

# Bowel cancer (Colorectal cancer)

Number of cases per year (2014-2018) <sup>1</sup>			Number of deaths per year (2014-2018) <sup>1</sup>		
Male	Female	Both sexes	Male	Female	Both sexes
648	530	1,178	232	207	439
Five-year net survival (2009-2013)			25-year prevalence (2018)		
Male	Female	Both sexes	Male	Female	Both sexes
61.6%	61.9%	61.7%	4,713	4,048	8,761

## Incidence

During 2014-2018:

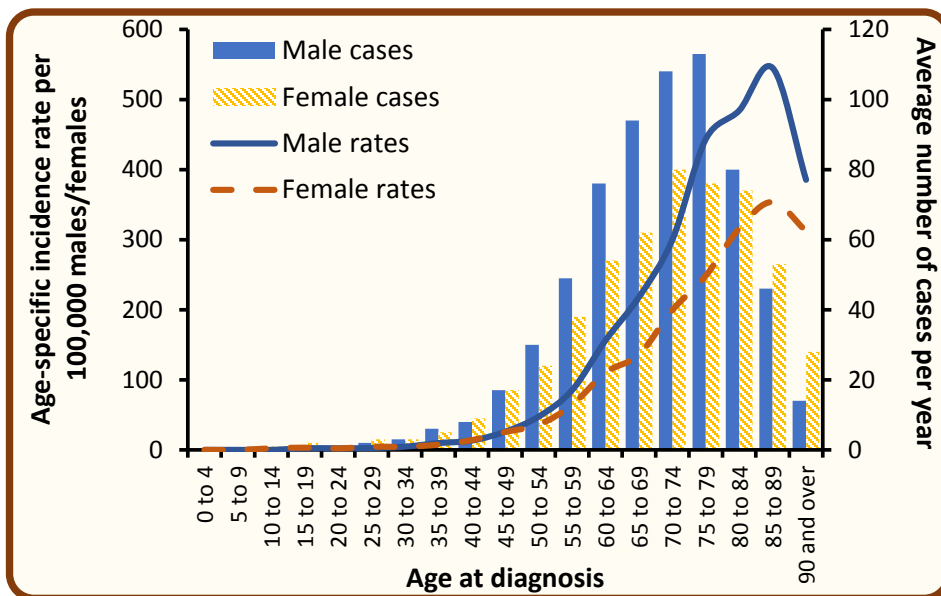
- There were 648 male and 530 female cases of bowel cancer diagnosed each year.
- There were 70.8 male and 56.0 female cases of bowel cancer per 100,000 males/females diagnosed each year.
- Bowel cancer made up 13.5% of all male cancers (ex NMSC), and 11.0% of all female cancers (ex NMSC).
- The risk of developing bowel cancer before the age of 75 was 1 in 24 for men and 1 in 33 for women.

### Incidence by sex and age at diagnosis: Bowel cancer 2014-2018<sup>1</sup>

During 2014-2018:

- The median age at diagnosis was 71 for men and 73 for women.
- Bowel cancer risk increased with age, with 70.2% of men and 70.4% of women aged 65 years or more at diagnosis.
- 6.6% of cases were diagnosed among those aged under 50.

Age at diagnosis	Average cases per year		
	Male	Female	Both sexes
0 - 49	38	41	78
50 - 64	155	116	270
65 - 74	202	142	344
75 +	253	231	485
<b>All ages</b>	<b>648</b>	<b>530</b>	<b>1,178</b>



### Incidence by sex and year of diagnosis: Bowel cancer 2009-2018

- Among males the number of cases of bowel cancer decreased by 3.6% from an annual average of 672 cases in 2009-2013 to 648 cases in 2014-2018.
- Among females the number of cases of bowel cancer increased by 0.8% from an annual average of 526 cases in 2009-2013 to 530 cases in 2014-2018.

