. (Fig. 10.5a)

This is partly due to the growth and ageing of the population. Adjusting for these factors using European age-standardised rates illustrates an underlying increase in prevalence. Specifically prevalence rates increased between 2002 and 2010 by 3.1% per year among men and by 2.0% per year among women. (Fig. 10.5b)

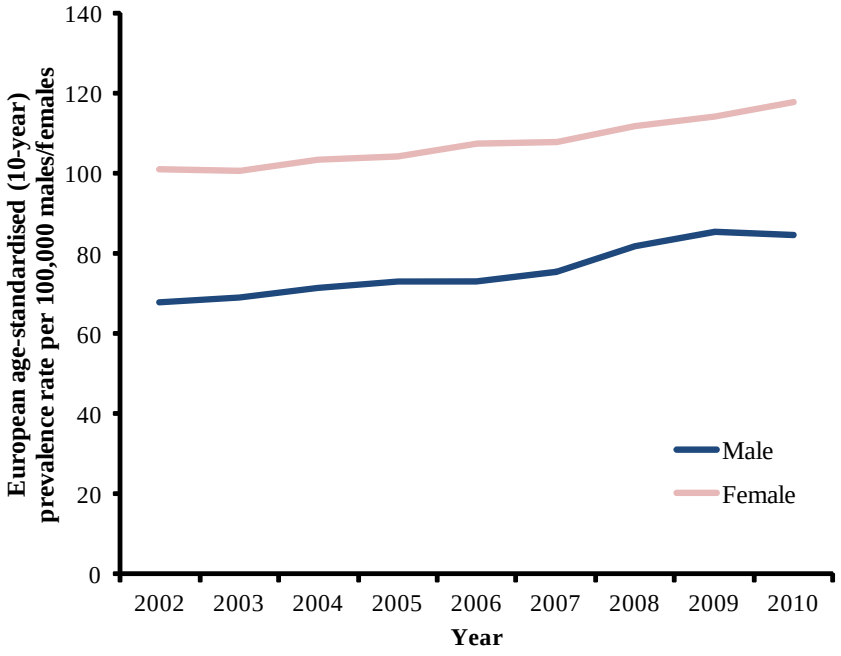
The increases are a direct result of increases in melanoma incidence rates and small improvements in survival from the disease over the last 15 years.

Figure 10.5: Trends in 10-year prevalence of malignant melanoma by sex

(a) Number of patients



(b) Age-standardised rates (per 100,000 persons)



10.4: Geographic variation

Table 10.4 presents the various prevalence measures by area of residence. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

Table 10.4: Different prevalence measures (based upon time since diagnosis) for malignant melanoma by Health and Social Care Trust (HSCT) of residence at diagnosis

MALE

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	19	5	22	79	131	172	186
Northern	32	7	29	130	212	253	267
South-Eastern	28	6	19	119	198	240	269
Southern	22	6	24	99	157	197	215
Western	12	4	13	51	80	97	107
Unknown	2	0	4	10	13	23	34
Northern Ireland	**116**	**26**	**111**	**488**	**791**	**982**	**1,078**

FEMALE

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	30	8	21	137	244	315	369
Northern	37	6	38	166	310	388	416
South-Eastern	34	6	31	149	252	335	378
Southern	34	5	47	151	247	331	381
Western	20	4	22	89	148	187	205
Unknown	1	0	1	6	14	20	30
Northern Ireland	**157**	**28**	**160**	**698**	**1,215**	**1,576**	**1,779**

BOTH SEXES

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	49	12	43	216	375	487	555
Northern	69	13	67	296	522	641	683
South-Eastern	62	11	50	268	450	575	647
Southern	56	11	71	250	404	528	596
Western	33	7	35	140	228	284	312
Unknown	4	0	5	16	27	43	64
Northern Ireland	**272**	**54**	**271**	**1,186**	**2,006**	**2,558**	**2,857**

11 Non-melanoma skin cancer (C44)

There was an average of 2,993 cases of non-melanoma skin cancer (NMSC) diagnosed each year during 2006-2010 in Northern Ireland, however only 17 people died each year from the disease as survival from the disease is excellent. (Tab. 11.1)

Table 11.1: Summary statistics for non-melanoma skin cancer

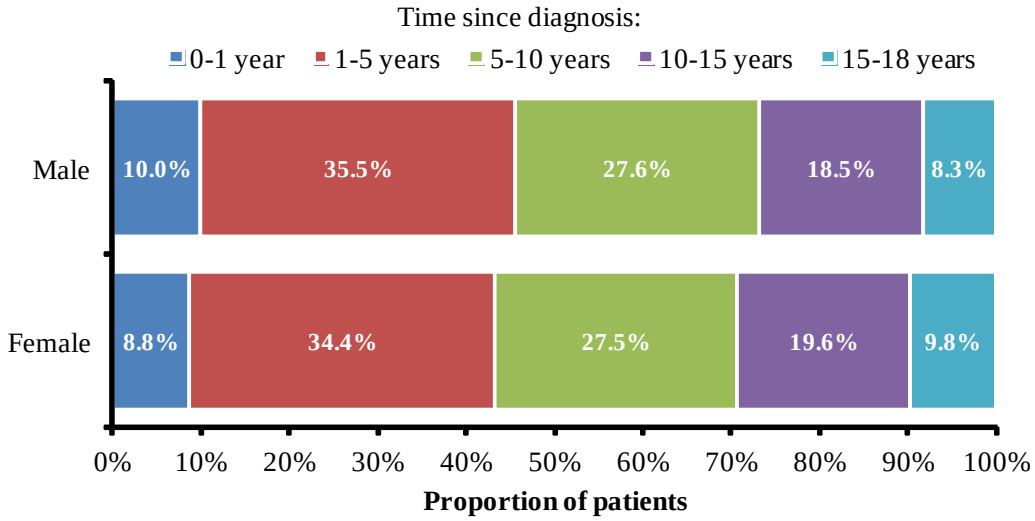
	Males	Females	Both sexes
New cases diagnosed per year (2006-2010)	1,643	1,350	2,993
Deaths per year (2006-2010)	9	8	17
10-year prevalence (2010)*	10,381	9,160	19,541
18-year prevalence (2010)**	14,190	12,965	27,155

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of non-melanoma skin cancer survivors at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 27,155.

- Among males there were 14,190 survivors. 10.0% had been diagnosed within the previous year while 8.3% had been diagnosed between 15 and 18 years ago.
- Among females there were 12,965 survivors. 8.8% had been diagnosed within the previous year while 9.8% had been diagnosed between 15 and 18 years ago.

Figure 11.1: 18-year prevalence of non-melanoma skin cancer by sex and time since diagnosis

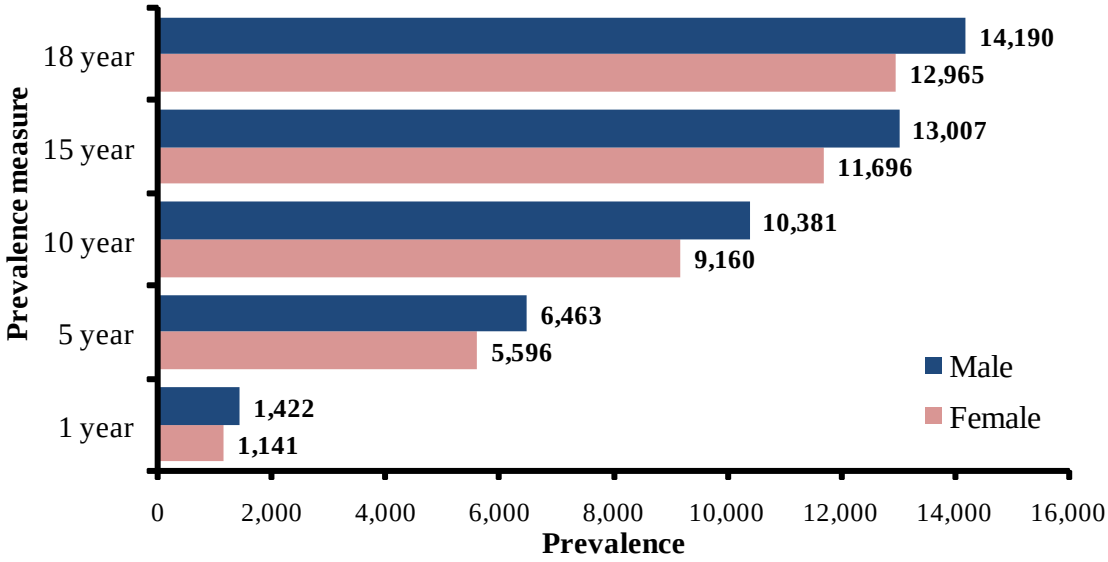


The 18-year prevalence represents all patients diagnosed with non-melanoma skin cancer during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 2,563 (Male: 1,422, Female: 1,141).
- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 12,059 (Male: 6,463, Female: 5,596).

- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 19,541 (Male: 10,381, Female: 9,160). (Fig. 11.2)

Figure 11.2: Different prevalence measures (based upon time since diagnosis) for non-melanoma skin cancer by sex



11.1: Prevalence by age

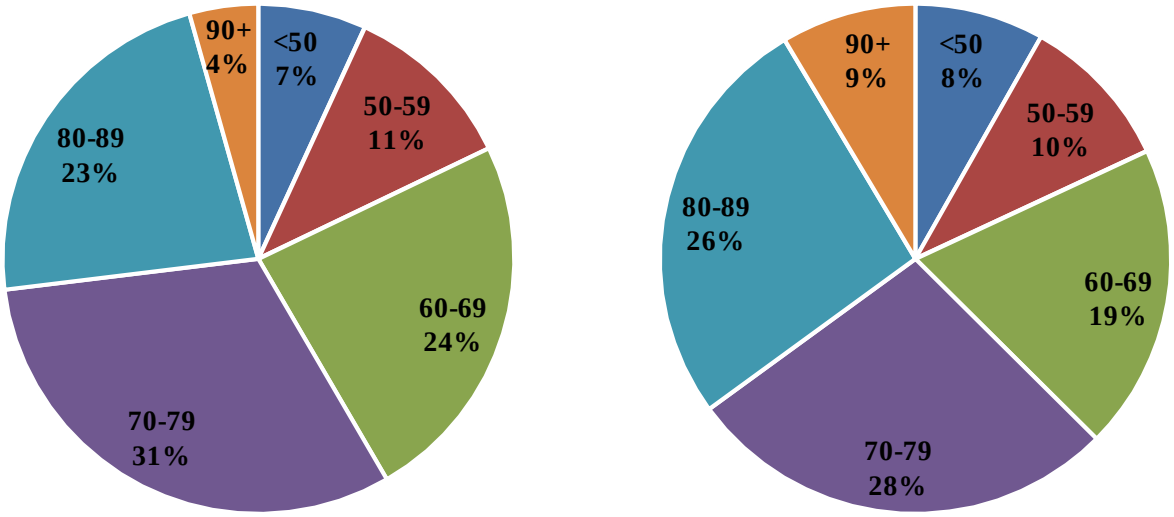
Since non-melanoma skin cancer is a disease which occurs primarily among the elderly, prevalence of this cancer is greater among older age groups. (Fig. 11.3, Tab. 11.2)

Among non-melanoma skin cancer survivors diagnosed within the last 10 years the median age at the end of 2010 was 73 (males: 72, females: 74). Other differences included:

- 7% of male survivors were aged under 50 compared to 8% of females.
- 27% of male survivors were aged 80 and over compared to 35% of females.

Figure 11.3a: 10-year prevalence of non-melanoma skin cancer by sex and age at the end of 2010

Male *Female*

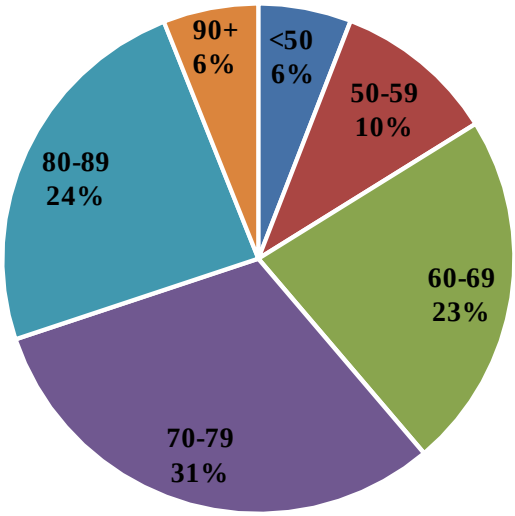


Among non-melanoma skin cancer survivors diagnosed within the last 18 years the median age at the end of 2010 was 73 for men and 75 for women. The difference was due to the higher proportion of

female survivors aged 80 and over (38%) compared to men (30%). The proportion aged under 50 was similar for men and women.

Figure 11.3b: 18-year prevalence of non-melanoma skin cancer by sex and age at the end of 2010

Male



Female

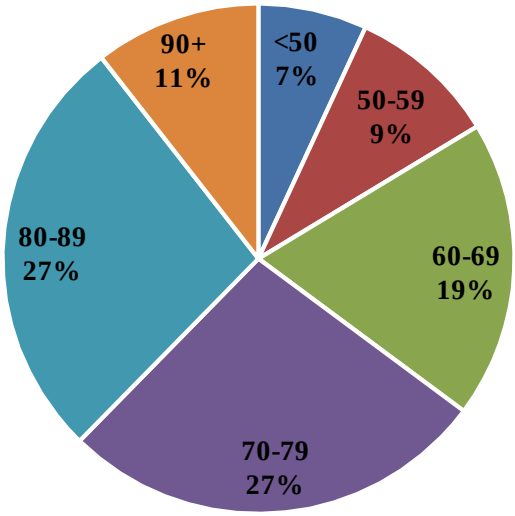


Table 11.2: Different prevalence measures (based upon time since diagnosis) for non-melanoma skin cancer by sex and age at the end of 2010

Sex and age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
MALE							
Under 50	133	-	115	496	713	807	836
50-59	189	-	180	756	1,143	1,371	1,457
60-69	396	1	348	1,548	2,463	2,995	3,208
70-79	531	4	424	2,053	3,267	4,067	4,419
80-89	346	3	313	1,376	2,341	3,074	3,412
90 and over	48	1	42	234	454	693	858
All ages	**1,643**	**9**	**1,422**	**6,463**	**10,381**	**13,007**	**14,190**
FEMALE							
Under 50	134	-	123	539	751	855	895
50-59	134	-	105	556	904	1,135	1,224
60-69	267	-	242	1,093	1,774	2,223	2,438
70-79	391	1	325	1,595	2,524	3,228	3,528
80-89	335	3	272	1,387	2,419	3,118	3,510
90 and over	90	3	74	426	788	1,137	1,370
All ages	**1,350**	**8**	**1,141**	**5,596**	**9,160**	**11,696**	**12,965**
BOTH SEXES							
Under 50	267	-	238	1,035	1,464	1,662	1,731
50-59	323	1	285	1,312	2,047	2,506	2,681
60-69	663	1	590	2,641	4,237	5,218	5,646
70-79	922	5	749	3,648	5,791	7,295	7,947
80-89	681	6	585	2,763	4,760	6,192	6,922
90 and over	138	4	116	660	1,242	1,830	2,228
All ages	**2,993**	**17**	**2,563**	**12,059**	**19,541**	**24,703**	**27,155**

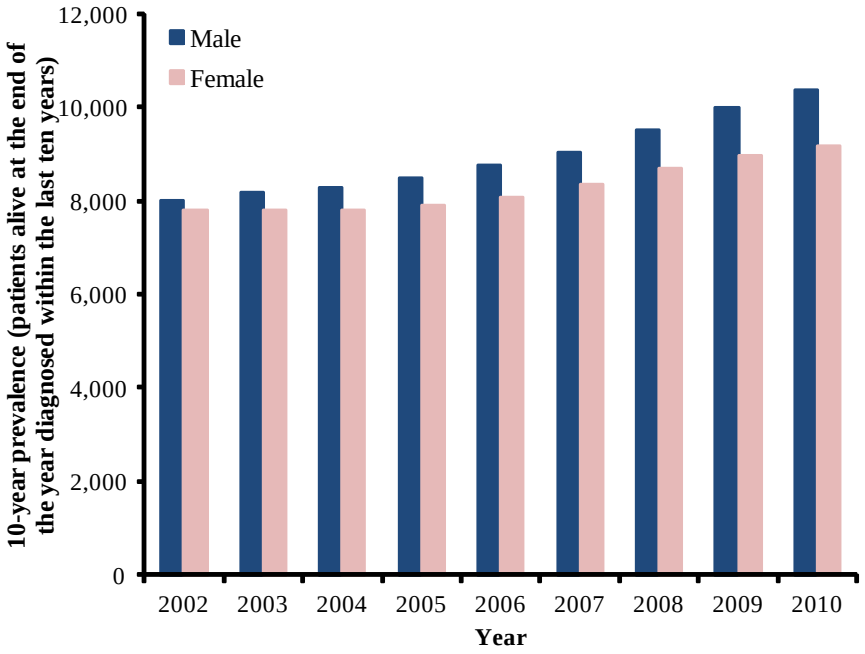
11.2: Prevalence trends

Ten-year prevalence of non-melanoma skin cancer is increasing, rising from 7,988 male and 7,803 female survivors in 2002 to 10,381 male and 9,160 female survivors in 2010. (Fig. 11.4a)

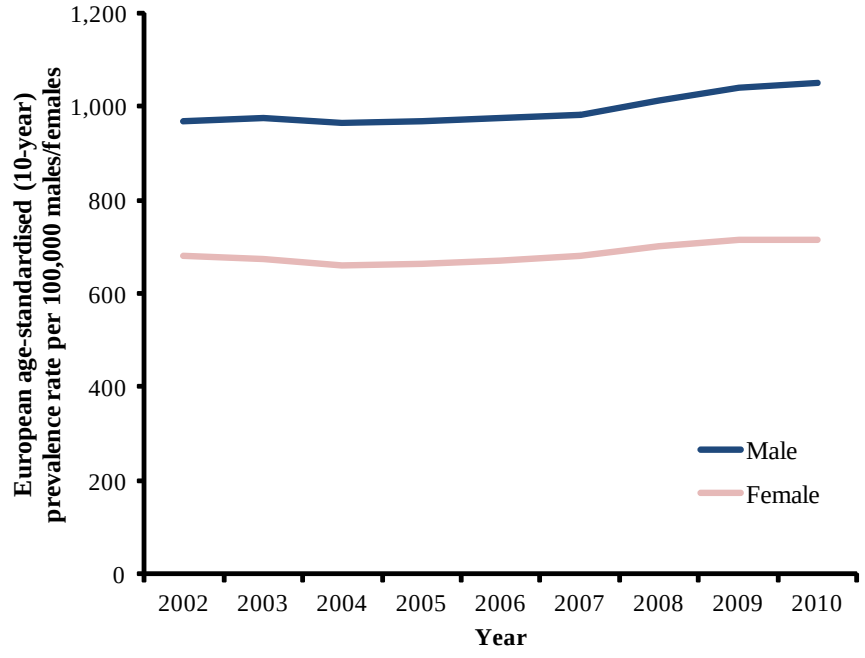
This is partly due to the growth and ageing of the population. In fact adjusting for these factors using European age-standardised rates illustrates that there was no change in underlying prevalence rates between 2002 and 2006 for men and between 2002 and 2005 for women. Since that time however prevalence rates increased by 2.2% per year among men and by 1.8% per year among women. (Fig. 11.4b)

Figure 11.4: Trends in 10-year prevalence of non-melanoma skin cancer by sex

(a) Number of patients



(b) Age-standardised rates (per 100,000 persons)



11.3: Geographic variation

Table 11.3 presents the various prevalence measures by area of residence. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

Table 11.3: Different prevalence measures (based upon time since diagnosis) for non-melanoma skin cancer by Health and Social Care Trust (HSCT) and Local Government District (LGD) of residence at diagnosis

MALE

HSCT and LGD of residence	Cases per year 2006-2010	Deaths per year 2006-2010	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
BELFAST HSCT							
Belfast	234	-	190	893	1,413	1,756	1,912
Castlereagh	67	-	68	283	436	529	553
TOTAL	**302**	**2**	**258**	**1,176**	**1,849**	**2,285**	**2,465**
NORTHERN HSCT							
Antrim	38	-	30	158	260	316	333
Ballymena	66	-	63	259	381	464	495
Ballymoney	29	-	19	110	175	214	228
Carrickfergus	41	-	38	152	233	295	320
Coleraine	63	-	60	238	370	439	474
Cookstown	30	-	27	122	211	246	266
Larne	25	-	24	101	178	225	242
Magherafelt	39	-	32	150	245	284	297
Moyle	18	-	17	76	126	154	159
Newtownabbey	75	-	59	295	463	570	611
TOTAL	**425**	**2**	**369**	**1,661**	**2,642**	**3,207**	**3,425**
SOUTH-EASTERN HSCT							
Ards	62	-	51	246	405	528	575
Down	70	-	55	291	455	557	606
Lisburn	88	-	69	354	562	732	792
North Down	82	-	83	323	518	642	697
TOTAL	**301**	**1**	**258**	**1,214**	**1,940**	**2,459**	**2,670**
SOUTHERN HSCT							
Armagh	52	-	32	192	330	432	470
Banbridge	41	-	36	159	277	346	376
Craigavon	78	-	73	300	485	630	698
Dungannon	47	-	37	179	292	369	407
Newry & Mourne	91	-	66	331	586	740	812
TOTAL	**309**	**3**	**244**	**1,161**	**1,970**	**2,517**	**2,763**
WESTERN HSCT							
Derry	89	-	96	356	514	605	655
Fermanagh	57	-	39	214	327	398	438
Limavady	26	-	21	106	165	194	204
Omagh	48	-	58	196	274	322	346
Strabane	35	-	35	135	209	245	262
TOTAL	**254**	**2**	**249**	**1,007**	**1,489**	**1,764**	**1,905**
Unknown	52	0	44	244	491	775	962
Northern Ireland	**1,643**	**9**	**1,422**	**6,463**	**10,381**	**13,007**	**14,190**

Table 11.3 cont. Different prevalence measures (based upon time since diagnosis) for non-melanoma skin cancer by Health and Social Care Trust (HSCT) and Local Government District (LGD) of residence at diagnosis

FEMALE

HSCT and LGD of residence	Cases per year 2006-2010	Deaths per year 2006-2010	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
BELFAST HSCT							
Belfast	218	-	181	907	1,440	1,839	2,028
Castlereagh	56	-	46	229	391	487	550
TOTAL	**274**	**2**	**227**	**1,136**	**1,831**	**2,326**	**2,578**
NORTHERN HSCT							
Antrim	36	-	27	149	227	278	296
Ballymena	47	-	39	190	288	349	380
Ballymoney	22	-	26	84	158	181	202
Carrickfergus	40	-	26	176	279	331	355
Coleraine	54	-	44	218	339	398	429
Cookstown	26	-	12	100	159	193	207
Larne	24	-	19	98	175	211	229
Magherafelt	24	-	25	101	167	202	224
Moyle	14	-	9	52	88	113	125
Newtownabbey	61	-	50	241	401	522	571
TOTAL	**348**	**2**	**277**	**1,409**	**2,281**	**2,778**	**3,018**
SOUTH-EASTERN HSCT							
Ards	59	-	49	246	400	506	556
Down	56	-	55	234	385	481	543
Lisburn	85	-	80	350	579	723	805
North Down	67	-	56	290	518	676	735
TOTAL	**267**	**2**	**240**	**1,120**	**1,882**	**2,386**	**2,639**
SOUTHERN HSCT							
Armagh	38	-	33	162	281	368	403
Banbridge	34	-	26	143	227	292	323
Craigavon	70	-	55	289	460	613	686
Dungannon	33	-	34	137	256	337	367
Newry & Mourne	70	-	58	285	493	659	734
TOTAL	**245**	**1**	**206**	**1,016**	**1,717**	**2,269**	**2,513**
WESTERN HSCT							
Derry	64	-	59	279	422	530	574
Fermanagh	42	-	29	168	244	308	335
Limavady	17	-	13	67	115	149	164
Omagh	32	-	31	135	186	247	278
Strabane	29	-	29	119	172	220	236
TOTAL	**184**	**2**	**161**	**768**	**1,139**	**1,454**	**1,587**
Unknown	31	0	30	147	310	483	630
Northern Ireland	**1,350**	**8**	**1,141**	**5,596**	**9,160**	**11,696**	**12,965**

Table 11.3 cont. Different prevalence measures (based upon time since diagnosis) for non-melanoma skin cancer by Health and Social Care Trust (HSCT) and Local Government District (LGD) of residence at diagnosis

BOTH SEXES

HSCT and LGD of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
BELFAST HSCT							
Belfast	453	-	371	1,800	2,853	3,595	3,940
Castlereagh	123	-	114	512	827	1,016	1,103
TOTAL	**576**	**3**	**485**	**2,312**	**3,680**	**4,611**	**5,043**
NORTHERN HSCT							
Antrim	74	-	57	307	487	594	629
Ballymena	113	-	102	449	669	813	875
Ballymoney	51	-	45	194	333	395	430
Carrickfergus	81	-	64	328	512	626	675
Coleraine	117	-	104	456	709	837	903
Cookstown	57	-	39	222	370	439	473
Larne	49	-	43	199	353	436	471
Magherafelt	63	-	57	251	412	486	521
Moyle	32	-	26	128	214	267	284
Newtownabbey	136	-	109	536	864	1,092	1,182
TOTAL	**773**	**4**	**646**	**3,070**	**4,923**	**5,985**	**6,443**
SOUTH-EASTERN HSCT							
Ards	120	-	100	492	805	1,034	1,131
Down	126	-	110	525	840	1,038	1,149
Lisburn	173	-	149	704	1,141	1,455	1,597
North Down	149	-	139	613	1,036	1,318	1,432
TOTAL	**569**	**3**	**498**	**2,334**	**3,822**	**4,845**	**5,309**
SOUTHERN HSCT							
Armagh	90	-	65	354	611	800	873
Banbridge	76	-	62	302	504	638	699
Craigavon	148	-	128	589	945	1,243	1,384
Dungannon	79	-	71	316	548	706	774
Newry & Mourne	161	-	124	616	1,079	1,399	1,546
TOTAL	**554**	**4**	**450**	**2,177**	**3,687**	**4,786**	**5,276**
WESTERN HSCT							
Derry	153	-	155	635	936	1,135	1,229
Fermanagh	99	-	68	382	571	706	773
Limavady	43	-	34	173	280	343	368
Omagh	80	-	89	331	460	569	624
Strabane	64	-	64	254	381	465	498
TOTAL	**438**	**3**	**410**	**1,775**	**2,628**	**3,218**	**3,492**
Unknown	84	0	74	391	801	1,258	1,592
Northern Ireland	**2,993**	**17**	**2,563**	**12,059**	**19,541**	**24,703**	**27,155**

12 Breast cancer (C50)

There was an average of 1,155 breast cancers diagnosed each year during 2006-2010 in Northern Ireland, with only 6 of these cases occurring among men. On average 301 people died each year from the disease, with two of these among men. Survival from the disease was very good, with 94.9% of women diagnosed in 2001-2005 surviving one year. Five-year relative survival for female patients diagnosed in this time period was 81.3%. (Tab. 12.1)

Table 12.1: Summary statistics for breast cancer

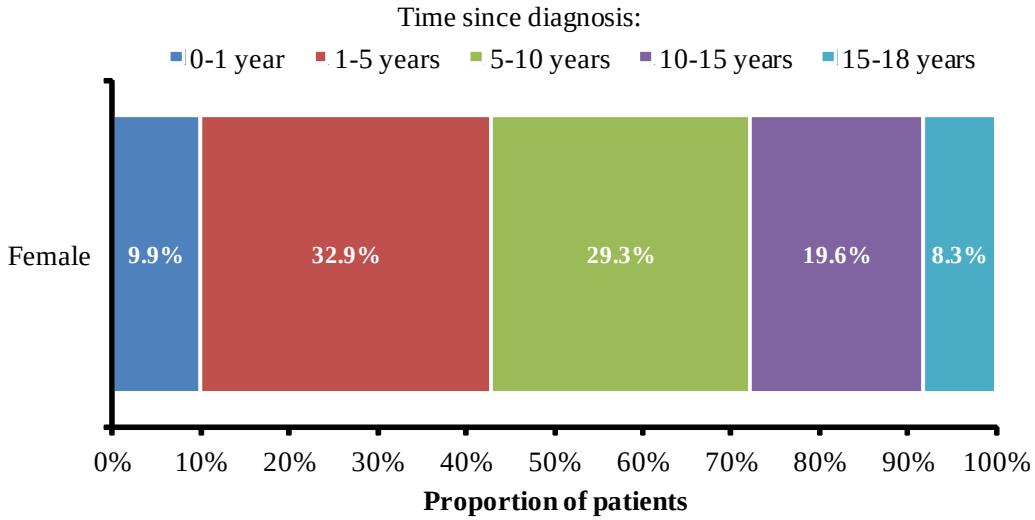
	Males	Females	Both sexes
New cases diagnosed per year (2006-2010)	6	1,149	1,155
Deaths per year (2006-2010)	2	299	301
1-year relative survival (diagnosed 2001-2005)	-	94.9%	-
5-year relative survival (diagnosed 2001-2005)	-	81.3%	-
10-year prevalence (2010)*	34	8,216	8,250
18-year prevalence (2010)**	53	11,393	11,446

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of breast cancer survivors at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 11,446, with the vast majority (99.5%) of these being women. Specifically

- Among males there were 53 survivors.
- Among females there were 11,393 survivors. 9.9% of these had been diagnosed within the previous year while 8.3% had been diagnosed between 15 and 18 years ago. (Fig. 12.1)

Figure 12.1: 18-year prevalence of female breast cancer by time since diagnosis

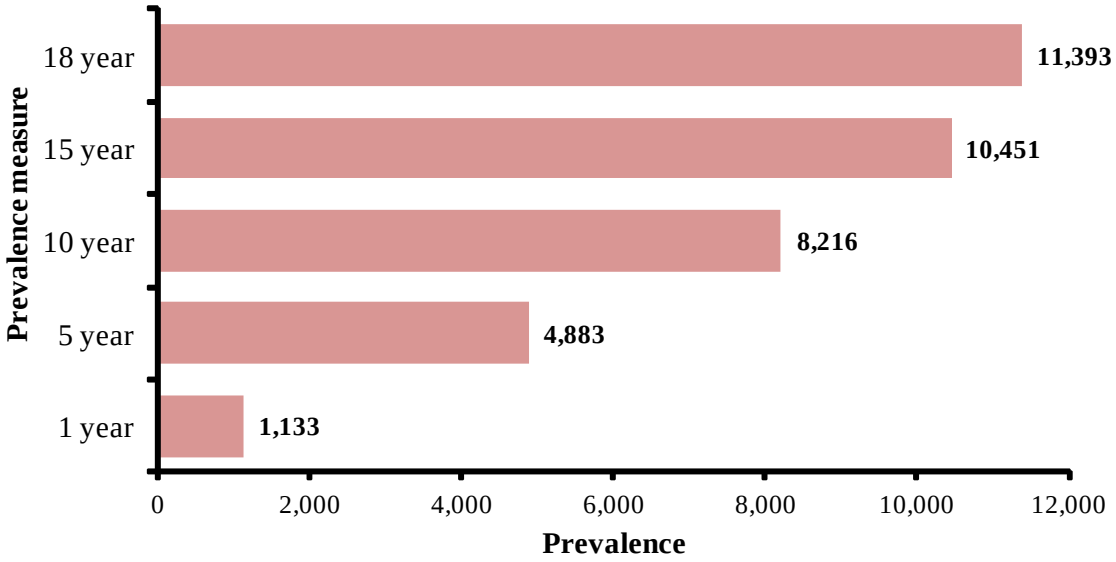


The 18-year prevalence represents all patients diagnosed with breast cancer during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 1,138 (Male: 5, Female: 1,133).

- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 4,901 (Male: 18, Female: 4,883).
- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 8,250 (Male: 34, Female: 8,216). (Fig. 12.2)

Figure 12.2: Different prevalence measures (based upon time since diagnosis) for female breast cancer



12.1: Prevalence by type

Breast cancer is made up of several different types of cancer. Patients can get more than one type of breast cancer or they can get more than one of the same type. In either event they are only counted once in the prevalence figures. Of the 11,393 female breast cancer patients alive at the end of 2010, 169 (1.5%) had two or more breast cancers diagnosed within the previous 18 years.

Table 12.2: Different prevalence measures (based upon time since diagnosis) for female breast cancer by first cancer type diagnosed

Cancer type	Cases per year (2006-10)	Prevalence 2010				
		One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Ductal and lobular neoplasms	1,025	1,022	4,472	7,475	9,395	10,100
Epithelial neoplasms	48	46	156	296	415	514
Cystic, mucinous & serous neoplasms	18	24	75	127	161	177
Adenocarcinoma	15	13	69	140	221	256
Squamous cell carcinoma	5	9	24	42	51	54
Other	6	5	22	34	40	43
Unspecified	32	14	65	102	168	249
Total	**1,149**	**1,133**	**4,883**	**8,216**	**10,451**	**11,393**

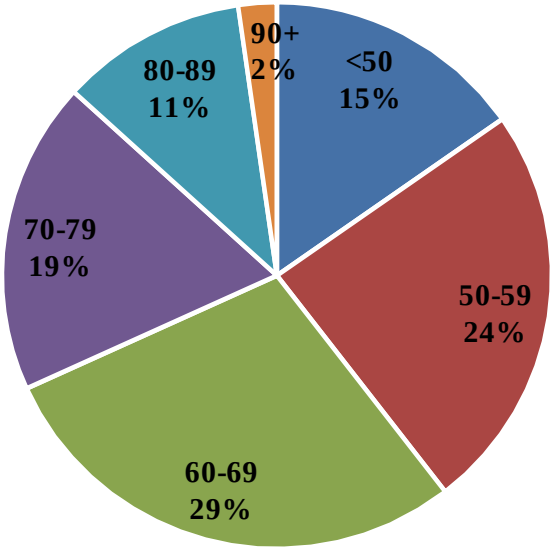
Nine out of ten (88.7%) female survivors had been diagnosed with a ductal or lobular neoplasm in the 18 years prior to the end of 2010. Epithelial, cystic, mucinous, serous, adeno- and squamous cell carcinomas made up most of the remaining types. (Tab. 12.2)

12.2: Prevalence by age

Since breast cancer is a disease which occurs primarily among the elderly, prevalence of this cancer is greater among older age groups. (Fig. 12.3, Tab. 12.3)

Among female breast cancer survivors diagnosed within the last 10 years the median age at the end of 2010 was 63, with 13% of survivors aged 80 and over. However 15% (1,259) of female survivors were aged under 50 illustrating the high number of women living with the disease prior to reaching screening age (50-70).

Figure 12.3a: 10-year prevalence of female breast cancer by age at the end of 2010



Among cancer survivors diagnosed within the last 18 years the median age at the end of 2010 was 65. There were 1,636 (15%) survivors aged 80 and over, and 1,403 (12%) survivors aged under 50.

Figure 12.3b: 18-year prevalence of female breast cancer by age at the end of 2010

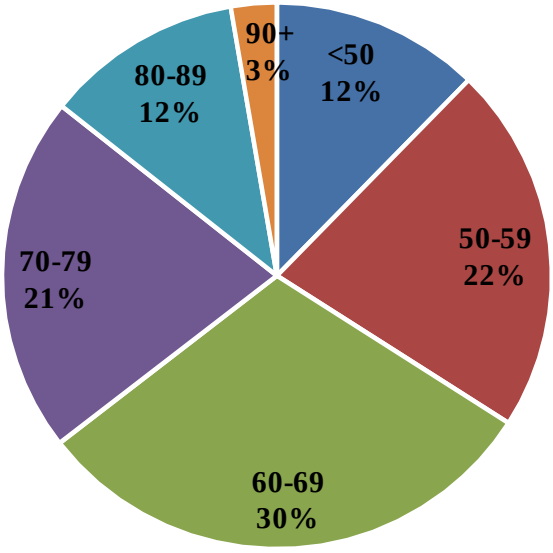


Table 12.3: Different prevalence measures (based upon time since diagnosis) for breast cancer by sex and age at the end of 2010

Sex and age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
MALE							
All ages	**6**	**2**	**5**	**18**	**34**	**49**	**53**
FEMALE							
Under 50	249	35	251	902	1,259	1,376	1,403
50-59	271	49	221	1,182	1,985	2,374	2,474
60-69	275	59	299	1,314	2,363	3,167	3,477
70-79	207	77	219	875	1,518	2,091	2,403
80-89	122	59	122	520	904	1,180	1,327
90 and over	25	19	21	90	187	263	309
All ages	**1,149**	**299**	**1,133**	**4,883**	**8,216**	**10,451**	**11,393**
BOTH SEXES							
All ages	**1,155**	**301**	**1,138**	**4,901**	**8,250**	**10,500**	**11,446**

12.3: Prevalence by stage at diagnosis

Prevalence of female breast cancer was highest for those with stage I or II disease due to the excellent survival for those diagnosed early. Compared to the number of cases of female breast cancer diagnosed each year at stage IV (57 per year), prevalence of women living with stage IV breast cancer was relatively low due to very poor survival rates. Less than five of the 143 stage IV survivors were diagnosed more than 10 years ago, while 45.5% had been diagnosed in 2010. This, however, will be influenced by the proportion of unstaged patients in earlier diagnosis years (e.g. 55.0% of patients were unstaged in 1993 compared to only 7.7% in 2010). (Tab. 12.4)

Table 12.4: Different prevalence measures (based upon time since diagnosis) for female breast cancer by stage at diagnosis

Stage at diagnosis	Cases per year (2006-10)	Prevalence 2010				
		One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Stage I	387	443	1,820	3,148	4,095	4,334
Stage II	404	407	1,846	3,182	4,014	4,267
Stage III	168	139	678	1,022	1,090	1,119
Stage IV	57	65	126	139	141	143
Unknown	133	79	413	725	1,111	1,530
Total	**1,149**	**1,133**	**4,883**	**8,216**	**10,451**	**11,393**

12.4: Prevalence trends

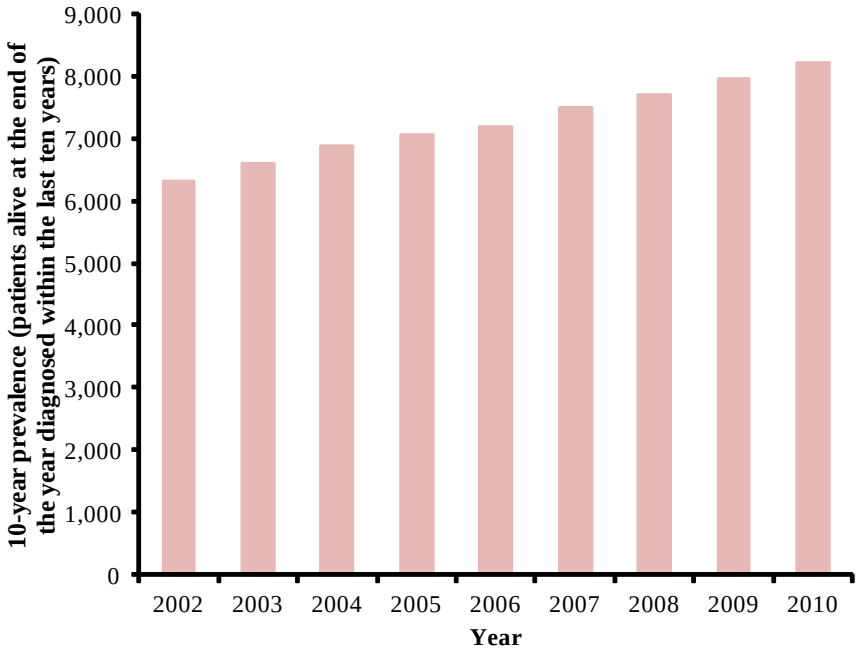
Ten-year prevalence of female breast cancer is increasing, rising from 6,304 female survivors in 2002 to 8,216 female survivors in 2010. (Fig. 12.4a)

This is partly due to the growth and ageing of the population. However adjusting for these factors using European age-standardised rates illustrates that the underlying prevalence rate of female breast cancer increased by an average of 1.6% each year between 2002 and 2010. (Fig. 12.4b)

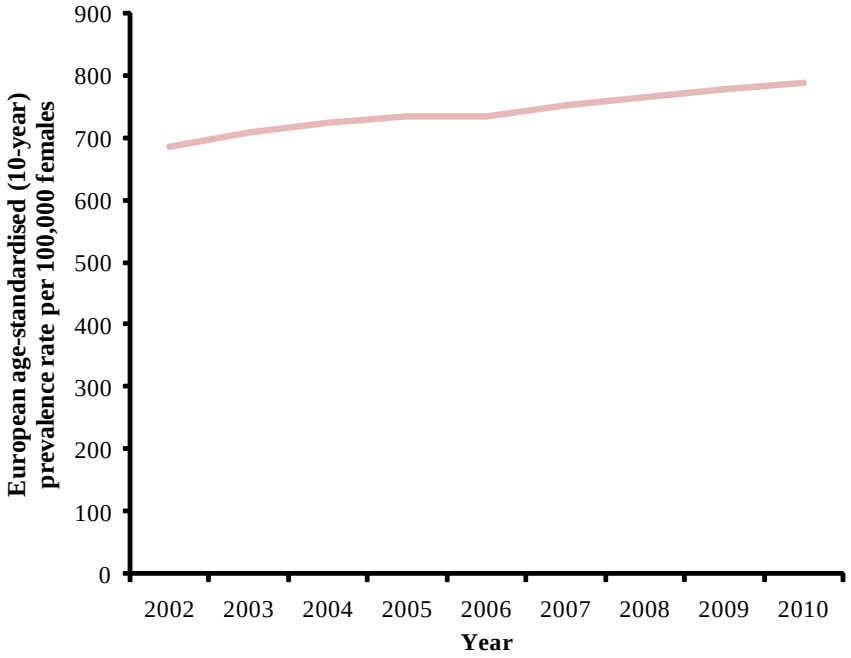
This trend is likely due to increasing incidence rates of breast cancer and improving survival from the disease.

Figure 12.4: Trends in 10-year prevalence of female breast cancer

(a) Number of patients



(b) Age-standardised rates (per 100,000 females)



12.5: Geographic variation

Table 12.5 presents the various prevalence measures by area of residence. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

Table 12.5: Different prevalence measures (based upon time since diagnosis) for female breast cancer by Health and Social Care Trust (HSCT) and Local Government District (LGD) of residence at diagnosis

FEMALE

HSCT and LGD of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
BELFAST HSCT							
Belfast	172	47	174	713	1,241	1,602	1,747
Castlereagh	45	13	59	198	355	454	496
TOTAL	**217**	**60**	**233**	**911**	**1,596**	**2,056**	**2,243**
NORTHERN HSCT							
Antrim	31	9	23	128	218	263	285
Ballymena	45	12	49	198	309	400	433
Ballymoney	21	5	32	93	146	174	189
Carrickfergus	25	6	24	109	195	249	266
Coleraine	44	11	36	189	293	368	396
Cookstown	20	6	19	89	148	178	194
Larne	23	7	18	96	165	212	228
Magherafelt	22	6	18	91	167	211	237
Moyle	12	2	16	54	87	104	118
Newtownabbey	58	13	55	251	422	540	589
TOTAL	**300**	**77**	**290**	**1,298**	**2,150**	**2,699**	**2,935**
SOUTH-EASTERN HSCT							
Ards	56	12	67	241	407	520	556
Down	47	11	43	204	342	421	449
Lisburn	76	15	54	320	555	691	737
North Down	60	19	46	259	463	583	630
TOTAL	**239**	**58**	**210**	**1,024**	**1,767**	**2,215**	**2,372**
SOUTHERN HSCT							
Armagh	39	9	38	161	264	330	361
Banbridge	25	4	30	113	193	259	284
Craigavon	57	18	43	238	405	515	568
Dungannon	34	10	45	141	206	268	305
Newry & Mourne	58	19	52	237	407	518	564
TOTAL	**214**	**60**	**208**	**890**	**1,475**	**1,890**	**2,082**
WESTERN HSCT							
Derry	68	17	73	290	435	565	618
Fermanagh	38	9	40	160	258	339	375
Limavady	19	4	25	82	146	179	205
Omagh	26	6	22	112	189	250	277
Strabane	22	5	25	92	157	205	230
TOTAL	**173**	**42**	**185**	**736**	**1,185**	**1,538**	**1,705**
Unknown	**6**	**1**	**7**	**24**	**43**	**53**	**56**
Northern Ireland	**1,149**	**299**	**1,133**	**4,883**	**8,216**	**10,451**	**11,393**

13 Cervical cancer (C53)

There was an average of 105 cases of cervical cancer diagnosed each year during 2006-2010 in Northern Ireland, while 24 women died each year from the disease. For patients diagnosed in 2001-2005 one-year relative survival was 88.1%, while five-year relative survival was 72.0%. (Tab. 13.1)

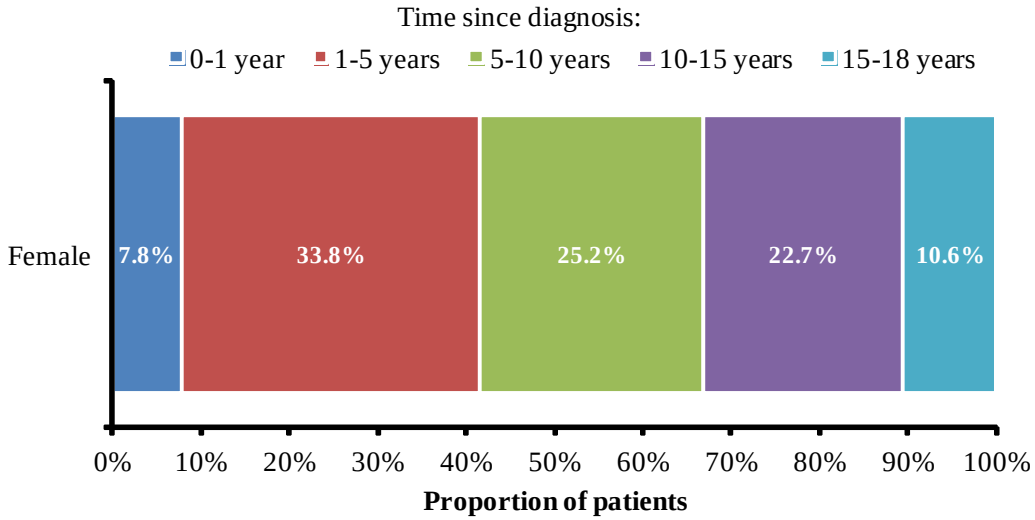
Table 13.1: Summary statistics for cervical cancer

	Females
New cases diagnosed per year (2006-2010)	105
Deaths per year (2006-2010)	24
1-year relative survival (diagnosed 2001-2005)	88.1%
5-year relative survival (diagnosed 2001-2005)	72.0%
10-year prevalence (2010)*	695
18-year prevalence (2010)**	1,041

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of cervical cancer survivors at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 1,041. 7.8% had been diagnosed within the previous year while 10.6% had been diagnosed between 15 and 18 years ago. (Fig. 13.1)

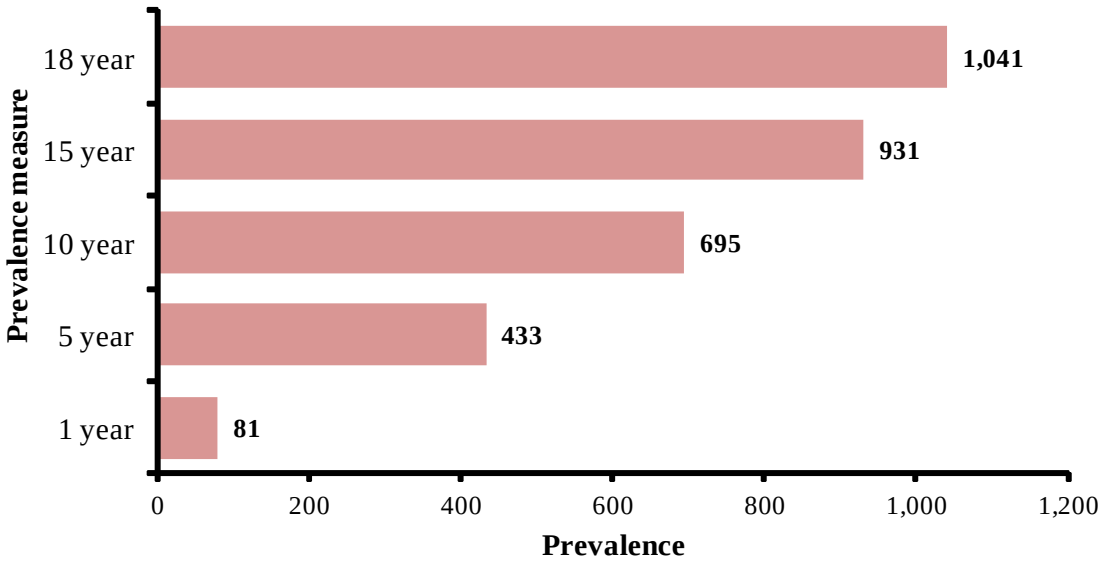
Figure 13.1: 18-year prevalence of cervical cancer by time since diagnosis



The 18-year prevalence represents all patients diagnosed with cervical cancer during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 81 women.
- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 433 women.
- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 695 women. (Fig. 13.2)

Figure 13.2: Different prevalence measures (based upon time since diagnosis) for cervical cancer



13.1: Prevalence by type

Cervical cancer is made up of several different types of cancer. Patients can get more than one type of cervical cancer or they can get more than one of the same type. In either event they are only counted once in the prevalence figures. However of the 1,041 cervical cancer patients alive at the end of 2010, there were no patients who had two or more cervical cancers diagnosed within the previous 18 years.

Table 13.2: Different prevalence measures (based upon time since diagnosis) for cervical cancer by first cancer type diagnosed

Cancer type	Cases per year (2006-10)	Prevalence 2010				
		One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Squamous cell carcinoma	71	55	297	491	665	743
Adenocarcinoma	26	19	109	164	199	216
Other/Unspecified	8	7	27	40	67	82
Total	**105**	**81**	**433**	**695**	**931**	**1,041**

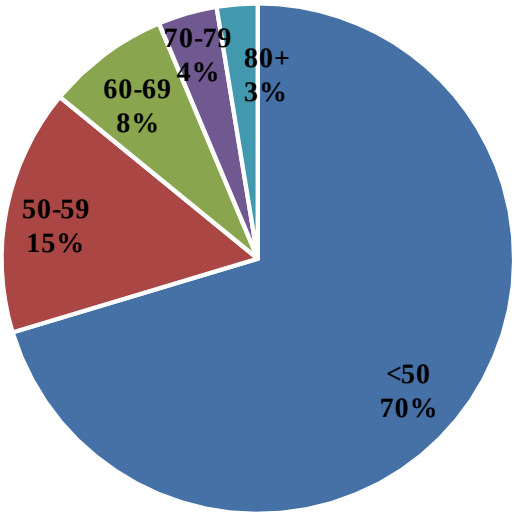
Seven out of ten (71.4%) cervical cancer survivors had been diagnosed with a squamous cell carcinoma in the 18 years prior to the end of 2010. A further two out of ten (20.7%) survivors had been diagnosed with an adenocarcinoma. (Tab. 13.2)

13.2: Prevalence by age

Cervical cancer is a disease which occurs primarily among younger and middle aged women, thus prevalence of cervical cancer is greater among these age groups. (Fig. 13.3, Tab. 13.3)

Among cancer survivors diagnosed within the last 10 years the median age at the end of 2010 was 42, with 70% of survivors aged under 50, while only 3% were aged 80 and over.

Figure 13.3a: 10-year prevalence of cervical cancer by age at the end of 2010



Among cancer survivors diagnosed within the last 18 years the median age at the end of 2010 was 47, with 58% of survivors aged under 50 and 3% aged 80 and over.

Figure 13.3b: 18-year prevalence of cervical cancer by age at the end of 2010

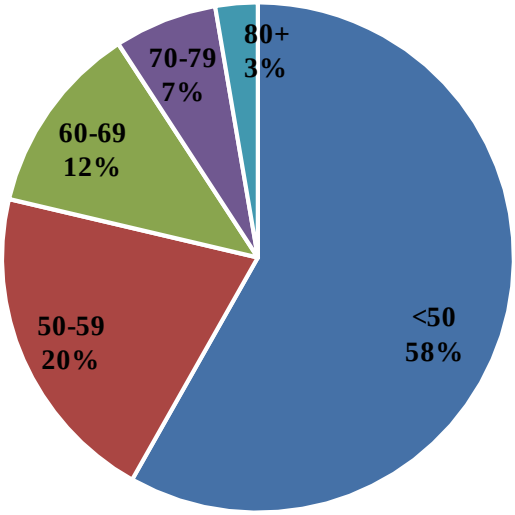


Table 13.3: Different prevalence measures (based upon time since diagnosis) for cervical cancer by age at the end of 2010

Age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Under 50	75	7	56	323	489	585	606
50-59	12	3	10	62	108	174	213
60-69	5	3	7	22	54	99	126
70-79	7	5	4	15	26	50	68
80 and over	6	5	4	11	18	23	28
All ages	**105**	**24**	**81**	**433**	**695**	**931**	**1,041**

13.3: Prevalence trends

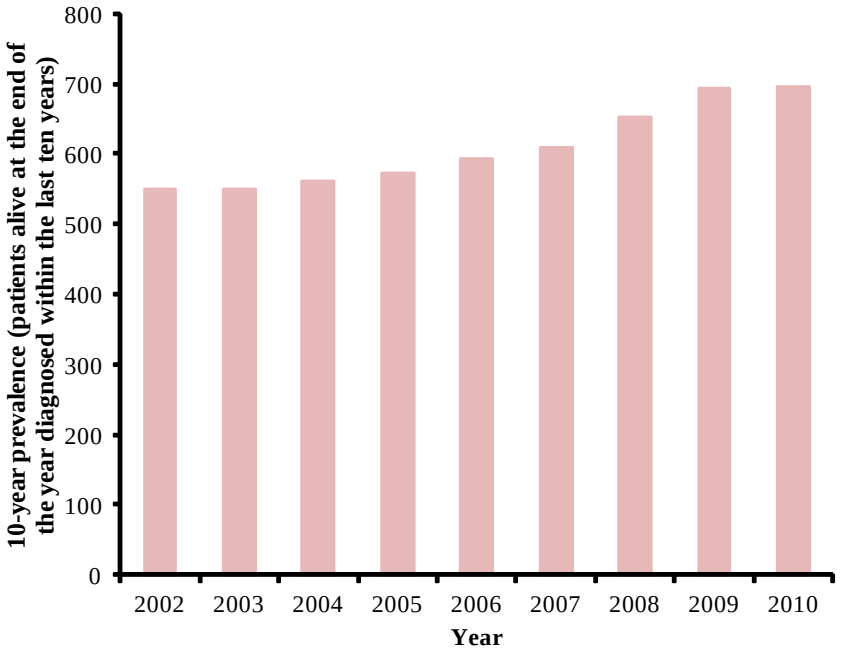
Ten-year prevalence of cervical cancer is increasing among women, rising from 550 survivors in 2002 to 695 survivors in 2010. (Fig. 13.4a)

Adjusting for population growth and the ageing of the population using European age-standardised rates illustrates that prevalence rates did not change much between 2002 and 2006; however there has been an increase of 4.4% per year between 2006 and 2010 in prevalence rates among women. (Fig. 13.4b)

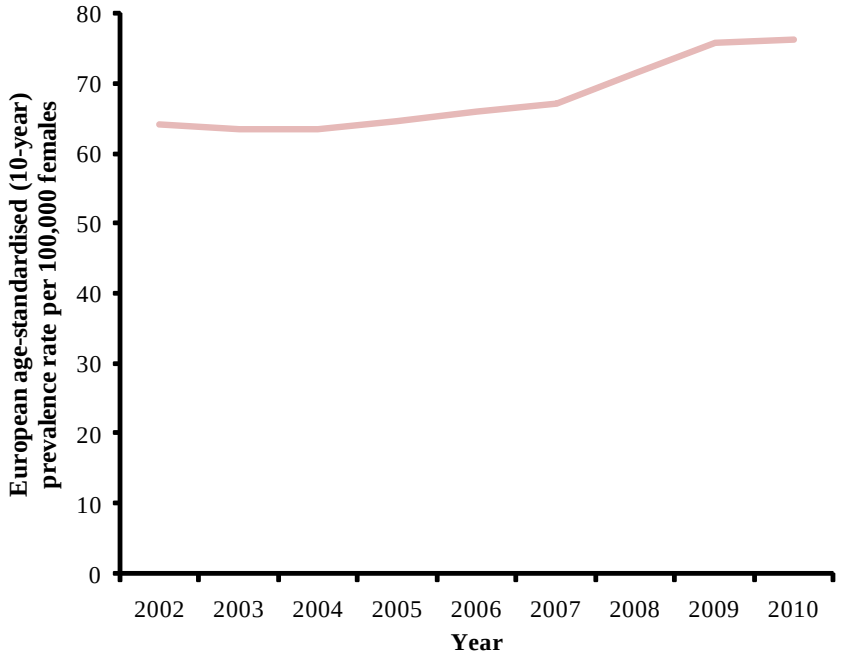
This is likely due to increasing incidence rates of the disease and improved survival.

