
Impact of Covid-19 on incidence and survival of neuroendocrine cancer in Northern Ireland

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

Further information

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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

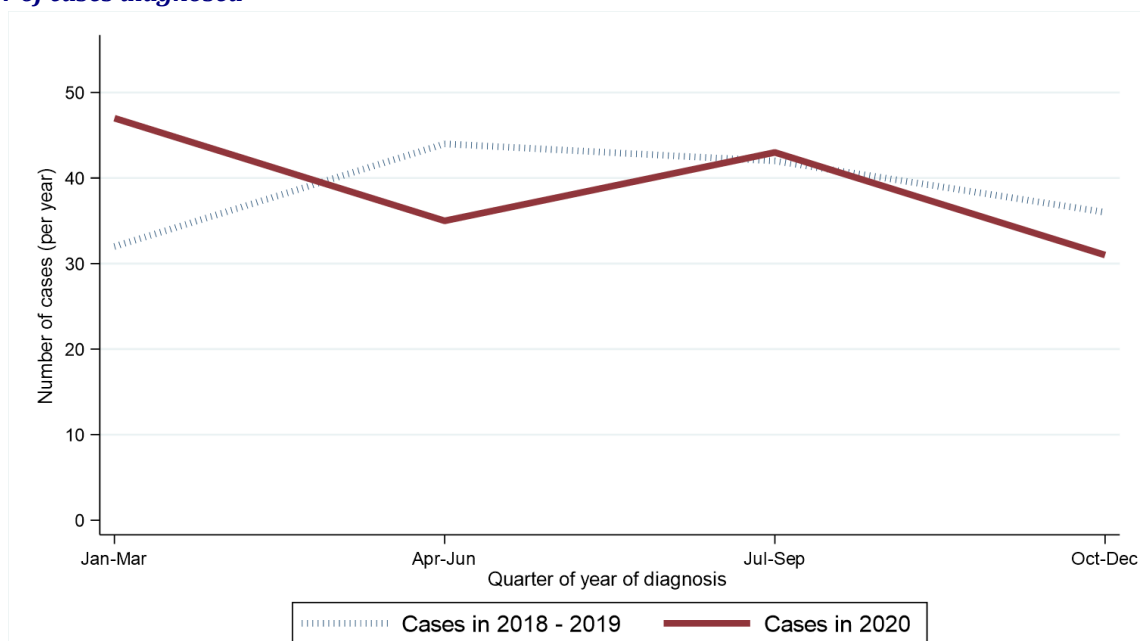
During the April-December period when Covid-19 was present the number of cases of neuroendocrine cancer diagnosed decreased by 9.9% (12 patients) from 121 per year in 2018 - 2019 to 109 in 2020.

Table 1: Number of neuroendocrine cancer cases diagnosed in 2018-2020 by quarter and year of diagnosis

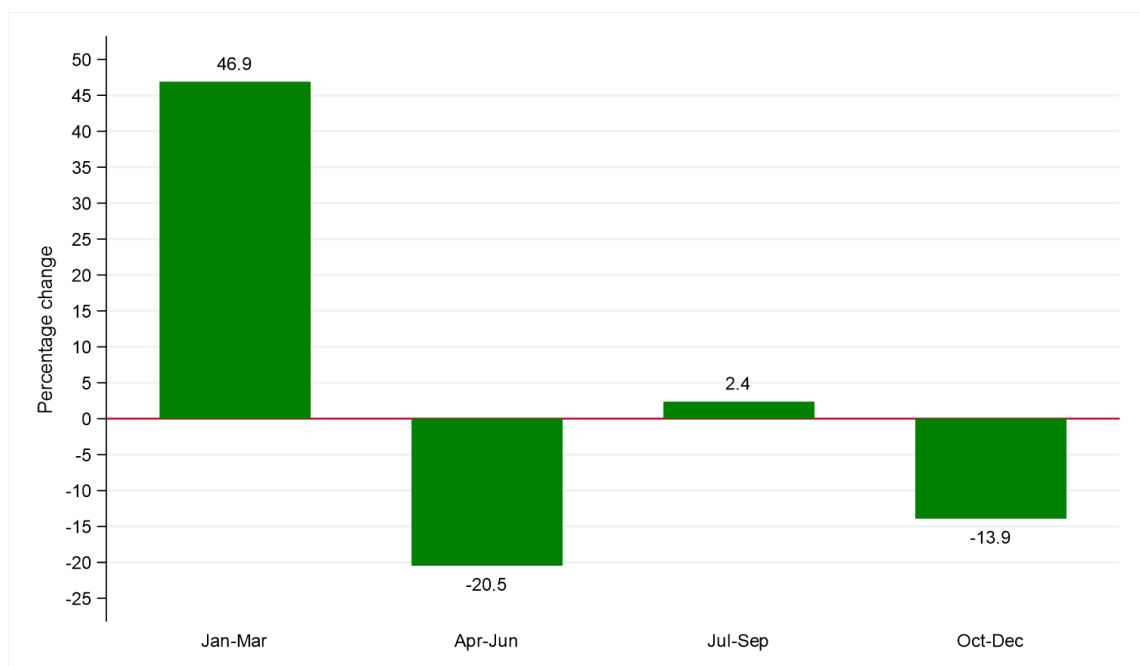
Period of diagnosis	Annual total	Quarter of year diagnosed			
		Jan-Mar	Apr-Jun	Jul-Sept	Oct-Dec
2018-2019*	153	32	44	42	36
2020	156	47	35	43	31

