

---

# Impact of Covid-19 on incidence, survival and mortality of stomach cancer in Northern Ireland

(A comparison between April-December of 2020 and 2018-2019)

---

## Further information

Further information is available at: [www.qub.ac.uk/research-centres/nicr](http://www.qub.ac.uk/research-centres/nicr)

**Phone:** +44 (0)28 9097 6028

**e-mail:** [nicr@qub.ac.uk](mailto:nicr@qub.ac.uk)

## Acknowledgements

The Northern Ireland Cancer Registry (NICR) is funded by the Public Health Agency and is based in Queen's University, Belfast.

NICR uses data provided by patients and collected by the health service as part of their care and support.

The incidence, prevalence and survival statistics in this publication are designated as official statistics signifying that they comply with the Code of Practice for Official Statistics.



## INCIDENCE

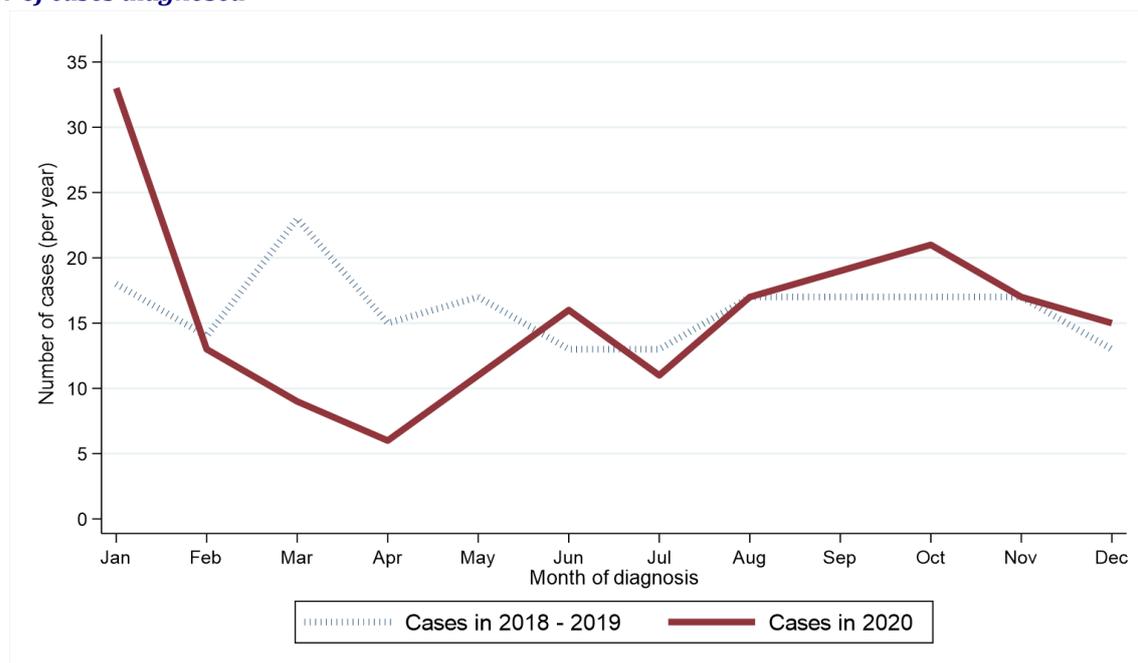
During the April-December period when Covid-19 was present the number of cases of stomach cancer diagnosed decreased by 3.6% (5 patients) from 138 per year in 2018 - 2019 to 133 in 2020.

**Table 1: Number of stomach cancer cases diagnosed in 2018-2020 by month and year of diagnosis**

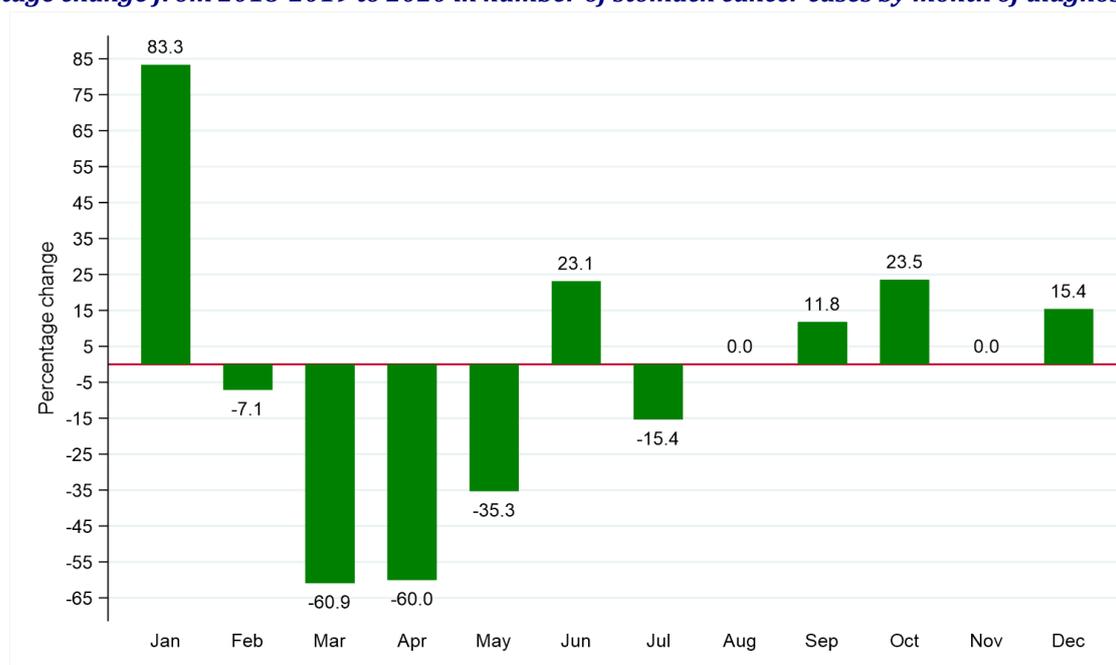
Period of diagnosis	Annual total	Month diagnosed											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
2018-2019*	193	18	14	23	15	17	13	13	17	17	17	17	13
2020	188	33	13	9	6	11	16	11	17	19	21	17	15

\* Average cases per year rounded to the nearest integer. Row sums may thus differ slightly from the total.