Figure 13.4: Trends in 10-year prevalence of cervical cancer

(a) Number of patients



(b) Age-standardised rates (per 100,000 females)



13.4: Geographic variation

Table 13.4 presents the various prevalence measures by area of residence. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

Table 13.4: Different prevalence measures (based upon time since diagnosis) for cervical cancer by Health and Social Care Trust (HSCT) of residence at diagnosis

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	24	5	17	95	170	213	239
Northern	27	5	17	115	191	253	282
South-Eastern	24	5	17	99	149	200	222
Southern	17	4	17	70	101	148	170
Western	13	4	13	51	76	109	120
Unknown	1	0	0	3	8	8	8
Northern Ireland	**105**	**24**	**81**	**433**	**695**	**931**	**1,041**

14 Uterine cancer (C54-C55)

There was an average of 214 cases of uterine cancer diagnosed each year during 2006-2010 among women in Northern Ireland. Survival from the disease is generally good, with 87.6% of those diagnosed in 2001-2005 alive one year from diagnosis and 73.6% alive five years from diagnosis. There was an average of 42 deaths each year from the disease during 2006-2010. (Tab. 14.1)

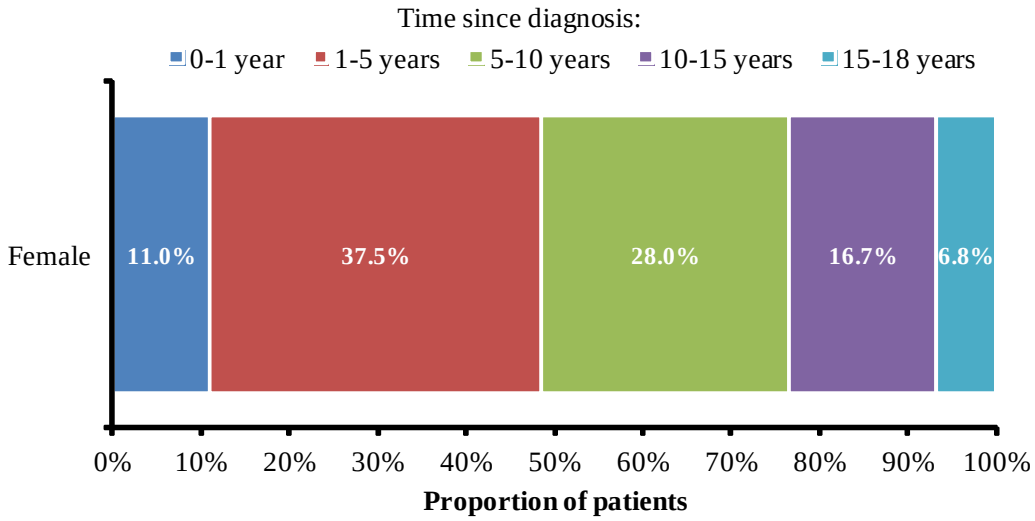
Table 14.1: Summary statistics for uterine cancer

	Females
New cases diagnosed per year (2006-2010)	214
Deaths per year (2006-2010)	42
1-year relative survival (diagnosed 2001-2005)	87.6%
5-year relative survival (diagnosed 2001-2005)	73.6%
10-year prevalence (2010)*	1,391
18-year prevalence (2010)**	1,818

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of uterine cancer survivors at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 1,818. 11.0% of these were diagnosed within 2010, while 6.8% had been diagnosed between 15 and 18 years ago (i.e. during 1993-1995). (Fig. 14.1)

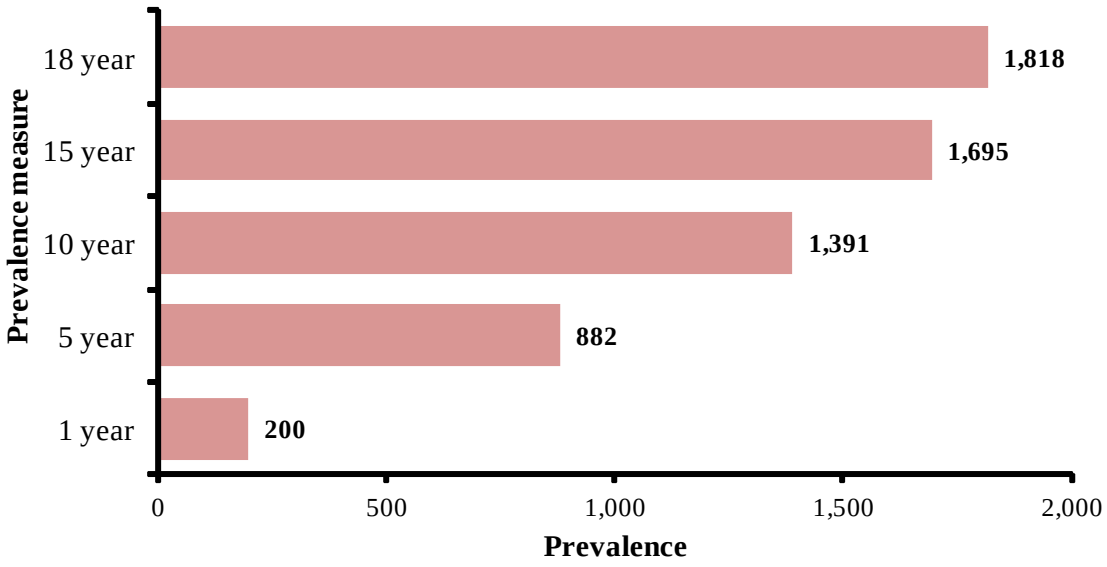
Figure 14.1: 18-year prevalence of uterine cancer by time since diagnosis



The 18-year prevalence represents all patients diagnosed with uterine cancer during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 200 women.
- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 882 women.
- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 1,391 women. (Fig. 14.2)

Figure 14.2: Different prevalence measures (based upon time since diagnosis) for uterine cancer



14.1: Prevalence by type

Adenocarcinoma is the most common type of uterine cancer. However there are several other different, less common, types of uterine cancer. Patients can get more than one type of uterine cancer or they can get more than one of the same type. In either event they are only counted once in the prevalence figures. Among the 1,818 uterine cancer patients alive at the end of 2010, there were six patients who had two or more uterine cancers diagnosed within the previous 18 years.

Table 14.2: Different prevalence measures (based upon time since diagnosis) for uterine cancer by first cancer type diagnosed

Cancer type	Cases per year (2006-10)	Prevalence 2010				
		One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Adenocarcinoma	167	149	747	1,201	1,460	1,564
Cystic, mucinous & serous neoplasm	20	23	67	82	85	85
Complex, mixed & stromal neoplasm	12	16	38	60	73	75
Epithelial neoplasm	4	6	11	20	27	35
Other & Unspecified	11	6	19	28	50	59
Total	**214**	**200**	**882**	**1,391**	**1,695**	**1,818**

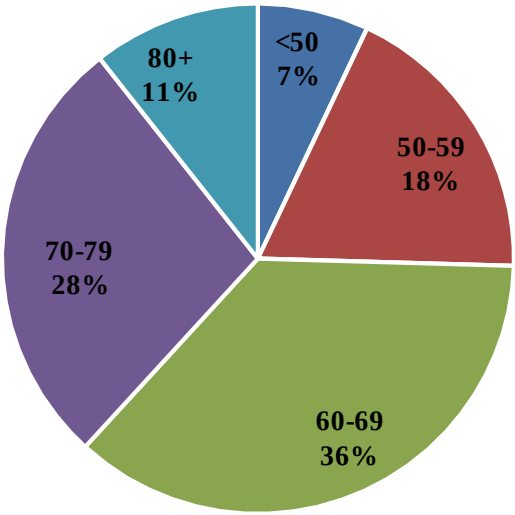
86.0% of uterine cancer survivors had been diagnosed with an adenocarcinoma in the 18 years prior to the end of 2010. Some of the rarer forms of uterine cancer diagnosed among the survivors included cystic, mucinous, serious, complex, mixed, stromal and epithelial neoplasms, which collectively accounted for a further 10.7% of survivors. (Tab. 14.2)

14.2: Prevalence by age

Since uterine cancer is a disease which occurs primarily among the elderly, prevalence of this cancer is greater among older age groups. (Fig. 14.3, Tab. 14.3)

Among cancer survivors diagnosed within the last 10 years the median age at the end of 2010 was 67, with 25% of survivors aged under 60 and 11% aged 80 and over.

Figure 14.3a: 10-year prevalence of uterine cancer by age at the end of 2010



Among cancer survivors diagnosed within the last 18 years the median age at the end of 2010 was 68, with 22% of survivors aged under 60 and 13% aged 80 and over.

Figure 14.3b: 18-year prevalence of uterine cancer by age at the end of 2010

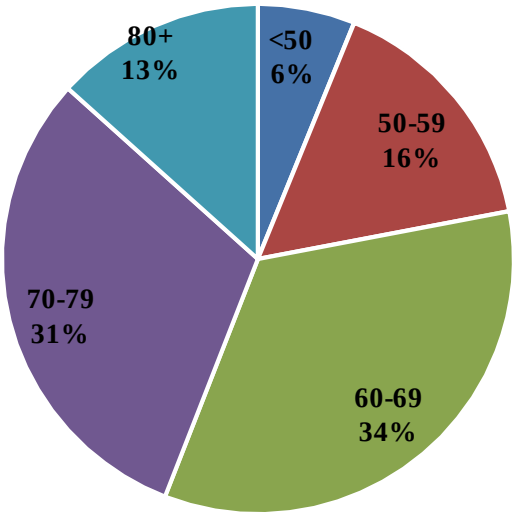


Table 14.3: Different prevalence measures (based upon time since diagnosis) for uterine cancer by age at the end of 2010

Age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Under 50	24	1	25	80	98	109	112
50-59	46	4	39	180	256	284	288
60-69	67	9	59	312	506	594	617
70-79	54	13	54	225	383	491	558
80 and over	23	15	23	85	148	217	243
All ages	**214**	**42**	**200**	**882**	**1,391**	**1,695**	**1,818**

14.3: Prevalence trends

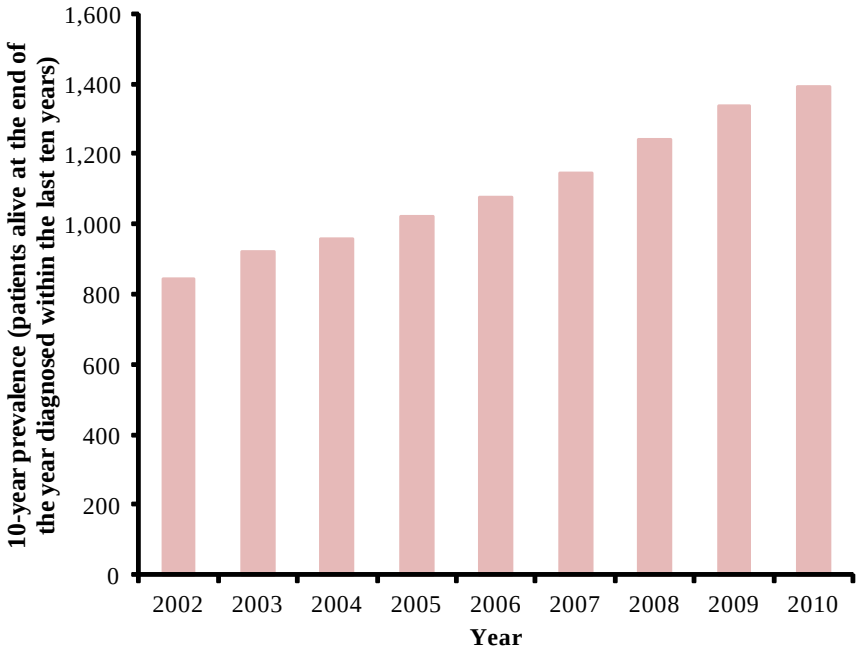
Ten-year prevalence of uterine cancer is increasing among women, rising from 845 survivors in 2002 to 1,391 survivors in 2010. (Fig. 14.4a)

Adjusting for population growth and the ageing of the population using European age-standardised rates illustrates that underlying prevalence rates increased between 2002 and 2010 by an average of 4.9% per year. (Fig. 14.4b)

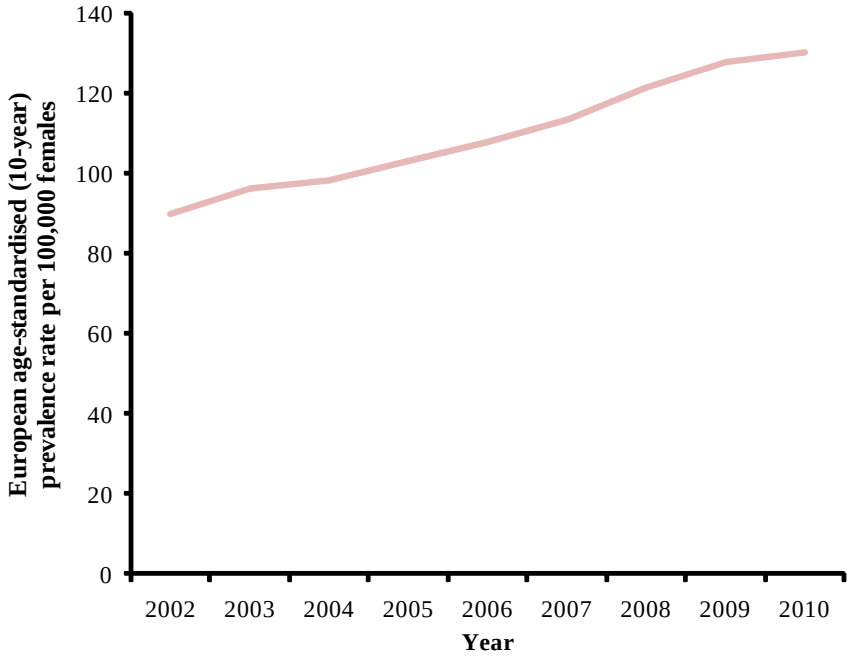
The increase in prevalence rates is primarily due to increasing incidence rates of the disease.

Figure 14.4: Trends in 10-year prevalence of uterine cancer

(a) Number of patients



(b) Age-standardised rates (per 100,000 females)



14.4: Geographic variation

Table 14.4 presents the various prevalence measures by area of residence. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

Table 14.4: Different prevalence measures (based upon time since diagnosis) for uterine cancer by Health and Social Care Trust (HSCT) of residence at diagnosis

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	38	8	39	158	264	326	350
Northern	50	12	43	196	322	398	437
South-Eastern	45	8	48	190	293	356	379
Southern	45	7	33	187	276	331	350
Western	34	6	37	144	220	268	285
Unknown	1	0	0	7	16	16	17
Northern Ireland	**214**	**42**	**200**	**882**	**1,391**	**1,695**	**1,818**

15 Ovarian cancer (excluding borderline ovarian cancer) (C56)

There was an average of 158 cases of (non borderline) ovarian cancer diagnosed each year during 2006-2010 in Northern Ireland, while an average of 121 women died each year from the disease. For patients diagnosed in 2001-2005 one-year relative survival was 63.5%, while five-year relative survival was 33.8%. (Fig. 15.1)

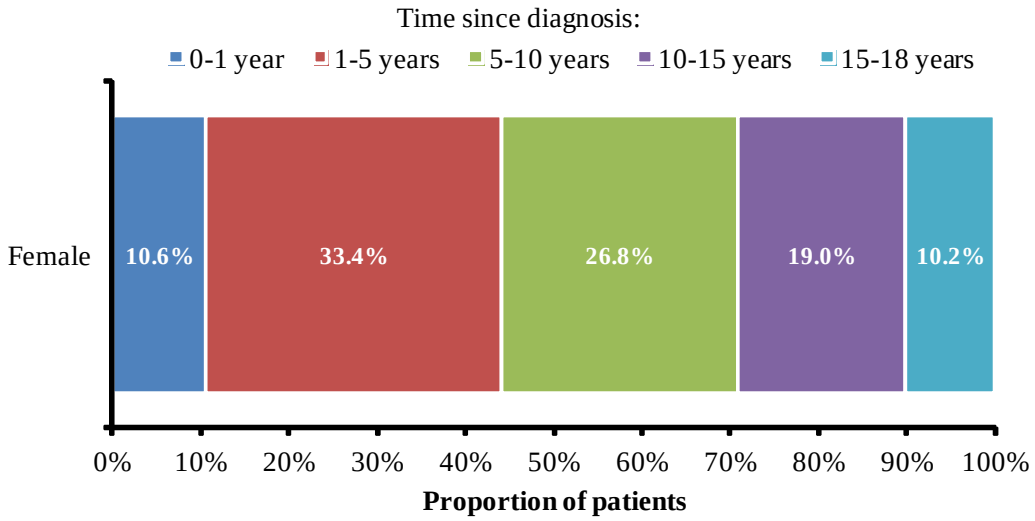
Table 15.1: Summary statistics for ovarian cancer

	Females
New cases diagnosed per year (2006-2010)	158
Deaths per year (2006-2010)	121
1-year relative survival (diagnosed 2001-2005)	63.5%
5-year relative survival (diagnosed 2001-2005)	33.8%
10-year prevalence (2010)*	619
18-year prevalence (2010)**	874

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of ovarian cancer survivors at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 874. 10.6% had been diagnosed within the previous year while 10.2% had been diagnosed between 15 and 18 years ago. (Fig. 15.1)

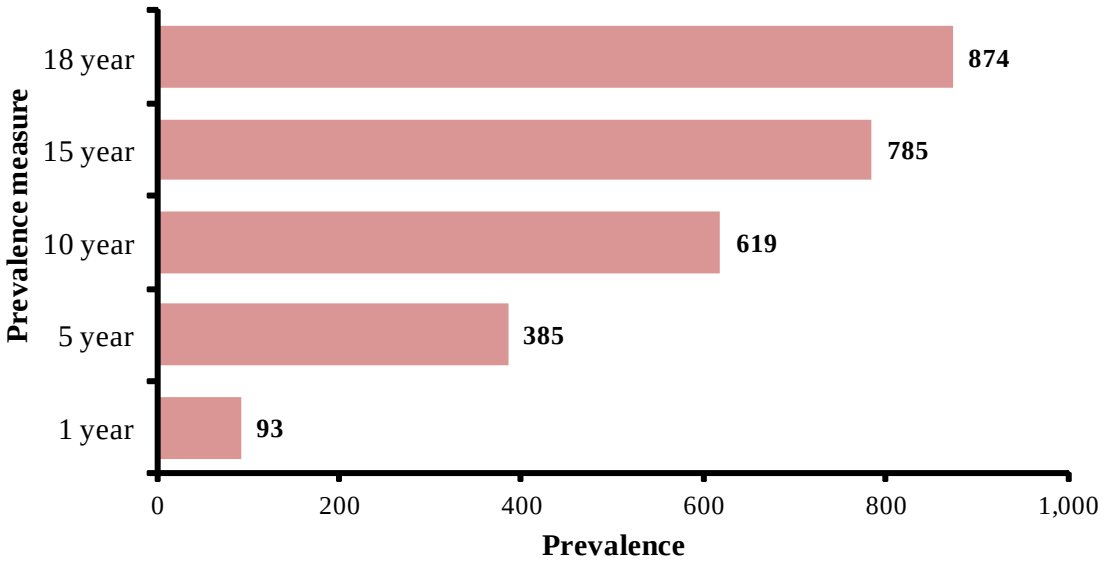
Figure 15.1: 18-year prevalence of ovarian cancer by time since diagnosis



The 18-year prevalence represents all patients diagnosed with ovarian cancer during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 93 women.
- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 385 women.
- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 619 women. (Fig. 15.2)

Figure 15.2: Different prevalence measures (based upon time since diagnosis) for ovarian cancer



15.1: Prevalence by type

There are several types of ovarian cancer. Patients can get more than one type of ovarian cancer or they can get more than one of the same type. In either event they are only counted once in the prevalence figures. Among the 874 ovarian cancer patients alive at the end of 2010, there were less than five patients who had two or more ovarian cancers diagnosed within the previous 18 years.

Table 15.2: Different prevalence measures (based upon time since diagnosis) for ovarian cancer by first cancer type diagnosed

Cancer type	Cases per year (2006-10)	Prevalence 2010				
		One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Cystic, mucinous & serous neoplasm	88	71	250	353	426	452
Adenocarcinoma	36	17	101	181	243	273
Specialised gonadal neoplasm	2	0	9	26	36	56
Other & Unspecified	32	5	25	59	80	93
Total	**158**	**93**	**385**	**619**	**785**	**874**

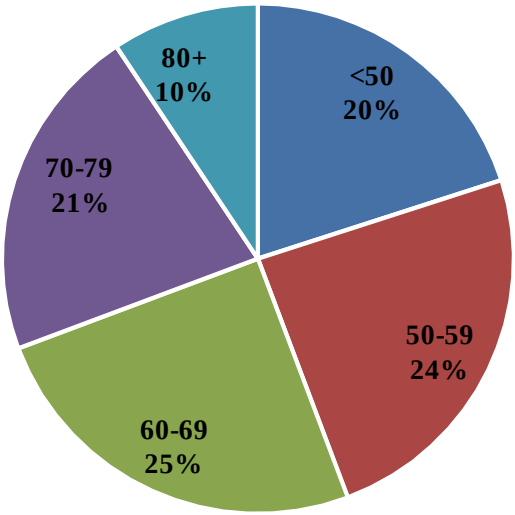
Just over one half (51.7%) of ovarian cancer survivors had been diagnosed with a cystic, mucinous or serious neoplasm in the 18 years prior to the end of 2010, while almost one third (31.2%) had an adenocarcinoma. Some of the rarer forms of ovarian cancer diagnosed among the survivors included specialized gonadal neoplasms, which accounted for a further 6.4% of survivors. (Tab. 15.2)

15.2: Prevalence by age

Since ovarian cancer is a disease which occurs primarily among the elderly, prevalence of this cancer is greater among older age groups. (Fig. 15.3, Tab. 15.3)

Among cancer survivors diagnosed within the last 10 years the median age at the end of 2010 was 62, with 20% of survivors aged under 50 and 10% aged 80 and over.

Figure 15.3a: 10-year prevalence of ovarian cancer by age at the end of 2010



Among cancer survivors diagnosed within the last 18 years the median age at the end of 2010 was 63, with 18% of survivors aged under 50 and 12% aged 80 and over.

Figure 15.3b: 18-year prevalence of ovarian cancer by age at the end of 2010

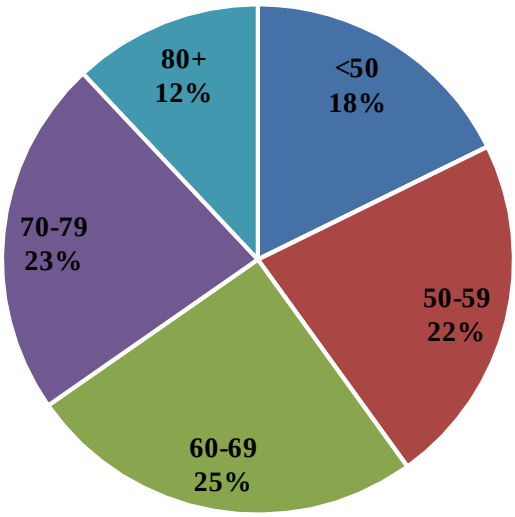


Table 15.3: Different prevalence measures (based upon time since diagnosis) for ovarian cancer by age at the end of 2010

Age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Under 50	23	8	18	72	124	144	155
50-59	32	17	20	103	150	176	195
60-69	42	33	24	99	155	200	221
70-79	34	34	24	76	132	180	198
80 and over	28	31	7	35	58	85	105
All ages	**158**	**121**	**93**	**385**	**619**	**785**	**874**

15.3: Prevalence trends

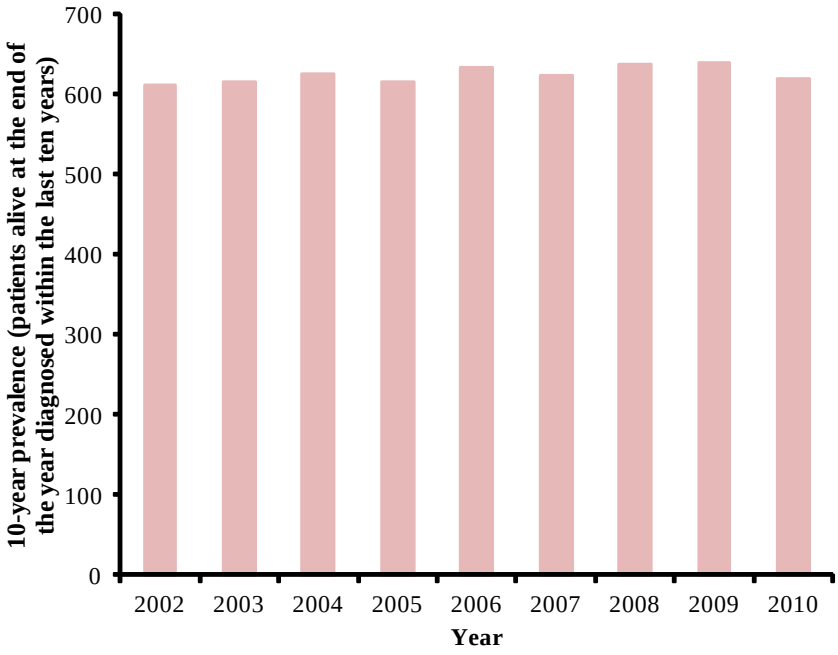
Ten-year prevalence of ovarian cancer did not change much during 2002 to 2010 with 610 survivors in 2002 and 619 survivors in 2010. The maximum number of survivors was 639 at the end of 2009. (Fig. 15.4a)

Adjusting for population growth and the ageing of the population using European age-standardised rates illustrates that underlying prevalence rates decreased between 2002 and 2010 by an average of 1.1% per year. (Fig. 15.4b)

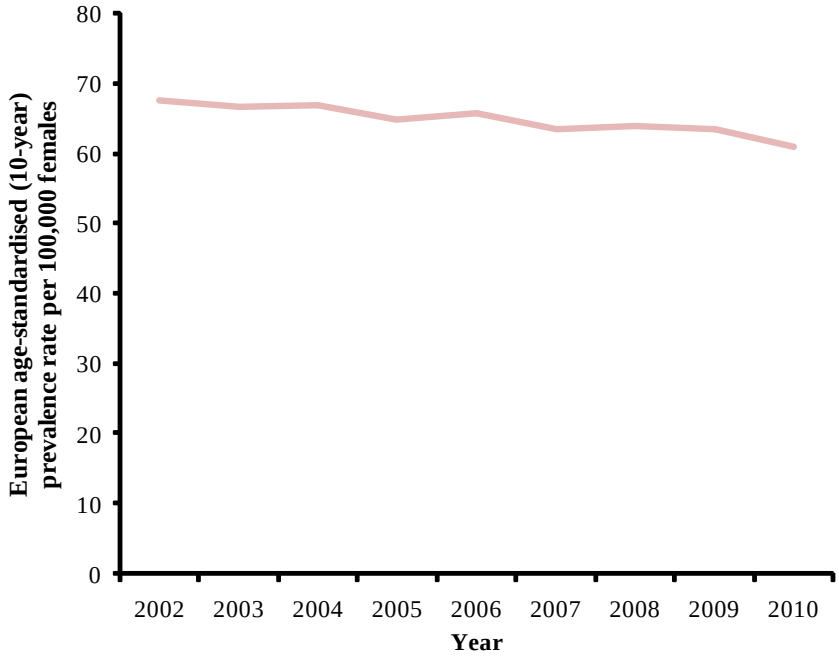
Since there has been little change in incidence and survival rates during the last decade this may be due to misclassification of borderline ovarian cancers as non-borderline in the early 1990s.