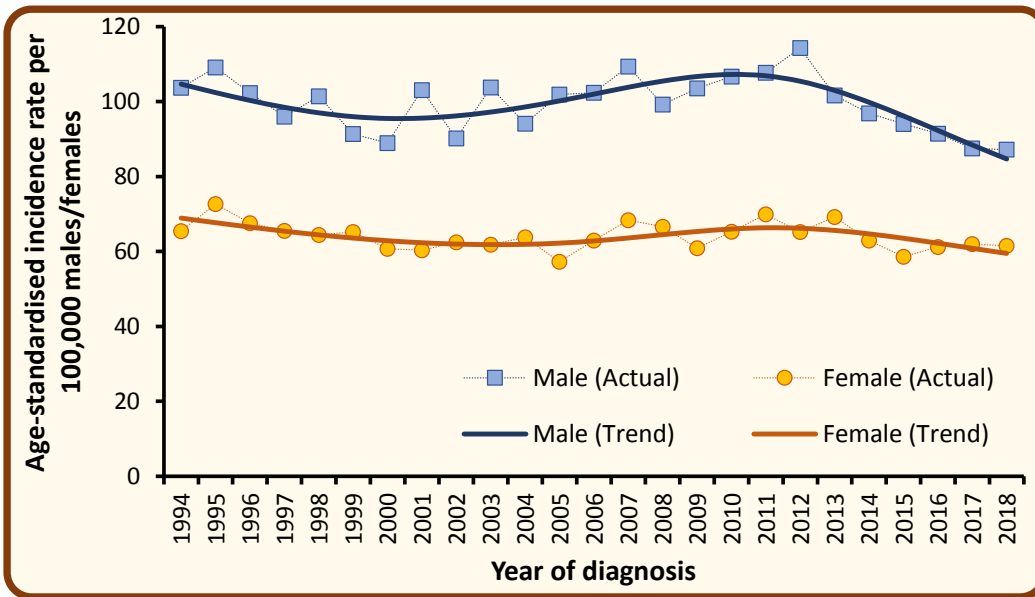
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Male	606	655	684	738	676	665	653	639	636	646
Female	469	509	552	528	573	529	499	529	543	549
Both sexes	1,075	1,164	1,236	1,266	1,249	1,194	1,152	1,168	1,179	1,195

1. Annual averages based upon several years have been rounded to the nearest integer. Sums of numbers in table rows or columns may thus differ slightly from the given total.

NMSC: Non-melanoma skin cancer

## Trends in age-standardised incidence rates by sex: Bowel cancer 1994-2018

- Among males age-standardised incidence rates of bowel cancer decreased by 14.4% from 106.7 per 100,000 person years in 2009-2013 to 91.3 cases per 100,000 persons years in 2014-2018. This difference was statistically significant.
- Among females age-standardised incidence rates of bowel cancer decreased by 7.3% from 66.1 per 100,000 person years in 2009-2013 to 61.3 cases per 100,000 persons years in 2014-2018. This difference was statistically significant.



Age-standardised incidence rates illustrate the change in the number of cases within a population of a fixed size and age structure (2013 European Standard).

They thus represent changes other than those caused by population growth and/or ageing.