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

Figure 1: Number of neuroendocrine cancer cases diagnosed in 2018-2020 by quarter and year of diagnosis
(a) Number of cases diagnosed



(b) Percentage change from 2018-2019 to 2020 in number of neuroendocrine cancer cases by quarter of year of diagnosis



GENDER

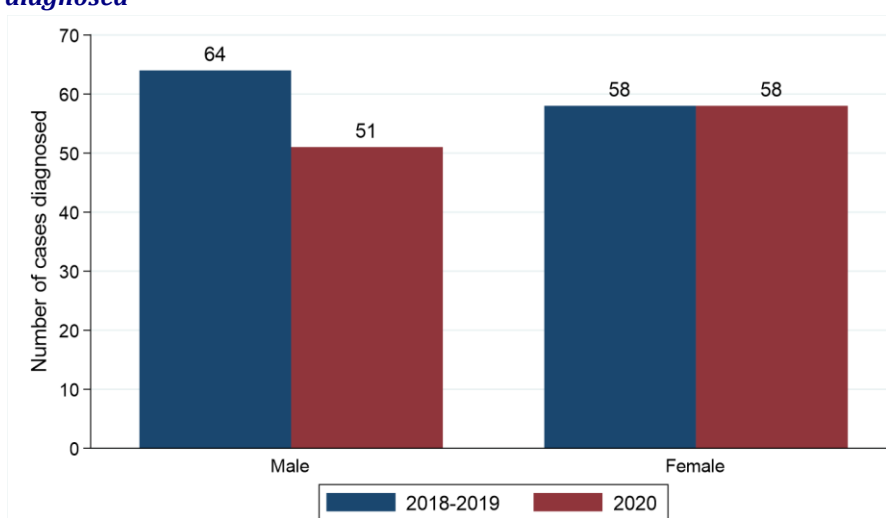
Excluding the first quarter of each year among males the number of cases of neuroendocrine cancer diagnosed decreased by 20.3% from 64 per year in 2018 - 2019 to 51 in 2020. Among females there was no change in the number of cases per year between 2018 - 2019 and 2020, with an average of 58 cases each year. The change in case distribution by gender between 2018 - 2019 and 2020 was not statistically significant.

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

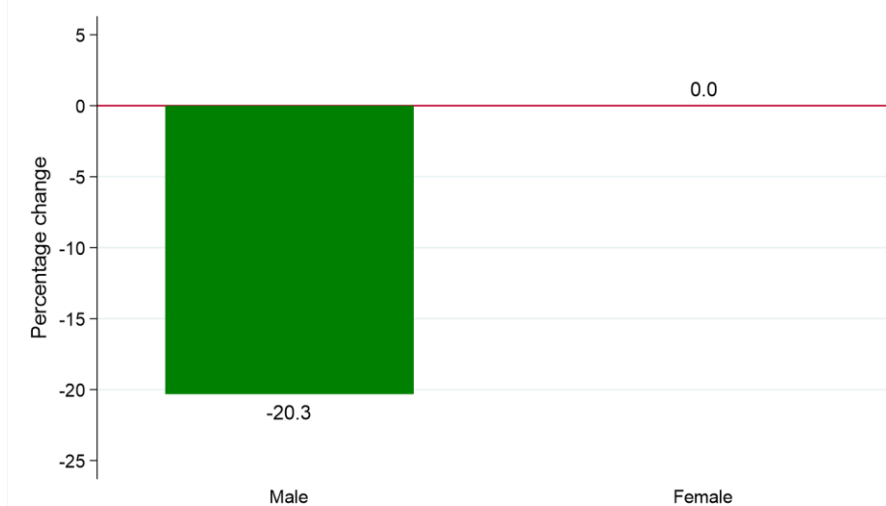
Gender	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Male	64 (52.9%)	51 (46.8%)	-20.3% (13 patients)
Female	58 (47.9%)	58 (53.2%)	0.0% (0 patients)
All persons	121	109	-9.9% (12 patients)