Figure 15.4: Trends in 10-year prevalence of ovarian cancer

(a) Number of patients



(b) Age-standardised rates (per 100,000 females)



15.4: Geographic variation

Table 15.4 presents the various prevalence measures by area of residence. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

Table 15.4: Different prevalence measures (based upon time since diagnosis) for ovarian cancer by Health and Social Care Trust (HSCT) of residence at diagnosis

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	31	25	22	72	118	154	178
Northern	43	32	29	102	176	218	242
South-Eastern	30	23	17	77	121	158	177
Southern	32	26	14	76	122	152	164
Western	22	14	11	57	80	100	108
Unknown	0	1	0	1	2	3	5
Northern Ireland	**158**	**121**	**93**	**385**	**619**	**785**	**874**

16 Prostate cancer (C61)

There was an average of 965 prostate cancers diagnosed each year during 2006-2010 in Northern Ireland while 226 men died each year from the disease. Survival from the disease was very good, with patients diagnosed in 2001-2005 having one-year relative survival of 93.2% and five-year relative survival of 79.8%. (Tab. 16.1)

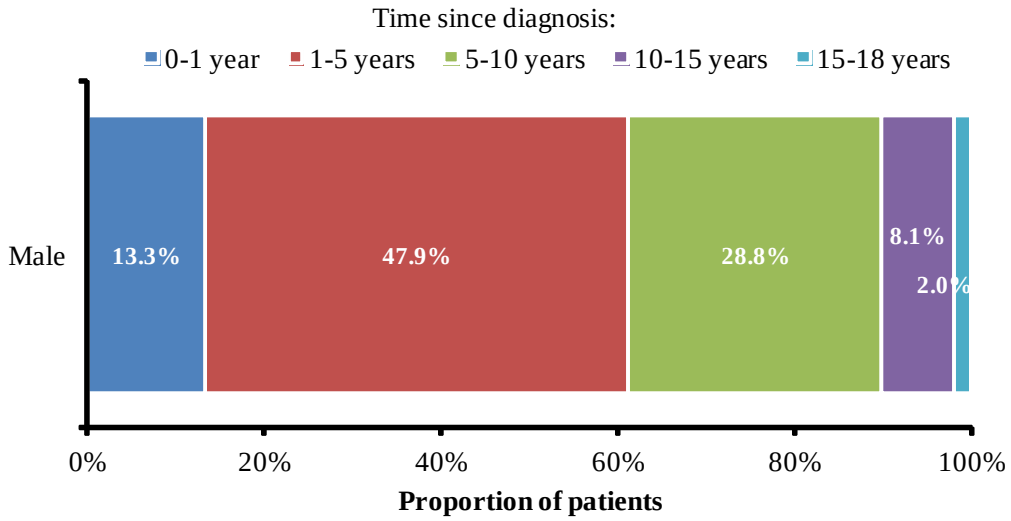
Table 16.1: Summary statistics for prostate cancer

	Males
New cases diagnosed per year (2006-2010)	965
Deaths per year (2006-2010)	226
1-year relative survival (diagnosed 2001-2005)	93.2%
5-year relative survival (diagnosed 2001-2005)	79.8%
10-year prevalence (2010)*	5,976
18-year prevalence (2010)**	6,646

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of prostate cancer survivors at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 6,646. 13.3% had been diagnosed within the previous year while 2.0% had been diagnosed between 15 and 18 years ago. (Fig. 16.1)

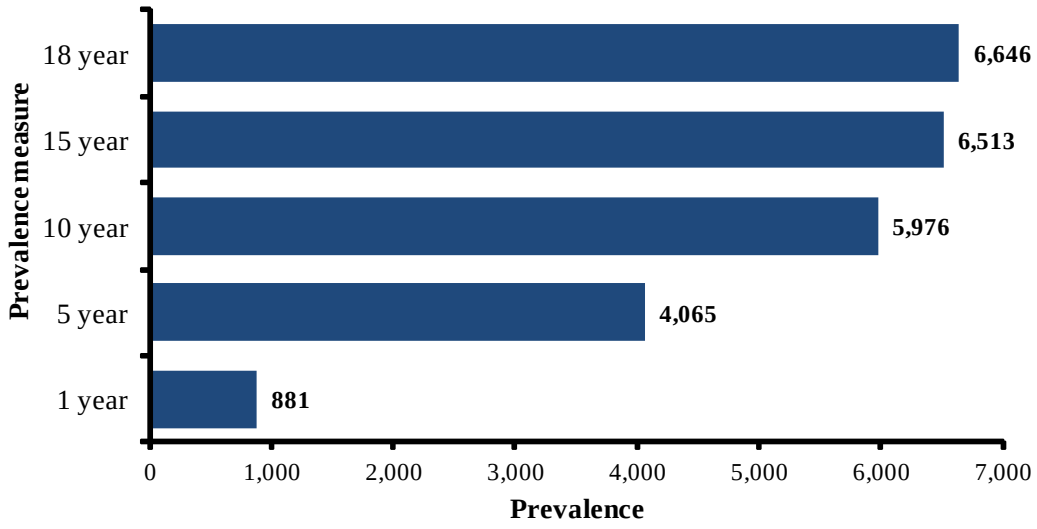
Figure 16.1: 18-year prevalence of prostate cancer by time since diagnosis



The 18-year prevalence represents all patients diagnosed with prostate cancer during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 881 men.
- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 4,065 men.
- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 5,976 men. (Fig. 16.2)

Figure 16.2: Different prevalence measures (based upon time since diagnosis) for prostate cancer



16.1: Prevalence by type and Gleason score

Of the 6,646 prostate cancer patients who were alive at the end of 2010 there were less than five patients who had two or more prostate cancers diagnosed within the previous 18 years. The vast majority of prostate cancer survivors (94.9%) were diagnosed with an adenocarcinoma, with a further 4.3% not having a type specified.

While there is thus little variation in the type of prostate cancer diagnosed, the severity of the disease varies considerably. The aggressiveness of prostate cancer is commonly measured using Gleason score. Of the 6,646 survivors 22.1% had been diagnosed with a Gleason score of 8 to 10 which represents the more aggressive forms of prostate cancer. However 12.2% did not have a Gleason score assigned. Many of these were diagnosed in the 1993-1995 period. (Tab. 16.2)

Table 16.2: Different prevalence measures (based upon time since diagnosis) for prostate cancer by Gleason score of first cancer diagnosed

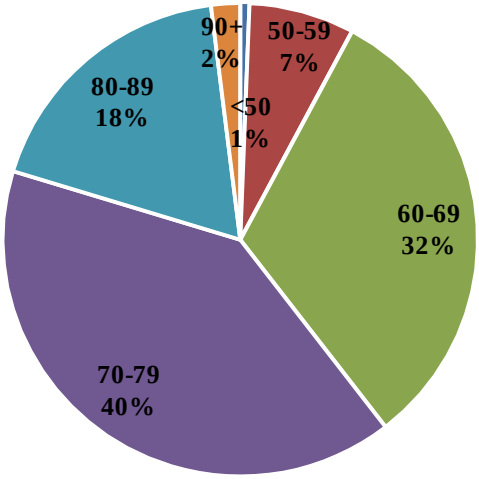
Gleason score	Cases per year (2006-10)	Prevalence 2010				
		One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
1 to 5	7	5	35	268	432	432
6	284	224	1,321	2,079	2,182	2,185
7	264	268	1,237	1,681	1,749	1,750
8	102	105	449	623	649	653
9 to 10	167	151	652	796	813	813
Unknown	141	128	371	529	688	813
Total	**965**	**881**	**4,065**	**5,976**	**6,513**	**6,646**

16.2: Prevalence by age

Since prostate cancer is a disease which occurs primarily among the elderly, prevalence of this cancer is greater among older age groups. (Fig. 16.3, Tab. 16.3)

Among prostate cancer survivors diagnosed within the last 10 years the median age at the end of 2010 was 72 with 8% of survivors aged under 60 and 20% aged 80 and over.

Figure 16.3a: 10-year prevalence of prostate cancer by age at the end of 2010



Among prostate cancer survivors diagnosed within the last 18 years the median age at the end of 2010 was 73 with 7% of survivors aged under 60 and 24% aged 80 and over.

Figure 16.3b: 18-year prevalence of prostate cancer by age at the end of 2010

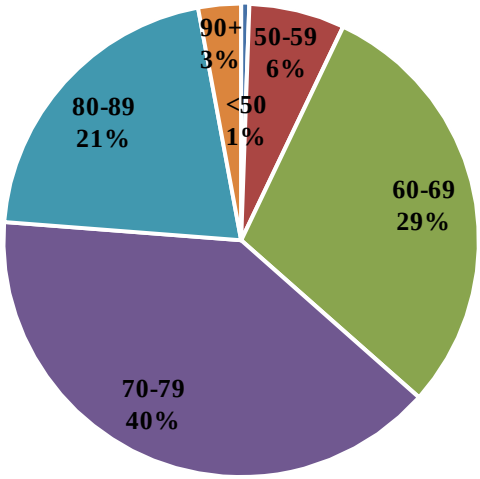


Table 16.3: Different prevalence measures (based upon time since diagnosis) for prostate cancer by age at the end of 2010

Age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Under 50	12	0	16	37	37	37	37
50-59	122	5	99	374	431	434	434
60-69	343	31	299	1,388	1,892	1,955	1,956
70-79	337	78	323	1,556	2,401	2,612	2,639
80-89	135	88	127	644	1,096	1,311	1,386
90 and over	15	23	17	66	119	164	194
All ages	**965**	**226**	**881**	**4,065**	**5,976**	**6,513**	**6,646**

16.3: Prevalence trends

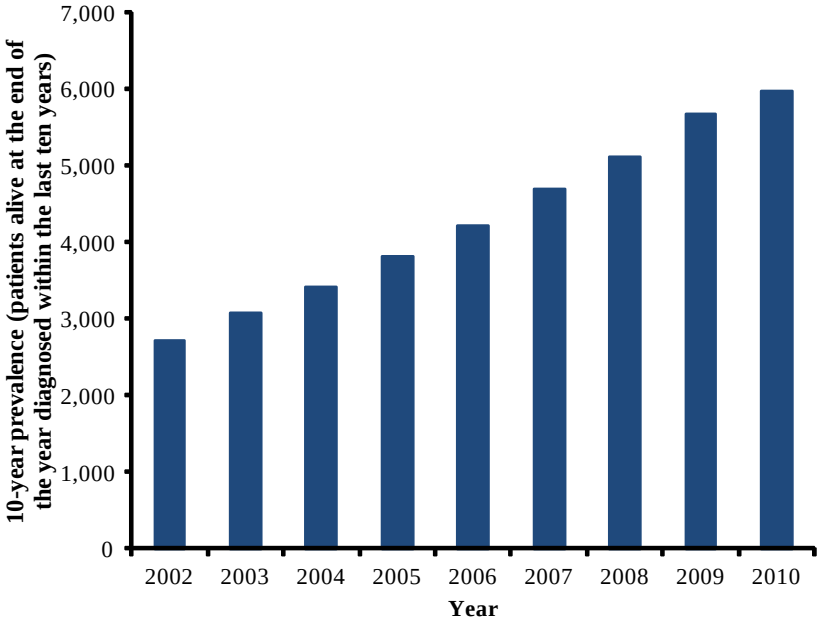
Ten-year prevalence of prostate cancer is increasing rapidly, rising from 2,707 survivors in 2002 to 5,976 survivors in 2010. (Fig. 16.4a)

This is only partly due to the growth and ageing of the population as after adjusting for these factors using European age-standardised rates underlying prevalence rates of prostate cancer increased by an average of 8.0% each year between 2002 and 2010. (Fig. 16.4b)

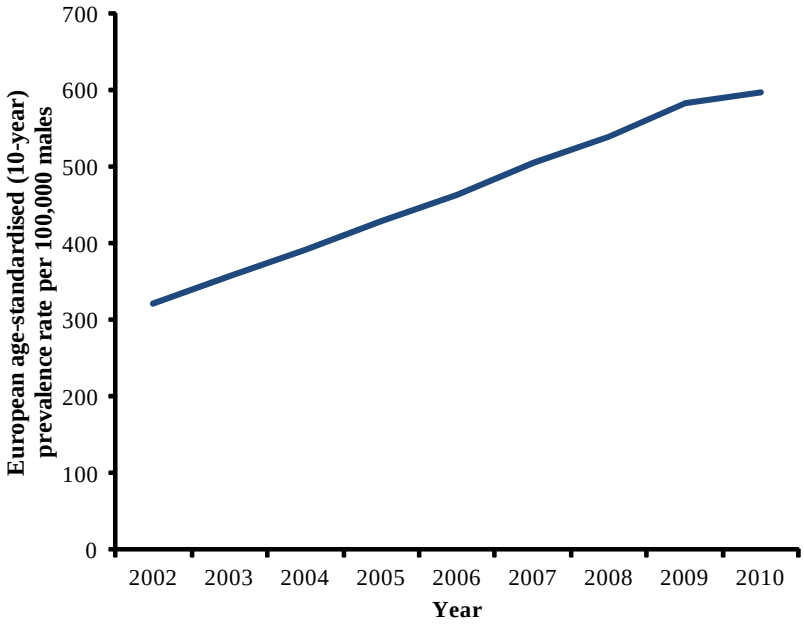
This is due to increasing incidence rates of prostate cancer and improving survival from the disease. However both of these are artefacts of increased use of PSA testing in the diagnosis of prostate cancer.

Figure 16.4: Trends in 10-year prevalence of prostate cancer

(a) Number of patients



(b) Age-standardised rates (per 100,000 males)



16.4: Geographic variation

Table 16.4 presents the various prevalence measures by area of residence. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

Table 16.4: Different prevalence measures (based upon time since diagnosis) for prostate cancer by Health and Social Care Trust (HSCT) and Local Government District (LGD) of residence at diagnosis

HSCT and LGD of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
BELFAST HSCT							
Belfast	140	37	114	556	769	831	844
Castlereagh	37	11	28	153	232	255	261
TOTAL	**177**	**48**	**142**	**709**	**1,001**	**1,086**	**1,105**
NORTHERN HSCT							
Antrim	26	5	28	116	158	165	172
Ballymena	38	8	42	161	234	253	259
Ballymoney	17	4	16	68	102	111	111
Carrickfergus	24	6	26	99	138	143	149
Coleraine	30	9	33	124	212	229	237
Cookstown	20	3	17	92	119	128	130
Larne	26	4	17	117	151	158	158
Magherafelt	20	4	28	88	135	145	147
Moyle	11	5	12	42	77	79	81
Newtownabbey	49	10	45	206	273	291	300
TOTAL	**261**	**57**	**264**	**1,113**	**1,599**	**1,702**	**1,744**
SOUTH-EASTERN HSCT							
Ards	44	15	41	181	260	278	285
Down	39	6	33	171	247	275	277
Lisburn	61	16	40	251	358	396	401
North Down	52	11	53	219	321	348	355
TOTAL	**197**	**48**	**167**	**822**	**1,186**	**1,297**	**1,318**
SOUTHERN HSCT							
Armagh	35	7	27	150	216	231	238
Banbridge	24	6	26	101	145	164	166
Craigavon	50	8	42	221	327	360	370
Dungannon	32	7	27	133	192	204	206
Newry & Mourne	46	10	40	196	279	314	321
TOTAL	**187**	**38**	**162**	**801**	**1,159**	**1,273**	**1,301**
WESTERN HSCT							
Derry	38	7	40	167	291	338	342
Fermanagh	33	10	30	136	225	238	241
Limavady	17	4	12	77	122	135	137
Omagh	26	6	27	116	191	220	224
Strabane	19	5	17	84	141	157	158
TOTAL	**134**	**33**	**126**	**580**	**970**	**1,088**	**1,102**
Unknown	**10**	**1**	**20**	**40**	**61**	**67**	**76**
Northern Ireland	**965**	**226**	**881**	**4,065**	**5,976**	**6,513**	**6,646**

17 Testicular cancer (C62)

There was an average of 59 cases of testicular cancer diagnosed each year during 2006-2010 in Northern Ireland. Survival from the disease is excellent with one-year and five-year relative survival for those diagnosed in 2001-2005 being 97.9% and 97.5% respectively. Consequently mortality from the disease is low with an average of 2 deaths each year from the disease during 2006-2010. (Tab. 17.1)

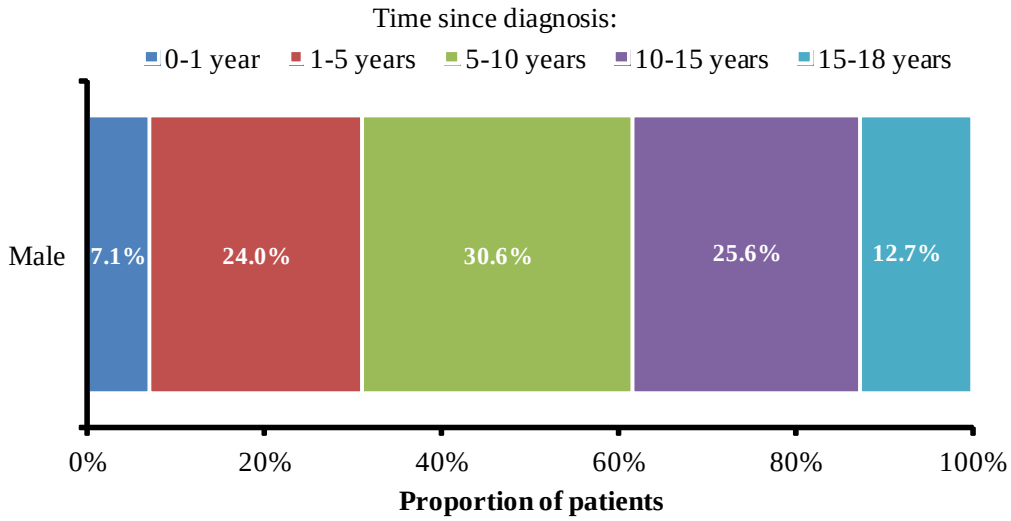
Table 17.1: Summary statistics for testicular cancer

	Males
New cases diagnosed per year (2006-2010)	59
Deaths per year (2006-2010)	2
1-year relative survival (diagnosed 2001-2005)	97.9%
5-year relative survival (diagnosed 2001-2005)	97.5%
10-year prevalence (2010)*	566
18-year prevalence (2010)**	918

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of testicular cancer survivors at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 918. 7.1% had been diagnosed within the previous year while 12.7% had been diagnosed between 15 and 18 years ago. (Fig. 17.1)

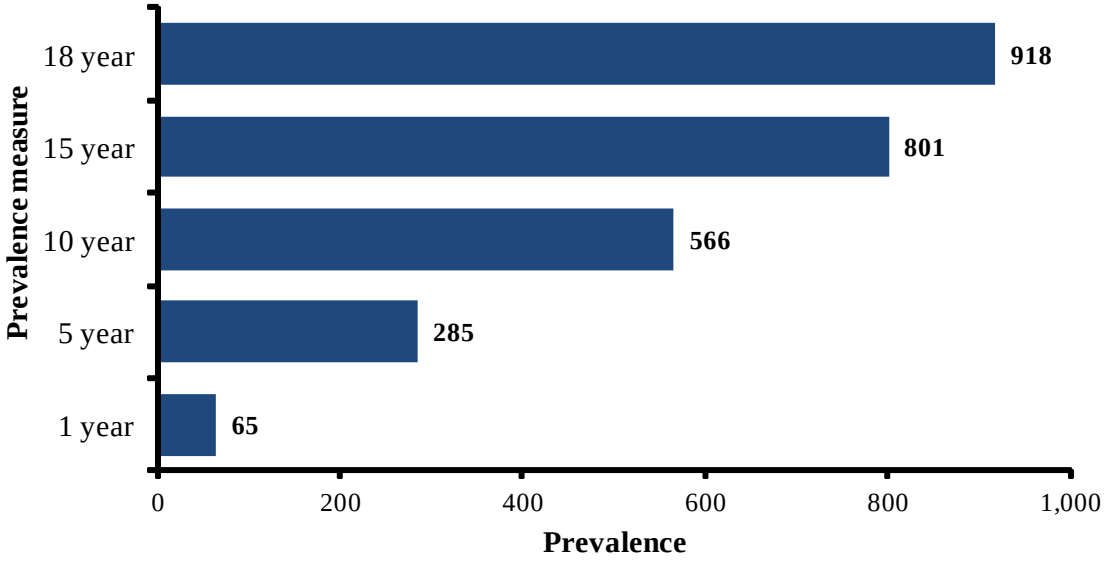
Figure 17.1: 18-year prevalence of testicular cancer by time since diagnosis



The 18-year prevalence represents all patients diagnosed with testicular cancer during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 65 men.
- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 285 men.
- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 566 men. (Fig. 17.2)

Figure 17.2: Different prevalence measures (based upon time since diagnosis) for testicular cancer

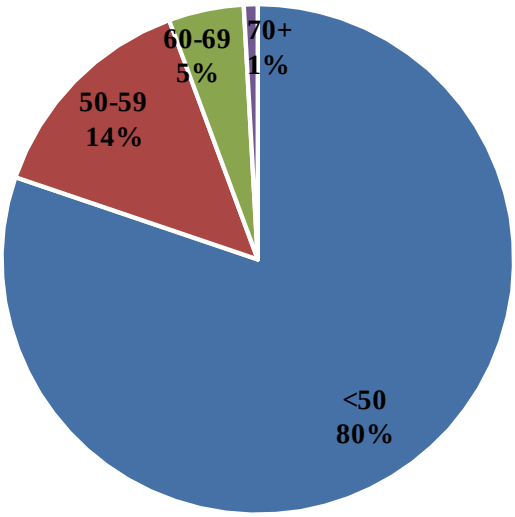


17.1: Prevalence by age

Testicular cancer is a disease which occurs primarily among younger men, thus prevalence of this cancer is greater among these age groups, however since survival is excellent many men diagnosed in middle age live to their fifties and beyond. (Fig. 17.3, Tab. 17.2)

Among cancer survivors diagnosed within the last 10 years the median age at the end of 2009 was 39 with 80% of survivors aged under 50. Only 6% of survivors were aged 60 and over.

Figure 17.3a: 10-year prevalence of testicular cancer by age at the end of 2010



Among cancer survivors diagnosed within the last 18 years the median age at the end of 2010 was 53, with 74% of survivors aged under 50. Only 7% were aged 60 and over, however this low proportion is due to the majority of men diagnosed up to 18 years ago being aged in their thirties at diagnosis. Longer term prevalence measures would likely show a much higher proportion of survivors aged 60 and over.

Figure 17.3b: 18-year prevalence of testicular cancer by age at the end of 2010

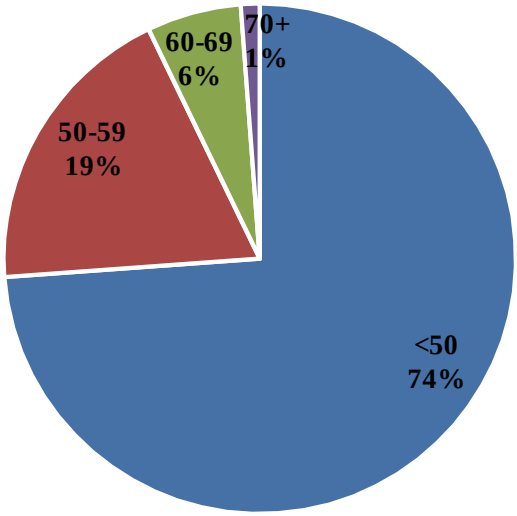


Table 17.2: Different prevalence measures (based upon time since diagnosis) for testicular cancer by age at the end of 2010

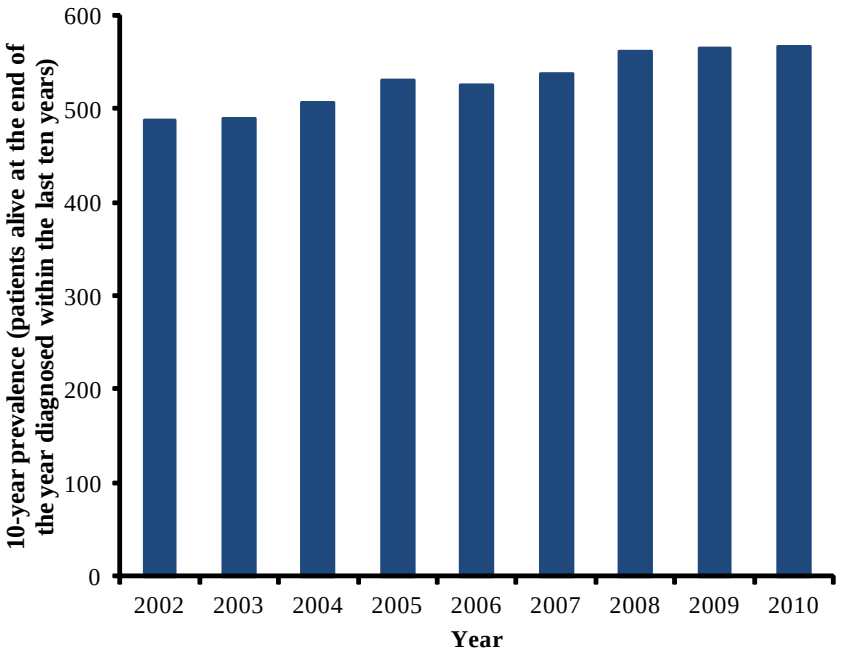
Age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Under 50	52	1	55	241	454	614	678
50-59	} 7	} 1	} 10	31	80	133	174
60-69				} 13	27	43	55
70 and over					5	11	11
All ages	**59**	**2**	**65**	**285**	**566**	**801**	**918**

17.2: Prevalence trends

Ten-year prevalence of testicular cancer increased during 2002 to 2010 with 487 survivors in 2002 and 566 survivors in 2010.

Since testicular cancer occurs mainly among younger men this is unlikely to be due to the ageing of the population. (Fig. 17.4a)

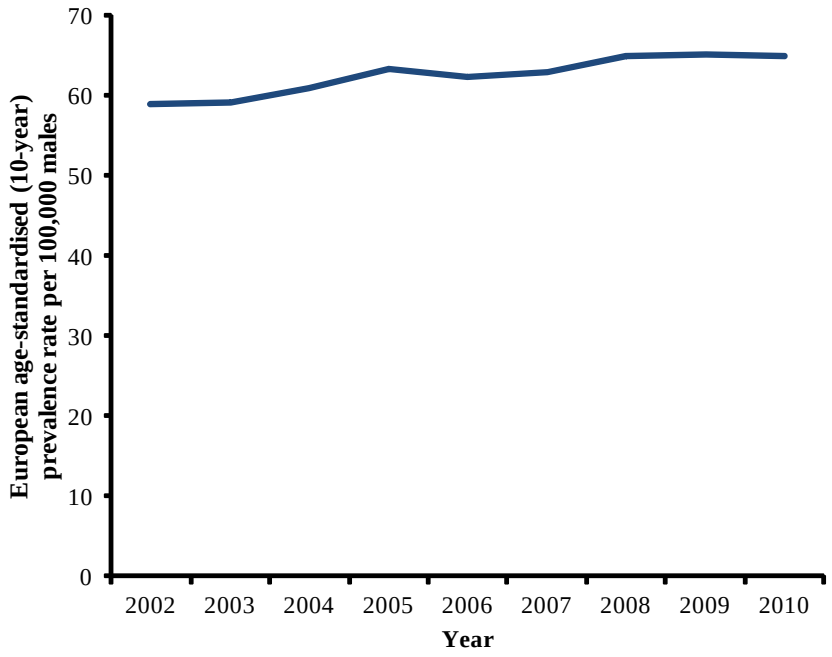
Figure 17.4: Trends in 10-year prevalence of testicular cancer
(a) Number of patients



Adjusting for population growth and the ageing of the population using European age-standardised rates confirms this postulate as underlying prevalence rates increased between 2002 and 2010 by an average of 1.3% per year. (Fig. 17.4b)

The increase in prevalence rates is likely to be driven by increases in incidence rates and gradual survival improvements.

(b) Age-standardised rates (per 100,000 males)



17.3: Geographic variation

Table 17.3 presents the various prevalence measures by area of residence. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

Table 17.3: Different prevalence measures (based upon time since diagnosis) for testicular cancer by Health and Social Care Trust (HSCT) of residence at diagnosis

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	10	0	8	44	86	131	161
Northern	16	0	22	77	151	209	238
South-Eastern	12	1	11	58	112	158	174
Southern	11	0	11	54	113	167	190
Western	10	0	13	50	98	129	146
Unknown	0	0	0	2	6	7	9
Northern Ireland	**59**	**2**	**65**	**285**	**566**	**801**	**918**

18 Kidney cancer (C64-C66, C68)

There was an average of 154 male and 100 female cases of kidney cancer diagnosed each year during 2006-2010 in Northern Ireland, while 97 people died each year from the disease. Excluding non-cancer related causes of death, two thirds of kidney cancer patients diagnosed in 2001-2005 survived one-year from diagnosis, while 45.3% survived five years. (Tab. 18.1)

Table 18.1: Summary statistics for kidney cancer

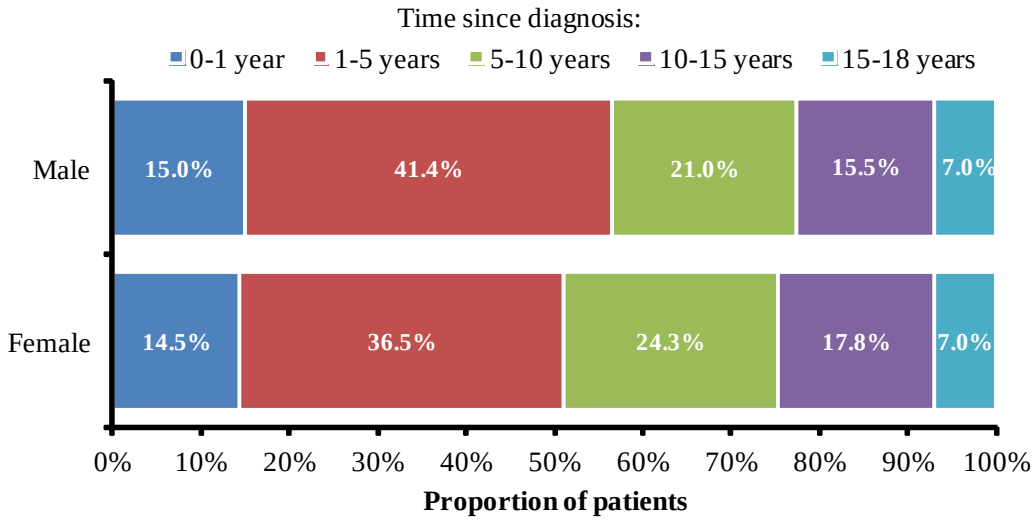
	Males	Females	Both sexes
New cases diagnosed per year (2006-2010)	154	100	254
Deaths per year (2006-2010)	56	41	97
1-year relative survival (diagnosed 2001-2005)	66.6%	66.5%	66.6%
5-year relative survival (diagnosed 2001-2005)	44.2%	47.1%	45.3%
10-year prevalence (2010)*	649	431	1,080
18-year prevalence (2010)**	838	573	1,411

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of kidney cancer survivors at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 1,411. Due to the higher number of cases diagnosed, the prevalence among men was one and a half times greater than among women. Specifically:

- Among males there were 838 survivors. 15.0% had been diagnosed within the previous year while 7.0% had been diagnosed between 15 and 18 years ago.
- Among females there were 573 survivors. 14.5% had been diagnosed within the previous year while 7.0% had been diagnosed between 15 and 18 years ago. (Fig. 18.1)

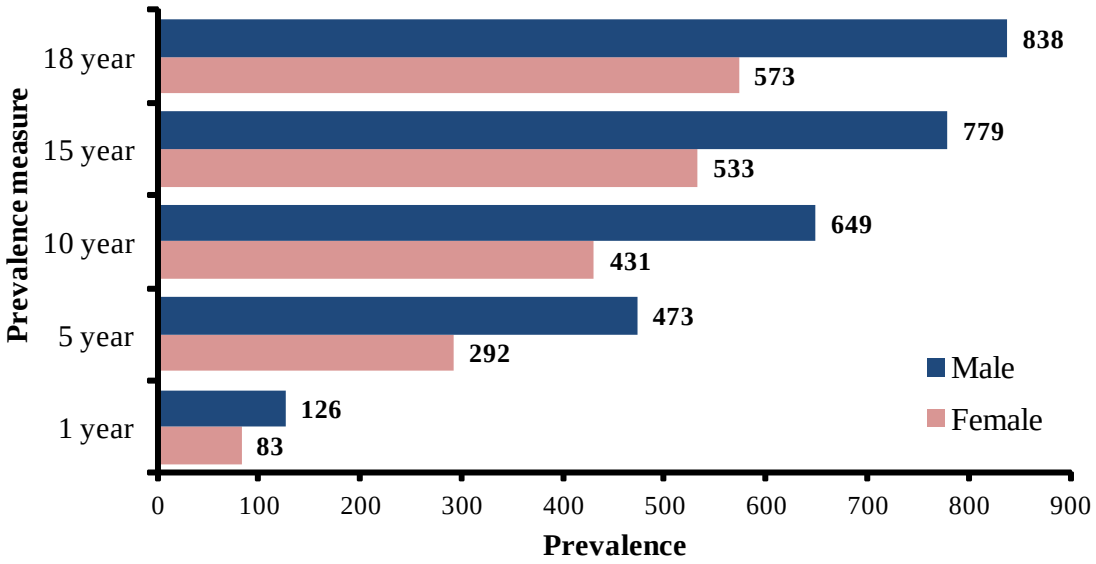
Figure 18.1: 18-year prevalence of kidney cancer by sex and time since diagnosis



The 18-year prevalence represents all patients diagnosed with kidney cancer during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 209 (Male: 126, Female: 83
- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 765 (Male: 473, Female: 292).
- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 1,080 (Male: 649, Female: 431). (Fig. 18.2)

Figure 18.2: Different prevalence measures (based upon time since diagnosis) for kidney cancer by sex



18.1: Prevalence by type

The majority of kidney cancers diagnosed are adenocarcinomas, although some rarer types also exist. However kidney cancer patients can get more than one kidney cancer, but regardless of whether they are of the same type the patient is only counted once in the kidney cancer prevalence figures. However of the 1,411 kidney cancer patients alive at the end of 2010, there were only 20 patients with a history of more than one kidney cancer diagnosed within the previous 18 years.