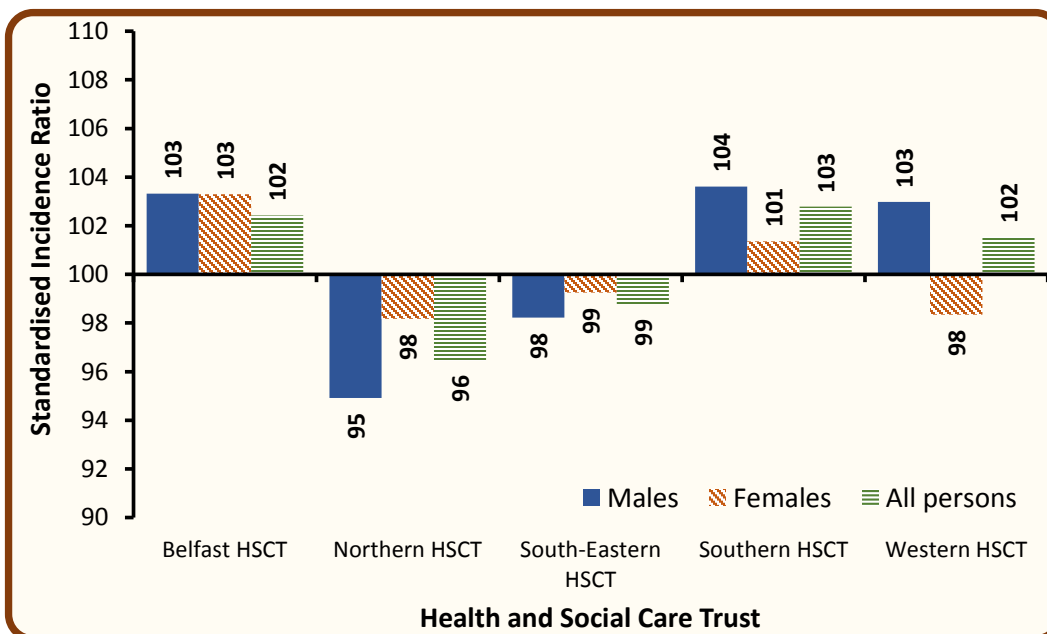
## Incidence (cases and rates) by sex and Health and Social Care Trust (HSCT): Bowel cancer 2014-2018<sup>1</sup>

The annual number of bowel cancer cases during 2014-2018 varied in each HSCT due to variations in population size and age (see table).

After accounting for these factors, incidence rates (see figure):

- in Belfast HSCT did not vary significantly from the NI average.
- in Northern HSCT did not vary significantly from the NI average.
- in South-Eastern HSCT did not vary significantly from the NI average.
- in Southern HSCT did not vary significantly from the NI average.
- in Western HSCT did not vary significantly from the NI average.

Health and Social Care Trust	Average cases per year		
	Male	Female	Both sexes
Belfast HSCT	118	106	224
Northern HSCT	165	138	302
South-Eastern HSCT	134	110	244
Southern HSCT	125	98	223
Western HSCT	106	78	184
<b>Northern Ireland</b>	<b>648</b>	<b>530</b>	<b>1,178</b>



Standardised incidence ratios compare incidence rates in each HSC Trust with the Northern Ireland incidence rate.

A value above 100 means that incidence rates in that HSC Trust are greater than the Northern Ireland average.

This measure takes account of population size and age structure. Differences are thus not a result of these factors.

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HSCT: Health and Social Care Trust

## Incidence (cases and rates) by sex and deprivation quintile: Bowel cancer 2014-2018<sup>1</sup>

The annual number of bowel cancer cases during 2014-2018 varied in each deprivation quintile due to variations in population size and age (see table).

After accounting for these factors, incidence rates (see figure):