**Figure 1: Number of stomach cancer cases diagnosed in 2018-2020 by month and year of diagnosis**  
(a) Number of cases diagnosed



(b) Percentage change from 2018-2019 to 2020 in number of stomach cancer cases by month of diagnosis



## GENDER

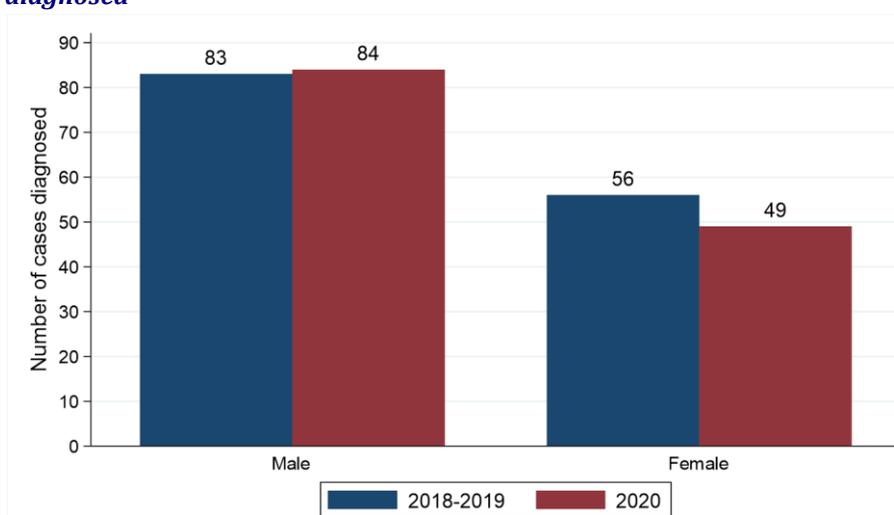
Excluding the first quarter of each year among males the number of cases of stomach cancer diagnosed increased by 1.2% from 83 per year in 2018 - 2019 to 84 in 2020. Between the same two time periods the number of cases among females decreased by 12.5% from 56 per year to 49. The change in case distribution by gender between 2018 - 2019 and 2020 was not statistically significant.

**Table 2: Number and proportion of stomach cancer cases diagnosed in April-December of 2018-2020 by gender and period of diagnosis**

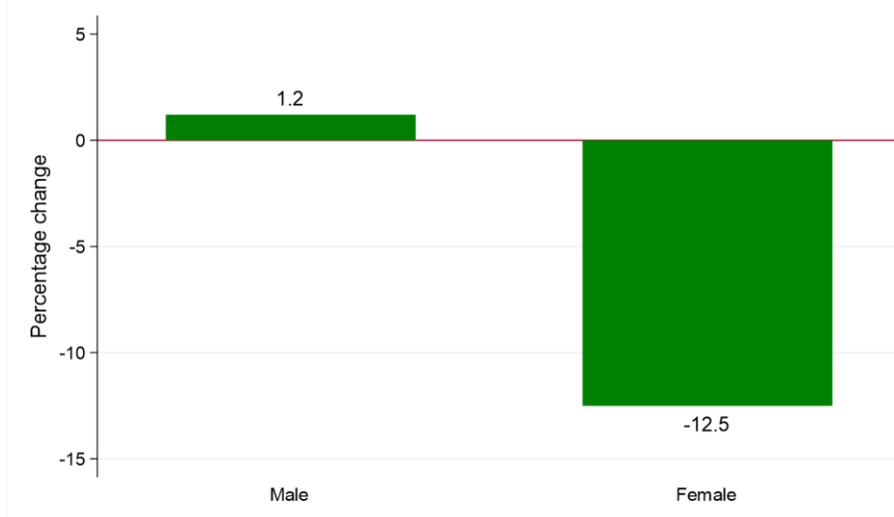
Gender	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Male	83 (60.1%)	84 (63.2%)	+1.2% (1 patients)
Female	56 (40.6%)	49 (36.8%)	-12.5% (7 patients)
All persons	138	133	-3.6% (5 patients)

\* Average cases per year rounded to the nearest integer. Column sums may thus differ slightly from the total.

**Figure 2: Stomach cancer cases diagnosed in April-December of 2018-2020 by gender and period of diagnosis (a) Number of cases diagnosed**



**(b) Percentage change from 2018-2019 to 2020 in number of stomach cancer cases by gender**



## AGE

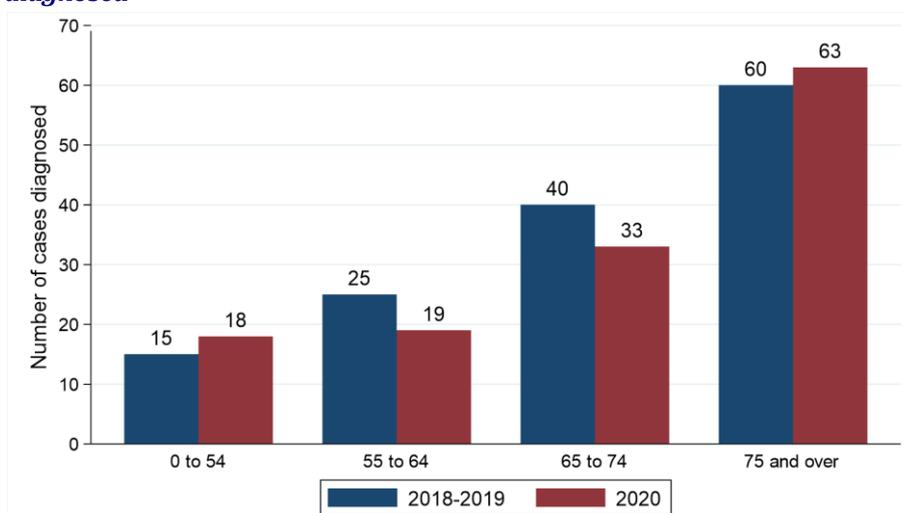
Excluding the first quarter of each year among people aged 55 to 64 the number of cases of stomach cancer diagnosed decreased by 24.0% from 25 per year in 2018 - 2019 to 19 in 2020. Between the same two time periods, the number of cases among people aged 0 to 54 increased by 20.0% from 15 per year to 18. The change in case distribution by age between 2018 - 2019 and 2020 was not statistically significant.