Table 18.2: Different prevalence measures (based upon time since diagnosis) for kidney cancer by first cancer type diagnosed

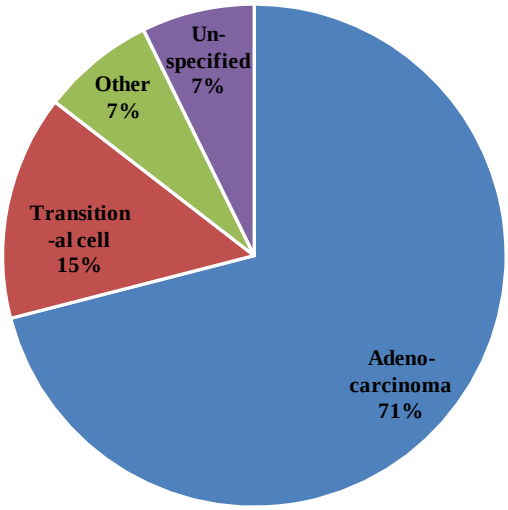
Cancer type	Cases per year (2006-10)	Prevalence 2010				
		One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Adenocarcinoma	149	156	550	774	942	1,009
Transitional cell carcinoma	36	25	92	143	171	184
Other	14	11	47	75	98	102
Unspecified	55	17	76	88	101	116
Total	**254**	**209**	**765**	**1,080**	**1,312**	**1,411**

Just over seven out of ten (71.5%) kidney cancer patients who were alive at the end of 2010 had been diagnosed with adenocarcinoma in the 18 years prior to the end of 2010, while a further 13.0% were diagnosed with transitional cell carcinomas. Among the rarer forms of kidney cancer were complex

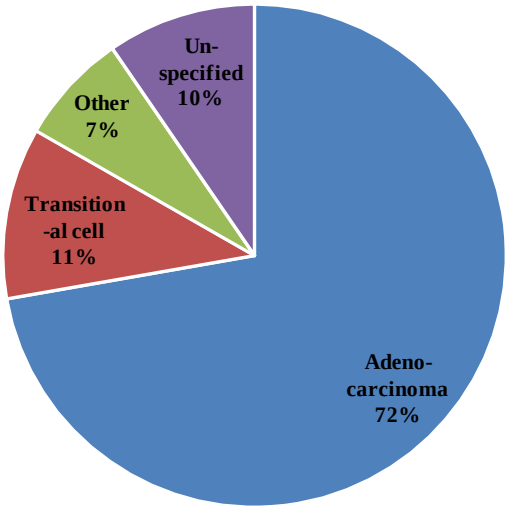
mixed, stomal, epithelial and squamous cell carcinomas, however 8.2% of patients did not have a cancer type assigned due to lack of histological verification of their cancer. The distribution by cancer type was similar for men and women. (Fig. 18.3, Tab. 18.2)

Figure 18.3: 18-year prevalence of kidney cancer by sex and first cancer site diagnosed

Male



Female



18.2: Prevalence by age

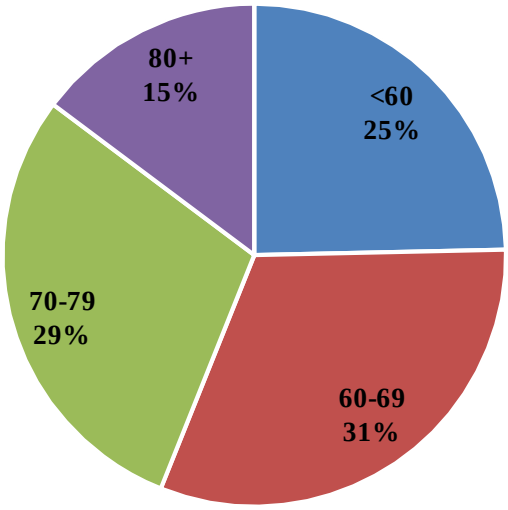
Kidney cancer is a disease which occurs primarily among the elderly although it is not uncommon among younger people. Prevalence of kidney cancer is thus greater among older age groups. (Fig. 18.4, Tab. 18.3)

Among cancer survivors diagnosed within the last 10 years the median age at the end of 2010 was 68.

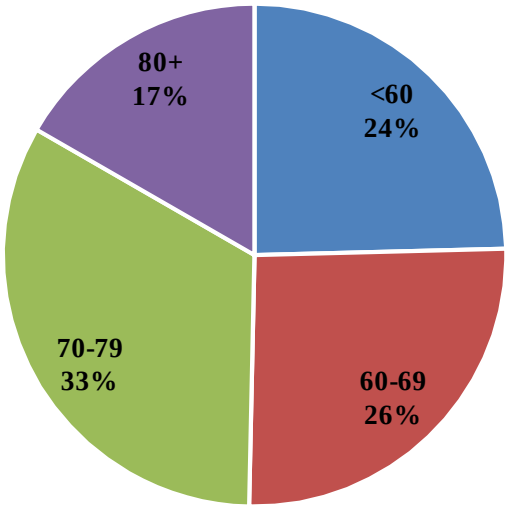
- Among male survivors the median age at the end of 2010 was 67 with 25% aged under 60 and 15% aged 80 and over.
- Among female survivors the median age at the end of 2010 was 69 with 24% aged under 60 and 17% aged 80 and over.

Figure 18.4a: 10-year prevalence of kidney cancer by sex and age at the end of 2010

Male



Female

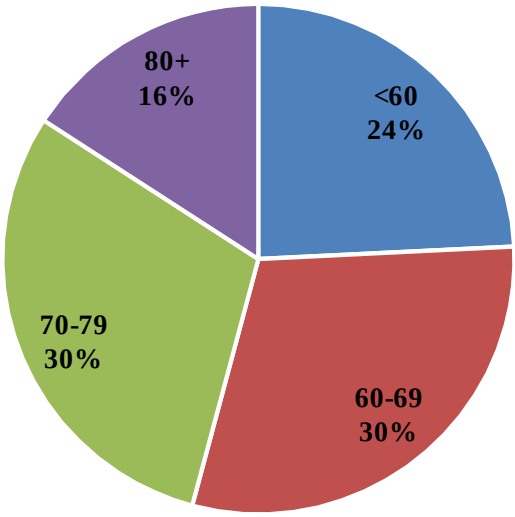


Among cancer survivors diagnosed within the last 18 years the median age at the end of 2010 was 69.

- Among male survivors the median age at the end of 2010 was 68 with 24% aged under 60 and 16% aged 80 and over.
- Among female survivors the median age at the end of 2010 was 70 with 25% aged under 60 and 18% aged 80 and over.

Figure 18.4b: 18-year prevalence of kidney cancer by sex and age at the end of 2010

Male



Female

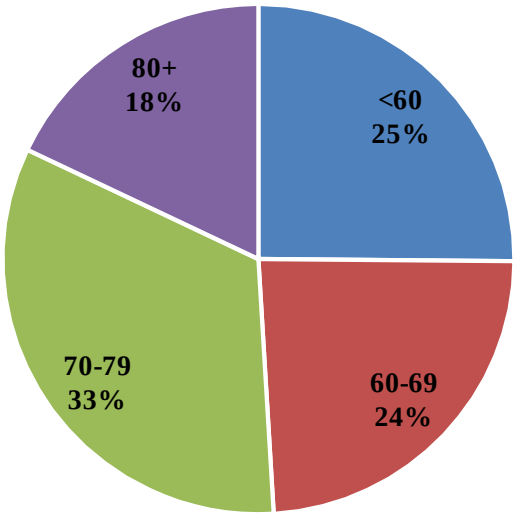


Table 18.3: Different prevalence measures (based upon time since diagnosis) for kidney cancer by sex and age at the end of 2010

Sex and age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
MALE							
Under 60	38	7	36	120	160	188	203
60-69	46	15	43	147	204	237	251
70-79	50	21	34	146	189	232	251
80 and over	20	13	13	60	96	122	133
All ages	**154**	**56**	**126**	**473**	**649**	**779**	**838**
FEMALE							
Under 60	25	6	24	75	106	133	144
60-69	24	7	19	75	111	130	137
70-79	29	14	24	97	142	177	189
80 and over	22	13	16	45	72	93	103
All ages	**100**	**41**	**83**	**292**	**431**	**533**	**573**
BOTH SEXES							
Under 50	22	4	24	74	106	137	148
50-59	41	10	36	121	160	184	199
60-69	69	23	62	222	315	367	388
70-79	79	34	58	243	331	409	440
80 and over	42	26	29	105	168	215	236
All ages	**254**	**97**	**209**	**765**	**1,080**	**1,312**	**1,411**

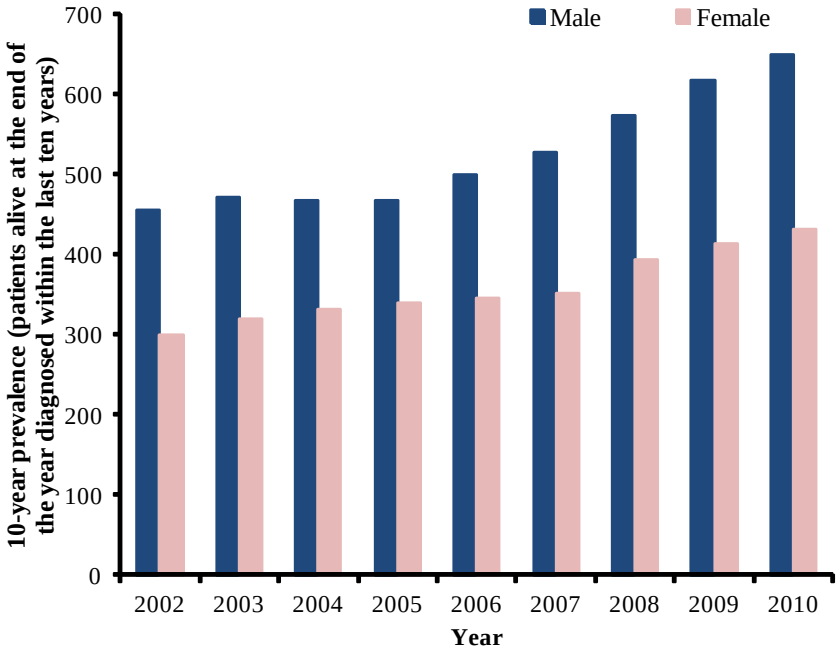
18.3: Prevalence trends

Ten-year prevalence of kidney cancer is increasing, rising from 455 male and 300 female survivors in 2002 to 649 male and 431 females survivors in 2010. (Fig. 18.5a)

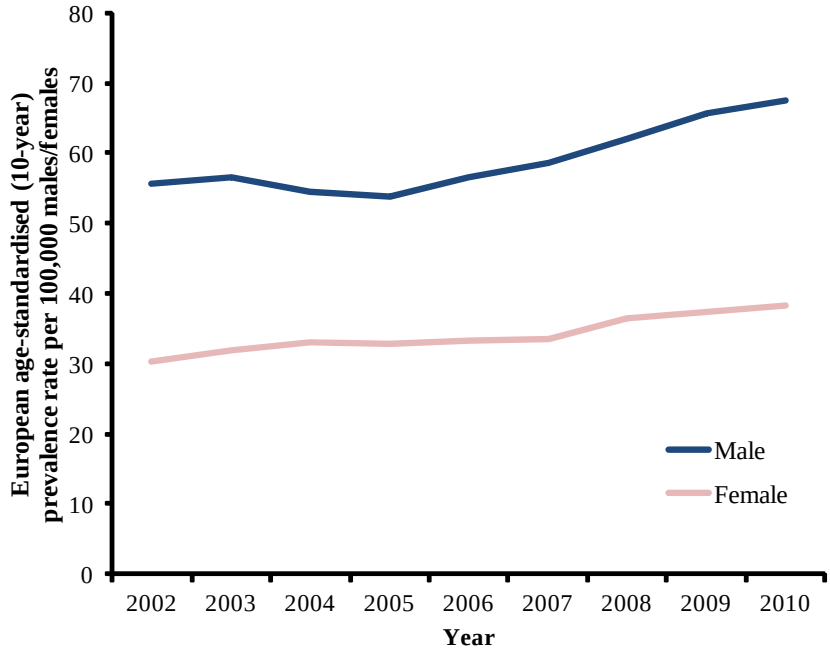
Adjusting for population growth and the ageing of the population using European age-standardised rates illustrates that there was no significant change in male prevalence rates between 2002 and 2005, however between 2005 and 2010 they increased by an average of 4.7% per year. Among women prevalence rates increased between 2002 and 2010 by an average of 2.8% per year. (Fig. 18.5b)

Figure 18.5: Trends in 10-year prevalence of kidney cancer by sex

(a) Number of patients



(b) Age-standardised rates (per 100,000 persons)



18.4: Geographic variation

Table 18.4 presents the various prevalence measures by area of residence. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

Table 18.4: Different prevalence measures (based upon time since diagnosis) for kidney cancer by Health and Social Care Trust (HSCT) of residence at diagnosis

MALE

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	33	12	31	101	130	154	171
Northern	41	15	40	125	184	225	235
South-Eastern	25	12	20	76	106	138	151
Southern	29	8	19	95	130	147	162
Western	24	9	16	69	91	106	110
Unknown	2	0	0	7	8	9	9
Northern Ireland	**154**	**56**	**126**	**473**	**649**	**779**	**838**

FEMALE

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	22	9	15	62	80	98	108
Northern	24	10	25	71	109	133	145
South-Eastern	21	9	18	65	97	119	125
Southern	17	7	14	45	74	91	101
Western	15	7	10	46	67	88	90
Unknown	1	0	1	3	4	4	4
Northern Ireland	**100**	**41**	**83**	**292**	**431**	**533**	**573**

BOTH SEXES

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	54	21	46	163	210	252	279
Northern	66	25	65	196	293	358	380
South-Eastern	46	21	38	141	203	257	276
Southern	46	14	33	140	204	238	263
Western	39	16	26	115	158	194	200
Unknown	3	0	1	10	12	13	13
Northern Ireland	**254**	**97**	**209**	**765**	**1,080**	**1,312**	**1,411**

19 Bladder cancer (C67)

There was an average of 221 cases of bladder cancer diagnosed each year during 2006-2010 in Northern Ireland, with two and a half times more male than female cases (158 male, 62 female cases). The incidence to mortality ratio was 2.2:1 with 101 people dying each year from the disease. Survival from the disease varied considerably by sex. Among men diagnosed with bladder cancer in 2001-2005 one-year relative survival was 80.3% and five-year relative survival was 63.7%. However among women diagnosed in this time period one-year relative survival was 62.2% and five-year relative survival was 48.5%, representing much poorer outcome than among men. (Tab. 19.1)

Table 19.1: Summary statistics for bladder cancer

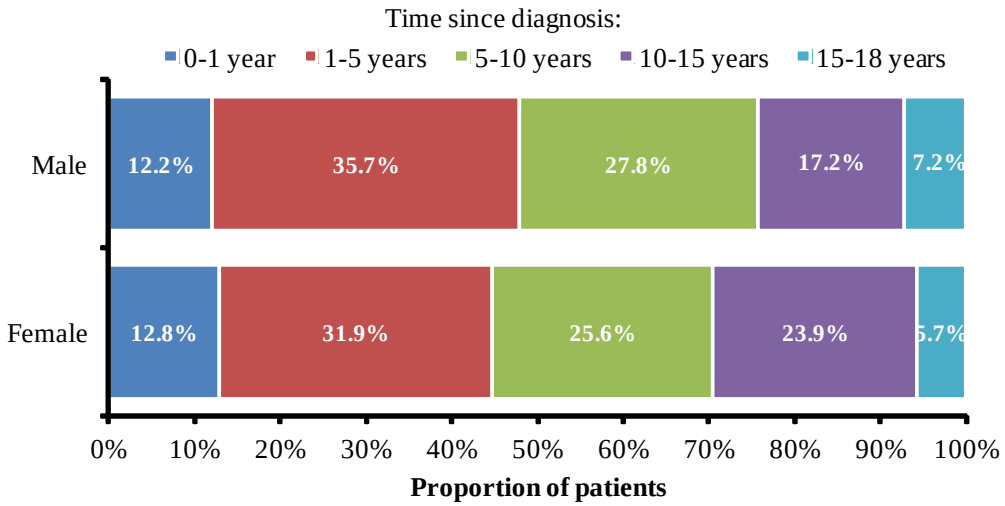
	Males	Females	Both sexes
New cases diagnosed per year (2006-2010)	158	62	221
Deaths per year (2006-2010)	69	32	101
1-year relative survival (diagnosed 2001-2005)	80.3%	62.2%	75.2%
5-year relative survival (diagnosed 2001-2005)	63.7%	48.5%	59.4%
10-year prevalence (2010)*	759	247	1,006
18-year prevalence (2010)**	1,004	351	1,355

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of bladder cancer survivors at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 1,355. Due to the higher incidence and better survival, there were three times as many male as female survivors. Specifically:

- Among males there were 1,004 survivors. 12.2% had been diagnosed within the previous year while 7.2% had been diagnosed between 15 and 18 years ago.
- Among females there were 351 survivors. 12.8% had been diagnosed within the previous year while 5.7% had been diagnosed between 15 and 18 years ago. (Fig. 19.1)

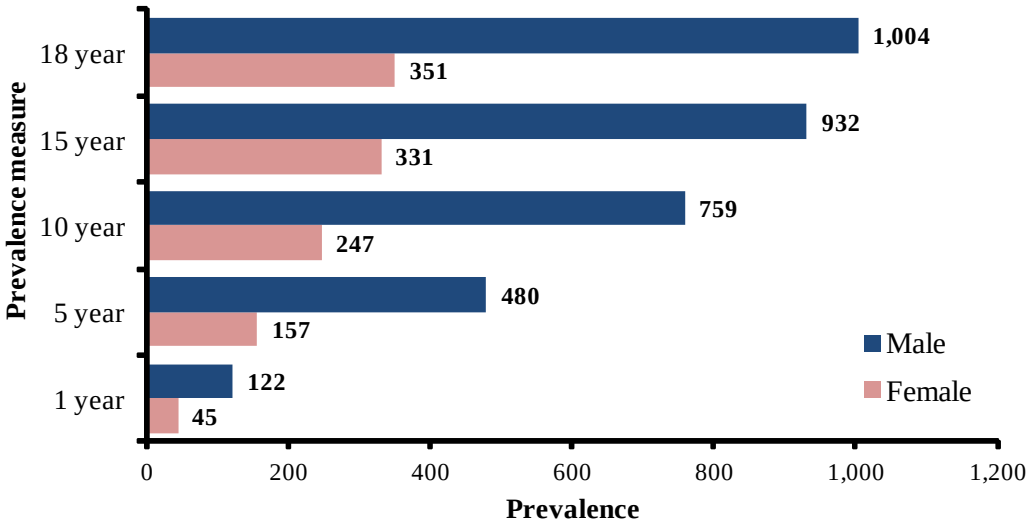
Figure 19.1: 18-year prevalence of bladder cancer by sex and time since diagnosis



The 18-year prevalence represents all patients diagnosed with bladder cancer during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 167 (Male: 122, Female: 45)
- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 637 (Male: 480, Female: 157).
- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 1,006 (Male: 759, Female: 247). (Fig. 19.2)

Figure 19.2: Different prevalence measures (based upon time since diagnosis) for bladder cancer by sex



19.1: Prevalence by type

The majority of bladder cancers diagnosed are transitional cell carcinomas, although some rarer types also exist. While it is possible for bladder cancer patients to get more than one bladder cancer there were no patients alive at the end of 2010 with a history of more than one bladder cancer diagnosed within the previous 18 years.

Table 19.2: Different prevalence measures (based upon time since diagnosis) for bladder cancer by first cancer type diagnosed

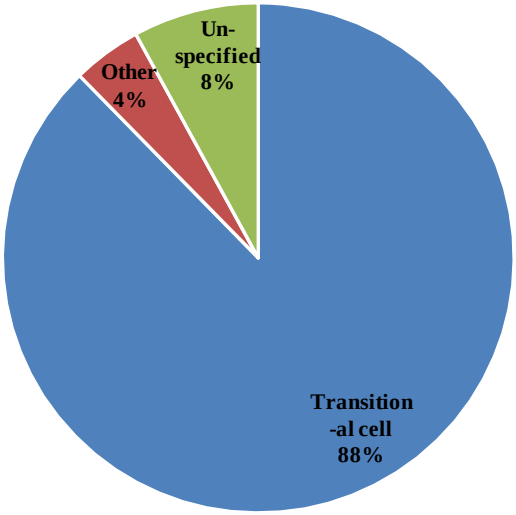
Cancer type	Cases per year (2006-10)	Prevalence 2010				
		One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Transitional cell carcinomas	179	138	559	897	1,106	1,179
Other	18	10	31	47	59	65
Unspecified	24	19	47	62	98	111
Total	**221**	**167**	**637**	**1,006**	**1,263**	**1,355**

The vast majority (87.0%) of bladder cancer patients who were alive at the end of 2010 had been diagnosed with a transitional cell carcinoma in the 18 years prior to the end of 2010, while a further 4.8% where diagnosed with a rarer form of bladder cancer such as an adenocarcinoma, epithelial neoplasm or squamous cell carcinoma. However 8.2% of patients did not have a cancer type assigned due to lack of histological verification of their cancer. Despite the difference in incidence rates and

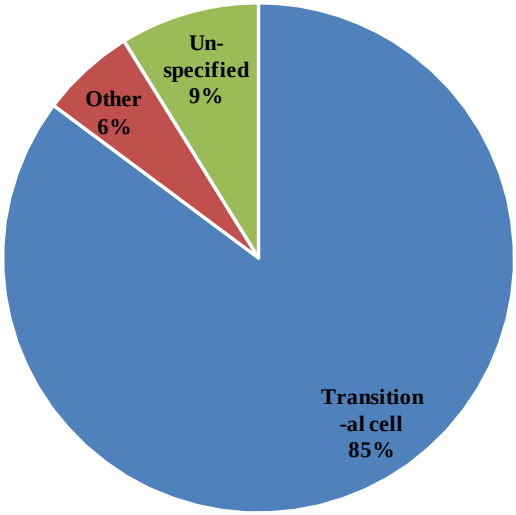
survival between sexes, the distribution of bladder cancer by cancer type was similar for men and women. (Fig. 19.3, Tab. 19.2)

Figure 19.3: 18-year prevalence of bladder cancer by sex and first cancer site diagnosed

Male



Female



19.2: Prevalence by age

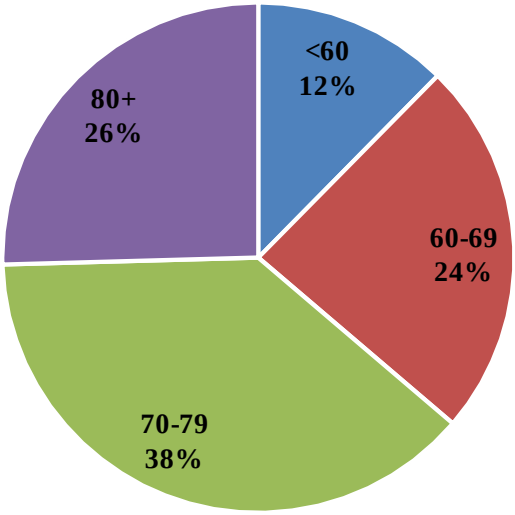
Since cancer is a disease which occurs primarily among the elderly, prevalence of bladder cancer is greater among older age groups although it is not uncommon among younger people. (Fig.19.4, Tab. 19.3)

Among cancer survivors diagnosed within the last 10 years the median age at 2010 was 73:

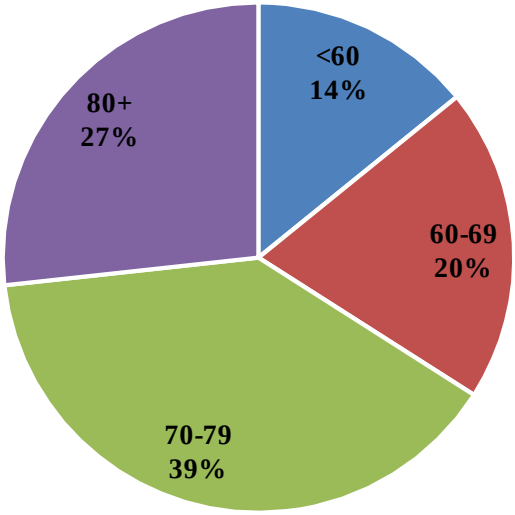
- Among male survivors 12% were aged under 60 and 26% were aged 80 and over, with the median age at the end of 2010 being 73.
- Among female survivors 14% were aged under 60 and 27% were aged 80 and over, with the median age at the end of 2010 being 74.

Figure 19.4a: 10-year prevalence of bladder cancer by sex and age at the end of 2010

Male



Female

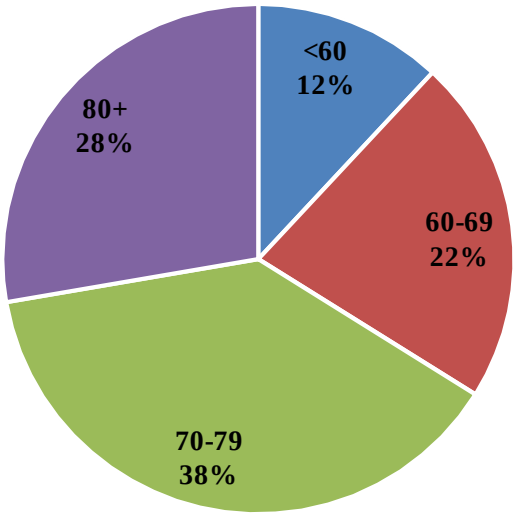


Among cancer survivors diagnosed within the last 10 years the median age at 2010 was 74:

- Among male survivors 12% were aged under 60 and 28% were aged 80 and over, with the median age at the end of 2010 being 74.
- Among female survivors 12% were aged under 60 and 34% were aged 80 and over, with the median age at the end of 2010 being 76.