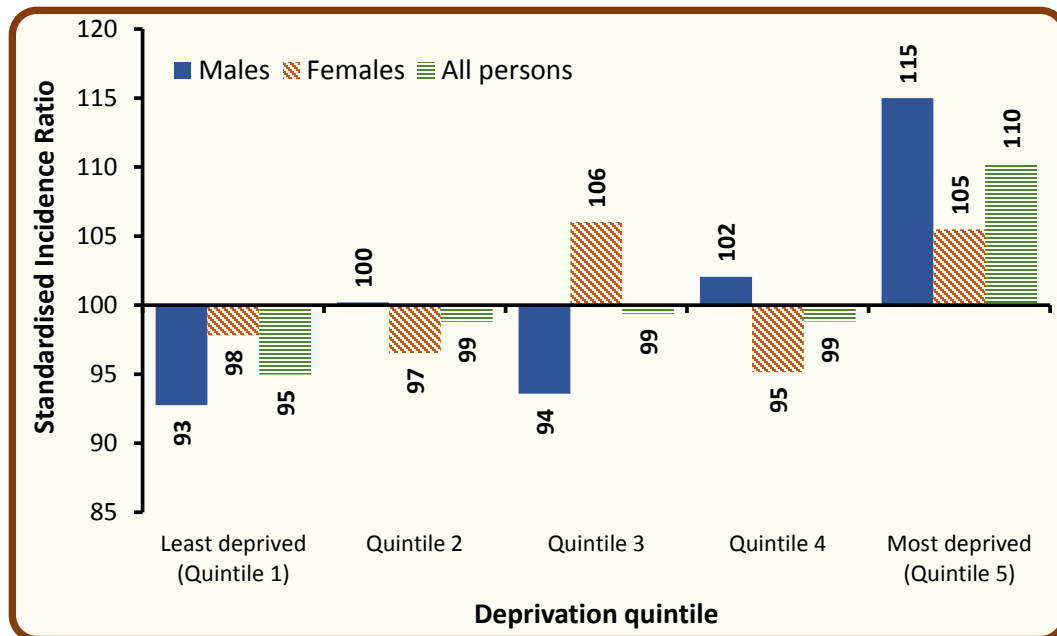
- in the most socio-economically deprived areas were 10.3% higher than the NI average.
- in the least socio-economically deprived areas did not vary significantly from the NI average.

Deprivation quintile	Average cases per year		
	Male	Female	Both sexes
Least deprived (Quintile 1)	127	112	239
Quintile 2	138	107	245
Quintile 3	129	116	245
Quintile 4	132	102	234
Most deprived (Quintile 5)	121	94	215
Northern Ireland	648	530	1,178

Standardised incidence ratios compare incidence rates in each deprivation quintile with the Northern Ireland incidence rate.

A value above 100 means that incidence rates in that deprivation quintile are greater than the Northern Ireland average.

This measure takes account of population size and age structure. Differences are thus not a result of these factors.



## Survival

- 76.2% of patients were alive one year and 50.1% were alive five years from a bowel cancer diagnosis in 2009-2013. (observed survival)
- Age-standardised net survival (ASNS), which removes the effect of deaths from causes unrelated to cancer, was 80.8% one year and 61.7% five years from a bowel cancer diagnosis in 2009-2013.
- Five-year survival (ASNS) for patients diagnosed in 2009-2013 was 61.6% among men and 61.9% among women.
- Estimates for survival (ASNS) of patients diagnosed during 2012-2016 are 81.5% one year, and 62.6% five years from diagnosis.

Period of diagnosis <sup>2</sup>	Gender	Observed survival		Age-standardised net survival	
		One-year	Five-years	One-year	Five-years
2009-2013	Male	77.5%	50.2%	81.4%	61.6%
	Female	74.5%	50.1%	79.9%	61.9%
	Both sexes	76.2%	50.1%	80.8%	61.7%
2012-2016 estimates	Male	79.2%	52.6%	83.0%	63.8%
	Female	74.0%	49.0%	79.4%	61.1%
	Both sexes	76.9%	51.0%	81.5%	62.6%

Observed survival is the proportion of patients still alive one/five years after diagnosis. However, in this measure patients may have died from causes unrelated to their cancer.

Age-standardised net survival is the proportion of patients who would survive if the patient could not die from causes unrelated to their cancer. This measure is more typically used in studies of cancer survival.