**Table 3: Number and proportion of stomach cancer cases diagnosed in April-December of 2018-2020 by age and period of diagnosis**

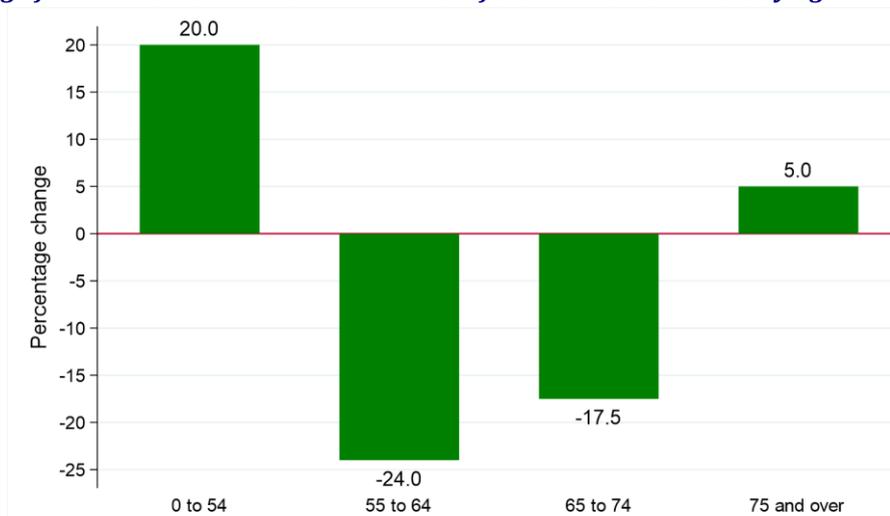
Age group	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
0 to 54	15 (10.9%)	18 (13.5%)	+20.0% (3 patients)
55 to 64	25 (18.1%)	19 (14.3%)	-24.0% (6 patients)
65 to 74	40 (29.0%)	33 (24.8%)	-17.5% (7 patients)
75 and over	60 (43.5%)	63 (47.4%)	+5.0% (3 patients)
All ages	138	133	-3.6% (5 patients)

\* Average cases per year rounded to the nearest integer. Column sums may thus differ slightly from the total.

**Figure 3: Stomach cancer cases diagnosed in April-December of 2018-2020 by age and period of diagnosis**  
(a) Number of cases diagnosed



(b) Percentage change from 2018-2019 to 2020 in number of stomach cancer cases by age at diagnosis



## HEALTH AND SOCIAL CARE TRUST

Excluding the first quarter of each year among residents of Belfast HSCT the number of cases of stomach cancer diagnosed decreased by 36.1% from 36 per year in 2018 - 2019 to 23 in 2020. Between the same two time periods the number of cases among residents of Northern HSCT increased by 40.7% from 27 per year to 38. The change in case distribution by HSCT between 2018 - 2019 and 2020 was not statistically significant.

**Table 4: Number and proportion of stomach cancer cases diagnosed in April-December of 2018-2020 by Health and Social Care Trust and period of diagnosis**

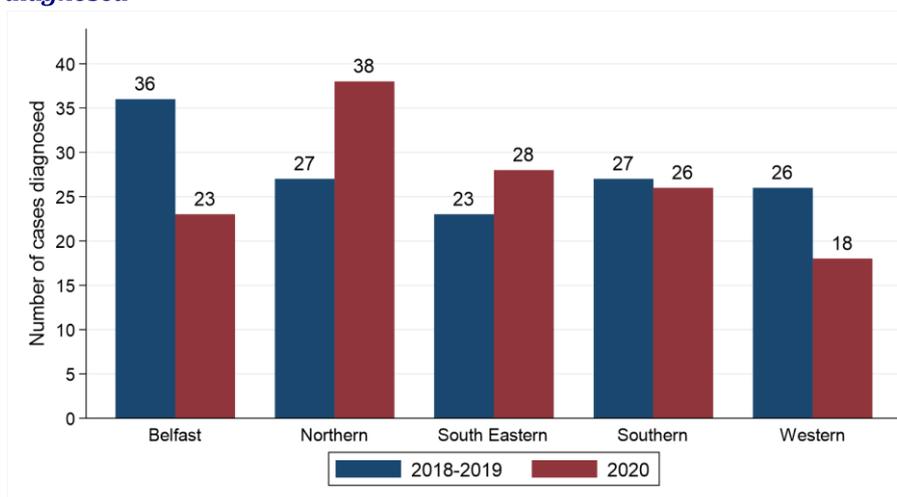
Health and Social Care Trust	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Belfast HSCT	36 (26.1%)	23 (17.3%)	-36.1% (13 patients)
Northern HSCT	27 (19.6%)	38 (28.6%)	+40.7% (11 patients)
South Eastern HSCT	23 (16.7%)	28 (21.1%)	+21.7% (5 patients)
Southern HSCT	27 (19.6%)	26 (19.5%)	-3.7% (1 patients)
Western HSCT	26 (18.8%)	18 (13.5%)	-30.8% (8 patients)
Northern Ireland	138	133	-3.6% (5 patients)

\* Average cases per year rounded to the nearest integer. Column sums may thus differ slightly from the total.