Figure 19.4b: 18-year prevalence of bladder cancer by sex and age at the end of 2010

Male



Female

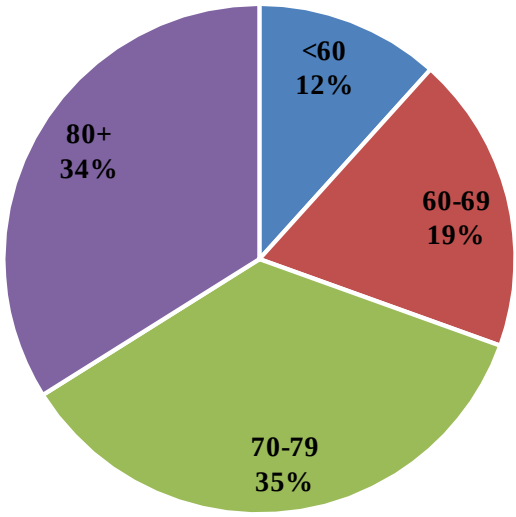


Table 19.3: Different prevalence measures (based upon time since diagnosis) for bladder cancer by sex and age at the end of 2010

Sex and age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
MALE							
Under 60	22	6	22	72	94	111	120
60-69	38	10	27	115	181	211	220
70-79	60	26	53	188	291	365	386
80 and over	38	28	20	105	193	245	278
All ages	**158**	**69**	**122**	**480**	**759**	**932**	**1,004**
FEMALE							
Under 60	9	3	7	23	35	40	41
60-69	12	4	7	30	49	62	66
70-79	20	8	22	67	97	120	125
80 and over	22	17	9	37	66	109	119
All ages	**62**	**32**	**45**	**157**	**247**	**331**	**351**
BOTH SEXES							
Under 50	9	2	8	27	40	53	59
50-59	22	7	21	68	89	98	102
60-69	50	13	34	145	230	273	286
70-79	80	34	75	255	388	485	511
80 and over	60	45	29	142	259	354	397
All ages	**221**	**101**	**167**	**637**	**1,006**	**1,263**	**1,355**

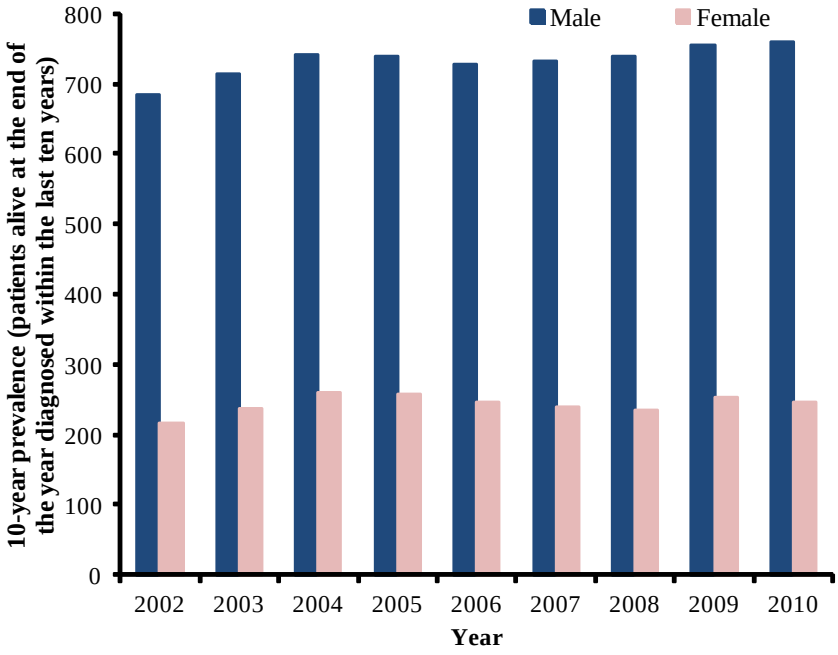
19.3: Prevalence trends

Ten-year prevalence of bladder cancer is increasing, rising from 685 male and 216 female survivors in 2002 to 759 male and 247 females survivors in 2010. (Fig. 19.5a)

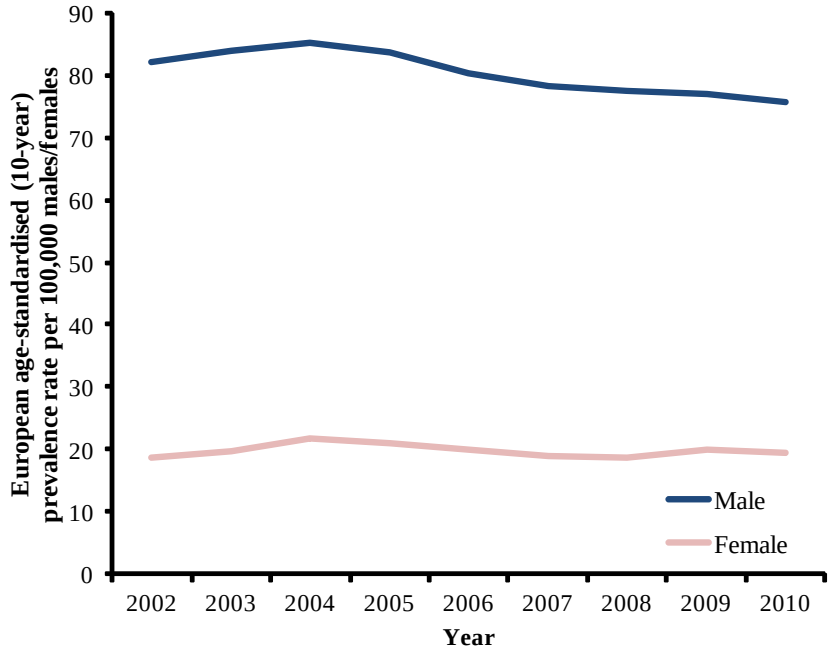
This increase is due to the combined effect of population growth and the ageing of the population. In fact adjusting for these factors using European age-standardised rates illustrates that there was no significant change in female prevalence rates between 2002 and 2010, while male prevalence rates actually decreased between 2004 and 2010 by an average of 2.0% per year. (Fig. 19.5b)

Figure 19.5: Trends in 10-year prevalence of bladder cancer by sex

(a) Number of patients



(b) Age-standardised rates (per 100,000 persons)



19.4: Geographic variation

Table 19.4 presents the various prevalence measures by area of residence. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

Table 19.4: Different prevalence measures (based upon time since diagnosis) for bladder cancer by Health and Social Care Trust (HSCT) of residence at diagnosis

MALE

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	33	17	26	96	167	200	219
Northern	41	16	31	134	212	254	273
South-Eastern	36	16	24	100	154	189	206
Southern	29	11	25	90	136	159	165
Western	19	8	15	57	86	120	131
Unknown	1	0	1	3	4	10	10
Northern Ireland	**158**	**69**	**122**	**480**	**759**	**932**	**1,004**

FEMALES

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	15	9	5	39	62	85	92
Northern	16	7	15	38	61	83	88
South-Eastern	14	6	9	37	58	73	77
Southern	10	5	11	31	40	52	55
Western	7	5	5	12	26	37	37
Unknown	0	0	0	0	0	1	2
Northern Ireland	**62**	**32**	**45**	**157**	**247**	**331**	**351**

BOTH SEXES

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	48	27	31	135	229	285	311
Northern	57	24	46	172	273	337	361
South-Eastern	50	23	33	137	212	262	283
Southern	40	16	36	121	176	211	220
Western	25	13	20	69	112	157	168
Unknown	1	0	1	3	4	11	12
Northern Ireland	**221**	**101**	**167**	**637**	**1,006**	**1,263**	**1,355**

20 Brain cancer (including central nervous system) (C70-C72)

There was an average of 133 cases of malignant brain cancer diagnosed each year during 2006-2010 in Northern Ireland, while 100 people died each year from the disease. Survival from the disease is poor with one-year relative survival for patients diagnosed in 2001-2005 being 37.8%, while five-year relative survival was 19.7%. (Tab. 20.1)

Table 20.1: Summary statistics for brain cancer

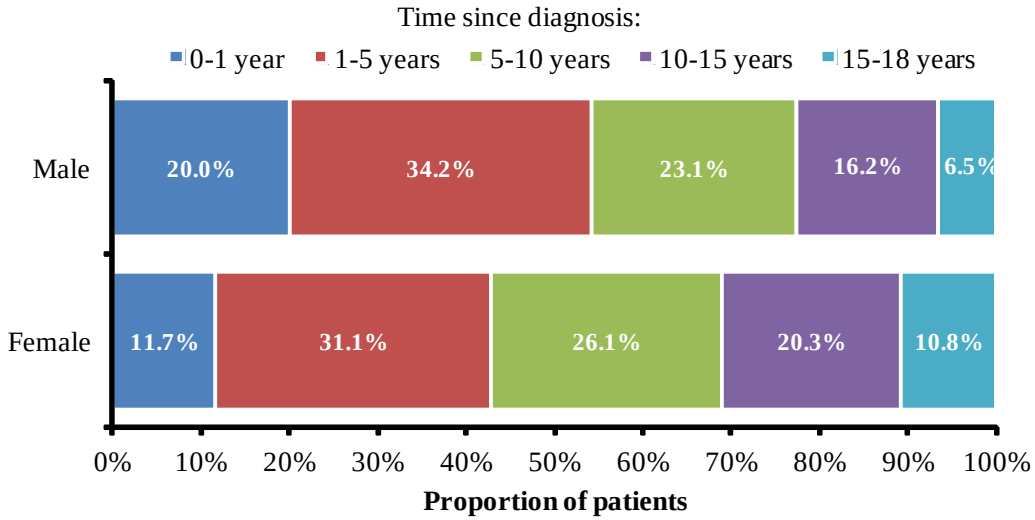
	Males	Females	Both sexes
New cases diagnosed per year (2006-2010)	81	53	133
Deaths per year (2006-2010)	61	39	100
1-year relative survival (diagnosed 2001-2005)	37.8%	37.7%	37.8%
5-year relative survival (diagnosed 2001-2005)	19.4%	20.2%	19.7%
10-year prevalence (2010)*	201	153	354
18-year prevalence (2010)**	260	222	482

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of brain cancer survivors at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 482.

- Among males there were 260 survivors. 20.0% had been diagnosed within the previous year while 6.5% had been diagnosed between 15 and 18 years ago.
- Among females there were 222 survivors. 11.7% had been diagnosed within the previous year while 10.8% had been diagnosed between 15 and 18 years ago. (Fig. 20.1)

Figure 20.1: 18-year prevalence of brain cancer by sex and time since diagnosis

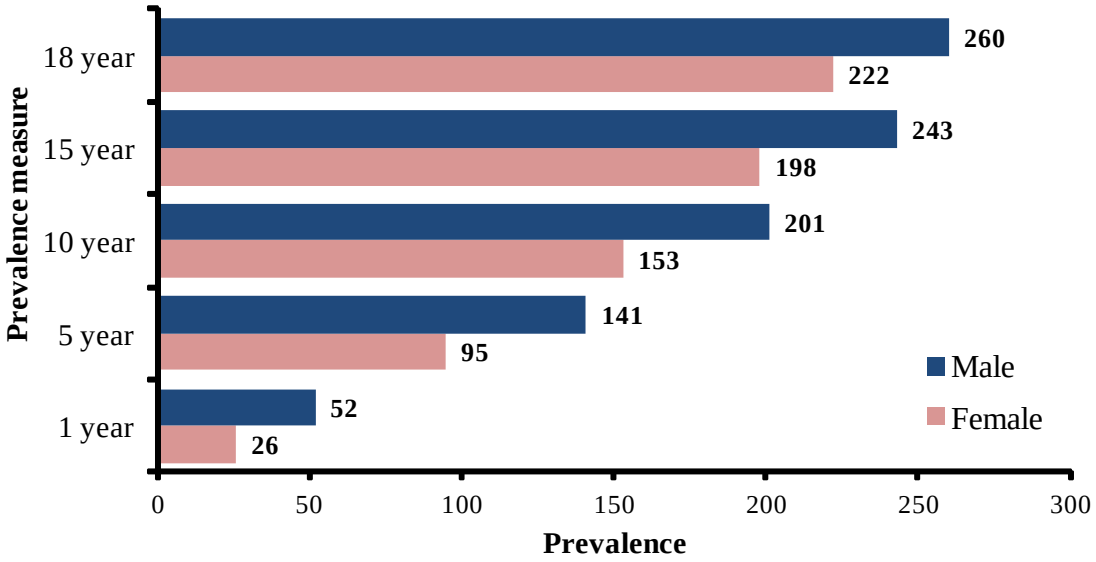


The 18-year prevalence represents all patients diagnosed with brain cancer during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 78 (Male: 52, Female: 26)

- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 236 (Male: 141, Female: 95).
- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 354 (Male: 201, Female: 153). (Fig. 20.2)

Figure 20.2: Different prevalence measures (based upon time since diagnosis) for brain cancer by sex



20.1: Prevalence by age

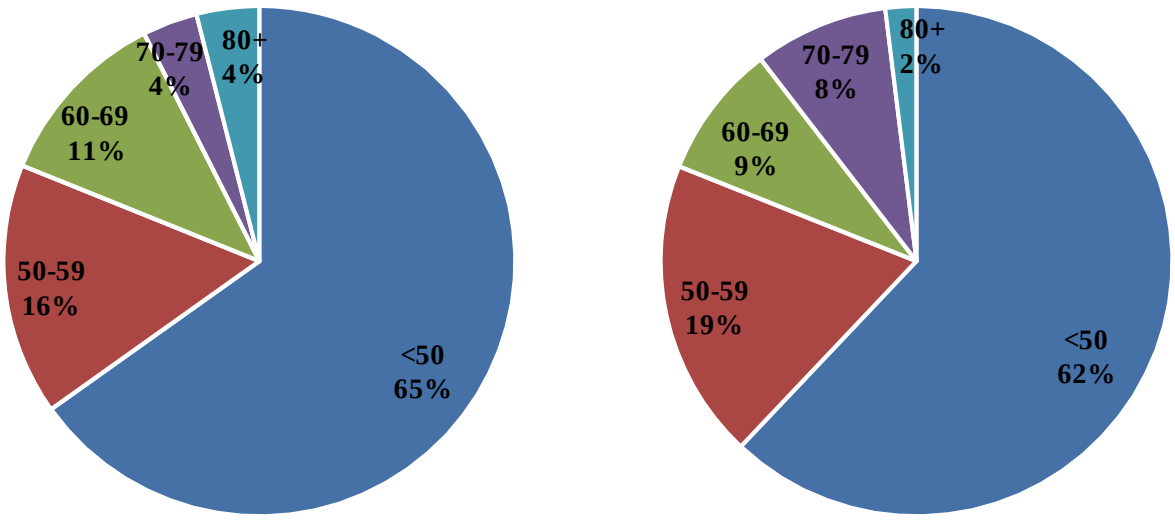
Since brain cancer is a disease which is diagnosed primarily among younger people, prevalence of brain cancer is greater among these age groups. (Fig. 20.3, Tab. 20.2)

Among cancer survivors diagnosed within the last 10 years the median age at the end of 2010 was 41 for men and 42 for women. The age distribution was similar for men and women. Specifically:

- 65% of males were aged under 50, while 4% were aged 80 and over.
- 62% of females were aged under 50, while 2% were aged 80 and over.

Figure 20.3a: 10-year prevalence of brain cancer by sex and age at the end of 2010

Male *Female*

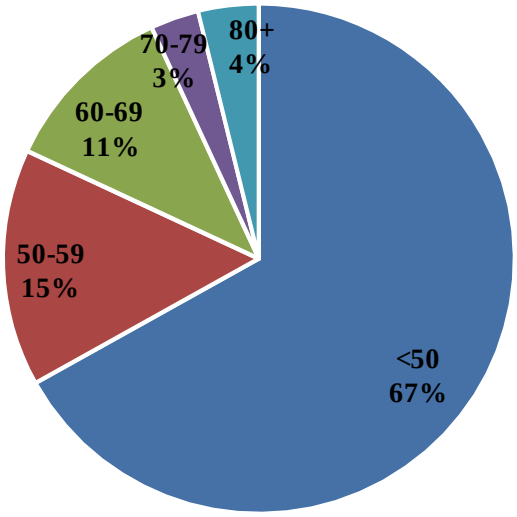


Among cancer survivors diagnosed within the last 18 years the median age for both sexes was 40, while:

- 67% of males were aged under 50 and 4% were aged 80 and over.
- 65% of females were aged under 50 and 3% were aged 80 and over.

Figure 20.3b: 18-year prevalence of brain cancer by sex and age at the end of 2010

Male



Female

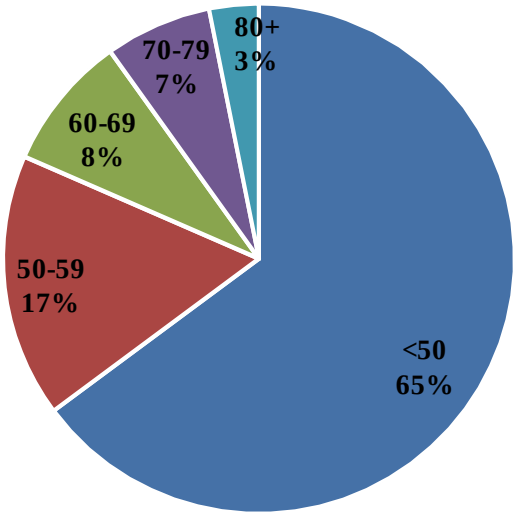


Table 20.2: Different prevalence measures (based upon time since diagnosis) for brain cancer by sex and age at the end of 2010

Sex and age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
MALE							
Under 50	28	16	24	83	131	163	174
50-59	17	12	13	26	32	36	39
60-69	17	17	} 15	19	23	28	29
70-79	13	12		} 13	} 15	7	8
80 and over	6	5				9	10
All ages	**81**	**61**	**52**	**141**	**201**	**243**	**260**
FEMALE							
Under 50	17	9	9	54	95	125	144
50-59	10	7	9	22	29	36	37
60-69	10	9	} 8	8	13	17	19
70-79	10	9		} 11	} 16	14	15
80 and over	5	4				6	7
All ages	**53**	**39**	**26**	**95**	**153**	**198**	**222**
BOTH SEXES							
Under 50	45	25	33	137	226	288	318
50-59	27	19	22	48	61	72	76
60-69	27	26	7	27	36	45	48
70-79	23	22	8	16	20	21	23
80 and over	11	9	8	8	11	15	17
All ages	**133**	**100**	**78**	**236**	**354**	**441**	**482**

20.2: Prevalence trends

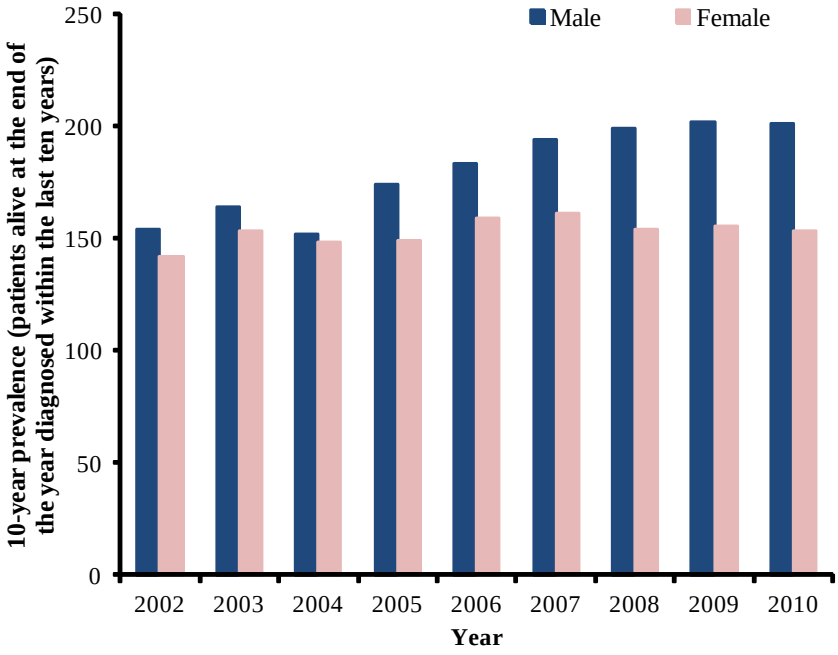
Ten-year prevalence of brain cancer is increasing, rising from 154 male and 142 female survivors in 2002 to 201 male and 153 females survivors in 2010. (Fig. 20.4a)

The increase among females is due to the combined effect of population growth and the ageing of the population as adjusting for these factors using European age-standardised rates illustrates that there was no significant change in female prevalence rates between 2002 and 2010. However male prevalence rates increased between 2002 and 2010 by an average of 3.1% per year. (Fig. 20.4b)

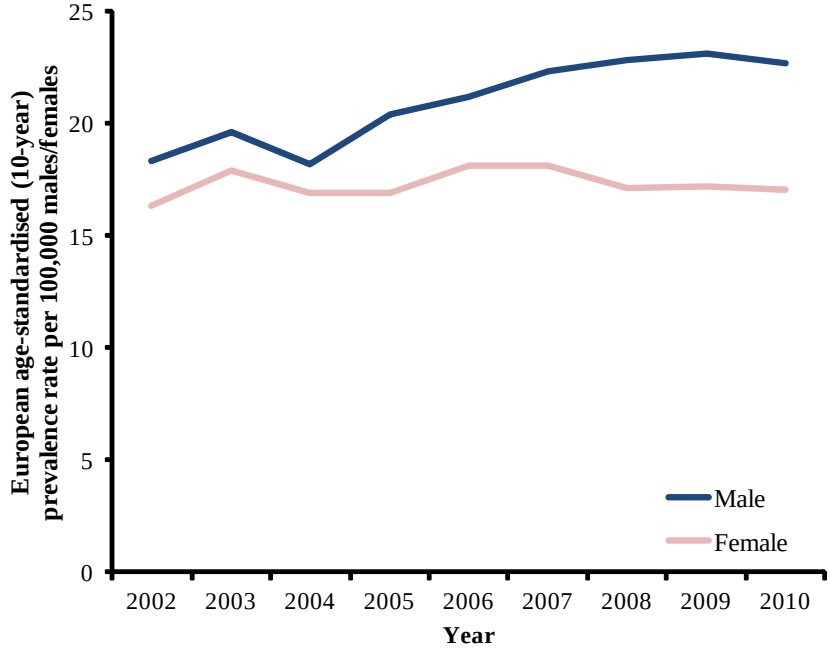
The increase in male prevalence is likely due to improvements in survival from the disease between 1993-1995 and 2001-2005.

Figure 20.4: Trends in 10-year prevalence of brain cancer by sex

(a) Number of patients



(b) Age-standardised rates (per 100,000 persons)



20.3: Geographic variation

Table 20.3 presents the various prevalence measures by area of residence[5]. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

[5] *Table is presented at Health and Social Care Trust level. However one-year prevalence is not provided at this level broken down by sex due to the small number of patients in some of these areas.*

Table 20.3: Different prevalence measures (based upon time since diagnosis) for brain cancer by Health and Social Care Trust (HSCT) of residence at diagnosis

MALE

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	17	12	-	29	37	44	49
Northern	19	17	-	27	47	63	67
South-Eastern	18	11	-	35	44	50	51
Southern	15	12	-	28	39	43	47
Western	12	9	-	21	33	41	44
Unknown	0	0	-	1	1	2	2
Northern Ireland	**81**	**61**	**52**	**141**	**201**	**243**	**260**

FEMALE

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	8	6	-	11	22	33	36
Northern	12	9	-	26	42	48	54
South-Eastern	10	7	-	16	24	37	43
Southern	11	8	-	24	31	39	45
Western	10	8	-	17	33	39	40
Unknown	1	0	-	1	1	2	4
Northern Ireland	**53**	**39**	**26**	**95**	**153**	**198**	**222**

BOTH SEXES

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	24	18	11	40	59	77	85
Northern	32	27	23	53	89	111	121
South-Eastern	28	18	16	51	68	87	94
Southern	26	20	16	52	70	82	92
Western	22	17	12	38	66	80	84
Unknown	2	0	0	2	2	4	6
Northern Ireland	**133**	**100**	**78**	**236**	**354**	**441**	**482**

21 Lymphoma (C81-C85)

There was an average of 348 cases of lymphoma diagnosed each year during 2006-2010 in Northern Ireland, with a similar number of cases among males and females. On average 109 people died each year from the disease. For patients diagnosed in 2001-2005 one-year relative survival was 73.6%, while five-year relative survival was 61.6%, with minimal variation between males and females. However survival depends greatly upon the type of lymphoma diagnosed with Hodgkin's lymphoma having much better survival than non-Hodgkin's lymphoma. (Tab. 21.1)

Table 21.1: Summary statistics for lymphoma

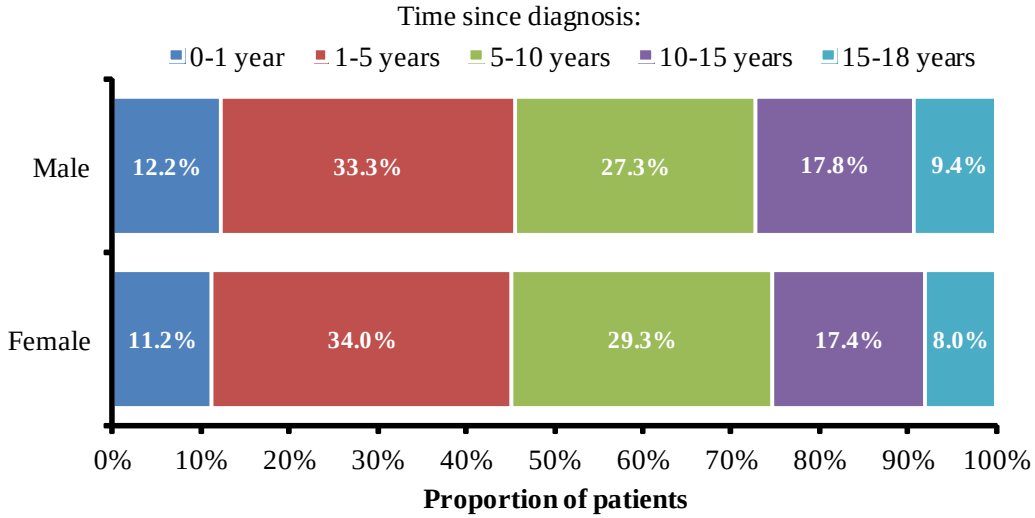
	Males	Females	Both sexes
New cases diagnosed per year (2006-2010)	178	170	348
Deaths per year (2006-2010)	54	55	109
1-year relative survival (diagnosed 2001-2005)	74.0%	73.2%	73.6%
5-year relative survival (diagnosed 2001-2005)	61.8%	61.5%	61.6%
10-year prevalence (2010)*	958	958	1,916
18-year prevalence (2010)**	1,317	1,285	2,602

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of lymphoma survivors at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 2,602.

- Among males there were 1,317 survivors. 12.2% had been diagnosed within the previous year while 9.4% had been diagnosed between 15 and 18 years ago.
- Among females there were 1,285 survivors. 11.2% had been diagnosed within the previous year while 8.0% had been diagnosed between 15 and 18 years ago. (Fig. 21.1)

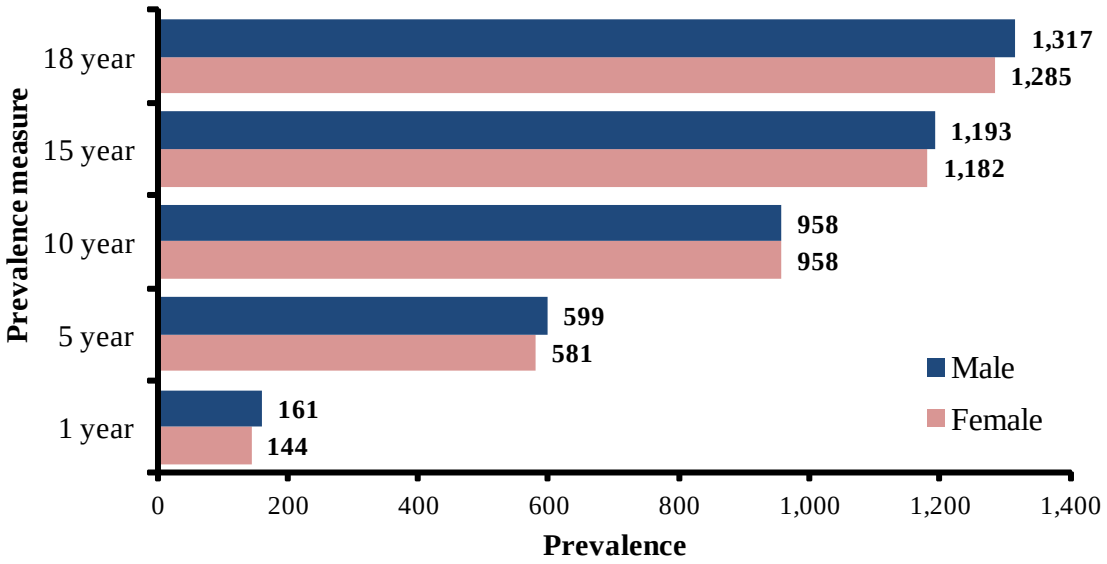
Figure 21.1: 18-year prevalence of lymphoma by sex and time since diagnosis



The 18-year prevalence represents all patients diagnosed with lymphoma during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 305 (Male: 161, Female: 144)
- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 1,180 (Male: 599, Female: 581).
- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 1,916 (Male: 958, Female: 958). (Fig. 21.2)

Figure 21.2: Different prevalence measures (based upon time since diagnosis) for lymphoma by sex



21.1: Prevalence by type

There are several different types of lymphoma. Patients classified as lymphoma patients can get more than one type of lymphoma within their lifetime; however they are only counted once in the lymphoma prevalence figures. Of the 2,602 lymphoma patients alive at the end of 2010, 54 (2.1%) had more than one lymphoma diagnosed within the previous 18 years.