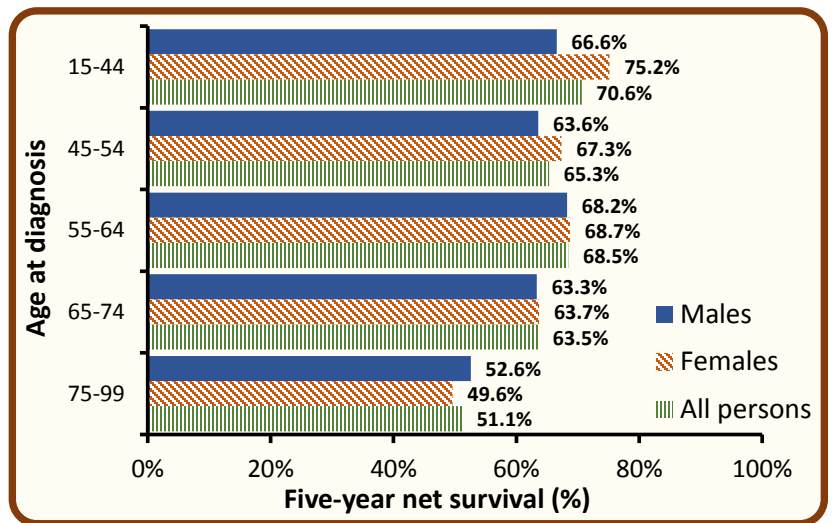
1. Annual averages based upon several years have been rounded to the nearest integer. Sums of numbers in table rows or columns may thus differ slightly from the given total.

2. Five-year survival for 2012-2016 are estimates as not all patients have five years worth of follow up.

ASNS: Age-standardised net survival

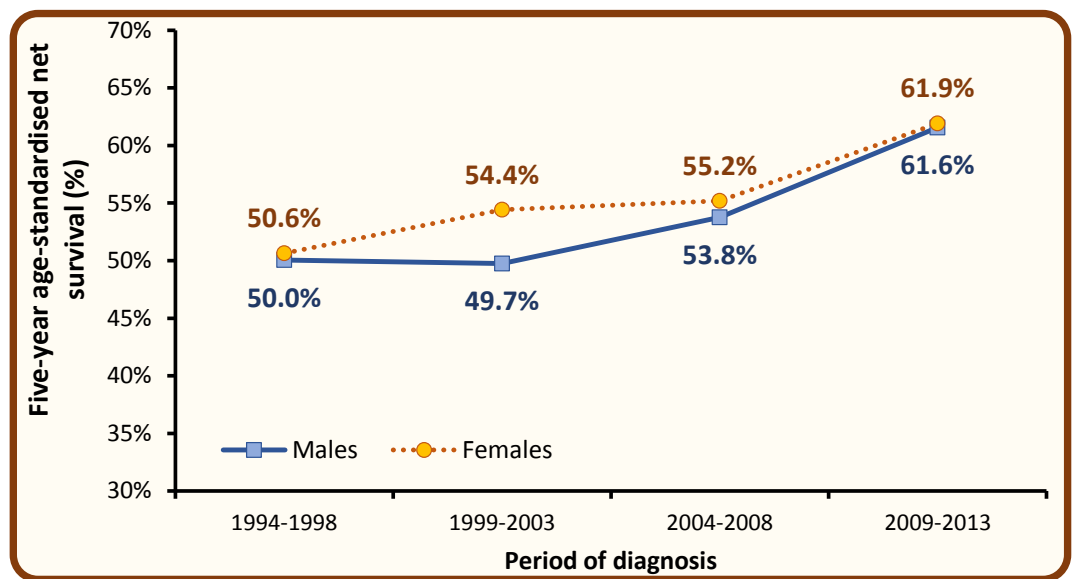
### Survival by sex and age at diagnosis: Bowel cancer 2009-2013

- Survival from bowel cancer varies by age at diagnosis with poorer five-year survival among the oldest patients.
- Five-year net survival ranged from 70.6% among patients aged 15-44 at diagnosis to 51.1% among those aged 75 and over.
- Five-year net survival among bowel cancer patients aged 75 and over was 52.6% for men and 49.6% for women.



### Trends in age-standardised net survival by sex: Bowel cancer 1994-2013

- Among men five-year survival (ASNS) from bowel cancer increased from 50.0% for those diagnosed in 1994-1998 to 61.6% for those diagnosed in 2009-2013. This difference was statistically significant.
- Among women five-year survival (ASNS) from bowel cancer increased from 50.6% for those diagnosed in 1994-1998 to 61.9% for those diagnosed in 2009-2013. This difference was statistically significant.