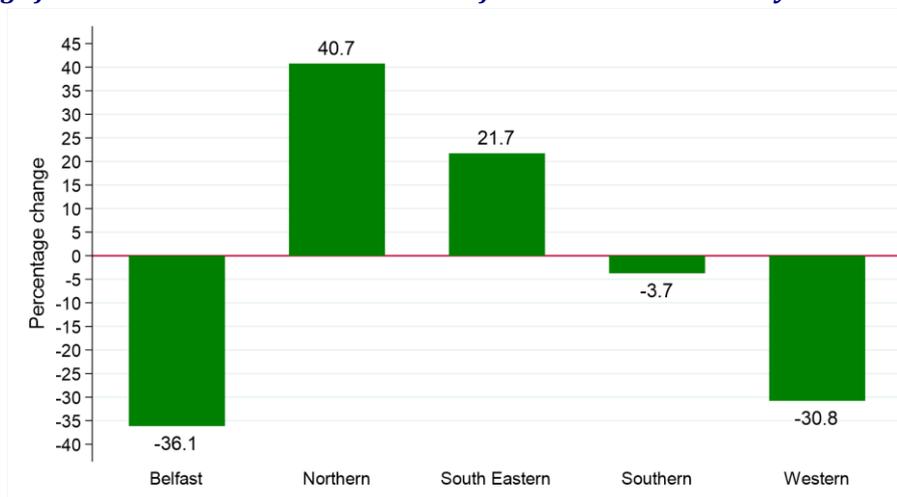
Note: Cases with unknown Health and Social Care Trust are included in totals

**Figure 4: Stomach cancer cases diagnosed in April-December of 2018-2020 by Health and Social Care Trust and period of diagnosis**

**(a) Number of cases diagnosed**



**(b) Percentage change from 2018-2019 to 2020 in number of stomach cancer cases by Health and Social Care Trust**



## DEPRIVATION

Excluding the first quarter of each year among residents of the most deprived areas the number of cases of stomach cancer diagnosed decreased by 12.5% from 32 per year in 2018 - 2019 to 28 in 2020. Between the same two time periods the number of cases among residents of the least deprived areas increased by 20.8% from 24 per year to 29. The change in case distribution by deprivation quintile between 2018 - 2019 and 2020 was not statistically significant.

**Table 5: Number and proportion of stomach cancer cases diagnosed in April-December of 2018-2020 by deprivation quintile and period of diagnosis**

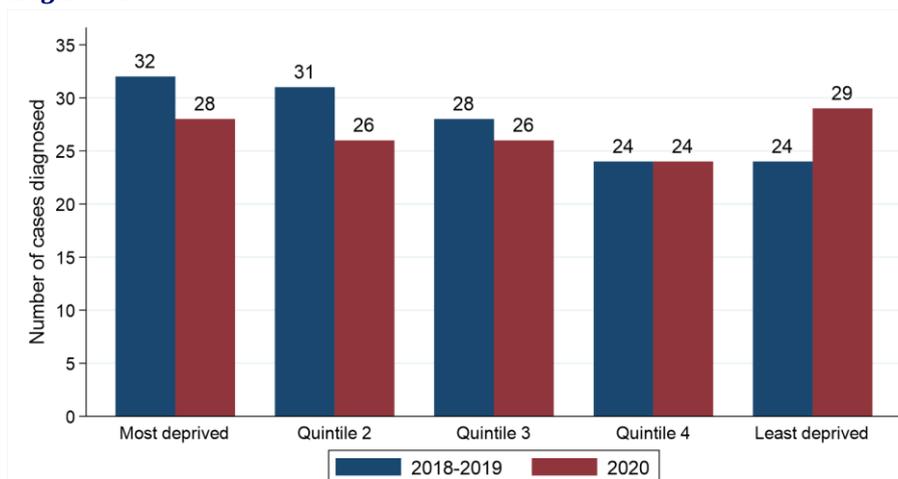
Deprivation quintile	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Most deprived	32 (23.2%)	28 (21.1%)	-12.5% (4 patients)
Quintile 2	31 (22.5%)	26 (19.5%)	-16.1% (5 patients)
Quintile 3	28 (20.3%)	26 (19.5%)	-7.1% (2 patients)
Quintile 4	24 (17.4%)	24 (18.0%)	0.0% (0 patients)
Least deprived	24 (17.4%)	29 (21.8%)	+20.8% (5 patients)
Northern Ireland	138	133	-3.6% (5 patients)

\* Average cases per year rounded to the nearest integer. Column sums may thus differ slightly from the total.

Note: Cases with unknown deprivation quintile are included in totals

**Figure 5: Stomach cancer cases diagnosed in April-December of 2018-2020 by deprivation quintile and period of diagnosis**

(a) Number of cases diagnosed



(b) Percentage change from 2018-2019 to 2020 in number of stomach cancer cases by deprivation quintile



## STAGE

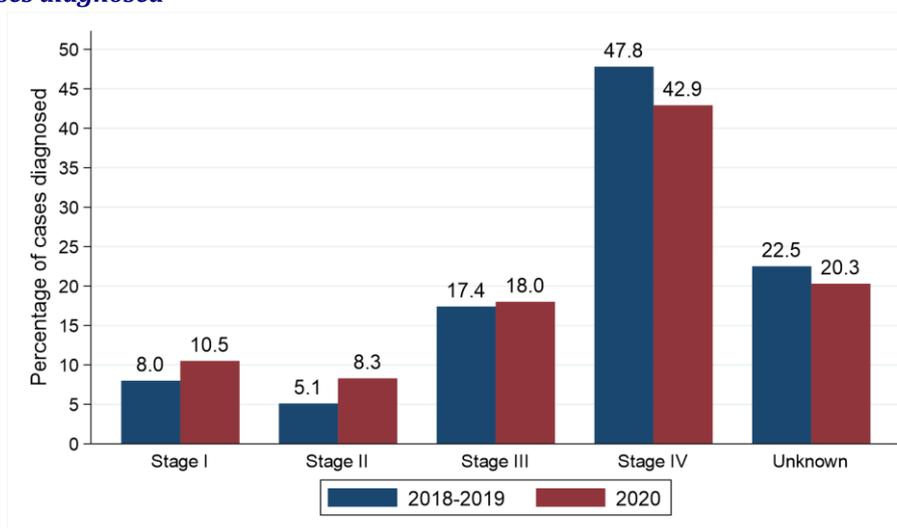
Excluding the first quarter of each year the number of stomach cancer cases diagnosed at Stage I increased by 27.3% from 11 per year in 2018 - 2019 to 14 in 2020. Between the same two time periods the number of cases diagnosed at Stage IV decreased by 13.6% from 66 per year to 57. The change in case distribution by stage at diagnosis between 2018 - 2019 and 2020 was not statistically significant.