Table 21.2: Different prevalence measures (based upon time since diagnosis) for lymphoma by first cancer type diagnosed

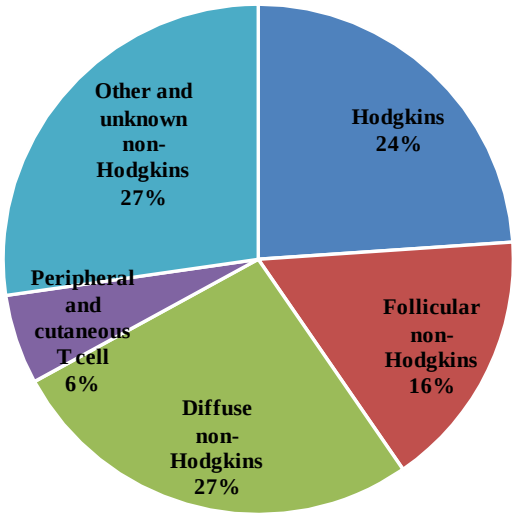
Cancer type	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Hodgkin's lymphoma (C81)	57	8	55	232	375	482	559
Non-Hodgkin's lymphoma (C82-C85)	291	101	250	948	1,541	1,893	2,043
Follicular non-Hodgkin's (C82)	73	4	79	315	457	510	526
Diffuse non-Hodgkin's (C83)	125	11	119	402	582	632	644
Peripheral and cutaneous T-cell (C84)	22	7	16	60	106	133	147
Other/Unknown non-Hodgkin's (C85)	71	79	36	171	396	618	726
Total	**348**	**109**	**305**	**1,180**	**1,916**	**2,375**	**2,602**

Due to the higher number of cases diagnosed, prevalence of non-Hodgkin's lymphoma (NHL) was higher than that of Hodgkin's lymphoma. The most common NHL subtype first diagnosed among

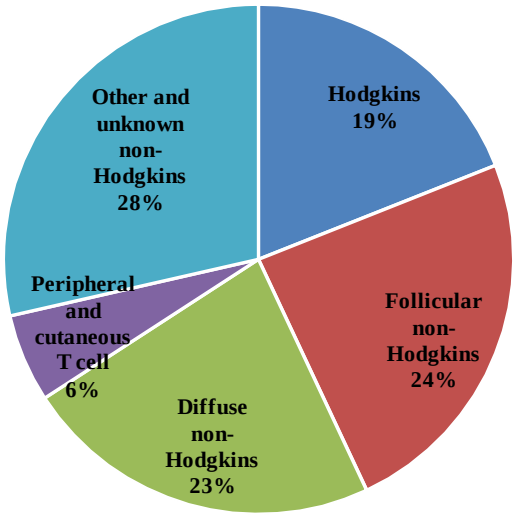
survivors was diffuse NHL; however there was a high proportion (35.5%) of NHL survivors whose subtype was unknown. The distribution by cancer type differed slightly between men and women, with male survivors having a greater proportion of Hodgkin's lymphoma and diffuse NHL and women survivors having a greater proportion of follicular NHL. (Fig. 21.3, Tab. 21.2)

Figure 21.3: 18-year prevalence of lymphoma by sex and first cancer type diagnosed

Male



Female



21.2: Prevalence by age

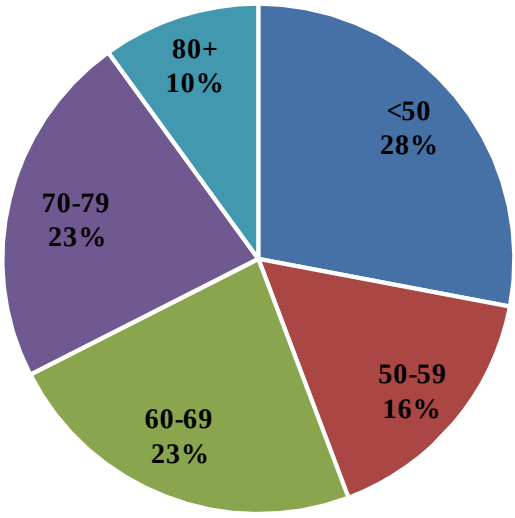
Since lymphoma is a disease which occurs primarily among older people but is still quite frequent among children and younger people, prevalence of lymphoma is spread throughout different age groups. (Fig. 21.4, Tab. 21.3)

Among cancer survivors diagnosed within the last 10 years the median age at the end of 2010 was 64, however this varied by sex with a median age of 62 for males and 66 for females. In addition:

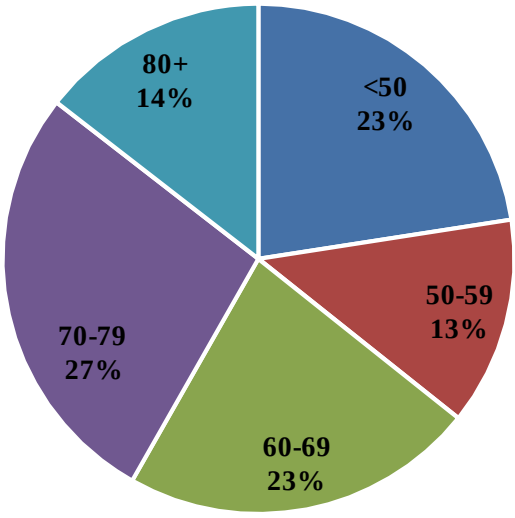
- 28% of males were aged under 50, while 10% were aged 80 and over.
- 23% of females were aged under 50, while 14% were aged 80 and over.

Figure 21.4a: 10-year prevalence of lymphoma by sex and age at the end of 2010

Male



Female

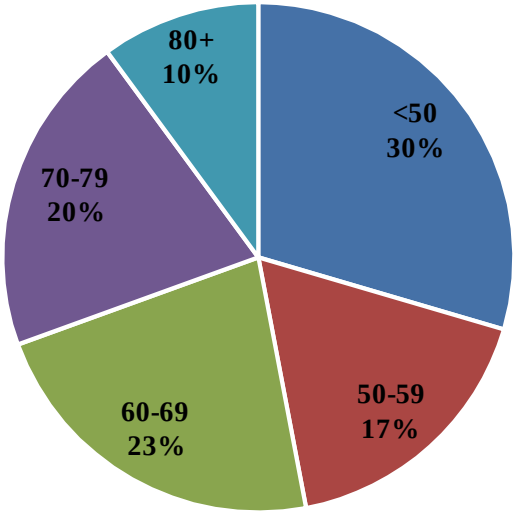


Among cancer survivors diagnosed within the last 18 years the median age at the end of 2010 was 63, however this varied by sex with a median age of 61 for males and 66 for females. In addition:

- 30% of males were aged under 50, while 10% were aged 80 and over.
- 23% of females were aged under 50, while 15% were aged 80 and over.

Figure 21.4b: 18-year prevalence of lymphoma by sex and age at the end of 2010

Male



Female

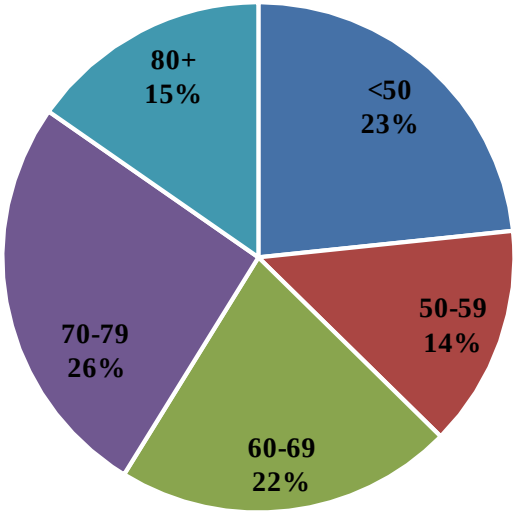


Table 21.3: Different prevalence measures (based upon time since diagnosis) for lymphoma by sex and age at the end of 2010

Sex and age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
MALE							
Under 50	44	5	42	168	268	343	389
50-59	28	6	29	102	156	204	230
60-69	42	12	30	137	223	269	296
70-79	43	17	39	142	215	255	269
80 and over	22	15	21	50	96	122	133
All ages	**178**	**54**	**161**	**599**	**958**	**1,193**	**1,317**
FEMALE							
Under 50	33	2	27	129	216	275	300
50-59	24	4	19	83	126	164	180
60-69	42	11	38	142	216	259	276
70-79	45	18	42	160	261	310	332
80 and over	27	20	18	67	139	174	197
All ages	**170**	**55**	**144**	**581**	**958**	**1,182**	**1,285**
BOTH SEXES							
Under 50	76	7	69	297	484	618	689
50-59	52	10	48	185	282	368	410
60-69	84	23	68	279	439	528	572
70-79	88	35	81	302	476	565	601
80 and over	49	35	39	117	235	296	330
All ages	**348**	**109**	**305**	**1,180**	**1,916**	**2,375**	**2,602**

The median age at the end of 2010 also varied considerably depending upon cancer type, with Hodgkin's lymphoma survivors having a median age of 44 (males: 45, females: 43) and non-Hodgkin's lymphoma survivors having a median age of 66 (males: 65, females: 68).

21.3: Prevalence trends

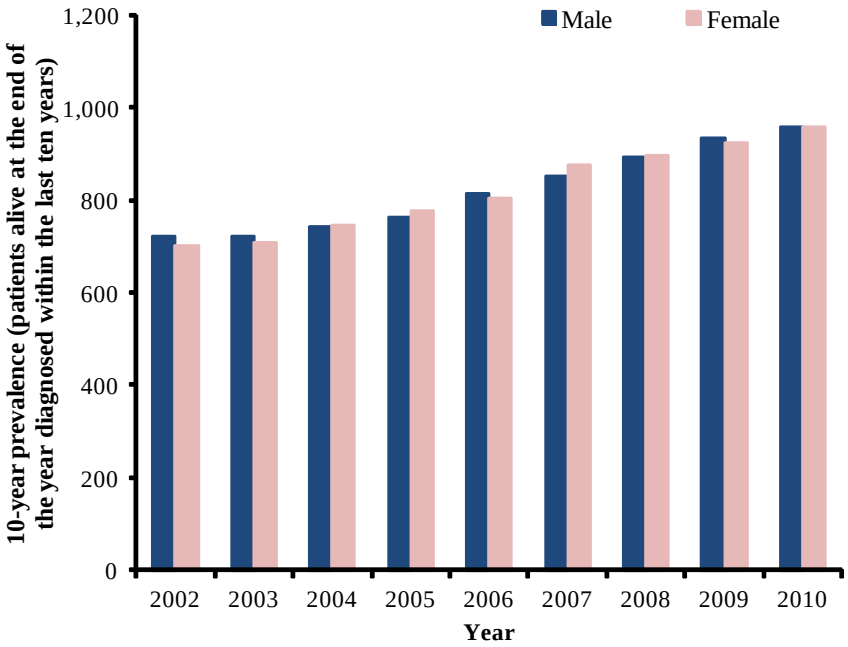
Ten-year prevalence of lymphoma is increasing, rising from 721 male and 700 female survivors in 2002 to 958 male and 958 females survivors in 2010. (Fig. 21.5a)

This increase is partly due to the combined effect of population growth and the ageing of the population. However adjusting for these factors using European age-standardised rates illustrates that male prevalence rates increased between 2002 and 2010 by an average of 2.2% per year, while female rates increased by 2.8% per year. (Fig. 21.5b)

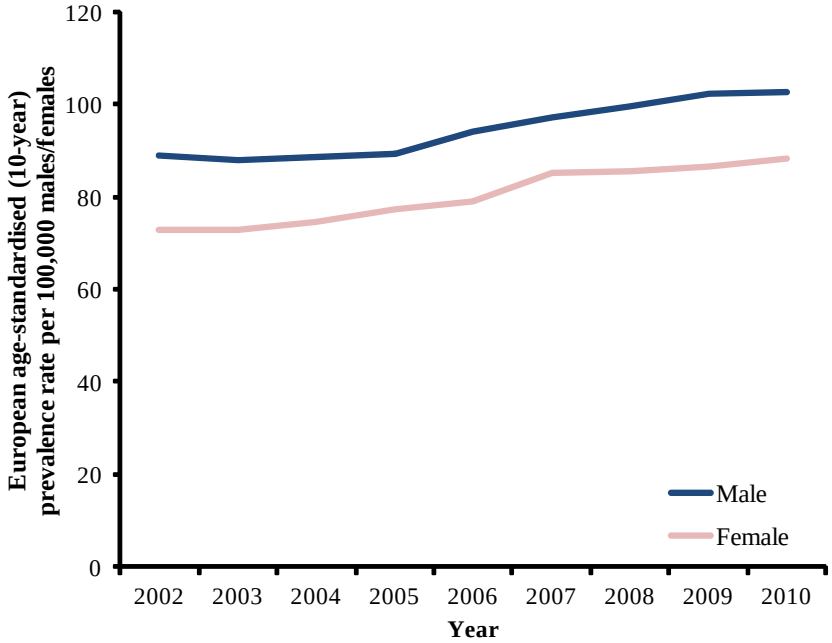
The increase in lymphoma prevalence is mostly due to survival improvements over the last 15 years; however slight increases in incidence rates are also a contributory factor.

Figure 21.5: Trends in 10-year prevalence of lymphoma by sex

(a) Number of patients



(b) Age-standardised rates (per 100,000 persons)



21.4: Geographic variation

Table 21.4 presents the various prevalence measures by area of residence. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

Table 21.4: Different prevalence measures (based upon time since diagnosis) for lymphoma by Health and Social Care Trust (HSCT) of residence at diagnosis

MALE

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	32	12	30	107	188	239	256
Northern	45	16	37	150	243	288	313
South-Eastern	42	10	36	144	212	258	278
Southern	32	10	32	105	175	226	260
Western	25	7	25	86	126	162	185
Unknown	1	0	1	7	14	20	25
Northern Ireland	**178**	**54**	**161**	**599**	**958**	**1,193**	**1,317**

FEMALE

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	34	12	33	114	185	221	245
Northern	48	16	33	160	266	327	352
South-Eastern	29	11	25	91	168	214	233
Southern	33	9	27	117	195	249	264
Western	25	7	25	94	134	160	179
Unknown	1	0	1	5	10	11	12
Northern Ireland	**170**	**55**	**144**	**581**	**958**	**1,182**	**1,285**

BOTH SEXES

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	66	24	63	221	373	460	501
Northern	93	32	70	310	509	615	665
South-Eastern	71	21	61	235	380	472	511
Southern	65	19	59	222	370	475	524
Western	50	13	50	180	260	322	364
Unknown	3	0	2	12	24	31	37
Northern Ireland	**348**	**109**	**305**	**1,180**	**1,916**	**2,375**	**2,602**

22 Leukaemia (C91-C95)

There was an average of 183 cases of leukaemia diagnosed each year during 2006-2010 in Northern Ireland, while 96 people died each year from the disease. Survival from the disease was moderate with relative survival among those diagnosed in 2001-2005 being 62.5% after one year and 41.9% after five years. While there were slightly more male than female cases and deaths from leukaemia, survival was similar for both sexes. (Tab. 22.1)

Table 22.1: Summary statistics for leukaemia

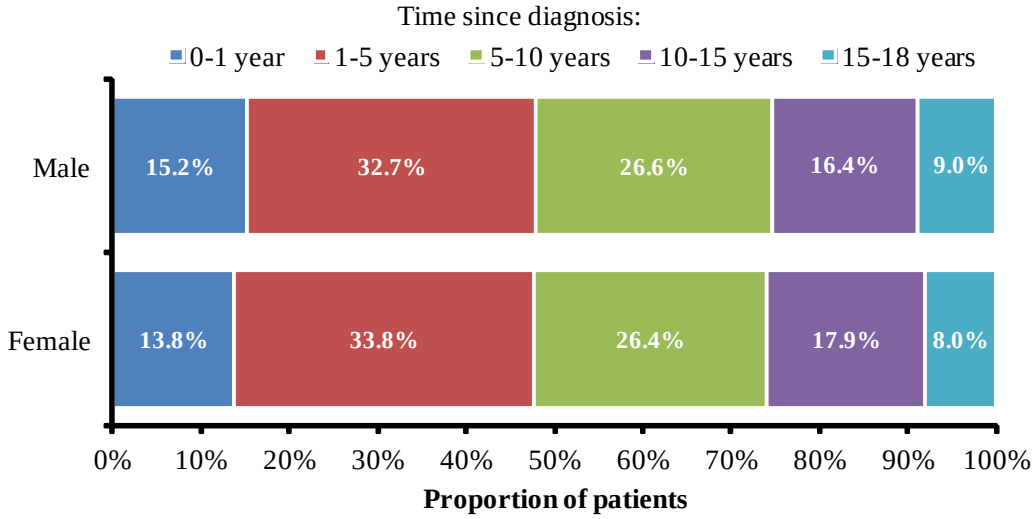
	Males	Females	Both sexes
New cases diagnosed per year (2006-2010)	104	78	183
Deaths per year (2006-2010)	53	43	96
1-year relative survival (diagnosed 2001-2005)	63.2%	61.7%	62.5%
5-year relative survival (diagnosed 2001-2005)	41.3%	42.6%	41.9%
10-year prevalence (2010)*	431	322	753
18-year prevalence (2010)**	578	435	1,013

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of leukaemia survivors at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 1,013 with 1.3 times as many male than female survivors; similar to the male to female incidence ratio.

- Among males there were 578 survivors. 15.2% had been diagnosed within the previous year while 9.0% had been diagnosed between 15 and 18 years ago.
- Among females there were 435 survivors. 13.8% had been diagnosed within the previous year while 8.0% had been diagnosed between 15 and 18 years ago. (Fig. 22.1)

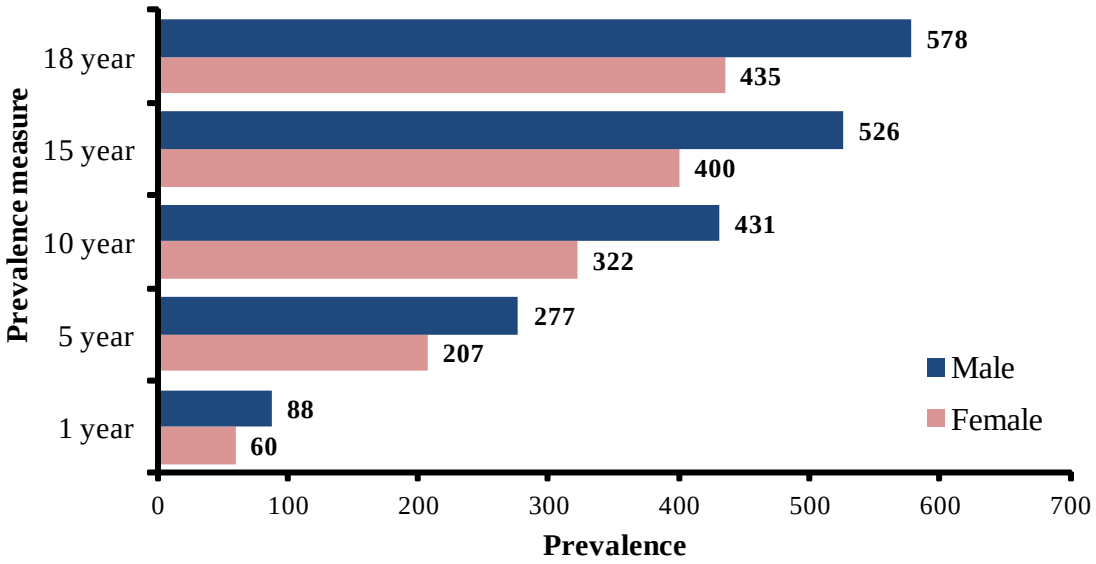
Figure 22.1: 18-year prevalence of leukaemia by sex and time since diagnosis



The 18-year prevalence represents all patients diagnosed with leukaemia during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 148 (Male: 88, Female: 60)
- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 484 (Male: 277, Female: 207).
- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 753 (Male: 431, Female: 322). (Fig. 22.2)

Figure 22.2: Different prevalence measures (based upon time since diagnosis) for leukaemia by sex



22.1: Prevalence by type

There are several different types of leukaemia. Leukaemia patients can be diagnosed with more than one of these variants or more than one of the same type within their lifetime. In each scenario patients are only counted once in the prevalence figures. Of the 1,013 leukaemia patients alive at the end of 2010 less than five had more than one leukaemia diagnosed within the previous 18 years.

Table 22.2: Different prevalence measures (based upon time since diagnosis) for leukaemia by first cancer type diagnosed

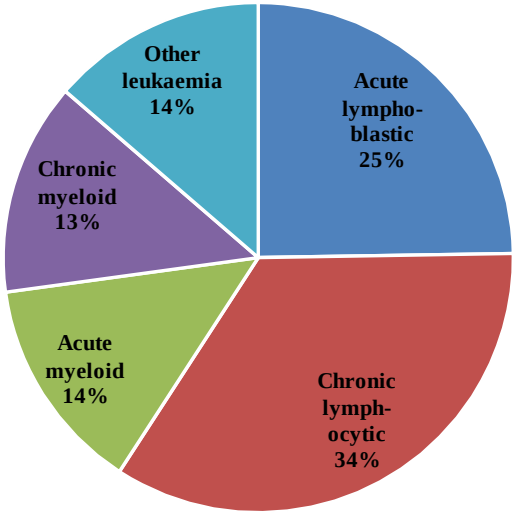
Cancer type	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Acute lymphoblastic	20	6	17	63	131	197	236
Chronic lymphocytic	59	24	56	202	276	319	337
Acute myeloid	59	47	36	82	131	151	163
Chronic myeloid	20	6	22	69	116	129	133
Other leukaemia	26	13	17	68	99	130	144
Total	**184**	**96**	**148**	**484**	**753**	**926**	**1,013**

The most common type of leukaemia among survivors was chronic lymphocytic leukaemia which was the first type diagnosed in one third of survivors (33.3%). This was followed by acute lymphoblastic

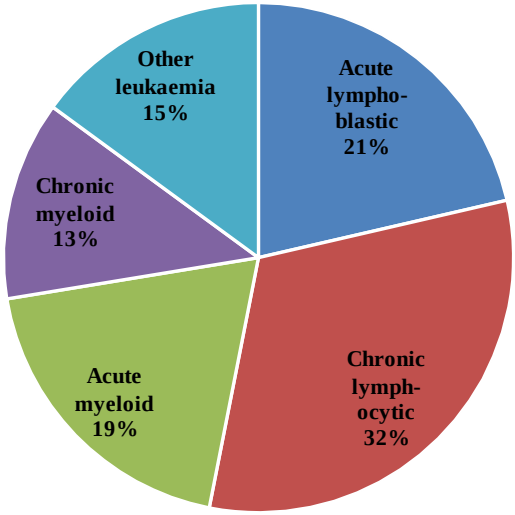
(23.3%) as despite having a much smaller number of cases diagnosed each year it had among the best survival rates. The distribution by cancer type differed slightly between men and women, with male survivors having a greater proportion of acute lymphoblastic leukaemia and women survivors having a greater proportion of acute myeloid leukaemia. (Fig. 22.3, Tab. 22.2)

Figure 22.3: 18-year prevalence of leukaemia by sex and first cancer site diagnosed

Male



Female



22.2: Prevalence by age

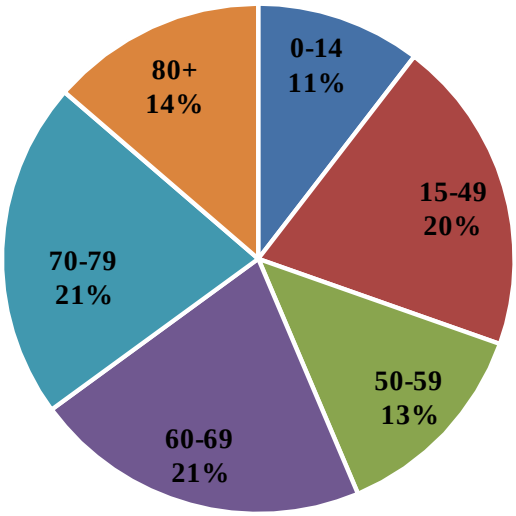
Since leukaemia is a disease which occurs primarily among older people but is still quite frequent among children and younger people, prevalence of leukaemia is distributed throughout different age groups. (Fig. 22.4, Tab. 22.3)

Among cancer survivors diagnosed within the last 10 years the median age at the end of 2010 was 63 for men and 60 for women. In addition:

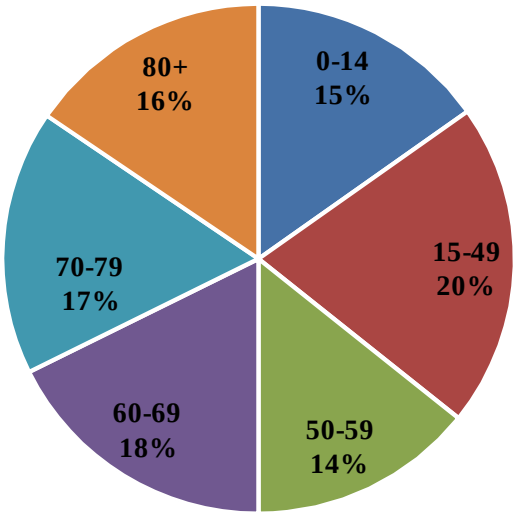
- 31% of males were aged under 50, while 14% were aged 80 and over.
- 35% of females were aged under 50, while 16% were aged 80 and over.

Figure 22.4a: 10-year prevalence of leukaemia by sex and age at the end of 2010

Male



Female

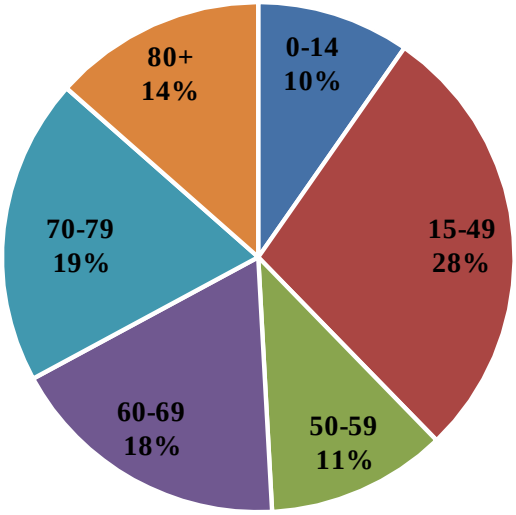


Among cancer survivors diagnosed within the last 18 years the median age at the end of 2010 was 60 for men and 58 for women. In addition:

- 38% of males were aged under 50, while 14% were aged 80 and over.
- 40% of females were aged under 50, while 17% were aged 80 and over.

Figure 22.4b: 18-year prevalence of leukaemia by sex and age at the end of 2010

Male



Female

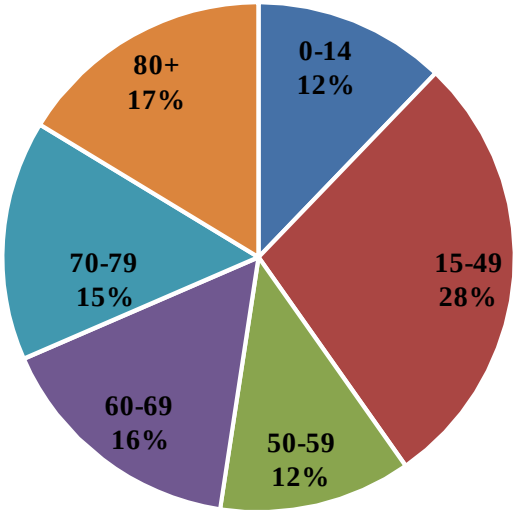


Table 22.3: Different prevalence measures (based upon time since diagnosis) for leukaemia by sex and age at the end of 2010

Sex and age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
MALE							
Under 50	20	4	22	71	131	185	218
50-59	13	5	11	34	57	61	66
60-69	21	10	24	60	92	103	104
70-79	31	21	23	69	92	108	112
80 and over	19	14	8	43	59	69	78
All ages	**104**	**53**	**88**	**277**	**431**	**526**	**578**
FEMALE							
Under 50	18	3	15	67	115	157	175
50-59	9	3	9	31	46	51	53
60-69	15	9	11	36	57	65	70
70-79	17	11	15	39	54	64	66
80 and over	20	17	10	34	50	63	71
All ages	**78**	**43**	**60**	**207**	**322**	**400**	**435**
BOTH SEXES							
Under 50	38	7	37	138	246	342	393
50-59	22	8	20	65	103	112	119
60-69	36	18	35	96	149	168	174
70-79	48	32	38	108	146	172	178
80 and over	39	31	18	77	109	132	149
All ages	**183**	**96**	**148**	**484**	**753**	**926**	**1,013**

The median age at the end of 2010 varied depending upon cancer type being 16 (male:18, female:15) for acute lymphoblastic, 73 (male:72, female: 74) for chronic lymphocytic, 53 (male:59 , female:56) for acute myeloid and 56 (male:59, female:56) for chronic myeloid leukaemia.