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

Figure 2: Neuroendocrine 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 neuroendocrine cancer cases by gender



AGE

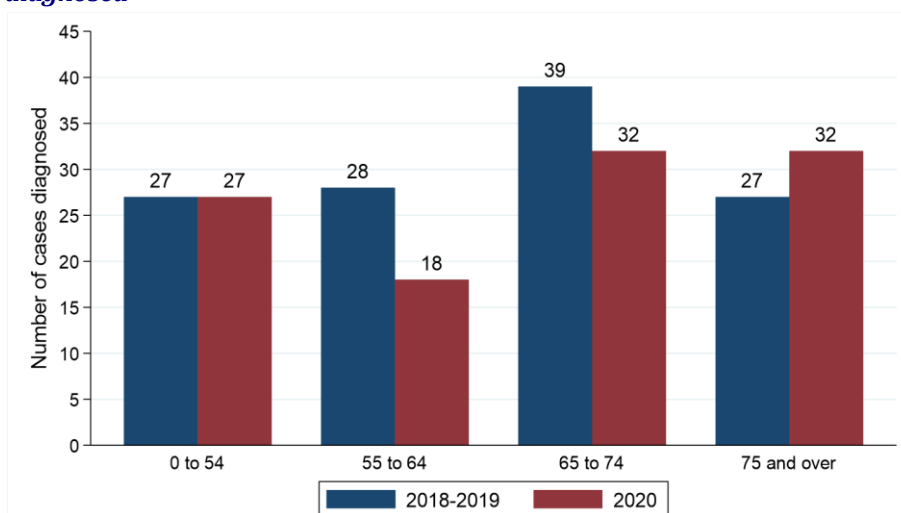
Excluding the first quarter of each year among people aged 55 to 64 the number of cases of neuroendocrine cancer diagnosed decreased by 35.7% from 28 per year in 2018 - 2019 to 18 in 2020. Between the same two time periods, the number of cases among people aged 75 and over increased by 18.5% from 27 per year to 32. The change in case distribution by age between 2018 - 2019 and 2020 was not statistically significant.

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

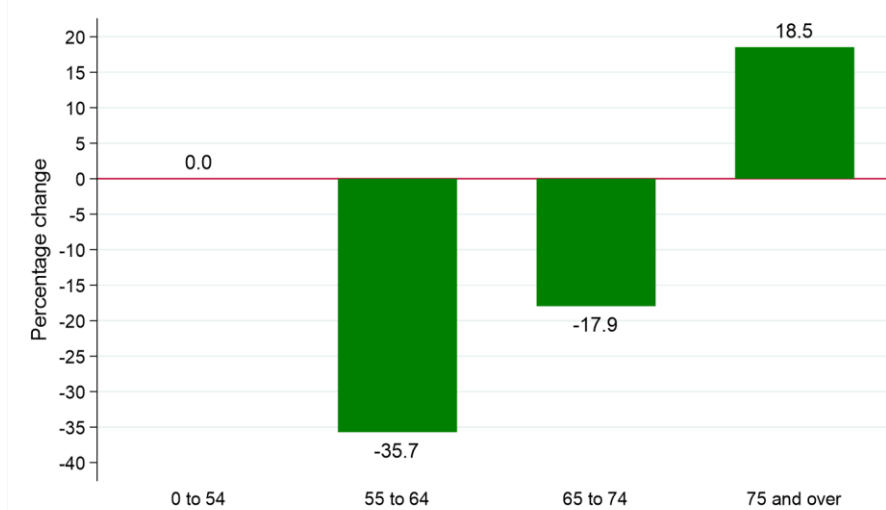
Age group	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
0 to 54	27 (22.3%)	27 (24.8%)	0.0% (0 patients)
55 to 64	28 (23.1%)	18 (16.5%)	-35.7% (10 patients)
65 to 74	39 (32.2%)	32 (29.4%)	-17.9% (7 patients)
75 and over	27 (22.3%)	32 (29.4%)	+18.5% (5 patients)
All ages	121	109	-9.9% (12 patients)