### Prevalence

- At the end of 2018, there were 8,761 people (Males: 4,713; Females: 4,048) living with bowel cancer who had been diagnosed with the disease during 1994-2018.
- Of these, 53.8% were male, 65.4% were aged 70 and over, and 11.2% had been diagnosed in the previous year.

25-year prevalence refers to the number of cancer survivors who were alive at the end of 2018, and had been diagnosed with their cancer in the previous 25 years (i.e. 1994-2018).

Time since diagnosis	25-year prevalence								
	Aged 0-69			Aged 70+			All ages		
	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes
0-1 year	232	205	437	293	252	545	525	457	982
1-5 years	647	497	1,144	899	706	1,605	1,546	1,203	2,749
5-10 years	460	380	840	883	714	1,597	1,343	1,094	2,437
10-25 years	308	305	613	991	989	1,980	1,299	1,294	2,593
0-25 years	1,647	1,387	3,034	3,066	2,661	5,727	4,713	4,048	8,761

ASNS: Age-standardised net survival

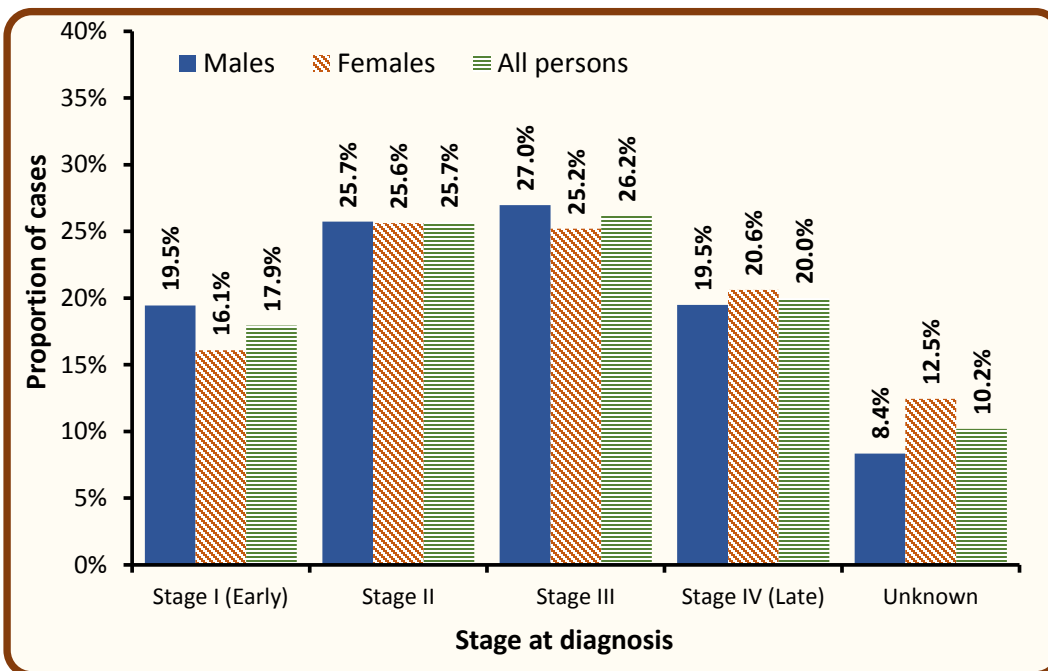
## Cancer stage

### Incidence by sex and stage at diagnosis: Bowel cancer 2013-2017<sup>1</sup>

During 2013-2017:

- 89.8% of cases diagnosed had a stage assigned.
- 17.9% of cases were diagnosed at stage I. (20.0% of staged cases)
- 20.0% of cases were diagnosed at stage IV. (22.3% of staged cases)
- Among cases which were staged, 21.3% of male cases were diagnosed at stage IV, compared to 23.5% of female cases.