**Table 6: Number and proportion of stomach cancer cases diagnosed in April-December of 2018-2020 by stage at diagnosis and period of diagnosis**

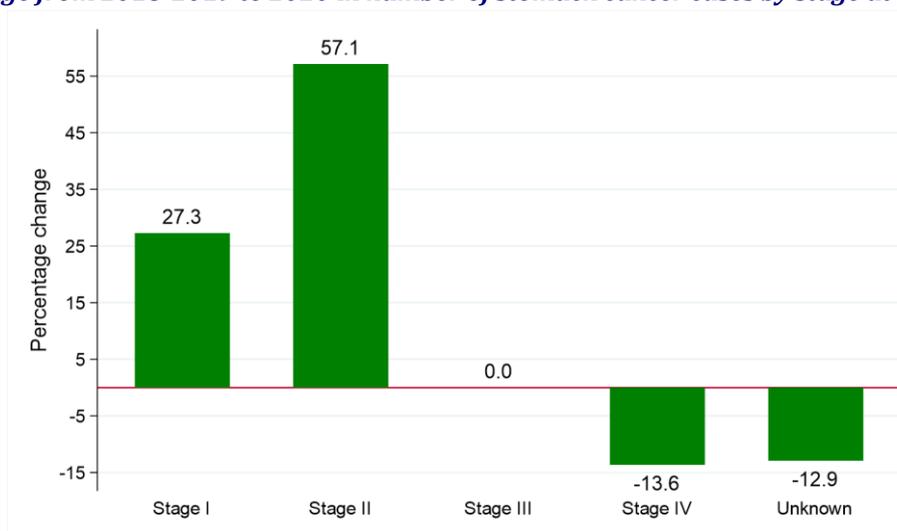
Stage at diagnosis	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Stage I	11 (8.0%)	14 (10.5%)	+27.3% (3 patients)
Stage II	7 (5.1%)	11 (8.3%)	+57.1% (4 patients)
Stage III	24 (17.4%)	24 (18.0%)	0.0% (0 patients)
Stage IV	66 (47.8%)	57 (42.9%)	-13.6% (9 patients)
Unknown	31 (22.5%)	27 (20.3%)	-12.9% (4 patients)
All stages	138	133	-3.6% (5 patients)

\* Average cases per year rounded to the nearest integer. Column sums may thus differ slightly from the total.

**Figure 6: Stomach cancer cases diagnosed in April-December of 2018-2020 by stage and period of diagnosis**  
(a) Proportion of cases diagnosed



(b) Percentage change from 2018-2019 to 2020 in number of stomach cancer cases by stage at diagnosis



## METHOD OF HOSPITAL ADMISSION

Excluding the first quarter of each year the number of cases of stomach cancer where the patient had an emergency admission recorded as the most recent hospital admission type up to 30 days prior to diagnosis increased by 22.9% from 35 per year in 2018 - 2019 to 43 in 2020. The change in case distribution by hospital admission type between 2018 - 2019 and 2020 was not statistically significant.

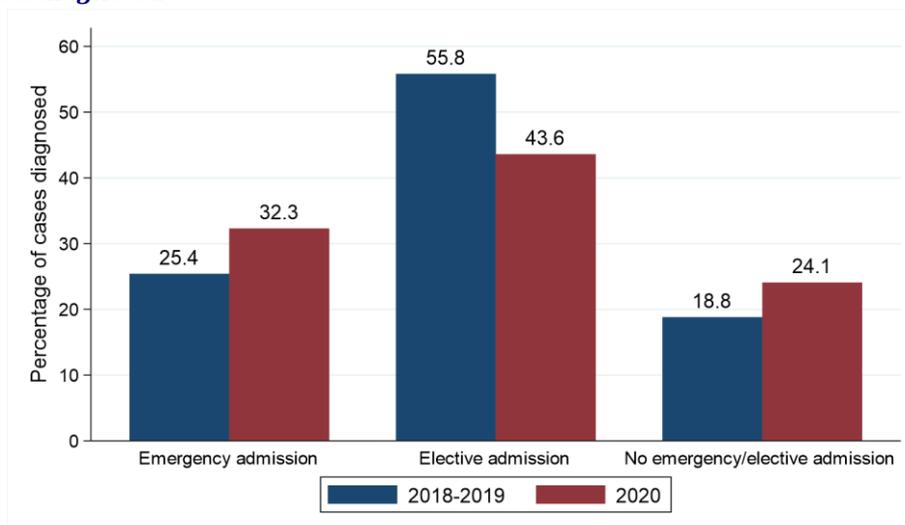
**Table 7: Number and proportion of stomach cancer cases diagnosed in April-December of 2018-2020 by method of admission to hospital and period of diagnosis**

Method of admission to hospital	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Emergency admission	35 (25.4%)	43 (32.3%)	+22.9% (8 patients)
Elective admission	77 (55.8%)	58 (43.6%)	-24.7% (19 patients)
No emergency/elective admission recorded	26 (18.8%)	32 (24.1%)	+23.1% (6 patients)
All persons	138	133	-3.6% (5 patients)

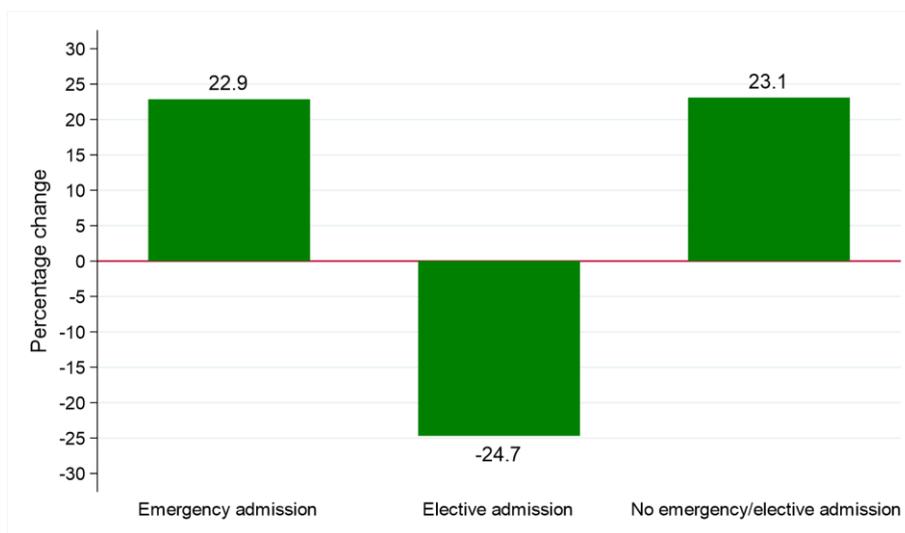
\* Average cases per year rounded to the nearest integer. Column sums may thus differ slightly from the total.