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

Figure 3: Neuroendocrine 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 neuroendocrine 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 neuroendocrine 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 residents of Southern HSCT increased by 31.8% from 22 per year to 29. The change in case distribution by HSCT between 2018 - 2019 and 2020 was not statistically significant.

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

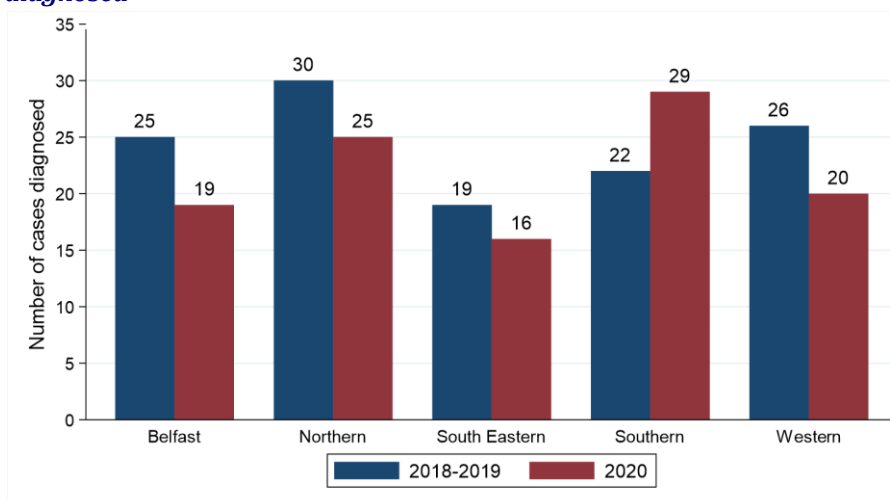
Health and Social Care Trust	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Belfast HSCT	25 (20.7%)	19 (17.4%)	-24.0% (6 patients)
Northern HSCT	30 (24.8%)	25 (22.9%)	-16.7% (5 patients)
South Eastern HSCT	19 (15.7%)	16 (14.7%)	-15.8% (3 patients)
Southern HSCT	22 (18.2%)	29 (26.6%)	+31.8% (7 patients)
Western HSCT	26 (21.5%)	20 (18.3%)	-23.1% (6 patients)
Northern Ireland	121	109	-9.9% (12 patients)

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

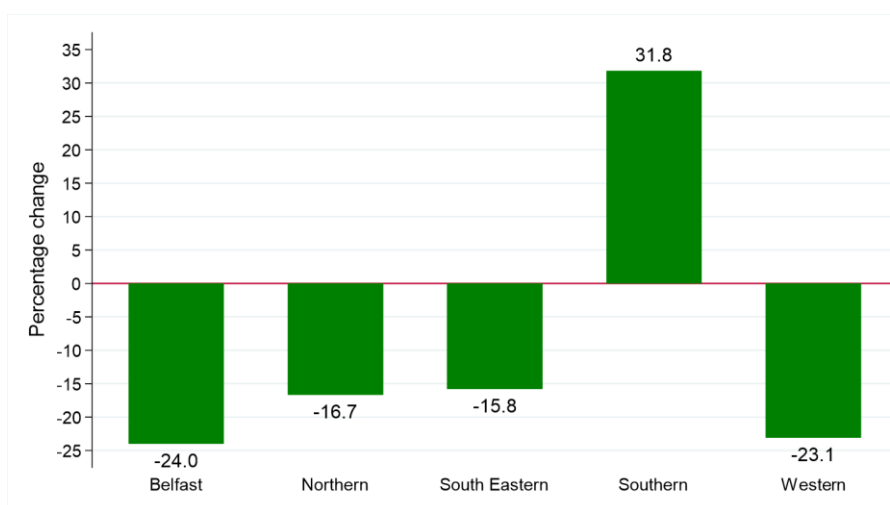
Note: Cases with unknown Health and Social Care Trust are included in totals

Figure 4: Neuroendocrine 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 neuroendocrine 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 neuroendocrine cancer diagnosed decreased by 7.1% from 28 per year in 2018 - 2019 to 26 in 2020. Between the same two time periods the number of cases among residents of the least deprived areas decreased by 34.6% from 26 per year to 17. The change in case distribution by deprivation quintile between 2018 - 2019 and 2020 was not statistically significant.