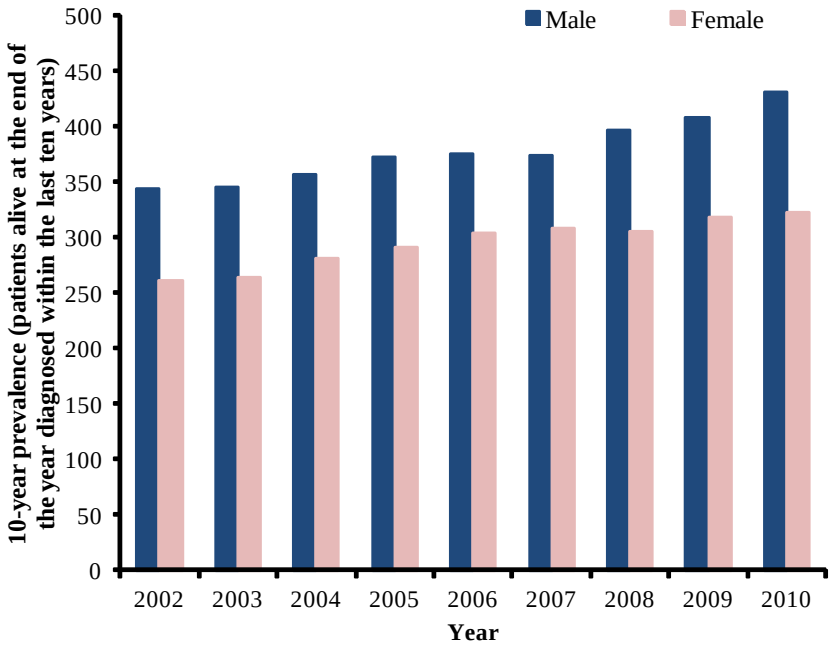
22.3: Prevalence trends

Ten-year prevalence of leukaemia is increasing, rising from 343 male and 261 female survivors in 2002 to 431 male and 322 females survivors in 2010. (Fig. 22.5a)

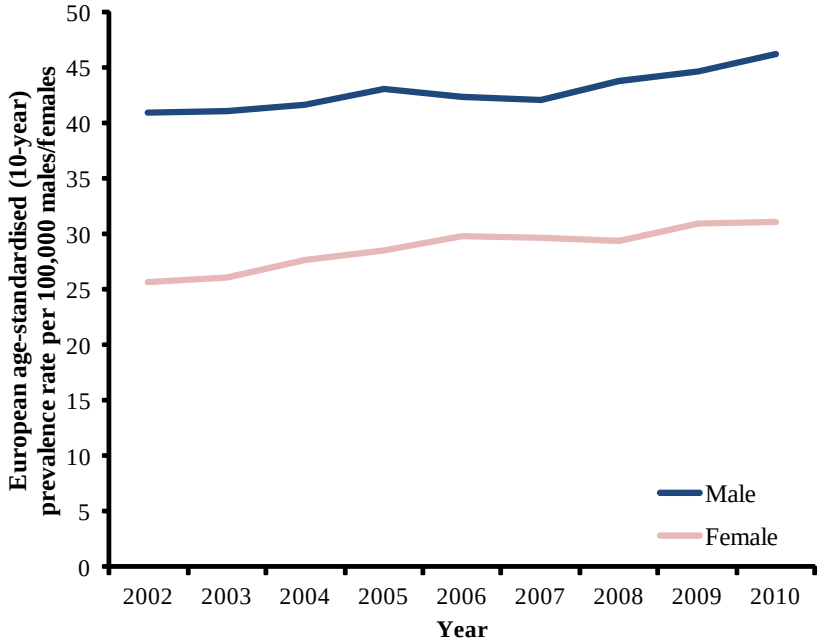
This increase is partly due to the combined effect of population growth and the ageing of the population. However adjusting for these factors using European age-standardised rates illustrates that male prevalence rates increased between 2002 and 2010 by an average of 1.4% per year, while female rates increased by 2.4% per year. (Fig. 22.5b)

Figure 22.5: Trends in 10-year prevalence of leukaemia by sex

(a) Number of patients



(b) Age-standardised rates (per 100,000 persons)



22.4: Geographic variation

Table 22.4 presents the various prevalence measures by area of residence. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

Table 22.4: Different prevalence measures (based upon time since diagnosis) for leukaemia by Health and Social Care Trust (HSCT) of residence at diagnosis

MALE

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	20	12	18	51	95	110	120
Northern	25	13	18	59	81	106	115
South-Eastern	22	9	25	67	111	127	135
Southern	20	10	12	51	78	91	100
Western	17	9	15	47	63	87	103
Unknown	0	0	0	2	3	5	5
Northern Ireland	**104**	**53**	**88**	**277**	**431**	**526**	**578**

FEMALE

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	17	10	8	43	65	83	87
Northern	16	10	16	42	69	90	98
South-Eastern	18	7	13	48	70	84	92
Southern	15	8	12	41	65	78	89
Western	11	7	11	31	51	61	64
Unknown	1	0	0	2	2	4	5
Northern Ireland	**78**	**43**	**60**	**207**	**322**	**400**	**435**

BOTH SEXES

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	37	22	26	94	160	193	207
Northern	41	23	34	101	150	196	213
South-Eastern	40	16	38	115	181	211	227
Southern	35	18	24	92	143	169	189
Western	29	16	26	78	114	148	167
Unknown	1	0	0	4	5	9	10
Northern Ireland	**183**	**96**	**148**	**484**	**753**	**926**	**1,013**

23 Cancer of unknown primary (C77-C80)

There was an average of 307 cases of cancer of unknown primary diagnosed each year during 2006-2010 in Northern Ireland with 257 deaths each year from the disease. Survival from the disease was poor being 16.7% after one year and 10.9% after five years for patients diagnosed in 2001-2005. (Tab. 23.1)

Table 23.1: Summary statistics for cancer of unknown primary

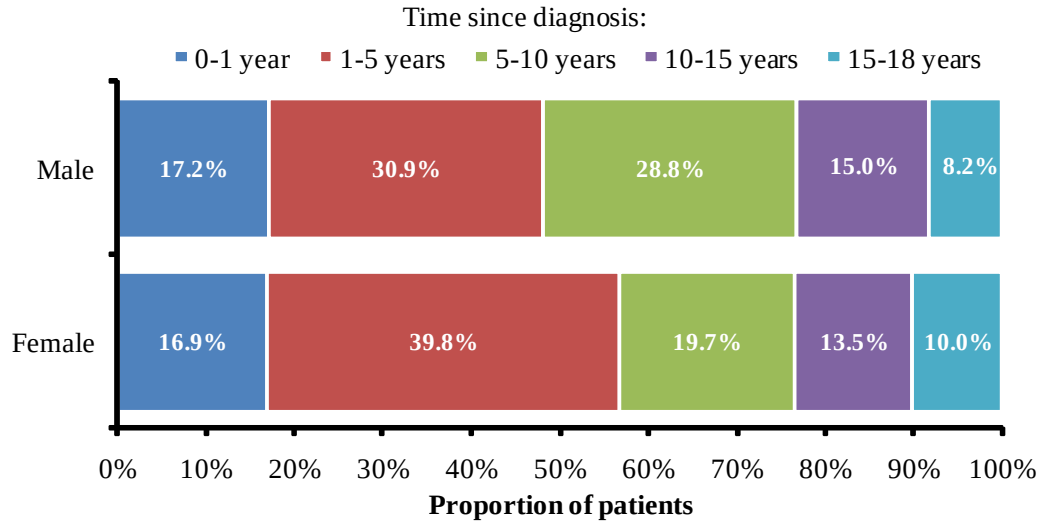
	Males	Females	Both sexes
New cases diagnosed per year (2006-2010)	131	176	307
Deaths per year (2006-2010)	120	137	257
1-year relative survival (diagnosed 2001-2005)	17.8%	15.8%	16.7%
5-year relative survival (diagnosed 2001-2005)	12.2%	9.8%	10.9%
10-year prevalence (2010)*	179	244	423
18-year prevalence (2010)**	233	319	552

** Patients diagnosed within 2001-2010 who were alive at the end of 2010*
*** Patients diagnosed within 1993-2010 who were alive at the end of 2010*

The number of survivors from cancer of unknown primary at the end of 2010 who had been diagnosed since 1993 (18-year prevalence) was 552, with slightly more female than male survivors due to the higher number of cases diagnosed.

- Among males there were 233 survivors. 17.2% had been diagnosed within the previous year while 8.2% had been diagnosed between 15 and 18 years ago.
- Among females there were 319 survivors. 16.9% had been diagnosed within the previous year while 10.0% had been diagnosed between 15 and 18 years ago. (Fig. 23.1)

Figure 23.1: 18-year prevalence of cancer of unknown primary by sex and time since diagnosis

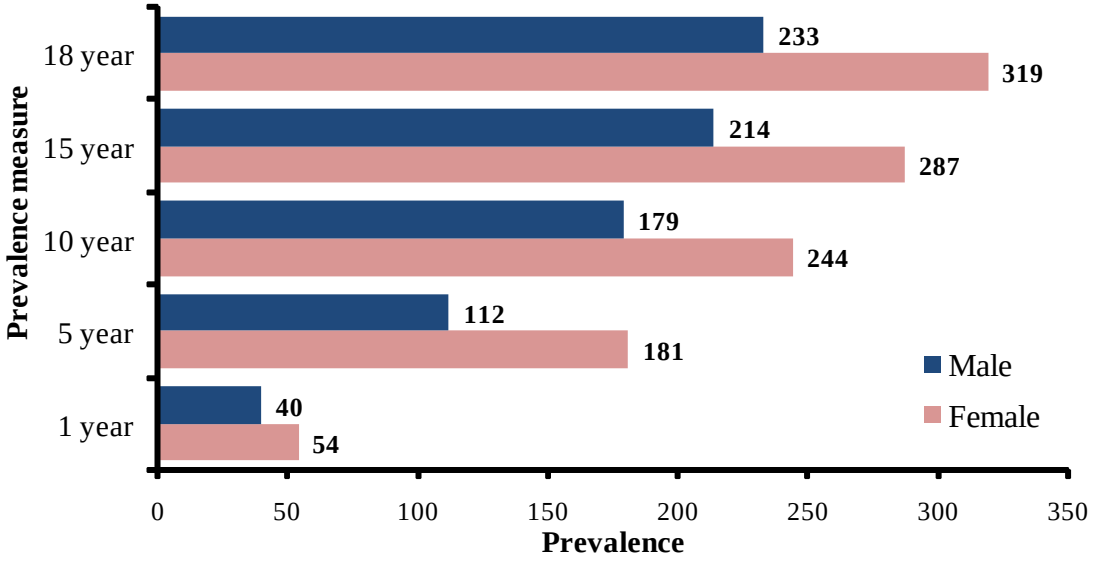


The 18-year prevalence represents all patients diagnosed with cancer of unknown primary during 1993-2010 who were still alive at the end of 2010. Other prevalence measures commonly used, which depend upon the diagnosis period considered, include:

- One-year prevalence (patients diagnosed in 2010) which at the end of 2010 was 94 (Male: 40, Female: 54)

- Five-year prevalence (patients diagnosed in 2006-2010) which at the end of 2010 was 293 (Male: 112, Female: 181).
- Ten-year prevalence (patients diagnosed in 2001-2010) which at the end of 2010 was 423 (Male: 179, Female: 244). (Fig. 23.2)

Figure 23.2: Different prevalence measures (based upon time since diagnosis) for cancer of unknown primary by sex



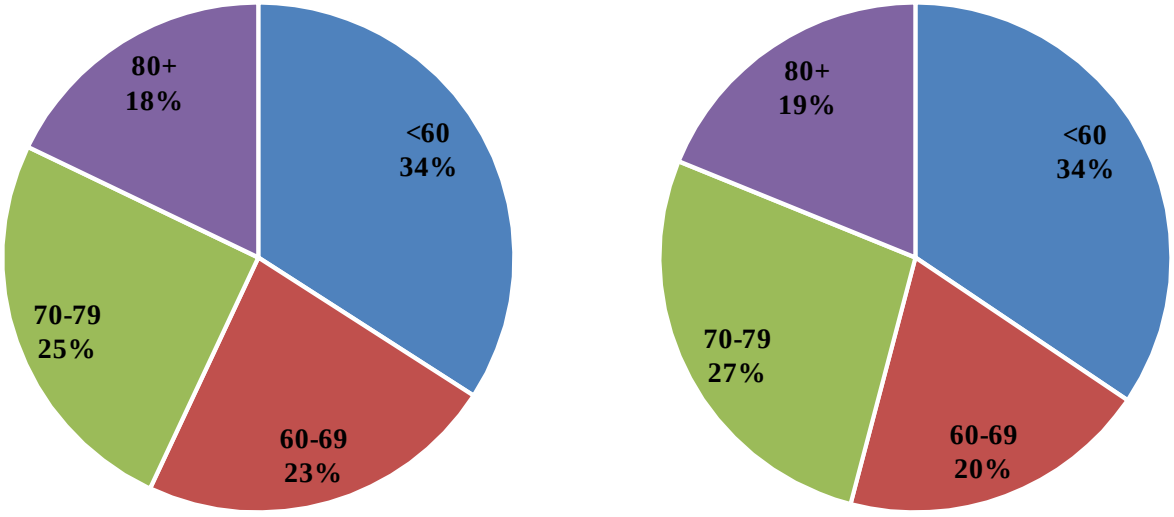
23.1: Prevalence by age

Since cancer of unknown primary is a disease which occurs primarily among older people but still occurs frequently in other age groups, prevalence of this cancer is spread among different age groups. (Fig. 23.3, Tab. 23.2)

Among cancer survivors diagnosed within the last 10 years the median age at the end of 2010 was 67 for males and females. In addition 34% of males and females were aged under 60, while 18% of males and 19% of females were aged 80 and over.

Figure 23.3a: 10-year prevalence of cancer of unknown primary by sex and age at the end of 2010

Male *Female*

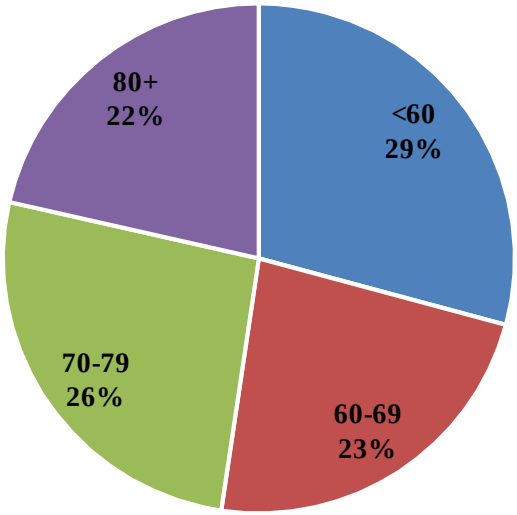


Among cancer survivors diagnosed within the last 18 years:

- The median age at the end of 2010 of male survivors was 67 with 29% aged under 60 and 22% aged 80 and over.
- The median age at the end of 2010 of female survivors was also 67 but with 31% aged under 60 and 24% aged 80 and over.

Figure 23.3b: 18-year prevalence of cancer of unknown primary by sex and age at the end of 2010

Male



Female

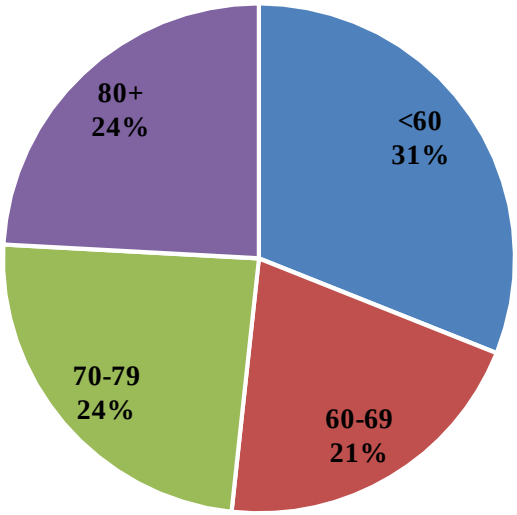


Table 23.2: Different prevalence measures (based upon time since diagnosis) for cancer of unknown primary by sex and age at the end of 2010

Sex and age at the end of 2010	Cases per year (2006-2010)	Deaths per year (2006-2010)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
MALE							
Under 60	22	16	16	42	61	66	68
60-69	30	25	10	25	41	50	54
70-79	41	40	14	28	45	55	61
80 and over	37	39		17	32	43	50
All ages	**131**	**120**	**40**	**112**	**179**	**214**	**233**
FEMALE							
Under 60	32	16	21	68	84	93	99
60-69	28	18	9	38	48	53	66
70-79	49	41	24	43	66	74	77
80 and over	67	63		32	46	67	77
All ages	**176**	**137**	**54**	**181**	**244**	**287**	**319**
BOTH SEXES							
Under 50	22	10	20	50	63	67	72
50-59	32	22	17	60	82	92	95
60-69	58	43	19	63	89	103	120
70-79	90	81	21	71	111	129	138
80 and over	104	101	17	49	78	110	127
All ages	**307**	**257**	**94**	**293**	**423**	**501**	**552**

23.2: Prevalence trends

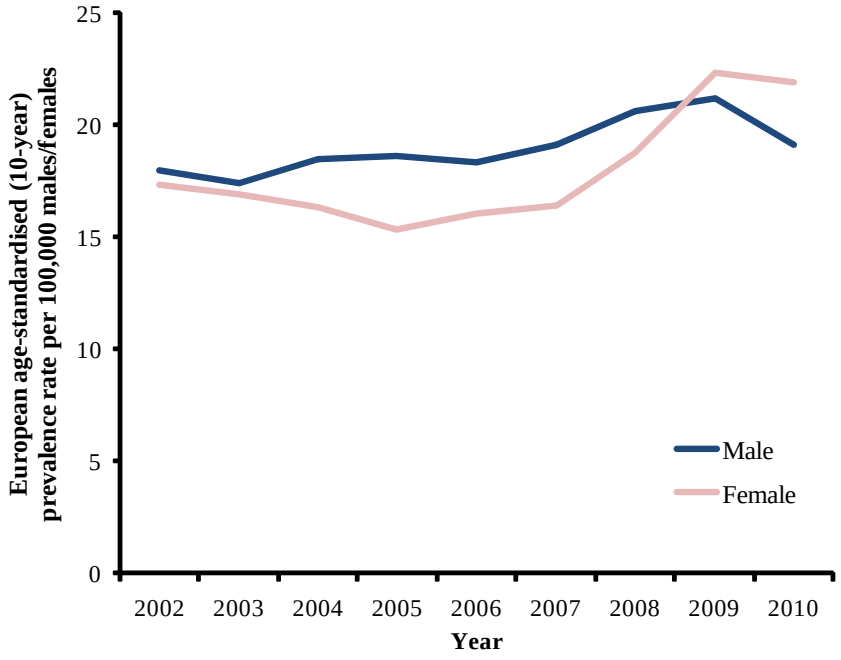
Ten-year prevalence of cancer of unknown primary is increasing, rising from 146 male and 186 female survivors in 2002 to 179 male and 244 female survivors in 2010. (Fig. 23.4a)

This increase is partly due to the combined effect of population growth and the ageing of the population. However adjusting for these factors using European age-standardised rates illustrates that male prevalence rates increased by an average of 1.8% per year between 2002 and 2010, while female rates increased by 10.4% per year between 2006 and 2010. (Fig. 23.4b)

Figure 23.4: Trends in 10-year prevalence of cancer of unknown primary by sex

(a) Number of patients

(b) Age-standardised rates (per 100,000 persons)



23.3: Geographic variation

Table 23.3 presents the various prevalence measures by area of residence. The variation is dependent upon the area's population, age structure, incidence of cancer and mortality from both cancer and other causes (such as heart disease etc).

Table 23.3: Different prevalence measures (based upon time since diagnosis) for cancer of unknown primary by Health and Social Care Trust (HSCT) of residence at diagnosis

MALE

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	28	28	7	22	36	39	45
Northern	36	32	8	28	41	48	51
South-Eastern	29	23	10	30	44	51	54
Southern	19	19	10	16	26	35	38
Western	17	17	5	16	25	32	34
Unknown	2	0	0	0	7	9	11
Northern Ireland	**131**	**120**	**40**	**112**	**179**	**214**	**233**

FEMALE

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	39	29	12	36	47	61	67
Northern	46	39	14	42	53	59	62
South-Eastern	33	30	12	36	55	65	72
Southern	28	23	9	28	32	39	44
Western	26	17	7	30	42	48	54
Unknown	3	0	0	9	15	15	20
Northern Ireland	**176**	**137**	**54**	**181**	**244**	**287**	**319**

BOTH SEXES

HSCT of residence	Cases per year (2006-10)	Deaths per year (2006-10)	Prevalence 2010				
			One year (diagnosed 2010)	Five years (diagnosed 2006-2010)	Ten years (diagnosed 2001-2010)	Fifteen years (diagnosed 1996-2010)	Eighteen years (diagnosed 1993-2010)
Belfast	67	57	19	58	83	100	112
Northern	81	71	22	70	94	107	113
South-Eastern	62	52	22	66	99	116	126
Southern	48	43	19	44	58	74	82
Western	43	34	12	46	67	80	88
Unknown	5	0	0	9	22	24	31
Northern Ireland	**307**	**257**	**94**	**293**	**423**	**501**	**552**

Appendix 1: Methodology

Data

The Northern Ireland Cancer Registry (NICR) was established in 1994 and uses an automated computer system with multiple information sources to collate information on new diagnoses of cancer, with information collected for incidence years 1993 onwards. The three main sources for registration are the Patient Administration System (PAS) used by all the Hospital Trusts, histopathology reports and death notifications, which are supplied by the General Registrar Office (GRO). From PAS the registry obtains demographic information on individual patients along with basic site and behaviour information for each tumour. This information is supplemented by electronic downloads from histopathology and cytopathology laboratories. A major focus of the registry's operation work is on the verification of the information from a single hospital admission, a single histopathology report or a single death certificate (death initiated cases). Trained Tumour Verification Officers (TVOs) examine General Practitioners' (GPs) notes for patients who have died from cancer, hospital records for cases identified without histopathology or cytology confirmation and histopathology reports where there is conflicting information or other possible errors. In the event that no further information on death-initiated cases is obtainable the record is included in the registry but flagged as a death certificate only (DCO) case. Follow up of patients is conducted passively by linking cancer incidence data to death certificate information. Data on cancer mortality also comes from the information supplied by GRO.

Cancer site in NICR incidence data, based on the electronic data collated from various sources, is received coded to the tenth revision of the International Classification of Diseases[3] (ICD10). In addition cancer morphology is received coded to the International Classification of Diseases for Oncology (version 2[4] from 1993-2006 and version 3[5] from 2007-2010).

Table A1: Classification of cancer site by ICD10 code

Cancer site	ICD10 code	Cancer site	ICD10 code
Head and Neck	C00-C14, C30-C32	**Uterus**	C54-C55
Oesophagus	C15	**Ovary**	C56
Stomach	C16	**Prostate**	C61
Colorectal	C18-C21	**Testis**	C62
Pancreas	C25	**Kidney**	C64-C66,C68
Lung	C33,C34	**Bladder**	C67
Malignant melanoma	C43	**Brain and other CNS**	C70-C72
Non-melanoma skin	C44	**Lymphoma**	C81-C85
Breast	C50	**Leukaemia**	C91-C95
Cervix	C53	**Unknown primary**	C77-C80

CNS: Central Nervous System

Geographic areas

In Northern Ireland the smallest geographic area in common use is the census output area (COA). It is assigned to each cancer incidence and mortality record through an electronic process that uses the postcode that accompanies the majority of Northern Ireland addresses along with a postcode to COA lookup file known as the Central Postcode Directory (CPD)[6], which is maintained by the Northern Ireland Statistics and Research Agency (NISRA) and updated annually. Addresses with an unknown,

incomplete or invalid postcode cannot be assigned a COA. COAs aggregate exactly to Local Government District, which in turn aggregate exactly to Health and Social Services Trusts.

Population data

The population data used throughout this report are the mid-year population estimates derived by the Northern Ireland Statistics and Research Agency (NISRA)[7]. This data uses 2001 census figures along with births, deaths and migration data to provide up to date estimates of the population of Northern Ireland.

Prevalence measures

Prevalence refers to the number of people living in a population with a diagnosis of cancer. Most cancer registries have difficulty in providing an exact figure for this value for a variety of reasons. In the context of Northern Ireland the problems are twofold:

- There is no point at which cancer is considered cured. While some people diagnosed with cancer may be cancer free within a few years, others may need treatment for a considerable length of time. Thus in order to develop prevalence figures, either an assumption must be made as to an average "cure" point (sometimes arbitrarily taken as being five or ten years) or all people who have been diagnosed with cancer and are still alive at a certain point must be included.
- NICR have information on people diagnosed with cancer from 1993 onward. Unfortunately with regard to measuring prevalence, this means that there is no information on members of the population who had a diagnosis of cancer prior to 1993. Thus any complete prevalence figures produced is an undercount of the true value.

Figures for complete prevalence are thus not provided in this report, however prevalence figures for people diagnosed within the most recent eighteen years (1993-2010) are provided along with various fixed time measures (i.e. those diagnosed within one, five, ten and fifteen years). These refer to the number of people who are alive on the 31st December 2010 and have previously been diagnosed with cancer up to one, five, ten, fifteen and eighteen years ago respectively.

Cancer prevalence is based upon patients rather than tumours and only the first diagnosed tumour of the cancer type under consideration is counted. Thus if a patient has been diagnosed with one colorectal tumour and one breast tumour since 1993 they contribute to both the colorectal cancer and breast cancer prevalence count, however they contribute only once to the all cancers count. Similarly a patient with two breast cancers since 1993 contributes only once to the breast cancer count.

Glossary

Age-specific rate: The rate that events occur per 100,000 persons of a particular age class.

Age-standardised rate (ASR): The rate per 100,000 persons that has been adjusted to take account of different age structures between geographic areas or time periods by adopting a reference population.

Annual percentage change (APC): The percentage increase or decrease per year in the age-standardised rate (ASR).

Cancer site: The body place that a cancer originates in, e.g. lung, breast or prostate.

Cell type: Classification of a cancer according to the type of cell that the tumour resembles. The most common categories include: carcinoma, lymphoma, leukaemia, sarcoma and glioma. Carcinomas represent the most common cancers with sub categories frequently used including adenocarcinoma, squamous cell carcinoma and basal cell carcinoma.

Confidence interval: The range of values calculated to have a specified (usually 95%) probability of containing the true value of an observation. Thus the 95% confidence interval for a rate is the range of values within which there is a 95% probability of finding the true value for the rate.

Crude rate: The rate per 100,000 persons that an event occurs among a given population.

Diagnosis: The process whereby the nature of a patient's illness is identified through medical examination.

District council: See Local Government Districts (LGDs).

European standard population: A standard population using the age distribution per 100,000 persons given in the table below. The same age distribution is used for males and females.

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

Expected survival: The survival expected in a subset of the general population whose characteristics are the same as that of the group of cancer patients being studied.

ICD10: The tenth edition of the International Classification of Diseases and Related Health Problems, which is published by the World Health Organisation (WHO). It provides a detailed description of known diseases and injuries and is used in the production of morbidity and mortality statistics.

Incidence: The number of new cases of a cancer diagnosed in a particular period for a particular population.

Local Government District: A geographic area in Northern Ireland defined for Local Government purposes. There are currently 26 Local Government Districts in Northern Ireland.

Mid-year population estimate: An estimate of the population in a region. Population estimates are based upon the number of births, deaths and migration flows for regions that have occurred since the last population census.

Mortality: The number of deaths from a particular cause for a particular period of time and population.

Observed survival: The probability that a patient with cancer will be alive at the end of a particular length of time.

Prevalence: The number of living people who have ever had a cancer diagnosis. It includes people diagnosed with cancer in the past as well those who were recently diagnosed.

P-value: The probability of an event occurring given a null hypothesis is true. In any statistical tests in this report the null hypothesis is taken to be that there is no difference between two mean values or rates. A small p-value (typically less than 0.05) suggests that the two means or rates tested are significantly different. In this case the result is called statistically significant.

Relative survival: The ratio of the observed survival of a given group of patients to the expected survival for a group of persons in the general population with the same sex and age.

Stage: A measure of how far a malignancy has spread in the body. Staging is carried out using a number of laboratory and clinical tests at diagnosis. The most common classification used is the TNM stage that includes information on the extent of the primary tumour (T), the absence or presence of lymph node metastasis (N) and the absence or presence of distant metastasis (M).

Statistical significance: See p-value.

Vital status: Whether or not a patient is alive or dead at the censor date.

References

1. Northern Ireland Cancer Registry. Online Statistics. Available from http://www.qub.ac.uk/nicr.
2. Northern Ireland Statistics and Research Agency. Registrar General Northern Ireland annual report 2010. Belfast: TSO; 2011.
3. World Health Organisation. ICD10 International Classification of Diseases 10th revision. Geneva: WHO; 1997.
4. World Health Organisation. ICD10 International Classification of Diseases for Oncology 2nd edition. Geneva: WHO; 1990.
5. World Health Organisation. ICD10 International Classification of Diseases for Oncology 3rd edition. Geneva: WHO; 2000.
6. Northern Ireland Statistics and Research Agency. Central postcode directory. Available from http://www.nisra.gov.uk.
7. Northern Ireland Statistics and Research Agency. Mid-year population estimates. Available from http://www.nisra.gov.uk.

Northern Ireland Cancer Registry

Centre for Public Health
Mulhouse Building
Grosvenor Road
Belfast BT12 6DP

Tel: (44) 028 9063 2573
Fax: (44) 028 9024 8017
Email: nicr@qub.ac.uk
Website: www.qub.ac.uk/nicr

ISBN: 9781909131149