**Figure 7: Stomach cancer cases diagnosed in April-December of 2018-2020 by method of admission to hospital and period of diagnosis**

**(a) Proportion of cases diagnosed**



**(b) Percentage change from 2018-2019 to 2020 in number of stomach cancer cases by method of admission to hospital**



## TREATMENT

Excluding the first quarter of each year the number of stomach cancer cases where the patient was treated with surgery (within six months of diagnosis) increased by 5.5% from 55 per year for those diagnosed in 2018 - 2019 to 58 for those diagnosed in 2020. The resulting change in the proportion receiving surgery from 39.9% in 2018 - 2019 to 43.6% in 2020 was not statistically significant.

Between the same two time periods the number of cases where the patient was treated with chemotherapy (within six months) decreased by 22.2% from 54 per year to 42. The resulting change in the proportion receiving chemotherapy from 39.1% in 2018 - 2019 to 31.6% in 2020 was not statistically significant.

The number of stomach cancer cases where the patient was treated with radiotherapy (within six months of diagnosis) decreased by 33.3% from 9 per year for those diagnosed in April-December of 2018 - 2019 to 6 for those diagnosed in April-December of 2020. The resulting change in the proportion receiving radiotherapy from 6.5% in 2018 - 2019 to 4.5% in 2020 was not statistically significant.

The proportion of patients receiving none of surgery, chemotherapy or radiotherapy (within six months of diagnosis) who were diagnosed in April-December 2020 was 40.6%. This compared to 37.7% of those diagnosed in 2018 - 2019. This change was not statistically significant.

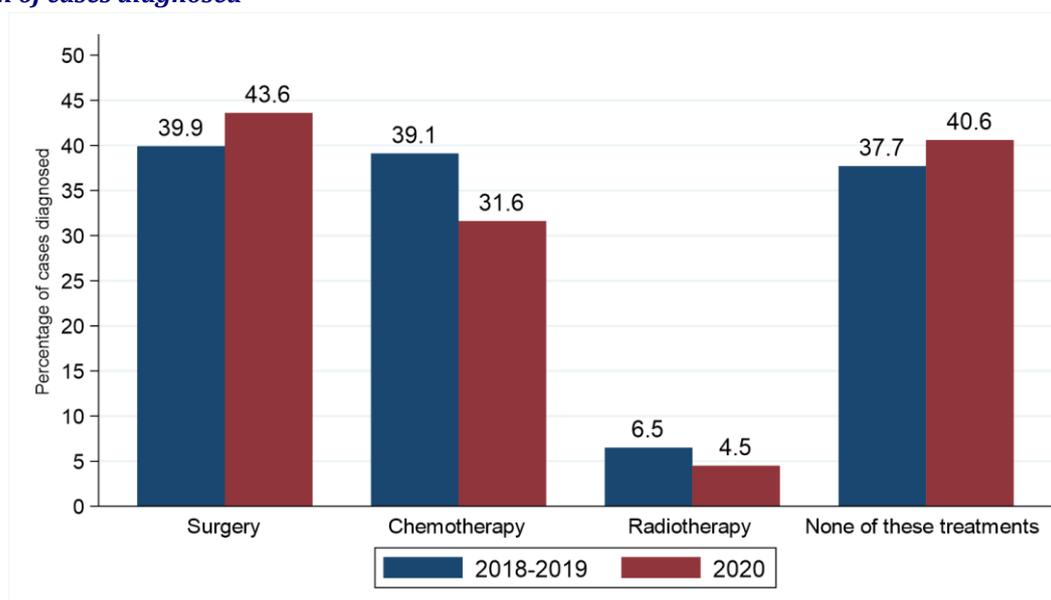
**Table 8: Number and proportion of stomach cancer cases diagnosed in April-December of 2018-2020 by treatment type and period of diagnosis**

Treatment type	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019 average	2020	
<b>Surgery</b>	55 (39.9%)	58 (43.6%)	+5.5% (3 patients)
<b>Chemotherapy</b>	54 (39.1%)	42 (31.6%)	-22.2% (12 patients)
<b>Radiotherapy</b>	9 (6.5%)	6 (4.5%)	-33.3% (3 patients)
<b>None of these treatments</b>	52 (37.7%)	54 (40.6%)	+3.8% (2 patients)