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

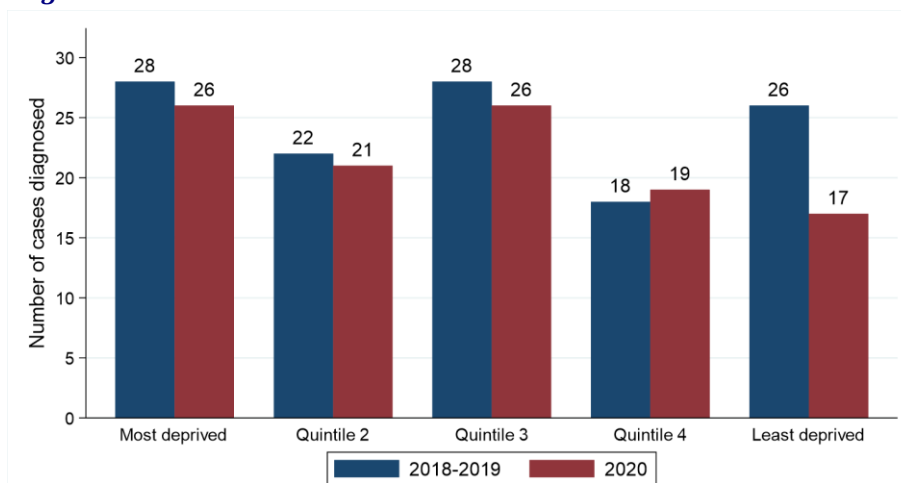
Deprivation quintile	Period of diagnosis (Apr-Dec)		Percentage change
	2018-2019*	2020	
Most deprived	28 (23.1%)	26 (23.9%)	-7.1% (2 patients)
Quintile 2	22 (18.2%)	21 (19.3%)	-4.5% (1 patient)
Quintile 3	28 (23.1%)	26 (23.9%)	-7.1% (2 patients)
Quintile 4	18 (14.9%)	19 (17.4%)	+5.6% (1 patient)
Least deprived	26 (21.5%)	17 (15.6%)	-34.6% (9 patients)
Northern Ireland	121	109	-9.9% (12 patients)

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

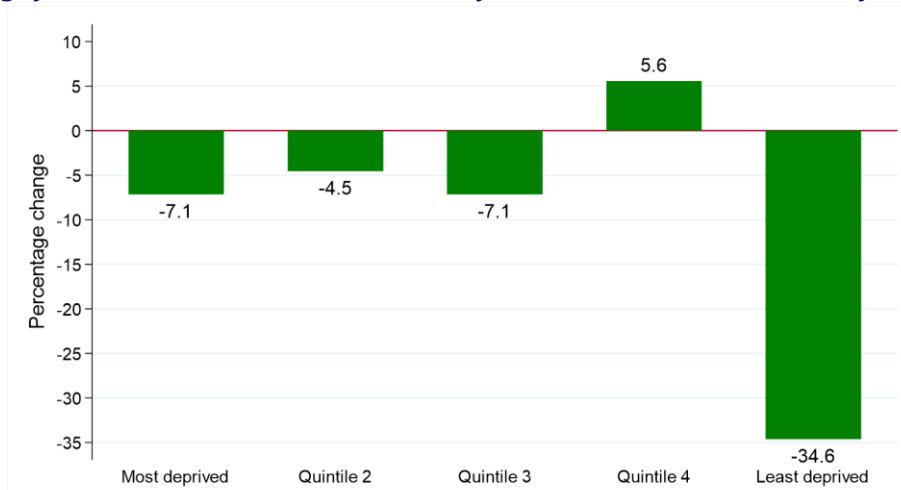
Note: Cases with unknown deprivation quintile are included in totals

Figure 5: Neuroendocrine 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 neuroendocrine cancer cases by deprivation quintile