Stage at diagnosis	Average cases per year		
	Male	Female	Both sexes
Stage I (Early)	127	86	213
Stage II	168	137	305
Stage III	176	135	311
Stage IV (Late)	127	110	238
Unknown	55	67	121
<b>All stages</b>	<b>654</b>	<b>535</b>	<b>1,188</b>



Cancer stage describes the size of a cancer and how far it has grown and spread.

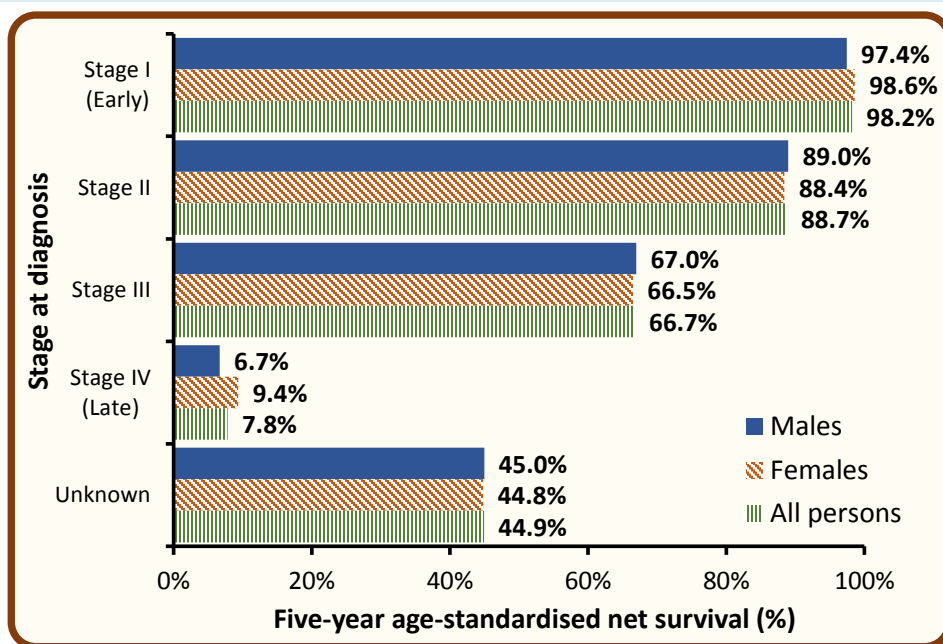
This information is used to help decide what treatments are needed.

The classification used here to stage cancer is the TNM (version 7) classification.

Data on cancer stage in 2018, classified using TNM (version 8), is available online at [www.qub.ac.uk/nicr](http://www.qub.ac.uk/nicr)

### Survival by sex and stage at diagnosis: Bowel cancer 2009-2013

- Stage at diagnosis is one of the most important factors in bowel cancer survival with five-year survival decreasing as stage increases.
- Five-year survival (ASNS) ranged from 98.2% for early stage (stage I) disease to 7.8% for late stage (stage IV) disease.
- Five-year survival (ASNS) for unstaged bowel cancer was 44.9%.
- Five-year survival (ASNS) for stage IV bowel cancer was 6.7% for men, compared to 9.4% for women.



1. Annual averages based upon several years have been rounded to the nearest integer. Sums of numbers in table rows or columns may thus differ slightly from the given total.

ASNS: Age-standardised net survival

## Mortality

During 2014-2018:

- There were 232 male and 207 female deaths from bowel cancer each year.
- Death from bowel cancer made up 10.1% of male cancer deaths (ex NMSC), and 9.9% of female cancer deaths (ex NMSC).

### Deaths by sex and age at death: Bowel cancer 2014-2018<sup>1</sup>

During 2014-2018:

- The median age at death was 74 for men and 78 for women.
- Risk of death from bowel cancer was strongly related to age, with 77.2% of men and 82.1% of women aged 65 years or more at time of death.
- 3.6% of bowel cancer deaths occurred among those aged under 50.