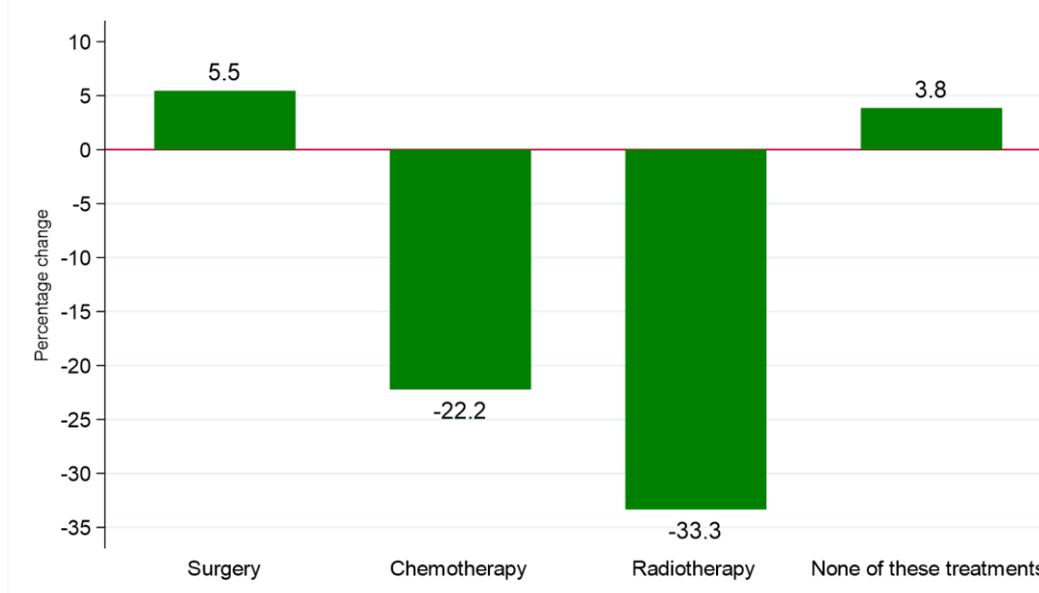
*No statistically significant changes*

**Figure 8: Stomach cancer cases diagnosed in April-December of 2018-2020 by treatment received and period of diagnosis**

**(a) Proportion of cases diagnosed**



*(b) Percentage change from 2018-2019 to 2020 in number of stomach cancer cases by treatment received*



## SURVIVAL

Changes in survival are evaluated using two measures. Observed survival examines the time between diagnosis and death from any cause. It thus represents what cancer patients experience, however, due to the inclusion of non-cancer deaths (e.g. heart disease), it may not reflect how changes in cancer care impact survival from cancer. Thus changes in age-standardised net survival are also examined. This measure provides an estimate of patient survival which has been adjusted to take account of deaths unrelated to cancer. It also assumes a standard age distribution thereby removing the impact of changes in the age distribution of cancer patients on changes in survival over time. While this measure is hypothetical, as it assumes patients can only die from cancer related factors, it is a better indicator of the impact of changes in cancer care on patient survival.

### OBSERVED SURVIVAL

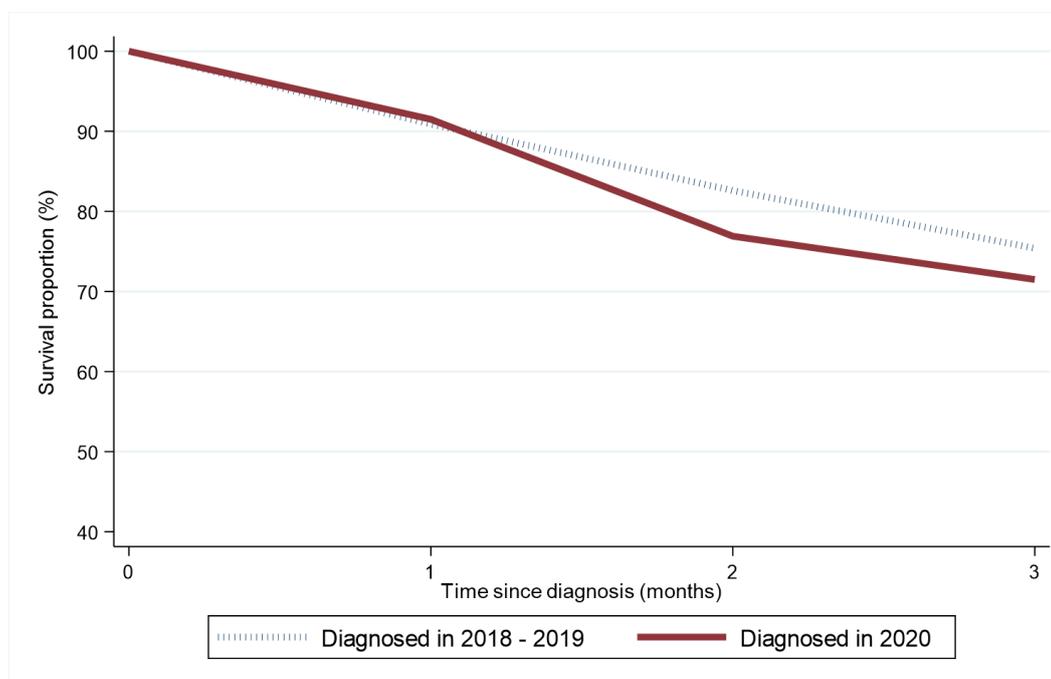
Survival among stomach cancer patients one month after diagnosis increased from 90.9% among those diagnosed in April-December of 2018 - 2019 to 91.5% among those diagnosed in April-December of 2020. This change was not statistically significant. Between the same two diagnosis periods, three-month survival decreased from 75.4% to 71.5%. This change was not statistically significant.

**Table 9: Observed survival for patients with stomach cancer diagnosed in April-December of 2018-2020 by period of diagnosis**

Survival time	Period of diagnosis (Apr-Dec)	
	2018-2019	2020
<b>1 month</b>	90.9% (86.9% - 93.8%)	91.5% (85.2% - 95.2%)
<b>2 months</b>	82.6% (77.6% - 86.6%)	76.9% (68.7% - 83.3%)
<b>3 months</b>	75.4% (69.8% - 80.0%)	71.5% (62.9% - 78.5%)

*No statistically significant reductions*

**Figure 9: Observed survival for patients with stomach cancer diagnosed in April-December of 2018-2020 by period of diagnosis**



## DEATHS FROM COVID-19

During 2020 there were a total of 5 deaths from Covid-19 among stomach cancer patients diagnosed at any point since 1993.