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

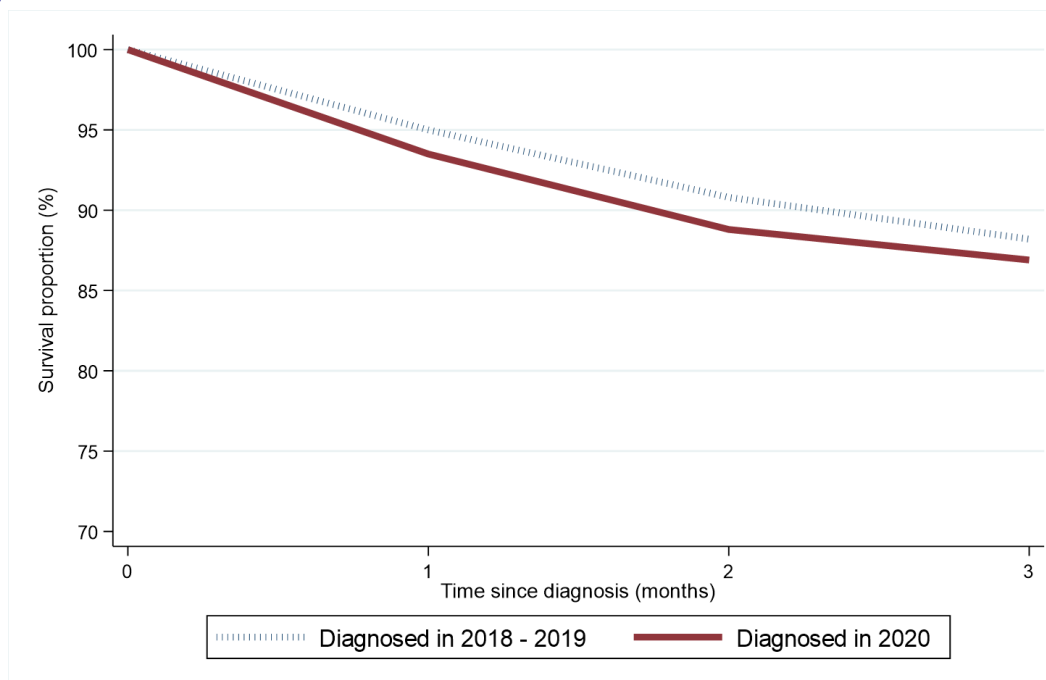
Survival among neuroendocrine cancer patients one month after diagnosis decreased from 95.0% among those diagnosed in April-December of 2018 - 2019 to 93.5% among those diagnosed in April-December of 2020. This change was not statistically significant. Between the same two diagnosis periods, three-month survival decreased from 88.2% to 86.9%. This change was not statistically significant.

Table 6: Observed survival for patients with neuroendocrine cancer diagnosed in April-December of 2018-2020 by period of diagnosis

Survival time	Period of diagnosis (Apr-Dec)	
	2018-2019	2020
1 month	95.0% (91.3% - 97.1%)	93.5% (86.8% - 96.8%)
2 months	90.8% (86.3% - 93.8%)	88.8% (81.1% - 93.5%)
3 months	88.2% (83.4% - 91.7%)	86.9% (78.9% - 92.0%)

No statistically significant reductions

Figure 6: Observed survival for patients with neuroendocrine cancer diagnosed in April-December of 2018-2020 by period of diagnosis



DEATHS FROM COVID-19

During 2020 there were a total of 4 deaths from Covid-19 among neuroendocrine 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 neuroendocrine cancer patients one month after diagnosis decreased from 94.8% among those diagnosed in April-December of 2018 - 2019 to 93.6% among those diagnosed in April-December of 2020. This change was not statistically significant. There was no change in three-month age-standardised net survival between April-December of 2018 - 2019 and April-December of 2020, which was 87.4% in both periods.

Table 7: Age-standardised net survival for patients with neuroendocrine cancer diagnosed in April-December of 2018-2020 by period of diagnosis

Survival time	Period of diagnosis (Apr-Dec)	
	2018-2019	2020
1 month	94.8% (91.9% - 97.8%)	93.6% (89.1% - 98.3%)
2 months	90.4% (86.4% - 94.6%)	89.2% (83.4% - 95.3%)
3 months	87.4% (82.7% - 92.3%)	87.4% (81.3% - 94.0%)

No statistically significant reductions

Figure 7: Age-standardised net survival for patients with neuroendocrine cancer diagnosed in April-December of 2018-2020 by period of diagnosis