Age at death	Average deaths per year		
	Male	Female	Both sexes
0 - 49	8	8	16
50 - 64	43	29	71
65 - 74	66	46	112
75 +	113	124	238
<b>All ages</b>	<b>232</b>	<b>207</b>	<b>439</b>

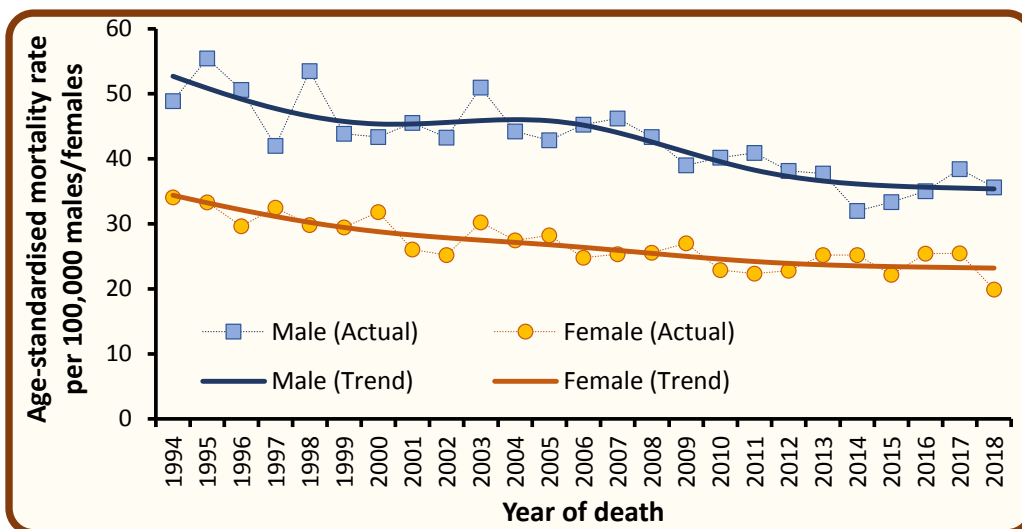
### Deaths by sex and year of death: Bowel cancer 2009-2018

- Among males the number of deaths from bowel cancer increased by 0.9% from an annual average of 230 deaths in 2009-2013 to 232 deaths in 2014-2018.
- Among females the number of deaths from bowel cancer increased by 7.3% from an annual average of 193 deaths in 2009-2013 to 207 deaths in 2014-2018.

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>Male</b>	223	231	232	231	233	208	215	230	262	245
<b>Female</b>	208	180	179	187	210	214	191	224	227	181
<b>Both sexes</b>	431	411	411	418	443	422	406	454	489	426

### Trends in age-standardised mortality rates by sex: Bowel cancer 1994-2018

- Among males age-standardised mortality rates from bowel cancer decreased by 10.9% from 39.2 per 100,000 person years in 2009-2013 to 34.9 deaths per 100,000 persons years in 2014-2018. This difference was not statistically significant.
- Among females age-standardised mortality rates from bowel cancer decreased by 1.7% from 24.0 per 100,000 person years in 2009-2013 to 23.6 deaths per 100,000 persons years in 2014-2018. This difference was not statistically significant.



Mortality data are provided by the Northern Ireland General Registrar Office via the Department of Health.

Counts of the number of deaths are based upon the year that death occurred, and upon the primary cause of death only.

Age-standardised mortality rates remove changes over time caused by population growth and/or ageing.

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NMSC: Non-melanoma skin cancer

## Further Information

Further data is available from the NI Cancer Registry web site: [www.qub.ac.uk/nicr](http://www.qub.ac.uk/nicr)  
 Phone: +44 (0)28 9097 6028  
 e-mail: [nicr@qub.ac.uk](mailto:nicr@qub.ac.uk)



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