## NET SURVIVAL

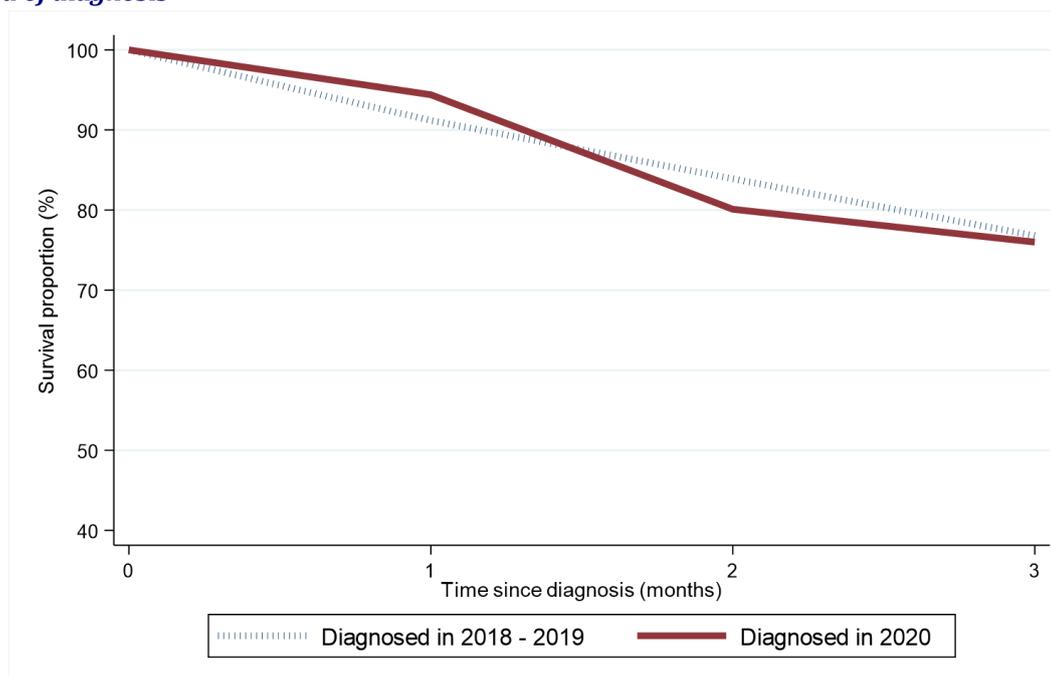
Age-standardised net survival (which takes account of deaths from other causes such as Covid-19) among stomach cancer patients one month after diagnosis increased from 91.2% among those diagnosed in April-December of 2018 - 2019 to 94.4% among those diagnosed in April-December of 2020. This change was not statistically significant. Between the same two time periods, three-month age-standardised net survival decreased from 76.8% to 76.0%. This change was not statistically significant.

**Table 10: Age-standardised net survival for patients with stomach cancer diagnosed in April-December of 2018-2020 by period of diagnosis**

Survival time	Period of diagnosis (Apr-Dec)	
	2018-2019	2020
<b>1 month</b>	91.2% (87.7% - 94.8%)	94.4% (90.9% - 98.0%)
<b>2 months</b>	83.9% (79.4% - 88.6%)	80.1% (73.5% - 87.3%)
<b>3 months</b>	76.8% (71.7% - 82.3%)	76.0% (68.9% - 83.8%)

*No statistically significant reductions*

**Figure 10: Age-standardised net survival for patients with stomach cancer diagnosed in April-December of 2018-2020 by period of diagnosis**



# CANCER MORTALITY

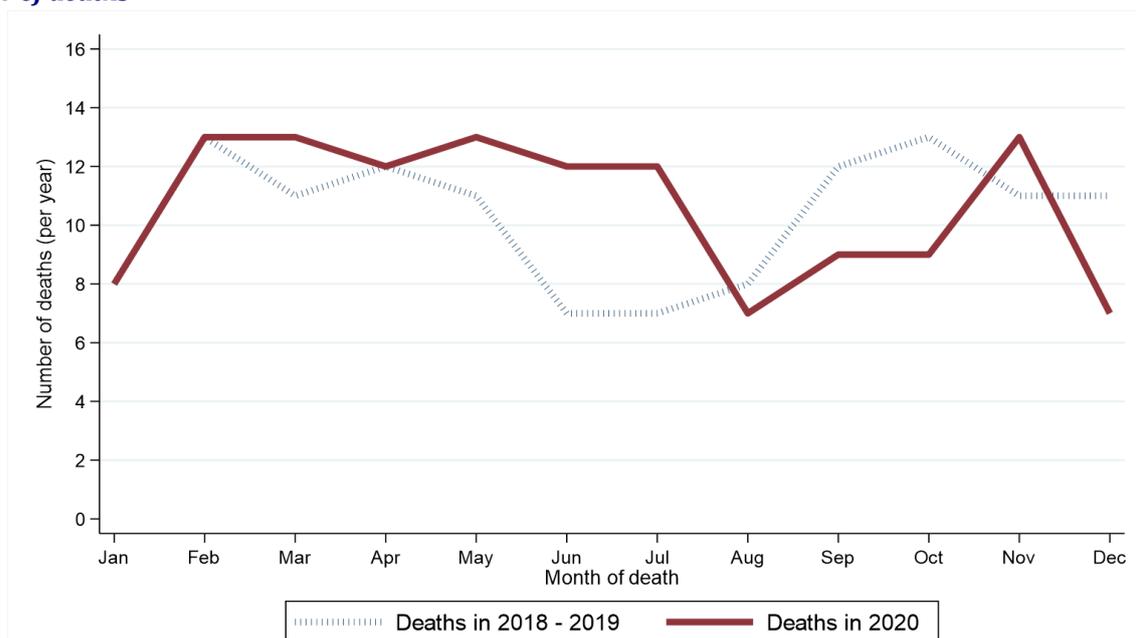
During the April-December period when Covid-19 was present the number of deaths from stomach cancer increased by 4.4% from 90 per year in 2018 - 2019 to 94 in 2020.

**Table 11: Number of stomach cancer deaths in 2018-2020 by month and year of death**

Period of death	Annual total	Month death occurred											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
2018-2019*	120	8	13	11	12	11	7	7	8	12	13	11	11
2020	128	8	13	13	12	13	12	12	7	9	9	13	7

\* Average deaths per year rounded to the nearest integer. Row sums may thus differ slightly from the total.

**Figure 11: Number of stomach cancer deaths in 2018-2020 by month and year of death**  
(a) Number of deaths



(b) Percentage change from 2018-2019 to 2020 in number of stomach cancer deaths by month of death

